

Risk disclosure: An exploratory study of UK and Canadian banks

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ABSTRACT

It is important that stakeholders receive relevant information to be able to understand the risk profile of any financial firm they have an interest in. This study examines risk disclosure practices within annual reports of Canadian and UK banks; these being chosen because of the relatively advanced state of the risk disclosure debate within the respective countries. The paper analyses and classifies the risk information communicated by the sample banks and discusses the nature of the risk disclosures. The usefulness of current disclosures is questioned as relatively little quantitative risk information is disclosed and there is a very strong bias towards disclosing past rather than future risk-related information. Risk disclosure is still evolving within the academic literature and therefore suggestions are made for further empirical research.
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INTRODUCTION

There is a developing debate as to how the different users of annual reports can be provided with risk and risk management information that enables them to assess the risk profile of firms. However, because there has been relatively little research into risk disclosure practices, discussions concerning how risk reporting can be developed are often unsupported. This paper is therefore seeking to initiate risk disclosure research in the financial services arena through an examination of the annual reports of a sample of UK and Canadian banks. A large number of disclosure studies have been performed in the last 30 years but their primary focus has been analyses of corporate disclosures in general (see for example Chau and Gray, 2002).¹ Additionally, the majority of these prior studies have examined the annual reports of non-financial firms. This study specifically examines risk and risk management disclosures within the banking sector. Therefore there is an exploratory aspect to this study, and from the data gathered the authors have chosen to focus upon examining the nature and characteristics of the risk disclosures, and testing for relationships between the number of risk disclosures and potentially related factors.

The structure of the paper is as follows: the paper commences by reviewing the existing bank risk disclosure literature placing it within the context of the current state of the risk disclosure debate; the research methods are then explained, hypotheses developed and the rationale for the selection of UK and Canadian

banks discussed; an analysis of the results then follows. Finally conclusions are discussed and suggestions for further research made.

BANK RISK REPORTING

The risk disclosure debate

In 1998 the Institute of Chartered Accountants in England and Wales (ICAEW) published a discussion paper 'Financial Reporting of Risk — Proposals for a Statement of Business Risk'.² This paper explored the issue of risk reporting and concluded that quoted UK companies should voluntarily undertake to disclose risk information within a separate statement contained within the annual report. The ICAEW were aware that companies do already provide *some* risk information through their adherence to accounting standards, however the difficulty with such standards is that they provide risk disclosures only in discrete areas. The annual report does not present a coherent discussion of the risks that challenge the company and the actions the directors are undertaking to manage those risks. Hence, the ICAEW's 1998 paper called for this deficiency to be removed via the publication of a Statement of Business Risk. To encourage directors to voluntarily disclose risk information the ICAEW argued that a number of benefits would arise if a Statement of Business Risk was incorporated into the annual report. These included, *inter alia*, discussions about the potential impact of voluntary risk disclosure upon the cost of capital. Thus, it was proposed that there would be a beneficial impact upon the cost of capital arising from an increase in the confidence of the providers of finance who would be reassured through the receipt of such risk information. Critics of the ICAEW proposal have argued that two main difficulties arise in connection with the disclosure of risk information. The first issue is that directors can be reluctant to provide detailed risk and risk management information if they consider it to be commercially sensitive and therefore of potential value to competitors. This is the problem of proprietary information.

The second issue concerns the disclosure of forward-looking risk information. The ICAEW state that companies should be providing forward-looking risk information, not only historical information, because it is much more useful for decision-making. Directors can be reluctant to publish information of this type because it is inherently unreliable and could leave directors open to potential claims from investors who have acted upon this information.³ Despite these criticisms the ICAEW have reiterated the need for improved risk information in subsequent discussion papers published in 1999⁴ and 2002.⁵

The ICAEW stance can be usefully compared to the Canadian Institute of Chartered Accountants (CICA) who have been similarly proactive in respect of risk disclosure discussions. CICA issued guidance in 2002⁶ on the preparation of Management's Discussion and Analysis (MD&A) and section 360 is specifically concerned with risk disclosures. This section recommends 'a company should disclose its principal risks and describe related risk management systems to enable MD&A report readers to understand and evaluate the company's risks and its decisions regarding the management of such risks'.⁷ CICA have therefore adopted a very similar position to the ICAEW.

