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# THE IRISH ACCOUNTING AND FINANCE ASSOCIATION

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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:

Margaret Healy
Department of Accounting and Finance
University College Cork
Ireland
Tel: + 353 21 490 2966
Email: mhealy@afis.ucc.ie

# EDITORIAL POLICY

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

e-mail: n.hyndman@qub.ac.uk

or

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

e-mail: ciaran.ohogartaigh@ucd.ie

Notes for Contributors are contained on pages 93–94.

# THE ONE MINUTE PAPER AND ASSESSMENT INNOVATION AT THIRD LEVEL: A TEACHING NOTE

**Edel Barnes**
*University College Cork*

***ABSTRACT***
*This paper takes up the increasingly contentious subject of how teachers know and assess what students at third level have learned and know. While research into teaching and learning is developing in institutions of higher education nationally, the extant literature is not extensive. Specifically, instruments such as the One Minute Paper (OMP), which this study has as its focus, are not widely used, even though it is both straightforward to implement and well received by students where research has been undertaken. This study constitutes a teaching note that reflects on the usefulness of introducing the OMP to enhance the effectiveness of lectures in terms of developing student learning. It concludes that the innovation contributes substantially to students' ability to develop their own sense of meaning and identification with lecture topics and, in this case, resulted in a noteworthy improvement in student performance in summative examinations.*

## INTRODUCTION

There is an increasing and welcome recognition in both the education literature and in practice that teaching, regardless of discipline, should be about *student-centred* learning (for example, Angelo and Cross, 1993; Biggs, 1999; Lyons, Hyland and Ryan, 2002; Berry, 2004; Bok, 2006). Students should be actively involved and should strive to engage more holistically in the learning process, taking new theories and insights on board, revisiting, reflecting, debating, conversing, weighing, balancing, growing in knowledge and understanding, and ultimately constructing their own sense and meaning. There is probably less widespread acceptance that practitioners should engage in an evaluation of that learning process. However, if traditional approaches to assessment fail to serve our students best, one cannot persist simply because such modes are pervasive or because they reflect the established signature pedagogies of our discipline. The community of learners, particularly at tertiary level, is increasingly diverse and nowadays includes full-time and part-time students, school-leavers and mature students, distance learners and on-campus constituencies. Many will come from backgrounds that might be considered 'alternative' or 'disadvantaged' in the context of traditional schooling norms. An open-minded, flexible, inclusive philosophy of teaching, learning and assessment must take all these contextual factors into account, and teaching and assessment design must reflect the variety of characteristics, strengths and difficulties that typify learners as a whole.

One startling result of recent reviews of education in the United States and in Europe is the lack of hard evidence of student learning (Cochran-Smith and Zeichner, 2005; Kuh, Kinzie, Schuh, Whitt and Associates, 2005; Teichler, 2007). Zeichner (2005) states flatly that student learning has been largely neglected in teacher education research. Bok (2006) finds that college students lack critical thinking skills and the ability to make sound judgments beyond a naïve epistemology. Not surprising, calls are being made to launch rigorous new assessments of college students in the US and in Europe (Kuh, 2007; Shulman, 2007; Teichler, 2007). In many European countries, the relationship between higher education and the world of work and how this gap is bridged in practice is poorly understood (Teichler, 2007). Complicating this situation is the difficulty of uncovering what it takes to engage students in self-inquiry and how to teach such skills. Kuhn (2005) believes that students must have not only the skills but also the opportunity to engage in increasingly complex forms of inquiry and to grow in epistemological understanding of the nature of knowledge, especially the metacognitive task of knowing how they know.

This paper takes up the issue of how to develop students' skills in active self-learning, together with assessing what students have learned and know. It describes a class project whereby students are asked to explicitly identify what they have come to know and what they still do not understand, in the context of lecture topics. Essentially the study hopes to determine whether introducing the One Minute Paper (OMP) – a classroom assessment technique that asks students to document what they have understood and also areas of troublesome knowledge – is useful in enhancing the effectiveness of lectures in terms of developing student learning. The remainder of the paper is structured as follows. The literature and evidence that exists on the use of and perceptions of the OMP are initially summarised. The next section explains and describes my choice of classroom assessment technique (CAT), that is, the One Minute Paper (OMP), together with the motivations for its introduction. The subsequent section describes the sample group and the teaching design. An analysis of the findings of the study follows, together with some reflection thereon. The final section summarises and concludes.

## THE LITERATURE

Biggs (1999) coined the term 'constructive alignment' as a teaching paradigm, a term that has become one of the most influential ideas in higher education. Alignment is about getting students to take responsibility for their own learning and establishing trust between teacher and student. The onus is on teachers to create a teaching environment that is supportive and encouraging of students and which facilitates them in active mental engagement with lecture topics. There are two parts to constructive alignment: students construct meaning from what they do to learn, and teachers align the learning activities with the stated learning outcomes. Thus, teachers must have a clear idea of what it is they want their students to know and understand, communicate these learning outcomes clearly and design teaching activities with that objective in mind. Therefore, learning activities, learning outcomes and assessment should be aligned and consistent. It has been suggested that alignment is essentially a question of honesty in communication between teacher and student that establishes trust in an environment that is conducive to students managing their own learning (Biggs, 2003). Thus, constructive alignment encourages clarity in teaching and curriculum design, and transparency in linkages between learning and assessment. Just as teaching design needs to support student participation it must also be flexible and subject to modification as the teacher reflects on his/her delivery.

The objective of this study was to document the effectiveness of this learning paradigm. Stated succinctly, the aim was to assess my ability to achieve this constructive alignment by communicating learning outcomes for a financial management module clearly to students, engaging them actively in the learning process by introducing a simple, easy to administer classroom assessment technique, which I refer to as the One Minute Paper (OMP), and reflecting on any improvements in understanding and learning that developed from that process.

One of the most pressing issues in teacher research regards the rigor of the work and its connection to other research in the field. Berry (2004) comments:

> One of the major challenges for self-study of teacher education practices continues to involve finding ways to remain true to itself in communicating the particularities of experience while at the same time drawing out generalisable knowledge that can be widely available to others (Berry, 2004, p. 1328).

In consequence it is interesting to query what has been learned from application of the classroom assessment techniques (and the OMP in particular) in practice, and to posit how this work might be useful to others to advance their own teaching and learning.

The extant literature on the pervasiveness and efficacy of the OMP is not large. Where it has been used, both students and teacher practitioners regard it positively (Stead, 2005). However, such literature as exists relates largely to the US and to a lesser extent to the UK. Furthermore, the literature tends to focus generally on descriptions of the OMP in various contextual situations but speaks little as to how the test is actually applied and/or to the rich data sets that it has the potential to create.

Stead (2005) reviews the literature on the use and perception of the OMP and documents evidence of both extent of use and student opinion. His paper documents awareness that the OMP is widely applicable, easy to use, requires little or no technology and relatively little time and effort to incorporate into teaching and assessment design. However, perversely, the OMP appears to be rather sparsely utilised for both Stead's sample and by other surveys cited by the author. While the OMP is recognised as a good learning tool by teacher and learner alike, yielding improved performance benefits for students and timely valuable feedback for teachers, it appears that a significant majority of teacher practitioners are either not aware of the technique or have misconceptions regarding the necessary requirements of time and effort. Furthermore, students are liable to tire of the technique if used too frequently – Stead (2005) documents rapidly declining completion rates over a given semester of usage.

At practitioner level, there appears to be some interdisciplinary variation in usage; economists tend to use the tool relatively little, although the OMP has been used to an extent in the accounting and auditing field of study. Almer, Jones and Moeckel (1998), for example, compare the performance of 867 introductory accounting students and find that regular completion of the OMP was associated with significantly improved student performance in tests where there was some element of subjective assessment, independent of student ability. McElroy and Coman (2002) report supporting evidence of performance improvements for introductory managerial accounting students, while Chizmar and Ostrosky (1998) document improvements in performance in multiple choice tests (which are comprised largely of objective material) taken by their sample of 571 economics students. In general, however, application rates for the OMP were found to be biased towards those who are pre-disposed to innovations in teaching and learning practice generally.

To date there has been little, if any, analysis of the OMP's use in the context of higher education in Ireland of which I am aware. As a prelude to its introduction for the purposes of this study, the University College Cork (UCC) academic community was surveyed through circulation of an online weblink survey that solicited information regarding knowledge of CATs, specifically the OMP, reasons why it wasn't utilised, respondent's disciplinary area and extent of teaching experience. The response rate was 211 academic staff members, or approximately 12 per cent. In total 50 users (24 per cent) utilise the OMP technique, while 159 (76 per cent) are non-users. Reasons for its non-use range from lack of knowledge of the technique (108 respondents or 67 per cent) to concerns about time requirements and class size (15 respondents or 9.3 per cent), availability of other sources of student feedback (29 respondents or 18 per cent) and utilisation of other forms of active learning (33 respondents or 20.4 per cent), these latter to include in-class discussion, blackboard discussions and group work. Across the range of respondents, 64 separate disciplines were represented, 5 respondents derived from Accounting/Finance and 9 from Economics. There was no significant link between use of the OMP and teaching experience, albeit those new to teaching were more likely to use the OMP.

Membership of the Irish Accounting and Finance Association (IAFA) was the basis for a survey of institutes of higher education nationally. In total, there were 99 responses, or approximately 72 per cent, of which 3 (96) respondents were users (non-users) of the OMP. Of those who responded, 69 (approximately 70 per cent) had never heard of the assessment technique, 15 (15.2 per cent) considered it too time-consuming, 9 (9.1 per cent) and 6 (6 per cent) had other feedback sources or utilised other learning tools respectively, such as blackboard and in-class questions. Across the disciplines 43 (43.4 per cent) of respondents teach Financial Accounting, 36 (36.4 per cent) teach Managerial Accounting, 3 (3 per cent) teach Taxation, 12 (12.2 per cent) teach Finance and 5 (5 per cent) teach Auditing. In total 14 separate institutions were represented in the survey, split evenly between universities and institutes of technology. As a whole, therefore, there appears to be little recognition of the role that classroom assessment techniques such as the OMP can play in ascertaining the extent of student learning and in offering valuable sources of feedback on learning to students and teacher alike. In consequence it is considered that a teaching note that reflects on the effectiveness of the OMP in developing student learning might constitute a useful increment to the literature at this time. If the OMP represents a positive feature of teaching design, there may be potential implications on foot of this self-study for the future of accounting and financial management education, as the discipline that represents the focus of this study.

## CLASSROOM ASSESSMENT TECHNIQUES: THE ONE MINUTE PAPER

Every teacher is keen to draw his/her learners into the subject, to engage with them and to interest them in the subject matter. To develop learning is exciting and encourages greater enthusiasm and involvement. However that journey is less rewarding when there is failure to facilitate that development of learning. How one determines whether that desired increment in learning is achieved is thus critical to the success of a practitioner's teaching design. Classroom assessment techniques (CATs) provide both teacher and learner with evidence of learning (or not), evidence that is important in all learning contexts but vital when one is charged with bringing a subject or discipline to a group of learners with no prior exposure to or experience in the field, such as the focus group for this study. Any teacher can cover material throughout a teaching period but to engage students actively provides scope for them to make their own meaning of new knowledge, to make it their own. This is a process rather than an action with an instantaneous product. CATs facilitate a stream of checks and balances, an ongoing answer to the question of what it is our students come to know and whether they are making their own sense of meaning on the learning journey. Critically, CATs facilitate feedback, which is formative, immediate and useful, and they give teachers 'information to navigate by, feedback to guide the continual small adjustments and corrections needed to keep student learning on course' (Angelo and Cross, 1993, p. 26). CATs also facilitate the integration of teaching and learning with assessment. This (informal) assessment enables a practitioner to revisit his/her teaching design, consistent with Biggs' (1999) 'constructive alignment' to ensure that students' learning experiences are compatible with desired learning outcomes: those key points or concepts that are important for our learners know and understand.

CATs are tools that come in a variety of shapes and formats and certain tools will work well with some groups of learners and less well with others. Angelo and

Cross (1993) define CATs as 'instruments that faculty can use to find out how much, how well, and even *how* students are learning what they are trying to teach' (Angelo and Cross, 1993, p. 25, emphasis added). The most effective and therefore useful CATs are context-sensitive (relate to a clearly defined topic for a specific group of learners), are flexible (can be adapted for use in a variety of situations), can potentially make a difference (relate to a teaching design that can be altered), are beneficial for both teacher and learners, are simple and straightforward both to administer and to analyse, and are valid in that they enhance specific learning objectives/content/skills. The decision to use a particular CAT requires a teacher to *plan* – this involves choosing the focus group, deciding on the class meeting and selecting the particular CAT to be used. My choice of CAT was made in the context of students with no prior exposure to financial management concepts or to in-class formative assessment techniques. It draws from features of both the One Minute Paper (OMP) and the Muddiest Point (MP) tools, and asks students to reply to two questions:

- What was the most important thing you learned and
- What was/is the main question remaining at the conclusion of the class?

The objective was to encourage students to investigate the extent of their own learning, and to provide formative feedback for myself as teacher to inform subsequent lecture content.

*Implementation* requires a teacher to let students know in advance what he/she is going to do, to let them know that he/she is asking for information that will assist him/her as a teacher in optimising their learning opportunities, and to inform them how much time they will have to undertake the CAT. It also involves taking cognisance of the time that will be necessary to read the responses and to analyse them. Ideally a practitioner will have time to read and analyse responses as early as possible after a class, typically each response will require just a few minutes to read through and appreciate. If CATs are to be truly effective as a learning-enhancement tool there is a need to *respond*, to 'close the feedback loop' (Angelo and Cross, 1993, p. 30). This is essentially a question of letting learners know what you as teacher learned from the CAT exercise, and explaining how you will use that information, in other words, what difference their responses will make to your teaching enactment/design. If use of CATs is to qualify as a learner-centred strategy, learners need to be told that their participation in the assessment can and will make a difference to how you teach and in consequence to how they learn. Of course there is also potential for learners themselves to change *their behaviour* to improve their own learning, and the CAT responses, together with a teacher's reflection-on-action, may highlight some such possible changes.

Teaching and learning are or should be shared activities, the joint responsibility of both teacher and learner. My plan was to consider the concepts that were continuing to cause understanding blockages, and in particular those 'muddiest points' that were causing difficulty for a number of learners. This reflection would prompt me to revisit these points in preparation for the immediately following lecture; to reconsider my approach to explanation and illustration; to ponder what potential barriers to understanding might have arisen; and to explore alternative 'entry points' to these concepts (constructive alignment). Above all my objective was to achieve teacher–student appreciation of areas of problematic learning and to remain with these muddiest points until satisfied that the barriers to understanding had been overcome. My hope was that in the OMPs submitted at the end of the subsequent lecture, these important concepts would appear in the learner responses to the first question regarding concepts now understood.

## THE STUDY GROUP

This study describes the re-design of a teaching plan to incorporate ongoing assessment, specifically use of the One Minute Paper, with a group of learners who were meeting Financial Management concepts for the first time. The AC4440 module is an elective 5-credit module open to all those in the final (fourth) year of study on the Bachelor of Commerce European Degree Programme, in University College Cork. The overarching goal and approach is to introduce students to key elements or concepts in financial management, scaffolding the gap between theory and application/practice of business finance in the context of real-life financial decision making and facilitating students in constructing their own knowledge and meaning of financial paradigms. The module seeks to bridge a gap between 'received knowing' and 'constructed knowing' by supporting students in a re-introduction to financial contexts and problems that they experience themselves in their daily lives (experiential learning). Module delivery is consistent with the dictates of an established modular protocol yet seeks to move beyond that by drawing on or fostering students' skills and a capacity for critical thinking that may have been developed in earlier years of their programme. Students take a number of business subjects comprising approximately half of the total credits for the programme, the balance of credits being taken in language, which may be Irish, French, German, Spanish or Italian. The third year of the programme is spent studying abroad; students then return to UCC for their final year before graduation.

Students on the programme have their first and only exposure to Financial Management concepts by taking the AC4440 5-credit module as an elective in their final year. In consequence, no prior exposure to or substantial interest in financial or corporate issues can be assumed by the lecturer/guide/moderator of the elective. A number of problems had been identified with the module by departmental staff, namely that it has traditionally been taken by relatively few students across the programme, attendance has been poor and those taking the module on average have not performed very well in the context of end-of-year university examinations, which themselves are problematic in the context of teaching and assessing *for understanding*. These issues motivated me in large measure to engage in this interactive learning experiment. It was clear that no assumptions could be made or solid prior conceptions held about likely attendance levels, attention spans or application rates. It was equally clear that one could hope realistically only to touch on the subject, a focus on more complete coverage would be simply inappropriate. I was curious about these issues, keen to try something new and excited at the prospect of perhaps being able to shed some light on why this might be the case,

**TABLE 1: DESCRIPTION OF THE STUDY GROUP**

| Programme | Number | Percentage of All |
|---|---|---|
| B.Comm. French | 2 | 10 |
| B.Comm. German | 4 | 20 |
| B.Comm. Irish | 6 | 30 |
| B.Comm. Italian | 1 | 5 |
| B.Comm. Spanish | 6 | 30 |
| Erasmus | 1 | 5 |
| *Total* | *20* | *100* |

through direct interaction with learners both in the lecture hall and in tutorial/office hour environments. Reflection, both in-action and on-action, potentially offered rich scope to facilitate deep learning and new understandings and optimisation of the learning journey for these students.

The study group is represented by those taking the elective module in the academic year October 2006–June 2007. Table 1 shows the breakdown of these students.

In the study group all learners had come directly to third level from secondary schools, approximately half the student cohort derived from Cork city schools, the remainder from the Munster/South Lenister area. There was just one visiting Erasmus student and no mature student or learner from the access programme. All language options were represented, thus the AC4440 study group can be seen to be diverse.

## ANALYSIS OF FINDINGS

As a 5-credit module, the AC4440 subject involves 24 direct contact hours over the 2 teaching periods of the academic year and 1 additional 'pre-examination' meeting at the terminal point. Allowing for the introductory session at the beginning of Teaching Period 1, a (formal, graded) interim assessment at the beginning of Teaching Period 2 and, at my own discretion, a 'review' session at the end of each teaching period, this implied ten 'teaching sessions' in each teaching period. With due consideration to flexibility and the likelihood of not having fully developed a particular learning goal at the conclusion of each and every lecture meeting, it was expected that in total, students would complete the OMP assessment approximately 10–15 times over the academic year as a whole. In the event, they completed 12 OMPs. Operationally, completion of the OMPs was simple and straightforward. At the end of each lecture (or relevant topic) students were given a sheet with the two questions on it, and these were completed quite literally in the last minute(s) of the class and returned to me. Students were told at the introductory session that every major topic would be subject to an OMP so they were prepared to complete it and understood the purposes for which it was sought.

The hour immediately following each lecture meeting was devoted to reading learner responses and to compiling two lists, the first list containing those 'things understood' and the second list detailing those 'puzzles remaining'. A mental tally was kept of the number of times that particular items or concepts were appearing, in particular under the 'puzzles remaining' heading. The third component of the personal feedback sheet was titled 'action to be taken', which was filled in following a reflection on action, that action being the teaching enactment of the day. This third component addressed how the teaching plan would be amended for the following meeting to revisit the areas that constituted 'unknowing' for students, to better draw them into the concept, and to overcome the barriers to understanding. The changes made to my teaching practice depended in large measure on the concepts that were problematic for students. Table 2

**TABLE 2: PERSONAL FEEDBACK SHEET RELATING TO OMP COMPLETIONS**

| Areas Understood | Problematic Topics | Action to be Taken |
|---|---|---|
| **Investment consumption trade-off** | Graphical illustration of transfer of wealth over time | Include additional numerical examples in teaching notes with direct meaning for students |
| **Investment net cashflows** | Hurdle rates | Produce simple examples where variable project risks have economic consequences |
| **Assumption of constant capital market rate of interest** | Variable rate interest bearing accounts | Description of typical personal mortgages in an environment of changing interest rates |
| **Inflation and nominal rates of return** | Determining real rates of return | Illustration of 'under the mattress' example and maintaining purchasing power |
| **Concept of Standard Deviation** | Use of Standard Deviation as a measure of risk | Fuller exposition of the assumptions that underlie use of financial variables and their distribution(s). Illustration of the Normal Curve |
| **Capital budgeting analysis** | Extent of knowledge required of factors that impact on the capital budgeting technique | Re-clarification of desired learning outcomes for this topic |
| **Risk concept** | Specific versus market risk | Identification of typical risks in each category |
| **Portfolio Theory generally, diversification of some risks** | Why market risk cannot be diversified away | Identification of risks that affect all firms regardless of operations, to some extent |
| **Beta as measure of firm exposure to market risk** | Portfolio beta | Completion of additional examples of calculating portfolio beta as weighted average across all individual securities in the portfolio |
| **Dividend influence on price** | P/E Model | Return to market ratings discussion with elaboration |

reproduces a portion of my personal feedback sheet together with some of the feedback obtained from students.

In many cases, including a broad number of practical real-life examples allowed learners sufficient entry points to engage with a topic or topics, and of course this was consistent with students' stated learning objective of studying a topic with a real-life, practical focus. Surprisingly, and in contrast to the extant literature, completion rates for the OMP exceeded 90 per cent consistently throughout the two teaching periods, and there was no fall off in completion, suggesting that students found the tool to be helpful and that there was no significant boredom factor with its use. I considered this consistently high completion rate a clear measure of the effectiveness of the OMP, as perceived by students, in developing learning. In terms of my own perceptions of its effectiveness, I could see students coming to a new sense of meaning about previously problematic areas of learning and therefore felt validated in amending my teaching design to achieve Biggs' (1999) constructive alignment with core objectives and stated learning outcomes.

In terms of formal assessment and student performance, all but one student attained honours in the terminal assessment and, over the group as a whole, 50 per cent attained first honours standard, a significant improvement on performance in the module in earlier years. While improvements in performance cannot unambiguously be attributed to use of the OMP – other variables such as quality of student, attendance, etc. being potentially influential in this regard – use of the OMP was certainly useful to students and informative to myself as teacher-practitioner in terms of obtaining student feedback in a timely and relevant fashion. The perception that use of the OMP was helpful to students was tested by asking students to complete an end-of-year feedback sheet, which addressed such questions as whether learning objectives had been achieved, whether module content had been perceived to be relevant and engaging and how the teaching design and enactment had been viewed. 19 students out of the group (95 per cent) returned these feedback sheets. Their responses indicated widespread satisfaction with the content of the module and the way in which that content had been explored, and demonstrated that the learning experience as a whole had reached or even exceeded student expectations. Students were particularly positive about the OMP and how its completion influenced teaching enactment at subsequent teaching interactions, which is consistent with their observed practice of voluntarily signing the OMPs. One comment read as follows, 'I really felt that we were consulted about learning and that our views were taken on board, both in what we could understand and what we couldn't'. Another student noted that, '[w]e felt acknowledged and valued and that we were part of the module plan'. One student said, '[i]t was exciting to be part of something new, an experiment where we were the beneficiaries'. Learners clearly appreciated that participation in this form of assessment could make a difference to teaching practice and to how they might best learn. Although the study group was self-selecting so that participants could be assumed to have a pronounced interest in optimising learning outcomes, nevertheless from a teaching and learning perspective this student feedback reinforced and validated the decision to take a student-centred approach, to emphasise frequent and consistent assessment and feedback, and to very deliberately include learners in the teaching enactment.

