



**CIRANO**  
Centre interuniversitaire de recherche  
en analyse des organisations

---

**Cahiers CIRANO**  
*CIRANO Papers*

---

N° 94c-2

**COMMERCIAL BANKRUPTCY AND  
FINANCIAL REORGANIZATION IN  
CANADA**

*Jocelyn Martel*

Montréal  
Septembre 1994

# Commercial Bankruptcy and Financial Reorganization in Canada<sup>\*</sup>

*Jocelyn Martel*

Université de Montréal

CIRANO

Jocelyn Martel détient un doctorat en économie de l'Université de Montréal. Il poursuit présentement des études post-doctorales au CIRANO.

Le professeur Martel se spécialise en analyse économique des faillites et de la réorganisation financière, ainsi qu'en micro-économie appliquée. Il s'intéresse particulièrement au comportement stratégique des entreprises et créanciers en difficultés financières. Une grande partie de son travail consiste à élaborer de nouveaux modèles de comportement de la firme dans un contexte d'insolvabilité, à construire des séries de données originales sur les entreprises en faillite et en réorganisation, à tester les théories existantes dans ce domaine, ainsi qu'à évaluer le fonctionnement du système de faillite canadien. Une autre partie de ses recherches consiste en un travail empirique sur l'impact de l'investissement en capital humain spécifique sur la structure de capital des entreprises.

*Jocelyn Martel has a Ph.D. degree in economics from the University of Montreal. He is currently pursuing post-doctoral studies at CIRANO.*

*Dr. Martel specializes in the economic analysis of bankruptcy and financial reorganization and in applied microeconomics. He is particularly interested in examining the strategic behaviour of firms and creditors in the context of financial distress. The main body of his work deals with developing new models of firm behaviour in insolvency, building original data sets on bankrupt reorganized firms, to test existing and new theories in the area as well as to evaluate the functioning of the bankruptcy system in Canada. He is also doing empirical work on the impact of specific human capital investment on the capital structure of the firm.*

---

<sup>\*</sup> This paper represents a revised version of Chapter 2 of my Ph.D. thesis. I thank the Bankruptcy Branch of the Department of Science and Industry Canada for making available the data used in the study. I am grateful to Jacques Robert, Michel Poitevin and Thomas Lemieux for their comments and to Stéphanie LLuis for her technical assistance. Errors are the responsibility of the author.

## **CIRANO**

Le CIRANO est une corporation privée à but non lucratif constituée en vertu de la Loi des compagnies du Québec. Le financement de son infrastructure et de ses activités de recherche provient des cotisations de ses organisations-membres, d'une subvention d'infrastructure du ministère de l'Industrie, du Commerce, de la Science et de la Technologie, de même que des subventions et mandats obtenus par ses équipes de recherche. La collection des *Cahiers CIRANO* est la réalisation d'une des missions que s'est données le CIRANO, soit d'assurer la diffusion des résultats des ses recherches au sein des organisations-partenaires.

*CIRANO is a private non-profit organization incorporated under the Québec Companies Act. Its infrastructure and research activities are funded through fees paid by member organizations, an infrastructure grant from the Ministère de l'Industrie, du Commerce, de la Science et de la Technologie, and grants and research mandates obtained by its research teams. The CIRANO Papers collection fulfils one of the missions of CIRANO: to transfer the results of its research to partner organizations.*

## **Les organisations-partenaires / The Partner Organizations**

- Ministère de l'Industrie, du Commerce, de la Science et de la Technologie.
- École des Hautes Études Commerciales.
- École Polytechnique.
- Université de Montréal.
- Université Laval.
- McGill University.
- Université du Québec à Montréal.
- Bell Québec.
- Caisse de dépôt et de placement du Québec.
- Hydro-Québec.
- La Banque Laurentienne du Canada.
- Fédération des caisses populaires de Montréal et de l'Ouest-du-Québec.

Ce document est publié dans l'intention de rendre accessible les résultats préliminaires de la recherche effectuée au CIRANO, afin de susciter des échanges et des suggestions. Les idées et les opinions émises sont sous l'unique responsabilité des auteurs, et ne représentent pas nécessairement les positions du CIRANO ou de ses partenaires.

*This paper presents preliminary research carried out at CIRANO and aims to encourage discussion and comment. The observations and viewpoints expressed are the sole responsibility of the authors. They do not necessarily represent positions of CIRANO or its partners.*

## **Abstract / Résumé**

*The paper examines a micro data set of 417 commercial bankruptcies and 393 financial reorganizations filed in Canada during the period 1977-87. Descriptive statistics from the data are used to characterize the main features of the bankruptcy process in Canada. Firms in bankruptcy or in reorganization are typically small firms; the former being significantly smaller than the latter. The data shows that firms in bankruptcy are in significantly worse financial condition than firms in reorganization. Finally, the Canadian bankruptcy process is efficient in offering a rapid solution to financial distress. However, the data confirms the view that bankruptcy imposes substantial losses to creditors.*

Ce document poursuit deux objectifs. Premièrement, il présente les caractéristiques financières des entreprises en faillite et en réorganisation sous la *Loi sur la faillite* au Canada. Deuxièmement, il offre un aperçu du fonctionnement du système de faillite canadien. L'analyse de la situation financière d'un échantillon de 810 entreprises insolvable qui ont eu recours à la loi au cours de la période 1977-1987 révèle que la très grande majorité de ces entreprises sont de petite taille : 99 % des entreprises en faillite et 72 % des entreprises en réorganisation ont une valeur au livre des actifs inférieure à un million de dollars. Les créances ordinaires (fournisseurs de biens et services) représentent le poste le plus important en proportion des créances totales des entreprises. Suivent dans l'ordre les créances garanties (banques) et les créances privilégiées (gouvernement, etc.). De façon générale, la situation financière des entreprises en faillite est des plus critiques au moment de l'échec alors que celle des entreprises en réorganisation se veut relativement plus saine. Ceci se traduit par des pertes importantes pour les créanciers lors de la faillite. En ce qui a trait à son fonctionnement, le système de faillite canadien offre une solution rapide aux entreprises en difficultés financières. En particulier, 84 % des propositions de réorganisation sont soumis à l'approbation des créanciers en deça d'un délai de 60 jours.

# 1 Introduction

Over the last decade, the topic of bankruptcy has been the object of a growing concern. In Canada, the number of bankruptcies and financial reorganizations has risen significantly since the beginning of the eighties. In addition, in December 1992, a new legislation governing the insolvency in Canada came into effect.<sup>1</sup> Yet, as pointed out by Fisher & Martel (1994b), these legislative changes took place without reference to detailed data on the characteristics of firms seeking the protection of the Act.

Until recently, the vast majority of the empirical literature on firms in bankruptcy and financial reorganization was based on U.S. data. In Canada, this phenomenon has been the object of few studies. First, Kryzanowsky & Holland (1984) examined the characteristics of 76 firms which filed for bankruptcy and 41 firms which filed for financial reorganization under the Canadian *Bankruptcy Act*. Second, from a representative sample of 338 Canadian firms who have filed a reorganization proposal under the *Bankruptcy Act*, Fisher & Martel (1994a,b,c) have provided new evidence on the characteristics of firms reorganizing and on the reorganization process in Canada. The authors used the data to examine the possible impact of the recent changes to the Act. However, the analysis is still incomplete due to the lack of information on firms going through straight bankruptcy.<sup>2</sup>

The object of this paper is to address this lack of data and to provide new evidence on firms in bankruptcy and in financial reorganization in Canada. We analyze a representative sample of 417 firms which filed for bankruptcy and 393 which filed a reorganization proposal under the *Bankruptcy Act* for the period 1977-1987. The paper is organized as follows. Section 2 offers an overview of the legal environment surrounding commercial bankruptcy and reorganization under the *Bankruptcy Act* in Canada and under the *Bankruptcy Code* in the U.S. Section 3 describes how the data was collected and sections 4 and 5 offer an detailed description of the characteristics of firms going through bankruptcy and financial reorganization respectively. The results are compared with other Canadian and American studies. We conclude by discussing the implications of these findings from a policy perspective.<sup>3</sup>

---

<sup>1</sup>See Fisher & Martel (1994b) for a discussion of the amendments to the *Bankruptcy Act*.

<sup>2</sup>Between 92-94% of commercial insolvency cases under the *Bankruptcy Act* are straight bankruptcies. See Martel (1991).

<sup>3</sup>The reader is referred to Martel (1991), Fisher & Martel (1994b) and Bohémier (1992) for a discussion of the legal environment surrounding commercial bankruptcy and reorganization in Canada.

## 2 Overview of the Bankruptcy Process

### 2.1 Canada

The Canadian bankruptcy law offers two alternatives to insolvent debtors: bankruptcy and reorganization.<sup>4</sup> A business bankruptcy is identified as being:

“a bankruptcy which is chiefly attributable to liabilities incurred as a result of the carrying on of a commercial venture or business and includes proprietorships, partnerships and Limited Corporations.”

A proposal is identified as being:

“a proceeding under the Bankruptcy Act whereby the debtor, with the approval of his creditors and the Court, is granted a composition of his debts, an extension of time to pay his debts or a schema or arrangement to otherwise satisfy his creditors.”

In the case of unincorporated businesses, the liabilities attributable to a business venture have to represent more than 50% of the total liabilities in order to qualify as a business estate.<sup>5</sup>

#### 2.1.1 Bankruptcy

In practice, filing for bankruptcy triggers the automatic stay provisions which freeze all unsecured creditors' rights against the firm's assets.<sup>6</sup> The trustee, selected by the petitioning creditors, takes possession of the debtor's assets, sells them and distributes the proceeds among creditors following the allocation schedule set out in section 136 of the *Bankruptcy Act*. Subject to the rights of secured creditors, the order in which the proceeds are to be distributed among unsecured creditors is summarized as follows: i) in the case of a deceased bankrupt, funeral and testamentary expenses; ii) the costs of administration in the following order, the expenses and the fees of the trustee, and the legal costs; iii) the Superintendent levy, iv) wages, salaries, commissions and compensations, up to a maximum of \$500 per worker for services rendered three months prior to the bankruptcy. Travelling salesmen are entitled to an additional \$300 in expenses<sup>7</sup>; v) municipal taxes or levied within the two years preceding the bankruptcy; vi)

---

<sup>4</sup>The present discussion relates to the bankruptcy process prior to the amendments to the *Bankruptcy Act* which came into effect in December 1992 (Bill C-22). Reference to any significant changes to the Act will be done in a footnote when necessary.

