



Political uncertainty and asset valuation: Evidence from business relocations in Canada [☆]

Dogan Tirtiroglu ^{a,*}, Harjeet S. Bhabra ^a, Ugur Lel ^b

^a *Department of Finance, John Molson School of Business, Concordia University,
1455 de Maisonneuve Boulevard W., Montreal, Que., Canada H3G 1M8*

^b *Department of Finance, Kelley School of Business, Indiana University, 1309 East Tenth Street,
Bloomington, IN 47405, USA*

Received 15 January 2002; accepted 1 September 2003

Available online 9 January 2004

Abstract

Quebec's drive for sovereignty from Canada has been the source of political uncertainty for decades in Canada. This paper studies empirically stock market's reaction to the announcements of business relocations from the province of Quebec to other provinces within Canada. Similar announcements about Toronto are used for control. Empirical results show that the market's reaction to the announcements of business relocations (a) from Quebec is positive, (b) from Toronto is negative, and (c) to Toronto is positive. The difference in abnormal returns between the Quebec and Toronto samples is positive and significant.

© 2003 Elsevier B.V. All rights reserved.

JEL classification: E44; F21; F30; G12; G14; G15; G31

Keywords: Political uncertainty; Business relocations; Abnormal returns

[☆] We thank Ed Kane, Gordon Roberts, George Bittlingmayer, David Laband, Steve Malpezzi, Alastair Marsden and two anonymous referees for their constructive comments. Earlier versions of this paper were presented at the Homer Hoyt Institute, German Finance Association, European Financial Management Association, Financial Management Association, and Northern Finance Association meetings and at Concordia University and University of Montreal. A Concordia University M.Sc. Thesis Research Grant for Tirtiroglu and Lel and a Concordia University Faculty Research Development Program Fund for Tirtiroglu provided financial support for this research. Tirtiroglu thanks to the Department of Land Economy, Cambridge University, UK for its support while he was a visiting faculty member there.

* Corresponding author. Tel.: +1-514-848-2424x4119; fax: +1-514-848-4500.

E-mail address: dtirt@jmsb.concordia.ca (D. Tirtiroglu).

1. Introduction

A frequently referenced risk in financial markets is that of political risk. Its importance and effects have become more pronounced as a result of the ongoing globalization process of financial markets.¹ Yet, empirical measurement of political risk and examining its effect on asset valuation has been an elusive and difficult task (Cosset and Rianderie, 1985). Political instability and uncertainty generally hits home in developing or less developed countries, where even a deliberate official effort may be in effect to control the information collected, maintained, and released, to avoid questions about the conduct of the governing bodies. The difficulty in assessing the impact of political risk on asset valuation primarily stems from (a) a lack of data or (b) the presence of unreliable and/or contaminated data. As a result, our understanding of the many aspects of political risk and its influence on asset valuation remains incomplete.

Some evidence on the impact of political uncertainty on the stock market has been offered around political elections. Brander (1991) studies the impact of uncertainty on the stock market around the 1988 general elections in Canada and reports that the relationship of political opinion polls (as a measure of uncertainty) and the stock market's reaction is statistically significant and economically meaningful. Similarly, Shum (1996) finds a relationship between opinion polls and the stock market performance around the 1992 constitutional referendum in Canada. Gemmill (1992) investigates the impact of political uncertainty on both the stock and the options markets around the 1987 general elections in the UK. The author finds that while the predictions with respect to the outcome of the election from the opinion polls and the stock market were significantly positively related, predictions from the index options market were just the opposite. The actual outcome of the elections turned out to be consistent with the predictions of the stock market and the opinion polls, thus suggesting that the index options market was informationally inefficient. Manning (1989) also studied the impact of opinion polls around the 1987 elections in the UK and found that the share price of British Telecom (which was threatened with re-nationalization in the event of a Labor victory) did not respond to the publication of opinion poll data.² Similar evidence on the impact of opinion polls on the stock market for the US is reported in Niederhoffer et al. (1970) and Riley and Luksetich (1980).

¹ For example, waves of drastic volatility in the North American financial markets in late 1990s followed from events that had taken place in politically unstable environments such as Russia, Hong Kong, Indonesia, Malaysia, and other far east countries. Also, popular media reports attributed the huge financial problems of Long-Term Capital Management and other hedge funds to the politically driven events in Russia. Similarly, the trend of depreciation of the Canadian dollar vis-à-vis the US dollar was attributed largely to the drop in demand for Canada's natural resources by the Asian countries.

² Evidence shows a positive relationship between changes in asset prices and a higher probability of Conservatives' wins in the 1987 British and the 1988 Canadian elections, respectively (Brander, 1991; Gemmill, 1992). This suggests that the British as well as the Canadian Conservative Parties were deemed more favorable to business than the Labor Party in Britain and the Liberal Party in Canada.

The main purpose of this paper is to document empirically the stock market's reaction to the announcements of business relocations in the presence of political risk. We focus our attention on the Province of Quebec, Canada, where the Province's drive for sovereignty from Canada has been the source of a long-lasting and still ongoing political uncertainty. As a control group, we also study the stock market's reaction to similar announcements by businesses in other Canadian provinces (especially Ontario) in the absence of political risk.³ Since almost all firms that moved out of Quebec are from Montreal, we focus on a control group of firms that moved from Toronto. Only business relocations within Canada are included in our study. Our study differs from existing work on the link between political uncertainty and the stock market, as reported in the previous paragraph, in several ways. First, previous studies focus their investigations around political elections and examine a short time interval of a month preceding the elections. Our paper examines the impact of political instability that has lasted for more than three decades now. Second, the previously mentioned papers look at the impact on the broader market. We, on the other hand, examine firm level data and the specific decision by firms, who responded to the political uncertainty by redeploying their investments. Finally, while the political uncertainty surrounding an election is resolved once the outcome of the election is known, political instability in Quebec is still ongoing, though its level has fluctuated over time.

