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The Irish Accounting Association was founded in 1987 to bring together academics from all parts of Ireland in order to advance teaching and research in accounting and related disciplines. In 1991, the name and objectives were changed to include finance.

### MEMBERSHIP

Membership is open to those engaged in teaching, research or educational administration in accounting, finance or related disciplines and to those engaged in similar activities acceptable to the Council for membership purposes.

The Association now has members in virtually all third level colleges that employ accounting and finance academics in both Northern Ireland and the Republic of Ireland. The annual membership fee is €35/£25.

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All enquiries regarding membership should be addressed to:

Ger Long  
School of Business Studies  
Waterford Institute of Technology  
Cork Road  
Waterford  
Telephone: +353 (0)51 30 2026  
e-mail: [glong@wit.ie](mailto:glong@wit.ie)

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The *Irish Accounting Review* is published by the Irish Accounting and Finance Association as part of the process of fulfilling its objective to advance accounting and related disciplines in the education and research fields in the Republic of Ireland and Northern Ireland. The *Review's* policy is to publish suitable papers in any of the areas of accounting, finance and their related disciplines. Papers in all categories of scholarly activity will be considered, including (but not limited to) reports on empirical research, analytical papers, review articles, papers dealing with pedagogical issues, and critical essays.

All submissions that pass an initial editorial scrutiny will be subject to double-blind refereeing. Referees will be asked to assess papers on the basis of their relevance, originality, readability and quality (including, for empirical work, research design and execution). In determining relevance, the editors will be influenced by the Association's objectives; thus, papers reporting on empirical work will be viewed more favourably if they deal with data relevant to those working in Ireland. Similarly, papers that have previously formed the basis of a presentation at the Association's annual conference will be particularly welcomed.

All submissions to the *Irish Accounting Review* should be made to either:

Noel Hyndman  
School of Management and Economics  
Queen's University Belfast  
Belfast BT7 1NN  
Northern Ireland

Email: [n.hyndman@qub.ac.uk](mailto:n.hyndman@qub.ac.uk)

or

Ciarán Ó hÓgartaigh  
UCD School of Business  
University College Dublin  
Belfield  
Dublin 4  
Ireland

Email: [ciaran.ohogartaigh@ucd.ie](mailto:ciaran.ohogartaigh@ucd.ie)

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## CASE STUDIES IN LARGE AND SMALL CLASSES: COMMON APPROACHES, DIFFERENT RESPONSES

John Doran, Margaret Healy, Maeve McCutcheon and Steve O'Callaghan  
*University College Cork*

### ABSTRACT

*This paper explores the case study experience in large and small undergraduate classes, with a view to identifying and comparing the challenges which exist in each setting. Using open-ended student surveys and lecturer reflections, the study compares how students in large and small classes, drawn from similar backgrounds, experienced two case events. Contrary to expectations, positive responses were reported in the large class setting as well as in the small class setting. However, managerial factors dominated in the large classes, reducing opportunities for engagement. Different class dynamics were also observed in each setting. Significant differences in expectations were identified between students in large and small class settings regarding participation and interaction. Raising the expectations of students in large classes emerged as a challenge to educators.*

### INTRODUCTION

The changing role of the accountant in society makes demands for an array of personal and interpersonal skills in communication, negotiation and organisation, as well as the requisite technical and business knowledge of the profession. While case-based teaching approaches have been proposed as one way of advancing the development of such skills and knowledge in accounting education (Hassall, Lewis and Broadbent, 1998; Boyce, Williams, Kelly and Yee, 2001; Cullen, Richardson and O'Brien, 2004), little empirical evidence exists supporting their use in large class settings.

Prior research has established a number of benefits arising from case-based teaching. Cases provide a valuable opportunity to bring relevance and reality into the classroom, promoting the integration and application of the underlying knowledge base (Boyce et al., 2001). Case-based teaching allows for the introduction of realism, via the use of real world scenarios (Weil, Oyelere, Yeoh and Firer, 2001; Rippin, Booth, Bowie and Jordan, 2002; Cullen et al., 2004); the use of judgement in resolving uncertainties, with no single right answer existing (Campbell and Lewis, 1991; Libby, 1991); the discussion and debate of alternative answers (Adler and Milne, 1997); and the practical demonstration of technical skills and knowledge, as part of the development of broader critical understanding of the accounting discipline (Booth, Bowie, Jordan and Rippin, 2000; Maltby, 2001).

Moss and McMillen (1980) consider the issue of how to develop problem-solving skills in large undergraduate classes, stating that for many undergraduate programmes there is a belief that time constraints and perceptions of student expectations can lead to an emphasis on subject-specific content, at the expense of the development of transferrable skills. In this context, improvements to teaching focus on the use of effective delivery mechanisms such as better audiovisual facilities (Craig, 2000), rather than emotional issues concerning students' ability to cope. Jackson and Prosser (1989) describe this approach to learning as follows:

In the lecture the emphasis is on the content or product. The product is the knowledge, transferred from the lecturer's notes to the student's notes. For most students this is the goal since it provides the key to the examination and other work to be done on a course. There is only a little process learning in the lecture. The student learns how to learn from lectures. This is a survival skill for a student. However, after graduation few will have the occasion to learn from lectures (Jackson and Prosser, 1989, p. 55).

Adler, Whiting and Wynn-Williams (2004), in the context of teaching cost and management accounting, point to the importance of the manner in which case studies are used, emphasising how the level and extent of student involvement determine their effectiveness. While the inherent 'plasticity' of the medium (Rippin et al., 2002) allows lecturers to capitalise on the established benefits of case-based teaching in business education, obtaining these benefits in accounting classes depends upon many factors, including the case materials, the setting and the roles of the lecturer and students (Campbell and Lewis, 1991). In the specific context of large class settings, it is argued that students are less likely to achieve higher-order learning outcomes and to become actively engaged in the teaching and learning activities.

The specific objective of this paper is to explore the case study experience in large and small undergraduate classes, with a view to identifying and comparing the challenges which exist in each setting. The paper is organised as follows: the next section reviews existing research on the use of case-based teaching and presents the need for additional evidence in the context of large class settings; the research context and the choice of data collection techniques are described in the following section; the research evidence is then presented, followed by discussion

of the experiences of case-based teaching with large classes. Conclusions and recommendations for ongoing research are discussed in the final section.

## CASE-BASED TEACHING IN LARGE CLASS SETTINGS

The use of case studies offers benefits both within and beyond the accounting curriculum. Within the accounting curriculum case-based teaching demands that students move from rote learning to beginning to analyse realistic scenarios and to integrate into the case context broader insights from across a module and programme of study (Libby, 1991). In addition, beyond the explicit curriculum, case-based teaching enables the integration of soft skills and facilitates personal development opportunities in team work and presentation skills (Stout, 1996). The case medium allows students to experience independent learning, peer learning and personal validation, if carefully managed. However, the use of case-based teaching in large class settings is not without difficulties. While there is little empirically based evidence investigating this specifically, some insight into the problems of large class settings generally does exist. For students, difficulties occur relating to participation, collective learning and peer interaction. Students are slow to participate in a context where large numbers of the class are unknown to them. With fragmented student groups, reluctant to prepare and participate, business lecturers in turn require significant class management skills (Booth et al., 2000).

The context of the original Harvard MBA case-based model includes classes of mature post-experiential learners who are usually acculturated with teambuilding and bonding exercises and opportunities. In contrast, participation in a large undergraduate class is more challenging and it becomes easier to seek to hide and hope the lecturer will not notice this amongst the greater number of students requiring attention (Booth et al., 2000). Collective learning – learning with others – is also difficult where individual students are less likely to know each other. If classes are mixed as well as large, students and instructors need to negotiate the logistical difficulties imposed in managing the requirements of different programmes and timetables. Peer interaction – learning from others – becomes harder in this environment, as students are less likely to question each other and difficulties in so doing become heightened by the lack of familiarity experienced in what for many is a very unfriendly situation (Islam, 2001). For example, the final report of the Australian *Teaching Large Classes Project* states:

Principles of good teaching and learning such as communication and negotiation, linking theory with practice and encouraging metacognition are often harder to build into the large class context. Large classes make it harder to personalise lectures, engage and maintain attention and create interaction (Australian Universities Teaching Committee, 2003, p. 13).

For lecturers, two interrelated aspects of the large class setting – the managerial and the educational (Biggs, 2003) – pose difficulty. Managerial concerns include the need to operate within strict time constraints and to adapt to the built environment.

Constraints on student time, lecturer time and class time become more acute (Hassall et al., 1998) and require careful balancing of teaching and learning activities both inside and outside of scheduled contact hours. A built environment which is conducive to a lecturing style of teaching for large numbers will not satisfy the prerequisites considered by many as necessary for case-based teaching (Knechel, 1992; Adler, Milne and Stringer, 2000; Erskine, Leenders and Mauffette-Leenders, 2003). Dealing with a large number of students, engaged in activities that are unfamiliar to them, creates a need for highly structured protocols to avoid chaos ensuing (Jackson and Prosser, 1989; Stout, 1996).

Educational concerns include the design of activities to facilitate the multiple perspectives on issues offered via case-based teaching, whilst avoiding the repetition that leads to student disengagement; the formulation of assessment strategies which take into account the level of resources available (Knechel, 1992; Adler et al., 2000); the need for rigor and fairness; and the balancing of form versus content and product versus process. Both lecturers and students can be reluctant to move from a traditional lecture or tutorial style of teaching, particularly in the context of large class sizes (Adler et al., 2000). Students become unwilling to participate, disinclined to speak out, assuming a more passive role on the assumption that their inactivity is less likely to be noticed in a larger class (Booth et al., 2000; Australian Universities Teaching Committee, 2003). However, the broader literature in education and the social sciences indicates that most undergraduate students are more willing to change than lecturers may give them credit for (Moss and McMillen, 1980; Islam, 2001) and can work without constant direct lecturer involvement in the teaching and learning activities (Jackson and Prosser, 1989). This also applies in the accounting area; for example, Brooks and Oliver (2004) in their postcard from the podium state:

Provided the subject content and modes of delivery are interesting and relevant, most students are generally willing to try something different. ... Well structured case-based work can be a useful vehicle to engage students in a productive learning environment outside of the formal classroom - in a *virtual classroom* - wherever the student is located (Brooks and Oliver, 2004, p. 116, emphasis as per original).

Stout (1996) reports that undergraduate accounting students found the case analysis aspect of the case study experience to be simultaneously interesting, valuable and difficult. Booth et al. (2000, p. 73) argue that their data suggest 'a set of strong tensions in the use of case studies' in large undergraduate business programmes. Pressures arising from what they term 'the massification in higher education' (Booth et al., 2000, p. 65) are affecting both teaching practice and pedagogic intent in the use of case studies in large undergraduate business programmes. Whilst research since then has acted to examine this, specific evidence in the context of large class settings is still required (Booth et al., 2000; Rippin et al., 2002).

This paper addresses the need for research specifically focused on the case experience in large undergraduate classes. The study explores case-based teaching in small and large class settings with the objective of identifying and comparing the managerial and educational problems that arise in each setting. The research approach adopted is described in the following section.

## RESEARCH APPROACH

Two case events designed for large class settings were also used in small class settings, involving student groups of similar background and level of prior studies. The majority of the students were in the penultimate year of a specialised degree in either Accounting or Finance. These students were taught together but subdivided into two cohorts for placement purposes; hence both case events occurred twice. The majority of students went on placement in the second semester; therefore in the first semester the cohort of students being taught was large while in the second semester it was small. The classes were defined as 'large' based on the relationship between the number of students, the teaching and learning activities and the facilities available. This is in accordance with the final report of the *Teaching Large Classes Project* of the Australian Universities Teaching Committee (2003). In the context of this study, the large classes numbered 84 students and the smaller classes up to 45 students.

The first case event (used with both large and small classes) formed part of a module examining the governance, regulation and control of financial organisations, which was assessed entirely by continuous assessment. The case study used examined internal control systems in WorldCom [Kaplan, R. and Kiron, D. (2004). *Accounting Fraud at WorldCom, Harvard Business School, case study #104107*]. The case assignment accounted for 25 per cent of the total marks for the module. Two assessment points were chosen: an in-class presentation and a reflective written submission. A debate format was designed, which, it was felt, would facilitate a higher degree of student participation in the large class setting than the standard approach to case teaching. Students were assigned into groups, such that in the large class the size of each group was six students; in the small class, groups consisted of five students. In both the small and large classes, two programmes were represented and student groups were not mixed by programme. Debate motions dealing with aspects of the case were distributed to students. Prior to coming to class, each group was asked to prepare to debate on all the motions.

At the start of the debate class all groups were given a short period to prepare a single slide to argue their assigned side of a designated motion. In class, one member of each group debated one side of one of the seven motions, using only the single slide to accompany the presentation, and with a limit of five minutes allowed in which to present their arguments. Following each motion, the class as a whole was asked to vote on the motion, based on the arguments made. An individual post-class assignment served as the means of enabling the students to reflect on the materials covered, integrating the seven motions in the construction of a coherent understanding of the topic area generally.

The second case event (used with both large and small classes) was part of a business finance module and was the responsibility of a different lecturer to the first event. The case study used examined a potential acquisition by Cadbury Schweppes of Adams, a chewing gum company [Collis, D., Stuart, T. and Smith, T. (2008). *Cadbury Schweppes: Capturing Confectionery (A), Harvard Business School, case study #708453*]. The format for the case study session was a 'Meeting of the Board of Directors of Cadbury Schweppes'. Students were allocated into groups

with six students per group in the large class and five students in the small class. In these events, the student groups were mixed across programmes. Each group was assigned individual perspectives from which to analyse the proposed acquisition and was required to submit a short analysis of the acquisition to the lecturer the day before the case study session. Groups nominated one member to present their analysis to the single board meeting, which was chaired by the lecturer, acting solely as a facilitator. Following the board meeting, the same groups then reconvened to decide whether, as shareholders in Cadbury Schweppes, they would vote in favour of the acquisition. They were then asked to declare their position and justify it. After the case study session, groups were required to submit a short analysis of the acquisition from the perspective of a shareholder in the acquiring firm. The case assignment accounted for 30 per cent of the students' overall grade for the module.

Each event was designed to harness elements of 'structured conflict' (Pearce, 2002), leading to greater in-class student interaction and the recognition and appreciation of multiple viewpoints. In each instance the format adopted (a debate and a boardroom meeting) represented a novel classroom experience for all of the students concerned. The same case material was delivered in both the large and small class settings. A strict timeline was established for the conduct of the in-class activities. The lecturer provided students with detailed written instructions on the tasks which were to be completed before, during and after each individual case study event, as well as work to be completed in small groups prior to the case event class session itself. Students were allocated to groups by the module lecturer, with each group having a direct involvement in the combined classroom activities through their chosen representative.

Student feedback was gathered using an anonymous survey administered at the end of each case event session. Table 1 presents the response rates. The survey posed a series of open-ended questions to students regarding what they felt they had learned in the class; what aspects of the process worked well and what aspects didn't work well; and what changes could be made. The use of open-ended questions, whilst more time consuming to analyse given the total of 214 responses, allowed respondents to answer in their own terms, unconstrained by researcher perceptions of possible responses (Brennan, 1998; Bryman and Bell, 2003) and was deemed appropriate given the exploratory nature of the underlying research objective (Saunders, Lewis and Thornhill, 2009).

While the use of open-ended questions helped ensure the capture of an authentic student voice in the responses, the researchers were careful to avoid oversimplification in the drawing of comparisons between those responses. Bryman and Bell (2003) refer to the possibility of measurement error which may arise from the use of open-ended questions. Mindful of this, each of the four researchers independently analysed all of the survey responses collected over multiple readings of those responses and determined an initial categorisation of their content. At this point, the initial broad themes suggested by the literature – managerial and educational – were developed and expanded in light of the student responses. Inter-researcher consistency in cataloguing of the student responses was greater than 90 per cent across all questions, suggesting a strong degree of reliability in the analysis. Responses generating divergent categorisations were reviewed and discussed

in light of similarities with other responses, to establish concurrence across all four researchers.

**TABLE 1: SURVEY RESPONSE RATES**

	Sample Size	Response Rate	% Response Rate
<i>'The Debate'</i>			
Large group	84	79	94%
Small group	35	33	94%
<i>'The Board Meeting'</i>			
Large group	84	67	80%
Small group	45	35	78%

Jackson and Prosser (1989) stress the importance of looking at the large class context from both the student and the lecturer points of view. Lecturer inputs were collected via the compilation of a series of pre- and post-event reflections. One of the researchers (not involved with any of the case events) acted as a 'critical friend' (Kember, Ha, Lam, Lee, Ng, Yan and Yum, 1997), observing the learning environment and bringing increased rigor and objectivity to the research process. The critical friend, however, played no part in the teaching and learning process.

## RESEARCH FINDINGS

The objective of this paper is to explore the case study experience in large and small undergraduate classes, with a view to identifying and comparing the challenges which exist in each setting. The data were collated and analysed from the perspectives of the students, the lecturers and the non-participant critical friend observer. Each of these is set out in the following sub-sections and illustrated with representative quotes.

### The Student Perspective

Students were asked to comment on what they learned from the case experience, what worked well, what didn't work well and what could be improved. As the questions were open-ended, students could raise more than one issue in their responses. Appendix 1 summarises the responses to the student surveys, under each of four headings. Responses were categorised by large and small class students and a two proportion z-test was used to identify statistically significant differences between large class and small class responses. Where significant differences in response emerged, the underlying concerns were further explored. It should be noted from the outset that with all classes the tone of the survey responses was very positive. Both large and small classes welcomed the novel class formats, as illustrated in the following typical response:

Very interesting; better than an ordinary class; easier to further develop understanding of case.

There was little difference between large and small classes in the nature of their comments on the overall learning experience. Their most frequent response in each instance related to subject specific knowledge such as, for example, the complexities of mergers or the role of financial analysts in relation to WorldCom as part of the first case event. Students also, although less frequently, alluded to soft skills or competencies such as group work and presentation skills, as shown in the following example from one student listing what was learned by them following the debate format:

How to debate in front of an audience, keep composure, be articulate.

In a minority of instances students' insights suggested personal development, beyond the subject-specific content of the case event; for one student this was recorded as the recognition that:

People can see things in a very different way than you do.