<sup>5</sup>Annual Statistical Summary, Office of the Superintendent of Bankruptcy, Industry and Science Canada.

<sup>6</sup>This section of the paper is based on Martel (1991). The reader is also referred to Bohémier & Massüe-Monat (1989) and Bohémier (1992) for more details on these aspects.

<sup>7</sup>Any claims exceeding this limit rank as ordinary claims. The recent amendments to the Act raised the upper limit on wage claims to \$2000 for services rendered during the six months preceding bankruptcy. Travelling salesmen are entitled to an additional \$1000 in expenses.

arrears of rent for a period of three months preceding the bankruptcy; vii) federal deductions at source for Income tax, Unemployment insurance and employees contributions to the Workers' Compensation Board; viii) claims of the federal and provincial government not previously mentioned. All the above claims are referred as *preferred* claims. *Ordinary* creditors are last, and their claims are set on a pro rata basis.<sup>8</sup> Secured creditors, as a rule, are not subject to the stay provisions; they can enforce their liens against the debtor's assets at any time during the proceedings.

### 2.1.2 Reorganization

In Canada, firms in financial distress have one means for commercial reorganization under the *Bankruptcy Act*: a proposal pursuant to Part III of the Act.<sup>9</sup>

A proposal is a legal procedure which has the effect of staying proceedings by unsecured creditors while enabling the firm to reorganize and continue operating under the protection of the bankruptcy court. The firm attempts to arrive at a settlement with its creditors by spreading out the repayment of their claims over time, or reducing their claims, subject to the order of priority defined in the Act. These repayments can be made in cash and/or in installments, and/or in equity in the reorganized firm. In practice, a plan provides for the secured claims to be paid in accordance with arrangements existing between the debtor and the holders of the secured claims. Similarly, preferred claims have to be paid in full before all claims of ordinary creditors. The latter are offered a partial or sometimes a full payment of their original claims. In a proposal, the original management team usually remains in control of the firm under the supervision of a committee of inspectors which stays in place for the entire period covered by the proposal.

To be accepted, a proposal requires the affirmative vote of unsecured creditors representing 75 percent in value of the claims, and a majority in number of the unsecured creditors.<sup>10</sup> Once accepted, a proposal has to be approved by the court. Rejection of the proposal by unsecured creditors or the court entails the automatic bankruptcy of the debtor. Secured creditors are not bound by the 1949 *Bankruptcy Act*. They have the right to enforce their security, in the event of a default, notwithstanding the filing of a proposal.<sup>11</sup>

---

<sup>8</sup>Ordinary creditors are typically trade creditors.

<sup>9</sup>There also exists the *Companies' Creditors Arrangements Act* (C-36) which can be used only by debtors which have outstanding secured or unsecured bonds (debentures) under a trust deed. To our knowledge, there exists no formal records on its use by insolvent debtors. See Bohémier (1992), Section II.

<sup>10</sup>Bill C-22 provides for a softening of the voting requirement by lowering the value of claims criterion to two-thirds instead of three-fourth.

<sup>11</sup>Bill C-22 allows the debtor to include secured creditors in a reorganization plan which automatically stay their proceedings. See Fisher & Martel (1994b) and Bohémier (1992), Section III for a more detailed discussion.

## 2.2 United States

In 1978, the American Congress adopted the U.S. *Bankruptcy Code* to replace the *Chandler Act*. Commercial bankruptcies and reorganization are governed by the so-called Chapter 7 and Chapter 11 respectively.<sup>12</sup>

### 2.2.1 Bankruptcy (Chapter 7)

Similar to Canada, Chapter 7 provides for a liquidation procedure in the event of bankruptcy by a debtor. A trustee is appointed to locate, evaluate and liquidate the firm's assets in order to distribute the proceeds according to the absolute priority rule defined in the Code. The order of priority is the following: i) administrative costs of bankruptcy (including post-petition loans); ii) loans to the firm made after the bankruptcy filing, if the filing is involuntary; iii) claims for wages, salaries or commissions up to \$2,000 per employee for services rendered over the three months preceding bankruptcy; iv) claims for contributions to employees' benefit plans up to \$2,000 per employee for services rendered over the six months preceding bankruptcy; v) claims by customers for deposits up to a limit of \$900 per customer; vi) government claims for taxes of any type; vii) claims of unsecured creditors; and viii) equity claims. Claims in the categories ii) to vi) are referred to "priority" claims.

Under the Code, secured creditors are given the highest priority over the proceeds from the sales of their specific lien assets. Secured creditors are allowed to take possession of the lien assets directly only if the value of their claims exceeds the value of the assets. Otherwise, the assets are liquidated by the trustee on their behalf.

### 2.2.2 Reorganization (Chapter 11)

Under the Code, the filing of a proposal imposes an automatic stay of proceedings on all creditors, including secured creditors. However, any creditor can seek a court order in order to be relieved of the stay. In reorganization, the original management can remain in control of the firm or a trustee can be appointed to oversee management. The firm's management has an exclusivity period of 180 days to propose their own plan. The plan can apply to all creditors, including secured creditors. Creditors can then propose an alternative plan after this period is exhausted. The firm's management or the trustee is allowed to dispose of any of the firm's assets, shut down parts of the firm's operations or sell the firm as a going concern.

According to the *Unanimous Consent Procedure (UCP)*, secured and unsecured creditors can only vote on a proposal if their claims have been cut back. Otherwise, they are deemed to have accepted the plan. Secured creditors are considered individually rather than as a class. Priority claims can also be cut

---

<sup>12</sup>This section is based on White (1984).



back, but if so, they must vote in favour of the plan. The repayment of tax claims can be spread over a period of up to six years. A plan is deemed to be approved if a majority of creditors in each sub class, representing two-thirds of the claims of those creditors voting in that sub class, are in favour of it. Equity who's claims have been impaired can also vote on a proposal. To approve the plan, they must vote in favour of it by two-thirds of those shares voting. The elimination of all equity automatically results in the rejection of the plan by equity holders and the plan cannot be approved under UCP. A class of creditors who receives nothing under the plan is deemed to have rejected it.

The U.S. *Bankruptcy Code* provides for a second reorganization procedure, called *cramdown*. This procedure can be used if an impaired class of creditors rejects a reorganization proposal. In such a case, the court can approve the plan as long as each dissenting class of creditors is treated according to the "fair and equitable" standard. Basically, this standard requires that creditors cannot receive a lower treatment than what they would receive in liquidation. Due to high transactions cost, cramdown is scarcely used.

### 3 Data

In Canada, each bankruptcy and reorganization proposal under the *Bankruptcy Act* is filed with one of 15 regional bankruptcy offices of Industry & Science Canada. The files used for this study originate from two regional offices: Montreal and Toronto for the period 1977-1987. From a list of 27,324 commercial bankruptcies and 1,280 commercial reorganization, a random sample of 1000 firms is selected.<sup>13</sup> This sample is composed of two sub-samples; i) 500 commercial bankruptcies and ii) 500 commercial reorganization proposals.

The data reported in this study is taken directly from the firms' individual files. Due to the fact that some files were not available or to the absence of key information, the final sample is reduced to 810, which includes 417 commercial bankruptcies and 393 commercial reorganization proposals. The Montreal regional office is the source of 274 bankruptcy files and 273 reorganization files while the other 143 bankruptcy and 120 reorganization files come from the Toronto regional office.

Since little is known about firms going through bankruptcy and financial reorganization, we compare our results with other Canadian and American studies. In Canada, our results are compared with those of i) Kryzanowsky & Holland (1984) who examine a sample of 76 firms which filed for bankruptcy in 1976 and 41 businesses which filed a reorganization proposal over the period 1972-1980<sup>14</sup> and ii) Fisher & Martel (1994c) who study a sample of 338 firms

---

<sup>13</sup>Random sampling was carried out using the Systematic Random Sampling Procedure. The sample is chosen to be representative of the regional distribution of bankruptcies and reorganization over the years and the regional offices.

<sup>14</sup>The reorganization sample consists of 32 incorporated businesses and 9 unincorporated

in financial reorganization under the *Bankruptcy Act* for the period 1978-1987.<sup>15</sup> In the U.S., we use different sources of comparison. First, White (1984) reports on the characteristics of 90 insolvent firms which filed for Chapter 7 and 95 firms which filed for Chapter 11 under the *Old Act* as well as 73 firms which filed for Chapter 7 and 45 firms which filed for Chapter 11 under the *New Code* in the Southern District of New York. Second, White (1983) examine some of the characteristics of 90 firms liquidating and 96 firms reorganizing under the *Old Act* and of 88 firms liquidating and 33 firms reorganizing under the *New Code* in the same bankruptcy district.<sup>16</sup> Finally, Flynn (1989) examines 2,395 firms from all over the U.S. reorganizing under Chapter 11 between 1979 and 1989.

## 4 Commercial Bankruptcies

### 4.1 Financial Variables

As Table 1 indicates, Canadian firms filing for bankruptcy under the *Bankruptcy Act* are typically small firms. For the full sample, the average value of assets is \$74,231 (\$5,202) while the average value of liabilities is \$232,565 (\$87,882).<sup>17</sup> As expected, the estate size is significantly larger for incorporated than for unincorporated firms: the mean value of assets is \$177,251 and \$31,335 for both types of businesses respectively.<sup>18</sup> Similarly, the mean value of liabilities is \$476,293 and \$131,758 for incorporated and unincorporated businesses respectively.<sup>19</sup>

Based on their sample of 76 bankrupt firms, Kryzanowsky & Holland find a mean value of assets and liabilities of \$85,756 and \$140,185 respectively. For the White (1984) sample, the mean value of assets and liabilities of firms which filed for Chapter 7 under the *Old Act* is U.S.\$736,000 and U.S.\$1.551 million while the mean value of assets and liabilities of firms which filed for Chapter 7 under the *New Code* is U.S.\$437,000 and U.S.\$710,000.<sup>20</sup> This suggests that U.S. firms filing for Chapter 7 are significantly larger than Canadian firms filing for court protection under the *Bankruptcy Act*.

Firms in bankruptcy are generally very small. Nearly 85% of all bankrupt firms have a value of assets lower than \$100,000 and 98% of the estates have

---

businesses.

<sup>15</sup>A comparison with the study of Fisher & Martel is done only when there is a marked difference in the results.

<sup>16</sup>The *Old Act* applies to the period prior to 1980 while the *New Code* covers the period after 1980.

<sup>17</sup>Dollar values are reported in June 1993 Canadian dollars, deflated by the *GDP* deflator. Median values are reported in parenthesis for the full sample of firms.