By all accounts, Montreal, Quebec was considered to be the center of commerce and the leading city, representing the Canadian economy until the Province's political drive to separate itself from Canada shifted these designations largely to Toronto, Ontario. A major flight of Montreal-based firms, an exodus of well-educated, wealthy and skilled individuals from Montreal to other cities, especially to Toronto, and a trend of higher unemployment rate have occurred at the expense of Quebec and its economy in the last three decades.⁴ For example, a study by Dun and Bradstreet (1996) found that more than 500 firms, consisting mostly of small privately held companies, relocated their head offices from Montreal to Toronto between 1977, the year following the separatist Parti Quebecois' (PQ) first election to political power, and 1996. On the other hand, there were only 122 businesses that moved from Toronto to Montreal during the same time period. A huge brain drain from Quebec to other Canadian provinces and the United States has also been an alarming trend for Quebec (Aubin, 1999).

The political uncertainty in Quebec motivated Altug et al. (ADD) (2000) to rigorously examine investors' behavior under conditions of uncertainty of the true state

³ Taking the stock market's reaction to the business relocation announcements from Ontario to other provinces as a benchmark may be criticized on the grounds that political uncertainty relating to the Quebec issue has had an impact on the entire Canadian economy. The effect of this uncertainty on Quebec has undoubtedly been far stronger (see Altug et al., 2000); thus, the comparison is still relevant. Moreover, Toronto has been the choice of new location for many of the business relocations and flight of human capital from Quebec.

⁴ Reports prepared for the Ontario government before the 1995 referendum reportedly indicated an expectation of continued migration of head offices and jobs out of Quebec (Thompson, 2000a,b).

of demand and irreversibility of investments. ADD (2000) demonstrate that investors demand a risk premium and will wait for better information before undertaking an irreversible investment, thereby depressing the flow and volume of investments.⁵ This risk-premium is a function of the loss of flexibility for the investor.⁶

ADD's (2000) work is also consistent with the argument that firms, which had already invested in this uncertain and politically risky environment before political risk became a factor, will face a higher cost of capital, and that they will have the incentive to move elsewhere to avoid the risk premium in their cost of capital. It is this issue that our paper considers empirically.⁷

There are a number of distinguishing aspects to our paper. First, Canada is a G-7 country. Studying business relocations in the framework of political risk in a G-7 country allows us to go beyond the notion that political risk belongs to developing and/or less developed countries. Perhaps more importantly, it provides us with clean and reliable data for our analyses.

Second, our study is the first to consider political risk as a motive for business relocations. Extant research in this area (Alli et al., 1991; Chan et al., 1995; Ghosh et al., 1995) for the US market empirically investigates motives such as business expansions, cost savings or improvements in operating efficiency, capacity reduction, facilities consolidation, a CEO change, labor disputes, or sale of a facility. Kane (1996) also suggests that firms may relocate to escape from heavy regulatory restraints. We add another important motive for why firms may relocate and investigate its impact empirically by using the well-accepted event study methodology.

Third, to control for relocation motives other than political risk, we compare the announcement period stock returns for firms moving from Quebec with those from other regions, especially Toronto. In the absence of political risk as a primary motive, there is no a priori reason to expect any significant difference in the market's reaction to business relocations from Quebec and from locations other than Quebec.

Finally, the difference in the mean (and median) cumulative average abnormal returns (CAAR) around the announcement for the Quebec and non-Quebec samples provides a quantitative estimate of the effect of political risk on asset valuation.

Our empirical findings indicate that the stock market rewards firms that relocate their business (corporate headquarters or divisions or plants) from politically unstable Quebec to other politically stable Canadian provinces. The market reacts significantly positively both before and around the announcements for firms moving from

⁵ This result carries the spirit of adjusting for the option to wait in the net present value analyses (Ingersoll and Ross, 1992; Ross, 1995; Dixit and Pindyck, 1994). ADD (2000) provide evidence for this "wait and see" behavior in the context of Quebec's political risk, but do not study the effect of political risk on asset valuation.

⁶ This result is obtained after introducing learning via a Bayesian updating scheme in a two-state Markovian environment. Rodrik (1991) also shows that, under irreversibility conditions, political uncertainty amounts to levying a tax on investment.

⁷ Symonds (1996) reports evidence from Montreal consistent with this last conjecture. Similarly, when Eaton's, a historically important business player and a symbol of Canada and her retailing industry, was under considerable financial distress before eventually going bankrupt, political risk was cited as a reason for the timidity of Sears and other American enterprises in investing in Eaton's (Bonner, 1999).

Quebec (95% of these firms relocated from Montreal alone), while it reacts significantly negatively only before the announcements for businesses relocating from Toronto.⁸ Furthermore, we also find that firms moving to Quebec experience negative announcement returns, though not significant, while those moving to Toronto show significantly positive cumulative average abnormal returns (CAAR) around the announcement date. In addition, in the pre-announcement period, $(-10, -1)$, there is a significant price run-up for the Quebec sample while there is a significant downward drift in the stock prices for the Toronto sample. The market's reaction to announcements from locations other than Quebec and Toronto is positive around the announcement date while it is mute before the actual announcement. Thus, while relocations from Quebec and Toronto appear to be anticipated to some extent, it is not so for other locations.

These results suggest that, after controlling for relocation motives, such as business expansions, cost savings or operating efficiency, the stock market viewed relocation decisions for firms moving from Quebec positively, the disruption and transition costs associated with relocations, notwithstanding.⁹ Moreover, these findings are consistent with (a) Murphy et al.'s (1993) view that rent seeking (redistribution activity that consumes valuable resources) is costly to growth, (b) Olson's (1982) view that capital flees in search of more stable environments, and (c) Shapiro's (1985) and Citron and Nickelsburg's (1987) view that political instability may jeopardize a country's access to the international financial markets.

The rest of this paper is organized as follows. Section 2 overviews the political uncertainty in Quebec. A summary of the history of the political instability, emanating from the Quebec nationalists' drive for sovereignty, and a documentation of the main economic consequences, including the patterns of the flight of the firms from this province to other provinces in Canada supplements this section. Section 3 discusses the relationship between political risk and asset valuation. Section 4 describes the data set and the research design. Section 5 presents and discusses the empirical results. Finally, Section 6 concludes the paper.