When asked about what worked well, the general design of the case event used (i.e. that of a debate or a board meeting) was most frequently identified as a positive feature of the experience. In the large class 49 per cent of responses and in the small class 35 per cent of responses commented favourably on matters relating to the class format. However, two significant differences between the large and small class settings emerged in the responses to this question. The students in the large classes commented more frequently on management issues. In particular, students noted the lecturers' skill in managing a large number of individual contributions in a short space of time. For example, one student from a large class setting commented on the lecturer's role in managing the time available in the following terms:

Timing - was regulated firmly and no group had an unfair advantage.

This 'timing' aspect was raised by 24 per cent of students in the large class settings compared with 6 per cent of the students in the smaller classes, a difference which is significant at 1 per cent. In contrast, the students in the small class settings commented more frequently on the positive aspects of their in-class experience, with 45 per cent of students raising such issues compared to 14 per cent of students in the larger class settings, significant at the 1 per cent level. For example, one student from a small class setting listed what worked well as being:

Ultimately the responses to the arguments - back and forth discussion works best for learning in my opinion.

Students were also invited to consider aspects that didn't work well. The most common response from both groups (24 per cent from the large classes and 33 per cent from the small classes) concerned the detail of learning activities, for example:

[Use of] acetates - maybe should be PowerPoint instead; some of the presentations were not constructed well.

The large classes differed from the smaller classes in their level of concern about an informal peer evaluation mechanism which was used in the debates. The structure was a series of motions with the groups on either side drawn from students of the two different programmes, Accounting and Finance. At the end of each motion being debated, the class as a whole was asked to vote on which argument won. The survey responses indicated that in the large class setting, students voted on programme lines, but yet as individuals were quick to condemn the group behaviour. For example, one student in the large class setting described the process in the following terms:

The voting system – totally biased; people vote for people in their course – FACT!

In the small class setting, although the same peer evaluation format was used, problems were raised in only 6 per cent of responses as compared to 33 per cent in the large class, a difference which is significant at 1 per cent. The small class, by contrast, emphasised aspects of the student experience which did not work well, and in particular they stressed the lack of opportunities for participation. For example, one student commented in relation to the first case event that there was:

... no debate side of presentations; sometimes you learn most from asking and answering questions and POIs [points of information] from your classmates.

These aspects were raised in 31 per cent of responses from the small class setting but only in 5 per cent of responses from the large classes, a difference which is significant at 1 per cent.

The smaller classes were also more critical of a design feature common to both the case events which required one representative to speak on behalf of the group as a whole, effectively delegating responsibility to one student for part of the grades of the group. In many of the student groups the preparatory work was divided between members, with each student completing discrete parts. In the case event sessions the group representatives may not have used all of the material prepared by the group members. This left some students feeling that their work was not recognised, either by their peers or by the lecturer, since it was never presented to the class. Issues of this nature appeared in 17 per cent of responses in the small class setting and only 4 per cent in the large class setting, a difference which is significant at 1 per cent.

The final element of the student survey concerned changes which the students had suggested. The changes suggested were generally consistent with the negative aspects students had identified earlier on. Thus, overall the suggestions most frequently made related to the detail of learning activities (in 35 per cent of the small class responses and 31 per cent of the large class responses). For example, one student suggested that that the lecturer for the debate should:

... get groups to do up slides for all motions – pro and con – and hand these up so that all group members had to review all the motions rather than focus on any individual motion.

Only 9 per cent of responses from the large class settings were directed at the student experience. By contrast, in 23 per cent of responses from the small class setting, changes were suggested to improve the student experience, with an emphasis on widening participation, a difference which is significant at 1 per cent. The large class suggested altering or scrapping the informal peer evaluation system used in the first case event. This was an issue for 16 per cent of the large class responses but only 2 per cent of the small class responses, a difference which is significant at 1 per cent. A higher proportion of the large class responses (16 per cent compared to 5 per cent in the small class responses (significant at 5 per cent)) advocated changes in group composition. Students who complained about mixed programme groups advanced reasons such as logistical difficulties in arranging meetings, lack of familiarity with other group members and difficulty in assigning tasks to the most appropriate group member.

### **The Lecturer Perspective**

Both lecturers concluded that their respective case event sessions had been worthwhile. In all instances, there was a strong level of case analysis which exceeded expectations. The students displayed good verbal skills but other communication skills such as managing visual presentation aids were less impressive. Attendances were high and the students in class were polite and attentive. For example, the lecturer responsible for the second case event commented as follows:

The attitude of the students not participating in the [board] meeting was a concern before the session. I expected some students to disengage as the meeting was taking place; however from looking around the room most students were actively listening and noting pertinent points being made.

Managerial issues were more of a concern in the large class settings, overshadowing the experience from the lecturer perspective, especially with the debate format of the first case event. In reflecting on the large class experience, that lecturer recounted his experience in the following terms:

... pressure from conflict of administration versus academic issues, especially once the debate got going. The administrative issues distracted me from paying the full attention I would like to give to each presentation for grading purposes.

There was a marked difference noted in both of the small class setting case events, as compared to the large class settings, in the level of engagement of students. Even those students who would not be called on to present displayed a higher level of activity and engagement. For example, one of the lecturers noted that in the small class setting:

Nearly everybody in the room seems engaged in activity rather than just watching others work.

Both lecturers independently commented that in the small class setting the students appeared to identify with the positions or roles they were asked to defend. When considering the difference between the large class iteration and the subsequent small class iteration of each of their respective case events, representative comments in this regard were as follows:

Students discussing the case in one way actually behave quite similarly to the characters in the case that they are discussing. Those who are tasked in the debate to defend the actions of particular characters tend to concentrate on the failings of other characters who could have prevented the problems in the case.

The board meeting itself proceeded quite differently to the previous session. Students were much more animated and committed to their perspective. On a number of occasions there was heated 'back and forth' between students on particular points.

Both lecturers reported that the students in the small class settings appeared more comfortable. The potential impact of dominant personalities in the smaller group setting was also recognised. In the board room setting of the second case event, the dynamic which developed was attributed to one student who was particularly trenchant in his views. The lecturer summed this up as follows:

Had this student not been at the meeting I'm not sure if the same dynamic would have developed. This suggests that the personalities involved in the session are key determinants of how it will develop.

The lecturers also welcomed greater time for feedback in the smaller class setting which was provided by having fewer groups with fewer students.

### **The Critical Friend Perspective**

The 'critical friend' commented favourably on the level of pre-class preparation undertaken by the students and their attention to the proceedings for all four of the case events. In general, the students had a good level of attendance, had analysed the cases in advance, and were motivated to learn during class. The most notable differences between the large and small class settings related to time constraints, atmosphere, participation and feedback.

Time constraints had a noticeable impact on the use of the debate format of the first case event in the large class setting, leading the critical friend to comment in the following terms:

The lecturer kept the process moving swiftly but this left little time for reflection. The lecturer did not comment on the individual points raised or on the presentation styles. There was no time for spontaneity, questions from the floor or rebuttals.

For both case event formats, the critical friend described the atmosphere as being less formal in the small class setting, as compared to the large class setting. While

group representatives participated, rather than the class as a whole, the level of their participation was observed as being more forceful and the audience more engaged. The critical friend described this in one instance (for the small class setting) as follows:

Discussion took a while to get going but when it did, it really engaged the audience to the extent that they started to listen rather than taking notes.

A difference in the level of lecturer feedback given was also noted by the critical friend. Feedback was given and listened to in the small class settings. In the large class more time was taken up by presentations from student groups and no time was left for feedback.

## DISCUSSION

Four key issues emerged from the analysis of the research data, as presented under each of the three perspectives described in the previous section. These were the impact of managerial issues, the level of student interaction, the desire to participate and the strength of programme identity. Each of these issues is discussed in the following paragraphs.

The impact of managerial issues was far more significant in the responses from the large classes, with more students highlighting timing and the format of the classes. Students recognised lecturers' efforts in ensuring equal time was given to all. This was not a significant concern for the small classes. Lecturers highlighted time pressure as a limiting factor in the conduct of case-based teaching in the large class settings, as a larger number of contributions had to be facilitated within the same limited time. In the small class settings, there was sufficient time for the lecturer concerned to give contemporaneous feedback on students' contributions and prompt discussion by questioning some of the points made. This engendered a more free-flowing, informal atmosphere.

The level of interaction observed, both between individual students and between students and the lecturer, differed markedly between the large and small classes. In the large class settings the students presented arguments, generally reading from notes, and these were not challenged by colleagues. There was little interaction between students beyond that required by the protocols of the case events. Students in the small classes had an objectively greater opportunity for interaction, due to the smaller class size, and in this setting points made were challenged by others and students were willing to defend their analyses against criticism. Students in the small classes noted and praised the free-flowing nature of the discussion during the sessions. Most of the negative comments on the experience related either to the standard of contributions made by other students or the absence of (even more) interaction between students.

Students in the small classes criticised the structure of the case sessions for not facilitating even greater participation and suggested amendments to the protocols to achieve this. The protocols designed for the case sessions provided for much of

the analytical work to be completed in groups prior to class and for one member of each group to represent their group during the case session. In the small class settings, students clearly recognised the benefits of participation in the case discussion but many reported being dissatisfied with their own opportunities for participation in the sessions. They also felt cheated if work they had done at the preparatory stages was ultimately neither presented nor graded. In contrast, the students in the larger group were satisfied with the opportunity for participation available.

The participants in the case events underlying this research study largely comprised students from two undergraduate degree programmes. As evidenced in the research data, student reactions to working with peers either from within their own programme or across other programmes was quite different in the large and small class settings. Students in the small class settings did not focus on group composition to a significant extent and there appeared to be little concern about the assignment of either mixed or single-programme groups.

## CONCLUSIONS

The purpose of this research was to explore the case study experience in large and small undergraduate classes, with a view to identifying and comparing the challenges which exist in each setting. Contrary to expectations, positive responses were reported in the large class setting as well as in the small class setting. The findings indicate that while managerial challenges were addressed, this did not resolve the reduced interaction and inhibited desire to participate that can arise in larger classes. The experience in the large class setting was constrained by timing and procedural concerns which reduced the potential for free-flowing spontaneous interaction between students and also inhibited the lecturers from providing informal immediate feedback. The challenge that remains is to reduce the impact of these managerial constraints on the educational experience of all participants.

One aspect of the approach adopted in the case event sessions was the use of novel formats, a debate and a board room setting, to create constructive conflict between students. The study found that the students in both classes were responsive to novelty but the students in large class settings did not fully engage with the case event sessions as learning opportunities. They both interacted less and demanded less opportunity for interaction than their peers in the small class settings. Their critique of the case event sessions revolved around structural and management factors and it appears that they were preoccupied with these issues to the extent that their expectations of the sessions as learning experiences were quite limited. The challenge for the future is to present the case event session as something more than a welcome distraction and emphasise its value as a learning opportunity, challenging and modifying student expectations of teaching and learning activities (identified by Boyce et al. (2001) as being the real problem with case-based teaching facing accounting educators).

A related but distinct issue to student expectations regarding interaction is the differing desire for participation evident in small and large class settings. Students in the small classes were eager to participate and dissatisfied when the format of

the sessions limited their opportunities for individual participation. Students in the large classes did not express comparable concerns. Either they were satisfied with the low level of participation available to them or the possibility of greater participation simply did not occur to them. This was borne out by the lecturers' observations that students in the small classes participated and engaged more fully with the opportunities presented to them. The findings of this study complement the results of prior research regarding the relative passivity of the student role in larger classes (Adler et al., 2000; Booth et al., 2000; Australian Universities Teaching Committee, 2003). It is easier to hide and a lecturer is less likely to demand participation from a particular student. It is likely that there are weaker interpersonal links between students, making participation less attractive.

This study also points to an expectations gap whereby the students in the larger class setting, who are not normally afforded possibilities for participation, were satisfied by the limited opportunities available to them. In contrast, in the smaller class settings, students actively sought greater opportunities for participation. It may be that students do not miss what they don't have and want more of what they get. Addressing these differences in expectations is a first step towards working with the students to achieve higher levels of participation. Meeting their higher expectations is the second stage of this challenge.

The extent to which the class groups identified as cohesive units differed in the large and small class settings. In the small classes there was little evidence of students retaining a strong identification with their degree programme. In the large class settings students clearly categorised the class by programme and identified with their colleagues in the same programme. This created difficulties when the large classes were engaging in group work. There may be some critical small group size within which students can operate in comfort and that any large class setting is potentially simply a collection of smaller groups and will naturally sub-divide for comfort. It should be noted here that apart from the programme divisions, the large classes were homogenous with no identifiable differences in terms of age or ethnicity of the student members which could have provided alternative class groupings. In seeking to promote peer learning and peer interaction in a large class setting, this apparent tendency to cluster in smaller units and seek the comfort of the familiar needs to be considered. The challenge is to find ways of encouraging students to learn from and interact more with students from a variety of backgrounds and programmes.

In summary, the case study sessions proved a positive experience for students and lecturers alike in both the large and small class settings. However, in the large class setting managerial factors dominated student and lecturer responses. Student expectations were lower, notably in relation to participation and interaction. In addition, they were more hesitant in working with other students with whom they were unfamiliar. The challenges remaining for future research are to refine the managerial practices so that they don't constrain the educational experiences; to assist students in unlocking the potential benefits to them of fuller engagement with the case study sessions as an active learning experience rather than a passive but pleasant distraction; and to move beyond familiar groupings to develop skills in working and interacting across the broader student population.

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## APPENDIX I: RESPONSES TO STUDENT SURVEYS

Today I Learned	Large Classes (n = 146)	Small Classes (n = 68)	z-stat
Knowledge	64%	53%	0.832
Competencies	44%	49%	0.480
Personal insights	18%	18%	-0.0165

What Worked Well?	Large Classes (n = 141)	Small Classes (n = 64)	z-stat
<i>Managerial</i>			
Timing	24%	6%	2.986***
Class format	49%	35%	1.77*
<i>Educational</i>			
Group work	19%	14%	0.699
Student experience – pre-class	1%	6%	1.769*
Student experience – in class	14%	45%	4.784***
Learning activities	26%	20%	0.782
Lecturer role	8%	9%	-0.019

What Didn't Work Well?	Large Classes (n = 110)	Small Classes (n = 48)	z-stat
<i>Managerial</i>			
Environment	9%	2%	1.631
Timing	8%	13%	0.898
Group size	5%	2%	0.69
<i>Educational</i>			
Group work	3%	6%	0.69
Student experience in class	5%	31%	5.034***
Level of repetition	12%	4%	1.585
Learning activities	24%	33%	1.221
Assessment – burden on one	4%	17%	2.926***
Assessment – task balance	11%	15%	0.609
Peer evaluation	33%	6%	4.117***

What Could Be Improved?	Large Classes (n = 110)	Small Classes (n = 62)	z-stat
<i>Managerial</i>			
Environment	4%	8%	0.901
Timing	18%	24%	0.844
Group structure	16%	5%	2.069**
<i>Educational</i>			
Student experience	9%	23%	2.572***
Learning activities	31%	35%	0.426
Assessment	22%	34%	1.702*
Peer interaction	27%	24%	0.3
Peer evaluation	16%	2%	2.789***
Other < 6%	9%	13%	0.655

\*\*\* = significant at the 1% level; \*\* = significant at the 5% level; \* = significant at the 10% level.

Note: As more than one response to each question by each student was allowed, the figures represent the percentages of students giving each response.

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## IS 'NECESSARILY' REALLY NECESSARY? EVIDENCE OF SCHEDULE E EXPENSES DEDUCTIONS AMONGST IRISH EMPLOYEES

Paula Farrelly, Thomas McCluskey and Pauline Willis  
*Dublin City University*

### ABSTRACT

*Section 114 of the Taxes Consolidation Act 1997 restricts income tax relief for employee expenses to those which employees are necessarily obliged to incur in the performance of their duties. Despite the rigidity of this rule, income tax relief is granted for certain flat rate expenses. This paper explores the inconsistencies in the negotiation, granting and publicising of these concessionary allowances and investigates the extent to which employee taxpayers are remiss in claiming them. Responses obtained from 557 taxpayers demonstrate confusion amongst taxpayers as to their entitlements and it is recommended that the relief should be granted at source.*

### INTRODUCTION

The history of taxation commentary has been dominated by analyses of judicial decisions on the interpretation of case law and statutes and investigations into behavioural attitudes to tax compliance amongst taxpayers. Richardson (2005) observed that most of the academic research on tax compliance has focused on the field of fiscal psychology, which has examined the influence of non-economic variables (for example, ethics, perceived fairness and perception of tax evasion) on tax compliance behaviour (for example, Kim, Evans and Moser, 2005; Cummings, Martinez-Vazquez, McKee and Torgler, 2006; Richardson, 2006; Fortin, Lacroix and Villeval, 2007; Verboon and Van Dijke, 2007).

One of the most neglected topics in the tax research literature is the non-take-up of available tax allowances. This is somewhat surprising given the extensive literature in the related field of social security entitlements which reports that a

substantial number of citizens eligible for social security assistance simply do not claim their entitlements (see, for example, Ruggles and Michel, 1987; Giannarelli and Clark, 1992; Blank and Ruggles, 1994, 1996). There have been a number of United States (US)-based studies on the failure to claim tax reliefs which conclude that the nature and complexity of tax regulations appear to inhibit taxpayers in making claims for tax deductible expenses to which they are entitled. Specifically, studies by de Bartolome (1995), Chetty and Saez (2009) and Saez (2010) noted widespread confusion amongst taxpayers regarding allowable tax deductions and credits arising from layers of complex regulations in the Internal Revenue Service Code and various statutory instruments. Krause (2000) noted that complexity, uncertainty, ignorance and burdensome documentation requirements deterred taxpayers from taking advantage of legitimate deductions and credits and these were the primary cause for the non-take-up of available tax reliefs. Findings by Madrian and Shea (2001) and Choi, Laibson, Madrian and Metrick (2003) observed that in the context of employee savings plans, taxpayer inertia was amongst the most common reasons for many taxpayers failing to make efficient tax investment decisions so as to minimise tax liabilities. Scholz (1993) examined the participation rate of federal income taxpayers in 1990 for the earned income tax credit and noted that between 14 and 20 per cent of eligible taxpayers did not claim the credit. The paper concluded that the taxpayers least likely to file claims when eligible were those who were entitled to smaller credits, had a greater share of their earnings composed of self-employment income and lived in states without state income taxes. However, Ramsden and Donnay (2001) noted that well-publicised reforms to the tax regime for tax deductions in respect of political contributions in various US state legislature elections appear to have broadened the base of taxpayer claims for allowable deductions for political contributions, particularly amongst middle-class taxpayers.