Risk disclosure discussions that have occurred in the USA also tend to cover the same ground as the ICAEW and CICA. For example, the American Accounting Association/Financial Accounting Standards Board (AAA/FASB) 1997 conference incorporated a risk disclosure session for participants. Schrand and Elliott (1998)⁸ summarise the conference presentations and debates stating that the 'discussions indicated several noteworthy inadequacies in the current (risk) disclosure requirements'.⁹ Schrand and Elliott note that the fundamental inadequacies are that currently companies are not required to report much in the way of risk information and where companies do disclose risk information voluntarily it is very difficult to ascertain whether a

company has disclosed a complete risk picture. Schrand and Elliott conclude that companies 'have no incentives for voluntary disclosures about risk'¹⁰ because of a lack of empirical research into potential linkages between the cost of capital and risk disclosure.

Concurrent to the AAA/FASB conference discussions and the ICAEW's 1998 discussion paper the Basel Committee on Banking Supervision¹¹ has issued a number of papers relating to the disclosure of risk information in the banking sector. The Basel Committee's 1998 paper 'Enhancing Bank Transparency'¹² recommended banks disclose six categories of information within their annual reports. Significantly two of these information categories are risk exposures, and risk management strategies and practices. The 1998 Basel paper also discusses the critical importance of disclosure and transparency within the context of banking supervision explaining that when public disclosure of appropriate information occurs this results in transparency as it enables the reader to make judgements about the entity's financial performance, including its risk profile. Transparency is important as it provides a disciplining mechanism whereby the market can apply relevant sanctions to banks whose performance or risk profile is considered inadequate, and it can provide incentives for those banks whose performance or risk profile indicate sound management (for example, a reduction in the cost of capital may occur as explained above). In addition, if risk disclosures are improved this assists bank supervisors in monitoring for impending problems, and hence enables them to take earlier action.

In June 1999, the Basel Committee issued its proposed new capital adequacy accord (Basel II)¹³ with the purpose of producing a more stable banking system. Pillar 3 of Basel II is concerned with market discipline and recommends disclosure of a bank's risk exposure and its capital adequacy. In 2001, a Pillar 3 consultative document¹⁴ and working paper¹⁵ were published with the final framework being issued in 2004.¹⁶ The Pillar 3 disclosure requirements

consist of highly detailed quantitative and qualitative risk disclosures in the areas of: capital structure, capital adequacy, credit risk, market risk, operational risk, equities risk and interest rate risk. The Basel Committee has a fundamental commitment to encouraging market discipline through improving risk disclosure by banks with, for example, Andrew Crockett (then General Manager of the Bank for International Settlements) arguing strongly that 'high quality financial reporting is essential for the efficiency and stability of systems' and this includes 'providing information about the ... risk profile of firms to all potential users'.¹⁷ Thus, it is generally accepted that transparent risk information is potentially of great use to stakeholders and that 'disclosure by firms ... (is) ... a key element of the new capital accord'.¹⁸

Bank risk disclosure studies

In a number of the papers cited above the authors conclude that for the discussions to be carried forward more meaningfully then further empirical research needs to be undertaken to give greater insight into what risk information is being disclosed by firms at present. The Basel Committee has published three studies to date (Public disclosures by banks: results of the 1999 disclosure survey (2001),¹⁹ Public disclosures by banks: results of the 2000 disclosure survey (2002),²⁰ Public disclosures by banks: results of the 2001 disclosure survey (2003)²¹) examining bank risk disclosures. The three disclosure studies adopt identical research methods, although the samples of banks surveyed differs between the three years.²² The survey instrument comprised a detailed list of 104 questions that the Basel Committee considered useful for their own disclosure review purposes and are grouped into 12 categories. As an example, question 1 is within the capital structure category and asks, '(Has the bank) Disclosed the amount of common shareholder's equity?'²³ The banking supervisors in each country where the sample banks were located then reviewed their banks' annual reports and for each question provided

Table 1 Summary of Basel Committee 1999, 2000 and 2001 public disclosure surveys

Disclosure categories	Number of questions within the disclosure category	Percentage of 'yes' responses measured against 'no' responses		
		2001 Survey (%)	2000 Survey (%)	1999 Survey (%)
1. Capital structure	14	82	78	73
2. Capital adequacy	7	55	48	46
3. Market risk internal modeling	16	68	66	64
4. Internal and external ratings	4	46	35	32
5. Credit risk modelling	5	33	33	32
6. Securitisation activities	8	45	36	29
7. Credit risk	13	61	56	55
8. Credit derivatives and other credit enhancements	6	34	25	24
9. Derivatives	9	62	56	58
10. Geographic and business line diversification	10	65	63	65
11. Accounting and presentation policies	7	84	84	82
12. Other risks	5	84	74	62
	104			

either a 'yes', 'no' or 'not applicable' response for each annual report sampled. The results of responses are not detailed bank by bank within the Basel Committee papers; rather the overall percentage of 'yes' responses to 'no' responses is stated for each question asked. Table 1 summarises the results of the three surveys across the 12 disclosure categories and it can be seen that from 1999 to 2001 there has, generally, been an increase in disclosure noted by the bank supervisory authorities.