<sup>18</sup>Of the 407 firms in the sample, 288 (70.7%) are incorporated and 119 (29.3%) are unincorporated businesses. None of the firms in the sample have publicly traded shares.

<sup>19</sup>We use the term "significant" in comparing incorporated and unincorporated firms when the mean value of the two sub-samples are statistically different at a 5% level.

<sup>20</sup>Values for American firms are current U.S. dollars.

assets lower than \$500,000. None of the firms in the sample had a value of assets greater than \$10 million; the largest estate is evaluated at \$8.2 million. Although the distribution of estates by liabilities is less pronounced, the data indicate that 55% of firms have liabilities lower than \$100,000 and that 92% of firms have liabilities lower than \$500,000. The largest estate has \$9.4 million in liabilities.

These results are in line with those found by Kryzanowsky & Holland. Based on their sample, 50% of the bankrupt firms have a value of assets lower than \$10,000. Our data shows that 68% of the firms in our sample have a value of assets lower than \$23,600.<sup>21</sup>

In the area of insolvency, the liabilities to assets ratio is often used as an indicator of the firm's financial health. As Table 1 indicates, the financial health of Canadian firms in bankruptcy is critical; the liabilities to assets ratio is equal to 72.2 (8.1) for the entire sample of firms. Incorporated firms, with a liabilities to assets ratio of 10.6, are, on average, in significantly much better financial condition than unincorporated firms which have a mean ratio of 96.3.<sup>22</sup> This result contrast with those found by White (1984). The mean value of the liabilities to assets ratio for bankrupt firms under the *Old Act* and the *New Code* is 2.1 and 1.6 respectively. White (1983) reports a ratio of 2.26 and 1.62 for firms liquidating under the Act and the Code respectively. This suggests that American firms file for bankruptcy at a much earlier stage of financial distress than Canadian firms.

## 4.2 Secured Claims

About 48% of all commercial bankruptcies involve some secured claims. The mean value of secured claims is \$72,761 (\$0) for the full sample of firms. Incorporated firms, with an mean value of \$159,837, have significantly larger secured claims than unincorporated firms which with a mean value of \$36,752. Secured claims represent approximately 19% of total liabilities. This proportion does not vary significantly across the two classes of firms. The same trend appears when we examine the number of secured creditors in bankrupt firms. For the full sample, there is, on average, 1 secured creditor involved in the proceedings. In absolute terms, there is no difference between incorporated and unincorporated firms. This suggests that larger firms in bankruptcy do not rely more on secured financing than smaller firms.

Based on the White (1984) sample, the mean value of secured claims for American firms liquidating under Chapter 7 of the *Old Act* and the *New Code* is U.S.\$548,000 and U.S.\$182,000 respectively. White (1983) estimates that the

---

<sup>21</sup>The \$10,000 figure used by Kryzanowsky & Holland corresponds to about \$23,600 in June 1993 dollars.

<sup>22</sup>Using the assets to liabilities ratio, firms in the sample have a mean ratio of 0.204. This result is consistent with those of Kryzanowsky & Holland who find an average assets to liabilities ratio of 0.21.

ratio of secured claims to total liabilities is equal to 34% for the firms liquidating under the Act and 55% for those liquidating under the Code. This suggests that banks play a larger role in the financing of U.S firms in liquidation under Chapter 7 than for Canadian firms in bankruptcy under the *Bankruptcy Act*.

As pointed out by Fisher & Martel (1994a,b), secured creditors play an important role in the Canadian insolvency process. They typically represent an important source of capital and can prolong the life of a business by extending new loans. A major determinant of the firm's ability to attract new loans is the presence of free assets in the firm. The data reveals that the ratio of secured claims to total assets is equal to 1.39 (0) for all the firms, with incorporated firms having a lower ratio of assets that are secured, 1.30 than unincorporated firms, 1.42.<sup>23</sup>

White (1984) finds that the mean ratio of secured claims to total assets of the firms under the Act and the Code is equal to 0.75 and 0.42 respectively. White (1983) estimates this ratio at 0.77 for firms under the Act and at 0.89 for firms under the Code.

### 4.3 Ordinary claims

Every bankruptcy estate involves some ordinary claims. For the full sample, the average value of ordinary claims is \$130,117 (\$50,134). Incorporated firms have a significantly larger value of ordinary claims, \$254,691, than unincorporated firms with an average value of \$78,601. The proportion of ordinary claims in total liabilities is equal to 68.2% for all bankrupt firms, 66.7% for incorporated businesses and 68.9% for unincorporated businesses.

For the White (1984) sample, the mean value of ordinary claims is equal to U.S.\$1.05 million and U.S.\$481,000 for bankrupt firms under the *Old Act* and the *New Code* respectively.<sup>24</sup>

Typically, a commercial bankruptcy estate involves an average of 20 ordinary creditors; this number being significantly higher for incorporated than for unincorporated firms. Incorporated firms have almost three times more ordinary creditors than those of unincorporated firms; the former having an average of 38 ordinary creditors compared to 13 for the latter. Ordinary creditors represent by far the largest class of creditors in a bankruptcy estate. For the full sample, they represent 80.8% of all the creditors. There is not a significant difference between incorporated firms and unincorporated firms.

---

<sup>23</sup>It is reasonable to assume that the maximum value for the secured liabilities to assets ratio should be 1. The data shows that this ratio exceeds the value of 1 in 21% of the estates. Imposing a constraint on the maximum value for the secured liabilities to assets ratio significantly reduces its value. For the full sample, the ratio is then equal to 0.40; it is equal to 0.45 and 0.37 for incorporated and unincorporated businesses respectively. This suggests that the unconstrained ratio is biased by the presence of some estates with an exceptionally large secured liabilities to assets ratio.

<sup>24</sup>The U.S. Bankruptcy law uses the term *unsecured* instead of ordinary.

An interesting feature of our data set is that it provides information on the distribution of claims among creditors of a same class. The data shows that, on average, the largest ordinary creditor holds 49% of the total ordinary claims. In fact, a single creditor holds more than 25% of the ordinary claims in 82% of the estates examined. When calculated over the total value of unsecured claims (ordinary and preferred), a single ordinary creditor holds a potential veto right in more than 70% of the estates. This is an important fact when considering that these creditors would have a veto right if the firm had opted for reorganization rather than for bankruptcy.

#### 4.4 Preferred claims

About 78% of all commercial bankruptcy filings involve some preferred claims. For the full sample, the average value of preferred claims is equal to \$26,138 (\$3,862). Incorporated firms have almost four times as much preferred claims than unincorporated firms (\$53,812 for the former compared to \$14,022 for the latter). Preferred claims represent 12.3% of the firms' liabilities at the time of bankruptcy. This proportion is slightly higher for incorporated firms, 14.0%, than for unincorporated firms, 11.5%.

According to White (1984), preferred claims are relatively small in Chapter 7 cases.<sup>25</sup> The mean value of priority claims under the *Old Act* and the *New Code* is equal to U.S.\$65,000 and U.S.\$46,000 respectively. These represent less than 5% of total liabilities at the time of bankruptcy.

There are only a few preferred creditors involved in a bankruptcy estate. For the full sample of firms, the average number of preferred creditors is equal to 3 (2); this number is significantly higher for incorporated than for unincorporated businesses (6 vs. 2 creditors).

#### 4.5 Crown claims

About 66% of all bankruptcy estates involve some Crown claims. On average, Crown claims represent more than 55% of preferred claims and about 10% of total liabilities. For the full sample of firms, the average value of Crown claims is equal to \$20,575 (\$1,830). These claims are higher for incorporated firms, \$39,494, than for unincorporated firms, \$12,752.

An important component of Crown claims are the claims for source deductions.<sup>26</sup> According to the data, claims for source deductions represent, on average, 40.5% (8.4%) of Crown claims in a bankruptcy estate. Incorporated and unincorporated firms have the same proportion of source deductions in Crown claims. The average value of claims for source deductions is \$8,900 (\$352) for the full

---

<sup>25</sup>The U.S. Bankruptcy law uses the term *priority* instead of preferred.

<sup>26</sup>These are levies for Income Tax, Unemployment Insurance and Canada Pension Plan contributions.

sample and it is equal to \$8,628 and \$9,012 for incorporated and unincorporated businesses respectively.

## 4.6 Wage claims

Only 41 files of the full sample have positive wage claims. Incorporated firms account for 26 of these files while unincorporated firms account for 15 files. For the 41 estates, the average value of wage claims is \$7,377 (\$1,264). Wage claims are significantly higher for incorporated than for unincorporated firms, with an average value of \$10,526 for the former compared to \$1,919 for the latter. Approximately 96% of total wage claims rank as preferred claims and 4% rank as ordinary claims. The same distribution holds for incorporated and unincorporated firms. On average, there are 12 (3) wage creditors involved in a bankruptcy estate. Incorporated businesses, with 18 creditors, have significantly more wage creditors than unincorporated businesses which have 3 creditors.

On an individual basis, the average wage claim per worker is equal to \$597 (\$611) for the full sample of firms. Incorporated and unincorporated have a similar wage claim structure with an average claim of \$606 and \$583 respectively. The wage claim per worker exceeds the value \$500 in 46% of the estates and the value of \$800 in 15% of the estates which suggests that maximum amounts allowed by the *Act* to rank as preferred claim is often binding on wage creditors. However, the amounts involved are relatively low.

## 4.7 Payoff Rate to Creditors

As Table 3 indicates, bankruptcy imposes substantial losses on ordinary and preferred creditors. For the full sample, the payoff on ordinary and preferred claims is equal to 2.5% (0%) and 23.2% (0%) respectively.<sup>27</sup> Ordinary creditors receive a zero payment in 77% of the bankruptcies while preferred creditors receive nothing in 53% of the bankruptcies. The payoff to creditors does not vary significantly between incorporated and unincorporated firms.

These results compare with those found by Kryzanowsky & Holland and by White (1984). The former find a payoff rate of 1.4% and 24.4% to ordinary and preferred creditors respectively. Ordinary and preferred creditors respectively receive a zero payoff rate in 80% and 51% of the bankruptcy estates. For the sample of firms under the *Old Act*, White (1984) finds that the average payoff rate to unsecured and priority creditors is equal to 4% and 6% respectively. Unsecured and priority creditors receive a zero payoff rate in 71% and 50% of the cases examined. White (1983) estimates a 2% payoff rate on unsecured claims.