Moving forward with use of the OMP, I would do much the same but a small number of things differently. Electronic completion of the OMP would certainly be more time efficient in terms of gathering feedback information, however having to log on specifically to submit feedback might bias against completion rates. I would certainly devote more time at the introductory session to discussion of the learning paradigm and to the potential for optimising learning by participating in the process. I would also ask students for their thoughts on the regularity of completion of the OMP, in order to optimise its effectiveness.

## CONCLUSION

In light of the sum total of feedback received, it is considered that the decision to explore the use of CATs with the AC4440 group of learners was validated, that this student-centred approach was supportive of deep meaningful learning for students and, critically, informative for myself as a lecturer. The practice of very deliberately including learners in the teaching enactment was rewarded by a ready flow of feedback from them, which constituted a win–win position, and the behavioural changes that could be seen to have been made to my teaching enactment were, in my opinion, matched by behavioural changes by learners. With respect to future teaching practice, I received substantial notice of the importance of communicating fully and clearly with students in respect of desired learning outcomes, and an indication that if I continued to explain to students that by participating in CATs they helped me to help them reach greater understandings, then that communication would likely be rewarded by consistent participation and a sharing of responsibility for learning between teacher and students. In summary, the experience was a positive one for the teacher and the student body; an experience that, I believe, represents important new evidence on the efficacy of the use of CATs at tertiary level in an Irish university context and offers the potential to inform teaching practice in a more pervasive way, if this evidence is disseminated. Early findings from a survey circulated throughout the disciplines in UCC on use of the OMP, preparatory to this self-study, suggests that the OMP is neither well known nor widely applied, although a number of queries and requests for information on the CAT give reason to believe that with sufficient explanation, there is a body of teacher-practitioners that is well-disposed towards its future use.

In terms of the extant literature and teaching practice generally, there are several important implications of this case study. Firstly, small scale, easily accessible classroom assessment techniques are useful to teachers in implementing assessments to fit their purposes and contexts. Secondly, these assessments help to make possible teacher inquiries into a domain of research needing investigation: that is, how one knows what students have learned and know how to do. This possibility also makes possible research projects that can be built on one another. It is important to note the proviso that improvements in documented performance observed for this study group cannot be simply translated into improved performance for all, the influences on performance being many and varied, and that the simple technique utilised here is not necessarily so easily applied in all learning environments. Nevertheless, it is hypothesized that the use of assessment techniques that teachers can implement may improve their practice and may help to foster a new interconnection of research and practice in the everyday experiences of teachers.

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# THE ROLE OF HUMAN CAPITAL IN EXPLAINING THE CROSS-SECTIONAL VARIATION OF FTSE 100 STOCK RETURNS

**Michelle Carr**
*University College Cork*
**and**
**Fergal G. O'Brien**
*University of Limerick*

***ABSTRACT***

*In this paper the Standard CAPM, the Labour CAPM, the Conditional CAPM and the Conditional Labour CAPM were tested on FTSE 100 return data over the period 1984–2004. When human capital is incorporated into the market portfolio the CAPM is able to explain additional cross-sectional variation in FTSE 100 stock returns. More importantly, when the cross-sectional regression method is refined to incorporate information relating to the sign of the market realisation in the test period the relationship between beta and return is statistically significant.*

## INTRODUCTION

The Capital Asset Pricing Model (CAPM) developed by Sharpe (1964), Lintner (1965) and Mossin (1966) has been the dominating capital market equilibrium model since its inception. It continues to be widely used in practical portfolio management and in academic research. Its central implication is that the contribution of an asset to the variance of the market portfolio – the asset's systematic or beta risk – is the correct measure of the asset's risk and the only systematic determinant of the asset's return.

Empirically examining whether this model is a reasonable description of reality requires measuring the market return, that is, the return on the aggregate market portfolio of all assets in the economy. Since the market return is unobserved, empirical studies of the CAPM have made the convenient assumption that the relevant stock index return is a good proxy for the market return. Many of these empirical studies find little empirical support for the CAPM. For example, Fama and French (1992) find a flat relationship between expected return and beta in US stock returns, and conclude that stock characteristics are important predictors of cross-sectional returns beyond that of market beta. The two most prominent characteristics are the size and the book-to-market ratio of the company. Strong and Xu (1997) note similar findings for the UK.

The general reaction to the lack of empirical support for the Standard CAPM has been to focus on alternative asset pricing models, e.g. the Fama and French (1993) three-factor model. However, recent empirical research indicates that this may not be necessary and suggests that the lack of empirical support for the CAPM may just be due to the inappropriateness of the auxiliary assumptions made to facilitate empirical analysis of the model. For example, empirical studies of the CAPM show a more favourable picture when researchers use a broader definition of the market portfolio (e.g. Jagannathan and Wang, 1993; Jagannathan, Kubota and Takehara, 1998; Fletcher, 2002; Durack, Durand and Maller, 2004) or a conditional version of the model that controls for different realised risk premia in up and down markets (Pettengill, Sundaram and Mathur, 1995).

The purpose of this paper is to investigate the empirical performance of different versions of the CAPM for UK stock returns between January 1984 and December 2004. This examination includes the Standard CAPM with the FTSE 100 as the proxy for the market portfolio, a Labour CAPM that adds a proxy for human capital to the definition of the market portfolio (Jagannathan and Wang, 1993), and a Conditional CAPM which allows for a negative cross-sectional risk–return relationship in periods in which the market portfolio yields a negative return relative to the risk-free rate (Pettengill et al., 1995). Finally, an examination of a Conditional Labour CAPM is undertaken, which incorporates both the human capital proxy and the conditional relationship between beta and returns.

The remainder of the paper is organised as follows. The next section focuses on recent CAPM empirical developments that attempt to explain the anomalies highlighted by Fama and French (1992). Data and a sample description are provided in the third section. Sections four and five describe the research methods employed to empirically investigate the performance of different versions of the CAPM. The results of the empirical analysis are presented and analysed in the sixth section. The final section summarises and discusses the limitations of our research.

## RECENT EMPIRICAL DEVELOPMENTS

The returns to human capital are a crucial part of an individual's capital holding and comprise much of the total aggregate wealth in the US and other economically advanced nations. The OECD (1996, p. 22) defines human capital as the 'knowledge that individuals acquire during their life and use to produce goods, services or ideas in market or non-market circumstances'. Becker (1993) observes that the investment in human capital that takes place, along with the resultant increase in scientific knowledge and technical skills, probably explains the twentieth century's sustained growth in per capita income in the US, Japan and many Western countries.

Becker (1993) also estimates the value of human capital to be at least four times as large as the value of stocks, bonds, housing and all other assets combined. Total national income in the UK in 2002 was £1,121,240 million (Bank and Smith, 2002). Of that amount, £672,744 million (60 per cent) was wages and salaries. Given that human capital forms the largest component of the national wealth portfolio, recent empirical research examines the empirical performance of the CAPM when the proxy for the market portfolio includes a proxy for labour income in addition to the stock market index. Following Mayers (1972), Jagannathan and Wang (1993) find that when human capital is included in measuring wealth the CAPM is able to explain 28 per cent of the cross-sectional variation in average returns on the portfolio used in the Fama and French (1992) study. Using Japanese data, Jagannathan et al. (1998) demonstrate that the Standard CAPM performs poorly. The relationship between average return and market betas is flat with an adjusted $\overline{R}^2$ of 2 per cent. However, when labour beta is included in addition to the stock index beta the performance of the CAPM improves remarkably. The $\overline{R}^2$ rises to 75 per cent. Fletcher (2002) examines the empirical performance of the CAPM in UK stock returns, using a stochastic discount framework. Fletcher (2002) finds that when the proxy for the market portfolio includes a proxy for labour income growth in addition to the stock market index, the performance of the CAPM improves. However, in contrast to previous studies, Durack et al. (2004), using Australian data, found that the inclusion of a proxy for human capital does not save the CAPM and beta remains insignificant.

Pettengill et al. (1995) argue that the cross-sectional second stage regression of the Fama and MacBeth (1973) test procedure may be the reason for the apparent independence of beta risk and realised returns documented by Fama and French (1992) and others. The key distinction between the Pettengill et al. (1995) tests and traditional tests is the recognition that the positive relationship between returns and beta predicted by the Standard CAPM is based on expected rather than realised returns. Pettengill et al. (1995) demonstrate that in periods where realised market returns fall below the risk-free rate, a negative relationship is predicted between realised returns and beta. When the expectations concerning negative market excess return are incorporated, Pettengill et al. (1995) find a consistent and significant relationship between beta and returns. The results for the US capital markets are supported by further international evidence. Fletcher (1997), Hodoshima, Garza-Gomez and Kunimura (2000) and Isakov (1999) obtain similar results for the British, the Japanese, the Hong Kong and the Swiss stock markets respectively. These results suggest that beta does have predictive power for the cross-section of returns.

In summary, while early empirical tests concluded in favour of the CAPM (e.g. Fama and MacBeth, 1973), subsequent studies provide evidence that is less than conclusive. Fama and French (1992) find a flat relationship between expected return and beta in US stock returns. Jagannathan and Wang (1993) believe that the rejection of the CAPM may be a direct result of failing to capture the true wealth portfolio, whereas Pettengill et al. (1995) argue that once the conditional relationship between beta and returns is incorporated the CAPM has significant explanatory power. The next section investigates the empirical performance of the Standard CAPM, the Labour CAPM, the Conditional CAPM and the Conditional Labour CAPM in UK stock returns between January 1984 and December 2004.

## DATA AND SAMPLE DESCRIPTION

As there is a requirement for financial market information and labour market information, data are collected from two sources. All financial data are obtained from DataStream International. Labour market data are obtained from the UK National Statistics Office website. The stock market data used in the empirical analysis consist of monthly stock prices on shares listed on the FTSE 100. The index used to proxy the market is the FTSE 100 all share index. The risk-free rate is proxied by the UK one-month fixed inter-bank rate. As this is given as an annualised figure the monthly risk-free rate is calculated assuming that it was compounded on a monthly basis. Market value of common stock is calculated as the average market capitalisation of common equity stock series listed on the FTSE 100 for the period December 1984–January 2004 for every company.

Following Jagannathan and Wang (1993) in measuring the returns to human capital, it is assumed that the return on human capital is a linear function of the growth rate in per capita labour income. Monthly labour income from salaries and wages is taken from the monthly personal income numbers obtained from the UK National Statistics Office.

Data are collected from January 1984 to December 2004 inclusive, yielding 228 monthly observations. All companies listed on the FTSE 100 in 2004 were initially included in the sample. In order to combat survivorship biases firms delisted from the FTSE 100 in each year between 1984 and 2004 were identified and consequently added to the initial sample. This resulted in the addition of 207 companies. Obtaining yearly constituent lists for the FTSE 100 and investigating changes achieved this. Consequently, sample bias towards successful and financially strong companies has been mitigated to a reasonable extent.

The experimental design employed in this study also requires an additional constraint, in order to be included in the final sample. To be included in the sample, a company must have had uninterrupted stock price data for 30 months before the portfolio formation date. This condition is in line with the Fama and MacBeth (1973) methodology, which requires at least 30 to 48 consecutive monthly returns for estimating the stock index beta on individual companies. Also, to be included in the sample, a firm's market capitalisation information must be available for all years corresponding to the firm's portfolio formation period. This resulted in 81 firms being deleted. The sample therefore consists of a total number of 225 firms listed on the FTSE 100 for the study period 1984–2004.

## PORTFOLIO ANALYSIS

It is common practice within the cross-sectional asset return literature to form portfolios and thus test a model's predictive ability on a group of stocks instead of individually. Two attributes, firm size and beta, are used in grouping stocks into portfolios. The approach of Fama and MacBeth (1973) is followed when forming portfolios. Monthly stock returns are calculated for each company for each month in the 20-year period, and stored in a company returns array. Similarly, monthly risk-free rates and market returns are calculated and stored in appropriate arrays. For the first time period $t_1$ (month 1 – month 60) all stock returns are examined. If a company had less than 30 continuous observations for this period it is automatically discarded and the beta and average return for this company for the time period are set to zero. For companies with 30 or more observations, Matlab code is written that estimates the beta, $\beta_{it}^{vw}$ of that company for the period using equation 1, where $R_{it}$, $R_{mt}$ and $\beta_{it}^{vw}$ are as defined in Figure 1.

$$\beta_{it}^{vw} = \frac{Cov(R_{it}, R_{mt})}{Var(R_{mt})} \tag{1}$$

To calculate a labour beta, i.e. beta calculated from the growth in per capita income, the Matlab code was modified so that for each company $i$ for each time period $t$ a second beta, $\beta_{it}^{l}$, is calculated using equation 2.

$$\beta_{it}^{l} = \frac{Cov(R_{it}, R_{lt})}{Var(R_{lt})} \tag{2}$$

In order to form beta-sorted portfolios all companies that have both a zero beta and zero average return are removed. The remaining companies are organised in order of descending stock index betas. Portfolios containing either 10 or 11 companies are formed as follows: if there were $q$ many companies with enough information for the period, form integer ($q/10$) many portfolios. Once all the companies are sorted into portfolios, calculate the average beta and average return for each of the portfolios. This is done on an equal weighting basis.

To form size-sorted portfolios, an average market capitalisation for each company for the whole period and an overall market capitalisation for all companies combined is calculated. Companies are ranked as small, medium or large by comparing the average individual market value capitalisation for each company with the overall average market capitalisation for all companies combined. If the individual market capitalisation was less than 0.4 of the average it was termed 'small'. If the individual market capitalisation was above the average by more than 0.4 it was termed 'large'. If the individual market capitalisation was in between these two figures it was termed 'medium'. Due to the reduced size of the split data set (e.g. 103 small, 69 medium and 53 large companies), smaller portfolios are formed in order to ensure that a good cross-section is obtained.

## METHODOLGY

The cross-sectional regressional analysis (CSR) follows the methodological framework of Fama and MacBeth (1973). The CSR is run to test the Standard CAPM, where the dependent variable is the portfolio returns and the independent variable is the portfolio stock index beta. Figure 1 presents the regression model to be tested.

An inherent problem in the empirical specification of the Standard CAPM is the assumption that $R_{vwt}$ is a good proxy for market return. It was demonstrated earlier that the return to human capital forms the largest component of the UK's national wealth portfolio. To investigate this issue the assumption that $R_{vwt}$ is a good proxy for the true return on the market portfolio is relaxed and the theory that the inclusion of a labour beta (a proxy for human capital) will improve the performance of the CAPM is examined. If $R_{lt}$ were the growth in average earnings, which proxies for the return on human capital, then the true market return would be a linear function of $R_{vwt}$ and $R_{lt}$. With labour income built into the CAPM the asset pricing model is outlined in Figure 2.

In order to test the assumption that beta and portfolio returns have a negative relationship on months of negative market excess returns, the market data are split in two distinct data sets: up-months and down-months, i.e. months where the market return is greater than and less than the risk-free rate respectively. This distinction between positive and negative market excess returns is crucial in defining the new model outlined in Figure 3.

An average return and an average stock index beta and labour beta based on the up-months only is calculated. Similarly an average return and an average

**FIGURE 1: THE STANDARD CAPM**

$$R_{it} = \gamma_O + \gamma_1 \beta_{it} + \varepsilon_{it}$$

*where*

$R_{it}$ = the return on portfolio *i* in time period *t*

$\beta_{it} = Cov(R_{it}, R_{mt}) / Var(R_{mt})$

$R_{mt}$ = the return on the proxy for the market index portfolio in time period *t*

$\varepsilon_{it}$ = error term

Under the assumption that $R_{vwt}$ (the value-weighted portfolio of all stocks traded on FTSE 100) is a good market proxy, the empirical specifications of CAPM becomes:

$$R_{it} = \gamma_o + \gamma_1 \beta_{it}^{vw} + \varepsilon_{it}$$

*where*

$\beta_{it}^{vw} = Cov(R_{it}, R_{vwt}) / Var(R_{vwt})$

**FIGURE 2: THE LABOUR CAPM**

$$R_{it} = \gamma_0 + \gamma_1 \beta_{it}^{vw} + \gamma_2 \beta_{it}^{l} + \varepsilon_{it}$$

*where*

$R_{it}$ = return on portfolio *i* in time period *t*

$\beta_{it}^{vw} = Cov(R_{it} . R_{vwt}) / Var(R_{vwt})$

$R_{vwt}$ = return on the value-weighted market proxy in time period *t*

$\beta_{it}^{l} = Cov(R_{it}, R_{lt}) / Var(R_{lt})$

$R_{lt}$ = return in per capital labour income in time period *t*

**FIGURE 3: THE CONDITIONAL CAPM**

$$R_{it} = \gamma_0 + \delta\gamma_1\beta_{it}^{vw} + (1-\delta)\gamma_2\beta_{it}^{vw} + \varepsilon_{it}$$

*where:*

$$\delta = 0 \ \ if \ (R_{mt} - R_{ft}) < 0$$

$$\delta = 1 \ \ if \ (R_{mt} - R_{ft}) > 0$$

**FIGURE 4: THE CONDITIONAL LABOUR CAPM**

$$R_{it} = \gamma_0 + \delta\gamma_1\beta_{it}^{vw} + \delta\gamma_2\beta_{it}^{l} + (1-\delta)\gamma_3\beta_{it}^{vw} + (1-\delta)\gamma_4\beta_{it}^{l} + \varepsilon_{it}$$

*where:*

$$\delta = 0 \ \ if \ (R_{mt} - R_{ft}) < 0$$

$$\delta = 1 \ \ if \ (R_{mt} - R_{ft}) > 0$$

stock index beta and labour beta based on the down-months is also calculated. Thus, twice as many matrices for the testing process are formed.

The final version of CAPM to be tested is the Conditional Labour CAPM. The lack of empirical support for the CAPM is associated with the auxiliary assumptions made in order to facilitate its empirical analysis. In order to implement the CAPM, for practical purposes it is commonly assumed that the return to the value-weighted stock exchange is a reasonable proxy for the return on the market portfolio of all assets. The Conditional Labour CAPM allows the market portfolio to be expanded to include human capital, which forms the largest component of the national wealth portfolio (Becker, 1993). Furthermore, by analysing monthly returns with positive and negative market premia, it allows the hypothesis of a relationship between beta and return to be tested independently of the hypothesis of a positive market risk premia in the sample period. In summary, the Conditional Labour CAPM allows risk and return to be empirically tested under more rational assumptions. Formally, the model can be defined by Figure 4.

## RESULTS

In order to compare the relative performance of the different variants Table 1 is presented. The results for the Standard CAPM, the Labour CAPM, the Conditional CAPM and the Conditional Labour CAPM are reported in Panels A, B, C and D respectively. Results for four sets of regressions are reported:

- Beta-sorted portfolios ($P_\beta$)
- Small portfolios ($P_s$)
- Medium portfolios ($P_m$)
- Large portfolios ($P_l$)

**TABLE 1: EVALUATION OF VARIOUS CAPITAL ASSET PRICING MODELS SPECIFICATIONS**

| Coefficient | | | $\bar{\gamma}_0$ | $\bar{\gamma}_1$ | $\bar{\gamma}_2$ | $\bar{R}^2$ |
|---|---|---|---|---|---|---|
| **Panel A: Standard CAPM** | $H_0 : E[\gamma_0] = 0$ | $P_\beta$ | 0.0060*** (3.12) | 0.0029 (1.38) | — | 0.2839 |
| $R_{it} = \gamma_O + \gamma_1 \beta^{vw}{}_{it} + \varepsilon_{it}$ | $H_0 : E[\gamma_1] = E[R_{mt}] - E[R_{Ft}] > 0$ | $P_s$ | 0.0073* (1.83) | 0.0007 (0.14) | — | 0.1457 |
| | | $P_m$ | 0.0064* (1.78) | 0.0016 (0.39) | — | 0.3237 |
| | | $P_l$ | 0.0008 (0.37) | 0.0081 (1.43) | — | 0.3284 |
| **Panel B: Labour CAPM** | $H_0 : E[\gamma_0] = 0$ | $P_\beta$ | 0.057*** (2.77) | 0.0010 (0.64) | –0.0005 (0.35) | 0.3568 |
| $R_{it} = \gamma_0 + \gamma_1 \beta_{it}^{vw} + \gamma_2 \beta_{it}^{l} + \varepsilon_{it}$ | $H_0 : E[\gamma_1] = E[R_{mt}] - E[R_{Ft}] > 0$ | $P_s$ | 0.0070* (1.73) | 0.0017 (0.36) | –0.0007 (–0.29) | 0.2878 |
| | $H_0 : E[\gamma_2] \neq 0$ | $P_m$ | 0.0068 (1.81) | 0.0017 (0.43) | –0.2956 (–0.01) | 0.5040 |
| | | $P_l$ | 0.0019 (0.59) | 0.0058 (1.07) | –0.0005 (–0.48) | 0.5070 |
| **Panel C: Conditional CAPM** | **Up-months** | $P_\beta$ | 0.0213*** (7.41) | 0.0167*** (6.44) | — | 0.7939 |
| $R_{it} = \gamma_0 + \delta \gamma_1 \beta_{it}^{vw} + (1-\delta)\gamma_2 \beta_{it}^{vw} + \varepsilon_{it}$ | $H_0 : E[\gamma_0] = 0$ | $P_s$ | 0.0344*** (4.19) | 0.0047 (0.58) | — | 0.1744 |
| | $H_0 : E[\gamma_1] > 0$ | $P_m$ | 0.0231*** (2.862) | 0.1840*** (1.89) | — | 0.4058 |
| | | $P_l$ | 0.0275*** (2.57) | 0.0116 (1.23) | — | 0.344 |

**TABLE 1: CONTINUED**

| **Coefficient** | | | $\bar{\gamma}_0$ | $\bar{\gamma}_3$ | $\bar{\gamma}_4$ | $\bar{R}^2$ |
|---|---|---|---|---|---|---|
| | **Down-months** | $P_\beta$ | –0.0077** (–2.19) | — | –0.0157*** (–4.76) | 0.5770 |
| | $H_0 : E[\gamma_0] = 0$ | $P_s$ | –0.0197 (–1.13) | — | –0.0070 (–0.83) | 0.2310 |
| | $H_0 : E[\gamma_2] > 0$ | $P_m$ | –0.0159 (–1.42) | — | –0.0124 (–1.14) | 0.3488 |
| | | $P_l$ | –0.0265*** (–2.63) | — | –0.0020 (–0.08) | 0.3314 |

| **Coefficient** | | | $\bar{\gamma}_0$ | $\bar{\gamma}_1$ | $\bar{\gamma}_2$ | $\bar{R}^2$ |
|---|---|---|---|---|---|---|
| **Panel D: Conditional Labour CAPM** | **Up-months** | $P_\beta$ | 0.0214*** (6.86) | 0.0161*** (4.48) | 0.0007 | 0.8147 |
| $R_{it} = \gamma_0 + \delta\gamma_1\beta_{it}^{vw} + \delta\gamma_2\beta_{it}^{l} + (1-\delta)\gamma_3\beta_{it}^{vw} + (1-\delta)\gamma_4\beta_{it}^{l} + \varepsilon_{it}$ | $H_0 : E[\gamma_0] = 0$ | $P_s$ | 0.0322*** (3.32) | 0.0049 (0.456) | 0.0002 | 0.3397 |
| | $H_0 : E[\gamma_1] > 0$ | $P_m$ | 0.0202*** (2.91) | 0.0167* (1.88) | –0.0008 | 0.6034 |
| | $H_o : E[\gamma_2] \neq 0$ | $P_l$ | 0.0283*** (2.39) | 0.0100 (1.09) | 0.0011 | 0.5501 |

**TABLE 1: CONTINUED**

| Coefficient | | | $\bar{\gamma}_0$ | $\bar{\gamma}_3$ | $\bar{\gamma}_4$ | $\bar{R}^2$ |
|---|---|---|---|---|---|---|
| **Panel D: Conditional Labour CAPM** | **Down-months** | $P_\beta$ | –0.0057** | –0.0114*** | –0.0040 | 0.7337 |
| | | | (–2.22) | (–4.26) | (–0.26) | |
| | $H_0 : E[\gamma_0] = 0$ | $P_s$ | –0.0037** | –0.0174*** | –0.0010 | 0.8351 |
| | | | (–1.65) | (–5.80) | (–0.61) | |
| | $H_0 : E[\gamma_3] > 0$ | $P_m$ | –0.0036*** | –0.0195*** | –0.0006 | 0.8586 |
| | | | (–4.43) | (–9.27) | (–0.69) | |
| | $H_o : E[\gamma_4] \neq 0$ | $P_l$ | –0.0037*** | –0.0203*** | –0.0009 | 0.8748 |
| | | | (–2.72) | (–7.35) | (1.07) | |

The t-values (in parentheses) are equal to the mean value of the coefficient divided by its standard deviation. This tests whether the coefficient value is significantly different from zero

*Indicates statistical significance at the 10% level

**Indicates statistical significance at the 5% level

***Indicates statistical significance at the 1% level

The results for the Standard CAPM (with the FTSE 100 as the proxy for the market portfolio) indicate a lack of significance for the $\bar{\gamma}_1$ slope coefficient, which suggests that stock index beta is not a good predictor of portfolio return. Although the $\bar{\gamma}_1$ coefficients are of the correct sign the associated *t*-statistics are very low. Another feature of the results is the significance of the intercept terms, $\bar{\gamma}_0$, for three of the four regressions. This further suggests that the beta is not capable of explaining the cross-section of portfolio returns. The $\bar{R}^2$ statistics range from 0.1457 for small portfolios to 0.3281 for large portfolios.