The three categories where disclosure levels can be seen to be highest in the 2001 survey are those of capital structure, accounting and presentation policies, and other risks. In the first of these categories, capital structure, the Basel Committee paper (2002) notes that the items related to this are frequently disclosed, particularly in quantitative form. Frequent disclosure is also the case in respect of the second category of accounting and presentation policies. It can be noted, however, that because

it is the norm that disclosure of accounting policies is mandatory one would expect to see high disclosure levels within this category. The 'other risks' category is concerned with the disclosure of interest rate risk, liquidity risk, operational risk and legal contingencies. The most noticeable change over the 1999–2001 period was the increase in disclosure of operational risk. This is most likely a reflection of the banking sector's increasing interest in the measurement and management of operational risk brought about by the Basel II operational risk capital discussions. The two categories displaying the lowest amounts of disclosure in the 2001 survey are credit risk modelling, and credit derivatives and other credit enhancements. Thus it is noted that that a limited number of banks provide information about the credit risk models used within the bank, and credit derivative activities and therefore further transparency is called for in these areas.

The Basel Committee 2001, 2002 and 2003 papers are the most comprehensive bank

disclosure analyses to date. This paper adopts a different method (described below) to the Basel Committee analyses and has two related objectives of analysing the risk disclosure characteristics and testing a specific set of hypotheses for a sample of annual reports. The UK and Canada were selected as the basis for the study because of the proactive stance their respective chartered accounting bodies have adopted towards risk disclosure. Therefore, it might be expected that firms within these countries are, in some sense, 'developed' in terms of disclosing risk and risk management information. Furthermore, as the banking sector has been at the forefront of developments in risk management and risk measurement techniques then we would expect banks to be disclosing a range of important types of risk information.

RESEARCH METHOD

Sample selection

The selection of the banks to be used in the study was based upon The Banker (2002)²⁴ ranking of the top 1,000 banks. A matched

pairs approach was adopted to match the nine Canadian banks listed within the ranking with UK banks of comparable size. The banks were size-matched if total assets differed by a factor of less than three times. The total assets figures were derived from the annual reports of the sample banks using the annual report with a year-end closest to 31 December 2001 and with the Canadian bank's total assets being translated into pounds sterling to ensure comparability. Table 2 lists the sample banks. The overall sample size is relatively small, however, having selected Canada and the UK for the cross-country comparison the authors wanted to examine larger banks only within this particular study. Additionally this study is exploratory and is attempting to establish a base for further future risk disclosure studies.

Method of analysis

To analyse and classify the risk disclosures within the annual reports content analysis was performed. Content analysis is frequently selected as a disclosure categorisation and measurement tool. The authors chose to measure the volume of disclosure of risk

Table 2 Sample banks

<i>Canadian Bank</i>	<i>Accounting Year End</i>	<i>Total assets £m</i>	<i>UK Bank</i>	<i>Accounting Year End</i>	<i>Total assets £m</i>
Royal Bank of Canada	October 31, 2001	166,126	Barclays Bank	December 31, 2001	356,649
Toronto Dominion Bank	October 31, 2001	131,916	HBOS	December 31, 2001	312,275
CIBC	October 31, 2001	131,749	LloydsTSB	December 31, 2001	236,539
Scotiabank	October 31, 2001	130,352	Abbey National	December 31, 2001	214,906
Bank of Montreal	October 31, 2001	109,721	Standard Chartered	December 31, 2001	75,343
Desjardins Group	December 31, 2001	36,890	Alliance & Leicester	December 31, 2001	39,476
National Bank of Canada	October 31, 2001	34,722	Northern rock	December 31, 2001	26,409
Laurentian Bank of Canada	October 31, 2001	8,110	Egg	December 31, 2001	8,083
VanCity	December 31, 2001	3,442	HFC	December 31, 2001	3,735

information by counting risk and risk management sentences rather than words or pages as this is deemed more reliable as a coding method (Milne and Adler, 1999).²⁵ Unerman (2000)²⁶ does argue that this method is still open to some criticism and this is accepted as a limitation within this study. Two of the authors have previous experience in coding annual reports and they provided a period of training to a single coder. The coder and one of the authors coded an initial sample of two annual reports independently. A set of decision rules were created for the consistent coding of the entire sample by the single coder, and a detailed coding grid was prepared based upon prior risk disclosure studies undertaken by Linsley and Shrivies (2005).²⁷ As the Linsley and Shrivies (2005) study was based upon a content analysis of non-financial companies their coding grid was adapted to create a grid based upon the risk disclosure categories as set out by the Basel Committee in the Pillar 3 (Market Discipline) consultative document (2001). The adapted coding grid is shown in Table 3.

