Stock Market Reaction to Sell-Offs Announcements: Canadian Evidence

Claude Francoeur [a,1], Alain Niyubahwe [b]

[a] HEC Montreal, Canada
[b] Light University of Bujumbura, Burundi

Based on a sample of 121 Canadian divestitures, this study investigates various theories and arguments that have been put forward to explain divestiture's wealth gains. The findings indicate that generally the announcement of divestiture activities has a positive impact on the stock returns of divesting firms around the announcement date. The results also reveal that gains stem from divestitures of unrelated units which confirm the theory of increased firm focus. However, results also show that wealth gains are not beneficial to firms with weak financial conditions, and thus do not support the bankruptcy avoidance argument which states that divestiture reduces bankruptcy probability of distressed firms.
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1. Introduction

Asset sell-offs involve the disposal by the selling firm of subsidiaries, divisions or other combinations of fixed assets through direct transfer of ownership from one corporate entity to another, in exchange for some form of consideration, usually cash. There is much evidence in the United States that the announcement of a sell-off is associated with positive abnormal returns. Outside the US, however, this topic has received little attention. To our knowledge, only six non US based divestiture studies have been undertaken: Kaiser and Stouraitis (1995) with French, German, Swedish and UK data; Afshar, Taffler and Sudarsanam (1992) and Lasfer, Sudarsanam and Taffler with UK data; Hamilton and Chow (1993) with data from New Zeland; and two Australian studies one from Capon, Christodolou, Farley and Hulbert (1987) and the other from Cooney, Finn and Karl (2004).

Although the Canadian market shows a dynamic market for corporate control, studies using Canadian data betray a lack of attention to this topic. In fact, Thomson Financial's Securities Data Corporation (SDC) reports that the number of large subsidiary sales by Canadian firms- valued at 10 million US$ or more, dating from the past decade- approximate to 500 with a value of about 60 billion US$.

The aim of this study is to extend the US literature to the Canadian market. These two economies show strong differences both at the institutional and the corporate level. Rao and Lee-Sing (1996) show that corporate ownership of most Canadian firms is held by a relatively small number of large shareholders. Moreover, institutional ownership is much higher in the US than in Canada. Their results imply that the difference in corporate ownership plays a crucial role in determining the impact of the governance system on corporate decision-making and corporate performance. Divestitures represent an opportunity to enhance shareholder value, but some managers could be unwilling to reduce the firm size as they often gain from non-pecuniary benefits related to empire building (Dial and Murphy, 1995; Jensen, 1986).

Owen, Shi and Yawson (2009) state that some firms that would benefit from divestiture choose not to engage in sell-offs. It appears that additional motivation is called for to prompt managers to initiate

divestitures and effective corporate governance mechanisms could provide such stimuli. Buchholtz *et al.* (1999) argue that corporate governance factors matter for firms that have a choice of whether to divest or not and corporate governance mechanisms may explain the heterogeneity regarding these decisions. Moreover, Haynes *et al.*(2003) highlight that managerial responses to changes in the business environment may not be independent of the firm's corporate governance characteristics. In fact, the presence of strong corporate governance mechanisms is likely to give incentives to managers to divest when there is a fundamental need to do so. Ahn and Walker (2007) find that the relative effectiveness of a firm's corporate governance, particularly board structure and ownership, does play an important role in the decision to undertake a value-increasing spin-off. These findings may also apply to sell-offs, given that both activities result in asset decreasing under parent firm management. Specifically, ownership concentration as an internal governance mechanism plays a role in corporate restructuring. Bethel and Liebeskind (1993) show that blockholder ownership is associated significantly with corporate restructuring, suggesting that many managers restructured their corporations during the 1980s only when pressured to do so by large shareholders.

