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Trade Credit Information for Export Sales: The Canadian Experience¹

Abstract

- This paper ranks the relative importance of the sources and types of credit information used by Canadian managers to assess the risk of foreign buyers. Information use variances among export credit managers are also investigated in light of differences in financial cost and risk aversion and marketing benefit attraction orientations, export credit insurance use, and selected biodata characteristics.
- Credit information detailing the foreign buyer's payment record, background, business potential and financial strength was used much more by Canadian export credit managers than export-specific type information about political and economic risks. Substantial variance in credit information source and item use was also evident – explained in part by firm specific factors such as marketing benefit attraction and financial cost and risk aversion orientations. Oddly, the use of export credit insurance was associated with an increase in credit information search activities.

Key Results

- Even for export sales, the primary focus of credit managers is on information about the buyer's credit character and financial strength – political and economic risk information is generally of much less importance.

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Introduction

Offering trade credit is important to securing export sales – but the bad debt costs of offering export credit can be high. To control these costs, export credit managers seek credit information to determine whether potential foreign buyers are acceptable credit risks. As in the domestic trade credit decision, the export credit manager seeks out information about the buyer's credit character and financial strength. However, the additional country and foreign exchange risks involved in exporting extends the credit analysis to include export-specific information.

Prior studies on credit information use have focused both on the various sources and items of credit information used and their relative importance. Srinivasan and Kim (1988) and Ewert (1968) provide insight into both the use and relative importance of credit information but looked only at the *domestic* credit decision within one firm. Talaga and Buch (1992) looked at the credit practices of European subsidiaries of US multinationals and found that they tended to use different information sources and criteria in assessing creditworthiness – even within the same multinational. However, although their findings show clearly that one-firm studies are of limited generalisability, they made no distinction in credit information use between domestic and export sales. Ross and Pike (1992) show that both domestic and export credit risk information are important in the export credit decision but do not address differential credit information use among firms. However, Ross and Pike (1995) also show that managers vary in how they view the financial costs and marketing benefits of export credit, their use of export credit insurance use, and their biodata characteristics – factors which could cause information use to vary among export credit managers. No research has been published on the sources and types of credit information used to evaluate *foreign* buyers or why export credit information use varies among firms.

This paper moves to address this deficiency by providing a relative importance ranking of the various sources and types of credit information used by Canadian export credit managers to evaluate foreign buyers. We then go on to test for the influence of Ross and Pike's factors on export credit information use variance among firms. In so doing, this paper provides the first look at export credit information use by firms – a timely extension of our knowledge of credit information use given the increasing globalisation of firms.

Credit Information Sources

The professional credit literature prescribes multiple information sources which can be used for both the domestic and the export credit decision. However, Ta-

laga and Buch (1992) have presented the only evidence of the information sources actually being used by credit managers. The 47 US subsidiaries they surveyed most often used credit reporting systems & agencies, past credit history, and past sales history. In addition, they found that "numerous firms also indicated other information sources were used, including contacts with non-competing suppliers and credit collection agency reports". Talaga and Buch go on to report that information source varied among their 19 German, 16 French and 12 Italian respondents as the Germans tended to check a wider range of sources while the French and Italian firms seemed to place more reliance on the customer in gathering data. Their respondents also indicated that past sales histories and past credit histories were generally perceived to be better than credit agency and bank reports in terms of accuracy, response rapidity, and completeness. However, it is difficult to apply Talaga and Buch's findings about credit information source use to the export credit decision as (1) they do not distinguish between domestic and export credit decisions, (2) their survey's very low response rate precludes statistically significant comparisons, and (3) they do not investigate export-specific sources of credit information. Consequently, important questions remain as to the best information sources for export credit decisions and the factors which affect information source choice.

Credit Information Item Use

Few studies have presented evidence of credit information item use by managers. Of those studies, Ewert's (1968) US-based study of domestic credit information use suggests that payment record indicators – how the buyer is now paying its accounts – are the best predictors of whether the buyer will continue to pay its accounts. In contrast, Srinivasan and Kim's (1988) Analytical Hierarchy Process study of the credit granting decision within a large US firm shows the most weight (65–70%) being placed on financial strength indicators with payment record indicators garnering only about 18–20% of the total weight. Other information dealing with customer background, business potential and geographical location were deemed by Srinivasan and Kim to be of relatively low importance. Talaga and Buch (1992) don't attempt to determine which types of credit information are most important. Rather, they present evidence on information use by US subsidiaries in Europe for both financial ratio criteria and 'strategy-related' criteria – the latter consisting of market share, manager profile, ownership history, external economic conditions, and other information. '[M]aintain or increase market share of highly competitive product' and 'record on previous business debt satisfaction' were generally viewed as the most used items of credit information by their European credit managers.