HYPOTHESES

Hypothesis development

There have been no prior studies published that seek to examine the association between the volume of risk disclosures made by banks within their annual reports and potentially relevant variables. Consequently in developing the hypotheses below it was not possible to draw upon prior risk disclosure research. In part, therefore, they draw upon prior non-specific voluntary disclosure studies and in part they are based upon the authors' own postulations.

Canadian and UK banks risk disclosures

It has been explained that the Basel Committee, the ICAEW and CICA have demonstrated very similar levels of commitment to the risk disclosure debate and have urged firms within the UK and Canada to disclose greater amounts of risk information. It is also the case that the level of risk management knowledge within the banking sectors of both countries is similar. Consequently there would not appear to be

Table 3 Disclosure coding grid

<i>Text disclosures sentence characteristics</i>	<i>Credit risk</i>	<i>Market risk</i>	<i>Interest rate risk</i>	<i>Operational risk</i>	<i>Capital structure and adequacy risk</i>	<i>Risk management frameworks and policies</i>
	1	2	3	4	5	6
Quantitative/good news/future						A
Quantitative/bad news/future						B
Quantitative/neutral/future						C
Qualitative/good news/future						D
Qualitative/bad news/future						E
Qualitative/neutral/future						F
Quantitative/good news/past						G
Quantitative/bad news/past						H
Quantitative/neutral/past						I
Qualitative/good news/past						J
Qualitative/bad news/past						K
Qualitative/neutral/past						L
Definitions						M

any strong reasons as to why banks in Canada should disclose greater amounts of risk information than banks in the UK or vice versa. Therefore, the first hypothesis is:

Hypothesis 1: Canadian banks will disclose similar amounts of risk information as their UK counterparts as matched by size.

Risk disclosure and bank size

Previous disclosure studies have often found that company size has a positive association with disclosure levels (for example Ahmed and Courtis, 1999).²⁸ Although these prior studies have not been testing specifically for risk disclosures it would appear to be reasonable to postulate that this relationship will still hold for banks and their risk disclosures. Stakeholders may have an expectation that larger banks should be providing more disclosures or the stakeholders may have more varied information needs and consequently larger banks may be responding to this expectation or need. Therefore, it can be hypothesised that:

Hypothesis 2: There will be a positive association between the size of the bank and the total quantity of risk disclosures.

Risk disclosure and profitability

Whereas prior disclosure studies have often shown a linkage between size and disclosure levels, there have been mixed results when testing for a profitability-disclosure level association (for example see Ahmed and Courtis²⁹). It could, however, be argued that those banks that are better at risk management will have higher levels of relative profitability and that they will then want to signal their superior risk management abilities to the market place via disclosures in the annual report. Therefore, this potential link will be tested for in this study and consequently the third hypothesis is:

Hypothesis 3: There will be a positive association between the relative profitability

of the bank and the total quantity of risk disclosures.

Risk disclosure and the level of risk within a bank

Banks with higher levels of risk have a greater incentive to demonstrate that they are actively monitoring and managing those risks and to ensure they are not penalised excessively by the market. Consequently, it may be argued that those banks with the higher risk levels will disclose more risk information in comparison to those with lower risk levels. Therefore, the hypothesis is:

Hypothesis 4: There is a positive association between level of risk and the total quantity of risk disclosures.

RISK DISCLOSURE AND RISK DEFINITION DISCLOSURE

If banks choose to disclose increasing amounts of risk information then the issue arises as to whether the readers of the annual report will be able to understand the information. To avoid the problem of stakeholders misinterpreting the risk disclosures within the annual report banks can, and do, provide definitions of technical terminology that they have used. Those banks providing greater numbers of risk disclosures should therefore have an incentive to provide more definitions to aid the reader and avoid misunderstandings. Therefore, it is hypothesised that:

Hypothesis 5: There will be a positive association between the quantity of risk definitions disclosed and the total quantity of risk disclosures.