The Labour CAPM (adding a proxy for human capital to the definition of the market portfolio) does not improve the performance of the model. The results indicate that labour beta is statistically insignificant and does not impact on the cross-sectional variation of stock returns. The stock index beta coefficients, $\bar{\gamma}_1$, are of the correct sign but are not statistically different from zero. The labour beta coefficients, $\bar{\gamma}_2$, are negative without exception but statistically insignificant, while the intercept terms, $\bar{\gamma}_0$, are significant for three of the four regressions. All of this suggests that the Labour CAPM fails to improve on the performance of the Standard CAPM. These results are consistent with the extant literature. Durack et al. (2004), using Australian data, also found that labour beta is an insignificant factor in explaining the average excess returns. As one would expect, the $\bar{R}^2$ statistics have risen.

Table 2 presents comparative adjusted $\bar{R}^2$ statistics. The $\bar{R}^2$ statistics improve for the Labour CAPM but this should be interpreted with caution given the lack of significance in the regression slope coefficients.

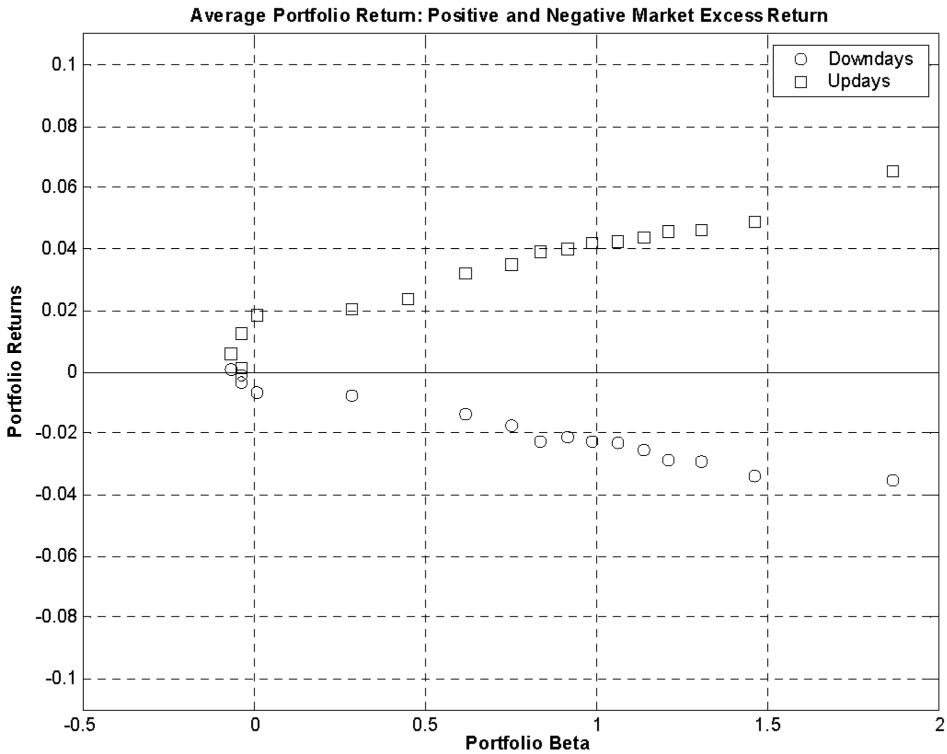
Clearly, the empirical performance of the two models examined is poor. Neither stock index beta nor labour beta is significant in explaining the cross-section of portfolio returns. Furthermore, the regressions feature significant intercept terms, further evidence to reject the model.

The Conditional CAPM (which allows for a negative cross-sectional risk–return relationship) shows improved results. The results provide support for a systematic but conditional relationship between stock index beta and realised returns. For up-months two of the regressions – $P_B$ and $P_m$ – have significant $\bar{\gamma}_1$ terms that are of correct sign. However the intercept terms for all regressions are highly significant, suggesting other factors for the explanation of portfolio returns. The results for down-months show a significant slope coefficient for $P_B$ regressions only. It is negative and of similar magnitude to the $\bar{\gamma}_1$ coefficient for up-month regressions. The intercept terms are significant for the $P_B$ and $P_s$ regressions. Both sets of regressions are characterised by relatively high $\bar{R}^2$ statistics (particularly

**TABLE 2: COMPARSION OF STANDARD CAPM AND LABOUR CAPM**

| Portfolio | Standard CAPM | Labour CAPM | Gain in Precision |
|---|---|---|---|
| $P_\beta$ | 28.39% | 35.68% | 7.29% |
| $P_s$ | 14.57% | 28.78% | 14.21% |
| $P_m$ | 32.37% | 50.40% | 18.03% |
| $P_l$ | 32.84% | 50.70% | 17.86% |

**FIGURE 5: PORTFOLIO ANALYSIS – POSITIVE AND NEGACTIVE MARKET EXCESS RETURNS**




the regressions). Figure 5 shows why the results for the conditional regression are 'better' than the standard regressions.

Results for the Conditional Labour CAPM (which incorporates both a proxy for human capital and the conditional relationship between beta and returns) are mixed. The results confirm a consistent and significant relationship between stock index beta and returns. However, labour beta remains statistically insignificant across all size portfolios and in both up and down markets.

Our findings are consistent with previous empirical research for the Standard CAPM. It is found that there is little empirical support for the Standard CAPM, which assumes that the relevant stock market index is the market return. The relationship between average returns and beta is flat – which is similar to the results reported in the literature by studies using US, Japanese, UK and Australian data.

In contrast to the extant literature (e.g. Jagannathan and Wang, 1993; Jagannathan et al., 1998), the Labour CAPM does not perform well. Including labour beta in the Standard CAPM specification does little to improve the performance of the CAPM. Consistent with the findings of Durack et al. (2004), we do not 'save' the stock index beta through the inclusion of a proxy for the return to human capital. With respect to the Conditional CAPM our results are broadly in line with those of Pettengill et al. (1995) for US markets. The beta coefficient is significantly positive for up-months and is significantly negative on down-months. Furthermore, the coefficients are of similar magnitude.

Finally, the Conditional Labour CAPM has not been considered in the literature. To the best of the authors' knowledge this is the first study to simultaneously investigate the performance of the CAPM when both the conditional relationship between beta and returns is recognised and when the market portfolio includes a proxy for human capital. The results show that the relationship between stock index beta and return remains statistically significant. However, conditioning on the market realisation does not improve the significance of the labour beta.

## SUMMARY AND CONCLUSIONS

> In a way it (capital asset pricing model) reminds us of cartoon characters like Wile E. Coyote who have the ability to come back to original shape after being blown to pieces or hammered out of shape (Jagannathan and Wang, 1993, p. 4).

While the evidence against the CAPM presented by, amongst others, Fama and French (1992) is imposing, it is not sufficient to conclude that the CAPM does not provide a useful framework for explaining the cross-sectional variation of asset returns. This study explores whether the lack of empirical support for the CAPM may be due to the inappropriateness of the auxiliary assumptions made to facilitate the empirical analysis of the CAPM. In empirical studies of the CAPM it is generally assumed that the return on the aggregate wealth portfolio is a linear function of the return on some portfolio of actively traded stocks. Following Mayers (1972), it is argued that it is important to include human capital when empirically examining the CAPM.

It has also been noted that the Fama and MacBeth (1973) two-pass test procedure is a joint test of the hypothesis, that there is a linear relationship between beta and realised returns and that the market risk premium is positive. Following Pettengill et al. (1995), it is recognised that the positive relationship between beta and returns predicted by the Standard CAPM is based on expected rather than realised returns. In order to test the assumption that beta and returns should have a negative relationship on months of negative market excess returns, the market data were split in two distinct sets: up-months and down-months.

There are three main findings. Firstly, the Standard CAPM performs poorly in empirical tests. It is characterised by a significant intercept term and an insignificant beta term. Secondly, the addition of a human capital to improve the market proxy does not result in significant improvements in explaining the cross-section of FTSE 100 equity returns. Finally, the Pettengill et al. (1995) analysis results in significant beta coefficients in some cases and improved $\overline{R}^2$ statistics.

The research has a number of limitations that can be addressed in future work. The proxy for human capital – labour income growth – is not necessarily a good proxy and has been referred to as 'ad hoc' in the literature. The proxy is limited for several reasons. For example, it does not take account of the capital gains of the stock of human capital, it assumes that labour supply is exogenous and it ignores the skills premia and the role of worker experience. Clearly a better proxy for human capital would be preferable to include in future empirical tests of the Labour CAPM. Furthermore, the proxy used was seasonally adjusted, which would have lessened its variability and mitigated its contribution to the analysis.

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# NPM AND PERFORMANCE MEASUREMENT: A COMPARATIVE STUDY OF THE PUBLIC SECTORS IN IRELAND AND THE UK

**Noel Hyndman**
*Queen's University Belfast*
**and**
**Francis McGeough**
*Institute of Technology Blanchardstown*

***ABSTRACT***

*The use of quantitative, often non-financial, targets and performance measures by businesses and not-for-profit organisations has recently received increasing attention in the academic literature. In the public sector this has been particularly driven by the rise and influence of New Public Management (NPM), resulting in a shift from issues of policy to issues of management, and the break-up of traditional bureaucratic structures. One aspect of these changes is an increasing focus on quantitative measures of performance as a support for better decision making and more appropriate accountability in the public sector. Driven by the NPM agenda, public sector organisations have sought to develop targets that cover all aspects of an organisation's performance. However, the extent to which such an agenda and focus has impacted varies between countries. This paper seeks to examine the possible role of quantitative targets and measures in public sector organisations in general and, through an exploratory study of annual reports, the nature and breadth of the usage of targets and measures are examined in a comparative study of Ireland and the UK. What is found are significantly different intensities of application between the countries, with the UK applying such ideas in a much more rigorous manner than Ireland. Possible reasons for this are suggested.*

## INTRODUCTION

After the Second World War there was a massive expansion in the role of the state across Organisation for Economic Co-operation and Development (OECD) countries. This was driven in the main by rising expectations and the demand for greater equality. It was felt that in order to participate in society citizens had to have a minimum access to services such as health, education and housing (Sanderson, 1996). However, in the last thirty years major changes have taken place in relation to the role, function and management of the public sector. These changes have been termed New Public Management (NPM) (Hood, 1991).[1] By the 1970s, serious doubts began to be raised about the continued expansion of the state's role. A number of reasons have been put forward to explain why the post-1945 expansion of the public sector was being questioned. Among these are financial distress (Matheson and Kwon, 2003), social changes (Bovaird and Loffler, 2003), globalisation and increased competition (Flynn and Strehl, 1996), and changing perceptions of the state (Lane, 1997; Pollitt, 1993). This questioning forced governments and organisations to examine, among other things, the role of the state, the manner in which public services are delivered to citizens and the accountability of the public sector.

These drivers of change prompted the push for public sector reform. There are varying views as to what was the underlying goal, or goals, of the reform process, with some seeing it in terms of improving the performance of the public sector (Bates, 1993; Flynn and Strehl, 1996), while others saw it in terms of a fundamental questioning of the role of the state (Sanderson, 1996; Lane, 1997). It is possible to argue that both of these goals, and indeed other goals, were behind the reforms undertaken in different countries under the NPM banner. Boston (1991), Barnes and Gill (2000), and Carroll (1995) suggest a wider set of goals which, they argue, drove the reform process. These include the need to improve the overall efficiency and effectiveness of public expenditure, to reduce overall levels of expenditure, to improve the accountability of public sector organisations, to improve the transparency of the public sector, to enhance the responsiveness of public sector organisations to citizens, and to improve trust in the public sector.

The drivers of change and the goals of the reform process had a major influence on the types of changes brought into the public sector, something referred to by Hood (1995, p. 95) as the 'dimensions of change'. These included disaggregation (involving the breaking up of public sector organisations into smaller units with quite specific purposes), competition (including competition between public sector organisations and private sector operators), greater use of private sector management practices, much more concentration on resources used and results achieved, a greater emphasis on active control (where managers are actively involved in the day-to-day running of their organisations), standards of performance (where performance is measured against defined benchmarks), and a focus on output and outcome measures (with emphasis being placed on what organisations are producing, not just on what they are spending).

As can be seen, one important aspect of these changes, which is related to the key goals of NPM, is an increasing use of quantitative measures of performance as a support to better decision making and more appropriate accountability in the public sector (related to the last four of Hood's dimensions of change outlined above). Driven by the NPM agenda, many public sector organisations have sought to develop targets that cover all aspects of an organisation's performance. However, the extent to which performance measurement and performance management have been a focus varies considerably between countries (Hood, 1995; Olson, Guthrie and Humphrey, 1998). The key objective of this paper is to examine the possible role of quantitative targets and measures in public sector organisations in general and, through an exploratory study of annual reports, the nature and breadth of the usage of such measurements are analysed in a comparative study of the Republic of Ireland (Ireland) and the UK. In addition, the paper will explore possible reasons for the different levels of adoption of performance measurement ideas in the UK and Ireland. In terms of the format of the paper, the following approach is taken. The next section discusses what is meant by performance information and explores its potential uses in both internal planning and external reporting. The difficulties of measuring performance in the public sector are then reviewed as a basis for interpreting the later empirical research. The reasons why different countries have implemented NPM reforms at different levels of intensity will then be examined. Following this, the specific contexts of both the UK and Ireland with respect to NPM and performance measurement in the public sector are explored. The method used in this study is then outlined and the results are presented. In the final section the results are discussed.

## PERFORMANCE MEASUREMENT

### Performance Explained

It is common to view the performance of a public sector organisation in terms of a simple production model consisting of three stages (inputs, outputs and results). Inputs are the resources used to provide a product or service (e.g. staff, money, equipment). Outputs represent the activities carried on by the organisation, or the immediate products or services generated by the organisation (e.g. number of visits made, number of passports issued). Results (or outcomes) represent the impact of the product or service on society (e.g. a healthier population, safer roads).

In such a model, the two key criteria for judging performance are efficiency and effectiveness. While other criteria (such as economy, efficacy, electability and equity) are sometimes added, efficiency and effectiveness are the dominant terms used in discussions on performance in public sector organisations. Effectiveness is concerned with the relationship between the outputs or results of an organisation and its objectives (or targets). For example, if the target is to ensure that a certain percentage of 11-year-olds achieve a particular level in mathematics, a measure of effectiveness would compare the percentage actually achieving this level (possibly captured through the use of a particular testing instrument) with the objective. Similarly, if the target is to carry out 100 medical operations of a particular specification, a measure of effectiveness would compare the actual number carried out (presumably each passing a quality threshold) with the objective. In practice, most public sector organisations have a variety of objectives and targets, many related to aspects such as volume of service provided and quality of service provision. Efficiency is the ratio of outputs to inputs, or the amount of input per unit of output. For example, an efficiency measure could be cost (an input) per operation (an output), or the number of cases handled (an output) per employee (an input). Two key reasons for measuring performance are, firstly, that it provides essential information to improve management within the public sector and, secondly, that it can form the basis for discharging accountability.

**Performance Information and Planning and Control**

The need to plan and control the performance of public sector organisations, with a view to improving performance, has been a central issue in a number of public sector initiatives in a range of countries that have embraced NPM ideas. These initiatives have often emphasised the importance of quantification in the public sector, specifically in the context of a highly rational model of management behaviour. Significant themes connected to this rational management approach, frequently drawing extensively from the writings of Drucker (1954) and Argenti (1980), are that strategy should come about by highly systematised forms of planning and that there is a need for specific and quantified targets. It is argued that performance information is necessary to improve management within the public sector. In such a scheme, the importance of establishing clear links (or alignment) between the various levels of planning and control is stressed. In these writings it is often argued that by having targets for performance, and by measuring achievements against targets, a basis for better management within the public sector is provided. It is suggested that this will give direction to activities and provide a basis for evaluating whether the organisation has been effective and efficient.

Related ideas occur in goal setting theory, which was originally developed by Locke (1968) to explain human action in specific work situations. The two main thrusts of the theory are that specific goals lead to higher performance levels than general goals, and that difficult goals are positively and linearly related to performance. The theory asserts that if managers know specifically what they are attempting to achieve, they are motivated to exert more effort which, in turn, increases performance (Locke and Latham, 1990, 2002), although it is acknowledged that task difficulty (which is associated with difficult-to-measure goals) reduces the impact on performance (Locke and Latham, 1990).

Hyndman and Eden (2001) suggest that the thrust of many official UK government publications is that managers need to have a clear view of their objectives and to have the means of assessing performance. Similar views are incorporated into a conventional planning and control model developed by Hyndman and Anderson (1997) that involved an objectives–plan–targets–monitor–control approach. Such a focus requires organisations to set out clearly what it is they want to achieve in terms of desired performance, to develop appropriate strategies to ensure such achievement, and then to measure what they are actually achieving and compare it with planned achievements. In such a model, managers would be responsible for examining any variances in performance and would be accountable for the results achieved by the organisation.

This approach requires public sector organisations to set performance targets and examine performance in the light of the overall objectives of the organisation.

Hyndman and Eden (2000) suggest that a completely rational system might work in the following manner:

> [O]bjectives would be clearly linked to mission statement, each objective would have a number of key targets, and each key target would spawn a number of linked operational targets and targets would not be set that were not linked to objectives (Hyndman and Eden, 2000, p. 179).

Similarly, the New Zealand Pathfinder Project (a co-operative venture involving eight government departments striving to develop better outcome measures) suggested that the first step for each organisation or unit within a diversified organisation was the identification of a 'few vital' outcomes rather than a plethora of outcomes (Pathfinder Project, 2003). These, it was argued, should underpin the organisation's ability to develop a results orientation. The Pathfinder Project (2003) goes on to suggest that the key criteria of these outcomes should align with the organisational mission, be clearly linked to the organisation's outputs and inputs, measure the benefits experienced by clients, support the organisation's decision-making processes, including resource decisions, and be measured using reliable data that is obtainable at a reasonable cost.

However, the difficulty of identifying outcomes, and the potential relationship between inputs, outputs and outcomes, is highlighted in a HM Treasury public sector guide (2001), which provides a synthesis of the key concepts and ideas behind good performance information practices. Here, the problem of approximating anything like perfect outcome measures is stressed, and it is argued that:

> Ultimately, we are aiming to improve outcomes, and so should measure them. But sometimes outcomes can be hard to measure. And we need to understand how inputs and outputs and associated processes are contributing to outcomes (HM Treasury, 2001, p. 3).

## Performance Information and Accountability

Accountability has been defined by the Government Accounting Standards Board as:

> [B]eing obliged to explain one's actions, to justify what has been done … accountability requires governments to answer to the citizenry – to justify the raising of public resources and the purposes for which they are used (GASB, 1987, p. 21).

There may be different bases of accountability. Stewart (1984) suggests a ladder of accountability, distinguishing between, for example, 'performance accountability' and 'accountability for probity and legality'. He argues that an accountability information system should report on all levels of accountability and this will result in a system which reports both financial information and output and outcome information.

Some have viewed the disclosure of performance information as an essential aspect of the principal–agent relationship in the public sector. For example, Hyndman and Anderson (1997) argue that the principal (often the public or the government as a proxy for the public) transfers to an agent (the public sector organisation) resources and expectations regarding the transfer. These expectations – which, as Laughlin (1990) highlights, are often complex and may be written and explicit or unwritten and implicit – form the basis of the accountability relationship. In many cases these expectations are framed extensively in terms of performance and it is through the provision of performance information that accountability is discharged.

A number of writers (Gibson, 1978; Gray, 1983; Hedlund and Hamm, 1978; Hyndman, 1990) have suggested that in the not-for-profit sector generally there may be a predisposition to overemphasise the discharge of accountability for probity and legality, possibly through the provision of traditional financial accounting information, at the expense of wider performance information. However, the importance of performance information in the discharge of accountability by public sector organisations is argued forcefully by Mayston (1985), Miah (1991) and Boyne and Law (1991). In the latter case it is suggested that in the absence of such information 'the concept of accountability and indeed the whole democratic process is simply a sham' (Boyne and Law, 1991, p. 179). Hyndman and Anderson (1992), in contrasting performance accountability with financial accountability, and in highlighting the overriding importance of performance information, argue that for a not-for-profit organisation (NFPO) to discharge its accountability:

> [I]t is necessary to disclose information regarding performance. While financial accountability is important, possibly to establish probity or legality in handling public funds, performance information is paramount. Therefore, without adequate means of evaluating and reporting on such issues, the discharge of accountability by NFPOs is seriously weakened (Hyndman and Anderson, 1992, p. 54).