The relative usefulness of individual political and economic risk indicators has yet to be established. However, Ross and Pike (1992) found that the standard domestic credit risks of credit character and financial strength were given substantially more weight in the export credit decision than the export-specific risks of country rating and foreign exchange risk. They also found evidence of considerable cue configularity in the decision whereby export credit managers blended pieces of information to form new composite cues for their decisions.

Overall, the preceding studies are somewhat contradictory and inconclusive as to the use of the various types of credit information. On balance, however, it seems that:

Hypothesis 1: The standard credit risk financial strength and payment record indicators would be used more than the standard credit risk customer background, business potential and geographical location indicators.

Hypothesis 2: Standard credit risk information, viz., financial strength, payment record, customer background, business potential and geographical location indicators, would be used more than country and foreign exchange risk information, viz., political and economic risk indicators.

Factors Affecting Credit Information Use

No studies into credit information use have attempted to explain differences in credit information use among managers. In a related study, we reported (Ross and Pike 1995) that Canadian export credit managers differ in financial cost and risk aversion (FCRA) and marketing benefit attraction (MBA) orientations to offering export credit. In addition, these managers differed in their use of export credit insurance and their biodata characteristics. We suspect that credit information use may vary by these particular export credit manager characteristics.

The FCRA measure is a five item index – constructed with a Cronbach Alpha of 0.682 – which looked at export credit manager perceptions of bad debt losses, carrying costs, exposure to large losses, lack of standby financing to cover losses, and stakeholder risk aversity. We found that some Canadian export credit managers are clearly very averse to the financial costs and risks to offering export credit while others are clearly not averse. Notably, the financial costs of offering export credit could be reduced by a more intensive credit information search which permits the credit manager to better gauge a foreign buyer's credit character.

The MBA measure is a four item index – with a Cronbach Alpha of 0.875 – which looked at managerial perceptions of the importance of trade credit to ex-

port sales success, customer sensitivity to the trade credit offer, product need for trade credit support, and trade credit as a marginal decision factor. Again, we found that some Canadian export credit managers clearly felt that offering trade credit would add to their export sales success while others felt that offering export credit would not help. We feel the marketing benefits of offering export credit could be enhanced by a more intensive credit information search which supports a more liberal extension of credit.

Hypothesis 3: Given the above, we suspect that: Managers who are more highly FCRA oriented would intensify their credit information search, and

Hypothesis 4: Managers who are more highly MBA oriented would intensify their credit information search.

The differential use of export credit insurance is also expected to be related to credit information search activities. Managers who purchase export credit insurance transfer the commercial credit and country risks to the insurer and are left with only the foreign exchange risk. As foreign exchange risk has been reported as being less important than the other risks (Husagh/Greene 1985, Ross/Pike 1992), exporting with export credit insurance reduces the insured's incentive to prevent loss through more intensive credit information searches. Consequently, it is expected that:

Hypothesis 5: Managers who use export credit insurance would lessen their credit information search activities.

Finally, the observed differences in the managers biodata characteristics suggest that credit information use may vary by experience or educational background. Certainly, the notion that biodata characteristics may reflect differences in managerial decision-making is in keeping with Owens' (1976) position that biodata characteristics account for a significant portion of the decision variance. On the other hand, Davis-Blake and Pfeffer's (1989) position that organisations emit strong influences on individual behaviour and that managers readily adapt to organisational settings mitigates the influence of personality traits in decisions. It is also possible that the multiple actors involved in the internal export sales decision-making process, exert considerable pressures on the manager making export credit decision.

However, on balance, we feel greater experience with export credit losses may lead managers to more intensive credit information searches given their heightened exposure to export credit losses. Likewise, credit managers with accounting designations may tend to focus more on financial strength information as their training focuses on the financial aspects of the firm. As such, it is expected that:

Hypothesis 6: Credit managers with more experience would engage in more intensive information searches.

Hypothesis 7: Credit managers with accounting designations would tend to focus more on financial strength information.