MEASUREMENT OF VARIABLES

To test the hypotheses three key variables need to be measured. These are size, profitability and level of risk. Previous disclosure studies have measured size in different ways including turnover, total assets, employee numbers and market capitalization. As there is no theoretical reason to favour one measure over another (Hackston and Milne, 1996³⁰) the measures selected for use in this study

are total assets and market capitalization. Turnover is considered to be an inappropriate measure of size for banks as their profits do not derive from sales in the same way that the profits of, say, a manufacturing company derive from sales. Employee numbers have not been used as they do not always act as a useful proxy for size.

Relative profitability is measured using return on assets as this is considered to be an acceptable measure of profitability within this study.

Measuring the level of risk within each bank is much more problematical as there is no single measure that truly encapsulates a bank's risk level. The ratio of book to market value of equity is used, based upon the Fama and French (1992)³¹ study, but is acknowledged to be imperfect.

ANALYSIS OF RESULTS AND DISCUSSION

Risk categorisation

A total of 3,323 risk sentences were identified within the sample of annual reports. It can be

seen from Table 4 that the sentence characteristic occurring most frequently is of the 'qualitative/neutral/future' type (1,156 disclosures). The majority of disclosures within this category consist of explanations of general risk management policy. For example the directors of Northern Rock plc state, 'The Group is committed to developing and maintaining a control-conscious culture in all areas'.³² Disclosures of this type reassure the reader that risk management systems are in place, but a criticism of this type of risk disclosure is that it does not provide information about specific risks that the bank faces and nor does it explain the actions the directors have taken to manage that risk. There is also a possibility that similar generalised risk management policy disclosures are inserted into the annual report in subsequent years and as a result their meaningfulness diminishes further. An example of a more meaningful risk disclosure that discusses a specific risk and its management would be,

Table 4 Number of risk sentence disclosures for the sample of banks

Text disclosures sentence characteristics		Credit risk	Market risk	Interest rate risk	Operational risk	Capital structure and adequacy risk	Risk management frameworks and Policies	Total
		1	2	3	4	5	6	
Quantitative/good news/future	A	7	0	0	0	3	1	11
Quantitative/bad news/future	B	2	1	1	0	0	0	4
Quantitative/neutral/future	C	22	11	4	2	11	1	51
Qualitative/good news/future	D	191	77	20	60	95	100	543
Qualitative/bad news/future	E	6	5	6	1	6	2	26
Qualitative/neutral/future	F	275	294	84	134	141	228	1156
Quantitative/good news/past	G	101	20	15	7	119	3	265
Quantitative/bad news/past	H	229	16	5	1	15	1	267
Quantitative/neutral/past	I	214	60	38	4	108	0	424
Qualitative/good news/past	J	64	23	22	15	28	14	166
Qualitative/bad news/past	K	30	16	14	1	2	1	64
Qualitative/neutral/past	L	39	9	13	6	10	3	80
Definitions	M	56	79	34	31	59	7	266
Total		1236	611	256	262	597	361	

'We successfully executed our business continuity plan on two occasions during 2001 — first, in response to a fire near a major CIBC processing, technology support and call centre in Toronto on May 2; and then, in response to physical and operational damage to the CIBC facility at One World Financial Center in New York following the collapse of the twin towers on September 11th'.³³ The Basel Committee, the ICAEW and CICA would all like to see discussions of specific risks but, as explained

earlier in the paper, commercial sensitivity may present a difficulty.

Table 5 and Figure 1 summarise the risk disclosure results. The split of disclosures between qualitative and quantitative risk information is approximately 67 per cent qualitative disclosures compared to 33 per cent quantitative disclosures (Table 5). If the potential size of a risk is disclosed the reader is in a better position to understand its significance. However, while quantified risk information is therefore more useful it is understandable that it is not disclosed as frequently as qualitative risk information. Risks, particularly those that may arise in the future, are inherently difficult to quantify and the directors may be reluctant to provide quantitative information against which they may eventually be judged and held to account. Additionally, quantified risk information may be highly sensitive and therefore subject to higher levels of proprietary cost.