On the other hand, a growing body of corporate governance literature addresses the relation between ownership concentration and firm performance outside the US context. Kang and Shivdasani (1995) show that in Japanese firms, ownership structure, proxied by blockholders, plays a key role in explaining why some firms restructure more quickly following performance declines than others. Claessens and Djankov (1999) study Czech firms and report that firm profitability and labor productivity are both positively related to ownership concentration. Gorton and Schmid (2000) document that firm performance in Germany is positively related to concentrated equity ownership. Rao and Lee-Sing (1996) found that corporate concentration and performance were not correlated in Canada but that a weak, negative correlation existed in the United States.

While a complete survey is beyond the scope of this paper, this body of evidence suggests that there is a more significant relation between ownership structure and firm performance in non-US firms than there is in US firms. Concentrated ownership most often has a positive effect on firm value (Denis and McConnell,2004).

Stemming on those two areas of corporate governance literature, we suggest that the outcomes of US empirical evidence on divestitures' wealth effects may not be consistent with results from a study conducted in a different corporate governance system. Canada, despite its resemblance with the US on such characteristics as common law heritage and investor protection structure, shows strong differences in its corporate governance system as it remains concentrated in ownership and control (Attig and Ghadoum, 2003). We expect a distinct market reaction to Canadian divestitures announcement from the one documented in the US literature.

A number of factors that motivate firms to undertake divestitures affect share price. Numerous explanations have been put forward to explain the sources of divestiture gains. The main motivation behind sell-offs, as stated by the "strategic hypothesis" or the"corporate focus hypothesis", is to increase focus and reverse value-destroying diversification. On average, diversified firms trade at a discount relative to undiversified firms (Berger and Ofek, 1995; Servaes, 1996) creating opportunities for bust-up takeovers (Boot, 1992; Berger and Ofek, 1996). In line with this argument, recent empirical studies have documented a trend toward corporate focus (Comment and Jarrell, 1995; John and Ofek, 1995). John and Ofek (1995) find that asset sales lead to an improvement in the operating performance of the seller's remaining assets following the asset sale. They find that the improvement in performance occurs primarily in firms that increase their focus, and the announcement period returns are higher when the SIC code of the sold division is different from that of the seller. In some papers, such as Hite, Owers and Rogers (1987), this positive stock-price reaction has been interpreted as evidence of the efficiency hypothesis. The central explanation derived from this hypothesis is that divestiture will eliminate negative synergies between the divesting firm's operations and the divested unit. This leads to more efficient allocation of management time, enabling the corporation to focus on businesses in which it has a competitive advantage and remove assets which interfere with other operations (John and Ofek 1995).

Another argument for sell-offs is that firms may divest assets to reduce financial distress. Evidence suggests that firms in financial distress experience a positive market reaction when divesting assets (Afshar et al., 1992) and event abnormal returns are positively related to the divesting firm's degree of leverage (Lasfer et al., 1996). Several studies argue that sell-offs act as a mechanism to alleviate debt obligations for a financially distressed seller (Afshar et al., 1992; Brown, James and Mooradian, 1994; Lafser et al., 1996). These studies show that financially distressed sellers generate higher stock returns than financially healthy sellers. One way to deal with financial distress is to generate cash through asset sales to repay debt. Lang, Poulsen and Stulz (1995) found that the stock price reaction is positive for sellers that are expected to use the proceeds from sell-off to pay down debt, but negative for sellers which are expected to retain the proceeds within the firm. However, support for the financial theories of divestitures is weakened by findings of no relationship between pre-divestiture financial distress and observed returns (Desai and Jain, 1999).

Another motivation for divestiture is selling-off of a low performing division or business. Alexander, Benson and Kampmeyer (1984) argue that the desire to sell unprofitable ventures is one of the important arguments in favour of sell-offs. The divestiture of under-performing assets can be associated with value enhancement for the selling firm. It eliminates influence activities costs within companies (rent-seeking behaviour), as under-performing divisions attempt to extract subsidies from the remaining firm (Meyer et al. 1992).