The GASB (1987) highlights two groups who have a particular need for information from public sector organisations: the citizenry, and legislative and oversight bodies. The information needs of each of the above groups may be different. For example, the citizenry may be most interested in the results, or effectiveness, of an organisation, while the concern of oversight and legislative bodies may be jointly focused on wider performance information, including efficiency, and probity. Many of the recent NPM reforms have emphasised the need for the use of performance information in discharging accountability (see, for example, the arguments for the publication of 'league tables' for schools, hospitals and universities by the UK government). It could be suggested that while obfuscation of performance may suit some managers, the external pressure provided by the disclosure of performance information encourages a focus on performance and provides a catalyst for managers as they seek to achieve performance improvement.

It has been argued that the development of performance information by public sector organisations and its use in reporting is necessary to justify funding and to counter possible criticisms of poor management and ineffectiveness.

Performance information gives a visibility to the resources, activities and achievements of a public sector organisation, thus enabling informed discussions and decisions. In addition, the need to discharge performance accountability encourages management to concentrate on the issues that are frequently of importance to those stakeholders who are outside the immediate management of the organisation and often provide the resources for the organisation to function (in the case of public sector organisations these stakeholders often comprise the public or their elected representatives). Edwards and Hulme assert that the absence of accountability, and in particular performance accountability, 'begins to make the likelihood of ineffective or illegitimate actions by an organisation much more probable' (1995, p. 9). With respect to public sector organisations, where accountability is weak, management might have limited incentive to manage the organisation's funds efficiently and effectively.

The New Zealand-based State Services Commission (1999) suggests that over time the emphasis in performance reporting has changed from the reporting of inputs to the reporting of results. Such a change encourages managers to spend less time accounting for where money (the inputs) is spent and more time accounting for the outputs and outcomes achieved. Fuller and Roffey (1993) argue that this change in emphasis needs to be underpinned by clear objectives and standards of service against which organisational performance can be measured (requiring detailed specification of the outputs expected in advance), performance measures to assess results (with an emphasis on usefulness as opposed to precision), robust information systems to support organisational decision making, and timely and understandable reporting of results.

## Difficulties of Measuring Performance in the Public Sector

The use of a planning and reporting system utilising specific and quantified goals, objectives, targets and performance measures is not without problems. It must be recognised that while many pronouncements by governments that have embraced NPM have been couched in terms of efficiency and effectiveness, with their emphasis on rational management and clear means–ends relationships, the application of such ideas in complex organisations is problematical. For example, McSweeney (1988), in discussing value-for-money audits, examines a number of the difficulties of such an approach. These include the lack of a direct and knowable link between intentions and outcomes, the difficulty of identifying explicit and quantifiable goals, the ability to manipulate information, a concentration on quantification, and a lack of regard for qualitative factors. These issues largely reflect the inherent difficulties of measuring performance in any NFPO (for further discussion of such difficulties see Connolly and Hyndman, 2003). A detailed discussion of these difficulties and more specific criticisms is beyond the scope of this paper; however, some examples may help in interpreting the later empirical work reported in this paper.

If systems are implemented and operated in very rigid ways, major dysfunctional effects may occur. This may be the case where a 'one size fits all' view is taken. Smith (1993) has suggested a number of possible adverse consequences, including tunnel vision, suboptimisation, myopia, ossification and misrepresentation. Hofstede argues that consideration must be given to the organisational context in which a system operates, and highlights the danger that 'the more formalised a control system, the greater the risk of obtaining pseudo-control rather than control' (1981, p. 211). He goes on to suggest that where outputs are ambiguous and are not easily measured, and where the effects of management intervention are not well known, the adoption of mechanistic, rationalistic, techniques-driven management systems are likely to have unintended consequences.

Some have questioned the use of a rational management approach in the public sector because of the way in which changes have been implemented. In certain cases this can lead to inappropriate behaviour on the part of managers or misjudgements by outside parties. Hopwood (1985), in presenting field evidence from one public sector organisation, suggested that changes that were articulated in terms of improving management were, in reality, more to do with external accountability and establishing legitimacy. Other criticisms of the rational management approach relate to the perceived lack of understanding of the political and social contexts into which these systems are introduced. For example, Broadbent and Guthrie (1992) argue that the changes that are being implemented in the public sector are often unevaluated, neglect the social side of organisations, deflect focus from key issues and may be detrimental to the best interests of society.

There is also a possible danger that defining a mission and objectives, and setting targets and reporting performance against them, will degenerate into a formal ceremony that has little impact on the behaviour of managers and does nothing to improve the efficiency, effectiveness and accountability of organisations. Thompson (1995) warned that unless care was taken in developing useful systems, there was a possibility of the whole exercise lapsing into a senseless ritual, which, sooner or later, would be abandoned as cost-ineffective. This view is expressed even more strongly by Sharifi and Bovaird:

> [I]t might … be argued that in the public sector the potent **symbol** of performance orientation has helped to establish the **myth** that public sector organisations have a sense of direction and an explicable rationale for their actions. This myth is reinforced by the **rituals** of performance measurement and reporting (1995, p. 477, emphasis in original text).

## Intensity of Adoption of NPM Reforms

International comparisons of NPM-style reforms across a number of countries indicate that these reforms are being implemented at a quicker pace and more enthusiastically in some countries compared to others (Hood, 1995; Flynn and Strehl, 1996; Pollitt and Bouckaert, 2004). For example, Hood (1995), in countering the suggestion that NPM is more obviously associated with right-wing governments, produced an analysis (see Table 1) outlining the degree of NPM intensity in various countries and the political orientation of the national

**TABLE 1: NPM INTENSITY AND POLITICAL ORIENTATION**

| | Political Orientation | | |
|---|---|---|---|
| **NPM Intensity*** | **Left** | **Centre** | **Right** |
| **High** | Sweden | Australia<br>Canada<br>New Zealand | UK |
| **Medium** | France | Austria<br>Denmark<br>Finland<br>Italy<br>Netherlands<br>Portugal<br>USA | |
| **Low** | Greece<br>Spain | Germany<br>Switzerland | Japan<br>Turkey |

Source: adapted from Hood (1995), p. 100
*It should be noted that while Ireland is not included in the above table of Hood's analysis of NPM intensity and political orientation, elsewhere in Hood's paper it is identified as a country having medium NPM intensity (Hood, 1995, p. 104, Table 4).

government in each of these countries at that time. Basically he argued that political orientation (of left, centre or right) could not explain the degree of implementation of NPM ideas.[2]

Hood (1995) went on to suggest that the adoption of NPM approaches requires motive and opportunity. Motive arising from the savings that will occur once NPM approaches are implemented. Opportunity occurring when there are limited constitutional checks on central government.

With respect to opportunity, Flynn and Strehl (1996) provide some support for Hood's view, when they argue:

> Constitutional arrangements and the legal basis of the state are clearly an important influence both on the nature of managerial work and the extent and direction of reforms … In a federal structure, the influence of central government may be small (Flynn and Strehl, 1996, p. 6).

Similarly, Pollitt and Bouckaert (2004) suggest that reforms are easier to push through in a centralised state than in a decentralised state, and in a state that operates a majoritarian approach to government rather than a consensual approach. In particular they argue that all reforms produce 'winners' and 'losers' and that in a consensus-driven system these 'losers' are likely to be represented in the government. On the basis of this contention, they produced a three-by-three matrix (see Table 2) that explored centralisation/decentralisation and majoritarian/consensus, and located countries within this matrix. In their analysis, they suggest that the speed and severity of public sector reforms decline as you move from left to

**TABLE 2: STATE STRUCTURES AND THE NATURE OF EXECUTIVE GOVERNMENT**

| | Majoritarian ⟶ | Intermediate ⟶ | Consensual |
|---|---|---|---|
| **Centralised (Unitary)** ↓ | New Zealand<br>UK | France | Italy<br>Netherlands |
| **Intermediate** ↓ | Sweden | | Finland |
| **Decentralised (Federal)** | Australia<br>Canada<br>USA | Belgium<br>Germany | |

Source: adapted from Pollitt and Bouckaert (2004), p. 47

right and that the scope of reform (the amount of the public sector impacted by any one reform programme) declines as one moves from top to bottom.

When considering Tables 1 and 2 together, it can be seen that of the five countries in Table 1 with high NPM emphasis, two (the UK and New Zealand) are majoritarian, centralised states, two (Canada and Australia) are majoritarian, decentralised states and one (Sweden) is a majoritarian, intermediate state. But as you move from left to right in Table 2 (to the states that operate intermediate and consensual approaches to politics), all the countries listed fall into the medium or low intensities of NPM usage using Hood's (1995) framework (France, Belgium, Germany, Italy, Netherlands and Finland).

Another factor possibly affecting the extent to which NPM ideas are embraced is the diversity of policy advice on reform issues to ministers. Pollitt and Bouckaert (2004) argue that the wider the range of advice, the greater the chance that new ideas will influence ministers. They suggest that, for example, in the UK when Margaret Thatcher was Prime Minister she sought advice from right-wing think tanks because of her suspicions of civil servants. This possibly increased exposure to NPM ideas to a much greater extent than would have been the case if civil servants had filtered ideas.

With respect to culture, Pollitt and Bouckaert (2004) further argue that the cultural climate of a country has a major influence on the success or otherwise of a public sector management reform programme. Hofstede (2001) identifies five critical cultural elements: power distance, uncertainty avoidance, masculinity versus femininity, long term versus short term, and individualist versus collectivist orientation. Individual countries, including Ireland and the UK, were scored using an index based on these cultural elements. The scores for Ireland and the UK were similar on the first four elements; however, on the last element (individualism versus collectivism), the UK was shown to have a much more individualistic orientation than Ireland. This might possibly indicate a more accepting context for the introduction of NPM ideas in the UK. At the same time a more collectivist orientation may militate against the introduction of NPM reforms in the Irish public sector.

## THE DEVELOPMENT OF PUBLIC SECTOR PERFORMANCE MEASUREMENTS IN THE UK AND IRELAND

The UK and Ireland have been actively involved in the development of performance information frameworks for their public sectors, although to varying degrees and over differing timescales. It is clear that the UK was an early adopter of the NPM 'forms of change' outlined previously and tended to take major steps in the reform process (for example, the Next Steps Initiative of the late 1980s and the marketisation of the NHS in the 1990s were clear examples of this). In contrast, Ireland was a relatively late adopter and has seemed to favour a more gradual process. However, Hood (1995) placed Ireland along with Denmark and the Netherlands in the medium category with regard to NPM emphasis. Nonetheless, the UK and Irish contexts have been relatively comparable. Traditionally, because of historical factors, the UK and Irish public administration systems have been somewhat similar. In economic terms the two countries, which are major trading partners, often experience parallel economic cycles. The UK experienced economic difficulties in the 1970s and 1980s. Moreover, the UK elected the right-wing Conservative party, led by Prime Minister Thatcher, to power in 1979. What followed was a period of early and intense introduction of NPM reforms. However despite very severe economic difficulties in Ireland, particularly in the 1980s, evidence of any significant impact of NPM reforms is not available until well into the 1990s. While Ireland, like the UK, is a centralised state, there are crucial differences. Firstly, Irish politics is largely non-ideological. Secondly, in Irish politics, largely because of the proportional representation voting arrangements in national elections, often the government consists of a coalition of parties rather than a majoritarian government, as is the norm in the UK. Perhaps as a result of the above there is a more consensual approach to policy making in Ireland, evidenced most strikingly in a series on national pay agreements involving a range of the social partners (mainly government, employers and unions).

### The Evolution of Performance Measurement in the Public Sector in Ireland

In the late 1980s and early 1990s there was strong interest and awareness in Ireland of the NPM reforms being introduced in many OECD countries, perhaps particularly in New Zealand and the UK. One important aspect of interest was the NPM focus on performance measurement as a basis for performance management. A major initiative under the NPM banner in Ireland was the launch in 1994 of the Strategic Management Initiative (SMI) by the then Taoiseach (Prime Minister), Albert Reynolds. The overall objective of the SMI (to improve the delivery of public services) was clearly related to performance improvement, and it was argued that, as a result of the SMI, public organisations would contribute more to economic and social development, and public resources would be used effectively by these organisations.

The SMI was developed further in 1996 when the Taoiseach launched the *Delivering Better Government* (DBG) report (Department of the Taoiseach, 1996).

Again, the issues of performance measurement and performance management were to the fore. The report envisaged that the key priorities of the government would be set out in Strategic Results Areas (SRAs) and that individual departmental statements of strategy, setting out the contribution that departments will make to the achievement of the SRAs, would flow from these. Furthermore, it was anticipated that the high-level departmental objectives would cascade down into the daily activities of the department, thus allowing key ideas from the SMI to embed themselves in the regular work of the department. The report also argued that there must be:

> [A] recognition that performance management is a process, based on the active and continuous management of work relative to a pragmatic, relevant set of performance measures or indicators, and not a routine filling of forms (Department of the Taoiseach, 1996, p. 31).

In DBG it was recognised that an important element of this process will be the monitoring of progress in achieving goals. It was argued that if performance management is to be integrated into the day-to-day operations of a department, appropriate performance indicators (PIs) must be developed, and these must link the work of individuals or divisions to the departmental objectives. The recommendations of DBG were implemented in the Public Service Management Act (Government of Ireland, 1997), with specific legislative backing being given to the preparation and publication of strategy statements (with the preparation of such statements and the publication of an annual progress report being the responsibility of the secretary general of a department or the head of a scheduled office). The Act outlines what is meant by a strategy statement, and in the process highlights the critical performance-related aspects, by stating that strategy statements should:

> [C]omprise the key objectives, outputs and related strategies (including use of resources) of the Department of State or Scheduled Office concerned (Section 5 (1) (a)).

In a related vein, and building on the ideas introduced in DBG, the Department of the Taoiseach (2004) suggests that objectives should be set in terms of the results required or outcomes intended, and that strategy statements should include PIs. Echoing ideas reminiscent of the rational management model, this point is developed by exhorting organisations to develop strategy statements that contain an organisation mission statement, an environmental analysis, the goals, objectives, strategies and outputs of the organisation, and PIs that can be linked to organisation objectives and are capable of demonstrating achievement. In building on this last point, guidelines contained in this document emphasise the importance of PIs as a means of monitoring progress by posing the following questions in relation to PIs:

> Are performance indicators clearly associated with objectives and strategies and capable of being assessed? Do indicators cover outcome and quality as well as outputs? … Are arrangements in place to clearly link the statement to the business

> planning and performance management and development process? (Department of the Taoiseach, 2004, p. 17).

Further guidance from the Department of Finance (2004a) suggests that the aim of business planning is to translate the goals or objectives in the strategy statement into goals or objectives for divisions, units and individuals. Again, it emphasises the centrality of matching objectives with high-level goals in an organisation, identifying the outputs (programmes, services) required to achieve these objectives, identifying daily activities and resources needed to support these outputs, and setting out useful and relevant PIs for each activity, which should allow for ongoing evaluation.

With respect to annual reports, the Public Service Management Act (Government of Ireland, 1997) requires departments to publish an annual report, with the Department of the Taoiseach guidelines (2004) on the preparation of strategy statements indicating that it should be clear from the annual report whether or not strategies set out in the strategy statement are being achieved. With such a requirement, PIs can provide a significant means of demonstrating the role that outputs are making to the organisation's objectives (related directly to the discharge of performance accountability). Given the potential importance of PIs, the Department of Finance has devoted a lot of effort to developing guidelines for their implementation (viewed as a key part of a Management Information Framework (MIF) project). The Department of Finance published three documents on PIs (2004a, 2004b, 2006a) which built on many of the issues outlined previously. These documents emphasised that the starting point for developing PIs is the outcomes set out in the strategy statement, and that these must cascade down into PIs. Furthermore, the need for clear alignment between the activities and outputs of the organisation and the desired outcomes was stressed.

There has also been a range of more recent official Irish government publications articulating the need for performance measures for both planning and control, and accountability purposes that reinforce the above themes. For example, the Department of Finance's budget document (2006b) states that in the budgeting process ministers will produce annual output statements to accompany their estimates (requests for resources) and, from 2008, these output statements will include information on outturns against targets. Furthermore, the purpose of the Expenditure Review Initiative (ERI) requires that:

> Each Department should be able to 'walk' from high-level goals and output information in their strategy statements to their divisional level objectives and also be able to link these to their estimates (Expenditure Review Central Steering Committee, 2005, p. 7).

Moreover, the first formal report of the Expenditure Review Central Steering Committee notes that departments (or offices) should intensify their efforts to develop PIs designed to map progress in adding value and, with respect to annual reports, recommends that they be modified, 'to include an Annual Statement providing the link between high-level planning and goals and programme delivery, the use of resources and achievements' (Expenditure Review Central Steering Committee, 2005, p. 2).

### The Evolution of Performance Measurement in the Public Sector in the UK

Much has changed in the UK public sector, particularly since 1979 (the advent of the Thatcher era). Large-scale privatisation, widespread market testing, the break-up of large units of government into smaller quasi-autonomous units and the increasing use of traditional private sector corporate practices are testimony to the NPM changes that have taken place. This can be seen in the 'Rayner scrutinies' of the early 1980s, the Financial Management Initiative (FMI) of 1982, the establishment of executive agencies following the Next Steps Initiative (NSI) of 1988, the Citizen's Charter of 1991 and a host of other changes in such areas as local government, health and education. One theme central to them all is that performance should be improved and such improvement must be measured in terms other than how much money is spent. Broadbent and Laughlin suggest that the launch of the FMI can be seen as a 'watershed point' (2006, p. 30) in the development of NPM in the UK, with departments required to set out their objectives and measure their performance in relation to these objectives (as well as managers having greater responsibility for delivering value for money).

With respect to the FMI, Zifcak (1994) claims that it was initially much less successful than anticipated, and argues that Australia's Financial Management Improvement Programme was more successful than the UK's FMI because the former was less top-down and more consensual than the latter. This perceived lack of success of the FMI prompted the development of the NSI, which resulted in the establishment of executive agencies, with each agency (headed by a chief executive) having responsibility for carrying out specified functions assigned to them by a supervising department. Broadbent and Laughlin (2006) suggest that such an arrangement led to central departments having a strong role to play in the setting of targets and the monitoring of agency performance in return for allowing greater freedom to individual agencies as to how money was spent.

The importance of performance information in underpinning such changes was emphasised by the UK's Comptroller and Auditor General in his evidence to the Public Administration Select Committee (PASC), where he stated:

> Over the last 20 years performance measurement has developed into an important means of improving performance and reinforcing accountability … Performance measurement has become an integral part of modern government … Good performance information is a crucial element in helping public sector organisations to develop policy; manage their resources cost effectively; improve delivery; and account for their performance to Parliament and the general public (PASC, 2003: Minutes of Evidence, PST 54, paras. 3 and 4).

The performance focus of the UK public sector has intensified further with the introduction of Public Service Agreements (PSAs).[3] This change is described by Broadbent and Laughlin as a 'step-change' (2006, p. 34) in the emphasis on performance information. PSAs are intended to move the focus away from inputs and processes towards delivery and results, i.e. an increased emphasis on outputs and outcomes. PSAs bring together in one document the aims and objectives of the organisation, outcome-focused performance targets and a statement as to who is responsible for the delivery of these targets. It is intended that the PSAs set out national priorities and that local organisations have freedom as to how best to achieve these outcomes in their local areas.

As well as extolling the necessity for measuring performance, official government guidance relating to performance measurement has supported such change. For example, in the early 1990s a HM Treasury (1992) document relating to executive agencies was published (although it was noted that it was applicable to all parts of the public sector). Among the key advice given in the guide was the following: no agency ought to be set more than a handful of key targets; targets will usually fall under one or other of the following broad headings – financial performance, volume of output, quality of service and efficiency; it is important that an explicit balance should be decided between the targets set for quality of service, and those covering volume of output and efficiency; targets should normally be proposed and set as part of a corporate planning process; progress against the key targets should be monitored during the year; and achievements against key targets should be included in the annual report and accounts of the agency. The guidance was peppered with examples of actual measures being used.

Another more recent public sector guide published in the UK, *Choosing the Right Fabric: A Framework for Performance Information* (HM Treasury, 2001), provided the public sector with a synthesis of the key concepts and ideas behind good performance information practices. The 35-page long document considered the type of information that is worth collecting as performance information, and the principles behind pulling together a set of performance measures. The role of performance information and the practical issues in putting a performance information system in place were discussed, and pointers to further sources of information and guidance were provided. The significance of performance information in strategy, policy development, business planning, performance management and accountability was discussed, and the importance of ensuring that high-level business plans are 'cascaded' through the organisation by the use of targets and performance measures was illustrated (with numerous examples provided).

## ANALYSIS OF ANNUAL REPORTS

### Method

The research sought to identify the nature and breadth of the quantitative performance targets and measures in public sector organisations in Ireland and the UK. A matched sample of ten UK executive agencies and ten comparable Irish public sector organisations was selected (see Appendix 1). Executive agencies were chosen because their activities have an operational concentration (and therefore are more likely to lend themselves to measurement and reporting), and it was expected that their Irish equivalents (being responsible for comparable activities to their matched UK counterparts) would have a similar focus. With respect to the Irish organisations, six were stand-alone state agencies while four of them were divisions or sections of central government departments.

Document analysis was used to gather data. Annual reports were accessed from the organisations' websites; with the latest available reports being used. The reports were examined to see the extent and type of performance information included in the annual reports. Annual reports are generally recognised as key documents in the discharge of accountability to external users, and public sector organisations in both Ireland and the UK are required to publish such documents. *The Corporate Report* states that such information packages are 'the primary means by which management of an entity is able to fulfil its reporting responsibility' (Accounting Standards Committee, 1975, p. 16). Dobell and Zussman, writing over 25 years ago, inferred that reporting systems by public sector organisations had significant deficiencies and suggested that 'more substantial annual departmental accounts should help the accountability process' (1981, p. 423). Similar sentiments are included in more contemporary Irish and UK official government publications relating to public sector service delivery (Department of the Taoiseach, 2004; HM Treasury, 2001).

For analysis purposes, information was considered disclosed if it was highlighted in some way (hard copy) and not contained in the main narrative of the annual report (soft copy). This approach was used by Hyndman and Anderson (1997) in their review of performance reporting by executive agencies, where it was argued that soft copy was difficult for users to isolate and use. While it could be argued that this is just a matter of presentation, information that is highlighted and concise was deemed to be significantly more useful in terms of communicating to users; this is particularly the case where users of annual reports have limited, or no, powers of interrogation.