The tension arising between future and past risk information parallels the tension that arises between quantitative and qualitative risk information. Namely, just as quantitative risk information is usually considered to possess greater value than qualitative information, so future (forward-looking) risk information is

Table 5 Summary of characteristics of risk disclosures (excluding risk definitions disclosures)

<i>Characteristic</i>	<i>Total number of disclosures</i>	<i>Proportion (%)</i>
Quantitative disclosures	1,022	33.4
Qualitative disclosures	2,035	66.6
Past disclosures	1,266	41.4
Future disclosures	1,791	58.6
Good news disclosures	985	32.2
Bad news disclosures	361	11.8
Neutral disclosures	1,711	56.0

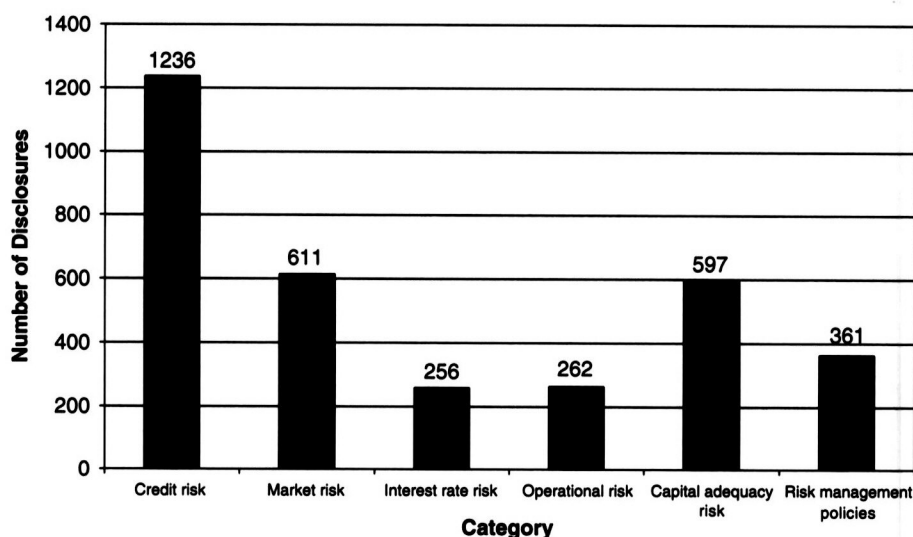


Figure 1 Summary of types of risk disclosures

generally considered to be more useful than past risk information. The results of the annual report analysis categorise approximately 59 per cent of disclosures as 'future' and 41 per cent as 'past' risk information (Table 5). *Prima facie* this implies that there is greater disclosure of future information. However, as has been stated above, the most common disclosure category ('qualitative/neutral/future') consists largely of general policy disclosures and if these are removed from the 'future' disclosure categories this causes a reduction from 59 to 21 per cent 'future' disclosures (one-half the number of past disclosures). As with quantitative disclosures, future disclosures are likely to be more sensitive and hence that may explain why directors disclose them less frequently. Indeed it is of note that 'quantitative/future' type disclosures are rarely disclosed, comprising only 2.4 per cent of total disclosures for Canadian banks and 1.7 per cent for UK banks.

The 'good news/bad news/neutral' disclosure split indicates that approximately 32 per cent of disclosures relate to good news, approximately 12 per cent relate to bad news and 56 per cent are neutral (Table 5). Deegan and Gordon (1996)³⁴ argue that companies need to be prepared to disclose bad news to avoid the suspicion that they are hiding problems. The Canadian and UK banks are willing to disclose some bad risk news, but the difficulty is knowing whether there is further bad news that remains undisclosed. If the reader is unaware that information has been withheld then they cannot know if they are drawing valid conclusions concerning the bank's risk position. This is similar to a criticism that the ICAEW received when it suggested that companies could refrain from disclosing risk information that they deemed too commercially sensitive to put into the public domain. Critics argued this opt-out clause had the implication that one would never know whether a complete risk information picture is being disclosed.

A final comment in relation to the sentence characteristics is that it was noted by the coder that in a number of cases 'quantitative and

qualitative/bad news/past' disclosure sentences would be immediately followed by 'qualitative/good news/future' disclosure sentences. Directors appeared to be wanting to demonstrate that any past/bad news had been acted upon and converted into good news. Additionally, it was noted during the study that frequently directors wanted to inform the reader early on in the annual report that the bank possessed significant risk management expertise. For example the Group Chief Executive of Barclays states, 'Our policy, implemented three years ago, of tightening our risk controls in both corporate and personal lending means that we can remain confident even in these more difficult times'.³⁵ This may warrant further empirical research as it could potentially lend support to signalling theory and this is discussed further in relation to hypothesis 3.