2. An overview of political uncertainty in Quebec

Political uncertainty in Quebec has a rather long history. Appendix A provides a summary of the most important dates since its inception. There were two unsuccessful referendums for sovereignty – first in 1980 and next again in 1995. While the difference between the “No” and “Yes” votes for separation was about 20% in 1980, it was only 1.2% in 1995. Thus, the Quebec nationalist camp gained substantial ground

⁸ Except for one firm, all relocations from Quebec in our final sample are from the Montreal metropolitan area and its suburbs. We use relocations from Toronto as our control group for two reasons: (1) Toronto is the new commercial capital of the country, and (2) a large majority of the businesses that moved out of Quebec relocated to Toronto or other parts of Ontario.

⁹ A Chi-square test of independence on the stated relocation incentives from Montreal and Toronto verified this conclusion (see Section 5).

over the 15 years between the two referendums and has continued to push forward aggressively with its separatist agenda. Despite the fact that the movement has lost its momentum since the last referendum, the threat of a new referendum has always been alive and constituted a heavy dose of the daily political rhetoric between Quebec nationalists and their foes.¹⁰ With the recent defeat of the PQ in the provincial elections in April 2003, the political uncertainty emanating from the sovereignty agenda has been reduced substantially, at least for the foreseeable future.

ADD (2000), and Demers and Demers (1995, Chapter 10) argue that the aftermath of a “Yes” vote to sovereignty could be a financial crisis similar to, or even worse than, Mexico’s 1994 crisis. Both studies suggest that (a) Quebec would suffer from a large current account deficit as did Mexico, (b) it would have a large debt problem amounting to over 120% of GDP (in contrast to Mexico’s 40%), and (c) it might even have to face the risk of partition of its territory due to opposing claims by native groups and some federalist groups who wish to remain in Canada. Furthermore, ADD (2000) refer to a poll of Quebec business executives carried out one month prior to the 1995 referendum. The results of this poll are stunning: 90% of the executives believed that Quebec would incur substantial costs following a yes vote; 83% believed that Quebec’s economy would be severely negatively affected in the 5-year period after a yes vote; 65% believed that Quebec’s economy would suffer long-term negative effects; 84% believed that a long period of political and economic instability would follow; and finally, 81% believed that immigrants and investors would be deterred from coming to Quebec.

The evidence above makes it clear that Quebec nationalists’ drive for separation from Canada has had several unfavorable economic consequences for the Province. First, as noted earlier, more than 500 head offices of mostly small privately held firms moved out of Montreal in the 20 years between 1977 and 1996 (Dun and Bradstreet Canada, 1996). Of these, 120 were large firms employing more than 100 employees. The corresponding figures for firms moving from Toronto are less than 20% of the above figures. In addition to firms relocating, there are attended losses in other high-value services such as law, accounting, consulting and financial services. A direct consequence of such relocations is the loss of high-paying jobs and a dwindling of the tax base.

Second, the uncertainty has resulted in a substantial brain drain to other Canadian provinces and the United States. Most individuals leaving are young, between 20 and 34, and nearly 30% have some university education (Aubin, 1999).

Third, ADD (2000) examine the difference in the investment–capital stock ratios in Quebec and Ontario for the 1963–1998 period. From almost identical investment–capital stock ratios for the two provinces in 1963, Quebec lagged Ontario significantly by 1998.¹¹ Reports of the sluggish performance of the Quebec economy

¹⁰ For example, the then Premier of Quebec promised another referendum as soon as possible as recently as Fall 2001.

¹¹ The investment–capital stock ratio refers to the ratio of both private and public expenditures (for example, for machinery and equipment, road repairs, non-residential structures, etc.) to the total capital stock for the corresponding industries over the same time period.

and its depressed real estate market, largely due to political instability, have regularly appeared in the media (for example, Symonds, 1996). Similarly, foreign investors have Quebec's sovereignty uppermost in their minds when they consider potential capital investments in the Province (for example, Alberts and Clark, 1999 and Thompson, 2000a,b).

Fourth, lower per capita income, higher unemployment rates and unfavorable migration patterns have also been cited as consequences of Quebec's separatist aspirations. Quebec's unemployment rate has been chronically higher than that of the country as a whole, resulting in a lower standard of living for its citizens.

Finally, restrictions imposed by government regulations with respect to language requirements in the Province have had a detrimental effect on the economy. One of the most restrictive laws introduced by the first PQ government was the introduction of Bill 101 in 1977. The bill restricts attendance at English-language schools, limits the use of any language other than French on commercial signs and requires that French be predominantly used in the workplace.¹² Strict enforcement of Bill 101 has worked as a deterrent for investment and human capital flow into Quebec.

3. Political uncertainty and investment decisions

ADD (2000) develop a multi-period, two-state Markov chain model with Bayesian learning and regime shifts, to study the impact of political risk on an investor's behavior in the face of irreversible investments under uncertainty about the true state of demand and the true price of the investment good.¹³ The ensuing conditional value function depends not only on the return at time t from the investment, but also the possibility of a regime shift at time $(t + 1)$ and how that might affect the true state of demand and the price of capital.¹⁴

Two important results follow from ADD's (2000) model. First, the investor's cost of capital is endogenously determined, depends on the uncertainty faced by the

¹² Many dimensions of Quebec's separation efforts, especially that of Bill 101, its strict enforcement and some of its economic consequences, have even attracted the attention of CBS's highly popular news magazine *60 Minutes* (Safer, 1998). Some proponents of the Bill have gone so far as to require businesses assume a French trademark. Even international companies with well-established and internationally recognized trademarks are being urged strongly to adopt a French-based trademark while doing business in Quebec.

¹³ While their model is quite general and widely applicable for problems of political uncertainty, the authors are also interested in Quebec's separation efforts. Thus, in this context, they consider only two states of nature, namely, Quebec staying in the Canadian Federation and Quebec leaving the Canadian Federation, and their four corresponding Markovian transition probabilities. Thus, they allow for the possibility of Quebec remaining in the Federation even after a vote of "Yes" to separation. That is, Quebec's separation from the Canadian Federation is not defined as an absorbing state. The authors note that the effect of an absorbing state would make the political risk higher, leading to further declines in investments.