To reduce subjectivity, a number of steps were taken. A set of definitions was developed to ensure that terms were being used in the same way for each organisation. In addition, a set of rules of classification was written to deal with common difficulties of analysis. For instance, only targets or measures with a numerical element (or a target completion date of a particular task) were included. For example, the Irish Marine Safety and Environment section of the then Department of Communications, Marine and Natural Resources had a target of responding to all 999 calls immediately. This was included as a target (of 100 per cent immediate response) and a measure because an actual achievement level was reported and could be benchmarked against the target. In addition, targets or measures were counted separately if several distinct and discrete aspects were included within a particular statement relating to targets or measures of performance. The UK Maritime and Coastguard Agency provides an example of this. The following target-related statement: 'provide initial responses on grant applications within 15 working days and final response within 6 weeks of receipt of final application' was made and actual measurement of performance was provided against each aspect (initial response and final response). This was counted as two targets and two actual measures. Again, to improve objectivity, the analysis was undertaken by two individuals, before discussing and agreeing the results. No judgment was made on the appropriateness of the targets set and actual performance level achieved.

## Results

Initially, the length of the annual reports was reviewed (see Appendix 2). As is seen, the average length of the UK reports was 84 pages, compared to 34 for the Irish reports (where the unit was part of a department, only the pages covering that unit were counted). To an extent, it may be argued that some of this difference may be accounted for by the fact that some of the Irish organisations were sub-sections of departments. Given that all the UK organisations were stand-alone agencies, Appendix 2 also shows a split between the stand-alone agencies in Ireland and their UK equivalents (six organisations) and those Irish organisations that were subsections of a larger department (four organisations). As can be seen, the annual reports of the stand-alone Irish agencies have an average length of 54 pages, compared to 78 pages for their UK equivalents. A comparison of the length of annual reports shows a stark contrast between the 4 Irish units that are reported as part of their parent department and their UK equivalents (6 pages for the Irish units as against an average of 94 pages for UK agencies). Thus, the fact that a unit is part of a larger department (which reports in total on what has happened at departmental level) may lead to less detail being provided in the annual report at unit level. This lack of separation from their department may make it problematic for a section to become what Miller and O'Leary (1987) call a 'governable unit', suggesting that smaller units make it easier for activities (and indeed individuals) to be isolated and evaluated in greater detail. The main findings from the empirical research are examined with respect to the extent of performance targets/measures reported, and the types of performance targets/measures being used.

### *The Existence of Performance Targets and Measures*

The annual reports were analysed to identify the number of targets and measures in each document. Table 3 details the findings with respect to this, highlighting numbers by individual organisation (distinguishing between the UK organisation and its Irish comparator) and the average of all organisations within each jurisdiction. In addition, it distinguishes between the stand-alone agencies in Ireland and their UK equivalents (six organisations) and those Irish organisations that were subsections of larger departments (four organisations) together with their UK equivalents. As can be clearly seen, the disclosure of performance targets and measures in annual reports is much higher in UK executive agencies than in their Irish counterparts. In relation to performance targets, the UK organisations average 12.5 (ranging from a high of 26 to a low of 6), compared to 5.2 for Ireland

**TABLE 3: NUMBER OF PERFORMANCE TARGETS AND MEASURES INCLUDED IN ANNUAL REPORTS**

| | UK | | Ireland | |
|---|---|---|---|---|
| | Targets | Measures | Targets | Measures |
| **Stand-Alone Agencies (UK/Ireland)** | | | | |
| Land Registry/Land Registry | 10 | 31 | 0 | 8 |
| Ordnance Survey/Ordnance Survey | 6 | 13 | 0 | 0 |
| Companies House/Companies Registration Office | 12 | 18 | 33 | 33 |
| Courts Service/Courts Service | 13 | 12 | 0 | 3 |
| Insolvency Service/Office of the Director of Corporate Enforcement | 26 | 41 | 0 | 8 |
| Employment Tribunals Service/ Employment Appeals Tribunal | 10 | 13 | 0 | 7 |
| **UK Stand-Alone Agencies/Irish Subsections of Department** | | | | |
| UK Passport Service/Department of Foreign Affairs* | 14 | 14 | 0 | 0 |
| Maritime and Coastguard Agency/ Maritime Safety and Environment** | 8 | 16 | 12 | 13 |
| Maritime Fisheries Agency/ Marine Resource Management** | 14 | 15 | 7 | 14 |
| Patent Office/Department of Enterprise, Trade & Employment** | 12 | 12 | 0 | 0 |
| *Total Targets/Measures* | *125* | *185* | *52* | *86* |
| *Average of All Organisations* | *12.5* | *18.5* | *5.2* | *8.6* |
| *Average of Six Matched UK Stand-Alone Agencies/Irish Agencies* | *12.8* | *21.3* | *5.5* | *9.8* |
| *Average of Four Matched UK Stand-Alone Agencies/Irish Subsections of Departments* | *12* | *14.3* | *4.8* | *6.8* |

*Consular and Passport section only
**Relevant sections (matched with equivalent UK executive agency)

(ranging from 0 to 33). With respect to measures, the pattern was similar (UK – average 18.5, range 12 to 41; Ireland – average 8.6, range 0 to 33). To a large extent the average in Ireland, in the case of both targets and measures, was extensively affected by the fact that the Companies Registration Office was somewhat of an outlier (having 33 targets and measures, while 7 Irish organisations had no targets and 3 Irish organisations had no measures of performance). This contrasts with the UK organisations, with every executive agency having at least several targets (minimum 6) and a fair number of measures (minimum 12).

Differences between Irish stand-alone agencies and Irish units that were subsections of a larger department were marginal (average for Irish stand-alone agencies – targets 5.5, measures 9.8; average for subsections of departments – targets 4.8, measures 6.8) Given that the average for the four comparator UK stand-alone agencies that were matched with their Irish subsections of departments was lower than the overall average for all UK organisations, too much should not be inferred from these differences. In addition, the fact that one of the stand-alone Irish agencies (the Companies Registration Office) had by far the most targets and measures of any Irish organisation (33 targets and 33 measures) makes generalisations from averages difficult. Indeed, only one of the six Irish stand-alone agencies (again the Companies Registration Office) had any targets (compared with two of the four subsections of departments).

The targets in both Ireland and the UK were widely used as benchmarks against which to judge actual performance. In Ireland all of the targets included in the annual reports had associated measures (although this is not highlighted in Table 3); in other words, when a target was published in the annual report the actual performance against that target was also disclosed. In total, 52 of the 86 Irish measures related to the 52 targets set by Irish organisations (with the other measures largely complementary to the main thrust of the targets). Similarly, in the UK the vast majority of the targets had a corresponding measure (121 out of 125). The only exceptions to this were the Courts Service and the UK Insolvency Service. In the case of the Courts Service one target was not measured and an explanation was given that the means of measuring progress had not yet been put in place (suggesting that in future a target would be set when this dimension of the measuring process had been established). In the case of the Insolvency Service it was explained that three targets relating to reductions in fees could not be implemented because of delays in agreeing budget allocations. In the context of accountability, this matching of targets and measures enables the reader of the annual report to evaluate the work of the organisation and make a judgment on the performance of the organisation.

While measures of performance were made against all targets in the annual reports of the Irish organisations, it should be noted that these targets related to only three organisations (Maritime Safety and Environment and Marine Resource Management – which are both part of the Department of Communications, Marine and Natural Resources – and the Companies Registration Office). The other seven Irish organisations highlighted no targets, although four of them had performance measures. As outlined above, targets and measures were only counted if they were highlighted in some way; thus, if the targets and measures were included in a table, or set apart by bold print or boxed off, they were counted. However, if they were embedded in the main text (and not set apart in any way), they were not counted. It should be noted that several of the organisations (particularly the Irish organisations) reported on activity levels in their annual reports (although did not refer to targets) but did not highlight these. However, by contrast, all of the UK organisations had at least several highlighted targets and measures, the vast majority of the organisations having specific, set-apart sections in their annual reports identifying and highlighting performance against target.

This absence of performance targets in the Irish organisations may arise from an inability or unwillingness to develop performance targets from high-level goals. For example, in the Irish Consular and Passport section of the Department of Foreign Affairs annual report a high-level goal is stated as being to 'provide a modern and efficient passport and consular service' but, as seen in Table 3, there is no disclosure of any performance targets relating to this or anything else. This is possibly indicative of no attempt being made in the organisation to break this high-level goal into a series of performance targets. Such lack of focus, evidenced by a dearth of specific and measurable targets, makes performance measurement and performance improvement difficult (if one accepts the main thrust of goal setting theory discussed earlier), and certainly runs counter to the rational management ideas contained in so much official Irish government literature and guidance on performance measurement. This contrasts with the UK Passport Service (UKPS), which has identified 'responding to customer needs' as one of the key areas to manage. Under this heading the UKPS identifies the goal 'to ensure that customers are satisfied with the standards of our service' and then breaks this down into the following performance targets: to ensure a customer satisfaction rating of 95 per cent (with an actual measurement being achieved by means of a survey); and to ensure that 92 per cent of customers are seen within 20 minutes of their appointment time. The UKPS then reports actual performance against these targets.

Another example of the lack of performance focus in Ireland is seen with respect to Ordnance Survey Ireland (OSI), which states its mission to be 'excellence in providing quality mapping and spatial information services to meet society's needs'. OSI goes on to identify a number of strategic themes, focusing on two areas in particular: 'to be an efficient organisation offering excellent value' and 'to develop our people and culture to underpin the success of the business'. Although these themes are further broken down into a number of activities that should be undertaken, no performance targets relating to them are developed (making it impossible to identify success or otherwise). However, while UK Ordnance Survey sets out its strategic objectives in detail in a similar fashion (for example, it states that it seeks to 'develop a business that focuses clearly on the needs of customers and continuously improves customer satisfaction'), a reasonably extensive range of performance targets is developed and used as a basis for judging performance. For example, a target 'to continuously improve the timeliness of the supply of our data to customers by processing and dispatching at least 95% of orders within agreed timescales' is disclosed and performance is then measured and reported against the target.

The three Irish public sector organisations where particular progress appears to have been made on the development of performance targets and measures were Maritime Safety and Environment, and Marine Resource Management (both subsections of the Department of Communications, Marine and Natural Resources) and the Companies Registration Office. With respect to Maritime Safety and Environment, the Department set out its core policy goal as being 'to establish, promote and enforce safety and security standards, and, by doing so, prevent, as far as possible, the loss of life at sea and on inland waters and other areas, and to provide effective emergency response services'. This was then broken down into four strategic objectives, one of them being 'to develop and implement international and domestic safety standards'. Under this objective a number of activities were identified and from these activities targets were developed and, subsequently, performance was measured. For example, with respect to the activity of licensing of passenger boats, the annual report sets out the standard of service (target) as being 'all boats to be surveyed within four weeks of receipt of application for a licence and, depending on the outcome of the survey, licence to be granted' and the actual performance against this target was disclosed. A similar pattern is seen with respect to the UK Maritime and Coastguard Agency. For example, one of the stated goals is 'a reduced rate of accidents and accident-related deaths involving UK registered merchant ships and fishing vessels.' The UK agency then states a target for carrying out planned ship inspections of 97 per cent of ships in the period to be inspected, and then highlights actual performance against this.

The research shows that, generally, the UK organisations have more established performance measurement systems than their Irish equivalents. The nature of the research, focusing on the annual reporting mechanism, demonstrates greater concentration on performance accountability by UK agencies and suggests greater use of objectives and targets in the planning and control systems (with the absence of targets in the Irish annual reports possibly being indicative of a lack of availability of such information in the planning process). The contrasting patterns in the development of performance information would seem to have little to do with the nature of the work (the organisations studied being matched by area of activity in each jurisdiction). Furthermore, while it might have been expected that Irish stand-alone organisations would have more comprehensive systems of performance targets and measures than Irish organisations that were parts of larger departments (the 'governable unit' expectation), there was no evidence of this in the research.

### *Types of Performance Targets Used*

As well as considering the number of performance targets and performance measures that are produced by public sector organisations, this research also considered the nature and breadth of targets and measures used in reporting. The performance of a private sector company is ultimately judged on profit; no similar measure exists for public sector organisations. Public sector performance is multi-faceted and therefore requires a range of measures (Jackson, 1988). HM Treasury (1992) outlines a taxonomy covering four broad areas (financial performance, volume of output, quality of service and efficiency – including cost per unit of output) and recommends that an explicit balance needs to be developed between these. Apparently embracing key ideas from goal setting theory and the rational management literature, key themes of this guidance are that targets set should align with an organisation's overall strategy and be balanced in terms of its main thrusts.

Table 4 explores this, and considers the number of targets and measures included in the annual reports, analysed by jurisdiction and by target/measure

**TABLE 4: TYPES OF PERFORMANCE TARGETS AND MEASURES DISCLOSED IN ANNUAL REPORTS**

| | Targets | | Measures | |
|---|---|---|---|---|
| **Type of Target/Measure** | **UK** | **Ireland** | **UK** | **Ireland** |
| **Financial performance** | 4 | 0 | 9 | 1 |
| **Volume of output** | 9 | 0 | 35 | 27 |
| **Quality of service** | 81 | 43 | 107 | 46 |
| **Efficiency (inc. unit cost)** | 13 | 0 | 10 | 0 |
| **Other** | 18 | 9 | 24 | 12 |
| ***Total*** | *125* | *52* | *185* | *86* |

type. The analysis largely uses the HM Treasury (1992) framework, distinguishing between financial targets, volume of output targets, quality targets and efficiency targets. In addition, a number of targets or measures could not easily be attributed to any one of these four categories and these were counted as 'other' targets. Examples of financial targets/measures might include degree of cost recovery through charges, surplus on commercial activities or having lived within the financial budget. In the case of volume of output targets/measures, the particular area measured would tend to be very specific to the nature of the work of the organisation. For example, the number of course days provided or the number of student days taught might be used by a training organisation (combined, hopefully, with quality indicators), whereas the number of job placings might be key to an organisation concerned with facilitating employment. The choice is especially wide when the nature of the output varies (e.g. with research organisations), with a possible distinction between 'intermediate outputs' (a step towards producing something) and 'final outputs' (the ultimate outcome). For example, it could be argued that the final output of a vehicle testing organisation may be such things as the impact on road safety or environmental pollution, but for the purposes of determining targets and developing measures it may be preferable to concentrate on the direct outputs (possibly because the final output may occur much later than the intermediate output and is often affected by various factors unrelated to the action of the agency). With respect to quality targets/measures these may be categorised into those relating to the quality of the product (e.g. accuracy) and those relating to aspects of the process of delivery (such as timeliness, turnaround time and customer–supplier relationship). In relation to efficiency targets and measures, as well as the importance of unit cost figures that could be used by most public sector organisations (which link the costs, an accumulation of inputs valued using a common financial benchmark, to the units of output), targets/measures such as the number of tests or operations conducted (an output) per employee (an input) or capacity utilisation (in terms of, for example, accommodation available or places available) could be useful.

Table 4 shows that in the UK there is a much wider variety of performance targets/measures being used than in Ireland, with each of the four recommended

HM Treasury categories (1992) being availed of. Although not shown in Table 4, all UK organisations reported at least one target and related measure in the quality of service and efficiency categories (with many reporting several, particularly with respect to quality of service), as well as reporting at least one volume of output measure (with most having at least one volume of output target as well). With respect to financial performance, most UK organisations disclosed at least one measure, although there were limited numbers of targets in this category. By contrast, the range of targets disclosed by Irish organisations was quite limited, with the vast majority being related to quality of service (albeit, as seen in Table 3, most Irish organisations disclosed no targets at all). There were no financial performance, volume of output or efficiency targets disclosed. In the case of measures of performance, 53 per cent of the measures (46 out of a total of 86) being used by Irish organisations were related to quality of service (largely aligning with the stated targets), with most of the remainder being volume of output measures (although, given that there were no volume of output targets, these were unrelated to any target). In Ireland there were virtually no financial performance and efficiency measures disclosed.

## ANALYSIS AND DISCUSSION

It is suggested that performance measurement in the public sector has two main objectives. Firstly, organisations provide a basis for better management by setting targets for performance and by measuring achievements against these targets. The rational management literature and goal setting theory suggests that this gives direction to activities and provides a basis for evaluating the organisation's performance. Overall, it is argued that such an approach is a necessary basis for performance improvement. Secondly, the provision of performance information enables the organisation to discharge accountability. Accountability, and in particular accountability for performance, is especially important for public sector organisations as they seek to justify public funding and counter criticisms that they are inefficient and ineffective. These themes are a leitmotif in a range of UK and Irish government publications.

The empirical research in this paper indicates that in Ireland there is a substantial gap between the rhetoric contained in official government publications relating to the importance of performance measurement and management and its actual impact in Irish public sector organisations. A significant proportion of Irish public sector agencies disclose limited amounts of performance information in their annual reports. For example, only 3 out of 10 Irish organisations studied highlighted any targets. The research made no attempt to judge the appropriateness of particular targets and measures, nor is it necessarily the case that the production of more measures is a good thing. Indeed, it may be that in some areas of the public sector there is a danger of producing too many, unfocused and low-level, performance measures and targets and this can lead to confusion (Lapsley, 1996). Nevertheless, given the unambiguous statement in Irish government publications that public sector organisations should (and will) provide such information, the lack of reporting in Ireland is indicative of weak accountability. Readers of annual reports will have difficulty judging both efficiency (where inputs and outputs are compared) and effectiveness (where targets are compared to actual performance). As a consequence there will be less pressure on management to improve performance (a state of affairs perhaps not unwelcomed by some managers in the public sector). With respect to the UK organisations, there is a much greater proliferation of performance measures and targets, and these targets and measures are used as a basis for discharging accountability.

In relation to planning and control, as part of NPM, there is an increased emphasis on quantification per se, specifically in the context of a highly rational model of management behaviour, which has been influenced greatly by traditional functional studies of management processes. The argument is that public sector organisations should develop targets related to their planned performance and these will give direction to their activities and provide a basis for evaluating whether they have been effective and efficient. Overall, well-set targets, used effectively, will provide the foundation for performance improvement. While this research focuses on the discharge of accountability by public sector organisations through the medium of the annual report, it also suggests that performance information is lacking in the planning and control systems of public sector organisations (particularly in Ireland). If performance targets are a sine qua non for performance improvement (a line of reasoning used in rational management literature, goal setting theory and official government publications), a lack of target setting (in terms of numbers of targets or breadth of target coverage) will result in reduced performance. This is perhaps a major concern for those pushing for such reform in the Irish public sector.

To an extent, it is perhaps unsurprising that there is such a gap between the UK and Ireland in terms of implementing performance measurement and performance management systems (a key aspect of the NPM agenda). Although there are strong historical, cultural and economic links between the two countries, earlier international comparisons of the adoption of NPM reforms indicate that some countries embrace such reforms more intensely than others. Hood (1995) has suggested that the UK has been a high intensity adopter, compared to Ireland (a medium intensity adopter). Given this, the later and, to date, less intense adoption of a performance measurement framework in the Irish public sector is possibly to be expected. While the UK NPM agenda accelerated in the 1970s and 1980s, a period of economic difficulty in both Ireland and the UK, evidence of any significant impact of NPM reforms in Ireland is not available until well into the 1990s. Perhaps a crucial difference was that of political and ideological drive. In 1979 the Conservative party came to power in the UK, under Margaret Thatcher, and this heralded a major shift in the perceived role of the state in a modern Western society. Flynn (1997) and Chow, Humphrey and Miller (2005) argue that the Conservative government had a strong belief in reducing the role of the state, cutting public expenditure, learning from the private sector and placing greater emphasis on individuals taking more responsibility for themselves. This set the background against which many of the NPM reforms were introduced. In contrast, Ireland, possibly because of a more collectivist culture than the UK in terms of both politics and social issues, did not experience such a shift in public policy. A lack of strong political ideology in Ireland, coupled with an electoral system that often resulted in coalition governments (rather than a majoritarian government as was generally the situation in the UK), reinforced a more reflective, gradualist approach. Therefore, despite severe economic difficulties in Ireland, the approach adopted by Irish governments of various hues emphasised the importance of partnership and more consensual decision making in the public sector. Such is unlikely to lead to radical and speedy shifts in public policy, hence the results of the empirical research reported in this paper.

Nonetheless it is possibly of concern to some policy makers in the Irish public sector that there is a major disparity between the arguments relating to the importance of performance measurement and performance management (as outlined in official Irish government publications) and the impact of such rhetoric. A recent OECD report (2008) on public sector reform in Ireland may perhaps give renewed purpose to the SMI process and result in performance measurement and management assuming a more central role in the public sector. Or, given the more consensual approach adopted in Ireland and the lack of evidence of significant political will to drive change, conceivably radical transformation is unlikely and a gradualist, ad-hoc, cherry-picking, reflective process is more probable with respect to performance measurement specifically and a wide range of NPM reforms generally. Given the less than conclusive evidence to date that NPM reforms lead to better and more accountable government (Olson et al., 1998), perhaps the Irish approach is to be commended.

## NOTES

[1] Hood (1991) suggested that NPM is a convenient, though rather loose, term that is shorthand for a set of broadly similar administrative doctrines that dominated the reform agenda in the public sector in many OECD countries from the late 1970s. Moreover, he identifies the main themes of NPM as being ‘the idea of a shift in emphasis from policy making to management skills, from a stress on process to a stress on output, from orderly hierarchies to an intendedly more competitive basis for providing public services, from fixed to variable pay and from a uniform and inclusive public service to a variant structure with more emphasis on contract provision’ (Hood, 1995, p. 95).

[2] An alternative view, as presented by Flynn and Strehl (1996), suggests a key influence on the pace of NPM implementation is the nature of political opinion at national level. They argue the use of market mechanisms for service delivery, an element of NPM reforms, requires an ideological commitment that is likely to be stronger among conservatives than socialists or social democrats. However, they do accept that there are exceptions to this.

[3] PSAs describe what a department will deliver in the form of measurable targets, over the public expenditure review period, in return for its budget.