Similarly, in the United Kingdom (UK) a report by the Department of Work and Pensions (DWP) (Department of Work and Pensions, 2008) concluded that the main reasons why individuals do not claim their entitlements to tax allowances is inertia and a perception that the expected refund will be negligible. The DWP report is consistent with the comments of the Irish Minister of Finance in relation to deposit interest retention tax. In reply to a question as to why certain elderly taxpayers were not claiming refunds to which they were entitled, he suggested that the 'quantum of tax saved could be so small that many consider it uneconomic to claim' (*Irish Independent*, 2006). The Irish Taxation Institute (ITI) has undertaken a number of surveys of Irish taxpayers. In 2006, the ITI reported that over 50 per cent of employee taxpayers were confused about their taxes, although 88 per cent 'were not afraid to engage with Revenue about tax' (Redmond, 2006). A further survey in 2009 reported that 35 per cent of employees depend on their employers to organise their tax affairs (Irish Taxation Institute, 2009). That report also noted that employee taxpayers in general appear to under-claim certain tax reliefs.

Section 112 of the Taxes Consolidation Act 1997 (TCA 1997)<sup>1</sup> charges the emoluments arising from an individual holding public office or employment within the Republic of Ireland to income tax. It is assessed under Schedule E and, generally, taxes due under this schedule are paid through the Pay As You Earn (PAYE)

system. Benefits in kind, expense allowances, ex-gratia payments and any other form of compensation payments are also assessable under Schedule E irrespective of whether paid before the commencement or after the cessation of an office or employment. Section 114 (S.114) of the TCA 1997 sets out the main rule that governs the deductibility of expenses from income chargeable under Schedule E. Judge (1995) noted that there is no deduction for expenses incurred in placing an individual in a position to perform the duties of the office or employment. Specifically, to qualify for travelling expenses deductions, the holder of the office or employment must be necessarily obliged to incur and defray the expenditure in the performance of the duties of the office or employment. More generally, allowable deductions against Schedule E income are restricted to expenses incurred wholly, exclusively and necessarily in the performance of the duties of the office or employment.

The restrictive nature of this general rule for employees' expense claims under Schedule E has resulted in taxpayers in both Ireland and the UK seeking legal interpretation and clarification of the rule from the law courts.<sup>2</sup> Although the 1980 Commission on Taxation in the Republic of Ireland received a number of submissions that the rule is too narrow and is unfair compared with the more liberal expenses allowable in the case of self-employed persons, there has been no change to the restrictive wording of the rule since its introduction in 1853. Indeed, the first report of the 1980 Commission on Taxation on direct taxation published in July 1982 recommended that there be no change to the Schedule E expenses rule and noted that:

It is doubtful if the present inequity could be satisfactorily dealt with by bringing the expenses rule under Schedule E into line with that of Schedule D. Once expenses voluntarily undertaken by an employee in connection with his duties are allowed as a deduction from his income, it becomes very difficult to draw a clear line of distinction between such expenses and personal expenses or between expenses reasonably incurred and those not reasonably incurred. If the Schedule E expenses rule were relaxed, the result would open up new avenues of tax avoidance and give rise to inequities between one Schedule E taxpayer and another whereas the present rule achieves a high degree of equity among Schedule E taxpayers (*First Report of the Commission on Taxation: Direct Taxation*, July 1982, par. 10.79, p. 150).

The restrictive nature of S.114 of the TCA 1997 did not appear to be considered by the 2008 Commission on Taxation and did not feature in the report of the Commission published in 2009 and hence now seems to have general acceptance. The issue may, of course, be the subject of further interpretation and clarification by the Irish courts. Despite the rigidity of the courts' interpretation to date, Revenue has adopted a more flexible application of S.114, granting tax relief for certain categories of employees in the form of flat rate expense deductions (FRED), which are deductible from Schedule E income without any obligation on the part of the employee to incur those expenses.

The objectives of this study are to explore FRED, to investigate the negotiation process for the granting of these deductions and to consider the extent to which taxpayers are remiss in claiming them. The study presents the findings of web-based

survey responses on the extent to which employees in two selected sectors are aware of their entitlements.

The remainder of the paper is structured as follows: the next section examines the Irish legal framework for employee expenses and provides a brief review of the interpretation by the courts of the phrase 'necessarily'. This is followed by an explanation of the existing non-statutory arrangements in place for the granting of FRED to various categories of employees. The survey findings are then presented and the paper concludes with recommendations and avenues for future research.

## THE IRISH LEGAL FRAMEWORK FOR EMPLOYEE EXPENSES

From the introduction of income tax in Ireland in 1853 until 1 April 1922, the basis of assessment for employees (other than the holders of public offices) was Schedule D rather than Schedule E. Under the regulations, those employees who did not hold public office paid income tax based on the average income of the three preceding years. The income of the holders of public offices was liable under Schedule E on an actual basis (Dowling and Harvey, 1998). Hence, the restrictive nature of the general rule for employees' expense claims under Schedule E applied to the holders of public offices while a more liberal expenses allowable rule applied to employees assessable under Schedule D.

In 1921, the Inspector of Taxes assessed a railway clerk in Wales to income tax as an office holder under Schedule E. The taxpayer appealed and in 1922 the House of Lords confirmed that the railway clerk was not an office holder and should be assessed for income tax purposes under Schedule D (*GWR Co (re Hall) v Bater*). Dowling and Harvey (1998) observed that this decision in the House of Lords set a precedent for the large number of UK taxpayers who were then assessable under Schedule E and that there was a serious risk that the ruling in the case would have resulted in a substantial loss in revenue for the British Exchequer. In response, the Finance Act 1922 moved all employed persons into Schedule E. From a review of parliamentary debates on the amendment at the time there appears to have been little, if any, consideration of the effect of this on the deductibility of employee expenses, or that those employees who were not the holders of public offices were, from 1922, to be assessed to income tax on their actual income rather than their average income over the previous three years. Essentially, the employees concerned lost the advantage of the relatively generous approach to the computation of income and deductible expenses by default. The Irish Finance Act 1926 passed the relevant provisions of the UK Finance Act 1922 into Irish tax law with effect from 1 April 1922.

The restrictive nature of the general rule for employees' expense claims has resulted in taxpayers in both Ireland and the UK seeking legal interpretation and clarification of the rule from the law courts. Judge (1995) noted that in *Lomax v Newton*, Vaisey J emphasises that the words used in the Schedule are:

... notoriously rigid, narrow and restricted in their operation ... compliance with each and every one of them is obligatory if the benefit of the Rule is to be claimed

successfully. They are, to my mind, deceptive words in the sense that when examined they are found to come to nearly nothing at all (Judge, 1995, p. 1252).

One of the earliest cases taken on this issue was in 1926, *Ricketts v Colquhoun*. The court held that the travelling and hotel expenses of a barrister residing and practicing in London but employed part-time as the Recorder of Portsmouth were partly incurred before entering upon such duties and partly after fulfilling the duties and were neither necessary to the office nor incurred in the performance of his duties. Judge (1995) quoted Lord Blanesburgh's opinion that:

If an employee decides to reside away from his work, he must bear the cost of staying away from home that is by his own choice and not by reason of any necessity arising out of his employment, such expenses are disallowed by the emphatic qualification that the expenses must be 'wholly, exclusively and necessarily' so incurred (Judge, 1995, p. 1253).

The principles set down by the decision in *Ricketts v Colquhoun* have been applied in a number of similar cases, including *Cook v Knott*, *Revell v Directors of Elworthy Bros & Co. Ltd*, *Andrews v Astley*, *Nolder v Walters*, *Burton v Rednall*, *Parikh v Sleeman*, *Miners v Atkinson* and *Kirkwood v Evans*.

Despite the relatively rigid nature of the decision in *Ricketts v Colquhoun*, however, travel between 'bases' or 'two places of work' may be deductible as such travel may be required 'in the performance' of the duties. For example, in *Pook v Owen*, a general practitioner employed part-time at a nearby hospital was also required for emergency call-outs from home. The court held that travelling expenses between the doctor's home and the hospital while on call were allowable as his responsibility for the patient began as soon as he received a telephone call and hence the expenses incurred in travelling to the hospital were in the performance of his duties. This principal was followed in the Irish case of *F.G. v O'Coidealbhain*.

A requirement by the employer that the employee incurs certain expenses does not ensure that the expenses are deductible. The objective test of necessity obliges the taxpayer to show that the expense is 'necessarily' imposed on the holder of the office or employment by 'the duties of that office or employment'. In *Brown v Bullock*, a bank manager argued a club membership subscription was 'necessarily incurred' as his employer required him to become a member to foster local contacts. The Court of Appeal held that the cost was not 'necessarily incurred in the performance of his duties' as a bank manager. Donovan LJ stated:

The test is not simply whether the employer imposes the expense, but primarily whether the duties do, in the sense that irrespective of what the employer may prescribe, the duties themselves involve the particular outlay (Judge, 1995, p. 1254).

The decision in the *Brown v Bullock* case featured in the parliamentary debates on the 1963 UK Finance Bill in the House of Commons (House of Commons, 1963). The member for Darwen argued that it was unfair that the bank manager in the case, who was obliged to attend the club, was liable to income tax on the benefit without an equivalent deduction. At the time, the Financial Secretary was resisting

a proposed amendment to the Finance Bill that school teachers be given tax relief in respect of expenditure on refresher courses which they were necessarily obliged to incur to maintain teaching competence. The Shadow Financial Secretary to the Treasury put forward the following new clause, no. 20: 'Income Tax, Schedule E: Deduction of Obligatory Educational Expenses':

If the holder of an office or employment of profit is obliged as a condition of holding the same to engage in certain studies or to receive certain tuition or examination, any expenses necessarily incurred by him in carrying out such studies or in procuring such tuition or examination shall be deemed to be incurred wholly, exclusively and necessarily in the performance of the duties of the office or employment, to be defrayed out of the emoluments thereof and accordingly to be deductible from the emoluments to be assessed (Shadow Financial Secretary to the Treasury, House of Commons, 1963).

The Financial Secretary to the Treasury rejected the proposed amendment and asserted:

... it would be impossible to defend giving tax relief to an employee for training that he was required to undertake by one employer while equally refusing it to an employee doing comparable work in another firm that voluntarily took that same training course, ... even though it may appear unfair, ... any general change in the Schedule E expense rule which replaced an employer's requirement to the statutory test would be indefensible ... it would then be open to all forms of abuse, where employees could seek to obtain tax relief for various types of expenditure (Financial Secretary to the Treasury, House of Commons, 1963).

The issue of allowing tax relief in respect of expenditure on training courses was re-examined in two recent cases, both of which relied on the decision in *Brown v Bullock*. In *DW Perrin v UK Special Commissioners*, Mr Perrin was a trainee accountant whose contract of employment obliged him to study for professional accountancy examinations at two nominated external accountancy educational providers, subject to a penalty of dismissal if he did not attend. The contract required that Mr Perrin's employers provide relevant training and study leave to enable him to qualify as a chartered certified accountant. Mr Perrin was contractually obliged to pay for the tuition and exam fees and these were not subject to reimbursement. The UK Special Commissioners disallowed the training costs on the basis of the established precedent that costs incurred by an employee to enable him/her to perform his/her duties rather than incurred in the actual performance of his/her duties were not allowable. The fact that the contract of employment required Mr Perrin to incur the expenditure was not sufficient because he did not incur the training costs in the actual performance of his duties at the firm. Carr (2008) observed that because the question of whether or not the training costs were deductible was a mixed question of law and fact, the Special Commissioner's decision is not final and ultimately may come before the courts.

The second case, *HMRC v Banerjee*, which was decided in the UK High Court, concerned whether expenses incurred by a doctor in attending training courses were allowable against her employment income. Mitchell (2009) noted that what

was critically important in this case was the finding of fact by the General Commissioners that:

Dr. Banerjee's employment as a specialist registrar constituted part of her five-year training programme. The post was essentially a training post and the courses that Dr. Banerjee attended formed a mandatory and essential part of her training. The service commitment of seeing patients was, of course, another part of her training, but it was not the only part. Her attendance at the courses took place during working hours, and was part of the job that she was paid to do (quoted in Mitchell, 2009, p. 12).

In a commentary on the case, Mitchell (2009) observed that the decision in the case does not broaden the criteria to claim expenses deductions but shows that each case must be considered on its own merits and that the entitlement to a tax relief must be considered by reference to the duties of each particular employment.

## FLAT RATE EXPENSES

### Background

Despite the strict judicial interpretation of S.114, the practice developed in both Irish and UK jurisdictions of negotiating and agreeing FRED for various categories of employees. These are defined by the Irish Revenue as:

... expenses that are incurred in the performance of the duties of the employment and are directly related to the 'nature of the employee's employment'. A standard flat rate expenses allowance (deduction) is set for various classes of employee (Office of the Revenue Commissioners, 2010a).

It is not possible to identify when the practice started. An official within the Office of the Revenue Commissioners, involved in negotiating such deductions, could not confirm exactly when relief for flat rate expenses was first introduced but believed it pre-dated the Income Tax Act of 1967.<sup>3</sup> Dáil debates from 1963 corroborate this with a number of questions posed to the Minister for Finance on the issue during that year (Dáil Éireann, 1963a, 1963b). Despite this long-standing practice of granting FRED they have never been formally legislated for. Over time there has been a consistency in the rationale given for the existence of these allowances. In 1963 the then Minister for Finance stated that FRED 'are given as a matter of administrative convenience as representing a round figure estimate of the deduction for expenses to which the employees concerned would be entitled' (Dáil Éireann, 1963a). A similar rationale was given in 2002 by the Minister for Finance who stated they 'avoid the necessity for each individual to make a separate claim' (Dáil Éireann, 2002). An additional reason given by a Revenue official who negotiates deductions is that it 'ensures uniformity of approach in Revenue offices around the country'.<sup>4</sup>

As of 2010, FRED have been agreed for 163 categories and subcategories of employment and a list outlining the occupations and deductions available may be accessed online (Office of the Revenue Commissioners, 2010b). The amounts range from just €21 for kitchen porters to €2,476 for members of the RTE Symphony and

Concert Orchestras. The average is €249 and the mode is €318. Relief is available at the taxpayer's marginal rate of tax and it is granted without any requirement on behalf of the individual taxpayer to actually incur the expenditure.

Estimated costs in terms of revenue forgone for all personal tax credits, reliefs and deductions are published by Revenue but it accepts that the estimates shown in many cases are tentative (Office of the Revenue Commissioners, 2009a, p. 16). The estimate for FRED for 2006, the most recent year available, shows a cost to the exchequer of €71.2 million in respect of claims by 960,400 taxpayers. However, this estimate is subject to a number of limitations, the most significant of which is that an adjustment is included in the cost figures to compensate for incomplete numbers of tax returns. Less than 5 per cent of all PAYE taxpayers completed a tax return in 2006 (Joint Committee on Finance and the Public Service, 2007, p. 56). Consequently, this appears to be a particularly tentative estimate. This may explain the wildly fluctuating variations in the cost reported year on year with, for example, a cost of €153.8 million estimated for 2002 (Office of the Revenue Commissioners, 2006). Nonetheless, it may be concluded that a significant number of taxpayers qualify for an allowance, albeit is not clear how many actually receive or claim it. The most recent Commission on Taxation established a comprehensive list of all tax relieving measures in the Irish taxation system, identifying those measures that are structural reliefs and hence part of the benchmark tax system and those that are tax expenditures (Commission on Taxation, 2009, p. 237). Costs were provided for all tax expenditures together with recommendations regarding their continuance or otherwise. Surprisingly, FRED were not discussed under either heading and only a passing reference to employee expenses is to be found within the Commission's report. Given the non-statutory nature of FRED, and the significant differences in the amount of relief granted to different categories of employees, the following sections of the paper seek to explore how they are agreed and communicated to taxpayers.

### **Negotiation Procedure**

'The amount of the deduction is agreed between Revenue and representatives of groups or classes of employees' (Office of the Revenue Commissioners, 2010a), usually trade unions. They are 'reviewed periodically on receipt of a claim by that body to reflect changes in costs, conditions of work, etc.' (Dáil Éireann, 2002, p. 141). Revenue was not in a position to provide information on the expenses included in claims as, in its view, 'details of agreements reached between Revenue and representative bodies/unions are strictly confidential'.<sup>5</sup> A trade union official provided access to his correspondence files with the Office of the Revenue Commissioners and his union members from 1996 to 2009 for a number of categories of employees. This enabled a review of one representative body's negotiation process and it is reasonable to conclude that a similar procedure applies for other bodies. The process commences with an approach from the union requesting an allowance. Following consideration by a Revenue official, an 'offer' is made by the appropriate individual within Revenue to which the union official's agreement is sought. Generally, the union response is to propose a higher amount, sometimes informally by phone. A revised offer is typically made, often with the caveat that the allowances

will not be reviewed for a period of at least three years and the union is asked for written acceptance of the offer. Further conditions may be included as part of the agreement. For the occupations included in the files reviewed, there is frequently a stipulation that the employees are obliged to wear a uniform. The amount of the associated allowance varies depending on who is responsible for providing and laundering the uniform. However, there is also an allowance available for employees in situations where the employer both supplies and launders the uniform and it is not clear what expense, if any, this relates to. The union then notifies its members of the agreement and frequently provides the file reference number for members to use in any dealings with the Inspector of Taxes.

The process for the revision of an existing allowance takes a similar path with the union initiating the negotiation process at the end of the prescribed period. The offer from Revenue is typically to increase the allowance in line with the consumer price index, again for a defined period. On occasion, adjustments are sought by the union to achieve parity with other similar occupations. Variations in the requirements of different Revenue officials may be observed from the union files. Some officials refer to the provisions of S.114 while others seem more willing to avail of the flexibility provided under the care and management provisions of S.849 TCA 1997 and make no reference to the requirement that the expenses be necessarily incurred in the performance of the duties of the employment as stipulated in S.114. Details of actual expenses incurred are frequently requested when negotiating new claims and also occasionally sought when reviewing existing allowances. In respect of one category of employee, in addition to details of actual expenditure incurred, a comprehensive breakdown of the functions carried out by the employees is also requested.