¹⁴ We benefit from the relevant insights and intuition of ADD's (2000) framework, which is a two-state Markov chain model with Bayesian learning and regime shifts. Alternatively, as suggested by one of the referees, a mean-variance framework, using the expected value and variance of business-government interactions, might be developed to study political adversity and its effects.

investor, and is comprised of two components. The first component represents the cost that the investor would face if the investment were reversible.¹⁵ The second component is a risk premium that the investor requires for the loss of flexibility resulting from political uncertainty and irreversibility.¹⁶ Second, ADD (2000) argue that since investors do not yet know, but are in the process of learning the true state of demand and price of investment, they will wait for better and more information before undertaking investments that are irreversible, especially if the investor is pessimistic about future economic prospects. This will depress the flow of investments.

One way to avoid the risk premium in the cost of capital, if possible, is to withdraw or re-deploy existing investments. Business relocations constitute such a move of redeploying investments.¹⁷ Thus, our empirical evidence on the stock market's reaction to the announcements of business relocations from Quebec to politically more stable Canadian provinces may be interpreted as the premium for avoiding or substantially lessening the political risk component of ADD's (2000) cost of capital under uncertainty and irreversibility.¹⁸

Both Bittlingmayer (1998) and Mei (1999) find that political events help explain the stock market volatility patterns and that investors tend to take a "wait and see" attitude in the face of increasing political uncertainty.¹⁹ While Bittlingmayer (1998) examines volatility patterns during the transition from Imperial to Weimar Germany (between 1880 and 1940), Mei (1999) focuses on the political election cycles of a number of emerging countries.²⁰

¹⁵ It is expressed as net of expected capital gains on the undepreciated portion of the unit (following Jorgenson, 1963).

¹⁶ ADD (2000) note that the risk premium arises because the firm cannot disinvest if the state of demand or of the price of investment turn out to be less favorable than expected. See also Shapiro (1978) and Agmon and Findlay (1982) who argue for an increase in investor's cost of capital.

¹⁷ A referee pointed out that relocating firms surrender their option to wait for better times and that, following Hirschman's (1974) options of voice and exit, firms have a choice of investing in political resources to influence the Quebec environment and waiting out the threat or emigrating to a more favorable business climate. Foreign investors' visible hesitation to invest in Quebec is evidence that the option to wait for better times and the option of voice have been out-of-money throughout this long-lasting situation (Alberts and Clark, 1999; Thompson, 2000a,b).

¹⁸ The PQ government has been trying to attract investments into Quebec by giving considerable tax breaks to the investors. This lessens considerably or removes completely the irreversibility problem for the investors. However, the financing of these tax breaks seems to be coming from levying high taxes on individuals. This policy has the potential for worsening the exodus of well-educated human capital from Quebec in the long run.

¹⁹ Mahajan (1990) and Clark (1997) also benefit from the option pricing theory in explaining the effects of political risk.

²⁰ Studies that consider the effects of political risk on international portfolio investment decisions include Korbin (1979), Cosset and Suret (1995), and Erb et al. (1996). These papers focus mostly on emerging or developing countries (see also Desta, 1985; Bailey and Chung, 1995; Diamonte et al., 1996; Butler and Joaquin, 1998). Phillips-Patrick (1989) studies the relationship between a firm's political risk and its asset ownership structure. The author observes that the Paris stock market reacted negatively when the late Mr. Mitterrand won the presidential election in France. He was well known for his policies towards nationalization.

It is clear that there is an increasing interest in studying how political uncertainty affects financial markets and asset valuations. Our study investigates the effects on asset valuation of investors' decision to re-deploy their investments from a politically uncertain environment to a politically stable environment.

4. Data and methodology

4.1. Data

This study considers business relocations within Canada. Business relocations include either the shifting of corporate headquarters or divisions or plants. The initial sample covers the period 1970–2001 and consists of 258 firms that relocated their headquarters, divisions or plants, with identifiable announcement dates. We chose 1970 as the starting year because the first indications of a movement towards separation date back to 1970. The index for *The Financial Post*, a leading financial daily newspaper in Canada, serving a clientele similar to the clientele served by the *Wall Street Journal* in the United States, is searched from 1970 to 1990, while the available electronic databases are searched for the rest of the time period. Keywords such as *relocation* and *move* (in conjunction with *headquarters*, *divisions* and *plants*) are used in searching the electronic databases (*CBCA Full Text 1993–2001*; *Canadian Database, The Globe and Mail Group 1991–2001*; and *Canadian News Disk 1992–2001*). We identify where the sample firms relocated from and where they relocated to, the announcement dates, the unit (headquarters, divisions or plants) that was moved, and the stated reasons underlying the relocation decisions. The announcements are also screened for any other information, such as earnings, the firm may have released in the two weeks prior to the relocation announcement.

Of the 258 companies in the initial sample, 45 business relocations originate from Quebec while 43 are from Toronto. Our numbers are smaller than the numbers reported in the Dun and Bradstreet (1996) report, because, as noted previously, most firms in the Dun and Bradstreet report are small privately held companies.

Unavailability of daily stock return data is the primary reason for eliminating firms from our initial sample. We omit 42 announcements prior to 1975 since daily stock return data on the Canadian Financial Markets Research Center (CFMRC) database for Canadian companies is available only from January 1, 1975. In addition, 112 firms are excluded since they did not trade on any organized Canadian exchange while insufficient stock price data result in the loss of an additional 15 firms. Our final sample consists of 89 companies with available daily stock returns to conduct an event study.

Of the initial 45 firms relocating from Quebec, only 20 are left in the final sample of 89 firms. Of these 20 firms, 19 relocated out of Montreal.²¹ Thus, the Quebec

²¹ Of the 19 firms that moved from Montreal, 11 firms relocated to Toronto.