## APPENDIX 1: AGENCIES/UNITS (ORGANISATIONS) INCLUDED IN THE EMPIRICAL ANALYSIS (PLUS DATE OF ANNUAL REPORT)

| UK | Ireland |
|---|---|
| Land Registry (2005/2006) | Land Registry (2005) |
| Ordnance Survey (2005/2006) | Ordnance Survey (2005) |
| UK Passport Service (2005/2006) | Department of Foreign Affairs (2006) |
| Maritime and Coastguard Agency (2004/2005) | Maritime Safety and Environment (Department of Communications, Marine and Natural Resources (2005)) |
| Marine Fisheries Agency (2005/2006) | Marine Resource Management (Department of Communications, Marine and Natural Resources (2005)) |
| Patent Office (2005/2006) | Department of Enterprise, Trade and Employment (2006) |
| Companies House (2005/2006) | Companies Registration Office (2005) |
| Her Majesty's Courts Service (2005/2006) | Courts Service (2005) |
| Insolvency Service (2005/2006) | Office of the Director of Corporate Enforcement (2006) |
| Employment Tribunals Service (2005/2006) | Employment Appeals Tribunal (2006) |

## APPENDIX 2: LENGTH (INCLUDING APPENDICES) OF ANNUAL REPORTS

| | UK | Ireland |
|---|---|---|
| | Number of pages | Number of pages |
| **Stand-Alone Agencies (UK/Ireland)** | | |
| Land Registry/Land Registry | 128 | 27 |
| Ordnance Survey/Ordnance Survey | 50 | 40 |
| Companies House/Companies Registration Office | 52 | 68 |
| Courts Service/Courts Service | 80 | 72 |
| Insolvency Service/Office of the Director of Corporate Enforcement | 90 | 77 |
| Employment Tribunals Service/Employment Appeals Tribunal | 65 | 37 |
| *Average number of pages for matched organisations 1–6* | *78* | *54* |
| **UK Stand-Alone Agencies/Irish Subsections of Department** | | |
| UK Passport Service/Department of Foreign Affairs* | 91 | 3 |
| Maritime and Coastguard Agency/Maritime Safety and Environment** | 151 | 9 |
| Maritime Fisheries Agency/Marine Resource Management** | 72 | 9 |
| Patent Office/Department of Enterprise, Trade and Employment** | 60 | 1 |
| *Average number of pages for matched organisations 7–10* | *94* | *6* |
| *Average number of pages for all 10 matched organisations* | *84* | *34* |

*Consular and Passport section only
**Relevant sections from the annual report, excluding the annual accounts

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# RELATIONSHIP BANKING WITHIN THE IRISH SME SECTOR AND ITS IMPLICATIONS

**Sheila O' Donohoe**

*Waterford Institute of Technology, Ireland*

**Aoife Hanley**

*University of Kiel and Institute for World Economics (IfW), Germany*

**and**

**Clare Lyons**

*Deutsche Bank (London), United Kingdom*

***ABSTRACT***

*Access to and the availability of finance for small firms has received considerable attention from policy makers. Somewhat more neglected is the concept of relationship banking, which this paper examines across two Irish regions, using the dimensions of proprietary information and multiple interactions between small firms and their bank(s). Findings from the survey suggest that SMEs maintain long and exclusive banking relationships and that bank overdraft interest margins vary significantly across firm size and duration of the banking relationship and with overdraft size. Smaller firms appear to pay more for their borrowings but it is unclear whether banks are discriminating excessively against them. This ambiguity is underpinned by the different composition of finance to smaller firms, who have smaller average overdrafts.*

## INTRODUCTION

More than 99 per cent of all business enterprises in the EU are categorised as small and medium-sized enterprises (SMEs). This is particularly true in Ireland, where they account for 97 per cent of all firms (Forfás, 2006). SMEs are generally characterised by the opacity of their operations and by a strong reliance on bank finance. Relationship intermediation is used by banks to ease resulting information asymmetry problems and the extant literature suggests that such intermediation can improve both the availability of bank finance and financing terms. Relationship banking involves the provision of financial services by an intermediary who

a) invests in obtaining customer-specific information, often proprietary in nature, and b) evaluates the profitability of these investments through multiple interactions with the same customer over time and/or across products (Boot, 2000).

The present study contributes to the literature with an assessment of the presence and impact of relationship banking from an Irish SME perspective. The paper is structured as follows: the next section presents the theoretical motivations for and empirical evidence of relationship banking. This is followed by section three, which describes the sample and method used. The fourth section reports on the findings and the fifth provides a discussion of the results before, finally, the conclusion is presented.

## LITERATURE REVIEW

Lenders have several tools at their disposal to help minimise the risks of dealing with potential borrowers (Coleman, 2000). One such tool is 'intermediation', which can be executed through two types of lending, namely relationship lending and transaction lending (Stein, 2002; Cole, Goldberg and White, 2004; Berger and Udell, 2006; Udell, 2008). Relationship lending is suited to more opaque enterprises and relies on the gathering by the lender of 'soft' information about the firm through a series of multiple interactions. This type of informal knowledge enables the lender to make better decisions on a credit application by the firm. In contrast, transaction lending relies more on 'hard' information as borrowers undergo a more formal structured process when applying for loans, including the provision of specific financial information and collateral, as these form the basis for underwriting the lenders' decisions (Elyasiani and Goldberg, 2004.)

Relationship banking has been measured by Petersen and Rajan (1994), Cole (1998), Degryse and Van Cayseele (2000), and Ennew and Binks (1996) through a series of variables, namely the length or duration of the relationship ('duration'), the breadth or scope of services sought ('scope'), the degree of concentration of borrowing ('concentration') and the extent of participation in the relationship ('participation'). A summary of the empirical evidence on relationship banking is presented in Table 1.

*Duration* reflects the degree of relationship intensity over time. In theory, the longer the relationship between a borrower and a lender, the greater the information flow between the two parties. This should lead to an increase in banks' willingness to provide funds, thus increasing the finance available to the firm (Berger and Udell, 2006). Empirical support in this regard is found by Petersen and Rajan (1994) and by Degryse and Van Cayseele (2000). However, a long relationship can generate a lock-in problem, with the incumbent bank having monopoly power over the borrower (Ongena and Smith, 2001).

The duration of Japanese and continental European bank relationships with small firms tend to be greater than their counterparts in the US, with the mean duration in Japanese companies being almost 30 years (Horiuchi, Packer and Fukuda, 1988) and in German companies 22 years (Elsas and Krahnen, 1998). The estimates for Sweden are for a mean of over 20 years (Sjögren, 1994) and a mean

**TABLE 1: EMPIRICAL EVIDENCE OF THE PRESENCE AND IMPACT OF RELATIONSHIP BANKING**

| Author(s) (Year) | Country/ Context | Main Findings | | | |
|---|---|---|---|---|---|
| | | Duration in Years | Impact of Duration | Impact of Scope | Impact of Concentration |
| **Horiuchi et al. (1988)** | Japan (1972–1983) | 30 | n/a | n/a | n/a |
| **Petersen and Rajan (1994)** | US (1987) | 10.8 | Positive impact on credit availability | Choice of bank for specific services | Concentrated relationship lowers borrowing costs |
| **Sjögren (1994)** | Sweden (1997) | >20 | n/a | n/a | n/a |
| **Petersen and Rajan (1995)** | US (1987) | 11 | n/a | n/a | Concentrated relationship lowers borrowing costs and reduces liquidity constraints |
| **Berger and Udell (1995)** | US (1988–1989) | 11.39 | Positive impact on borrowing costs | n/a | n/a |
| **Ennew and Binks (1996)** | UK (1992) | n/a | n/a | n/a | Participation in the banking relationship has a positive impact on growing firms |
| **Blackwell and Winters (1997)** | US (1988) | 9.01 | Positive impact on borrowing costs | n/a | Concentrated relationship lowers borrowing costs |
| **Cole (1998)** | US (1993) | 7.03 | n/a | n/a | Concentrated relationship enhances credit availability |
| **Ennew and Binks (1998)** | UK | n/a | n/a | n/a | Participative firms incur lower interest rates v. non-participative firms |
| **Angelini et al. (1998)** | Italy (1995) | 14 | n/a | n/a | Concentrated relationship enhances credit availability |

**TABLE 1: CONTINUED**

| Author(s) (Year) | Country/ Context | Main Findings | | | |
|---|---|---|---|---|---|
| | | Duration in Years | Impact of Duration | Impact of Scope | Impact of Concentration |
| **Harhoff and Körting (1998)** | Germany (1998) | ±12 | n/a | n/a | Concentrated relationship lowers borrowing costs and enhances credit availability |
| **Elsas and Krahnen (1998)** | Germany (1992–1996) | 22.2 | No impact on borrowing costs | n/a | n/a |
| **Ongena and Smith (2000)** | Cross-country data (1996) | n/a | n/a | Scope has a positive impact on lending | Significant variation in number of relationships across countries |
| **Degryse and Van Cayseele (2000)** | Belgium (1997) | 7.82 | Negative impact on borrowing costs | Scope has a positive impact on cost of credit | n/a |
| **Ongena and Smith (2001)** | Norway (1979–1995) | (15.8–18.1) | Firms likely to end the relationship as it matures | n/a | n/a |
| **Lehmann and Neuberger (2001)** | Germany (1997) | n/a | Negative impact on borrowing costs | n/a | n/a |
| **Bodenhorn (2003)** | US (1844–1860) | 4.2 | Positive impact on borrowing costs | n/a | n/a |
| **Elsas (2005)** | Germany (1992–1996) | 18 | n/a | n/a | Concentrated relationship enhances credit availability |
| **Hanley et al. (2006)** | UK(1996 –2002) | 15 | n/a | n/a | n/a |
| **Hernandez-Canavas and Martinez-Solano (2006)** | Spain (1999–2000) | 16.8 | Negative impact on borrowing costs | n/a | Concentrated relationship lowers borrowing costs |
| **Peltoniemi (2007)** | Finland (2002) | 9 | Positive impact on borrowing costs | n/a | n/a |

of 14 years in Italy (Angelini, Di Salvo and Ferri, 1998). In contrast, most of the US estimates of duration are for between 7 and 11 years on average (Petersen and Rajan, 1995; Blackwell and Winters, 1997; Cole, 1998), and the mean is 9 years in Finland (Peltoniemi, 2007).

In addition to interactions over time, relationships can be built through interaction over multiple products (*scope*), which have information generation implications and may affect contract terms (Degryse and Van Cayseele, 2000). Ongena and Smith (2000) find a positive relationship between scope and the number of lenders in a business–bank relationship, which suggests that firms choose a particular bank for a specific financial service.

In a similar vein, the number of bank relationships can serve as an indicator of the presence of relationship lending and is based on the premise that maintaining an exclusive bank relationship promotes the development of close ties between bank and borrower (Elsas, 2005). Here the commonly used proxy in the literature for the number of lenders is the *concentration of borrowing*. Ongena and Smith (2000) note that in the studies conducted in Sweden and Norway, a maximum number of six bank relationships were found, while the majority of firms in Italy, Portugal and Spain maintain at least six bank relationships. In a study of the banking relationships across 20 European countries, Ongena and Smith (2000) also found that Italian firms, on average, had 15.2 relationships and Norwegian firms had the lowest average, 2.3. In their study of Italian SMEs, Angelini et al. (1998) found the average number of lenders to be 2.4. Compared to the Italian results, Harhoff and Körting (1998) found that German SMEs maintain relatively more exclusive borrowing relationships, where German firms borrow on average from 1.81 banks.

Degryse and Van Cayseele (2000) use a variable, *main*, to measure the strength of the financial relationship and they use the *scope* of the relationship as the criteria to decide whether the relationship qualifies as that of a main bank. A main bank is one which provides 80 per cent or more of a firm's products. They posit that a main bank relationship should improve the accuracy of the bank's information and hence reduce the monitoring costs.

The final measure of relationship banking is a willingness to participate in the relationship, a variable drawn from the interaction-based literature. Ennew and Binks (1996) developed metrics to gauge the level of participation in UK banking relationships and while *participation* is evidently a multi-faceted concept, its essential elements were held to be a willingness to communicate and a willingness to share information.

Berger and Udell (1995) note that a test of whether banking relationships affect loan rates is in fact a joint test of whether a) prospective lenders gather valuable information from relationships, b) they use this information in pricing loans and c) this information is reflected in the observed loan rates (Cole, 1998).

The duration of the banking relationship is shown to have a significantly positive impact on loan rates for US SMEs by Berger and Udell (1995), Blackwell and Winters (1997) and Bodenhorn (2003), as well as in Finland (Peltoniemi, 2007), Germany (Lehmann and Neuberger, 2001) and Spain (Hernandez-Canavas and Martinez-Solano, 2006). While these studies are contrasted with the evidence for

Belgian firms by Degryse and Van Cayseele (2000), the weight of international evidence supports the 'hold up problem' hypothesis. According to this hypothesis, lenders attract borrowers with initially cheap finance. Once the borrower's risk type becomes known, this private information is retained by the lender. Subsequent rounds of finance are priced above the lender's actuarial rate of return because the lender is confident that the borrower will receive less competitive rates with other lenders who do not know the borrower's revealed risk type. Furthermore, any effort by the borrower to withdraw their custom and borrow elsewhere will be construed by other lenders negatively: they will conjecture that the borrower is a 'lemon', i.e. poses a high default risk and has been priced out or denied finance by the initial lender. This evidence questions the merits of long banking relationships between small firms and their banks, such stable banking relationships being a feature of borrowing in bank-dominated countries such as Germany. Rather surprisingly, there is limited evidence to suggest that risk–cost reductions are passed along to the firm over the course of these relationships. Instead it suggests that the value of previously accumulated private information can increase or decrease over some time as the firm establishes a track record (Diamond, 1991) or that the marginal value of additional information may increase or decrease over time (Elsas, 2005).

The existence of strong support for the single/main bank hypothesis is found where an exclusive banking relationship exerts a positive impact on loan rates to small firms. In the US, Petersen and Rajan (1994) and Blackwell and Winters (1997) have documented evidence for exclusive bank relationships. Further evidence exists for Belgium in a study by Degryse and Van Cayseele (2000) and for Spanish SMEs in a study by Hernandez-Canavas and Martinez-Solano (2006). Ennew and Binks (1996, 1998) show that UK firms who participate in banking relationships incur lower lending costs compared to non-participative firms, having controlled for other financing variables, firm size and the degree of business risk.[1]

In summary, there is a considerable volume of work that examines the presence of relationship banking in the US, continental Europe, Japan and the UK. While significant evidence exists to support the prevalence of lender–business relationships, few studies document the implications of relationship banking on the availability and cost of borrowing for the small firm sector. To our knowledge, no study of this phenomenon has been carried out for Ireland as a unique setting. In particular, the study examines the extent to which the Irish context differs from the continental banking system and, hence, the implications of such findings for lender–business relationships.

## DATA AND METHOD

The main objective of the present study is to investigate the presence and significance of bank–business relationships within the Irish business banking market. The study focuses on two regions in Ireland: Dublin and the south-east. The former is considered an urban region, in contrast with the south-east, which is predominantly rural. This facilitates a comparison of rural and urban financial

**TABLE 2: ORIGINAL SAMPLE AND RESPONDENTS**

| **Firm Location** | **Sampled Firms** | | **Respondent Firms** | |
|---|---|---|---|---|
| **Dun & Bradstreet Register** | **Number** | **Percentage** | **Number** | **Percentage** |
| **South-east** | 200 | 33.4 | 56 | 34.4 |
| **Dublin north** | 110 | 18.4 | 29 | 17.8 |
| **Dublin south** | 270 | 45.0 | 75 | 46.0 |
| **Co. Dublin** | 20 | 3.2 | 3 | 1.8 |
| ***Total*** | *600* | *100* | *163* | *100* |

intermediation given Petersen and Rajan's findings (1995) that credit constraints are less severe in rural areas as a result of greater information availability about small businesses and their managers.

A sample size of 600 firms was used in the present study, representing approximately 1 per cent of the population. Stratification was employed in order to ensure the sample was representative; the final sample comprising 400 SMEs from Dublin and 200 SMEs from the south-east. Additionally, the sample was stratified to reflect the clusters of firms within the south-east, broken down by county, and Dublin, broken down by area code. Both of the more focused breakdowns followed the proportions set by Dun and Bradstreet (2001). With the two levels of clustering, it was necessary to sample at two different stages. The sample within the clusters was drawn using systematic sampling, where every $n^{th}$ firm was selected depending on the size of the cluster. Table 2 demonstrates the sample breakdown within the two regions as well as the breakdown of the respondents to the survey.

A tailor-made questionnaire was administered through the postal system in early 2005 to the owner-managers of the firms sampled. This achieved a 27 per cent response rate. A series of analytical tests for non-response bias was carried out, similar to those outlined by Armstrong and Overton (1977), and no significant differences emerged.

The purpose of the study was to seek factual data, as well as the desire to gauge the opinion of respondent SMEs. With this in mind, quantitative data was sought and this required a survey that facilitated wide distribution.

The questionnaire employed was designed based on both the review of the literature and methodological approaches adopted within the relationship intermediation literature. To ensure it was easy to follow the survey was split into two sections, titled 'Relationship with Banks' and 'Bank Financing and Firm Characteristics'.

Appendix 1 contains the instrument used. A pilot study was conducted with disproportionate stratified systematic sampling employed to identify 50 firms split evenly across Dublin and the south-east regions. This was carried out in such a manner as to ensure an adequate number of firms responded from both regions. The results indicated that only a few minor changes were required that were incorporated into the final questionnaire, which was then made ready for distribution.

## RESULTS

### Profile of the Respondent Firms

The sample was comprised of 163 SMEs, 34 per cent of which from the south-east and 66 per cent from the greater Dublin area; of which 23 per cent were micro firms (those with fewer than ten employees), 61 per cent small and 16 per cent medium-sized enterprises, with more micro firms in Dublin and more medium-sized firms in the south-east. Respondent businesses have a mean age of 21 years and mean size of 32 employees. Firms in the south-east appear, on average, to be older and larger than their Dublin counterparts and have a greater proportion of manufacturing firms. The split between the manufacturing and services sectors is 30/70, with the three main sectors of business services, wholesale and construction accounting for up to 57 per cent of respondent firms. The average growth rate of these firms over the past three years is approximately 17 per cent, with businesses in the south-east found to have experienced faster growth rates than their Dublin counterparts.

Evidence is shown of high levels of interaction with the local branch, account/relationship manager and branch manager levels. This holds for both regions, with firms in the south-east demonstrating slightly higher levels of interaction.

With 93 per cent of firms adopting at least one alternative mode of banking, it is not surprising that this resulted in fewer branch visits. Reasons cited for not using alternative modes included a lack of awareness of any advantages from doing so and the opinion that the online and tele-banking services offered by their bank were poor. One firm stated that, 'internet does not give the personal touch'. In addition to not being aware of the benefits, one firm that uses its bank's online services comments that, 'a constant source of annoyance with all our banks is having to pay for internet banking. I cannot understand why we have to pay when we are reducing the bank's costs'.

When asked about the type of information banks sought when first opening a bank account or when applying for the first loan or further additional loans, respondents cited that banks place a strong emphasis on the owner's investment type and on their detailed business plan and projected cash flows at the initial stage of opening an account. Upon application for the first loan, a lender's main focus appears to be on firms' projected cash flows, the detailed business plan and sales projections. Alternatively, the financial statements (profit and loss and balance sheet) are deemed more useful when additional loans are sought and over the course of the ongoing banking relationship.

Given the considerable tendency to request information at the time of the first loan, it would appear that banks gather data for loan decision making and thus relationship banking could provide an important mechanism for gathering the data necessary for reducing information asymmetries. When asked about their perception as to why banks gathered information, the majority of respondents view it positively, with 79 per cent seeing it as part of the bank's ongoing monitoring process and 52 per cent as a mechanism of enhancing the bank's trust in the firm, while just 21 per cent see it as a way for banks to gain more power over the business.

### Borrowing Patterns

Up to 21 per cent of respondents have had no bank borrowings over the last three years and some of the reasons cited for this are:[2]

(a) 'Banks are a bad source of financing/loan products; other sources of finance are better (e.g. equity, EU schemes)'
(b) 'Banks do not provide loan or overdraft or working capital to SME software companies – the only way to finance is to sell equity'
(c) 'Our business is constantly focused on retaining a positive cash flow so that we don't have to pay the bank for excessive charges on overdraft facilities'
(d) 'We retain relatively high amounts of cash in the company (relative to turnover), to ensure that we can cash flow almost any scale of project, even in the event of a substantial delay in receipt of payments from customer. Therefore, we are effectively our own bank; this situation has arisen because the bank (and others we have approached) are not prepared to offer an unsecured overdraft facility…'

Table 3 indicates that approximately half of the firms responding did not get a bank loan to start their business. Significantly more firms in the south-east region sought their first loan at the same time as opening the business account.

Firms appear to use a variety of loan products, as demonstrated in Table 4, with bank overdrafts representing both the most popular instrument and the financial product most valued by businesses. The other most widely used product is the credit card, whilst invoice discounting is rated very highly by those who use it.

Further analysis of the costs of the products reveals how hire purchase (HP) and leasing are the most expensive sources of finance, while bank overdrafts manifest the greatest variation in cost. There is considerable variation in terms of loan volume, where up to 90 per cent of loans for greater than five years are in excess of €100,000. Conversely, 54 per cent of bank overdrafts, the most popular type of

**TABLE 3: STAGE AT WHICH FIRST LOAN WAS SOUGHT**

| | South-East % | Dublin % |
|---|---|---|
| **Never** | 5.5 | 19.4 |
| **With account opening** | 43.6 | 28.2 |
| **Within 6 months** | 3.6 | 4.9 |
| **Within 12 months** | 16.4 | 5.8 |
| **At a later stage** | 30.9 | 41.7 |
| ***Total*** | *100* | *100* |

**TABLE 4: LOAN IMPORTANCE**

| | No. of Firms | Average Rating Min=1 & Max=5 | Not Impor-tant % | Of Little Impor-tance % | Moderately Impor-tant % | Impor-tant % | Very impor-tant % |
|---|---|---|---|---|---|---|---|
| **Bank loan < 5years** | 40 | 2.93 | 32.5 | 5.0 | 20.0 | 22.5 | 20.0 |
| **Bank loan > 5 years** | 47 | 3.23 | 25.5 | 4.3 | 12.8 | 36.2 | 21.2 |
| **Working capital** | 35 | 3.26 | 28.6 | 2.9 | 14.3 | 22.9 | 31.3 |
| **Overdraft** | 84 | 3.87 | 7.1 | 6.0 | 14.3 | 38.1 | 34.5 |
| **Commercial mortgage** | 32 | 3.16 | 28.1 | 3.1 | 15.6 | 31.2 | 22.0 |
| **Hire purchase** | 40 | 3.00 | 25.0 | 5.0 | 25.0 | 35.0 | 10.0 |
| **Invoice discounting** | 35 | 3.00 | 45.7 | 2.9 | 2.9 | 11.4 | 37.1 |
| **Supplier finance** | 22 | 2.91 | 68.2 | 0.0 | 9.1 | 13.6 | 9.1 |
| **Credit cards** | 58 | 1.95 | 10.3 | 17.2 | 20.7 | 32.8 | 19.0 |
| **Other loans** | 3 | 3.3 | 0.0 | 0.0 | 0.0 | 33.3 | 66.7 |

finance, amount to less than €50,000, with 56 per cent exceeding that amount. Unsurprisingly, firm size is positively related to loan size.

Up to 66 per cent of firms believe that they would need finance for future expansion, with a greater number of Dublin respondents (78 per cent) reporting this to be the case vis-à-vis those in the south-east (41 per cent). This result is not surprising given the composition of the firms in each region. It is surprising that more small and medium firms (over 70 per cent of each) cited the need for additional finance, in contrast to the micro firms (55 per cent). Of those seeking funding in the near future, up to 92 per cent believe it is available, suggesting no major difficulties in sourcing finance. When asked about what financing terms they would be prepared to endure in order to gain finance, the results suggest that firms in the south-east are willing to undertake the most severe deterioration in conditions (collateral required and interest rate charged) in contrast to their Dublin counterparts. Measures of liquidity constraint demonstrate that there is a greater tendency for this to exist within the south-east sample than in Dublin.