Another important set of reasons could be classified as "information and agency reasons". Afshar et al. (1992) found that announcements that mitigated uncertainties regarding sell-offs resulted in higher abnormal returns for sellers on the event day. Generally it appears that the stock market interprets the non-announcement of the sell-off price as an indication that the seller is divesting its subsidiary at an extremely low price. The relative prices hypothesis can sometimes explain sellers' announcement returns; because it postulates that there is a direct association between sellers' abnormal returns and the size of the sell-off asset relative to the sellers' total size. Studies that support this hypothesis include Hite and Owers (1983), Klein (1986), Hite, Owers and Roger (1987) and Afshar et al. (1992). Datta, Iskandar-Datta and Raman (2003) suggested that sellers, who are monitored by private lenders, are less likely to misallocate funds and destroy value. Their results show that lender monitoring plays a crucial role in explaining seller's stock returns.

The use of the proceeds from the sale can also serve as an indicator of the presence of agency costs related to managerial discretion. Paying out the proceeds from asset sales is associated with positive abnormal returns for the selling firm around the sell-off announcement, whereas reinvesting the proceeds for expansion is associated with a negative market reaction (Lang et al.1995). Shareholders anticipate that management may be using funds not subject to the controls of the financial markets in order to invest in wasteful projects.

This study explores the stock price reaction to divestiture decisions in the Canadian context. To test the focus hypothesis, we follow previous studies and distinguish sell-offs according to the comparability of the divested unit's operations with the divesting firm's operations (Hite and Owers, 1983; Berger and Ofek, 1995) and measure the announcement effect. We further explore whether sell-offs for financial distress motives leads to shareholder wealth enhancement through the avoidance of direct and indirect costs associated with potential bankruptcy. We also look at the stock market reaction to reinvestments. Finally, we control for other characteristics of the divestiture announcement such as relative size, investment discretion, lender monitoring and the degree of financial distress.

The findings of this study indicate that generally, the announcement of divestiture activities has a positive impact on the stock returns of divesting firms around the announcement date. Using a non parametric bootstrap version of the standardized cross sectional test of Boehmer et al.(1991), we show that the average abnormal return is significant and of the magnitude of 0.92 % over a two- day period. These results are in line with previous divestiture studies.

However, when the sample is split into sub-samples based to self reported motives for sell-offs, the strategic divestitures are associated with a significant average abnormal return of 0.47% on the day of the announcement and of 1.35% over a two-day announcement. In contrast, returns accruing from the non-strategic group are insignificant. Our results show that wealth gains are not beneficial to firms with weak financial conditions, and thus do not support bankruptcy avoidance argument which states that divestiture reduces bankruptcy probability of distressed firms.

Using multiple regressions to test the effect of different variables on wealth creation, our results show that focused operations have a positive and significant effect on abnormal returns. The study further shows that wealth gains are positively related to the relative bank debt of the firm, supporting the lender monitoring argument of Lasfer et al (1996) and Datta et al (2003). The remainder of this paper is structured as follows: Section 2 presents data and methodology; Section 3 details the results and findings; we conclude in Section 4.

2. Data and Methodology

2.1. Data

The data set draws on multiple sources. The sample represents all sell-offs announced by Canadian listed companies between January 1990 and December 2000. The initial sample was obtained from the Thomson Financial Mergers and Acquisitions' database. The sample consists of sell-offs which were completed by publicly traded firms on the Toronto Stock Exchange (TSX). Only firms with at least 10 Million US $ worth of assets were retained. This cutoff value was selected in order to ensure comparability with the results of US studies. This process left us with 502 sell-offs over the sample period.

Our accounting data are obtained from the Stock Guide database, a monthly publication of accounting data and financial ratios taken from the latest financial reports of firms listed on the Toronto Stock Exchange (TSX).

The texts of sell-offs announcements are reported by Factiva, a Dow Jones and Reuters joint-venture database which includes information from, among other sources, the Wall Street Journal and the Financial Times. All divestitures announcements were examined to determine the motive behind the divestiture decision. The self-reported motives can also indicate the expected use of proceeds by the divesting firm. We distinguish between firms that divest operations for strategic reasons (focus), firms that divest for financial reasons (financial difficulties) and those that divest to get cash to finance unfunded projects. As in Brown et al. (1994), when multiple motives are given, the first stated motive or the motive indicated in the news report is used as the primary motive of the sale.