---

<sup>27</sup>The payoff rate to creditors is calculated from the value of "filed and approved" claims.

## 4.8 Bankruptcy Process

Tables 4 also displays some descriptive statistics on the Canadian bankruptcy process. The average time spent by firms in bankruptcy is 818 (690) days.<sup>28</sup> Paradoxically, incorporated firms spend less time in bankruptcy than unincorporated firms (770 days compared to 838 days.)

For the full sample, administration costs amount to \$5,892 (\$2,193). These costs are significantly larger for incorporated, \$12,690 than for unincorporated firms, \$3,059. On average, administration costs represent approximately 44% of the value of assets<sup>29</sup> and 5% of the value of liabilities.<sup>30</sup> Compared to unincorporated businesses, incorporated businesses have a significantly lower ratio of administration costs to assets but a significantly higher ratio of administration costs to liabilities.

Trustees' fees represent an important component of administrative costs in bankruptcy. On average, trustees' fees account for 80% of total administration costs. Typically, unincorporated businesses have a significantly lower ratio of trustees' fees to administration costs. This could be explained by the fact that smaller estates have a larger portion of the fixed-cost component of administrative costs.

Kryzanowsky & Holland find similar results. Based on their sample of bankrupt firms, the average time spent in bankruptcy is 870 days. However, these results contrast with those found in the U.S.. According to White (1984), firms in liquidation under the *Old Act* spent an average of 2,190 days (6 years) in bankruptcy. This is almost three times more than the time spent by Canadian firms in bankruptcy. White (1984) estimates that, administration costs amounts to 1% of total liabilities. White (1983) estimates this percentage at 1.3%. This is consistent with the presence of a scale effect in administration costs and that U.S. firms have lower average fixed costs of administration.

Many studies [Warner (1977), Ang, Chua & McConnell (1982), Gilson, Kose & Lang (1990) and Fisher & Martel (1994c)] found evidence for the presence of a scale effect in administration costs in financial reorganization. To investigate the presence of a similar scale effect in bankruptcy, we estimate the following equation:<sup>31</sup>

$$\text{Administration costs} = 2580.9 + 0.054 \text{ Assets} - 0.083 \text{ Assets}^2$$

(6.05)                      (15.17)                      (14.18)

---

<sup>28</sup>The time spent in bankruptcy is the time between the filing date and the trustee's discharge date.

<sup>29</sup>We use the value of assets as reported in the debtor's statement of affairs.

<sup>30</sup>Kryzanowsky & Holland (1984) estimate that the ratio of estimated realizable value to book value of the assets ranges from 42.5 to 52.5%. Using a value of 50%, we estimate that the ratio of administration costs to assets is equal to 55.6%.

<sup>31</sup>Variables are measured in 1993 dollars. There are 406 observations,  $R^2 = 0.364$  and the absolute values of the t-statistics are given in parentheses.

The regression result indicates the presence of a scale effect in the bankruptcy process and administration costs increase with the real value of assets but at a decreasing rate.

## 5 Financial Reorganizations

### 5.1 Financial Variables

As indicated by Table 9, firms in financial reorganization in Canada are relatively small firms. For the full sample of firms, the average value of assets is about \$2.45 million (\$350,874) and the average value of liabilities is equal to \$2.98 million (\$783,890). Estates of incorporated businesses, are significantly larger than those of unincorporated businesses.<sup>32</sup> The average value of assets and liabilities of incorporated businesses is equal to \$2.84 and \$3.34 million while the average value of assets and liabilities of unincorporated businesses is \$171,410 and \$719,734. Firms in financial reorganization have, on average, a liabilities to assets ratio of 16.0 (1.8). Contrary to Fisher & Martel (1994b), we find no marked difference in the liabilities to assets ratio between incorporated and unincorporated firms. According to the data, about 72% of firms in the sample have a value of assets lower than \$1 million while 57% of firms have total liabilities lower than \$1 million.

Kryzanowsky & Holland (1984) find a mean value of assets of \$247,592 for Canadian firms in reorganization. In the U.S., White (1984) finds a mean value of assets and liabilities equal to U.S.\$1.59 million and U.S.\$1.84 million for firms reorganizing under the *Old Act* and U.S.\$1.64 million and U.S.\$2.23 million for firms reorganizing under the *New Code*. According to Flynn's data (1989), reorganizing firms in the U.S. average US\$5.0 million in liabilities and US\$4.8 million in assets. Among the full sample of 2,395 cases, 42.4% of the estates have assets lower than U.S. \$1 million while 37.6% of the estates have total liabilities lower than U.S.\$1 million.

According to White (1983), the liabilities to assets ratio is 1.09 for the sample of firms reorganizing under the *Old Act* and 1.32 for the sample of firms reorganizing under the *New Code*. Based on Flynn's sample (1989) the liabilities to assets ratio of firms filing for Chapter 11 is 1.30. This suggests that, on average, American firms undergoing reorganization are in considerably better financial health than Canadian firms.

---

<sup>32</sup>Of the 393 firms in the sample, 336 (85.5%) are incorporated and 57 (14.5%) are unincorporated businesses. Only 10 firms have publicly traded shares.



## 5.2 Secured claims

About 82% of all commercial proposals involved some secured claims. The mean value of secured claims is \$1.61 million (\$201,254) for the full sample of firms. Incorporated firms, with a mean value of \$1.87 million, have significantly larger secured claims than unincorporated firms with a mean value of \$105,384. For the full sample, secured claims represent approximately 32% (30.8%) of total liabilities; incorporated businesses relying more on secured financing, 33.3%, than unincorporated businesses, 24.4%.

The same trend appears when we examine the number of secured creditors. For the full sample, there is, on average, 3.4 (2) secured creditors involved in the proceedings, with secured creditors being significantly more present in incorporated than in unincorporated businesses. This suggests that larger firms in reorganization rely more on secured financing than smaller firms.

To evaluate the firm's ability in attracting new loans, we examine the ratio of secured claims to total assets. The data reveals that, on average, 78% (54%) of the firms' assets are secured at the time of reorganization, with incorporated firms having a lower proportion of assets that are secured, 65% than unincorporated firms, 157%.<sup>33</sup>

In White's sample (1984), the mean value of secured liabilities is U.S.\$ 480,000 and U.S.\$1.1 million for incorporated firms in reorganization under the Act and the Code respectively. White (1983) estimates that secured claims account for about 18% of total liabilities of firms reorganizing under the Act and for about 36% for those reorganizing under the Code. The study also reports a mean ratio of secured claims to assets 0.20 for the former and of 0.48 for the latter. White (1984) reports a ratio of 0.30 and 0.70 in the cases of proposals under the Act and the Code respectively. It appears that U.S. firms are, on average, in a better position to reorganize than Canadian firms owing to the presence of more free assets.

## 5.3 Ordinary claims

Every financial reorganization involves some ordinary claims. For the full sample, the average value of ordinary claims is \$1.01 million (\$438,754). Incorporated firms have a significantly larger value of unsecured claims, \$1.1 million than unincorporated firms with an average value of \$379,078. Ordinary claims represent the largest portion of total liabilities in a reorganization. The proportion of ordinary claims in total liabilities is equal to 59.5% (58.2%) for all firms in reorganization, 58.0% for incorporated businesses and 68.4% for unincorporated businesses.

---

<sup>33</sup>If we impose the constraint that the proportion of assets that are secured cannot exceed 1, the ratio is then equal to 51% for the full sample and it is equal to 53% and 42% for incorporated and unincorporated businesses respectively.

Overall, Canadian corporations appear to have a lower level of ordinary claims than American corporations. According to White (1984), the mean value of ordinary liabilities of U.S. firms in reorganization is U.S.\$1.1 million.

Typically, a financial reorganization involves an average of 110 (68) ordinary creditors. Reorganization of incorporated firms have significantly more ordinary creditors than those of unincorporated firms; the former having an average of 125 ordinary creditors compared to 24 for the latter. Ordinary creditors represent by far the largest class of creditors in a bankruptcy estate. For the full sample, they represent 84.4% (89.0%) of all the creditors. There is not a significant difference between incorporated firms, 84.5%, and unincorporated firms, 83.7%.

The data shows that, on average, the largest ordinary creditor holds 30.5% of total ordinary claims. In fact, a single creditor holds more than 25% of ordinary claims in almost 50% of the reorganization cases. When calculated over the total value of unsecured claims (ordinary and preferred), one ordinary creditor holds a veto right in more than 43% of the estates. This means that there is one creditor who is pivotal in almost half of the reorganization proposals.

#### **5.4 Preferred claims**

About 84% of all reorganization involve some preferred claims. For the full sample, the average value of preferred claims is equal to \$111,459 (\$23,744). Incorporated firms have significantly more preferred claims, almost seventeen times, than unincorporated firms (\$129,036 for the former compared to \$7,832 for the latter). Preferred claims represent 6.1% (3.5%) of the firms' liabilities at the time of reorganization. This proportion is significantly higher for incorporated firms, 6.5%, than for unincorporated firms, 3.7%. There are, on average, 20 (3) preferred creditors involved in a financial reorganization of a Canadian business. Compared to incorporated businesses, unincorporated firms have typically only a few preferred creditors (significant at a 5% level).

According to White (1984), the mean value of priority (i.e. preferred) claims for incorporated businesses in reorganization is U.S.\$40,000 and U.S.\$68,000 for firms reorganizing under the Act and the Code.

#### **5.5 Crown claims**

About 80% of all reorganizations involve some Crown claims. On average, Crown claims represent more than 59% (69.4%) of preferred claims and about 4.5% (2.1%) of total liabilities. For the full sample of firms, the average value of Crown claims is equal to \$76,137 (\$15,094). These claims are significantly higher for incorporated firms, \$88,012, than for unincorporated firms, \$6,142. In proportion of preferred claims, the former have twice as much Crown claims than the latter; 63.1% compared to 36.4% (significant at a 5% level).

Compared to Fisher & Martel (1994c), we find a lower proportion of Crown claims in preferred claims. These authors find that Crown claims represent 80%

of preferred claims in the large corporate sample<sup>34</sup>, 70% in the small corporate sample and 80% in the non-corporate sample.

Claims for source deductions represent, on average, 41.8% (32.4%) of Crown claims in a proposal. Incorporated businesses have a significantly higher proportion of source deductions in Crown claims than unincorporated businesses (43.8% for the former compared to 30.5% for the latter.) The average value of claims for source deductions is \$31,508 (\$4,762) for the full sample and it is equal to \$36,472 and \$3,368 for incorporated and unincorporated businesses respectively (significant at a 5% level).