In summary, approximately 21 per cent of SMEs in this sample had no bank borrowings over the past three years. There are various reasons for this, including the lack of a borrowing requirement, company policy on borrowing or access to alternative sources of finance. Of those who do borrow, most do so at a later stage in their relationship with the bank. The bank overdraft facility is the most popular source of loan finance. This financial product also accounts for the greatest volume of credit from lenders. Firms use a variety of loan instruments, especially to fund working capital. The cost of finance varies considerably across the different sources used, with HP and leasing depicted as the most expensive sources. Access to finance does not appear to be a problem for respondents and most do not appear to have liquidity constraints. Up to 42 per cent of firms agree that relationship banking has had a positive impact on the firm's development, with 39 per cent remaining neutral on the matter and approximately 21 per cent disagreeing with this statement.

**Relationship Characteristics**

The findings suggest that SMEs across both regions maintain relatively exclusive banking relationships as up to 73 per cent have been with their current bank for more than 10 years. The average duration of bank–SME relations for the south-east sample is 19.4 years, compared to 17.9 years in Dublin. Table 5 suggests that firms in the south-east are more likely to maintain longer relationships, whereas in Dublin relationships are more fragmented over the duration. This result is not surprising as south-east firms are older on average, but the difference is not statistically significant.

The average number of products and/or services procured by firms in this study from all of their banks is 2.6. No significant difference appears between the average number of products procured by firms in Dublin (2.57) versus the south-east (2.64). Similar findings are revealed when the focus is placed on services and products sourced at a firm's main bank, with an average of 2.44. Moreover, firms in the south-east appear to source, on average, 2.5 products at their main bank compared to 2.41 in Dublin. However, it appears that the larger the firm, the greater the number of products sought.

Respondents were asked to identify the financial institutions they use as either a main bank (a bank with whom they conduct 80 per cent or more of their financial transactions) or non-main bank (dealings that account for less than 80 per cent). The average number of banks servicing the respondent SMEs is 2.15, suggesting that firms deal with more than one bank. The consensus in the literature is that SMEs tend to have fewer bank relationships than large enterprises. This also proves to be the case within this sample.

Approximately 32 per cent of the respondent firms deal with two banks, which is similar to the 35 per cent found by Ongena and Smith (2000) in their comprehensive analysis of the number of bank relationships across firms and countries. Hence, the majority of firms in both studies engage with one or two banks. Ongena and Smith (2000) found that 58.7 per cent of firms deal with one or two banks, compared to 71 per cent in this analysis. They assert that the variation in the number of banking relationships held by firms is due to the nature of the banking system and judicial systems, i.e. firms in countries with relatively stable

**TABLE 5: DURATION OF THE BANKING RELATIONSHIP**

| | South-East % | Dublin % | Total % |
|---|---|---|---|
| **1–5 years** | 8.9 | 13.1 | 11.7 |
| **6–10 years** | 14.3 | 15.9 | 15.3 |
| **11–20 years** | 37.5 | 27.1 | 30.7 |
| **21–30 years** | 7.1 | 18.7 | 14.7 |
| **More than 30 years** | 32.2 | 25.2 | 27.6 |
| ***Total*** | *100* | *100* | *100* |

Note: $\chi^2$ value = 5.85, p-value = 0.21

and unconcentrated banking systems have more banking relationships than those in strong judicial systems with strong creditor protection.

Firms in the south-east, on average, appear to engage with more banks (2.36) compared with Dublin firms (2.04). While there is only a marginal difference between the two findings, and ultimately the mean number of banks for both regions is two, the difference is statistically significant at the 1 per cent level. The average number of banks increases with each size class: micro (1.58), small (2.18) and medium (2.85). Hence, the larger the firm, the more banks it tends to use, a finding consistent with Ongena and Smith's findings (2000) for Irish firms and their wider sample-frame for firms from 20 countries. Harhoff and Körting (1998) also find that the mean and median number of bank relationships increase with firm size for German firms. They indicate two reasons for this, with the simplest explanation relating to the fixed costs for maintaining a borrowing relationship.

The number of lenders providing finance is used to gauge the level of concentration. Additionally, the percentage of the business borrowings held with the principal lender and whether the principal lender is the firm's main bank are explored for a greater understanding of the extent of debt concentration. Up to 52 per cent borrow from just one bank, while a further 17 per cent borrow from two banks, with a mean of 1.46 and mode of 1, suggesting that banking is relatively concentrated in this sample. Across the regions, respondents in the south-east appear to borrow more and do so from more than one bank: up to 75 per cent of Dublin firms borrow from just one bank compared with 62 per cent in the south-east. As with Elsas (2005), the number of lenders appears to increase significantly with firm size. Further tests of the level of concentration reveal that for 81 per cent of firms their main bank is also their principal lender.

Firms' participation in the banking relationship is assessed by their willingness to provide financial information on a regular basis to their bank, by having regular meetings with them and by discussing any financing issues they may have with their bank. While participation is evidently a multi-faceted concept, its essential elements were held to be a willingness to communicate and a willingness to share information (Ennew and Binks, 1996).

From Table 6, it appears that the majority of businesses surveyed participate with the financial institutions to the extent indicated. Over 80 per cent of respondents agreed with the statement 'that it is important to discuss excess borrowings with the banks', while 57 per cent of respondents agreed that 'it is important to provide banks with regular and timely information', with only 11 per cent stating that they would 'prefer to avoid contact with the bank or bank manager'. A discriminant function was applied with participation as the discriminant value and the factors 'provide information', 'avoid contact' and 'discuss excess borrowings' as the predictor variables, with the value of this function significantly different for participating and non-participating businesses at the 1 per cent level.

In summary, SMEs in both regions appear to maintain relatively exclusive banking relationships, with relatively high levels of interaction between the parties, despite most using internet and/or telephone banking (up to 57 per cent visit their bank on a daily or weekly basis). Furthermore, there is evidence of SMEs sourcing multiple products from their main bank, in particular, and concentrating

**TABLE 6: LEVEL OF PARTICIPATIVE BANKING**

| Statement | Average Rating Min = 1 & Max = 5 | Disagree % | Neutral % | Agree % |
|---|---|---|---|---|
| **It is important to discuss excess borrowings with the bank manager** | 4.06 | 3.16 | 12.03 | 84.81 |
| **It is important to provide the bank with regular and timely information** | 3.48 | 16.25 | 26.88 | 56.88 |
| **You prefer to avoid any contact with the bank or bank manager** | 2.20 | 66.24 | 22.93 | 10.83 |
| ***N = 160, 160, 157 respectively*** | | | | |

the current account with the main bank also. There is also strong evidence to support debt concentration, with a mean number of lenders of 1.46 and a mode of 1. While there is a tendency for the bank to gather data from firms at the application stage (for an initial loan), there is additional evidence to conclude that the bank updates its firm-specific information over the duration of its dealings with the firm.

While there is evidence that the bank requires a lot of information about the firm's management at the outset of the relationship, the number of firms asked to provide such data falls as the relationship matures. This would imply that banks no longer gather information about the firms' management on a formal basis. Rather they gain this information informally. Information is deemed to play an important role in the establishment and maintenance of the banking relationship. SMEs perceive information gathering by the bank to be an important part of the monitoring mechanism, but it is also considered a process enabling the bank to sell more products/services to business customers.

Firms appear willing to participate in the lender–business relationship and 79 per cent agree that 'banks are vital in the life of small businesses'. Finally, SMEs' perception of interacting with their bank reveals that the majority agree that meeting with bank personnel is beneficial and that they would seek the advice of the bank at a time of financial distress.

### Impact of the Banking Relationship on Lending Terms

Following Berger and Udell (1995), the only interest rate investigated in the present study is the overdraft rate; this is due to the fact that it is deemed a relationship-driven loan and not a transaction-driven loan. Tests are conducted for the impact of a number of variables on overdraft interest rates and these include the length or duration of the banking relationship, bank concentration, firm characteristics, overdraft size and finally the role across the two participative clusters.

**TABLE 7: IMPACT OF DURATION CHARACTERISTIC ACROSS THE OVERDRAFT INTEREST RATE**

| Overdraft Interest Rate | Mean Duration % | Duration 1–5 yrs % | Duration 6–10 yrs % | Duration 11–20 yrs % | Duration 21–30 yrs % | Duration >30 yrs % |
|---|---|---|---|---|---|---|
| **4–5.9%** | 27 | 0 | 14.3 | 16 | 50 | 45.8 |
| **6–7.9%** | 14 | 44.4 | 35.7 | 28 | 8.3 | 12.5 |
| **8–9.9%** | 17 | 44.4 | 28.6 | 40 | 4.7 | 41.7 |
| **10–11.9%** | 12 | 11.1 | 21.4 | 16 | 0 | 0 |
| **12–13.9%** | – | 0 | 0 | 0 | 0 | 0 |

In Table 7 interest rates are shown to vary with the duration of the banking relationship. The shorter the duration the greater the likelihood of paying higher rates, and the difference is statistically significant at the 5 per cent level ($\chi^2$ = 22.036, *df* = 12, *p* = 0.024). This result is consistent with the US evidence of Berger and Udell (1995) and Blackwell and Winters (1997), the Italian evidence of Angelini et al. (1998) and the Finnish evidence of Peltoniemi (2007), and contrasts with the Belgian study of Degryse and Van Cayseele (2000) and the Spanish study of Hernandez-Canavas and Martinez-Solano (2006).

In addition, it would appear from Table 8 that firms in multi-bank relationships pay higher rates compared to those with an exclusive relationship. This result is consistent with Petersen and Rajan (1994), who tentatively show that a single banking relationship lowers borrowing costs. Similar to their findings, the difference is not statistically significant. Accordingly, there is no major evidence to suggest that borrowing from the main bank will result in lower interest charges. No significant differences arise between interest rates charged by lender type (principal or ancillary lender). Similarly, no significant difference arises in the price of finance when the proportion borrowed from the main lender is less than or greater than 80 per cent. In fact, there is some weak evidence of lower rates when the principal lender is not the main bank and when the proportion borrowed from the main bank is less than 80 per cent. If anything, our evidence leans in the direction of the Hanley, Ennew and Binks study (2006), which found exclusive business–bank relationships to be counter-productive for small firms, where lenders with higher concentrations of SME finance charged higher rates.

An examination of the difference in interest rates and firm size reveals a significant inverse relationship, as medium-sized firms incur lower rates in comparison to micro enterprises. The difference is statistically significant at the 10 per cent level ($\chi^2$ = 11.225, *df* = 6, *p* = 0.102) and is tabulated in Table 9 and in Figure 1. Micro enterprises appear to pay higher interest on their overdrafts than either their small or medium-sized counterparts. This finding is consistent with the results depicted in Table 7, where duration has a negative but significant effect on interest charges.

In the present sample, micro firms form the largest cohort of those less than 10 years old (74 per cent), compared to 62 per cent of small and 42 per cent of

**TABLE 8: IMPACT OF BANK CONCENTRATION ACROSS THE OVERDRAFT INTEREST RATE**

| Overdraft Interest Rate | One Bank % | Multiple Banks % | Principal Lender is Main Bank % | Principal Lender is Not Main Bank % | Proportion Borrowed from Main Lender >80% % | Proportion Borrowed from Main Lender <80% % |
|---|---|---|---|---|---|---|
| **4–5.9%** | 22.6 | 30.2 | 27.1 | 33.3 | 25 | 34.5 |
| **6–7.9%** | 16.1 | 28.3 | 24.3 | 25.0 | 21.2 | 31.0 |
| **8–9.9%** | 54.8 | 30.2 | 38.6 | 33.3 | 44.2 | 24.1 |
| **10–11.9%** | 6.5 | 11.3 | 10.0 | 8.4 | 9.6 | 10.4 |
| **12–13.9%** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ***Total*** | *100* | *100* | *100* | *100* | *100* | *100* |

**TABLE 9: IMPACT OF FIRM CHARACTERISTICS AND OVERDRAFT VOLUME ACROSS THE OVERDRAFT INTEREST RATE**

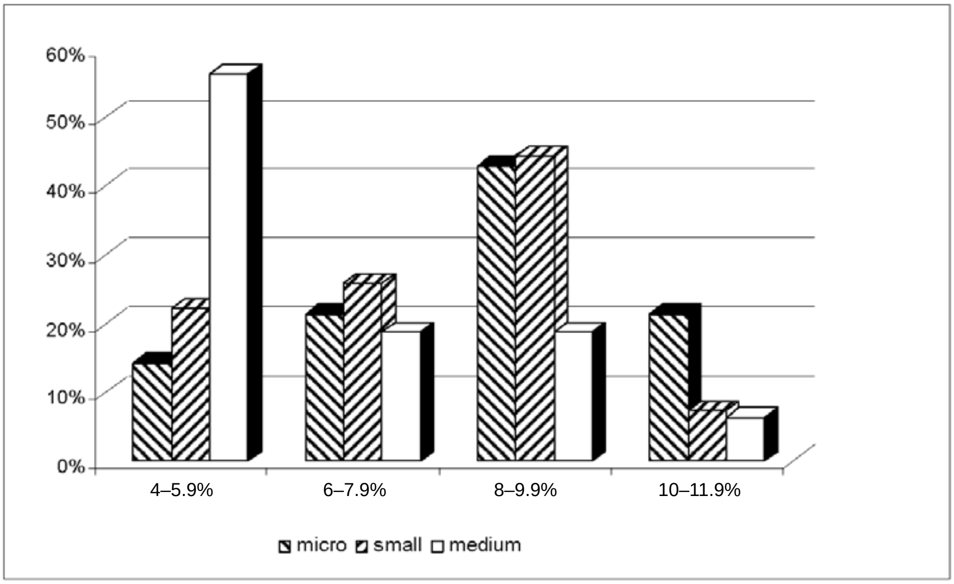
| Overdraft Interest Rate | Micro Firms % | Small Firms % | Medium Firms % | Founded Post-1990 % | Founded Pre-1990 % | Overdraft <€50k % | Overdraft >€50k % |
|---|---|---|---|---|---|---|---|
| **4–5.9%** | 14.3 | 22.0 | 56.3 | 21.2 | 31.4 | 20.7 | 33.3 |
| **6–7.9%** | 21.4 | 25.9 | 18.8 | 21.2 | 25.5 | 17.2 | 27.5 |
| **8–9.9%** | 42.9 | 44.4 | 18.8 | 48.5 | 33.3 | 44.8 | 35.3 |
| **10–11.9%** | 21.4 | 7.4 | 6.3 | 9.1 | 9.8 | 17.2 | 3.9 |
| **12–13.9%** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

medium-sized businesses. Smaller firms are likely to have shorter banking relationships and would appear to incur higher costs as a result. Our analysis of the year of formation, pre- and post-1990 (1990 being the most popular year of business formation of respondents) reveals that the older firms incur lower interest rates but the difference is not statistically significant. This is tabulated in Table 9, along with the variation in interest rates across loan size (where considerable variation is shown to exist).

A negative relationship is depicted in Table 9 between the size of the overdraft and interest charges, as approximately 17 per cent of overdrafts of less than €50,000 incur rates of 10–11.9 per cent, in contrast to just 4 per cent of overdrafts greater than €50,000 pay rates. The difference is shown to be statistically significant at the 10 per cent level ($\chi^2$ = 6.022, *df* = 3, *p* = 0.109).

The final test for the presence of variation in interest rates is across the nature of the banking relationship. This is shown in Table 10. Whilst those in the participative cluster are deemed to pay lower interest rates on their overdrafts, the difference with the non-participative cluster is statistically insignificant. However,

**FIGURE 1: DISTRIBUTION OF OVERDRAFT INTEREST MARGINS FOR FIRMS BY SIZE CLASS**




Note: $\chi^2$ value for this relationship is 11.225, *df* = 6, *p* = 0.1

**TABLE 10: PERCENTAGE OF FIRMS ACCORDING TO INTEREST RATE ACROSS PARTICIPATIVE CLUSTERS**

| Overdraft Interest Rate | Participative % | Non-Participative % | Total % |
|---|---|---|---|
| **4–5.9 %** | 29.3 | 23.5 | 28.0 |
| **6–7.9 %** | 27.7 | 11.8 | 24.4 |
| **8–9.9 %** | 35.4 | 47.1 | 37.8 |
| **10–11.9 %** | 7.7 | 17.6 | 9.8 |
| **12–13.9 %** | 0.0 | 0.0 | 0.0 |
| ***Total*** | *100* | *100* | *100* |

it does suggest that there are benefits from being classed as participative in terms of information exchange with the bank and willingness to discuss problems.

## ANALYSIS OF THE FINDINGS

The average duration of lender relationships in this study is comparable with the studies set in bank-dominated economies where relationship-based financing is deemed to play a significant role. An overview of the results is tabulated in Table 11. In particular, the results of this study are similar to those found by

**TABLE 11: COMPARISON OF FINDINGS AND PRIOR RESEARCH**

| | Prior Research | The Present Research on Irish SMEs |
|---|---|---|
| **Duration (length)** | Elsas and Krahnen (1998); Germany; 18.2 average; 15 yrs median<br>Harhoff and Körting (1998); Germany; 12 yrs average<br>Petersen and Rajan (1994); US; 11 yrs average<br>Cole (1998); US; 7 yrs average | Duration average 18.4 yrs; median 15 yrs |
| **Scope** | Ongena and Smith (2000); cross-country, average number of products sourced by Irish firms = 3.2 | Average number of products sourced = 2.6 |
| **Concentration** | Harhoff and Körting (1998); Germany; borrowing from 1.81 banks on average<br>Petersen and Rajan (1994); US; borrowing from 2.8 banks on average<br>Angelini et al. (1998); Italy; less liquidity constraints in more concentrated banking relationships | Borrowing from 1.46 banks on average |
| **Participation** | Ennew and Binks (1996); Lower interest rates found for participative firms | Interest rates not found to vary between participative and non-participative firms |

Harhoff and Körting (1998): their average relationship duration is 12 years, which compares to a median relationship length of 15 years in this study.[3] Analogously, Elsas and Krahnen's (1998) average (median) of 18.2 (15) years duration is relatively close to the average duration of 18.4 (15) years for firms in this study. Moreover, the average length of banking relationship in this study differs from empirical work set in market-based financial systems. This includes the seminal work of Petersen and Rajan (1994) and, more recently, Cole (1998).

The number of banks used by firms is also an indicator of relationship intensity. The average number of products/services sourced by respondents from banks is 2.6, lower than the 3.2 shown by Ongena and Smith (2000) for Irish firms. However, the latter studied larger Irish firms and the difference between the two findings suggests that the smaller Irish SMEs captured in this study foster closer and more exclusive banking relationships.

Our findings on multiple-lender relationships reveal that firms have, on average, 1.46 borrowing relationships, suggesting more exclusive ties than even in the German context, where exclusive ties are a feature of the banking system. Harhoff and Körting (1998) found that German SMEs maintain relatively more exclusive borrowing relationships, where German firms borrow on average from 1.81 banks. Interestingly, while the mode of borrowing relationships found in this study is the same as that found by Petersen and Rajan (1994), the median is higher for Petersen and Rajan (1994), again suggesting that the firms in this study maintain relatively exclusive relationships compared to the US firms examined in the former study.

A comparison of our study on the extent to which SMEs facilitate lenders in reducing information asymmetries (extent of borrower 'participation') reveals that, unlike in the UK study by Ennew and Binks (1996), the difference in the interest paid between participative and non-participative firms in our study is insignificant. However, a greater proportion of the participative firms are seen to pay the lower rates of interest whereas the majority of the non-participative pay rates of 8 per cent or higher. There appears to be no significant relationship between the number of banks and whether security has to be provided. However, more firms with an exclusive bank relationship do not have to commit personal or business assets. The findings in this study suggest, albeit tentatively, that the more exclusive the relationship, the more likely a firm will be able to access finance. This is in line with the aforementioned Italian results from Angelini et al. (1998), who found evidence that liquidity constraints occur less frequently among firms borrowing from a limited number of banks.

## CONCLUSION AND LIMITATIONS

We can conclude that from the two critical dimensions of the relationship banking definition of Boot (2000) – proprietary information and multiple interactions – that there is a high level of interaction between SMEs and account/relationship/branch managers, underpinning the importance of relationship banking in both regions. In terms of relationship characteristics, firms, on average, deal with more than one bank, and this is especially so for those in the south-east sample. Banks gather information on small firms primarily as part of their ongoing monitoring process (79 per cent) and this information plays an important role in both establishing and maintaining the banking relationship. Despite the market being heavily concentrated (two banks account for 80 per cent of SMEs' banking), a strong degree of satisfaction is manifested by small businesses surveyed, with 80 per cent citing they have not changed or are not considering changing banks. With up to 70 per cent of firms demonstrating participative behaviour, one can conclude that relationship banking is indeed a feature of the two regions assessed. Compared to their international peers, Irish firms surveyed exhibited exclusive lender–borrower relationships, a pattern more reminiscent of German SMEs. We recall that the German banking system is distinctive in its emphasis placed on close banking ties. This is an interesting finding because it either suggests a lack of choice in Ireland (possibly not the case given the high satisfaction ratings elicited by respondents) or, more likely, a genuine tendency towards close lender–borrower ties.

Regarding the cost of finance, it is unclear whether the smallest firms in our sample are charged actuarially fair rates on their overdraft borrowings, given their potentially higher risk profile. What is clear is the fact that they pay more for their overdraft borrowings.

One major drawback in any study of business–bank relationships is the issue of 'censoring' (Ongena and Smith, 2001). This study surveys the SMEs about their existing bank relationship but is unable to provide information about when the relationship will end. Thus, the duration of the firm–bank relationship is 'right-censored', since the maximum length of the relationship is limited by the survey year. Furthermore, the firms surveyed may be all at different stages in their life cycle, which could potentially influence their relationship with their bank(s), and this is not captured in the current study. The second limitation is that the study focuses on borrower responses only and therefore does not capture the banks' view on relationship banking. Specifically, it was not possible to assess whether the bank evaluates the profitability of their investment in information gathering.

This is a first illustration of how significant patterns can be seen across several dimensions of the lender–business relationship. These dimensions include the duration of lender–business relationships and the cost of finance. Our unique data of Irish businesses relates to the year 2005. Ideally, we would have collected data for a larger sample of firms, which would allow us to apply standard regression techniques to control for risk factors (age and length of relationship) while simultaneously controlling for firm size and/or industry. Furthermore, this study provides no insight into the challenges in sourcing finance for Irish SMEs as identified in the Forfás *Report of the Small Business Forum* (2006) or the competitiveness within the Irish banking market for small firms. We leave these questions for future research.

## NOTES

1. This evidence conflicts with the aforementioned studies, which conclude that exclusive business–bank relationships translate into cheaper borrowing costs. Hanley, Ennew and Binks (2006) find that UK lenders with the largest market share in SME finance over the eight years surveyed charged significantly higher interest premia to their business borrowers. This study finds evidence that lenders can abuse their market power.
2. From the open-ended question following on from the Likert rating.
3. We, like Harhoff and Körting (1998), use the median as a measure of the average value. The median is reasonably robust to outliers, unlike the mean (average).