Daily stock price have been obtained from the Canadian Financial Markets Research Centre (CFMRC) database. This organization provides the historical daily and monthly returns for firms listed on the TSX. We were able to match 246 sell-offs with the accounting and the market returns databases.

Table 1 presents the distribution of sell-offs through the nineties. These transactions occurred rather uniformly during this time with upsurges in the years 1995 through 1997 and 2000.

In Table 2, we report descriptive statistics for the sample firms. Divesting companies are typically large firms with mean (median) book values of assets over $ 5.37 billion ($1.43 billion). The relative size of transaction in our sample is on average (at the median) high and represents 18.2% (5.4%) of the total assets of the firm prior to the announcement year. The financial position of divesting firms gives no evidence of financial distress, as evidenced by positive Altman Z-scores [1] (mean= 4.9; median=2.21). This is not surprising since our sample firms exhibit strong end-year EBIT prior to sell-offs (mean= 317.65 million US $; median= 64.66 million US $)

2.2. Event-study Methodology

We use the standard event study methodology to capture the market's changing perception in regards to the value of a divesting firm.

Table 1
Time profile of sample firms

Year	N	Relative
1990	12	4.87
1991	18	7.31
1992	14	5.69
1993	13	5.28
1994	21	8.53
1995	32	13.01
1996	27	10.97
1997	26	10.56
1998	23	9.35
1999	21	8.53
2000	39	15.85
Total	**246**	**100.00**

Notes: The initial sample of sell-offs is collected from *Security Data Corporation (SDC) M&A Database* from1990 to 2000. The sample is restricted to those firms with financial and stock data respectively on Stock Guide and CFMRC at the firm level. After the selection process, the final sample consists of 246 sell-offs.

Table 2
Descriptive statistics

Characteristics	N	Mean	Median	Minimum	Maximum
Book value of Assets	227	5,377.30	1,433.10	8.40	41,261.00
Relative Size	206	0.18	0.05	0.00	5.95
Z-Score	189	4.90	2.20	-16.50	89.90
EBIT	226	317.70	64.70	-639.00	7,119.00
LT Debt / Total Assets	219	0.31	0.29	0.00	67.20
Bank Debt / MV Equity	146	0.31	0.05	0.00	23.90

Notes: Means and medians are reported. All financial characteristics are obtained from Stock Guide and are measured as of the fiscal year end just prior to the sell-off year (Year -1). Book Value of Assets and EBIT (Earnings Before Interest and Taxes) are expressed in millions of Canadian Dollars. Relative size of the transaction is the value of the divested assets divided by the total assets of the firm prior to the announcement year.   The variation of N is due to missing data. Firms with missing data are dropped from the sample.

Abnormal returns are calculated using the market model:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \tag{1}$$

With $R_{i,t}$ the expected return on asset i on day t; $R_{m,t}$ market return on day t; α and β, coefficients of the OLS regression; and $\varepsilon_{i,t}$ the error term. According to this methodology abnormal returns are calculated as follows:

$$AR_{i,t} = R_{i,t} - \hat{\alpha}_i - \hat{\beta}_i R_{m,t} \tag{2}$$

Average abnormal returns for each relative event day t are calculated by averaging across the N firms on that day:

$$\overline{AR_{i,t}} = \frac{1}{N} \sum_{i=1}^{N} AR_{i,t} \tag{3}$$

These are cumulated over the event window (T_1 to T_2) to form the cumulative abnormal return (CAR) for the period:

$$CAR_{T_1,T_2} = \sum_{T_1}^{T_2} \overline{AR_t}$$ (4)

The equally-weighted index as available on the CFMRC database is used as proxy for the market portfolio. Market model parameters are estimated using daily stock returns and the equally weighted index for day – 285 to day - 31. Day 0(t=0) is the announcement date of the divestiture. Twenty days before the announcement event window are excluded since they might be contaminated by information leakage. Various event windows between days - 10 and + 10 are estimated.