Table 1
Distribution of business relocations within Canada from 1975–2001

Years	Relocations from Quebec ^a	Relocations from Toronto	Relocations from other regions	Total
<i>Panel A: Business relocations by origin and year^a</i>				
1976–1980	6	2	7	15
1981–1985	4	3	5	12
1986–1990	0	5	4	9
1991–1995	4	5	14	23
1996–2001	6	2	22	30
	20	17	52	89
City	Gained	Lost	Net gain	
<i>Panel B: Business relocations by major city^b</i>				
Montreal	5	19	-14	
Toronto	16	17	-1	
Calgary	15	6	9	
Edmonton	2	7	-5	
Vancouver	5	4	1	

The final sample consists of 89 firms that are publicly traded and relocated their businesses within Canada between 1975 and 2001. The sample includes all firms that relocated either their corporate headquarters, regional or divisional office, or plant and for which stock return data are available on the CFMRC database to conduct an event-study analysis. Panel A provides a distribution of the relocations by origin and year while Panel B provides the most common locations from which or to which the firms relocated.

^a Nineteen of the 20 firms relocating out of Quebec were based in Montreal.

^b Sample sizes in Panels A and B differ since all cities are not listed in Panel B.

sample can essentially be considered a Montreal sample. Stock return data for 17 firms that moved out of Toronto are available. The remaining 52 announcements are for firms relocating from locations other than Quebec and Toronto.

Table 1 provides a summary of the final sample. Panel A shows that 60% of the firms in the sample relocated their businesses in the 1990s. While relocations from Quebec are about evenly distributed (except for the 1986–1990 period with no firms in the sample) and there is no particular concentration of firms relocating from Toronto, we find that 69% of the firms that moved from regions other than Quebec and Toronto did so in the 1990s. Panel B provides some information for relocation activity from and to some of the major cities in Canada. Montreal had a net loss of 19 firms while Calgary gained a net of 9 firms during our sample period.

The content of the announcements generally does not indicate political instability in Quebec as a reason for the relocation of a facility. We believe that this is because the issue is sensitive, affecting all aspects of Canadian life. Also, the fear of customer backlash may be another reason for not stating political uncertainty as a reason for relocations (for example, Shalom, 1996). Our research design of including a control group of relocations from Toronto allows us to capture the stock market's reaction predominantly as a result of political risk, holding other motives constant.

4.2. Methodology

We use the event study methodology as described in Patell (1976).²² Market model parameters are estimated using returns from day -75 to -11 (estimation period), where day 0 is the event date (announcement date). Results reported are based on the equally weighted index as the market portfolio. Similar results are obtained when the value-weighted index is used as the market portfolio.

To control for relocation motives other than political uncertainty, we compare the mean and median CAAR for firms relocating from Quebec with firms relocating from Toronto. The control sample from Toronto is of interest to us since, by all accounts, it is the commercial capital of the country today. We also compare the mean and median CAAR for the Quebec sample with the firms relocating from regions other than Quebec and Toronto. Since relocation incentives should be the same for all firms relocating within Canada, any difference between the Quebec based firms and non-Quebec based firms could be the result of political uncertainty in Quebec.²³ Results for differences in the means are reported using the *t*-test while those for the medians are reported using the Wilcoxon signed-rank test, which assumes equal variances for the two samples, and the robust rank-order Behrens–Fisher test, which does not make any such restrictive assumptions about the variances for the two samples (see Siegel and Castellan, 1988). We also conduct a Chi-square test of independence to see whether the distributions of the stated relocation motives are the same between Quebec-based and non-Quebec based firms.

5. Empirical results

A Chi-square test of independence is first conducted to see whether the relocations from Quebec and Toronto are distributed across the stated relocation motives about the same. We find the value of the Chi-square statistic to be 6.11. This value is below the critical Chi-square value of 11.07 (9.24) at the 5% (10%) significance levels, respectively. Thus, we conclude that the stated motives for relocating from Quebec and Toronto are distributed about the same. Similar results are obtained when the Quebec sample is compared to firms relocating from regions other than Quebec and Toronto. These results provide a robustness check that relocation motives other

²² A complete review of the event study methodology and the relevant literature is available in MacKinlay (1997).

²³ A referee suggested that, according to the location theory, relocations typically respond to pushes and pulls and that there did not appear to be any apparent reason for why pushes and pulls were independent of either of regions of origins or regions of destinations in Canada. We agree with the referee and the principles of the location theory. However, we tend to think that political risk has been the overwhelming reason for business relocations from Montreal. We believe that our research design isolates the effects of political risk on relocating firms' valuation.

than political uncertainty are unlikely to explain the differences in the event-study results between the Quebec and non-Quebec samples.

5.1. Business relocations within Canada

We begin first by reporting the announcement period returns for the full sample in Table 2. Similar to the results reported for US firms in Chan et al. (1995) and others, we find that the stock price response to business relocation announcements is statistically significantly positive. In panel A, the two-day CAAR for the (0, +1) window is 0.41% and significant at the 1% level. Likewise, the CAAR for the three-day window

Table 2
Mean and median cumulative average abnormal returns for the full sample

	Mean (%)	<i>t</i> -Statistic	Median (%)	Generalized sign <i>Z</i>
<i>Panel A: Full sample from 1976–2001 (N = 89)</i>				
(−10, +10)	0.56	2.39**	−0.02	0.35
(−10, −1)	0.00	1.12	0.42	1.21
(0, +10)	0.55	2.20**	−0.30	0.14
(−1, 0)	0.57	1.13	−0.05	−0.02
(0, +1)	0.41	2.70***	0.15	0.88
(−1, +1)	0.41	1.83*	−0.06	0.02
(0, +2)	0.34	2.55**	0.14	0.99
(−2, +2)	−0.03	1.22	−0.27	−0.07
<i>Panel B: Sub-period 1976–1990 (N = 36)</i>				
(−10, +10)	2.58	1.92*	−0.44	0.20
(−10, −1)	−0.15	0.07	0.06	0.19
(0, +10)	2.72	2.52**	1.17	0.87
(−1, 0)	0.72	0.67	−0.15	−0.35
(0, +1)	0.87	2.51**	0.45	1.04
(−1, +1)	0.54	1.22	0.46	1.04
(0, +2)	1.58	2.50**	1.00	1.53
(−2, +2)	1.01	0.97	0.20	0.53
<i>Panel C: Sub-period 1991–2001 (N = 53)</i>				
(−10, +10)	−0.81	1.52	−0.02	0.29
(−10, −1)	0.10	1.39	0.77	1.39
(0, +10)	−0.91	0.78	−0.86	−0.53
(−1, 0)	0.47	0.91	−0.01	0.26
(0, +1)	0.09	1.43	−0.14	0.28
(−1, +1)	0.33	1.37	−0.16	−0.84
(0, +2)	−0.50	1.24	−0.36	0.02
(−2, +2)	−0.74	0.79	−0.36	−0.53