The manner in which FRED are negotiated, agreed and publicised is likely to contribute to the inconsistencies that exist among the various categories of employees. No regular review of the level of individual FRED available appears to be undertaken by Revenue. Instead revisions seem to be prompted by a request from employee representatives. The FRED available to some categories of employees (for example, plasterers, electricians and shipping officers) have not increased in over seventeen years (Office of the Revenue Commissioners, 1993–2009). In contrast, other categories of employees have been reviewed regularly. Over the same seventeen-year period there have been six increases in the allowances available for teachers and third-level academic staff. This inconsistency regarding review exists even among occupations where similar expense outlays would be expected. There has been no increase in the allowances granted to any of the ten occupations within the hotel industry since 1993 while domestic staff in hospitals have received five increases since then. Local authority engineers have not received an increase since 1995 while engineers employed by the civil service have received three, albeit small, increases. Up until 1995 there was a gender difference in the deductions available for nurses, with females receiving twice that of males. While this anomaly was removed for nurses it still exists for cardiac technicians. A Revenue official was unable to explain this anomaly but suggested that when the allowance was agreed it would have been granted by virtue of gender-specific expenditure incurred.<sup>6</sup> The reason put forward for the difference in allowance between full- and part-time

firefighters is that the expenditure incurred by full-time firefighters is greater than for part-time staff.<sup>7</sup> However, the allowances granted contradict this as the allowance granted to part-time firefighters is 50 per cent higher than that granted to their full-time colleagues. There are also incidences of FRED being granted to employees whose occupation is not included on this list.

### Information Sources

Huerta and d'Entremont (2007, p. 97) suggest that there may be a failure to claim tax deductions 'without well-crafted outreach strategies'. Given the extra statutory concessionary nature of FRED, information has traditionally been difficult for taxpayers to access. Historically, there appears to have been a policy to publicise the reliefs as little as possible. In reply to a question asked in the Dáil in April 1963, the Minister for Finance stated that 'since these allowances involve an element of confidentiality I do not propose to publish them'. He went on to describe the rationale for the allowances and their agreement with representatives of employees and that 'it may be taken that the individual workers are aware of the position' (Dáil Éireann, 1963a). In July that year questions were asked in the Dáil about recommendations contained in the 1962 report of the Commission of Income Tax regarding greater publicity for these allowances. When questioned as to whether he would arrange for the allowances to be publicised in the annual report of the Revenue Commissioners or some other suitable format, the Minister of Finance replied that he would 'have to consider that'. On then being asked whether he considered them as confidential he responded, 'not exactly, but we do not want to encourage people too much' (Dáil Éireann, 1963b).

The agreed list is published annually in *Tax Briefing*, a publication published by the Revenue Commissioners since 1990. However, this is a publication circulated to tax practitioners and historically not easily accessible to Schedule E taxpayers. While the list has been available on the Revenue website for some time, until recently it was not very visible and was difficult to find, even for those who were aware of its existence. The Joint Committee on Finance and the Public Service (Joint Committee) investigated under-claiming of allowances by taxpayers in 2007 and concluded that FRED 'were poorly advertised by Revenue' (Joint Committee on Finance and the Public Service, 2007, p. 15). They recommended that these allowances 'should be advertised more widely by Revenue and should be given greater prominence on the Revenue website and other media' (Joint Committee on Finance and the Public Service, 2007, p. 19). This recommendation was adopted and they are now included under the employee expenses heading on the PAYE section of the Revenue website with links from a number of related topics and from the PAYE Anytime system.

The current version of the employee tax return (Form 12) includes a section on allowable deductions incurred in employment under the general heading of 'claim for tax credits, allowances and reliefs'. Employees are asked for the nature of their employment and the amount of their expenses with no explanation provided or conditions set out. If employees are unaware of the existence of FRED they are unlikely to complete this section of the return. As there has been no requirement since 2005 to state occupation elsewhere on the return, Revenue is not prompted to grant the allowance unless the taxpayer has completed this section. Consequently,

it is quite possible that even those employees who submit a tax return are not receiving the deduction they are eligible for. Prior to 2003, Form 12 requested particulars of 'expenses wholly, exclusively and necessarily incurred in the performance of the duties of the employment', with details to be set out on a separate sheet. Between 1996/1997 and 2002, a statement was included that 'if approved "flat rate" expenses apply you need not complete this section' which suggested that FRED were applied automatically but it was dependent on the employee giving an appropriate description of their employment. There is no statutory requirement on those whose only source of income is employment income to submit a Form 12 annually. In 2006, less than 5 per cent of all PAYE taxpayers completed a Form 12 (Joint Committee on Finance and the Public Service, 2007, p. 56). Consequently, the majority of taxpayers who are claiming FRED are doing so by other means. Claims for tax credits and allowances can be made through PAYE Anytime, through LoCall, by writing to the local Revenue office or by calling to the local office. These methods of claiming and/or adjusting allowances and reliefs are straightforward and less formal than submitting a full tax return but they all require the taxpayer to be proactive in claiming the allowance and to be aware that it is available in the first instance. The current online system, PAYE Anytime, lists FRED with other tax credits, includes a link to the information on the website and uses a drop-down menu to identify occupation. Hence those who access PAYE Anytime to claim other personal reliefs may be prompted to explore and claim FRED.

The principal means of communication between Revenue and taxpayers is their tax credit certificate (Joint Committee on Finance and the Public Service, 2007, p. 18), which is accompanied by a short leaflet explaining all the standard credits that are available. According to the presentation made by the Revenue Commissioners to the Joint Committee, taxpayers are encouraged to check the credits given against those available and advertisements are placed in the papers and on radio telling people about this (Joint Committee on Finance and the Public Service, 2007, p. 58). Prior to the publication of the Joint Committee's report in 2007, no reference was made to FRED in these annual leaflets. An information leaflet announcing the new online self-service facility for PAYE taxpayers was sent to employees in summer 2006. Flat rate expenses credit was listed as one of eight credits which could be claimed on the limited internet service. It was similarly included on the self-service options on the 2007 information leaflet as a credit which could be claimed online. However, it was not included on the list of tax credits on the face of the leaflet. The Joint Committee were critical of the language used in information leaflets and claim forms by Revenue and recommended that a systematic review be undertaken of all information leaflets and claim forms to address the design, complexity and language of the documents (Joint Committee on Finance and the Public Service, 2007, p. 18). Following these recommendations, the 2008 information leaflet was completely redesigned in a cartoon format and it encouraged taxpayers to claim their full entitlements. Work-related expenses were listed as one of the most common tax credits and inside the leaflet taxpayers were told 'don't forget, your job could entitle you to some expenses ...' (Office of the Revenue Commissioners, 2008). The less formal style of leaflet was maintained for 2009 with uniforms given as an example of work-related expenses. The language used was very user friendly and the word

'necessarily' was not used in any of these redesigned communications. Because there were no changes to PAYE in the 2010 Budget, tax credit certificates and consequently information leaflets were not forwarded to employees in 2010 (Office of the Revenue Commissioners, 2010c).

### **Taxpayer Education**

In recent years the issue of taxpayers under-claiming their entitlements has entered the political agenda. The Minister for Finance in his 2006 budget speech said that the Government was 'determined to make it easier for ordinary taxpayers to claim and receive their rightful entitlements' (Dáil Éireann, 2006a). The Joint Committee addressed the issue in 2007 and in their report acknowledged that the Revenue Commissioners are proficient as tax collectors but that they have an equal duty to demonstrate the same proficiency to people who overpay tax and that they must educate taxpayers about their tax entitlements (Joint Committee on Finance and the Public Service, 2007, pp. 11-12). This responsibility to help taxpayers receive their due entitlements is recognised by Revenue (Office of the Revenue Commissioners, 2009b, p. 32, 2010d, p. 37). While there is an acknowledgment by the tax authorities that tax is overpaid by some, no reliable estimates for the amount overpaid by employees exist. The chairman of the Revenue Commissioners estimates that it could be €100 million per annum (Dáil Éireann, 2006b), while the ITI estimate that the tax overpaid due to not claiming medical expenses relief alone could be as much as €50 million per annum (Joint Committee on Finance and the Public Service, 2007, p. 46).

The ITI has undertaken a number of initiatives to educate the public regarding their obligations and entitlements. These include publicity campaigns and tax guides written for the ordinary taxpayer in a range of languages. They commissioned research in 2006 which showed that only 58 per cent of PAYE taxpayers understood the tax system and 43 per cent were unsure whether they were getting all their entitlements (Irish Taxation Institute, 2009). They found that significant numbers were not claiming specified named reliefs, for example, 50 per cent of taxpayers were not claiming tax relief on medical expenses (Redmond, 2006). Following the publication of these findings, in summer 2006 Revenue launched a campaign to educate taxpayers regarding their entitlements (Office of the Revenue Commissioners, 2007a, p. 4). The latter end of 2006 saw a 280 per cent increase in the number of taxpayers seeking balancing statements compared to the same period the previous year (Office of the Revenue Commissioners, 2007b). Revenue continued this campaign in each of the following years, engaging in advertising, promotion of the PAYE Anytime website, direct marketing, a public relations drive, information posters, attendance at trade union conferences and visits to employer premises (Office of the Revenue Commissioners, 2010d, p. 37). In 2007, 783,933 refunds were made to employees totalling €525,797,535, which was a 26 per cent increase on the previous year. 2008 saw a further 10 per cent increase in refunds.<sup>8</sup> This indicates a measure of success in the information campaigns of the Revenue and ITI. These campaigns have emphasised certain reliefs, with much attention focused on medical expenses and related credits. In 2008, an online video was produced showing taxpayers how to claim relief for medical expenses and posters and leaflets were distributed to doctors'

surgeries and pharmacies (Office of the Revenue Commissioners, 2009b, p. 32). In contrast, little attention has been paid to FRED by either the Revenue or the ITI. Neither the information guides published by the ITI nor the publicly accessible areas of their website make any reference to the possibility of this relief.

In 2009, the ITI commissioned another survey on consumer attitudes towards tax issues. Some improvements were found compared to 2006, with 63 per cent of respondents claiming they understood the PAYE system and 59 per cent believing they were claiming all the reliefs they were entitled to. However, despite the publicity campaigns once again significant numbers of taxpayers were found not to be claiming certain reliefs (Irish Taxation Institute, 2009). The reasons why taxpayers do not claim their entitlements was not explored. Recent Revenue annual reports state that it aims to make it easier for customers to claim their entitlements (Office of the Revenue Commissioners, 2009b, p. 32, 2010d, p. 37) and indeed 60 per cent of respondents to the 2009 ITI survey believe that the process of claiming reliefs is now easier (Irish Taxation Institute, 2009). Revenue believes that to achieve this objective it must develop more imaginative ways of interacting with customers, such as granting reliefs automatically and prompting claims on the basis of information already available to them (Office of the Revenue Commissioners, 2009b, p. 32, 2010c, p. 37). Its treatment of FRED conflicts with this as it is left to the trade union movement to notify members of any changes to their entitlements. When queried, Revenue confirmed that tax credit certificates are not automatically updated whenever FRED are renegotiated. Instead, the 'representative body or union generally informs its members and the customer can then claim relief by using any of the various services offered by Revenue'.<sup>9</sup> It is not clear how non-union members are expected to be informed of the relief.

## DATA COLLECTION

To explore taxpayers' knowledge of FRED and other tax reliefs, a questionnaire was developed and circulated to two groups of taxpayers. University lecturers and local authority engineers and firefighters were chosen for the study as both groups are entitled to FRED and have publicly available e-mail addresses. A web-based survey was chosen in preference to a postal survey as it facilitates the distribution of surveys in a time-saving and cost-efficient manner and participants can conveniently respond. E-mail addresses of 606 academic staff in a range of institutions and departments were randomly selected from university websites. Ten local authorities circulated the e-mail internally to their engineers and firefighters while additional e-mail addresses were chosen randomly from relevant local authority websites, resulting in a total sample for this group of 600. Customised e-mails were sent to both groups inviting them to participate in the web-based survey. They were assured the survey was anonymous and that the data would only be used for the purposes of this research study. The survey was hosted by SurveyMonkey.com, which supports the distribution of reminder e-mails to non-respondents. Three reminders were sent to non-respondents at intervals of three weeks. Thirty-six e-mails were returned as undelivered and a further twenty-four individuals were

omitted as they were on maternity or sabbatical leave or were visiting non-Irish tax resident persons. Thirty-one respondents replied that they did not wish to partake in the survey and a further six were omitted due to incomplete responses. Completed questionnaires were received from 557 respondents: 314 engineers/firefighters (a response rate of 54.8 per cent) and 243 university lecturers (a response rate of 42.4 per cent). The resulting overall usable response rate of 48.6 per cent is considered acceptable for surveys of this nature.

## FINDINGS

Respondents were asked to classify their knowledge of FRED using a five-point Likert scale ranging from excellent to very poor. A majority of respondents, 63 per cent, indicated their knowledge is either poor or very poor while only 13 per cent stated that their knowledge is either good or excellent. As an introduction to the next section of the questionnaire, respondents were informed that workers in certain occupations can claim a flat rate tax allowance for work-related expenses such as tools or special clothing and an example was given relevant to the occupation of the particular respondent. Their responses to the remaining questions in this section confirmed their lack of awareness of the allowance.

Despite all respondents being engaged in occupations which qualify for FRED, 57 per cent indicated that they are unsure whether they qualify for an allowance and only one-third of respondents stated that they actually claim it. Those who do not claim the deduction were asked to give reasons why this was the case. They were presented with three possible reasons and asked to identify which, if any, applied to them and to give any other reason for their failure to claim the allowance. As illustrated in Table 1, the majority of those who do not claim FRED indicated that there are multiple reasons why, with two-thirds or more specifying they are not aware they can claim, do not know how to or have not received any information regarding claiming.

**TABLE 1: REASONS FOR NOT CLAIMING FLAT RATE TAX ALLOWANCE**

I wasn't aware I could claim	79%
I don't know how to claim	65%
I haven't received any information	75%

Alternative reasons were given by just twenty respondents, who indicated that either they do not have the time or the inclination to fill in forms or they do not incur work-related expenses so think the allowance is not available to them. Among those who know that they qualify for the allowance, 29 per cent do not realise that the onus is on them to make a claim and only 30 per cent know that the amount of the allowance occasionally increases.

While the focus of the study is not on differences between the two groups of respondents, it is interesting to note that differences are present. Exactly half of

engineers are unsure whether they qualify for an allowance or not, while this increases to 66 per cent for academics. A Pearson chi-square test showed the difference between both groups to be significant ( $p < 0.0005$ ). This may indicate that the professional organisations or unions representing the local authorities take a more active role in notifying their membership of their entitlements or that a greater proportion of respondents within this group are union members. Additionally, the difference could also be due to the more disparate nature of the respondents in the university category, who were spread across a range of departments and faculties. For those who claim the allowance there are no differences between the two groups of respondents as to whether they are aware that the onus is on them to make the claim ( $p < 0.777$ ) or that it occasionally increases ( $p < 0.128$ ).

As discussed earlier, Revenue and the ITI have engaged in campaigns to educate the public about their entitlements to certain tax reliefs with much of the focus directed on medical expenses. Due to the nature of medical expenses it is necessary to claim this relief after the year end and it requires taxpayers to be proactive in claiming it. Consequently, as part of the current study data were collected on respondents' medical expense relief claims. A significant majority of respondents, 87 per cent, stated that they had incurred medical or dental expenses within the previous four years.<sup>10</sup> Only 59 per cent of these had claimed tax relief. This is similar to the findings of the ITI survey, which reported that 53 per cent of respondents claim relief on medical expenses (Irish Taxation Institute, 2009). The current research project asked those who do not claim the relief to indicate why. Three reasons were included on the questionnaire (see Table 2) and respondents were asked to specify any other applicable reason.

**TABLE 2: REASONS FOR NOT CLAIMING MEDICAL EXPENSES RELIEF**

I wasn't aware I could claim	19%
I don't know how to claim	24%
I haven't held on to receipts	21%

Unlike FRED, lack of awareness of the relief is not responsible for failure to claim medical expenses relief. Only 19 per cent of those who had incurred medical expenditure but not claimed tax relief are unaware of their entitlements and only 24 per cent do not know how to claim. Forty-eight respondents specified other reasons for not claiming, which break down into three broad issues. The most common reason ( $n = 21$ ) is that the respondents are too busy or have not got around to it. Fifteen respondents are confused regarding their entitlement to tax relief, believing it to be connected to their PRSI class or, alternatively, not available to them as their expenses were incurred overseas. The remaining twelve erroneously think that the expenses incurred must exceed a certain amount before relief is available. While there is still some degree of confusion regarding tax relief for medical expenses, respondents were better informed of their entitlements to this relief than to FRED, suggesting that an information campaign can be effective in educating taxpayers regarding their entitlements.

## CONCLUSIONS AND RECOMMENDATIONS

This paper explores the courts' strict interpretation of S.114, which grants relief for work-related expenses and sets out the extra statutory concession arrangements which Revenue has in place to facilitate the application of S.114, i.e. FRED. While efforts have been made by Revenue and the ITI to inform taxpayers of their general entitlements to tax reliefs, the data collected in this study show that taxpayers remain ill-informed and confused by FRED. Consequently, the paper concludes with a number of recommendations to revise and update current practice.

It is recommended that a review of the legislation regarding employee expenses, which has been on the statute books since the introduction of income tax in Ireland in 1853, is long overdue. The rationale and equity in a distinction between expense deductions for the self-employed and employees should be explored and debated.

The current negotiation process to agree FRED introduces inequities with respect to expense deductions. There is an absence of transparency with regards to the negotiation process and the present unsatisfactory system, which is dependent on employee representatives initiating claims for FRED, should be replaced with a more regularised system. A full review of the list of allowances currently agreed should be undertaken with all anomalies removed and particular attention paid to those occupations which have not been reviewed for many years. Thereafter, these allowances should be subject to the same degree of scrutiny and review as other tax credits and given the same degree of visibility.