Figure 1 reports the risk types into which the risk disclosures fell. The highest numbers of disclosures fall within the credit risk area. Banks are, fundamentally, lending institutions and therefore this is a significant risk requiring appropriate disclosures. This result differs from the Basel Committee 2001 disclosure survey results where four other disclosure categories were ranked more highly than credit risk (see Table 1). The two next largest disclosure types are capital structure and adequacy risk and market risk. Capital structure and market risk also had relatively high rankings in the Basel Committee 2001 disclosure survey and therefore there is agreement for the results of these two categories. Again, it might be expected that there would be a significant number of disclosures in these areas as they are also of fundamental importance in the banking sector. It was stated earlier that the Basel disclosure surveys note an increase in operational risk disclosure over the 1999–2001 periods. This study, however, suggests that operational risk disclosures are, on a relative basis, disclosed far less than market risk, credit risk and capital adequacy risk. It is important to note that neither this study nor the Basel disclosure studies set out to establish the

usefulness of the risk disclosures *per se*. The Basel Committee's 1998 paper 'Enhancing Bank Transparency' proposes that 'useful' information will have the important characteristics of: reliability, relevance, timeliness, materiality, comprehensiveness and comparability. It does not suggest how these concepts may be incorporated into a bank's risk reporting. Future research may therefore seek to address this issue of measuring the quality of risk disclosures.

Testing the hypotheses

To statistically test hypothesis 1 the Mann-Whitney *U*-test has been performed and testing for significance at the 5 per cent level the resultant significance value is 0.145. Therefore this suggests, *prima facie*, that Canadian banks disclose similar amounts of risk information as their UK counterparts as matched by size.

It is worth noting, however, that although the result of the Mann-Whitney *U*-test indicates that there is insufficient evidence to suggest that risk disclosure amounts for Canadian and UK banks are significantly different, in eight out of the nine matched pairs the Canadian bank was recorded as disclosing more risk information than its UK counterpart (Table 6). Barfield (2000)³⁶ has argued that Canadian banks have a greater propensity to

disclose risk information than banks in the UK. Barfield's reasoning for this suggestion that Canadian banks adopt a more proactive approach towards transparency and hence disclose more risk information is based upon their physical proximity to the USA. A consequence of this geographical proximity is that the Canadian banks feel pressured into emulating the large USA banks with respect to providing investor information. The results of this study do not lend statistical support to this argument but the small sample size may be an issue or other uncontrolled factors may be causing this result.

To test hypotheses 2, 3, 4 and 5 (the levels of association between the total number of risk disclosures and the independent variables of size, profitability, level of risk, and number of risk definitions) Pearson's rank correlation has been calculated. From Table 7 it can be seen that the two measures of size³⁷ are highly positively correlated with the number of risk disclosures. Therefore, these results are consistent with hypothesis 2 that there is a positive association between the size of the bank and the total quantity of risk disclosures. As previous non-risk disclosure studies have also observed this size-disclosure relationship to exist, this therefore suggests that it may not be that the UK and Canadian banks are acting

Table 6 Summary of disclosures for individual banks

<i>Canadian Bank</i>	<i>Total risk disclosures</i>	<i>UK Bank</i>	<i>Total risk disclosures</i>
Royal Bank of Canada	310	Barclays Bank	352
Toronto Dominion Bank	216	HBOS	155
CIBC	268	LloydsTSB	181
Scotiabank	322	Abbey National	165
Bank of Montreal	333	Standard Chartered	169
Desjardins Group	220	Alliance & Leicester	142
National Bank of Canada	135	Northern Rock	77
Laurentian Bank of Canada	96	Egg	63
VanCity	98	HFC	21
Total	1,998	Total	1,325

Table 7 Pearson correlation co-efficients for variables

<i>Variable</i>	<i>Pearson correlation</i>	<i>Sig. (2 tailed) for pearson</i>
Nat log of total assets	0.734*	0.001
Nat log of market cap.	0.615**	0.015
Return on assets	0.121	0.633
Book to market value of equity	-0.194	0.489
Number of risk definitions	0.683*	0.002

*Correlation is significant at the 0.01 level.

**Correlation is significant at the 0.05 level.

upon the admonitions of the likes of the Basel Committee to provide more risk information. Rather they may just be conforming to a quasi-norm whereby larger companies believe they should disclose more information, risk or non-risk. Therefore institutional isomorphism (DiMaggio and Powell³⁸) may offer an explanation for the risk disclosure behaviour whereby financial firms are, to some extent, mimicking one another in their risk disclosures. Consequently the Basel Committee may need to consider the approach they should adopt to encourage greater risk reporting. If they can focus upon encouraging a very small number of banks of the benefits of improved risk disclosure other banks may then imitate their good practice.