***, **, * indicate significance at the 1%, 5% and 10% levels, respectively.

Event-study analysis is conducted using the methodology described in Patell (1976) and using daily stock return data as available on the CFMRC database. The market model parameters are estimated using an estimation period from −75 to −11 trading days relative to the announcement date, day 0. The equally-weighted index on the CFMRC database is used as a proxy for the market portfolio. Panel A provides the results for the full sample while panels B and C provide the results for two sub-periods.

(0, +2) is 0.34% and significant at the 5% level. Overall, the announcements are unanticipated as the CAAR for the (−10, −1) window is insignificant. However, the statistically significant positive abnormal return of 0.55% for the post-announcement window of (0, +10) suggests that there is considerable delay before the full impact of the relocation announcements is incorporated into the stock prices. We note that there is no precise method by which one can determine the most appropriate pre- and post-event windows. Our choice of a two-week window on either side of the event is predicated on two considerations: (1) the window should be long enough to capture any leakage of information prior to the event and any delay in the absorption of the information after the event, and (2) the window should be short enough not to be influenced potentially by other events that may have occurred if a longer window is chosen.

To examine if the market's response is dependent on the time period, we divide our sample into two sub-periods: 1976–1990 and 1991–2001. The cut-off year 1990 is chosen to ensure that the two sub-samples are large enough to draw statistical conclusions and at the same time each sub-period is sufficiently long. The results are reported in panels B and C of Table 2. For the 36 firms that relocated their businesses between 1976 and 1990, the CAAR are significantly positive for both the (0, +1) and (0, +2) windows. The results are consistent with those reported in panel A for the full sample. In contrast, the information effect of business relocation announcements for the later period is statistically insignificant. The CAAR are insignificant for all the windows examined. We conjecture that information with respect to relocations is most likely available much before the formal announcements in the later period especially with the explosion of the Internet. Its potential impact is impounded in the stock prices much ahead of its release to the market by the firm.

5.2. Relocations from the Province of Quebec and from Toronto

Table 3 reports the results for business relocations from the Quebec Province and Toronto. In panel A, results for firms that moved from and to the Quebec Province are presented while similar results are presented for firms that moved from and to Toronto in panel B.

As shown in panel A, the stock market reacts significantly positively for the 20 firms moving out of the Province of Quebec. As noted previously, 19 of these firms relocate out of Montreal. The two-day CAAR for the (0, +1) window is 0.79% with a t -statistic of 1.99. Similarly, results for the windows (0, +2) and (−2, +2) show CAAR of 1.16% and 1.56%, respectively, and both are significant at the 5% level. The median CAAR of 1.32% for the (0, +2) window is also significant at the 5% level. Examining the longer event windows, we observe that announcements for firms relocating out of Quebec appear to be anticipated. The CAAR for the two-week window (−10, −1) is 2.60% and statistically significant. Thus, a substantial part of the information associated with the relocation announcements is incorporated into the stock prices much ahead of the actual announcement. In the same panel, we observe that the CAAR for the five firms that move to the Province of Quebec (all five

Table 3

Mean and median cumulative average abnormal returns for the Quebec Province and Toronto samples

<i>Panel A: Firms moving from and to the Province of Quebec</i>								
Day	Firms moving from Quebec Province (<i>N</i> = 20)				Firms moving to Quebec Province (<i>N</i> = 5)			
	Mean (%)	<i>t</i> -Statistic	Median (%)	Generalized sign <i>Z</i>	Mean (%)	<i>t</i> -Statistic	Median (%)	Generalized sign <i>Z</i>
(−10, +10)	3.97	2.35**	3.82	0.61	−12.36	−0.20	0.13	0.73
(−10, −1)	2.60	2.23**	2.80	1.96**	−6.74	−0.51	0.26	0.73
(0, +10)	1.37	1.12	1.44	1.06	−5.62	−0.16	−1.11	−0.17
(−1, 0)	−0.11	−0.10	−0.28	−0.28	−0.32	−0.20	−0.14	−0.76
(0, +1)	0.79	1.99**	0.91	1.06	−4.60	−0.33	−0.32	−1.07
(−1, +1)	0.49	0.93	0.40	1.06	−4.64	−0.13	0.16	0.73
(0, +2)	1.16	2.06**	1.32	1.96**	−3.03	−0.41	−0.59	−1.97**
(−2, +2)	1.56	1.99**	0.83	1.51	−2.57	−0.18	−0.08	−0.17
<i>Panel B: Firms moving from and to Toronto</i>								
	Firms moving from Toronto (<i>N</i> = 17)				Firms moving to Toronto (<i>N</i> = 16)			
	Mean (%)	<i>t</i> -Statistic	Median (%)	Generalized sign <i>Z</i>	Mean (%)	<i>t</i> -Statistic	Median (%)	Generalized sign <i>Z</i>
(−10, +10)	−2.89	−0.19	−4.07	−0.92	3.58	1.80*	5.19	1.24
(−10, −1)	−2.41	−2.28**	−2.48	−1.72*	1.01	0.64	1.28	1.74*
(0, +10)	−0.63	−1.81*	−1.11	−0.92	2.57	1.38	2.41	2.24**
(−1, 0)	1.54	0.91	0.23	1.41	1.62	1.26	0.84	1.00
(0, +1)	−0.82	−0.74	−0.06	0.02	1.15	2.38**	1.31	1.74*
(−1, +1)	−0.62	−0.25	−0.46	0.02	1.99	1.96**	0.54	1.24
(0, +2)	−2.45	−0.49	0.10	0.54	1.36	2.44**	1.62	2.24**
(−2, +2)	−2.63	−0.29	−1.38	−0.92	1.17	1.93*	1.86	1.24

***, **, * indicate significance at the 1%, 5% and 10% levels, respectively.

Event-study analysis is conducted using the methodology described in Patell (1976) and using daily stock return data as available on the CFMRC tapes. The market model parameters are estimated using an estimation period from −75 to −11 trading days relative to the announcement date, day 0. The equally-weighted index on the CFMRC tape is used as a proxy for the market portfolio. Mean and median cumulative abnormal returns are reported along with the associated test statistics.

firms moved to Montreal) are negative for all the windows reported, though not statistically significant. Given the small sample size, we are unable to draw any firm conclusions. However, the *z*-statistic of 1.97 from the generalized sign test for the (0, +2) window is indicative of the negative news conveyed by the announcement to relocate to Quebec.