## 5.6 Wage claims

Only 125 files (32%) of the full sample have positive wage claims. Incorporated firms account for 121 of these files while unincorporated firms account for only 4 files.<sup>35</sup> For these 125 files, the average value of wage claims is \$54,527 (\$17,053). Approximately 90% of total wage claims rank as preferred claims and 10% rank as ordinary claims. On average, there are 55 (23) wage creditors involved in a reorganization.

On an individual basis, the average wage claims per worker is equal to \$1,396 (\$750) for the full sample of firms. The wage claim per worker exceeds \$500 in about 75% of the estates and \$800 in about 32% of the estates. This suggests that maximum amounts allowed by the *Act* to rank as preferred claim is insufficient in many reorganization proposals.

## 5.7 Payoff Rate to Unsecured Creditors

As Table 11 indicates, creditors are offered, on average, 38.2 (30.0) cents for every dollar of claims in a reorganization proposal. Proposals from incorporated firms offer a slightly higher payoff rate, 38.8 cents than proposals from unincorporated firms, 34.8 cents.<sup>36</sup>

Kryzanowski & Holland (1984) find a comparable payoff rate to ordinary creditors in reorganization. Their study shows that the ordinary creditors receive, on average, 36.9 cents for every dollar of claims against an insolvent debtor in reorganization. Fisher & Martel (1994c) report slightly higher figures with an average payoff rate of 43.6 cents on the dollar. The White (1984) study reports payoff rates of 33 cents on the dollar under *Act* and 34 cents on the dollar under the *Code*.

---

<sup>34</sup>Large corporations have liabilities over \$5 million; small corporations have liabilities under \$5 million.

<sup>35</sup>No comparison is done between incorporated and unincorporated business given the small number of unincorporated cases with positive wage claims.

<sup>36</sup>From the sample of 356 proposals with available information on the payoff rate to ordinary creditors, 44 proposals (12.4%) provided for a full repayment and 5 proposals (1.4%) provided for a null repayment.

A reorganization proposals can provide for three types of payments to creditors; cash, installment and equity payments.<sup>37</sup> For the full sample, 5% of the proposals offered cash payment only, 85% of the proposals offered installment payments only and 8% of the proposals offered both cash & installment payments. As Table 11 indicates, the great majority of payments, 91%, are made by installments while cash payments represent, on average, 7% of the proposed payments to creditors. Equity payments occurred in only four reorganization proposals.

According to the data, unincorporated firms use cash payments twice as often as incorporated firms (9.3% compared to 4.2%). Similarly, a combination of cash and installment payments is used in 14.8% of the proposals filed by unincorporated businesses and 6.9% of the proposals filed by incorporated businesses. Installment payments only are observed in 75.9% and 86.8% of the proposals filed unincorporated and incorporated firms respectively.

The use of cash payments is less frequent in Canada than in the U.S. White (1983) estimates from a sample of 26 accepted proposals under the *New Code* that cash represents 38% of the payment to creditors. From another sample of 26 firms with confirmed reorganization proposals under the Code, White (1984) estimates that cash represents 47% of the payment to creditors. Lastly, from a sample of 24 completed reorganization plans Franks and Torous (1991) find that cash represents 29% of the payment to creditors.

The lower part of Table 11 displays additional statistics on the payments to creditors. According to the data, 50% of the total payments are paid within three months of court's approval and almost 80% of total payments are paid within one year of court's approval. There are no significant differences between the method of payments of incorporated and unincorporated businesses. Typically, the deferred payments to creditors are made in 3 (2) installments and the repayment is spread over a mean period of 14 (9) months.

Kryzanowski & Holland (1984) estimate that the payments to creditors are made in seven installments over an average period of 24 months. Fisher & Martel (1994c) find that, on average, the payments to creditors are spread over 22 months. In addition, they estimate that the proportion of cash payments is twice as high as the one found by this study.

## 5.8 Reorganization Process

Table 12 displays some descriptive statistics on the reorganization process in Canada. For the full sample of firms, the average time between the filing of the proposal and the creditors' vote is equal to 50 (25) days. Typically proposals filed by incorporated firms take the same time period to be submitted to the creditors' vote than proposals filed by unincorporated firms. Overall, 60% of the proposals are voted within 30 days of the filing date, 84% are voted within

---

<sup>37</sup>Cash payments are defined as payments within 1 month of court's approval of the proposal.

60 days and 90% are voted within 90 days.

These figures are notably different from U.S. data. Based on Flynn (1989), the average time from filing to confirmation of a proposal in the U.S. is 740 days and the average period ranges from 531 to 996 days. According to the same study, only 18% of cases take less than one year to be confirmed and almost 40% take longer than two years. White (1984) reports an average time from filing to confirmation of 24 months for firms reorganizing under the Act and 17 months for firms reorganizing under the Code. Two factors could explain the considerable difference between the U.S. and Canada. First, in the U.S., reorganization is potentially more complex than in Canada. For example, under the U.S. Bankruptcy Code, creditors can also propose reorganization plans.<sup>38</sup> There also exists a *cramdown* procedure in the U.S., which often involves a valuation of the firm's assets by outside appraisers, testimony by experts, etc., all of which may prolong the reorganization process. Second, compared to Canada, courts are typically more involved in the reorganization process in the U.S.

On average, firms spent about 1,136 (965) days in reorganization.<sup>39</sup> Incorporated businesses spend almost the same time in reorganization than unincorporated businesses. For the U.S., Ang, Chua and McConnell (1982) find that it takes about 14 months (approximately 420 days), on average, to complete a reorganization plan. Franks and Torous (1989) find an average period in reorganization of 3.7 years. On balance, our data suggests that the reorganization period in Canada is shorter than the U.S.

A *holding* proposal is an interim document filed by an insolvent debtor requiring more time for the preparation of a final proposal. There are 93 holding proposals (23.7%) in the sample of firms in reorganization. This proportion is significantly higher for incorporated firms, 27.1%, than for unincorporated firms, 3.5%.

Finally, about 37% of the proposals in the full sample are amended at least once by unsecured creditors. This is higher than the percentage reported by Kryzanowsky & Holland (1984) who estimate that approximately 27% of the 41 proposals examined are amended.

## 5.9 Administration Costs

Table 12 indicates that for the full sample, administration costs amount to \$46,312 (\$20,046). These costs are significantly larger for incorporated, \$52,558 than for unincorporated firms, \$14,863. On average, administration costs represent approximately 13% (5.5%) of the payments to creditors and 4.8% (2.9%) of the value of liabilities. Both ratios are lower for incorporated firms than for unincorporated firms. Trustees' fees represent an important component of

---

<sup>38</sup>Strictly speaking, creditors can propose plans only after a 180-day period during which only the debtor may propose a plan.

<sup>39</sup>The time in reorganization is the number of days from the filing date of the proposal to the discharge date of the trustee.

administrative costs in reorganization. On average, trustees' fees account for 69.4% (72.9%) of total administration costs; the ratio being slightly lower for incorporated businesses, 68.5%, than for unincorporated businesses, 73.3% (significant at a 5% level). These results compare with those of Kryzanowski & Holland who estimate a ratio of trustees' fees to total administration costs of 68.2%.

For the U.S., Warner (1977) reports a ratio of bankruptcy costs to the value of the firm's debt and equity of 5.5%, and Altman (1984) finds a ratio of 6.2%. White (1984) estimates a ratio of administration costs to payment to creditors of 3.0% and 3.4% for firms reorganizing under the Act and the Code respectively. Administration costs represent about 0.5% of total liabilities.

To investigate the presence of a scale effect in administration costs in reorganization, we estimate the following equation:<sup>40</sup>

$$\text{Administration costs} = 22930 + 0.136 \text{ Assets} - 0.436 \text{ Assets}^2$$

(5.58)                      (7.91)                      (7.80)

The regression result confirms the presence of a scale effect in the reorganization process and administration costs increase with the real value of assets but at a decreasing rate.

## 5.10 Proposal acceptance rate

For the full sample, approximately 75% of the proposals are accepted by unsecured creditors. Contrary to Fisher & Martel (1994c), we find that unincorporated businesses, 88%, have a significantly higher acceptance rate than incorporated businesses, 73%.

Kryzanowski & Holland (1984) find slightly lower acceptance rate of reorganization proposals, with a rate of 68.3%. The acceptance rate in Canada is substantially higher than in the U.S. According to Flynn (1989), the overall confirmation rate for Chapter 11 cases filed prior to 1987 is 10–12%. The finding of a significantly higher acceptance rate in Canada is surprising. It is commonly believed that the U.S. bankruptcy system aims at the rehabilitation of the debtor, whereas the Canadian bankruptcy system is more oriented towards the recovery of creditors' money. The U.S. Bankruptcy Code has a voting requirement that is more lenient than the Canadian Bankruptcy Act.<sup>41</sup> In addition, the cram-

---

<sup>40</sup>Variables are measured in 1993 dollars. There are 344 observations,  $R^2 = 0.155$  and the absolute values of the t-statistics are given in parentheses.

<sup>41</sup>In order for a reorganization plan to be adopted, Canadian law requires that a majority of unsecured creditors representing at least 75 percent of the value of claims of creditors voting cast votes in favour of the proposal. In the U.S., the proportion of the value of claims of creditors that must vote in favour of the proposal in order for the plan to be adopted is  $66\frac{2}{3}$  percent.

down procedure in the U.S. allows, under certain circumstances, for a plan to be adopted despite the objection of some classes of creditors. Nothing like the cramdown procedure exists under the Canadian bankruptcy law. Thus, because it appears to be easier for firms to reorganize in the U.S., it seems reasonable to expect higher rates of acceptance in the U.S., *ceteris paribus*. This conjecture is not, however, supported by the data.

### 5.11 Voting procedure

In Canada, prior to December 1992, a proposal was deemed to be accepted by unsecured creditors provided that i) a majority of unsecured creditors at the meeting voted in favour of the plan, and ii) the claims of unsecured creditors voting represented at least three-quarters of the total claims of those creditors voting.

To examine this issue, we collected information on the vote of unsecured creditors to accept or reject a proposal. On average, there are about 31 (19) unsecured creditors voting on a proposal. This represents a participation rate of 34% (32.5%) from unsecured creditors. On average, a proposal receives the approval of about 84% (91%) of unsecured creditors present at the assembly, who represent 80% (94%) of the total claims of those unsecured creditors.