In respect of hypothesis 3, a Pearson's correlation coefficient of 0.121 indicates no significant association between relative profitability and the total quantity of risk disclosures. In establishing this hypothesis it was postulated that the more profitable banks might want to argue that the relatively higher earnings arise, at least in part, from their better risk management capabilities and therefore they can signal their

superior risk management skills to the marketplace via disclosures in the annual report. It may be that this argument still has some credence, but that other factors cause the banks to become circumspect when deciding upon what risk-related disclosures they will make. For example, one potentially important factor could be the proprietary costs that are related to the disclosure of information that places a company at a competitive disadvantage. Thus, a bank may believe it has superior risk management capabilities that positively impact upon its financial results, but it may not want to disclose information that can then be used by competitor banks to improve their risk management abilities.

The Pearson correlation coefficient testing the association between risk levels and the total number of risk disclosures (hypothesis 4) also indicates no significant association. Therefore, it does not appear that the riskier banks are seeking to give the marketplace confidence in their ability to manage risk through the disclosure of greater amounts of risk information. It could be argued that it is not appropriate to use book to market value of equity to measure risk and a more appropriate proxy for risk is needed. Alternatively it may be that the banks wish to keep discussions concerning their risk levels and their risk management capabilities out of the public domain. Thus these discussions may be taking place between the banks and investors or analysts but in private meetings. This desire for privacy may again be related to the issue of proprietary costs.

Table 7 does reveal that the number of risk definitions is highly positively correlated with the number of risk disclosures. Therefore, these results are consistent with hypothesis 5 and there is a positive association between the quantity of risk definitions disclosed and the total quantity of risk disclosures. Certain aspects of risk management, particularly within the financial sector, are technically complex. Consequently the reader may misinterpret risk information unless appropriate explana-

tions are provided. For example, value at risk (VaR) information is potentially of great interest to a bank's stakeholders, but if the VaR concept is misunderstood then the reader of the annual report may arrive at an incorrect conclusion concerning the bank's risk position.

CONCLUSION

This study examines risk disclosures within a sample of Canadian and UK bank annual reports. Five hypotheses have been developed and tested, two of which were rejected. The two rejected hypotheses suggest that there does not appear to be an association between levels of risk disclosure and either bank profitability or the level of risk within the bank. However, in the case of the other three hypotheses there does appear to be a positive association between levels of risk disclosure and both bank size and the number of risk definitions, and there appears to be no statistically significant difference in the risk disclosure levels of the Canadian banks when compared to the UK banks.

The nature of the risk disclosures is also examined based upon sentence characteristics and risk types. Overall, general statements of risk management policy dominate the risk disclosures although these are not as useful to the reader as specific risk or risk management information. It is also the case that the other characteristics noted as being more useful in relation to risk information, namely quantitative and future risk information, are disclosed much less often than qualitative and past information. It has been acknowledged that the sample size is small and therefore one must be a little circumspect when drawing conclusions, however there has been limited prior empirical research into risk disclosure and therefore this paper represents the start of a journey. As a result of this there is scope for considerable further research to be undertaken into risk disclosure in financial firms. Extending the study into other countries and undertaking longitudinal studies would be beneficial

in providing insights into how risk disclosure practices have altered over time. This may help researchers to understand why directors choose to disclose certain pieces of risk information and why they withhold other pieces of risk information. Non-risk-related disclosure studies have attempted to ascertain whether theories such as agency theory, signalling theory, and legitimacy theory can explain the motivations underlying voluntary disclosures and future empirical work could be directed at testing these theories in relation to risk disclosures. Such studies may, in turn, provide a better understanding of the significance of proprietary costs.

In addition there are some fundamentally important questions that also need to be asked. For example, is the annual report the most appropriate place for the disclosure of risk information? Although it is an important public document it is only published once a year and its primary focus is upon what has happened in the past. The Basel Committee expects the Pillar 3 risk disclosures to be made semi-annually, but this may still be insufficient. Risks alter, sometimes dramatically, and sometimes over very brief periods of time. Therefore, useful risk information may need disseminating by some other method. Another important question is whether there is a best way to present risk information? Even if full disclosure of risk information were to occur readers may interpret that information differently and hence they may arrive at differing conclusions as to the level of risk the firm possesses. These differing interpretations may arise because of ambiguities within the information, or because the readers' risk attitudes differ.

As public perceptions of risk are increasing the issue of risk reporting is becoming more, rather than less, important and this places greater pressure upon directors to explain how they are managing risks. The Basel Committee would like banks to increase their risk disclosure on an open and non-selective basis but guidance may be required as to how best this can be done. Further research will

therefore be necessary to inform the debates that are occurring and to ensure outcomes are appropriate.

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