Firms relocating out of Toronto do not experience any significant stock price reaction around the announcement date. None of the event windows close to the actual announcement date in panel B show any significant results. However, relocations out of Toronto are perceived negatively by the stock market. The market appears to anticipate relocations out of Toronto and reacts ahead of the actual announcement. The CAAR for the two weeks prior to the announcement (−10, −1) is −2.41% and significant at the 5% level while the median CAAR is −2.48%. The non-parametric sign test for this event window is significant at the 10% level. The downward drift

in the stock prices continues into the two-week post-announcement period with the CAAR for the (0, +10) window being -0.63% and significant at the 10% level.²⁴

Interestingly, the sample of 16 firms that move to Toronto experience positive announcement period returns. The mean and median CAAR are positive for all the windows reported in panel B. The abnormal returns for the windows (0, +1), (-1, +1) and (0, +2) are 1.15%, 1.99% and 1.36%, respectively, and all are significant at the 5% level, while the CAAR of 1.17% for the (-2, +2) window is significant at the 10% level. The median values for the (0, +1) and (0, +2) windows are also statistically significant. In addition, the mean CAAR for the four-week period around the announcement is 3.58% with a t -value of 1.80. These results are in striking contrast to firms moving out of Toronto and firms moving to Quebec. Furthermore, 10 of these firms that moved to Toronto were from Montreal. For these 10 firms, we find that the CAAR for the (0, +1) and (0, +2) windows are 1.09% (t -value = 1.96) and 1.75% (t -value = 1.97), respectively (results not reported in Table 3). These results provide strong evidence that the stock market reacts very differently for firms moving out of Quebec and Toronto. The evidence reported here clearly suggests that the market recognizes and prices political risk in the context of business relocations from politically uncertain environments to politically stable environments. Leaving the unstable political environment of the Province of Quebec affects stockholders wealth positively while leaving Toronto, particularly leaving Ontario, is viewed unfavorably.

Fig. 1 graphs the daily cumulative average abnormal returns for the Quebec sample, the Toronto sample and the sample of business relocations from locations other than Quebec and Toronto (labeled *Other* in the graph) over the (-10, +10) period. The divergence of CAAR for the Quebec and Toronto samples is quite striking, supporting the viewpoint that political uncertainty in Quebec has substantial implications for asset valuation.

Table 4 presents t -statistics for the mean differences and the Wilcoxon signed-rank test and the Behrens–Fisher test statistics for the median differences in the CAAR between the Quebec and Toronto samples for various event windows. The mean differences between the two samples for the (0, +2) and (-2, +2) windows are significant at the 5% level while the median difference for the (-2, +2) window is significant at the 10% level using both the Wilcoxon signed-rank test and the Behrens–Fisher test. For the window of four weeks around the announcement, (-10, +10), the means and medians (from the Behrens–Fisher test) for the two samples are significantly different at the 1% level. Similarly, the mean and median difference for the pre-announcement window, (-10, -1), is statistically significantly different at the 5% level. Overall, both

²⁴ In the Toronto sample, nine firms moved within the Ontario Province. There is no negative drift in the stock returns prior to the announcement for these firms. However, we observe a CAAR of -0.22% for the (0, +10) window (t -statistic of 2.41). For the remaining eight firms that moved out of the Province, the CAAR for the (-10, -1) window is -4.95% (t -statistic of 2.22). There is no post-announcement drift for these firms. These results suggest that relocating out of Toronto is perceived negatively, irrespective of whether firms move within the Province or outside. However, for firms moving out of the Province, the announcement is anticipated and the reaction is more negative.

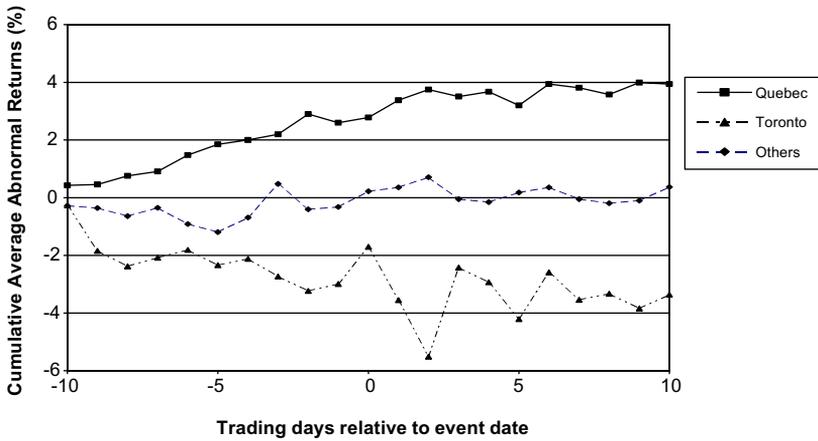


Fig. 1. Cumulative average abnormal returns around the event date.