Kryzanowsky & Holland (1984) estimate a higher participation rate from unsecured creditors, with an average rate of 44%. They also find that, on average, the proposals submitted by firms in their sample received the approval of about 81% of unsecured creditors present at the assembly, who represented 91% of the total claims of those unsecured creditors.

### 5.12 Proposal success rate

An accepted proposal is defined as a success if a debtor meets all the terms of the proposal before the trustee can be discharged. The data indicates that more than 70% of the accepted proposals are successful. Proposals of unincorporated firms, 76%, are slightly more successful than those of incorporated firms, 69%. Given the acceptance rate of 75%, we find that the overall success rate for firms entering reorganization is about 53% for the full sample of firms.

The success rate of the firms in our sample is lower than the one reported Fisher & Martel (1994c), 81%, but higher than the success rate estimated by Kryzanowski & Holland (1984), 53%.

## 6 Conclusion

This paper has described a micro data set of 417 firms which filed for bankruptcy and 393 firms which filed for financial reorganization under the Canadian *Bankruptcy Act* for the period 1977-1987. To our knowledge, this data set on bankrupt

firms is unique to both Canada and the United States in that it contains micro information from a large-scale random sample. The data set on financial reorganization is the second large-scale sample in Canada with the one of Fisher & Martel (1994c).

Generally speaking, firms in bankruptcy and in financial reorganization in Canada are relatively small. Compared to firms in reorganization, firms in bankruptcy are significantly smaller, by a scale factor of more than 30. The former are also in much better financial health than the latter. These facts raise a serious concern with respect to the main objective of the reform to the *Bankruptcy Act*.<sup>42</sup> which aims to promote the reorganization of firms in financial distress. Given the financial situation of firms in bankruptcy, we believe that bankruptcy was the right decision for the vast majority of these firms. In this context, encouraging the reorganization of some of these firms may be inefficient and costly for the Canadian economy.

The data confirms the view that bankruptcy imposes substantial losses to creditors, in particular ordinary creditors who receive only 2.5 cents for every dollar of claims. In a sense, the same conclusion holds for financial reorganization where ordinary creditors receive an average payoff of 38 cents on the dollar. However, trustees and legal experts appear to be the biggest beneficiaries of bankruptcy. The total administration costs represent a proportion of 44% of the value of assets at the time of bankruptcy. This ratio is evaluated at 56% if we use a ratio of estimated realizable value to book value of assets equal to 50%. On average, trustees fees represent 80% of total administration costs. These cost elements are less important in reorganization where administration costs represent 13% of the total payment to creditors.

The data shows that the Canadian bankruptcy system is efficient in offering a rapid solution to financial distress. On average, a bankruptcy estate is closed within 2.25 years and a reorganization proposal is completed within 3.1 years. In reorganization, the future of a firm is typically decided within about 50 days from its filing of a proposal. The changes to the stay of proceedings introduced by the amendments to the *Bankruptcy Act* provide reorganizing firms with a minimum of 51 days to submit a proposal to creditors vote. But according to our data, 80% of all proposals are voted within 51 days of filing. Therefore, we doubt that these changes will have a significant impact on the reorganization procedure.

Finally, it is our view that the reorganization process in Canada works relatively well since 75% of the proposals are accepted by creditors and that 70% of these proposals succeed. Therefore, the *ex ante* probability that an insolvent firm entering reorganization will succeed in its attempt is about 52.5%. Of course, one would hope that the success be close to 100% which would indicate that creditors are always taking the right decision. However, it is difficult to evaluate whether a failure rate of 30% is high or low given the absence of an

---

<sup>42</sup>See Fisher & Martel (1994b).



alternative basis for comparison.

## 7 References

- An Act to Amend the Bankruptcy Act and to Amend the Income Tax Act in consequence thereof (Bill C-22), S.C. 1992, c. 27.
- Ang, J. S., J. H. Chua and J. J. McConnell; "The Administrative Costs of Corporate Bankruptcy: A Note." *Journal of Finance*, 37, March 1982, p. 219-226
- Bankruptcy Act, R.S.C. 1985, c. B-3.
- Bohémier, A. *Faillite et Insolvabilité*, Tome 1, ed. Thémis, Université de Montréal, 1992.
- Bohémier A. and H. Massüe-Monat *Guide Pratique en Matière de Faillite*, ed. Thémis, Université de Montréal, 1989.
- Fisher, T.C.G., and J. Martel; "The Creditors' Financial Reorganization Decision: New Evidence from Canadian Data." Unpublished manuscript. Waterloo, Ont.: Department of Economics, Wilfrid Laurier University, May 1994, p. 1-29. Submitted to *Journal of Law, Economics and Organization*, August 1994.
- ; "Will the Bankruptcy Reforms Work? An Empirical Study of Financial Reorganization in Canada." forthcoming in *Canadian Public Policy*, Sept. 1994.
- ; "Facts About Financial Reorganization in Canada." *Canadian Business Economics*, Vol. 2, No. 2, Winter 1994, p. 54-66.
- Flynn, E.; "Statistical Analysis of Chapter 11." The Administrative Office of the United States Courts, Bankruptcy Division, October 1989, p. 1-35.
- Gilson, S. C., J. Kose and L.H.P. Lang; "Troubled Debt Restructuring: An Empirical Study of Private Reorganization of Firms in Default." *Journal of Financial Economics*, 27, October 1990, p. 315-353.
- Kryzanowsky, L. and J. Holland; "Bankruptcies and Commercial Arrangements in Canada." *Insolvency Bulletin*, Office of the Superintendent of Bankruptcy, Vol. 4, September 1984, No. 9, p.3-10.
- Martel, J.; "Bankruptcy Law and the Canadian Experience: An Economic Appraisal." *Canadian Public Policy*, XVII, No. 1, March 1991, pp. 52-63.
- Warner, J. B.; "Bankruptcy Costs: Some Evidence." *Journal of Finance*, May 1977, p. 337-347.
- White, M. J.; "Bankruptcy, Liquidation and Reorganization." in *Handbook of Modern Finance* edited by Dennis Logue, Boston: Warren, Gorham & Lamont, 1984.
- ; "Bankruptcy Costs and the New Bankruptcy Code." *The Journal of Finance* Vol. XXXVIII, No. 2, May 1983, p. 477-487.
- ; "Economics of Bankruptcy: Liquidation and Reorganization." Working Paper No. 239, Solomon Brother Centre for the Study of Financial Institutions, Graduate School of Business Administration, New York University, Aug. 1981, p. 1-40.

TABLE 1  
Financial Characteristics of Firms in Bankruptcy in Canada.<sup>1</sup>

Variables	Mean	Median	Standard deviation	Min	Max
Total assets <sup>2,3</sup>	74.231	5.202	438.953	0.00	8 229.00
Total liabilities	232.565	87.882	673.606	4.41	9 377.20
Secured claims	72.761	0.000	338.146	0.00	5 883.70
Ordinary claims	130.117	50.134	311.881	0.00	3 256.66
Preferred claims	26.138	3.862	141.491	0.00	2 620.74
Crown claims	20.575	1.830	132.777	0.00	2 620.74
Source Deductions claims <sup>4</sup>	8.900	0.352	29.618	0.00	376.89
Total wage claims <sup>5</sup>	7.377	1.264	15.961	0.07	79.40
Preferred wage claims	6.644	1.182	14.060	0.07	79.40
Ordinary wage claims	0.733	0.000	4.142	0.00	26.48
Total wage claim per worker	0.597	0.611	0.351	0.07	1.59
Contingent claims	3.545	0.000	49.177	0.00	971.26
Liabilities to assets ratio	72.242	8.086	260.150	0.80	3 042.00
Secured claims / total assets	1.387	0.000	5.783	0.00	77.67
Secured claims / total claims	0.189	0.000	0.267	0.00	0.96
Ordinary claims / total claims	0.682	0.765	0.297	0.00	1.00
Preferred claims / total claims	0.123	0.041	0.196	0.00	1.00
Crown claims / total claims	0.102	0.020	0.187	0.00	1.00
Crown claims / preferred claims	0.553	0.724	0.452	0.00	1.00
Source deductions / crown claims	0.405	0.084	0.450	0.00	1.00
Number of secured creditors	0.961	0.000	1.395	0.00	8.00
Number of ordinary creditors	20.432	12.000	38.819	0.00	634.00
Number of preferred creditors	2.983	2.000	11.368	0.00	213.00
Number of contingent creditors	0.055	0.000	0.391	0.00	5.00
Number of wage creditors	12.171	3.000	30.671	1.00	190.00
Total number of creditors	24.432	15.000	45.448	1.00	701.00
Secured creditors / total creditors	0.056	0.000	0.093	0.00	0.57
Ordinary creditors / total creditors	0.808	0.853	0.176	0.00	1.00
Preferred creditors / total creditors	0.132	0.094	0.152	0.00	1.00

Notes:

1. Except where noted, the information reported in this table is based on a sample of 417 files.
2. The total assets, total liabilities, and the claims variables are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).
3. Based on a sample of 415 files where the information is available.
4. Based on a sample of 395 files where the information is available.
5. Based on a sample of 41 estates with positive wage claims.

TABLE 2  
Distribution of Bankruptcy Estates by Assets and Liabilities.

Variables	Distribution of Estates by	
	Assets	Liabilities
≤ \$100 000	352	228
\$100 000 < ≤ \$500 000	56	157
\$500 000 < ≤ \$1 000 000	4	19
\$1 000 000 < ≤ \$5 000 000	2	11
\$5 000 000 < ≤ \$10 000 000	1	2
> \$10 000 000	0	0
Total	415	417

TABLE 3  
Payments to Creditors in Bankruptcy in Canada.

Variable <sup>1</sup>	Mean	Median	Standard deviation	Min	Max
Payoff rate to ordinary creditors <sup>2</sup>	2.533	0.000	9.534	0.00	100.00
Payoff rate to preferred creditors <sup>3</sup>	23.182	0.000	37.198	0.00	100.00

Notes:

1. The information on the payoff to ordinary and preferred creditors originate from the trustee's *Final Statement of Receipts and Disbursements*. The variables are reported in percentages.
2. Based on a sample of 406 files where the information is available.
3. Based on a sample of 333 proposals where the information is available.

TABLE 4  
 Characteristics of the Bankruptcy Process in Canada.