Inferences about observed cumulative average abnormal returns (CAAR) face some difficulties. Abnormal returns are frequently correlated, they appear to be non-Gaussian, and restructuring decisions are known to generate event-induced variance (Aktas et al. 2004). Solutions to these problems have been extensively studied in the literature.

When testing for statistical significance of abnormal returns, Brown and Warner (1985) suggested that there will be "substantial increases" in the variance of a security return around the event dates which may cause the t-statistic to be over-estimated and lead to a more frequent rejection of the null hypothesis. To overcome this phenomenon of event induced variances, Boehmer et al. (1991) calculate the standardized cross-sectional test (SCS) which effectively normalizes the conventional t-test by the standard error of the daily returns for the estimation period.
The Cowan (1992) generalised sign test (GST) is a non-parametric test which controls for the normal asymmetry of positive and negative abnormal returns in the estimation period. Cowan (1992) reports that the GST also is well specified for event data variance and more powerful than the cross-sectional test.

However, these contributions do not resolve all problems. A recent study of Aktas and al. (2004) seems to be more robust and propose to tackle simultaneously event-induced variance, non-normality and clustering in time problems by a bootstrap approach. Their procedure is very intuitive. From the original data matrix, they draw with replacement 500 bootstrap samples of the same size as the original one. For each bootstrap sample, they apply the corrected Boehmer et al. (1991) method. The estimated bootstrap t statistics provide an empirical distribution to which the t statistics obtained from the original data can be compared.

We follow Aktas and al. (2004) proposal and perform- for the first time on divestiture empirical studies- a non parametric bootstrap version of Boehmer et al. (1991) parametric test.

3. Results

3.1. Event study findings

Table 3 shows that corporate divestitures, on average, yield significantly positive abnormal returns around the announcement dates. The strong positive abnormal gains detected on and after the announcement dates suggest favourable market reaction towards divestitures. The mean abnormal return on the announcement date is 0.58% and is statistically significant according to the bootstrap test statistics. Moreover, the market seems to anticipate divestitures announcement. Our results show that on the day before the announcement, the market reacts positively (0.56%) and significantly (10%). A positive CAAR is also recorded for up to two days after the announcement date (0,+2) with CAAR of 0.92% significant at the 10% level. Further ahead, the CAAR appear to fluctuate randomly, indicating no further impact of the information. This is consistent with the US sell-off literature which reports positive abnormal returns of approximately 1% around the announcement date (John and Ofek 1995).

In order to test if the market reacts differently to divestiture with regard to underlying motives, we split our sample in sub-samples based on the divestiture motives reported by Factiva. The self-reported motives can also signal the expected use of proceeds by the divesting firm. The desire to restructure operations or focusing strategy is the most often cited reason for divesting. Other main

reasons include financial difficulties and expanding operations (which suggests that capital is required to finance the firm's new projects or upgrade existing projects).

Table 3
Full sample event study findings

Panel I

Period	N	Mean Cumulative Abnormal Returns	t	Generalized Sign Z
Market Model, Equally Weighted Index				
(-3,-3)	161	0.41%	1.513	1.427
(-2,-2)	163	0.32%	1.159	-0.456
(-1,-1)	167	0.56%	2.059*	2.196*
(0,0)	172	0.58%	2.131*	2.563**
(0,+1)	176	0.77%	1.976*	1.339
(0,+2)	180	0.92%	1.931*	0.592
(0,+3)	180	0.47%	0.850	0.293
(0,+4)	181	0.23%	0.381	0.965
(0,+5)	181	0.35%	0.526	1.412

Notes: This table reports abnormal returns generated with the market model. Statistical significance of abnormal returns is determined using t test and Generalized Sign test. The variation of N is due to missing data. Firms with missing data are dropped from the sample. **, * Significantly different from zero at the 5, and 10 percent levels, respectively