Survey Population Qualifiers and Methodology

This study's survey population was defined as export credit managers of Canadian manufacturing firms which export to more than one market. Although somewhat restrictive, this definition is appropriate given that (1) the manufacturing sector accounts for more than 80% of Canadian exporters and (2) there are systematic differences in export credit offers between industrial sectors.² As well, choosing only manufacturers which export to more than one market excludes those firms which export only to the US- an important consideration given that the US market accounts for about 80% of total Canadian exports. This ensures that the managers surveyed have expertise in markets of varying export risk.

The managers were asked about their use of credit information sources and items for their last ten credit decisions on new and repeat export buyers. Their responses were measured using a seven point scale which ranged from "Always" = 7 to "Never" = 1, with no verbal labels for scale points 2 through 6 (Parasuraman et al. 1986). Export credit manager responses to each of the individual credit information sources and items are presented in Appendices A & B respectively. To measure the relative intensity of credit information source use, a 'Credit Sources Used' index was created using the average use score of the 16 sources presented to the credit managers in the questionnaire. As such, a higher Credit Source Used score is associated with more sources being used more often. To measure the relative use of the various types of credit information, items were grouped as Payment Record Indicators, Customer Background Indicators, Business Potential Indicators, Financial Strength Indicators, and Political and Economic Risk Indicators. Classification of the items into the various groups was according to their description in the professional credit literature as payment record indicators, financial strength indicators, etc. Index scores for each of the groups as well as a 'Combined Index: All Credit Items' were computed in the same manner as the Credit Sources Used index. Finally, to address the hypotheses about variance in information use the managers were also asked to answer questions related to their FCRA and MBA as well as about their export credit insurance use and biodata characteristics.³

The Canadian Government's Business Opportunities Sourcing System (BOSS) list was used to sample the study population.⁴ As such, the survey questionnaire was directed to the officer making export credit decisions in 1,000 firms selected randomly from the BOSS list of 5,339 Canadian manufacturers which

export to more than one market. Before mailing, the questionnaire was piloted through personal interviews with eight export credit managers to remove ambiguities. To improve responses rates a follow-up postcard reminder was sent one week after the initial mailing and a second questionnaire was sent to those firms whose questionnaires has not been received by one month after the first mailing (Dillman 1980). Of the 1,000 questionnaires mailed, 25 were returned by Canada Post indicating the business had moved, address unknown, or had closed; 47 were returned unanswered as the companies reported no exporting activity; and 25 were returned unanswered as the companies reported either that export credit decisions were made by their US parent or that they exported only to related companies. Of the remaining 903 questionnaires, 430 (47.6%) were returned answered. However, not all of these questionnaires were answered completely with the result that useable response rates varied slightly among sections of the questionnaire.

Findings and Discussion

Canadian export credit managers vary substantially in the sources and types of credit information which they use to make trade credit decisions for export sales. Each of the individual credit sources and types presented to the managers evoked a full range of responses (from "never used" to "always used"), although some clear indications of relative use did emerge.

Credit Information Sources

Table 1 sets out credit information source use by Canadian export credit managers. They rely most on 'in-house', domestic-type sources, such as their own knowledge of the buyer, other suppliers' references, filed buyer data, and bank reports on the buyer, which are more easily obtained by credit managers and are generally used for domestic credit analysis as well. More actively solicited credit information sources such as the buyer's financial statements and Dun & Bradstreet reports were used less frequently by the managers – perhaps due to the time and expense required to obtain them. Interestingly, export specific credit sources such as country reports from Canadian embassies, commercial banks, and specialised risk assessment firms were rarely used.⁵ As such, these findings tend to confirm the importance of 'past credit history', 'past sales history' and 'contacts with non-competing suppliers' as sources of credit information as reported by Talaga and Buch. However, Canadian managers make less use of Talaga and Buch's top rated