This study has found that significant numbers of taxpayers are not claiming their entitlements, particularly with regard to FRED, mainly due to lack of knowledge. Recent years have seen a move to granting tax relief at source where possible. Indeed the Joint Committee have called for the extension of this method of relief (Joint Committee on Finance and the Public Service, 2007). Since 2004, employers are responsible for the application of the valuation rules for the taxation of employee benefits. A similar obligation regarding employee expenses should be considered. Employers should be required to deduct FRED when arriving at taxable pay as they are currently required to do for pension and permanent health benefit premiums. Such arrangements are currently in place for comparable flat rate expenses in the UK. If this is deemed unacceptable, an alternative would be to amend the end of year return of details of employees' pay and tax deducted (P35) to include details of the employees' occupation. The Inspector of Taxes could then ensure that the relief is included on the employees' tax credit certificates. Either of these recommendations would negate the necessity for taxpayers to actively claim the relief or indeed to be aware of their entitlement to it. When increases are negotiated they should be automatically granted to relevant employees in the same manner in which increases in tax credits are applied. While acknowledging that increased efforts have been made in recent years to publicise the existence of FRED, more is required. If the recommendations above are not adopted greater effort must be made to educate employees as to their entitlements to this relief and encourage them to claim it.

This research is consistent with and contributes to the international literature on why taxpayers are remiss in claiming reliefs. However, further research is needed to explore why taxpayers who are aware of allowances and reliefs still fail to claim

their entitlements. In particular, the failure and possible reluctance of taxpayers to claim their full entitlements could be contrasted with citizens' willingness to engage with the social welfare system.

## ENDNOTES

- <sup>1</sup> Section numbers used throughout the paper are those of the most recent legislation, i.e. the Taxes Consolidation Act 1997 (hereafter known as TCA 1997).
- <sup>2</sup> The Irish Free State adopted existing British tax laws with effect from 1 April 1922.
- <sup>3</sup> E-mail correspondence with the Office of the Revenue Commissioners, 16 July 2009.
- <sup>4</sup> *Ibid.*
- <sup>5</sup> *Ibid.*
- <sup>6</sup> *Ibid.*
- <sup>7</sup> *Ibid.*
- <sup>8</sup> E-mail correspondence with the Revenue Press Office, 21 July 2009.
- <sup>9</sup> E-mail correspondence with the Office of the Revenue Commissioners, 16 July 2009.
- <sup>10</sup> A claim for tax relief on medical expenses must be submitted within four years.

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## SECURITISATION, TRANSPARENCY AND FAILURE RISK

Patricia C. O'Brien<sup>1</sup>  
University of Waterloo

### ABSTRACT

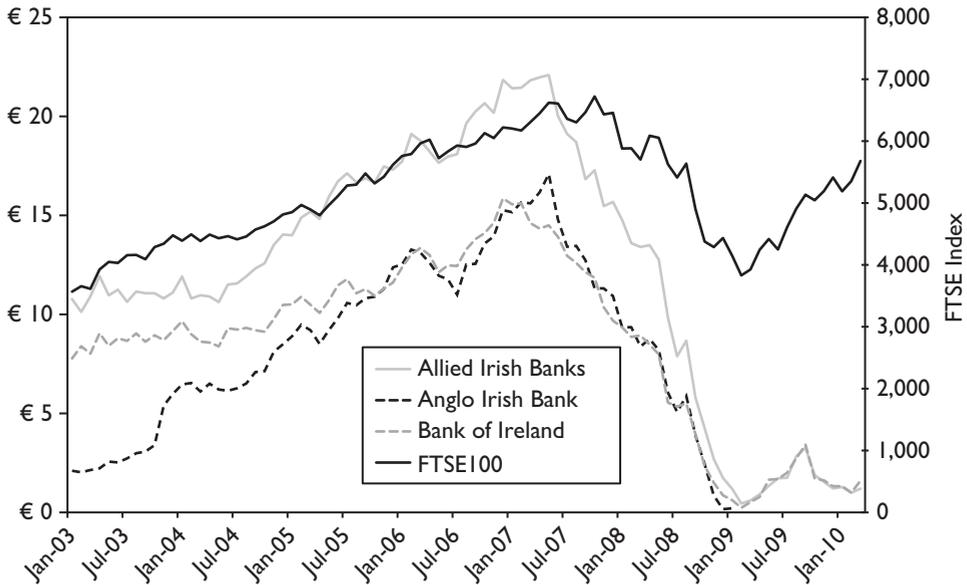
**B**anks and other financial companies use securitisation to redistribute risk and increase liquidity by pooling and selling assets. This paper reviews the typical set-up of a securitisation and its potential benefits and risks, including the tendency to concentrate risk in positions retained by the sponsor. The paper illustrates how the accounting for these transactions facilitates this risk concentration and impedes transparency. It discusses some academic evidence on securitisations and the role these complex transactions played in the recent financial crisis and in Ireland's banking sector afterwards.

### INTRODUCTION

In Ireland and elsewhere, the recent financial crisis triggered the failure of prominent financial institutions and required massive government intervention to prevent system-wide collapse. Figure 1 illustrates the crisis, plotting the share prices of three of Ireland's major banks (left vertical scale) and the *Financial Times 100* index (right vertical scale) from January 2003 through March 2010. The Irish government nationalised the scandal-plagued Anglo Irish Bank in January 2009, while Allied Irish Banks and the Bank of Ireland survived at much reduced valuations after receiving €7 billion in relief from Irish taxpayers in February 2009.

In a comprehensive discussion of the crisis in Ireland, Connor, Flavin and O'Kelly (2010) conclude that securitisations played little or no role in the Irish financial turmoil. Most commentators agree, however, that these structured transactions played a substantial role in the genesis of the crisis in the United States (US) (see, for example, Acharya, Cooley, Richardson and Walter (2009) and papers cited therein). This paper describes the economic substance and accounting form of typical

**FIGURE 1: BAILED-OUT IRISH BANKS AND FTSE-100, JAN 2003 – MAR 2010**

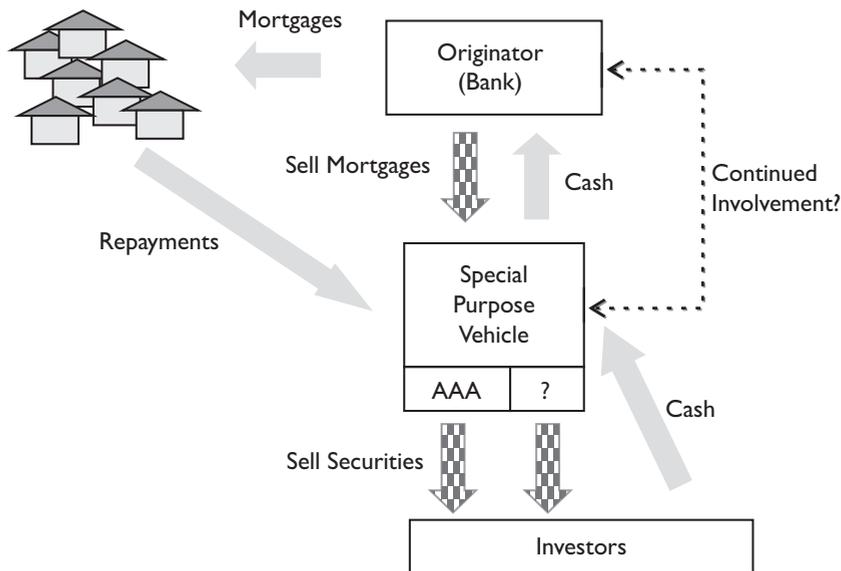


Data source: Yahoo! Finance

securitisations, and explains how the accounting results in a loss of transparency that foils both formal and informal regulatory mechanisms. It reviews academic studies that demonstrated, before the crisis took hold, the distortive effects of securitisations' off-balance-sheet status. The paper provides data to show why Ireland ought not be entirely complacent about these transactions, and concludes by offering views on how to account correctly and prudently for securitisations.

## SECURITISATION - A BRIEF REVIEW

Securitisations allow the sponsor, typically a bank or other financial company, to accelerate cash realisation from financial assets like mortgages. For brevity's sake, this paper refers to the sponsor as a bank and the underlying financial assets as home mortgages, though myriad variations exist. Figure 2 illustrates a securitisation. The bank lends to homeowners, whose homes stand as collateral for and whose wages will repay the mortgages. The bank then takes a pool of mortgages and transfers them to an entity created specifically for this purpose, called a 'special purpose vehicle' or SPV, in exchange for cash. The SPV raises cash by issuing securities to investors. The SPV has no other operations; its sole, special purpose is to issue securities funded by the bank's transferred loan portfolio. Typically, by design at least one of the SPV's securities is of very high credit quality, rated AAA by virtue of receiving the most secure and stable cash flows from the mortgage pool.

**FIGURE 2: SECURITISATION SCHEMATIC**

Creating these low-risk, premium tranche securities necessarily concentrates the risk of the mortgage pool in the other claims on the pool.

Advantages of securitisation include allowing the bank to diffuse some of its risks to other financial institutions or to investors, and increasing the supply of credit in the economy. Some believe that undiversified risks, such as the specific geographic risks of a local housing market, aggravated the US Savings and Loan crisis of the 1980s (see, for example, Kormendi, Bernard, Pirrong and Snyder, 1989; Loutskina and Strahan, 2011). If a bank can sell its local risks, and in turn buy unrelated risks from other banks, then it can lower its overall risk through diversification. Securitisations also allow banks to make new loans sooner, effectively increasing the supply of credit by accelerating cash recovery from long-term lending. The disadvantages of securitisation include the concentration of risks in lower-tier securities, mentioned above, along with creation of opaque structures that can evade regulatory scrutiny and capital requirements, as will be discussed in more detail below.

Because the SPV has no business activity, its value and risks derive entirely from the pool of assets transferred from the originating bank, along with any enhancements that it can purchase or the bank can provide. Originators employ a variety of mechanisms for ensuring the highest possible credit rating for at least one tranche of the SPV's securities. These include over-collateralisation, implicit or explicit guarantees from the originating bank and credit default insurance.

Banks need not use securitisation to distribute entity-specific risks or accelerate cash recovery from financial assets. They can, for example, sell whole loans or loan portfolios to other entities, without creating new securities or SPVs. Alternatively, banks can borrow, pledging the loan portfolio as collateral. The accounting for these two alternatives, described below, makes transparent the risks and rewards held by

the bank. That transparency is, one suspects, the primary reason that securitisation replaced these alternatives. The following simple example contrasts the three alternatives, namely sale without recourse, collateralised borrowing, and securitisation, to illustrate how the accounting for securitisation obscures its substance.

### EXAMPLE: SECURITISATION VERSUS LOAN SALES OR SECURED BORROWING

The example illustrated in Table 1 begins with an extremely simplified bank balance sheet. The bank holds €100 in loans, capitalised with €90 in borrowing (including deposits) and €10 of owners' equity. With a 10 per cent ratio of capital to assets, this bank is well capitalised. The bank wishes to convert the loan portfolio to cash more quickly than waiting for the borrowers to repay, so that it can make additional new loans. For simplicity, the example ignores the bank's earning activity outside of the sale of loans, to focus on its balance sheet. Because the bank seeks to raise cash more quickly than the loans' repayment period, and its earning from interest on loans would take place over that same time frame, this simplification is innocuous.

**TABLE 1: BALANCE SHEET COMPARISON OF NON-RECOURSE SALE, COLLATERALISED BORROWING AND SECURITISATION**

<b>Panel A Loan Sale without Recourse</b>				
	<b>Initial balances</b>	<b>Sells loans without recourse</b>		
<b>Assets</b>				
Cash	0	90		
Loans	100	0		
<b>Liabilities/Equity</b>				
Borrowings	90	90		
Capital	10	0		
<i>Capital ratio</i>	<i>10%</i>	<i>0%</i>		
<b>Panel B Collateralised Borrowing</b>				
	<b>Initial balances</b>	<b>Borrows using loans as collateral</b>	<b>Lends cash balance to customers</b>	<b>Borrows using loans as collateral</b>
<b>Assets</b>				
Cash	0	90	0	81
Loans	100	100	190	190
<b>Liabilities/Equity</b>				
Borrowings	90	180	180	261
Capital	10	10	10	10
<i>Capital ratio</i>	<i>10%</i>	<i>5%</i>	<i>5%</i>	<i>4%</i>

(Continued)

TABLE 1: (CONTINUED)

<b>Panel C Securitisation</b>				
	<b>Initial balances</b>	<b>Transfers loans to SPV</b>	<b>Lends cash balance to customers</b>	<b>Transfers loans to SPV</b>
<b>Assets</b>				
Cash	0	90	0	81
Loans	100	11	101	21
<b>Liabilities/Equity</b>				
Borrowings	90	90	90	90
Capital	10	11	11	12
<i>Capital ratio</i>	<i>10%</i>	<i>11%</i>	<i>11%</i>	<i>12%</i>
<b>Panel D Comparing the Three Options</b>				
	<b>Initial balances</b>	<b>Loan sale without recourse (Panel A)</b>	<b>Collateralised borrowings (Panel B)</b>	<b>Securitisation (Panel C)</b>
<b>Assets</b>				
Cash	0	90	81	81
Loans	100	0	190	21
<b>Liabilities/Equity</b>				
Borrowings	90	90	261	90
Capital	10	0	10	12
<i>Capital ratio</i>	<i>10%</i>	<i>0%</i>	<i>4%</i>	<i>12%</i>

In the case of non-recourse sale, shown in Panel A, the purchaser of the loan portfolio discounts its value, because it must accept the bank's representations about the borrowers' ability to repay and because the bank offers no recourse. In the example, the bank receives €90 for the portfolio it had carried at €100, and therefore recognises a €10 loss on the sale. The sale wipes out the bank's capital, causing alert regulators to shut the bank down, preventing it from making additional loans, and clarifying why banks avoid this alternative.

In the second alternative, shown in Panel B of Table 1, the bank borrows €90, secured against its €100 loan portfolio, raising its borrowing to €180. By over-collateralising the borrowing, the bank can obtain lower interest rates, but forgoes some principal. The bank can then lend the cash it has borrowed to homeowners, and can borrow against the new loans. Each round of borrowing, however, lowers the capital ratio. After the second round, the example bank is thinly capitalised, so vigilant regulators halt further replications of the strategy.

In Panel C of Table 1, the bank securitises the loan portfolio. The bank transfers the loan portfolio to an SPV, but it retains some interest. This interest may take the form of servicing rights on the loans to maintain the original contract with the homeowners, but generally also includes either an implicit or explicit risk position in the SPV. An explicit risk position, for example, would be to hold a lower-tier debt

security of the SPV. An implicit risk position could be an unwritten understanding that the bank will ensure the payoffs of the SPV's securities, without which understanding the bank would have difficulty making future securitisations.

Under the securitisation arrangement shown in Panel C, the bank must record the fair value of its contractual retained interests, and here the magic of accounting comes into play. Because no organised market exists for the retained interests, the bank estimates their fair value and records that value on its balance sheet. This estimate, along with the cash received, determines the gain or loss on the transfer of the loan portfolio. In the example, the bank receives €90 from the SPV and values its retained interests at €11, yielding a €1 gain on the transfer. The values in this example are purely fictitious and, for the sake of displaying the accounting effects of different arrangements, the example holds constant the cash received for the loan portfolio across the three arrangements. The notion of an estimated value for retained interests that yields a securitisation gain does no violence to reality: unlike the simpler non-recourse sale transaction shown in Panel A, few securitisation transactions result in a loss for the originating entity at the time of the asset transfer.

The bank in Panel C has improved its capital ratio to 11 per cent, while at the same time accelerating the cash recovery from its loan portfolio. As long as regulators accept this accounting, the securitisation puts the bank in an excellent position for another round of lending and securitisation. Panel D compares the three options, showing securitisation as the clear winner, in terms of the bank's apparent capital ratio.

## HOW IS THIS POSSIBLE?

The above-described 'magic of accounting' derives from two features of current accounting standards that enable banks to report gains when they transfer assets to SPVs. The first feature is an approach to valuation known as the financial components approach, under which the entity may value component parts of assets individually. An entity could, for example, value the stream of interest payments from the loan separately from the principal repayments, or value the 'servicing rights' on the loan separately from the primary cash flows. The financial components approach allows the entity to construct synthetic assets and liabilities, to replace the real underlying assets with the synthetic components, and to account for the components separately, including separate transfer or retention of individual components.

For this valuation approach to be conceptually valid the components themselves truly must be separate, that is, the risks and rewards of the various components must be independent of one another. Importantly, in most instances, the original assets remain unaltered by the securitisation. In our example, the households whose homes stand as collateral for and whose wages repay the mortgage loans generally see no change in the loan arrangements. The fundamental risks and rewards associated with a portfolio of loans, whether securitised or not, derives from those two things: the cash held or earned by the households, and the value of the homes as collateral; the degree of commonality of wages and of home values across the loans in the portfolio also plays a role. A valuation of synthetic components that ignores

their connection to these underlying fundamentals, and their interrelatedness via the fundamentals, is conceptually flawed.

The second feature of accounting standards that facilitates securitisation's magical accounting qualities is so-called 'fair' valuation. Most accountants agree that assets trading regularly in liquid, public markets can be valued reliably and verifiably, and that investors have an interest in learning these current values for assets held by the entity, particularly when the assets' values have declined. Fair values for assets that do not trade, and particularly for assets that are not cleanly separable from other elements of the business, remain controversial. The lack of genuine, arm's length transactions to provide credible evidence makes fair values for such assets at best educated guesses, and at worst fiction.

In securitisation, the fair valuation of retained interests, a synthetic asset or liability which cannot trade by definition of the word 'retained', determines whether the originating bank recognises a gain or a loss when it transfers assets to its SPV. These educated guesses or fictional values therefore do not merely inform investors about assets held. In securitisations, they allow the bank to manufacture equity capital through recorded gains from opaque transactions.

With assistance from these two aspects of accounting, financial component valuation and fair valuation of non-traded assets, securitisation achieves a near-perfect triumph of form over substance. Banks accelerate cash flow from loans by having an SPV borrow against the loans, so that the bank's balance sheet does not appear more levered. At the same time, the banks transfer loans to the SPV without incurring losses, by judicious fair valuation of non-traded components. The SPV, having no business of its own except to issue securities based on assets transferred by a single originating bank, exists to make the bank's real leverage and risk position opaque.