Panel II

	General model		Panel A		Panel B		Panel D	
			Financial difficulties		Focused		Reinvestment	
Period	N	CAAR	N	CAAR	N	CAAR	N	CAAR
(-3,-3)	161	0.41%	34	0.18%	87	0.39%	13	1.10%
(-2,-2)	163	0.32%	34	0.36%	88	0.25%	13	-0.28%
(-1,-1)	167	0.56%*	34	0.45%	91	0.97%	14	0.00%
(0,0)	172	0.58%**	33	-0.95%	93	0.47%*	14	-0.94%
(0,+1)	176	0.77%**	34	-0.92%	95	0.91%*	14	-0.61%
(0,+2)	180	0.92%*	35	-0.95%	98	1.35%*	14	-1.21%
(0,+3)	180	0.47%	35	-0.33%	98	0.96%	14	-2.07%**
(0,+4)	181	0.23%	35	-0.22%	99	0.73%	14	-2.14%**
(0,+5)	181	0.35%	35	0.05%	99	1.12%	14	-1.39%*

Notes: This table reports abnormal returns generated with the market model. Statistical significance of abnormal returns is determined using non parametric bootstrap version of Standardized Cross Sectional test of Boehmer et al.(1991). The variation of N is due to missing data. Firms with missing data are dropped from the sample.

In Panel A, the CAAR recorded for the "financial difficulties" sub-sample show that the financial hypothesis is not supported. None of the CAAR are significant around the day of the announcement. Financial markets do not seem to welcome divestitures made under "financial difficulties" motives and do not interpret it as a means of regaining financial strength. Kruse (2002) reports that firms are more likely to sell assets if they are suffering financial problems like low debt capacity or negative earnings, regardless of the price received.

Panel B presents results for the "focused" sub-sample and shows significant positive abnormal returns of 0.47%, at the announcement date for firms that engaged in "focused" sell-offs. This excess value increases to 1.35% up to two days after the announcement date. This finding is in line with those of John and Ofek (1995) which show that returns are higher, and that the firm operating performances improves when divestitures lead to more focused activities. However, consistent with

studies relying on "corporate focus theory", our results in Panel C indicate that "unfocused" divestitures do not lead to significant abnormal returns.

Panel D reveals that sellers that disclose raising funds to finance other firms' activities do not experience any significant abnormal returns at the announcement date. Negative CAAR are recorded 3 days after the announcement date with a CAAR of -2.07 %, significant at the 5% level. The market does not seem to welcome this type of divestiture. This is probably due to the difficulty of evaluating ex-ante the effectiveness and the efficiency of these financial choices.

3.2. Multiple regression results

A cross-sectional regression analysis is performed to assess the robustness of the event study findings. Multiple regression analysis is used to test whether both strategic characteristics and financial characteristics explain divestiture gains. Specifically, it analyzes the link between standardized abnormal returns over the announcement period and a range of variables, which may have had an influence on the price variations. The dependent variable in the models is the cumulative average abnormal returns over the announcement date and the following trading day (0,+1). In order to control for heteroscedasticity problem, this variable is standardized by its variance. Independent variables include focus, investment discretion, lender monitoring and financial status. The size of the transaction is used as a control variable.

The FOCUS variable represents the strategic increase in focus, or decrease in diversity, of a firm's operations. The variable "FOCUS" is dichotomic and takes the value of 1 when the parent and subsidiary have two different 2 digit SIC code and 0 otherwise.