Variables	Mean	Median	Standard deviation	Min	Max
Time in bankruptcy (days) <sup>1</sup>	818.300	690.000	458.680	195.00	3 052.00
Total administration costs <sup>2,3</sup>	5.892	2.193	12.558	0.00	118.28
Trustees fees <sup>4</sup>	3.949	1.877	7.886	0.00	85.18
Ratio of trustees fees to admin. costs	0.799	0.860	0.214	0.00	1.00
Admin. costs / total assets <sup>5</sup>	0.443	0.285	0.411	0.00	1.00
Admin. costs / total liabilities <sup>6</sup>	0.049	0.033	0.049	0.00	0.35

Notes:

1. Based on a sample of 414 files where the information is available.
2. Based on a sample of 408 files where the information is available.
3. Administration costs and trustees fees are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).
4. Based on a sample of 407 files where the information is available.
5. Based on a sample of 406 files where the information is available.
6. Based on a sample of 408 files where the information is available.

TABLE 5  
Financial Characteristics of Incorporated and Unincorporated Businesses in Bankruptcy.<sup>1</sup>

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Total assets*. <sup>2</sup>	214.541	19.878	31.335	2.382
Total liabilities*	476.293	138.184	131.758	65.575
Secured claims*	159.837	10.856	36.752	0.000
Ordinary claims*	254.691	88.845	78.601	42.330
Preferred claims	53.812	10.797	14.022	2.372
Crown claims	39.494	5.342	12.752	1.034
Source Deductions claims	8.628	1.678	9.012	0.000
Total wage claims*. <sup>3</sup>	10.526	4.653	1.919	0.699
Preferred wage claims	9.403	3.561	1.861	0.695
Ordinary wage claims	1.122	0.000	0.058	0.000
Total wage claim per worker	0.606	0.620	0.583	0.541
Contingent claims	7.961	0.000	1.718	0.000
Liabilities to assets ratio*. <sup>4</sup>	10.566	4.168	96.253	14.730
Secured claims / total assets	1.299	0.304	1.423	0.000
Secured claims / total claims	0.191	0.072	0.188	0.000
Ordinary claims / total claims	0.667	0.731	0.689	0.807
Preferred claims / total claims	0.140	0.068	0.115	0.034
Crown claims / total claims	0.110	0.037	0.098	0.016
Crown claims / preferred claims	0.578	0.724	0.543	0.708
Source deductions / crown claims	0.405	0.242	0.405	0.000
Number of secured creditors	1.016	1.000	0.939	0.000
Number of ordinary creditors*	38.115	22.000	13.119	9.000
Number of preferred creditors*	6.393	3.000	1.573	1.000
Number of contingent creditors	0.041	0.000	0.061	0.000
Number of wage creditors*	17.500	4.000	2.933	1.000
Total number of creditors*	45.566	26.000	15.692	12.000
Secured creditors / total creditors	0.033	0.018	0.066	0.000
Ordinary creditors / total creditors	0.817	0.867	0.804	0.833
Preferred creditors / total creditors	0.147	0.105	0.126	0.091

Notes:

\* : Indicates a statistical difference between incorporated and unincorporated firms at the 5% level.

1. Of the 417 bankruptcy files in the sample, 122 are incorporated businesses and 295 are unincorporated businesses.
2. The total assets, total liabilities, and the claims variables are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator(series D20556).
3. Of the 41 files with positive wage claims, 26 are incorporated businesses and 15 are unincorporated businesses.
4. Based on 102 files of incorporated businesses and 262 files of unincorporated businesses.

TABLE 6  
Payments to Creditors in Bankruptcy: Incorporated vs. Unincorporated Businesses.

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Payoff rate to ordinary creditors <sup>1</sup>	2.747	0.000	2.445	0.000
Payoff rate to preferred creditors	24.620	0.000	22.473	0.570

TABLE 7  
Characteristics of the Bankruptcy Process: Incorporated vs. Unincorporated Businesses.

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Time in bankruptcy (days)	769.550	573.000	837.970	716.000
Total administration costs <sup>* 2</sup>	12.690	5.943	3.059	1.672
Trustees fees <sup>*</sup>	7.970	3.778	2.287	1.566
Trustees fees / admin.costs <sup>*</sup>	0.647	0.704	0.862	0.935
Admin. costs / assets <sup>*</sup>	0.315	0.209	0.497	0.356
Admin. costs / liabilities <sup>*</sup>	0.068	0.049	0.041	0.039

Notes:

\* : Indicates a statistical difference between incorporated and unincorporated firms at the 5% level.

1. The payoff variables are reported in percentages.
2. Administration costs and trustees fees are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).

TABLE 8  
Comparative Statistics on Bankrupt Firms.

Variables	Martel (1994)	Kryzanowski & Holland (1984)	White (1984) <i>Act</i>	White (1984) <i>Code</i>
Total assets <sup>1</sup>	74.231	85.756	736.000	437.000
Total liabilities	232.565	140.185	1 551.000	710.000
Secured claims	72.761	–	548.000	182.000
Ordinary claims	130.117	–	1 047.000	485.000
Preferred claims	26.138	–	65.000	46.000
Liabilities to assets ratio	72.242	–	2.100	1.600
Secured claims / total assets	1.387	–	0.750	0.420
Payoff rate to ordinary creditors <sup>2</sup>	2.533	1.400	4.000	–
Payoff rate to preferred creditors	23.182	24.400	6.000	–
Time in bankruptcy (days)	818.300	870.000	2 190.000	–
Admin. costs / total liabilities	0.049	–	0.010	–

Notes:

1. The claims and administration costs variables are reported in thousands of June 1993 Canadian dollars (series D20556) (deflated by the *GDP*) for Martel, in Canadian nominal dollars for Kryzanowsky & Holland, and in U.S. nominal dollars for White.
2. The payoff rate variables are reported in percentages.



TABLE 9  
Financial Characteristics of Firms in Reorganization in Canada.<sup>1</sup>

Variables	Mean	Median	Standard deviation	Min	Max
Total assets <sup>2</sup>	2 453.309	350.874	19 674.204	0.00	385 765.05
Total liabilities	2 981.584	783.890	15 875.596	22.00	301 750.68
Secured claims	1 610.431	201.254	12 247.279	0.00	237 437.86
Ordinary claims	1 008.831	438.754	2 024.847	11.70	25 659.25
Preferred claims	111.459	23.744	321.962	0.00	4 653.79
Crown claims	76.137	15.094	204.747	0.00	2 424.72
Source Deductions claims <sup>3</sup>	39.164	5.919	134.480	0.00	1 952.88
Total wage claims <sup>4</sup>	54.527	17.053	111.759	0.53	806.69
Preferred wage claims	38.453	15.270	70.683	0.53	583.87
Ordinary wage claims	16.073	0.000	83.599	0.00	768.94
Total wage claim per worker	1.396	0.750	3.294	0.04	29.21
Contingent claims	250.850	0.000	2 991.901	0.00	56 879.68
Liabilities to assets ratio <sup>5</sup>	16.005	1.767	211.130	0.44	4 100.00
Secured claims / total assets <sup>6</sup>	0.781	0.539	3.372	0.00	65.00
Secured claims / total claims	0.320	0.308	0.251	0.00	0.96
Ordinary claims / total claims	0.595	0.582	0.264	0.01	1.00
Preferred claims / total claims	0.061	0.035	0.077	0.00	0.52
Crown claims / total claims	0.045	0.021	0.067	0.00	0.50
Crown claims / preferred claims	0.593	0.694	0.384	0.00	1.00
Source deductions / crown claims	0.418	0.324	0.406	0.00	1.00
Number of secured creditors	3.407	2.000	17.071	0.00	331.00
Number of ordinary creditors	86.489	59.000	98.178	2.00	834.00
Number of preferred creditors	20.122	3.000	65.731	0.00	826.00
Number of contingent creditors	0.257	0.000	1.324	0.00	22.00
Number of wage creditors	55.320	23.000	106.910	1.00	820.00
Total number of creditors	110.100	68.000	141.540	4.00	1 257.00
Secured creditors / total creditors	0.045	0.023	0.077	0.00	0.81
Ordinary creditors / total creditors	0.844	0.890	0.146	0.18	1.00
Preferred creditors / total creditors	0.107	0.054	0.135	0.00	0.75

Notes:

1. Except where noted, the information reported in this table is based on a sample of 393 proposals.
2. The total assets, total liabilities, and the *claims* variables are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).
3. Based on a sample of 377 proposals where the information is available.
4. Based on a sample of 125 proposals with positive wage claims.
5. Based on a sample of 379 proposals where the information is available.
6. Excludes a proposal from an incorporated firm with a ratio of 2953.

TABLE 10  
Distribution of Financial Reorganization Estates by Assets and Liabilities.

Variables	Distribution of Estates by	
	Assets	Liabilities
≤ \$100 000	95	31
\$100 000 < ≤ \$500 000	126	118
\$500 000 < ≤ \$1 000 000	61	75
\$1 000 000 < ≤ \$5 000 000	84	125
\$5 000 000 < ≤ \$10 000 000	15	28
> \$10 000 000	12	16
Total	393	393

TABLE 11  
Payments Statistics for Reorganization Proposals in Canada.

Variables <sup>1</sup>	Mean	Median	Standard deviation	Min	Max
Expected payoff in liquidation	37.237	30.332	36.454	0.00	100.00
Reorganization payoff <sup>2</sup>	38.157	30.000	28.143	0.00	124.00
Proportion of payments in cash <sup>3</sup>	7.230	0.000	23.234	0.00	100.00
Proportion of payments by installment	91.141	100.000	25.885	0.00	100.00
Proportion of payments in equity	1.629	0.000	12.378	0.00	100.00
Number of installments	3.050	2.000	4.121	0.00	36.00
Period for repayment (months)	14.011	9.000	16.027	0.00	120.00
% cash payments (< 1 month) <sup>4</sup>	9.742	0.000	27.083	0.00	100.00
% payments within 1 month	32.384	0.000	42.627	0.00	100.00
% payments within 3 months	50.224	0.000	42.634	0.00	100.00
% payments within 6 months	62.906	0.000	38.899	0.00	100.00
% payments within 9 months	68.953	0.000	36.413	0.00	100.00
% payments within 12 months	78.364	0.000	31.544	0.00	100.00
% payments within 15 months	81.373	0.000	28.815	0.00	100.00
% payments within 18 months	85.765	0.000	26.735	0.00	100.00
% payments within 21 months	87.613	0.000	25.372	0.00	100.00
% payments within 24 months	90.823	0.000	23.228	0.00	100.00

Notes:

1. The liquidation and reorganization payoff variables are reported in percentages. The proportion of payments variables are reported in percentage of the reorganization payoff.
2. Based on a sample of 356 proposals where the payoff to ordinary creditors is given.
3. Based on a sample of 342 proposals where the information is available.
4. Based on a sample of 305 proposals where the information is available.