## SELECTED ACADEMIC RESEARCH

A few academics pointed out the hidden risk of securitisation transactions before the onset of the 2008–2009 crisis. They deserve credit for advocating an unfashionable position in an era when the risk may have appeared small. Rather than exhaustively review the literature, this summary discusses a small number of papers written prior to the crisis whose themes intersect with the topic at hand.

Rajan (2006) gives an excellent summary description of the costs and benefits of securitisation and other financial innovations. He describes 'hidden tail risks', i.e. risks of potentially catastrophic events that appear, based on limited history, to have extremely low probability. He also discusses the associated incentives for managers to create and retain such risks. So long as the bad event does not occur, managers can *appear* to generate impressive returns with little risk. He conjectures, with what now seems tremendous foresight, that many actors loading up on similar hidden tail risks could trigger systemic collapse.

The risk position in securitisation structures is precisely a hidden tail risk. The most secure cash flows from household mortgages are pledged to the safe tranches of the securitisation. The tail risk involves the joint event of the homeowner being unwilling or unable to meet the mortgage commitments and the home's collateral

value falling below the amount owed, for many borrowers at once. As long as property values rise, the joint event does not happen and the risk remains hidden. Such conditions make it easier for banks to convince regulators that they can repeatedly sell loans profitably to SPVs, retaining no risk. The risk becomes apparent only when conditions turn adverse.

Niu and Richardson (2006), using US evidence from the period 1997–2003, demonstrate that SPV debt securities increase the originating entity's systematic risk, or  $\beta$ , in the same way as the originator's on-balance-sheet debt. Moreover, they find investors assess the securitisation gains as riskier or less sustainable when the originator has more outstanding securitised assets held in SPVs. These authors propose that securitisations involve 'implicit recourse' to the originator, making the transactions closer to secured borrowing than to true sales.

Landsman, Peasnell and Shakespeare (2008) studied a broad cross-section of US firms engaging in securitisation between 2000 and 2004. Their methods differed, but their objective was similar to that of Niu and Richardson (2006): to determine whether securitisations constitute true asset sales or secured borrowing. They show that investors value originating entities as if they continue to own the SPV's assets and liabilities; hence the investors treat securitisations as secured borrowing by the originator.

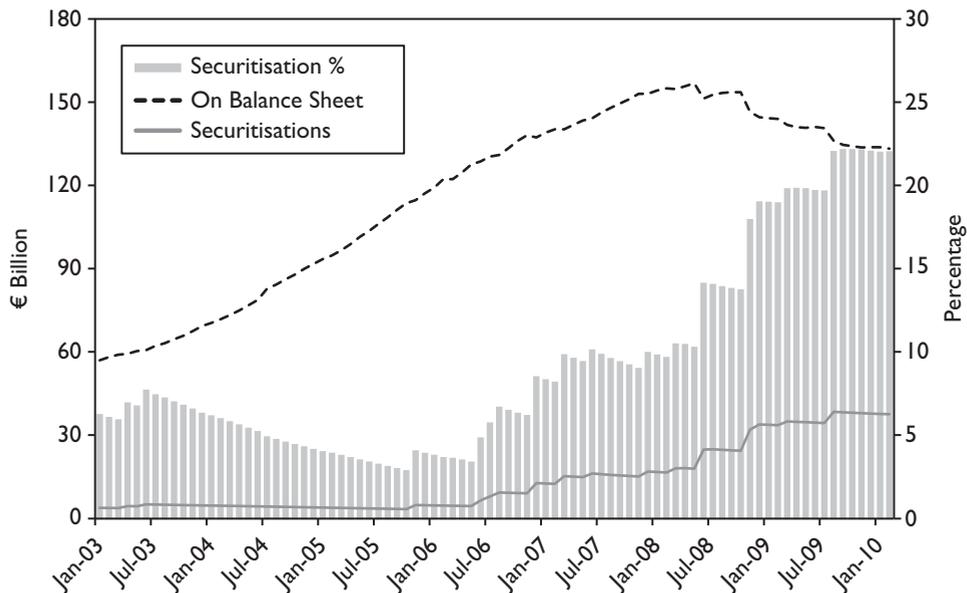
Using detailed data on individual securitisations by US banks from the period 2001–2006, Chen, Liu and Ryan (2008) distinguish between securitisations treated as sales of unique portfolios, such as those described in this paper's example, and revolving arrangements such as credit card securitisations. In the latter, the originator typically provides explicit recourse via contractual arrangements that accelerate payouts for underperforming assets. In the former type, these authors demonstrate that originators retain highly concentrated risk in 'first-loss' components.

The research cited above shows that some observers in the academic and investing communities found securitisation accounting lacking, even before the financial crisis. They confirm that treating securitisations as sales of individual components fails to reflect the risks and rewards retained by the entity.

## SHOULD IRELAND CARE?

All of the academic papers cited above use US data to make their points, and arguably the securitisation aspect of the crisis was isolated there. Why, then, should Ireland care about securitisation? To answer this question, Figure 3 employs data produced by the Central Bank and Financial Services Authority of Ireland.<sup>2</sup>

Figure 3 displays, for the period January 2003 through February 2010, the supply of credit by Irish banks (financial institutions excluding credit unions that are resident in Ireland) to Irish households. The black dashed line at the top of the graph shows the amount of credit held on the banks' balance sheets in billions of euro, as shown on the left-hand vertical axis. This line traces the credit expansion during the early part of the decade, until mid-2008, when the supply of credit apparently shrinks. The grey solid line closer to the bottom of the graph displays the amount of credit held in securitisation SPVs, also stated in billions of euro. The bar graph

**FIGURE 3: SUPPLY OF CREDIT TO IRISH HOUSEHOLDS FROM IRISH BANKS**

Data source: Central Bank and Financial Services Authority of Ireland

that forms a background to the line graph shows the proportion that securitisations form of the total Irish supply of credit to households, that is, the amount in SPVs divided by the sum of the SPV amount and the on-balance-sheet amount. The scale for the bar graph is on the right-hand vertical axis.

Figure 3 shows that the amount of household credit held in securitisations remained at 10 per cent or less until early 2007. Beginning in mid-2006, we see an expansion in Irish banks' use of securitisation, continuing through the crisis. By late 2009 and continuing into early 2010, Irish banks held about 22 per cent of household credit off balance sheet in securitisation vehicles. Thus, though securitisation may not have been a large factor before the crisis, it is a substantial and apparently growing feature of Irish banks' activities.

We cannot tell from these data who holds the securities issued by the SPV, nor which banks are most heavily involved as originators. Because the SPVs qualify as separate entities by design, sponsoring banks would not disclose the capital structure of these separate entities. Nor can we tell, bank by bank, the amount of assets held in securitisation vehicles, because of the paucity of disclosure once the assets are securitised. The transactions are designed for, and achieve, opacity.

## WHERE ARE THE MONITORS?

Academics, journalists and pundits have spilled oceans of ink describing failures by many parties who should have played monitoring roles to prevent the financial

collapse of 2008–2009.<sup>3</sup> For the accounting issues raised here, the most relevant potential monitors are financial reporting auditors and standard-setters, and bank auditors and regulators. Auditors ensure the entity has complied with the reporting standards or banking regulations. Securitisations, however, are structured precisely to conform to existing accounting standards and banking regulations, and to leave no role for an auditor's judgement to impose different accounting. Culpability, if any, therefore moves up to the level of the standard-setters and regulators. At this level, the monitors play a cat-and-mouse game against bankers, lawyers and accountants determined to write contracts that achieve the desired degree of opacity.

Consider, for example, US Financial Accounting Standards Board (FASB) Interpretation No. 46 (FIN46) (Financial Accounting Standards Board, 2003). To achieve the financial statement benefits of securitisation shown in Panel C of Table 1, companies must create their SPVs to appear independent. The favourable financial statement appearance would be undone if the originator were forced to consolidate the SPV; in that case the company would appear as in Panel B of Table 1, collateralised borrowing. Prior to 2003, accounting standards held that voting interests determined control and therefore consolidation. Companies exploited this to create SPVs in which the originating entity did not have majority voting control of the SPV's common equity, but nonetheless retained substantial financial and decision-making interest. Rather than abandoning the financial components approach, the FASB aimed to curtail this practice with FIN46, by broadening the criteria for consolidation to include the apportionment of risks and benefits.

FIN46 required originators to consolidate existing SPVs that met its criteria immediately, and to consolidate any future SPVs meeting its criteria from their inception. It is not difficult to predict the response by originating financial institutions: as quickly as possible, they wound up any SPVs that FIN46 required them to consolidate, designed new SPVs to miss the consolidation triggers set by the new interpretation, and continued their off-balance-sheet financing.<sup>4</sup> The standard-setters' role becomes one of trying to close loopholes without creating new ones, while companies intent on maintaining their off-balance-sheet activity seek to stay one step ahead of the standard-setters.

Banking regulators showed no apparent concern that securitisation might hide risk during this period. During the crisis, Irish banks adopted the Basel II framework, under which a bank can develop its own internal model of credit risk exposure and, if approved, use its model to compute its capital requirements. A look at the financial statements of two large Irish banks, Allied Irish Banks and Bank of Ireland, reveals that both reported higher core, Tier 1, and total capital measured at the same point in time under Basel II as compared with Basel I.<sup>5</sup> This suggests that their models discovered no 'hidden tail risk.'

## CONCLUDING REMARKS

This paper hopes to convey that the current accounting for securitisations obscures the risks retained by the originating entity. By allowing companies to account

piecemeal for synthetic components, rather than for entire contracts, accounting allows substantial financing activity to slip off balance sheet. By further allowing fair values on non-traded components to determine valuations, accounting allows originators to manufacture equity capital.

The academic research on the topic shows that investors treat securitised assets as if they continue to belong to the originating entity, and treat the securitisation debt as the originator's debt. A potential solution would be to return to the pre-financial-components practice of accounting for entire contracts, not for synthetic components. If a bank retains an interest in a loan, then accounting should not record the loan as transferred, and should record securities issued against it as secured borrowing. This all-or-nothing approach, widely dismissed as obsolete before the financial crisis, has at least the benefit of making the arrangement transparent.

Despite claims that securitisation played a relatively minor role in Irish banks' activities prior to the crisis, the evidence suggests that Irish banks have increasingly used this form of financing since 2007. In one respect, this is unsurprising, given securitisation's useful financial statement effects of accelerating cash flow without (apparently) increasing leverage, Irish banks' need to appear better capitalised, and securitisation's acceptance by bank regulators. On the other hand, securitisation's proven ability to mask risk is a cause for concern.

## ENDNOTES

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- <sup>2</sup> [http://www.centralbank.ie/polstats/stats/cmab/documents/ie\\_table\\_a.6\\_loans\\_to\\_irish\\_residents\\_-\\_outstanding\\_amounts\\_\(incl.\\_securitised\\_loans\).xls](http://www.centralbank.ie/polstats/stats/cmab/documents/ie_table_a.6_loans_to_irish_residents_-_outstanding_amounts_(incl._securitised_loans).xls), accessed 13 April 2010.
- <sup>3</sup> See, for example, White (2009) on credit rating agencies and financial regulators, Jorion and Zhang (2009) on counterparty risk, Ojo (2009) on bank regulators and Barth and Landsman (2010) on financial reporting.
- <sup>4</sup> See, for example, General Electric Corporation's 2003 Annual Report at note 29.
- <sup>5</sup> See Allied Irish Banks' Annual Financial Report 2008 at p. 34, and Bank of Ireland's Report & Accounts for the year ended 31 March 2008 at p. 5.

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## THE EFFECT OF THE BOARD OF DIRECTORS' QUALITY ON COMPENSATION FEES

**Daniel Zeghal and Sarra Elleuch**

*CGA-Accounting Research Centre, Telfer School of Management, University of Ottawa*

### ABSTRACT

**T***his paper examines the effect of the quality of the board of directors on the directors' compensation. The quality of the board of 204 Canadian firms is defined by adopting a scoring mechanism published by the Globe and Mail's 'Report on Business'. It is assessed based on four criteria: board composition, shareholding compensation, shareholder rights and disclosure.*

*Using univariate and multivariate statistical models, our results reveal that shareholding rights, shareholding compensation and disclosure are the significant components in explaining the level of compensation. However, the composition of the board does not have any impact.*

### INTRODUCTION AND MOTIVATION FOR THIS RESEARCH

Directors' compensation has received more attention in recent years after the many corporate scandals that have occurred since 2001. These scandals have shown the failure of governance mechanisms, such as boards, in spite of excessive remuneration delivered to directors.

Theoretically, the separation between ownership and management leads to agency problems. The board of directors is considered the primary means of aligning the interests of shareholders with those of managers (Fama and Jensen, 1983). Nevertheless, some barriers, such as informational asymmetry, and communication and coordination problems between directors, can influence the board's efficiency.

Remuneration can be a solution to these agency problems. In fact, board compensation is considered by agency theorists as a mechanism of active monitoring (e.g.

Fama and Jensen, 1983). The contracting theory holds that governance problems which reduce a board's effectiveness might be avoided by negotiating incentive compensation contracts with directors (Ryan and Wiggins, 2004).

While remuneration can be a solution to agency conflicts, it can also be a consequence of agency problems. The rent extraction theory (Chalmers, Koh and Stapledon, 2006) considers that compensation is a tool for directors to obtain excess private benefits at the expense of shareholders. Compensation is then viewed as a bargaining game between directors and managers.

In addition, recent research showed that ownership characteristics can influence the role of compensation. Ferrarini, Moloney and Ungureanu (2009) argued that in concentrated ownership companies, shareholders have enough information and can directly supervise the managers without the need for an incentive contract. The role of remuneration as a means of incentive is therefore less relevant.

Despite the expanding studies regarding the determinants of director compensation in the United States (US), little evidence is observed in other countries, especially in the context of firms with a concentrated structure.

Canada provides a particularly interesting context characterised by family-owned firms: boards with more concentrated ownership and smaller firms as compared to US companies (Klein, Shapiro and Young, 2005). Empirically, Gadhoun, Gueyié and Chahloul (2005) found that the average Canadian board size seems to be smaller than the average US one since Canadian firms are smaller. In addition, board members have the tendency to protect the position of shareholders who own a significant share of the firm. However, Canadian boards are more independent compared to American boards, with a higher proportion of external board members. Moreover, the director tenure in Canada is shorter than in the US (Gadhoun et al., 2005).

In such a context, it is interesting to treat the quality of the board and its impact on directors' compensation. Specifically, the question which we want to answer is this: does the good quality board receive more compensation than the bad one?

Using a data set of 204 Canadian companies published in the *Globe and Mail's* Games 2007 (McFarland, 2007), the objective of our paper is to examine the relationship between the quality of the board and its remuneration.

A large number of corporate governance studies used different governance practices as a measure of the quality of the board (Ryan and Wiggins, 2004; Yermack, 2004). This study proposes a synthesis measure of board quality which takes into consideration traditional measures along with other dimensions of corporate governance quality. Prior studies measure the quality of the board by board size, number of outside directors and chief executive officer (CEO)/chair split and other proxies. However, each of these measures is partial and cannot capture the quality of the board in its entirety. The main contribution of this research is to adopt a corporate governance index to capture the entire quality of the board.

Gompers, Ishii and Metrick (2003) argue that index construction is motivated by the many dimensions of corporate governance. It is therefore of value to combine the different elements of governance into one measure representing the quality of the firm's governance. According to their empirical results, they were able to show that an investment strategy based on a strongest governance index will earn

a high abnormal return. In our research, the board of directors' quality index provided by the *Globe and Mail* is based on four criteria: composition of the board of directors, shareholder compensation, shareholder rights and disclosure. Furthermore, we extend the existing literature on board compensation in the sense that we do not restrict the study of the remuneration to the total of the directors' fees as has been done in the majority of studies, but we also include the individual compensation of the directors as well as the chairperson's fees.

Using a univariate and a multivariate analysis, we find a positive relationship between the board's quality and the directors' compensation. In particular, shareholding rights, shareholding compensation and disclosure practices are significant components in explaining the level of compensation. However, the composition of the board has less impact on the directors' compensation.

This study is organised as follows: the next section summarises the previous studies on board compensation, while the following section illustrates the objective, the hypotheses and the conceptual model of our study. The fourth section presents the methodology used in this study and the empirical results are illustrated in the fifth section. The last section is devoted to the discussion and conclusion.

## PREVIOUS STUDIES ON THE RELATIONSHIP BETWEEN DIRECTORS' COMPENSATION AND DIRECTORS' QUALITY

Previous studies measured board quality in many ways and found contradictory results.

### Measures of the Quality of a Board of Directors

Many studies link the board's compensation to the effort expended by directors (e.g. Adams, 2005). The board's effort is captured by both the time devoted to its duties and the quality of its work. Others argue that the effort is not always an indicator of outcomes. Directors can spend a great amount of effort but without effectiveness. Therefore, we will treat the impact of both the board's effectiveness and the board's effort on compensation in two separate paragraphs.

#### *Measures of a Board's Effort*

Given the fact that the effort of the board is not directly observed, the amount of a director's effort is associated with economic attributes. The size of a firm and its performance are the most commonly evoked economic attributes in the literature. Thus, it is claimed, larger firms have complex operations and require more control (Demsetz and Lehn, 1985). The cost of inefficient control and the benefits of good governance are higher. Accordingly, firms will nominate well-qualified directors with more experience who ask for more remuneration in return.

The relationship between firm performance and board remuneration is also discussed in many studies. Main, Bruce and Buck (1996) redefine the problem of agency in the sense that the agent is the director and not the manager. Costs can be associated with the relationship between the shareholder (the principal) and the board (the agent) due to collusion between directors and managers. In order to

reduce these costs, incentive contracts are instituted. These contracts relate the compensation of the board to the performance provided to shareholders.

Others tried to measure directly the real effort of directors by using the number of directors' meetings as a proxy. As Adams (2005) proposed, when directors meet frequently, it is obvious that more effort is required.