The financial condition of a firm will determine the probability of its default. If a decrease in cash flow is expected, then the probability of default will increase. Furthermore, firms with adverse financial conditions will find it more costly and difficult to raise funds externally. If this is the case, then firms will be better off by selling assets to raise the cash needed for its operation. Sicherman and Pettway (1992) argue that investors will react positively at the announcement of these types of sell-offs, because financial slack has increased and the probability of default has been reduced. Divestment by a financially distressed firm may reduce bankruptcy potential of the firm and help regain financial strength. Capital generated by asset sales may be used to repay loans and hence reduce both direct and indirect costs of bankruptcy. To test this proposition, we use a single measure of financial distress, Altman's Z, which measures the firm's insolvency potential (Altman, 1968). The Altman's Z-score is computed as follows:

$$AltmanZ = 0.012X_1 + 0.014X_2 + 0.033X_3 + 0.006X_4 + 0.0999X_5 \qquad (5)$$

Where: X_1 : Working capital/Total Assets;

X_2 : Retained Earnings/Total Assets;

X_3 : Earnings before interest and taxes/Total assets;

X_4 : Market value equity/Book value of total debts;

X_5 : Sales/Total assets; and

Working capital = Current assets-current liabilities

The z-score is negatively correlated with the probability of going bankrupt, therefore, the lower the score, the more financially distressed is the firm. The inputs for Altman's Z are obtained from the last available published financial statements prior to the divestiture. We named this variable FIN_DIST.

Debt has an agency monitoring role (Jensen, 1989). Furthermore, if debt has a significant bank lending component, its monitoring role is reinforced (Lasfer et al.1996). Hirschey et al. (1990) argue that the presence of bank debt adds credibility to management's divestment decision. We would therefore expect that the higher the leverage, the more likely it is that divestments will be value-enhancing. Significant bank debt should thus be associated with higher returns from sell-offs. The "lender monitoring" variable, LEND_MON, is measured as the ratio of bank debt to market value of equity at financial year end before the divestiture.

The variable "investment discretion", INV_DISC, is measured as the ratio between long term debt and total assets. Adopting Jensen's view, based on agency costs and the overinvestment problem (Jensen, 1986), companies with higher debt to asset ratios should be less inclined to waist resources by overinvesting in non-profitable projects. The sign of this variable may be positive if the firm's higher debt forces management to make a healthy decision for the firm.

We use the transaction size as a control variable. Transaction size, SIZE, is represented by the ratio of selling price of the unit to firm total assets at the end of the year prior to divestiture. We expect that large transactions will be associated with larger positive abnormal returns. Hearth and Zaima (1984), Klein (1986) and Afshar et al. (1992) find a direct relationship between the relative size of divestiture and wealth gains occurred by divesting firm.

Table 4 reports the correlation coefficient and the expected signs of each of independent variable. The pair-wise correlation among explanatory variables indicates that there is a strong negative correlation among the "investment discretion" and "financial distress" variables. This negative correlation indicates that the higher Z-score (low probability of bankruptcy), the lower the ratio of long term debt/ total assets (investment discretion). If the two variables are included in the same regression model, multi-collinearity problem could arise and influence the interpretation of our results. To avoid this problem, we build two models that include theses variables separately.

Table 4
Correlation coefficients and expected sign of independent variables

	INV_DISC	*SIZE*	*FOCUS*	*FIN_DIST*
SIZE	-0.046			
FOCUS	-0.135	-0.151		
FIN_DIST	-0.429	0.002	-0.077	
LEND_MON	-0.022	-0.025	0.099	-0.134

Notes: SIZE is the ratio of selling price of the unit to firm total assets at the end of the year prior to divestiture. Focus is a dummy variable which takes value 1 when parent and subsidiary have two different 2 digit SIC code and 0 otherwise. FIN_DIST is Altman Z score. LEND_MON is measured as the ratio of bank debt to market value of equity at the end of the year prior the divestiture. INV_DISC is measured as the ratio between long term debt and total assets.

The results are presented in table 5. Panel A shows that the strategic variable, the focus factor, is positive and significant at the 5 per cent level. This supports the proposition that strategic characteristics explain a significant amount of divestiture gains and that the strategic hypothesis constitutes a strong explanation for the observed abnormal returns. In the second regression shown in panel B, the focus variable, although at a lesser level (10%) remains positive and significant. This is consistent with previous studies on the US market (Comment and Jarrell, 1995; John and Ofek, 1995) and confirms our univariate approach results presented in table 3.