TABLE 12  
Characteristics of the Reorganization Process in Canada.

Variables	Mean	Median	Standard deviation	Min	Max
Acceptance rate of reorganization proposals	0.748	-	-	-	-
Success rate of accepted proposals	0.704	-	-	-	-
Proportion of holding proposals	0.232	-	-	-	-
Time between filing and voting (days) <sup>1</sup>	50.000	25.000	105.460	0.00	1 631.00
Time in reorganization (days) <sup>2</sup>	1 136.000	965.000	756.600	70.00	5 057.00
Number of amendments to the proposal <sup>3</sup>	0.408	0.000	0.570	0.00	2.00
Number of unsecured creditors at the assembly	30.870	19.00	36.779	1.00	269.00
% unsecured creditors voting on a plan <sup>4</sup>	34.535	32.653	17.005	4.08	100.00
% unsecured creditors approving a plan <sup>5</sup>	84.446	90.900	20.222	0.00	100.00
% of claims of unsecured creditors approving a plan	80.617	95.000	29.756	0.00	100.00
Total administration costs <sup>6,7</sup>	46.312	20.046	92.226	1.75	897.04
Trustees' fees <sup>8</sup>	27.800	13.560	46.284	0.57	399.39
Ratio of trustees' fees to admin. costs	0.694	0.729	0.171	0.04	0.98
Admin. costs / payments to creditors <sup>9</sup>	0.131	0.055	0.249	0.00	3.28
Admin. costs / total liabilities <sup>10</sup>	0.048	0.029	0.053	0.00	0.34

Notes:

1. Based on a sample of 388 proposals where the information is available.
2. Based on a sample of 354 proposals where the information is available.
3. Based on a sample of 390 proposals where the information is available.
4. Based on a sample of 330 proposals where the information is available.
5. The proportions of unsecured creditors voting on the plan, of unsecured creditors approving a plan and of claims of unsecured creditors approving a plan are given in percentages.
6. Based on a sample of 344 proposals where the information is available.
7. Administration costs and trustees' fees are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).
8. Based on a sample of 340 proposals where the information is available.
9. Total payment to creditors = secured claims + preferred claims + (ordinary claims \* payoff on ordinary claims). Based on a sample of 314 proposals where the information is available.
10. Based on a sample of 344 proposals where the information is available.

TABLE 13  
Financial Characteristics of Incorporated and Unincorporated Businesses in Reorganization.<sup>1</sup>

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Total assets*. <sup>2</sup>	2 840.379	482.446	171.410	64.308
Total liabilities*	3 365.174	949.217	719.734	193.349
Secured claims*	1 865.743	241.913	105.384	36.240
Ordinary claims*	1 115.667	503.813	379.078	128.651
Preferred claims*	129.036	34.743	7.832	0.160
Crown claims*	88.012	20.023	6.142	0.000
Source Deductions claims*	45.335	8.631	4.186	0.000
Total wage claims <sup>3</sup>	56.166	17.999	4.931	1.861
Preferred wage claims	39.561	16.009	4.931	1.861
Ordinary wage claims	16.605	0.000	0.000	0.000
Total wage claim per worker	1.420	0.750	0.692	0.536
Contingent claims	254.815	0.000	227.432	0.000
Liabilities to assets ratio	16.010	1.753	15.969	2.068
Secured claims / total assets <sup>4</sup>	0.647	0.548	1.568	0.417
Secured claims / liabilities*	0.333	0.328	0.244	0.130
Ordinary claims / liabilities*	0.580	0.565	0.684	0.739
Preferred claims / liabilities*	0.065	0.037	0.037	0.001
Crown claims / liabilities*	0.047	0.024	0.029	0.000
Crown claims / preferred claims*	0.631	0.745	0.364	0.000
Source deductions / crown claims*	0.438	0.376	0.305	0.000
Number of secured creditors*	3.729	2.000	1.509	1.000
Number of ordinary creditors*	97.631	67.000	20.807	15.000
Number of preferred creditors*	23.247	3.000	1.702	1.000
Number of contingent creditors	0.268	0.000	0.193	0.000
Number of wage creditors	56.860	24.000	8.750	2.000
Total number of creditors*	124.880	81.000	24.211	18.000
Secured creditors / total creditors	0.037	0.021	0.087	0.039
Ordinary creditors / total creditors	0.845	0.894	0.837	0.857
Preferred creditors / total creditors	0.115	0.058	0.062	0.029

Notes:

- \* : Indicates a statistical difference between incorporated and unincorporated firms at the 5% level.
- 1. Of the 393 proposals in the sample, 336 were filed by incorporated businesses and 57 were filed by unincorporated businesses.
- 2. The total assets, total liabilities, and the *claims* variables are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).
- 3. Of the 125 files with positive wage claims, 121 are incorporated businesses and 4 are unincorporated businesses.
- 4. Excludes a proposal from an incorporated firm with a ratio of 2953.

TABLE 14  
Payments to Creditors in Reorganization: Incorporated vs. Unincorporated Businesses.

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Expected payoff in liquidation	38.237	31.418	31.339	21.199
Reorganization payoff	38.784	30.000	34.801	25.000
Proportion of payments in cash	6.296	0.000	12.214	0.000
Proportion of payments by installment	91.770	100.000	87.786	100.000
Proportion of payments in equity	1.934	0.000	0.000	0.000
Number of installments	2.925	2.000	3.646	1.000
Period for repayment (months)	13.953	9.000	14.333	6.000
% cash payments (< 1 month)	8.893	0.000	14.651	0.000
% payments within 1 month	31.418	0.000	37.965	12.000
% payments within 3 months	49.734	4.000	53.054	0.476
% payments within 6 months	61.794	6.400	69.330	100.000
% payments within 9 months	67.902	100.000	75.025	100.000
% payments within 12 months	77.798	100.000	81.639	100.000
% payments within 15 months	81.151	100.000	82.657	100.000
% payments within 18 months	85.950	100.000	84.697	100.000
% payments within 21 months	88.018	100.000	85.271	100.000
% payments within 24 months	91.276	100.000	88.206	100.000

TABLE 15  
Characteristics of the Reorganization Process: Incorporated vs. Unincorporated Businesses.

Variables	Incorporated Businesses		Unincorporated Businesses	
	Mean	Median	Mean	Median
Acceptance rate of proposals*	0.726	-	0.877	-
Success rate of accepted proposals	0.693	-	0.760	-
Proportion of holding proposals*	0.268	-	0.035	-
Time between filing and voting (days)	50.009	24.000	49.855	26.000
Time in reorganization (days)	1 144.500	1 106.000	1 092.500	837.000
Number of amendments to the proposal	0.417	0.000	0.351	0.000
Total administration costs*, <sup>1</sup>	52.558	23.349	14.863	6.894
Trustees' fees*	31.087	16.184	10.761	4.902
Trustees' fees / admin.costs*	0.686	0.717	0.733	0.762
Admin. costs / payments to creditors*	0.118	0.047	0.193	0.122
Admin. costs / total liabilities	0.043	0.026	0.071	0.044

Notes:

\* : Indicates a statistical difference between incorporated and unincorporated firms at the 5% level.

1. The liquidation payoff, reorganization payoff, and the *payments* variables are reported in percentages.
2. Administration costs and trustees' fees are reported in thousands of June 1993 Canadian dollars, deflated by the GDP deflator (series D20556).

TABLE 16  
Comparative Statistics on Firms in Reorganization.

Variables	Martel (1994)	Fisher & Martel (1994)	Kryzanowsky & Holland (1984)	White (1984) <i>Act</i>	White <sup>1</sup> (1984) <i>Code</i>
Total assets <sup>2</sup>	2 453.309	2 372.100	247.592	1 592.000	1 643.000
Total liabilities	2 981.584	3 971.700	–	1 835 000	2 226.000
Secured claims	1 610.431	1 890.500	–	480.000	1 072.000
Ordinary claims	1 008.831	1 324.700	–	1 309.000	1 100.000
Preferred claims	111.459	96.100	–	40.000	68.000
Crown claims	76.137	79.600	–	–	–
Liabilities to assets ratio	19.894	18.600	–	1.150	1.350
Secured claims / total assets	0.781	1.100	–	0.300	0.650
Secured claims / total liabilities	0.320	0.360	–	–	–
Ordinary claims / total liabilities	0.595	0.550	–	–	–
Preferred claims / total liabilities	0.061	0.056	–	–	–
Crown claims/ total liabilities	0.045	0.045	–	–	–
Crown claims/ preferred claims	0.593	0.641	–	–	–
Number of secured creditors	3.407	2.604	–	–	–
Number of ordinary creditors	86.489	80.435	–	–	–
Number of preferred creditors	20.122	13.607	–	–	–
Total number of creditors	110.100	97.784	–	–	–
Secured creditors / total creditors	0.045	0.075	–	–	–
Ordinary creditors / total creditors	0.844	0.810	–	–	–
Preferred creditors / total creditors	0.107	0.093	–	–	–
Payoff rate to ordinary creditors <sup>3</sup>	38.157	43.645	36.900	33.000	34.000
Proportion of payments in cash	7.230	14.427	–	27.273	47.058
Proportion of payments by installment	91.141	80.763	–	72.727	52.942
Proportion of payments by equity	1.629	3.376	–	–	–
Number of installments	3.050	–	7.000	–	–
Period for repayment (months)	14.011	22.052	24.000	–	–
Expected payoff in bankruptcy	37.237	28.700	–	–	–
Acceptance rate of proposals	0.748	0.770	–	–	–
Success rate of accepted proposals	0.704	0.813	0.530	–	–
Time between filing and voting (days)	50.000	52.518	–	720.000	204.000
Time in reorganization (days)	1 136.000	1 030.300	–	–	–
Admin. costs / total liabilities	0.048	0.043	–	0.005	–
Admin. costs / payments to creditors	0.131	0.132	–	0.030	0.034

Notes:

1. Information on the payments to creditors, the ratio of administration costs to payments to creditors and the time between filing and voting originates from a sub sample of 26 confirmed reorganization plans.
2. The *claims* and *administration costs* variables are reported in thousands of June 1993 Canadian dollars deflated by the *GDP* for Martel, in December 1993 Canadian dollars (deflated by the *GDP*) for Fisher & Martel, in Canadian nominal dollars for Kryzanowsky & Holland, and in U.S. nominal dollars for White.
3. The payoff rate and payment variables are reported in percentages.