## APPENDIX 1

**Survey Instrument Section A: Relationship with Banks**

Q1. How often do you visit your bank branch?
Daily ☐ Weekly ☐ Biweekly ☐ Monthly ☐ Bimonthly ☐ Every quarter ☐

Q2. What is the distance between your local bank branch and your business? _______________
*(Approx. number of miles)*

Q3. Does your bank offer a relationship management service? Yes ☐ No ☐ Don't know ☐

Q4. Have you been assigned an account/relationship manager? Yes ☐ No ☐

Q5. How often do you meet with your account/relationship manager?
Not applicable ☐ Monthly ☐ Bimonthly ☐ Every quarter ☐
Other (please specify) ☐

Q6. How often do you supply information about the business to your bank?
Monthly ☐ Bimonthly ☐ Every quarter ☐ Other (please specify) ☐

Q7. Please specify how you would classify this communication.
*You may ✓ more than one option*

As a condition of financing ☐ As part of an ongoing relationship ☐
Other (please specify) ☐

Q8. Does your business avail of banking services via the:
Internet ☐ Telephone ☐
If not, please state why: ______________________________

Q9. If your business banks via the internet and/or telephone has this resulted, in your opinion, in fewer visits to your branch? Yes ☐ No ☐

Q10. Upon opening the bank account for your business at what stage did your company seek the first loan from the bank?
*Please ✓ only one option*
Once the first account was opened ☐ Within 6 months of opening the account ☐
Within 12 months of opening the account ☐ At a later stage ☐

Q11. What information did the bank require from your business at each of the following stages?
*You may ✓ more than one option for each stage*

| | When first opening the account | When the first loan was sought | When additional loans/services were sought | As part of the ongoing relationship |
|---|---|---|---|---|
| Detailed business plan | ☐ | ☐ | ☐ | ☐ |
| Projected cash flows | ☐ | ☐ | ☐ | ☐ |
| Product/service details | ☐ | ☐ | ☐ | ☐ |
| Sales projections | ☐ | ☐ | ☐ | ☐ |
| Owner's investment in the firm | ☐ | ☐ | ☐ | ☐ |
| Management team profile | ☐ | ☐ | ☐ | ☐ |
| Break-even figures | ☐ | ☐ | ☐ | ☐ |
| Projected profit and loss | ☐ | ☐ | ☐ | ☐ |
| End of year profit and loss | ☐ | ☐ | ☐ | ☐ |
| Projected balance sheet | ☐ | ☐ | ☐ | ☐ |
| End of year balance sheet | ☐ | ☐ | ☐ | ☐ |
| Sensitivity analysis | ☐ | ☐ | ☐ | ☐ |

| | | | | |
|---|---|---|---|---|
| R&D investment details | ☐ | ☐ | ☐ | ☐ |
| Detailed financial ratios | ☐ | ☐ | ☐ | ☐ |
| Number of employees | ☐ | ☐ | ☐ | ☐ |
| Other (please specify) | ☐ | ☐ | ☐ | ☐ |

Q12. For each of the following statements, please circle the appropriate number which represents the extent to which you agree/disagree with it.
The bank acquires information regarding my business and uses it:

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| To cater for the changing needs of the firm | 1 | 2 | 3 | 4 | 5 |
| As part of the bank's ongoing monitoring of the firm | 1 | 2 | 3 | 4 | 5 |
| To improve its understanding of the nature of my business | 1 | 2 | 3 | 4 | 5 |
| To enhance the bank's trust in the firm | 1 | 2 | 3 | 4 | 5 |
| To tailor product offerings to my business's needs | 1 | 2 | 3 | 4 | 5 |
| To gain more power over the business | 1 | 2 | 3 | 4 | 5 |
| To enhance relations with the firm's management | 1 | 2 | 3 | 4 | 5 |
| To improve the bank's financial advice to my business | 1 | 2 | 3 | 4 | 5 |
| Primarily as a mechanism to sell more products and services | 1 | 2 | 3 | 4 | 5 |

Any other reasons:_______________________________________________

Q13. In your opinion do you believe that information you communicate to your bank remains private between you and the bank? Yes ☐ No ☐

Q14. Would you describe the current relationship between your business and the bank as:
A close working relationship ☐ At arms length ☐ Other (please specify) ☐

Q15. With regards to your business's relationship with the bank please indicate to what extent you agree/disagree with the following statements.
*Please circle the appropriate number in each row*

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| It is important to provide the bank with regular and timely information | 1 | 2 | 3 | 4 | 5 |
| Time spent meeting with bank personnel is beneficial | 1 | 2 | 3 | 4 | 5 |
| It is important to inform the bank if the business faces potential difficulties | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Relationship banking has had a positive impact on the firm's development | 1 | 2 | 3 | 4 | 5 |
| You prefer to avoid any contact with the bank or bank manager | 1 | 2 | 3 | 4 | 5 |
| Relationship banking is used to prevent the firm from switching banks | 1 | 2 | 3 | 4 | 5 |
| It is important to discuss excess borrowings with the bank | 1 | 2 | 3 | 4 | 5 |
| Banks are vital in the life of small businesses | 1 | 2 | 3 | 4 | 5 |
| Excess time is spent meeting with and providing information to the bank | 1 | 2 | 3 | 4 | 5 |
| Banks recognise the importance of their small business clientele | 1 | 2 | 3 | 4 | 5 |
| Time spent meeting with and providing information to the bank helps reduce errors | 1 | 2 | 3 | 4 | 5 |
| It is important to seek the advice of the bank at a time of financial distress | 1 | 2 | 3 | 4 | 5 |

Q16. In your opinion, does your bank actively seek to retain your custom? Yes ☐ No ☐

Q17. For each of the following statements, please circle the appropriate number, which represents the extent to which you agree/disagree with it.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| The nature of the relationship between my business and its bank has changed | 1 | 2 | 3 | 4 | 5 |
| Decision-making by the bank is now more centralised at headquarters | 1 | 2 | 3 | 4 | 5 |
| There has been significant change in the SME banking market | 1 | 2 | 3 | 4 | 5 |
| The firm's relationship with the bank has improved recently | 1 | 2 | 3 | 4 | 5 |
| Change in my firm's banking relations stems from the business environment | 1 | 2 | 3 | 4 | 5 |
| The bank's personnel change frequently and this affects bank–firm relations | 1 | 2 | 3 | 4 | 5 |
| The bank's emphasis has shifted towards more profit making | 1 | 2 | 3 | 4 | 5 |
| The firm's relationship with the bank has deteriorated recently | 1 | 2 | 3 | 4 | 5 |

Q18. Which of the following statements best describes your business?
*Please ✓ one box only*

- You have changed banks in the last three years ☐
- You are currently considering changing banks ☐
- You have changed banks and are considering changing again (please skip to Q20) ☐
- You have not changed banks and are not currently considering it (please skip to Q20) ☐

Q19. If you have changed bank in the past three years or are thinking about it, what was/is the reason for this?
*You may ✓ more than one option:*

- Loan application rejected ☐
- Need for increased credit ☐
- Bank mistakes ☐
- High interest rates charged ☐
- High bank charges ☐
- Approached by another bank ☐
- Poor overall relationship with the bank ☐
- Lack of transparency over fees/charges ☐
- Bank had too much control over the firm ☐
- Lack of support for business development ☐
- Other (please specify) ______________________________

Q20. If you have not changed banks in the past three years nor are you thinking about changing, please indicate to what extent you agree/disagree with the following statements.
*Please circle the appropriate number in each row*

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| There is little/no difference in service and products provided across banks | 1 | 2 | 3 | 4 | 5 |
| Our business is satisfied with its current bank | 1 | 2 | 3 | 4 | 5 |
| Switching banks would require too much effort | 1 | 2 | 3 | 4 | 5 |
| Our company feels tied to its current bank | 1 | 2 | 3 | 4 | 5 |
| The time and money invested in the relationship makes it difficult to move banks | 1 | 2 | 3 | 4 | 5 |
| Due to the nature of my firm it cannot convey its credit-worthiness to other banks | 1 | 2 | 3 | 4 | 5 |
| It is difficult to obtain suitable information to adequately compare banking services | 1 | 2 | 3 | 4 | 5 |
| There is a lack of competition among the banks | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Relationship formed with current bank results in benefits that outweigh the costs | 1 | 2 | 3 | 4 | 5 |

Q21. How does your business assess the pricing of the financial services it acquires?
*Please ✓ only one option*
Based on the cost of each service sought ☐
Based on cost of the total bundle of services sought ☐

Q22. Does your business seek advice from the bank when it is making critical business decisions?
Yes ☐ No ☐
If yes, please specify why your business seeks the bank's advice for critical decision making?

## Section B: Bank Financing and Firm Characteristics

Q1. What year did your firm begin trading? ________________

Q2. How many people does your company currently employ?
Full-time ________ Part-time ________

Q3. What has been your average rate of growth in company sales over the last three years?
*Please ✓ one box only*
Under 1% ☐ 1–5% ☐ 6–10% ☐ 11–20% ☐
21–49% ☐ 50–99% ☐ Over 100% ☐

Q4. Which of the following ownership structures applies to your business?
Sole trader ☐ Partnership ☐ Limited liability company ☐ Other (please specify) ☐

Q5. How many banks do you borrow from? ________________

Q6. Is your principal lender also your main bank? Yes ☐ No ☐ Don't have a main bank ☐
(Main Bank – Your business deals with this bank and it accounts for 80% or more of your financial transactions)

Q7. Approximately what percentage of your business's borrowings is sourced from your principal lender?
0–19% ☐ 20–39% ☐ 40–59% ☐ 60–79% ☐ more than 80% ☐

Q8. Please rate the usage of each of the following sources of finance sourced from your principal lender over the last three years. In doing so we ask that you identify the year in which it was secured, the year of final repayment and to circle the importance of each source.

| | *Year secured* | *Year of final repayment* | Not important | Of little importance | Moderately Important | Important | Very Important |
|---|---|---|---|---|---|---|---|
| Bank loan <5 years | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Bank loan >5 years | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Working capital finance | ______ | ______ | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Business overdraft | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Commercial mortgages | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Hire purchase | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Invoice discounting | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Supplier finance | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Business credit cards | ______ | ______ | 1 | 2 | 3 | 4 | 5 |
| Other (please specify) | ______ | ______ | 1 | 2 | 3 | 4 | 5 |

Q9. Please select the interest rate your business is currently charged for each of the following sources of finance by ticking the appropriate box.

Bank loan <5 years: 4–5.9% ☐ 6–7.9% ☐ 8–9.9% ☐ 10–11.9% ☐ 12–13.9% ☐

Bank loan >5 years: 4–5.9% ☐ 6–7.9% ☐ 8–9.9% ☐ 10–11.9% ☐ 12–13.9% ☐

Leasing: 4–5.9% ☐ 6–7.9% ☐ 8–9.9% ☐ 10–11.9% ☐ 12–13.9% ☐

Hire purchase: 4–5.9% ☐ 6–7.9% ☐ 8–9.9% ☐ 10–11.9% ☐ 12–13.9% ☐

Business overdraft: 4–5.9% ☐ 6–7.9% ☐ 8–9.9% ☐ 10–11.9% ☐ 12–13.9% ☐

Q10. Please select the credit limit that currently applies for each of the following sources of finance by ticking the appropriate box.

Bank loan <5 years: €0–€9,999 ☐ €10,000–€24,999 ☐ €25,000–€50,000 ☐ Greater than €50,000 ☐

Bank loan >5 years: €0–€19,999 ☐ €20,000–€49,000 ☐ €50,000–€100,000 ☐ Greater than €100,000 ☐

Hire purchase: €0–€9,999 ☐ €10,000–€24,999 ☐ €25,000–€50,000 ☐ Greater than €50,000 ☐

Leasing: €0–€9,999 ☐ €10,000–€24,999 ☐ €25,000–€50,000 ☐ Greater than €50,000 ☐

Business overdraft: €0–€4,999 ☐ €5,000–€9,000 ☐ €10,000–€19,999 ☐ €20,000–€50,000 ☐ Greater than €50,000 ☐

Q11. Do you believe that your business will need more finance for expansion in the future?
Yes ☐ No ☐

Q12. Do you believe that finance for future growth is available to your business?
Yes ☐ No ☐
If no, please state why ________________________________________

Q13. What would be the worst conditions your firm would be prepared to undertake in order to secure additional bank lending?
*Please ✓ only one option*

| | |
|---|---|
| A higher interest rate and more collateral | ☐ |
| The same interest rate but more collateral | ☐ |
| A higher interest rate but the same collateral | ☐ |
| The same interest rate and the same collateral | ☐ |

Q14. Please select the types of collateral required by the bank(s) as security at the following stages.
*You may ✓ more than one option for each stage.*

| | When first opening the account | When the first loan was sought | When additional loans/services were sought | As part of the ongoing relationship |
|---|---|---|---|---|
| 1. Personal assets | ☐ | ☐ | ☐ | ☐ |
| 2. Business assets | ☐ | ☐ | ☐ | ☐ |
| 3. Personal guarantees | ☐ | ☐ | ☐ | ☐ |
| 4. None | ☐ | ☐ | ☐ | ☐ |

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## PAPERS PRESENTED AT THE TWENTY-FIRST ANNUAL CONFERENCE

The titles of papers presented at the twenty-first Annual Conference of the Irish Accounting and Finance Association (8–9 May 2009, Institute of Technology, Athlone) were as follows:

| **Author(s)** | **Paper Title** |
|---|---|
| Abdelsalam, O.<br>*Aston Business School* | The Impact of Board Independence and Ownership Structure on the Timeliness of Corporate Internet Reporting of Irish-Listed Companies |
| Ballantine, J.<br>*Queen's University Belfast*<br>Mulgrew, M.<br>*Dublin City University* | The Perceived Benefits of e-Learning in an Accounting Context |
| Bley, J.<br>*American University of Sharjah, UAE* | Are European Stock Markets Drifting Apart? |
| Bowen, D.<br>*University College Cork*<br>Hutchinson, M.<br>*University College Cork* | The Performance of US Real Estate Investment Trusts 1997–2007 |
| Brennan, N.<br>*University College Dublin*<br>Ó hÓgartaigh, C.<br>*University College Dublin*<br>Pierce, A.<br>*University College Dublin* | A "Big Man" in Business: A Case of Dominant Ownership |
| Burke, R.<br>*Waterford Institute of Technology*<br>Demirag, I.<br>*Queen's University Belfast* | An Analysis of Risk Transfer in Public–Private Partnership in the Republic of Ireland: Case Studies from the Transport Sector |
| Byrne, M.<br>*Dublin City University*<br>Flood, B.<br>*Dublin City University*<br>Shanahan, D.<br>*Dublin Institute of Technology* | Communication Apprehension among Accounting and Business Students |
| Conheady, B.<br>*University of Ottawa* | BondBeagle: A Web-Based Application for Non-Convertible Bond Liability Life-Cycle Accounting |
| Doheny, P.<br>*Waterford Institute of Technology* | Do Stock Markets Overreact? A Re-Examination of the Over-Reaction Hypothesis Based on Evidence from the ISEQ Index and Copenhagen Stock Exchange |

| | |
|---|---|
| Donnelly, R.<br>*University College Cork*<br>McCarthy, J.<br>*University College Cork* | Pay, Performance and Governance in Irish plcs |
| Doyle, E.<br>*University of Limerick*<br>Gallery, K.<br>*University of Limerick*<br>M. Coyle<br>*Irish Revenue Commissioners* | Procedural Justice Principles and Tax Compliance in Ireland: A Preliminary Exploration in the Context of Reminder Letters |
| Doyle, G.<br>*University College Dublin*<br>Grampp, C.<br>*University College Dublin* | Accreditation as a Tool for Quality Improvement: A New Public Management Perspective |
| Gubbins, G.<br>*Gubbins Consultants*<br>Killian, S.<br>*University of Limerick* | Fine Wine as an Asset Class: A Model for Year-on-Year Returns |
| Heneghan, J.<br>*University of Limerick* | Advancing Corporate Governance in Small Irish Firms: Pushing Transparency Over the Regulatory Pull of Compliance |
| Hyndman, N.<br>*Queen's University Belfast*<br>Ó hÓgartaigh, C.<br>*University College Dublin* | Irish Academic Accounting Research: Looking to the Future |
| King, D.<br>*Dublin Institute of Technology* | Business Simulation Model |
| Kirwan, C.<br>*Waterford Institute of Technology*<br>Brennan, N.<br>*University College Dublin* | Comparative Analysis of Listed versus Unlisted Family Firms' Boards of Directors |
| Maingot, M.<br>*University of Ottawa*<br>Quon, T.<br>*University of Ottawa* | Audit Sampling Practices of Internal Auditors at Firms Listed on the Toronto Stock Exchange |
| Martyn, P.<br>*National University of Ireland, Galway*<br>O' Regan, E.<br>*National University of Ireland, Galway* | Management Accounting: A Blended Learning Approach |
| Mattimoe, R.<br>*Dublin City University* | The Role of the Accountant and the Marketeer in Operational Decision Making in UK Hotels and Restaurants: A Research Agenda |
| McAree, D.<br>*University of Ulster, Magee* | Intertemporal Dividend Models: Empirical Evidence Using Irish Interim Announcement Data |

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| Mokoteli, T.<br>*Cranfield University*<br>Taffler, R.<br>*University of Edinburgh*<br>Ryan, P.<br>*Institute of Bankers in Ireland* | Are Analysts Biased? An Analysis of Analysts' Stock Recommendations that Perform Contrary to Expectations |
| Mulgrew, M.<br>*Dublin City University* | Detecting Earnings Manipulation in UK Firms |
| Murphy, F.<br>*University of Limerick*<br>O'Regan, P.<br>*University of Limerick* | The Role of Fair-Value Accounting in the Credit Crunch |
| Murphy, N.<br>*Bank of Ireland Global Markets*<br>Ryan, J.<br>*University of Limerick* | The Use of Derivatives in Corporate Risk Management: Survey Evidence from Irish Non- Financial Firms |
| O'Donohoe, S.<br>*Waterford Institute of Technology*<br>Hanley, A.<br>*University of Kiel and Institute for World Economics (IfW), Germany*<br>Lyons, C.<br>*Deutsche Bank (London)* | Relationship Banking Within the Irish SME Sector and Its Implications |
| Olson, D.<br>*American University of Sharjah, UAE*<br>Bartholdy, J.<br>*Aarhus School of Business* | The Other January Effect (January Barometer) is Primarily an American Phenomenon |
| O'Regan, P.<br>*University of Limerick* | Regulating in the Public Interest and the Establishment of the Irish Auditing and Accounting Supervisory Authority |
| Reeves, E.<br>*University of Limerick*<br>Ryan, J.<br>*University of Limerick* | Value for Money Assessments in Irish Water and Wastewater PPP Projects: Reliable Evaluation or Magic Divination? |
| Ryan, W.<br>*Waterford Institute of Technology*<br>Egan, T.<br>*Waterford Institute of Technology* | The Effectiveness of a High-Dividend Yield Investment Strategy on the Irish Stock Market |
| Staunton, D.<br>*Athlone Institute of Technology & Russell Brennan Keane* | Evolutionary Costing Practices: Empirical Evidence from Leading Irish Manufacturing Companies |
| Wall, A.<br>*University of Ulster, Jordanstown*<br>Connolly, C.<br>*Queen's University Belfast* | The Private Finance Initiative: An Evolving Research Agenda? |

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| Walsh, S.<br>*Waterford Institute of Technology*<br>Byrne, S.<br>*Waterford Institute of Technology* | An Exploratory Investigation of the Role of Pension Fund Trustees and Research Trajectories |

**Plenary Session**

The plenary address, entitled 'Accounting Controls Cause Short-Termism: (Empirical) Fact or (Conceptual) Fiction?', was given by David Marginson, Cardiff University.

## THE IRISH ACCOUNTANCY EDUCATIONAL TRUST

*The Trust was established in 1981 by the Institute of Chartered Accountants, from which it receives annual funding, to enable it to fulfil the objectives for which it was formed.*

### GRANT AID FOR ACCOUNTANCY RESEARCH AND PROJECTS

The role of the Irish Accountancy Educational Trust (IAET) is to provide grants for accountancy-related research and other relevant projects. In doing so the objective is:

1. To further and develop the science of accountancy in all its branches and
2. To promote educational facilities for the teaching of accountancy, auditing, finance and other related subjects

### AMOUNT OF GRANTS

There is no specific limit to the level of grant support that may be provided by the IAET. Normally, the amount of funding provided is likely to be between €1,000 and €15,000. The exact amount will depend on the nature of the research or project and the level of related expenditure expected to be incurred by the grant applicant.

### ACKNOWLEDGMENT OF GRANTS

Recipients of funding will be expected to acknowledge the support provided by the Trust in any publications (or in the publicity associated with other projects) that benefit from such assistance.

### SUITABLE AREAS FOR GRANTS

The areas that the Trustees have established in the past as appropriate for grant aid include:

1. Development work and the provision of equipment necessary for research dealing particularly with the impact of information technology on the role of the accountant
2. Research into accountancy education

3. Scholarships or sponsored fellowships
4. New education structures and needs
5. Publication of text books or guidance booklets on specific topics

While the Trustees welcome academic publications and papers, for such work to receive grant aid support the content ideally should be of *practical relevance* to the accountancy profession and/or business.

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- Development of CBT Courseware for Accountancy Students
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- IT and the Professional Accountant (an assessment of the skills gap and proposed solutions)

**HOW TO MAKE A GRANT APPLICATION**

Grant applicants should provide the following information:

1. Title of project
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3. Duration of project and expected completion date
4. A budget of anticipated outlay
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Grant applications should be submitted in writing to:

Jacinta Conway
The Irish Accountancy Educational Trust
Burlington House
Burlington Road
Dublin 4

To obtain further information on any matter relating to The Irish Accountancy Educational Trust, please see http://www.icai.ie/en/General/About-Us/Irish-Accountancy-Educational-Trust-IAET/ or contact Jacinta Conway in writing or using Tel (01) 637 7200 or Fax (01) 668 5685 or by email: iaet@icai.ie

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   DeAngelo, L.E. (1981). Auditor Size and Audit Quality, *Journal of Accounting and Economics*, Vol. 3, No. 3, pp. 183–199.

   European Commission (1996). *Green Paper on the Role, the Position and the Liability of the Statutory Auditor Within the European Union*, October, Brussels: European Commission.

   Faulkner, R.R. (1982). Improvising on a Triad, in *Varieties of Qualitative Research*, Vol. 5, Van Maanen, J., Dabbs, J.M. and Faulkner, R.R. (eds.), pp. 65–101, Beverly Hills, California: Sage Publications.

   Fielding, N.G. and Fielding, J.L. (1986). *Linking Data: Qualitative Research Methods*, Beverly Hills, California: Sage Publications.

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