The coefficient of the lender monitoring ratio variable is positive and significant at 5 per cent level in panel A and at 10 per cent level in panel B. This suggests that bank debt obligations lead to effective monitoring of managers, compelling them to take value-maximizing decisions. This is consistent with the arguments of Jensen (1989), Ofek (1993), Lasfer et al. (1996) with UK evidence, and Datta et al. (2003).

Conversely, the financial hypothesis of divestiture gains is not supported by the regression results. Initially, Altman's Z score is used as a measure of financial distress. As the Altman Z-score is negatively correlated with the probability of bankruptcy, and divestitures should be valued more by financially distressed firms, the Altman Z-score is expected to be negatively correlated with the observed CAR. That is, as the firm's financial health decreases, the CAR from divestiture should increase. However, the coefficient of the "financial distress" variable is not significant. Although several studies find a positive relationship between financial distress in the pre-divestiture period and divestiture returns (Afshar et al., 1992; Lang et al., 1995; Lasfer et al., 1996), our results are

consistent with those of Desai and Jain (1999) who did not find any significant relationship between pre-divestiture financial distress and abnormal returns.

Table 5
Multiple regression results

	Panel A : N=121		Panel B : N=121	
	Coefficient	P-Value	Coefficient	P-Value
Intercept	-0.4338	0.1665	-0.0527	0.0964
SIZE	-0.1118	0.7232	-0.1401	0.6566
FOCUS	0.8059	0.0293**	0.7242	0.0509*
FIN_DIST	0.0125	0.4162		
LEND_MON	2.5136	0.0493**	2.3675	0.0609*
INV_DISC			-1.3152	0.2377
F-Statistic	2.5900	0.0403**	2.7900	0.0295**
Adjusted R²	0.0500		0.0600	
Durbin-Watson	2.0300		2.0100	

Notes: Dependent variable is the Cumulative Average Abnormal Returns (0,+1). Regression results are for sell-off occurring between 1 January 1990 and 31 December 2000. The variables in the models are: SIZE is the ratio of selling price of the unit to firm total assets at the end of the year prior to divestiture. FOCUS is a dummy variable which takes value 1 when parent and subsidiary have two different 2 digit SIC code and 0 otherwise. FIN_DIST is Altman Z score. LEND_MON is measured as the ratio of bank debt to market value of equity at the end of the year prior the divestiture. INV_DISC is measured as the ratio between long term debt and total assets. F-statistics (and their probabilities), Adjusted R-squared values and Durdin-Watson values are presented for each model.

The "investment discretion" coefficient does not exhibit the expected positive sign. This could be the case if firms are highly leveraged and are forced to sell their assets below fair value. Pulvino (1998) finds that airlines with low debt capacity are more likely to receive lower prices when they sell their assets. However this "unexpected sign" is not significant.

The coefficient of the variable "size" is not significant and does not present the expected sign. This implies that, unlike the US market (Klein 1986) and the European markets (Kaiser and Stouraitis, 1995), abnormal returns in the Canadian market are not positively related to the relative size of the sell-off. This result is, however, consistent with the Australian market (Cooney et al., 2004).

4. Conclusion

In recent years, researchers have conducted numerous studies to explain gains arising from divestitures, particularly in the US context. However, outside the US, little attention has been given to this issue. This study is the first to be based on Canadian data. It analyses, using robust methodologies, various theories and arguments that have been put forward to explain divestiture's wealth gains.

Following Aktas et al. (2004), we perform a more robust test (non parametric bootstrap version of standardized cross sectional test) than in previous studies on divestitures and document significant positive abnormal returns for sellers at the announcement of divestment operations. Further examination reveals that gains are limited to divestitures of unrelated units, recognizing the value of increased firm focus. Multiple regression analysis also reveals strong support for the focus hypothesis and bank monitoring argument in explaining divestiture gains. However, our study produces results contrary to the financially motivated divestitures hypothesis which argues that asset sales by potentially bankrupt firms have a significant positive effect on abnormal returns by avoiding direct and indirect bankruptcy costs.

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