Table 1. Credit Information Sources Use

| Rank | Variable | Mean | S.D. | % Never | % Always |
|------|-------------------------------|------|------|---------|----------|
| 1 | Credit Manager Knows Buyer | 4.48 | 2.17 | 17.6 | 25.4 |
| 2 | Other Suppliers' References | 4.43 | 2.24 | 21.1 | 24.1 |
| 3 | Filed Buyer Data | 4.33 | 2.14 | 18.3 | 22.8 |
| 4 | Buyer Application | 4.13 | 2.35 | 25.4 | 27.2 |
| 5 | Bank Reports on Buyer | 4.11 | 2.23 | 24.1 | 18.6 |
| 6 | Salesman Interview | 3.56 | 2.24 | 31.9 | 14.1 |
| 7 | Financial Statements | 3.16 | 2.12 | 38.3 | 8.1 |
| 8 | Survey of Plant | 3.07 | 2.10 | 39.0 | 7.6 |
| 9 | Dun & Bradstreet Reports | 2.90 | 2.19 | 47.6 | 11.6 |
| 10 | Embassy Reports | 2.71 | 2.01 | 48.6 | 6.8 |
| 11 | Bank Reports on Country | 2.62 | 1.74 | 53.4 | 7.1 |
| 12 | Credit Manager Interview | 2.55 | 1.92 | 47.5 | 6.3 |
| 13 | Other Credit Agencies' Report | 2.17 | 1.74 | 61.0 | 2.8 |
| 14 | Creditel Reports | 2.12 | 1.79 | 65.1 | 3.3 |
| 15 | Business International Report | 1.43 | 1.05 | 80.0 | 0.8 |
| 16 | S.J. Rundt Reports | 1.15 | 0.61 | 92.5 | 0.3 |
| | Index: Credit Sources Used | 3.04 | 1.04 | 4.5 | 0.0 |

credit information source of 'credit reporting systems & agencies' than do their European counterparts.

Interestingly, the mean use scores for the sources of information are low – even for the most popular sources. This situation – coupled with the relatively high standard deviations of the credit use scores and the substantial number of managers who indicated they either 'never used' or 'always used' these sources of credit information – suggests low levels of consistency among the managers in their source use. If this finding of considerable variance in source use among Canadian managers carries to other nationalities, it suggests that much larger samples of credit manager practices are required to make meaningful assessments of national credit management practices. As such, it is likely that Talaga and Buch's report that German firms tend to check a wider range of sources while French and Italian firms tend to rely more on the customer in gathering data needs to be buttressed.

Credit Information Types

Table 2 sets out individual item credit information use by Canadian export credit managers. Although considerable individual item use variance is evident for all of the information type categories, some aggregate trends did emerge. Almost all of the managers (about 95%) used payment record and customer background data while most (about 85%) used business potential and financial strength indicators.