#### *Measures of a Board's Effectiveness*

Many studies associate good governance with board independence. Yermack (2004) focused on the relationship between compensation and the presence of outside directors. Outside directors have the incentive to improve their reputations by making good decisions (Fama and Jensen, 1983). Their presence is necessary for the board's independence and is reflected in more effective boards. Therefore, their remuneration should be higher. This result is at odds with the hypothesis of Fama and Jensen (1983), which asserts that the quality of the outside directors' effort is better when they receive smaller payments. According to Fama and Jensen (1983), small payments give a more credible signal to the external market.

Ryan and Wiggins (2004) propose four measures of independence: size of the board, composition of the board, CEO tenure and CEO/chair duality. The large size of a board diminishes its quality since it creates problems in communication and coordination. It therefore increases the power of the CEO who influences the directors' decisions in his or her own best interests. Moreover, the tenure of the CEO who also presides over the board increases, which reduces the efficiency of the board.

#### **Results of Previous Studies**

Prior literature has showed contradictory results regarding the relationship between board quality and directors' compensation. One set of studies has suggested a positive relationship between good corporate governance and directors' compensation (e.g. Ryan and Wiggins, 2004), while another set has reported a negative relationship (e.g. Brick, Palmon and Wald, 2006). The contradiction in these results could be explained by the kind of variables used to measure board quality and the characteristics of the corporate ownership structure.

In fact, when researchers used firm size as a measure of a board's effort, all empirical studies found a positive relationship between firm size and board remuneration and confirmed this hypothesis in many contexts (Adams, 2005; Crespi-Cladera and Gispert-Pellicer, 2003; Fernandes, 2005; Andreas, Rapp and Wolff, 2009).

In contrast, when studies linked board compensation to firm performance, the empirical results were inconclusive. Some studies found a positive relationship (e.g. Brick et al., 2006) but others did not obtain any significant relationship between them (Fernandes, 2005). This divergence is explained by two factors. The first is the type of indicators used, i.e. the compensation-performance relationship is more significant when using capital market information (shareholder return) than accounting-based measures (return on assets). The second factor relates to the governance structure, which is weaker for concentrated firms. Crespi-Cladera and Gispert-Pellicer (2003) indicated that for such firms the remuneration of the board depends on the shareholders' wealth and not on accounting indicators.

When Brick et al. (2006) and Adams (2005) measured the real effort of directors, the results showed that board compensation is positively linked to the effort spent by directors. These results are confirmed by studies which measure the board effectiveness. For example, Yermack (2004) found a statistically significant and positive link between having outsiders on the board and compensation. Similarly, Ryan and Wiggins (2004), who argued that bad governance practices involve less remuneration, found a negative relationship between the total compensation and CEO tenure as well as board size. Specifically, when the CEO gains more power than the board, the total compensation decreases, which leads to weaker incentives to control.

However, other authors sustained the negative link between compensation and board quality. In fact, Brick et al. (2006) indicated that directors receive larger compensation when the CEO is also the chairperson and concluded that such an environment reflects weak governance.

This negative relationship is also validated in the concentrated ownership context. In fact, Andreas et al. (2009) underlined that in Germany, the ownership concentration is an alternative tool in place to align directors' interests with those of shareholders. The presence of this tool diminishes the level of compensation (Bryan and Klein, 2004; Hartzell and Starks, 2003).

## RESEARCH OBJECTIVE, HYPOTHESES AND CONCEPTUAL MODEL

Several studies examining the relationship between a board's quality and compensation fees revealed a significant impact. However, the sign of this link varied according to the measures chosen by the researcher and the ownership characteristics.

In Canadian firms, the structure of the board is more concentrated than in US ones and the presence of independent directors is remarkable. Since a high level of ownership concentration is considered an indicator of a high level of supervision, we can suppose that the function of monitoring in Canadian corporate governance is strong. We can therefore estimate that the monitoring function of the Canadian board is less relevant and the effort spent by directors is not necessarily compensated by high rewards.

However, Canadian corporate boards are also characterised by smaller sizes, independent directors and having separate CEO and chairperson positions. These characteristics lead to a more effective corporate governance and improve both the monitoring and advising functions of the board:

**H<sub>1</sub>:** The board's quality is positively associated with the level of directors' compensation.

Prior literature used many variables to measure the quality of the board. All these measures are incomplete and not relevant since none of them examines the quality of the board as a whole.

The objective of this study is to analyse the impact of a board's quality on compensation fees by improving the measures of the board's characteristics. We extend

the notion of the board's quality to include not just one criterion but a set of criteria reflecting the best practices of directors. This set is developed from the 'Report on Business' published in the *Globe and Mail* by McFarland (2007). It is based on the recommendations of regulators, major institutional investors, academics and the industry associations in the US and Canada.<sup>1</sup> It is the most comprehensive index publicly available in Canada on corporate governance rankings.<sup>2</sup> The main advantage of this index is its possibility to aggregate a variety of governance indicators. Many previous studies have used this index (e.g. Klein et al., 2005; Niu, 2006; Adjaoud, Zeghal and Andaleeb, 2007). The limit of the use of this index consists in the arbitrary choice of the items and the weights attached to them (Klein et al., 2005).

Based on this index, four components of good quality are taken into account: board composition, shareholding compensation, shareholder rights and disclosure. A more comprehensive discussion of the index and its components will be brought up in the methodology section.

The composition of the board refers to its independence and structure. The independence of the board is crucial to effective governance. According to most of the previous literature, we suppose that the board's compensation is positively linked to the composition of the board and therefore to its degree of independence:

**H<sub>2</sub>:** The composition of the board is positively associated with the level of directors' compensation.

Independence, good structure and effectiveness of the board are not however sufficient to measure good quality as a whole.

The shareholding compensation is the second component that measures the degree to which managers and the board have incentives to act in the best interests of shareholders. Ensuring that directors' own equity is a meaningful part of remuneration enhances the convergence of directors' and shareholders' interests. It is then another way to make directors more implicated in their monitoring and advertising functions. We therefore predict a positive relationship between shareholding compensation and board remuneration:

**H<sub>3</sub>:** Shareholding compensation is positively associated with the level of directors' compensation.

Stronger governance is also measured by more shareholder rights, which constitute the third component. When many shareholders have an influence over the selection of directors and the level of their appointments, it is in the interests of the members of the board to engage actively in improving the performance of the firm according to shareholders' plans. We suppose that the strong shareholder rights give directors more incentives to ameliorate their skills and this increases the level of their compensation:

**H<sub>4</sub>:** Shareholder rights are positively associated with the level of directors' compensation.

Disclosure is the last component which attempts to measure the public commitment of the firm to good governance. The presence of such disclosure increases the pressures faced by the board in order to adopt decisions that align its interests with those of the shareholders. In fact, it enables shareholders to evaluate the extent to which management and directors are involved in their company. So, it allows more protection for the rights of minority shareholders. The absence of such information creates agency problems and inefficient compensation policies (Andjelkovic, Boyle and McNoe, 2002). We then consider the positive link between disclosure and compensation:

**H<sub>5</sub>:** Disclosure is positively associated with the level of directors' compensation.

However, as identified by the literature, there are other economic attributes that might have an impact on the directors' remuneration, such as firm size, performance and complexity. We therefore introduce these attributes as control variables in the model.

As mentioned in previous studies, we suppose that larger firms carry out complex operations and require, therefore, more monitoring. This is provided by selecting the best qualified directors who will also demand higher remuneration. The level of directors' compensation might be related to difficulties in controlling the managers. We hypothesise that firm size and complexity have a positive impact on compensation fees:

**H<sub>6</sub>:** Firm size is positively associated with the level of directors' compensation.

**H<sub>7</sub>:** The complexity of the firm is positively associated with the level of directors' compensation.

As discussed in previous studies, the board's compensation-performance relationship diminishes as the concentration of ownership increases. Since Canadian firms have more concentrated ownership structures than US ones (Klein et al., 2005), we presume the existence of a weak relationship between Canadian firms' performance and the level of directors' compensation:

**H<sub>8</sub>:** The performance of the firm is not associated with the level of directors' compensation.

Prior literature also showed a link between the directors' and the CEO's compensations. We assume that in Canadian firms characterised by ownership concentration, the bargaining power between directors and CEO is not significant. We therefore suppose that directors' and CEO's compensations are related to each other due to the skill and effort needed to manage the firm. Therefore, the level of CEO pay has a significant impact on board remuneration:

**H<sub>9</sub>:** The level of CEO pay is positively associated with the level of directors' compensation.

## METHODOLOGY

### Sample Selection and Characteristics

Sample data were collected from the study representing the complete list of Canadian firms in the *Globe and Mail's* Games 2007, published in the 'Report on Business' (McFarland, 2007). It consists of 204 firms from the year 2007. This year was chosen because it precedes the financial crisis which started in 2008. The choice of the year 2007 therefore enables us to avoid the biases of the crisis. The sample includes most industrial sectors such as manufacturing, minerals, agriculture, financial services and retail trade. These firms are ranked from 1 to 204 based on Board Games 2007's rating criteria.

The data related to directors' fees and CEO compensation were collected from *Financial Post Magazine* (2008), COMPUSTAT<sup>3</sup> research insight and proxy circulars, the remaining data were collected from the Stock Guide database for 2008;<sup>4</sup> any missing information was collected from the audited financial statements for the year 2007 reported by www.sedar.com.<sup>5</sup>

Business activities are described by adopting the typology of the *Globe and Mail's* Board Games 2007 using a coded system from 1 to 10 representing the following: consumer discretionary, consumer staples, energy, financial, health care, industrials, information technology, materials, telecom services and utilities. Almost half of the sample is concentrated in two areas, energy and materials. The other half is distributed between the eight other areas (see Table 1).

**TABLE 1: CLASSIFICATION OF FIRMS BY INDUSTRY TYPE**

Type of Industry	Number	Percentage
Telecom services	4	1.96%
Utilities	5	2.45%
Health care	11	5.40%
Information technology	11	5.40%
Consumer staples	13	6.37%
Industrials	16	7.84%
Consumer discretionary	22	10.78%
Financial	25	12.25%
Energy	44	21.57%
Materials	53	25.98%
<i>Total</i>	204	100%

### Board Quality

Unlike prior literature, which presents many determinants related to governance variables, such as board size, number of outside directors, CEO duality and number of board meetings (Adams, 2005; Crespi-Cladera and Gispert-Pellicer, 2003; Ryan and Wiggins, 2004; Yermack, 2004; Brick et al., 2006; Andreas et al.,

2009), our main contribution is to use measures of the quality of the board in terms of four components provided by the 'Report on Business' published in the *Globe and Mail* by McFarland (2007). Each component is comprised of different items. Points are allocated for each item by referring to the information published in the companies' proxy information circulars for shareholders and compiled by the *Globe and Mail's* 'Report on Business'. A score is assigned to each component by summing the total of points. The different items and points established are presented in Appendix 1.

The first component is composition of the board. This includes the major important characteristics designated by the literature such as independence, compensation committee, presence of women in the board, split chairperson/CEO, board performance and board meetings.

The independence factor and the presence of an audit committee reflect good monitoring practices. Moreover, the presence of women in the board creates diversity and improves the governance mechanisms. Some studies found evidence of the positive relationship between the presence of women and financial performance (e.g. Stephenson, 2004). The increase of such performance may be rewarded by more appointments. The existence of a system with many details to evaluate the board performance is another item that improves the quality of the board. The composition of the board component has a maximum of 37 marks. More than 29 marks are allocated to the board's independence.

The second component concerns the shareholding compensation and includes the ownership of directors and CEOs as well as their compensation policies. Marks are allocated when directors own equity. In this case, the directors' interests are better aligned with corporate goals and strategies and this improves the quality of the board. In addition, when the disclosure system on loans to senior executives, CEO bonuses or CEO pension plans is perfect, it can align managers' compensation packages with their performance. The disclosure of such information limits management power and improves the accountability of directors. This component has a maximum of 25 marks.

The third component is shareholder rights. It is related to the shareholders' ability to vote for individual directors and the majority voting policy. It refers to the power of shareholders to nominate or obstruct the directors. Firms with strong shareholder rights will better coordinate the interests of directors and those of shareholders. For example, marks are allocated if there are no dual-class shares, zero marks otherwise. This component has a maximum of 28 marks.

The last component is related to disclosure. When the board presents to the public the CEO's/directors' compensation policies and the detailed board members' biographies, informational asymmetry problems are reduced. This reflects the transparency of the board and the experience of its members. Marks are allocated to firms that disclose corporate governance practices. This component has a maximum of 10 points.

For each firm, a score is obtained by summing the marks related to all four characteristics, with a maximum value of 100.<sup>6</sup> This score is indicated by 'total marks' in the discussion below.

### Univariate and Multivariate Analyses of the Effect of Board Quality on Compensation Fees

To analyse the relationship between the directors' compensation and the quality of the board, we conducted univariate analysis where the dependent variables are regressed on each quality component. Next, we realised multivariate regressions to show the effect of the board's quality components on the directors' compensation.

Directors' fees measures =  $b_0 + b_1 \text{Log}(\text{Board composition}) + b_2 \text{Log}(\text{Shareholding compensation}) + b_3 \text{Log}(\text{Shareholder rights}) + b_4 \text{Log}(\text{Disclosure}) + \varepsilon$

Finally, we studied the effect of the quality of the board on directors' fees in the presence of control variables using the following model:

Directors' fees measures =  $b_0 + b_1 \text{Log}(\text{Total marks}) + b_2 \text{Log}(\text{Firm size}) + b_3 \text{Log}(\text{CEO compensation}) + b_4 (\text{Performance}) + b_5 \text{Log}(\text{Complexity}) + b_6 (\text{Industry}) + \varepsilon$

Where:

- Firm size is measured by natural logarithm of total assets
- CEO compensation is measured by the total compensation defined as the annual plus the long-term compensation (which includes vested restricted stock grants and 'stock gains' - the value realised from exercising stock options during the just-concluded fiscal year)
- Firm performance is measured by ROA (return on assets)
- Complexity of the firm refers to the firm's research and development (R&D) expenditures and the amount of capital invested (measured by natural logarithm of total assets/board size)
- Industry is coded 1-10 representing the following: consumer discretionary, consumer staples, energy, financial, health care, industrials, information technology, materials, telecom services and utilities

To detect the possible relationships between different explanatory variables, we computed a correlation matrix by examining the Pearson coefficient. Besides correlations, we also checked for multicollinearity among variables that we used by performing the variance inflation factor (VIF).

## EMPIRICAL RESULTS

### Results of Descriptive Statistics

As reported in Table 2, the sample includes both small and large firms since the variables present a wide difference between their means and medians and between their minima and maxima (the firm size being measured by the natural logarithm of total assets). These firms show gains and losses but, on average, Canadian firms realise a profit and only 38 firms (19 per cent) were subject to a loss.

It is important to signal that, as in US firms, Canadian CEOs receive higher levels of compensation than the chairperson and the members of the board since, on average, the total CEO fees exceed CA\$3,464,000 whereas the chairperson and the directors receive only CA\$150,000 and CA\$52,000 respectively. It is worth noting that the CEO's compensation is measured by the *annual compensation* (calculated

as the CEO's salary plus bonuses) and the *total compensation* defined as the annual plus the long-term compensation (which includes vested restricted stock grants and stock gains – the value realised from exercising stock options during the just-concluded fiscal year (*Financial Post Magazine*, 2008)).

**TABLE 2: DESCRIPTIVE STATISTICS OF SAMPLE CHARACTERISTICS**

*Panel A: Firm Characteristics*

	<b>ROA %</b>	<b>Total Assets (000,000s)</b>	<b>Complexity (000,000s)</b>	<b>Annual CEO Compensation (000s)</b>	<b>Total CEO Compensation (000s)</b>
Mean	4.38	18,759	1,303	1,521	3,464
Median	4.58	2,127	232	1,150	1,966
Minimum	-94.21	24.8	2.7	6	6
Maximum	42.77	536,780	33,548	13,685	20,294
Standard deviation	12.63	64,342	3,969	1,478	3,743

Complexity of the firm is measured by total assets/board size.

Annual CEO compensation is calculated as the CEO's salary plus bonus.

Total CEO compensation is measured by the annual plus the long-term compensation which includes vested restricted stock grants and stock gains – the value realised from exercising stock options during the just-concluded fiscal year.

*Panel B: Directors' Fees Variables*

	<b>Individual Directors' Fees (000s)</b>	<b>Sum of Individual Directors' Fees (000s)</b>	<b>Chairperson's Fees (000s)</b>	<b>Total Directors' Fees (000s)</b>
Mean	52	592	150	742
Median	40	399	112	521
Minimum	0	0	0	0
Maximum	249	3,486	1,000	4,240
Standard deviation	42	565	165	667

Individual directors' fees: retainer and meeting fees for serving on various board committees.

The total includes cash and stock compensation for directors.

Total directors' fees: sum of individual directors' fees + chairperson's fees.

Table 2 also presents descriptive statistics of the directors' fees variables. It includes the directors' individual compensation, the sum of individual compensations, the chairperson's compensation and the total compensation. On average, the Canadian directors' fees exceed CA\$52,000 but the chairperson's fees are more than CA\$150,000 on average.

Table 3 presents the details of the descriptive statistics for this score and its components. Like Adjaoud et al. (2007), we found the mean and median of the total marks and its components to be very close. The score has a mean of 65.07 and a median of 64. However, the minimum and maximum values and the standard deviation of the four components indicate a wide variation within the sample. For example, the highest chairperson compensation is \$1,000,000 and the lowest is

zero. It also appears that composition of the board represents the highest proportion (76.59 per cent = 28.34/37) whereas disclosure represents the lowest proportion (51.2 per cent = 5.12/10).

**TABLE 3: MEASURES OF BOARD QUALITY ACCORDING TO THE GLOBE AND MAIL'S 'REPORT ON BUSINESS' 2007**

Variable Label	Total Marks	Board Composition	Compensation	Shareholder Rights	Disclosure
Mean	65.07	28.34	14.43	17.15	5.12
Median	64	29	14	18	5
Minimum	33	10	2	3	1
Maximum	96	36	24	28	10
Standard deviation	13.57	5.96	4.58	5.86	1.98
Total marks allowed	100	37	25	28	10

### Results of Univariate Tests

The results of univariate regressions are presented in Table 4. This table reports the results for individual directors' fees, the sum of individual directors' fees, chairperson's fees and total directors' fees.