Table 2. Credit Information Item Use

| Rank | Item | Mean | S.D. | % Never | % Always |
|--|------------------------------------|------|------|---------|----------|
| Payment Record Indicators (Index) | | 5.03 | 1.61 | 5.6 | 7.9 |
| 1 | Payment Record: Manner | 5.53 | 1.84 | 7.5 | 43.8 |
| 2 | Payment Record: Past Dues | 5.41 | 2.07 | 12.5 | 44.4 |
| 3 | Payment Record: Amounts Owning | 5.13 | 2.04 | 12.4 | 36.1 |
| 4 | Payment Record: Terms | 5.09 | 2.02 | 10.9 | 36.0 |
| 5 | Payment Record: High Credits | 4.88 | 2.05 | 12.5 | 30.5 |
| 6 | Other Suppliers' References | 4.18 | 2.19 | 20.5 | 18.9 |
| Customer Background Indicators (Index) | | 3.92 | 1.44 | 4.0 | 0.5 |
| 1 | History | 5.22 | 1.92 | 9.9 | 34.0 |
| 2 | Buyer/Seller Relationship | 4.88 | 2.03 | 13.0 | 28.0 |
| 3 | Years in Business: Buyer | 4.08 | 2.01 | 19.8 | 13.0 |
| 4 | Condition | 4.08 | 2.17 | 24.0 | 17.7 |
| 5 | Trend | 3.94 | 2.15 | 24.9 | 15.3 |
| 6 | Buyer's Management Quality | 3.89 | 2.11 | 24.6 | 13.2 |
| 7 | Banking Relationships | 3.83 | 2.15 | 25.6 | 14.0 |
| 8 | Nature of Bank References | 3.79 | 2.19 | 26.8 | 14.4 |
| 9 | Ownership | 3.62 | 2.15 | 27.8 | 13.5 |
| 10 | Number of Employees | 2.10 | 1.53 | 54.3 | 3.1 |
| Business Potential Indicators (Index) | | 3.52 | 1.64 | 11.8 | 2.7 |
| 1 | Buyer's Market Position | 3.72 | 1.99 | 22.5 | 11.0 |
| 2 | Order Frequency | 3.61 | 1.91 | 22.6 | 8.9 |
| 3 | Buyer's Growth Potential | 3.56 | 3.03 | 24.6 | 11.4 |
| 4 | Market for Seller's Other Products | 3.29 | 1.94 | 28.8 | 7.6 |
| Financial Strength Indicators (Index) | | 3.20 | 1.72 | 15.7 | 1.9 |
| 1 | Financial Standing | 4.47 | 2.12 | 18.6 | 21.2 |
| 2 | Buyer's Cash Flow | 3.02 | 2.10 | 41.1 | 6.4 |
| 3 | Buyer's Liquidity | 3.00 | 2.07 | 42.2 | 5.6 |
| 4 | Buyer's Profitability | 2.86 | 1.94 | 40.8 | 3.7 |
| 5 | Buyer's Debt Management | 2.71 | 1.97 | 47.1 | 4.5 |
| Political & Economic Risk Indicators (Index) | | 2.36 | 1.31 | 12.8 | 0.5 |
| Political Risk: | | | | | |
| 1 | Frequency of Coups | 2.46 | 2.02 | 56.5 | 7.9 |
| 2 | Frequency of Labour Unrest | 2.39 | 1.89 | 54.7 | 5.2 |
| 3 | Attitude Toward Capitalism | 2.35 | 1.87 | 55.4 | 5.0 |
| 4 | Nationalistic Tendencies | 2.30 | 1.80 | 55.9 | 3.9 |
| 5 | Social & Ethnic Group Conflicts | 2.24 | 1.77 | 57.7 | 4.2 |
| 6 | Role of Military | 2.19 | 1.78 | 59.8 | 5.8 |
| 7 | Role of Opposition | 1.93 | 1.50 | 62.4 | 1.8 |
| Economic Risk: | | | | | |
| 1 | Inflation Rate | 2.47 | 1.79 | 48.2 | 3.4 |
| 2 | GNP Growth Rate | 2.45 | 1.77 | 48.3 | 3.7 |
| 3 | Fiscal Deficit | 2.26 | 1.77 | 55.4 | 4.5 |
| 4 | Debt Servicing | 2.18 | 1.73 | 58.2 | 3.7 |
| 5 | Export Performance | 2.09 | 1.56 | 56.7 | 2.1 |
| 6 | International Reserves | 2.04 | 1.60 | 60.4 | 2.9 |
| Seller's Experience in Buyer's Country | | 4.11 | 2.01 | 18.3 | 14.9 |
| All Credit Risk Items (Index) | | 3.34 | 1.12 | 3.5 | 0.0 |

Table 3. Credit Information Type Use

| Rank * | Indicators | Mean | S.D. | Correlations ** | | | | | |
|--------|----------------------|------|------|-----------------|------|------|------|------|--|
| | | | | 1 | 2 | 3 | 4 | 5 | |
| 1 | Payment Record | 5.03 | 1.61 | 1.00 | | | | | |
| 2 | Customer Background | 3.92 | 1.44 | 0.62 | 1.00 | | | | |
| 3 | Business Potential | 3.52 | 1.64 | 0.37 | 0.61 | 1.00 | | | |
| 4 | Financial Strength | 3.20 | 1.72 | 0.47 | 0.68 | 0.41 | 1.00 | | |
| 5 | Political & Economic | 2.36 | 1.31 | 0.22 | 0.49 | 0.47 | 0.39 | 1.00 | |

* Rank by differences in means of information type indices using paired samples. Differences are significant to $p < 0.01$.

** All correlations significant $p < 0.01$.

Somewhat surprisingly, about 44% of the managers said they never used political risk indicators while 38% said they never used economic indicators when assessing export credit risks. Taken together, it appears that a small number of the managers (3.5%) do not use credit information at all.

Table 3 sets out the means, standard deviations and correlation measures for the different types of credit information items. These data strongly support (significance $p < 0.005$) the relative ranking of credit information types by Canadian export credit managers outlined in the table. They look most to information about the foreign buyer's payment record, then to information about the customer's background, business potential, financial strength, and political and economic risks in the buyer's country. As such, *Hypothesis* is supported only inasmuch as payment record type information is used more than customer background, business potential, and geographical location.

Hypothesis 1 is clearly rejected inasmuch as financial strength information is used less than customer background and business potential indicators. This latter finding is consistent with Ewert's statistical model of the trade credit decision but runs counter to Srinivasan and Kim's expert system work which showed the overwhelming dominance of financial strength indicators in the credit decision. The finding that financial strength indicators are used less than the other standard risk indicators also runs counter to Ross and Pike's (1992) finding that financial strength accounts for most of the weight in the export credit decision and Talaga and Buch's (1992) work which suggests a substantial focus on financial criteria such as liquidity (current, acid-test and average collection period ratios), debt service (debt-to-assets & debt-to-equity) and profitability (net income-to-sales) measures. Reconciling these differences between information type use and risk factor weightings is difficult. It could be that the export credit managers are combining cues in their credit assessment – as suggested by Ross and Pike – so as to infer the buyer's financial strength from payment record and other indicators rather

than by analysing it directly. Or, it could be that export credit managers do not ordinarily undertake the detailed financial analysis of customer creditworthiness assumed by the various studies referenced above.

Hypothesis 2 is strongly supported in that all standard credit risk information indicators were used more than the political and economic risk information. This finding is consistent with the relatively low weights assigned to country and foreign exchange risks by export credit managers (Ross/Pike 1992) and Talaga and Buch's report that "42.6% of respondents claim never to consider the country of the applicant in their credit extension decision." It is also consistent with the earlier finding that most managers rarely use sources of country risk credit information. Probably the biggest factor explaining the relatively low use of country risk indicators by the managers surveyed is the concentration by Canadian and European firms of export sales to other, relatively stable, countries. If so, it might be best to segment further studies of credit information use by high, moderate, and low risk country markets.

Table 3 also shows significant, positive correlations ($p < 0.005$) among the credit information types. This suggests that more diligent credit managers tend to look at all types of credit information more, albeit to varying extents. For example, managers who indicate a high use of payment record indicators would also tend to extensively investigate customer background information. There, apparently, is no tendency for managers to substitute one type of indicator for another type when assessing overall buyer creditworthiness.

Factors Affecting Credit Information Use

Table 4 sets out correlational and mean score data for the various factors thought to affect credit information use and the manager's use of credit information sources and credit information types.

Hypothesis 3 that managers who are more FCRA would intensify their credit information search is supported, albeit weakly in the case of credit information sources use. Stronger support was anticipated given the generally accepted position that managers facing greater credit risks could likely reduce their export credit costs through increased credit investigation. The weaker-than-anticipated relationship indicated by the data show in Table 4 could be the result of measurement error.⁶ It could also be that some managers reduce their risk exposure by relying more on commercial bank letters of credit and guarantees to secure their export sales than by conducting more extensive credit searches and carrying the risk on their own.

Hypothesis 4 that managers who are more MBA would intensify their credit information search is strongly supported in terms of both credit sources and credit items used. Thus, it appears that an increased information search is important to

Table 4. Factors Affecting Credit Information Use

| Variables | Sources Used | Items Used |
|--------------------------------|-------------------------------------|--------------------|
| | (Correlations) | |
| Financial Cost & Risk Aversion | 0.103 ^c | 0.131 ^b |
| Marketing Benefit Attraction | 0.296 ^a | 0.252 ^a |
| Experience | 0.055 | 0.094 ^c |
| Export Credit Insurance: | (Means) | |
| Insured | 3.517 ^a | 3.812 ^a |
| Not Insured | 2.863 | 3.029 |
| Professional Accountant | (Financial Strength Indicators Use) | |
| Accountant | 3.418 | |
| Non-Accountant | 3.194 | |

^a = $p < 0.01$; ^b = $p < 0.05$; ^c = $p < 0.10$

offering trade credit in support of export sales. It could also be that managers who are more marketing benefit oriented ordinarily conduct an increased information search on their buyer's needs and capabilities. If so, the additional information would serve the dual purpose of ensuring that the foreign buyer is deserving of export credit support and allowing the manager to structure the export credit offer to better meet the needs of the foreign buyer.