As seen in this table, director compensation, measured by the four criteria, is positively and significantly related to the quality of the board and its components. The first hypothesis is therefore verified. Only board composition is not significantly related at the 1 per cent level if director compensation is measured by individual fees or the sum of individual directors' fees. 'Total marks' seems to be the best measure of the board's quality to explain the board's compensation since it has the highest adjusted R<sup>2</sup> (17 per cent).

In terms of the four criteria of the board's quality, disclosure is the one most correlated with the dependent variable with adjusted R<sup>2</sup> = 12 per cent.

**TABLE 4: EMPIRICAL RESULTS OF UNIVARIATE REGRESSIONS BETWEEN DIRECTORS' FEES AND BOARD'S QUALITY**

	Dependent Variables			
	Individual Directors' Fees	Sum of Individual Directors' Fees	Chairperson's Fees	Total Directors' Fees
Constant	2.10 (4.09)***	2.17 (3.47)***	1.67 (2.61)***	2.20 (3.70)***
Log( <i>Total Marks</i> )	1.38 (4.92)***	1.89 (5.53)***	1.89 (5.50)***	1.94 (6.00)***
R-squared	12%	14%	17%	16%
Constant	3.86 (10.2)***	4.59 (9.49)***	3.34 (6.9)***	4.46 (9.6)***
Log( <i>Board composition</i> )	0.51 (2.00)**	0.69 (2.10)**	1.21 (3.73)***	0.85 (2.72)***
R-squared	2%	2%	7%	3%
Constant	3.86 (25.3)***	4.51 (22.7)***	4.15 (21.8)***	4.46 (24.1)***
Log( <i>Shareholding compensation</i> )	0.65 (5.08)***	0.95 (5.7)***	0.84 (5.21)***	0.91 (5.61)***
R-squared	8%	11%	11%	10%

(Continued)

TABLE 4: (CONTINUED)

	Dependent Variables			
	Individual Directors' Fees	Sum of Individual Directors' Fees	Chairperson's Fees	Total Directors' Fees
Constant	3.90 (27.0)***	4.76 (24.7)***	4.33 (18.0)***	4.80 (26.2)***
Log(Shareholder rights)	0.54 (4.53)***	0.68 (4.36)***	0.63 (3.44)***	0.68 (4.54)***
R-squared	7%	7%	6%	7%
Constant	4.10 (33.1)***	5.00 (30.0)***	4.6 (30.3)***	5.12 (30.6)***
Log(Disclosure)	0.63 (3.76)***	0.86 (3.87)***	0.72 (3.53)***	0.86 (3.86)***
R-squared	10%	12%	9%	12%

In our regressions, we follow the literature in using the logarithm of the directors' compensation.

$\text{Log}(\text{Directors' fees})$  measures =  $a + b_i \text{factor} + \varepsilon$ .

Absolute value of  $t$  statistics is in parenthesis.

\* Statistically significant at the 0.10 level; \*\* statistically significant at the 0.05 level; \*\*\* statistically significant at the 0.01 level.

### Results of Multivariate Tests

Table 5 shows the multivariate regressions between the directors' fees and board's quality components. It shows that shareholding compensation and shareholder rights are significantly linked to the directors' fees at the 1 per cent level. The disclosure component also has a significant impact but only at the 5 per cent level. These results therefore verify the third, fourth and fifth hypotheses. On the other hand, we did not find any relationship between the composition of the board and the directors' compensation. These results confirm those obtained by the univariate analysis and do not verify the second hypothesis. Moreover, Table 5 shows that there is no significant relationship between ranking variables and the chairperson's fees.

In accordance with the findings of Fama and Jensen (1983), our results indicate that boards with more independent members or a separate CEO and chairperson receive less remuneration. By giving small payments, the quality and integrity of the independent board should be more securely guaranteed. It also appears that boards with strong shareholder rights and compensation have more power to increase their compensation.

Before providing the results of multivariate regressions in the presence of control variables, we present the correlation matrix in Table 6. As seen in Panel A of this table, total marks seem to be higher for large firms and firms with higher CEO compensation. Among the sub-ranking criteria, disclosure is the one most correlated with the explanatory variables. The board's composition is the least correlated. Additionally, there is a strong positive correlation between the size and the complexity of the firm (coefficient = 0.989) on the one hand and between these two variables and CEO compensation (coefficient = 0.64) on the other hand (see Table 6). Thus, larger firms appear more complex and their CEOs, as well as their directors, exert more effort to realise higher benefits. We would expect board compensation to be higher in bigger firms and in those operating in more uncertain environments.

**TABLE 5: EMPIRICAL RESULTS OF MULTIVARIATE REGRESSIONS BETWEEN DIRECTORS' FEES AND BOARD'S QUALITY COMPONENTS USING MODEL:**

Directors' fees measures =  $b_0 + b_1 \text{Log}(\text{Board composition}) + b_2 \text{Log}(\text{Shareholding compensation}) + b_3 \text{Log}(\text{Shareholder rights}) + b_4 \text{Log}(\text{Disclosure}) + \varepsilon$

	Dependent Variables			
	Individual Directors' Fees	Sum of Individual Directors' Fees	Chairperson's Fees	Total Directors' Fees
Constant	3.615 (10.7)***	4.261 (9.77)***	3.147 (6.56)***	4.100 (9.84)***
Board composition	-0.17 (0.8)	-0.267 (0.88)	0.505 (1.53)	-0.035 (0.12)
Shareholding compensation	0.400 (3.24)***	0.640 (3.98)***	0.454 (2.50)**	0.553 (3.57)***
Shareholder rights	0.409 (3.66)***	0.500 (3.34)***	0.371 (1.80)*	0.484 (3.22)***
Disclosure	0.438 (2.430)**	0.576 (2.34)**	0.369 (1.72)*	0.567 (2.26)**
R-squared	17.21%	20.10%	18.48%	20.04%
Observations	204	204	204	204

In our regressions, we follow the literature in using the logarithm of the directors' compensation.

Absolute value of *t* statistics is in parenthesis.

\* Statistically significant at the 0.10 level; \*\* statistically significant at the 0.05 level; \*\*\* statistically significant at the 0.01 level.

The mean of the VIF (18.07) is consistent with these results since it is higher than 10, indicating a serious problem of multicollinearity.

The existence of some correlations prevents us from including all variables in the same regression. We therefore put the correlated explanatory variables in separate regressions and not in the same one (see Table 7).

The results of these regressions are consistent with our prediction that the board's quality should be positively and significantly related to its remuneration even when we control by using the variables of governance, performance and other characteristics (see Table 7). Similarly, we find that the directors' compensation is generally positively related to the firm's size and its more complex environment.

Additionally, there is a significant positive relationship between the CEO and the directors' compensation variables, revealing that large and complex firms are more difficult to control and therefore need more effort and skill from both CEO and directors. This can explain the strong positive relationship between the remuneration of the two functions. The sixth, seventh and ninth hypotheses are also confirmed.

Brick et al. (2006), on the other hand, provide another explanation, claiming that the positive relationship can be due to cronyism. In the Canadian context, we sustain the first explanation since the bargaining power between managers and directors decreases in firms with strong shareholder rights.

As reported in Table 7, the type of industry does not have any impact on remuneration. The firm performance is not a determinant of the board's compensation since ROA is not significant at the 5 per cent level in any model used. The eighth hypothesis is therefore verified. As suggested by Crespi-Cladera and Gispert-Pellicer (2003), a plausible explanation of this finding may be that in a firm characterised by a higher ownership concentration, as in Canadian companies, the board compensation-performance relationship is weak. Finally, all the hypotheses that have previously been developed are accepted except for the second one, which

TABLE 6: CORRELATION METRICS

Categories	Annual CEO Compen- sation	Total CEO Compen- sation	ROA	Total Assets	Complexity	Board Composition	Shareholding Compensation	Share- holder Rights	Disclosure	Total Marks
Annual CEO compensation	1	0.791**	0.19**	0.58**	0.569**	0.293**	0.254**	0.068	0.328**	0.324**
Total CEO compensation		1	0.25**	0.64**	0.623**	0.309**	0.356**	0.188**	0.401**	0.432**
ROA			1	0.155*	0.169*	-0.009	0.095	0.05	0.179*	0.084
Total assets				1	0.989**	0.137*	0.394**	0.248**	0.361**	0.387**
Complexity					1	0.119	0.374**	0.238**	0.355**	0.363**
Board composition						1	0.38**	0.254**	0.363**	0.782**
Shareholding compensation							1	0.177*	0.428**	0.684**
Shareholder rights								1	0.209**	0.637**
Disclosure									1	0.581**
Total marks										1

\*Statistically significant at the 0.05 level, \*\* statistically significant at the 0.01 level.

states that the composition of the board is positively associated with the level of the directors' compensation.

**TABLE 7: EMPIRICAL RESULTS OF MULTIVARIATE REGRESSIONS BETWEEN DIRECTORS' FEES, BOARD'S QUALITY AND CONTROL VARIABLES USING MODEL:**

Directors' fees measures =  $b_0 + b_1 \text{Log}(\text{Total marks}) + b_2 \text{Log}(\text{Firm size}) + b_3 \text{Log}(\text{CEO compensation}) + b_4 (\text{Performance}) + b_5 \text{Log}(\text{Complexity}) + b_6 (\text{Industry}) + \varepsilon$

<b>Dependent Variables</b>			
<b>Individual Directors' Fees</b>			
	<i>Model (1)</i>	<i>Model (2)</i>	<i>Model (3)</i>
Constant	1.48 (3.04)***	1.9 (4.35)***	1.91 (4.33)***
Log( <i>Total marks</i> )	0.79 (2.73)***	0.67 (2.79)***	0.74 (3.03)***
Log( <i>Firm size</i> )		0.21 (7.8)***	
Log( <i>CEO compensation</i> )	0.25 (4.03)***		
Performance	2e-03 (1.46)	3e-03 (1.96)**	3e-03 (1.79)*
Complexity			0.23 (7.31)***
Industry	6e-03 (0.75)	0.01 (1.47)	0.01 (1.33)
R-squared	25%	32%	31%
<b>Sum of Individual Directors' Fees</b>			
	<i>Model (1)</i>	<i>Model (2)</i>	<i>Model (3)</i>
Constant	1.24 (2.21)**	1.84 (3.95)***	1.87 (3.87)***
Log( <i>Total marks</i> )	1.06 (2.96)***	0.84 (3.16)***	1.00 (3.52)***
Log( <i>Firm size</i> )		0.33 (10.9)***	
Log( <i>CEO compensation</i> )	0.37 (4.61)***		
Performance	1e-03 (0.5)	2e-03 (1.00)	2e-03 (0.9)
Complexity			0.34 (8.86)***
Industry	3e-03 (0.35)	8e-03 (0.82)	6e-03 (0.60)
R-squared	29%	34%	37%
<b>Chairperson's Fees</b>			
	<i>Model (1)</i>	<i>Model (2)</i>	<i>Model (3)</i>
Constant	1.29 (2.01)**	1.85 (3.06)***	1.84 (3.01)***
Log( <i>Total marks</i> )	1.04 (2.96)***	0.91 (2.63)***	1.04 (3.00)***
Log( <i>Firm size</i> )		0.23 (6.73)***	
Log( <i>CEO compensation</i> )	0.29 (4.63)***		
Performance	-4e-03 (0.16)	2e-04 (0.10)	2e-04 (0.11)
Complexity			0.23 (6.27)***
Industry	0.01 (1.24)	0.01 (1.70)	0.01 (1.55)
R-squared	25%	30%	28%

(Continued)

TABLE 7: (CONTINUED)

	Total Directors' Fees		
	Model (1)	Model (2)	Model (3)
Constant	1.36 (2.49)***	1.80 (4.09)***	1.91 (4.03)***
Log( <i>Total marks</i> )	1.21 (3.47)***	0.99 (3.75)***	1.14 (4.07)***
Log( <i>Firm size</i> )		0.30 (9.83)***	
Log( <i>CEO compensation</i> )	0.33 (4.54)***		
Performance	2e-04 (0.09)	9e-04 (0.44)	9e-04 (0.40)
Complexity			0.30 (8.55)***
Industry	6e-03 (0.61)	0.01 (1.07)	9e-03 (0.85)
R-squared	27%	38%	34%

In our regressions, we follow the literature in using the logarithm of the directors' compensation.

Firm size is measured by natural logarithm of total assets; CEO compensation is measured by the total compensation defined as the annual plus the long-term compensation (which includes vested restricted stock grants and stock gains – the value realised from exercising stock options during the just-concluded fiscal year); firm performance is measured by ROA; complexity of the firm refers to the firm's R&D expenditures and the amount of capital invested (measured by natural logarithm of total assets/board size); industry is coded 1–10 representing the following: consumer discretionary, consumer staples, energy, financial, health care, industrials, information technology, materials, telecom services and utilities.

The results using 'Annual CEO Compensation' instead of 'Total CEO Compensation' are not different.

\* Statistically significant at the 0.10 level; \*\* statistically significant at the 0.05 level; \*\*\* statistically significant at the 0.01 level.

## DISCUSSION AND CONCLUSION

This study investigates the link between the board's quality and the directors' compensation in the Canadian context. Contrary to previous literature, which used traditional measures of the board's quality, we use the measure provided by the 'Report on Business' published in the *Globe and Mail*, which synthesises several characteristics of the board. It is defined by a score used by McFarland (2007). Based on this score, the sample of 204 Canadian firms is ranked on four components: board composition, shareholding compensation, shareholder rights and disclosure.

We find a positive and significant relationship between quality and board remuneration, whether we measure the dependent variable by individual or total remuneration.

In the context characterised by a high ownership concentration, companies have higher incentives to compensate boards when governance mechanisms are effective. This result suggests that the quality of the board of directors influences the level of the director's compensation, contrary to the conclusions of some studies realised in the German context (e.g. Andreas et al., 2009).

It is obvious that in the ownership dispersion context, the directors' compensation is structured to mitigate agency conflicts and to ameliorate the monitoring function in the shareholders' interest. But, even if ownership is concentrated, the directors' compensation design remains important. The board's advising function

is also important in helping managers make good decisions. Directors bring valuable expertise and connections to the companies that increase the level of compensation.

Moreover, the results also reveal that the composition of the board does not have a significant impact at the 1 per cent level. Our findings are in contrast to earlier studies (Ryan and Wiggins, 2004; Yermack, 2004; Brick et al., 2006) which showed a significant effect of the composition of the board on the directors' compensation. The compensation pattern is better explained by shareholder compensation, shareholder rights and disclosure. Boards with the strongest shareholder rights and with directors who own equities are the better remunerated boards.

Our findings suggest that classical measures of board quality, such as independence, are not the best factor to influence the compensation policies. Controlling shareholders plays an important role in fixing the level of compensation. In this case, compensation cannot be viewed as a bargaining game between managers and directors. Directors are more interested in improving the performance of the firm and this has a positive effect on their remuneration. The fact that the company decides to disclose the directors' biographies, ages and compensation means that the directors are skilled experts and spend many efforts in fulfilling their responsibilities. Such directors require higher remuneration. These components must be taken into account when studying the impact of the board's quality on compensation fees.

By adding economic determinants in the multivariate regressions as control variables, the strongest relationship does not change. In terms of control variables, the regressions indicate that firm size is positively related to board remuneration. However, the effect of the firm's performance and the type of industry is not significant.

Like all studies, our research has a number of limitations. Firstly, our sample only covers data for a one-year period. We suggest that future research should incorporate longer periods involving the period after the financial crisis, this will allow analysis of the relationships between director quality and director remuneration during a crisis.

Secondly, the aggregate index can be an object of criticism since the weighting scheme is arbitrary. The items of this index should be well established using a better theoretical construct. Regulators and financial analysts can contribute to formulate a more objective weighting scheme and give more credibility to this index.

## ENDNOTES

- <sup>1</sup> See Adjaoud et al. (2007), who used the same tool.
- <sup>2</sup> See <[http://v1.theglobeandmail.com/v5/content/boardgames/index.php?year=2007&view=corp&industry=all&sort=DESC&ord=q1&cat=board\\_comp](http://v1.theglobeandmail.com/v5/content/boardgames/index.php?year=2007&view=corp&industry=all&sort=DESC&ord=q1&cat=board_comp)>.
- <sup>3</sup> COMPUSTAT is a database of financial, statistical and market information on global companies throughout the world. It is a division of Standard & Poor's, which is a division of the McGraw-Hill companies, US.
- <sup>4</sup> Stock Guide is a commercial database containing historical accounting information of TSX-listed firms. It is published by Stock Guide Publications in Montreal, Quebec.
- <sup>5</sup> [www.sedar.com](http://www.sedar.com) (System for Electronic Document Analysis and Retrieval) is the official website that provides access to most public securities documents and information filed by Canadian public companies.
- <sup>6</sup> See the study published in the *Globe and Mail* by McFarland (2007).

**APPENDIX I: CRITICAL COMPONENTS AND RESPECTIVE MARKS**

<b>Board Composition</b>	<b>Shareholding and Compensation</b>	<b>Shareholder Rights</b>	<b>Disclosure</b>
Independent	8 Directors required to own shares	4 Election of directors	4 Related directors
Audit committee	4 Directors own stocks	4 Majority voting policy	2 Board members' biographies
Compensation committee	4 CEO required to own stock	2 Stock options dilutive	2 Attendance records of directors
Nominating committee	3 CEO owns shares	3 Annual grant rate excessive	2 Directors' compensation for previous year
Split chairperson/CEO	5 Loans to senior executives	2 Vesting period	2 Total accumulated value of directors' equity holdings
Relationships among directors and other boards of publicly traded companies	3 CEO bonus	4 Option plan features	2 Fees paid to an outside compensation consultant
Directors on more S&P/TSX company boards	2 CEO compensation	2 Award options to directors	2 Directors' ages
Women on the board	2 CEO's pension plan	2 Performance hurdles for deferred share units or options	2 Retirement policy for directors
Board performance	3 Total value of the CEO's accumulated shares	1 Non-voting or subordinate voting shares	10
Meeting without management	3 Total cost of compensation to the top executive team	1	1
<b>Maximum marks</b>	<b>37</b>	<b>25</b>	<b>28</b>
			<b>10</b>

The specific details on corporate governance index components appear on the *Globe and Mail* website (McFarland, 2007). S&P/TSX = Standard and Poor's/Toronto Stock Exchange.

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