Hypothesis 5 that managers who use export credit insurance would lessen their credit information search activities is clearly rejected by the mean information use scores presented in Table 4. In fact, the Canadian export credit managers surveyed who used export credit insurance actually used *more* credit information sources and credit information items. Accordingly, it does not appear that export credit insurance encourages managers to lessen their credit information search, loss reduction activities. Rather, it appears that export credit insurance may actually encourage managers to be more diligent in their information search activities – perhaps, due to moral hazard controls in export credit insurance which require managers to demonstrate that they were prudent in their credit granting decisions.

Finally, both biodata characteristics hypotheses that (*Hypothesis 6*) credit managers with more experience would engage in more intensive credit information searches and (*Hypothesis 7*) credit managers with accounting designations would tend to focus more on financial strength information failed to gain sufficient support. For *Hypothesis 6*, more experience was only weakly correlated with items used (0.094, $p < 0.1$). For *Hypothesis 7*, although the mean use score for financial strength data was higher for the accountants the mean difference was not

significant. As such, although there is a hint of biodata characteristics as a source of information use variance, it seems certain that these factors are minor relative to firm specific factors.

Conclusions

This investigation of trade credit information use for export sales has served to strengthen and extend our knowledge of the trade credit decision. Overwhelmingly, Canadian export credit managers use domestic-type credit information sources and items when assessing the credit risk of foreign buyers. Of the domestic credit information types used by the managers, most attention was placed on payment record indicators. Oddly, financial strength indicators were used less frequently than the other standard credit risk indicators – even though earlier studies show that credit managers perceive the buyer's financial strength as the most important factor in assessing creditworthiness. Export specific credit information sources and items are used only infrequently by Canadian export credit managers – perhaps due to the concentration of their export sales to the USA and other, relatively safe, export markets.

This study also uncovered substantial variance in credit information use among Canadian export credit managers. Clearly, some managers use much more information when analysing a foreign buyer's creditworthiness than others. More particularly, it appears that managers who are more attracted to the marketing benefits of offering export credit engage in a more intensive credit information search to support their offer. A greater need to ensure that the credit risk is reasonable seems to only be slightly associated with more intensive information searches. Perhaps, not offering credit in the first place is a more desirable option for those managers who are very financial cost and risk averse. Surprisingly, export credit insurance use seems to lead to a more intensive search – not a less intensive search as was expected given the loss transference aspects of insurance. Finally, the very weak association between biodata characteristics and information search activities suggests that most of the variance in the managers' credit information use can be attributed to firm – not individual differences.

The study's multiple firm survey gives strength to its findings – especially in light of the substantial variance in credit information use among managers – and highlights the limitations of one-firm studies of trade credit information use. Limitations in our study's design stem from the use of a mail survey and include the possibility of non-response bias from a less-than-perfect response rate and the lack of preferred insight that personal interviewing may have achieved. In addition, our focus on Canadian export credit managers equally suggests that credit

information source and item use practices may be country specific. It is also possible that sectoral and target market influences will impact on trade credit information use. Clearly, comparative work is required to more clearly establish the generalisability of our findings to other countries, sectors, and target markets. Future research should use in-depth interviewing techniques to provide a more complete picture of how export specific risk information is used.

Notes

- 1 Financial support for this research was provided by the Council of Maritime Premiers through the Centre for International Business Studies at Dalhousie University. Various portions of the paper were presented at earlier conferences.
- 2 Other exporter categories – such as trading houses and freight forwarders – also imply a different level of export credit expertise which would probably best be left to a comparative analysis.
- 3 The complete description of the FCRA and MBA orientations of the Canadian export credit managers surveyed as well as of their export credit insurance use and biodata characteristics is presented in Ross and Pike (1995).
- 4 An expansive description of the BOSS list is given in Calof (1994). Briefly, the BOSS listing is a large, public-accessible database of Canadian companies which includes about 75% of the total population of Canadian manufacturers which export. BOSS is also updated annually and indicates certain aspects of a firm's exporting activity such as countries exported to and total export sales. Among its limitations, the BOSS list includes only categorical data on firm size and sales. It is also proportionally under-represented by small and medium-sized firms – although these companies make up the bulk of BOSS company listings.
- 5 This low ranking could be explained by the high level of general knowledge Canadian managers already have of the USA – their largest market.
- 6 Recall that the Cronbach Alpha of the five item, FCRA measure was only 0.682 – a somewhat weaker measurement construct. Of course, at 0.682 the construct is acceptable given Nunnally's (1967, p. 226) suggestion that reliabilities of 0.60 or 0.50 will suffice for 'early stage' construct development.

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