Table 4

Parametric and non-parametric tests for differences in cumulative average abnormal returns between the Quebec and Toronto samples

Event window	<i>t</i> -Test for mean differences	Wilcoxon 2-sample median test (<i>Z</i>)	Behrens–Fisher median test (<i>Z</i>)
(−10, +10)	2.67***	2.51**	2.84***
(−10, −1)	2.53**	2.02**	1.68*
(0, +10)	1.12	0.87	0.86
(−1, 0)	1.62	1.03	1.04
(0, +1)	0.86	0.28	0.29
(−1, +1)	0.57	0.25	0.25
(0, +2)	1.96**	1.45	1.44
(−2, +2)	2.17**	1.81*	1.87*

***, **, * indicate significance at the 1%, 5% and 10% levels, respectively.

Event-study analysis is conducted using the methodology described in Patell (1976) and using daily stock return data as available on the CFMRC tapes. The market model parameters are estimated using an estimation period from −75 to −11 trading days relative to the announcement date, day 0. The equally-weighted index on the CFMRC tape is used as a proxy for the market portfolio. Differences in the means of the two samples are tested using the *t*-statistic. Differences in the medians of the two samples are tested using the Wilcoxon Signed-Rank test (which assumes that the variances of the two underlying distributions are equal) and the Behrens–Fisher test, a robust rank order test (which assumes that the variances of the two underlying distributions are unequal). Absolute values are reported.

parametric and non-parametric test results strengthen the evidence that the stock market reacted significantly more positively to the announcements of business relocations from the Province of Quebec than those from Toronto.

5.3. Relocations from regions other than Quebec and Toronto

We next turn our attention to examining the market's response to business relocations from other regions in Canada (other than the Province of Quebec and

Toronto). There is no reason to expect that announcement period returns for firms moving from these regions would be driven by reasons related to political uncertainty. Any stock price effects are likely to be due to other motives such as cost reduction, business expansion, etc., mentioned earlier.

Event study results for the 52 relocations from other regions in Canada are presented in Table 5. We note in panel A that the abnormal returns for the windows immediately surrounding the announcement, (0, +1), (-1, +1) and (0, +2) are all positive at 0.62%, 0.69% and 0.94%, respectively, and all are significant at the 10% level. These results are similar to those reported for the full sample in Table 2 and are also

Table 5

Mean and median cumulative average abnormal returns for business relocations from regions other than Quebec and Toronto

	Mean (%)	t-Statistic	Median (%)	Generalized sign Z
<i>Panel A: Relocations from regions other than Quebec and Toronto (N = 52)</i>				
(-10, +10)	0.38	1.61	0.11	0.61
(-10, -1)	-0.26	1.05	1.17	1.31
(0, +10)	0.63	1.21	-0.24	0.05
(-1, 0)	0.61	1.12	-0.12	-0.58
(0, +1)	0.62	1.81*	0.09	0.47
(-1, +1)	0.69	1.64*	-0.16	-0.66
(0, +2)	0.94	1.70*	-0.31	-0.23
(-2, +2)	0.21	0.38	-0.51	-0.51
<i>Panel B: Sub-sample from Panel A that moved within the Province (N = 28)</i>				
(-10, +10)	1.27	1.26	0.09	0.23
(-10, -1)	0.20	0.83	-0.08	-0.15
(0, +10)	1.07	0.95	0.41	0.61
(-1, 0)	0.44	0.98	-0.26	-1.18
(0, +1)	2.08	2.65***	0.96	2.12**
(-1, +1)	1.61	1.96**	-0.28	-0.15
(0, +2)	1.81	2.25**	1.15	1.37
(-2, +2)	0.96	0.88	-0.55	-0.15
<i>Panel C: Sub-sample from Panel A that moved out of the Province (N = 24)</i>				
(-10, +10)	-0.67	-1.00	0.11	0.64
(-10, -1)	-0.81	-0.65	1.22	2.11**
(0, +10)	0.11	0.76	-1.11	-0.59
(-1, 0)	0.81	0.58	0.22	0.44
(0, +1)	-1.15	-0.25	-0.28	-1.65*
(-1, +1)	-0.43	-0.24	-0.16	-0.82
(0, +2)	-0.08	-0.06	-0.59	-1.81*
(-2, +2)	-0.67	-0.41	-0.44	-0.59

***, **, * indicate significance at the 1%, 5% and 10% levels, respectively.

Event-study analysis is conducted using the methodology described in Patell (1976) and using daily stock return data as available on the CFMRC database. The market model parameters are estimated using an estimation period from -75 to -11 trading days relative to the announcement date, day 0. The equally-weighted index on the CFMRC database is used as a proxy for the market portfolio. Panel A provides the results for all firms that moved from regions other than Quebec and Toronto. Thus, firms that moved from Ontario, but were not located in Toronto are included in the sample in Panel A. Panels B and C provide the results of sub-samples of firms in Panel A that moved within and out of the Province, respectively.

consistent with the evidence in Chan et al. (1995) for the US market. Unlike the relocations from Quebec and Toronto, business relocations from other regions in Canada are not anticipated. In addition, there is no stock price drift after the announcement. None of the CAAR for the longer windows is significant.

An interesting pattern emerges when we break our results into two groups: firms that moved within the same province and firms that moved to other provinces. For the 28 firms in panel B that moved within the same province, the mean CAAR for all the windows are positive. The CAAR for the (0, +1) window is 2.08% and significant at the 1% level while the median CAAR is 0.96% with a non-parametric generalized sign z -statistic value of 2.12. Likewise, the mean CAAR for the (-1, +1) and (0, +2) windows are 1.61% and 1.81%, respectively, and both are significant at the 5% level. These firms that moved within the province did not lose any of the economic incentives that the province may have offered. The positive stock price reaction suggests that these relocations are associated with motives such as cost savings and improved productivity and thus viewed by the market as positive net present value decisions. In contrast, for the 24 firms that moved out of the province (panel C), the CAAR for the event windows immediately around the announcement are negative but insignificant. The non-parametric sign test is significant at the 10% level for the windows (0, +1) and (0, +2), clearly indicating that more firms experienced negative announcement period returns in this group. These results could be due to a number of reasons, such as, lost economic incentives in their province before relocation, extra costs of complying with regulations in the new province, or it could be that these relocations are driven by agency related reasons.

In unreported results, the difference in the medians for the Quebec sample and firms moving from other regions for the (0, +2) and (-2, +2) samples are significant at the 5% level ($z = 2.09$) and the 10% level ($z = 1.68$), respectively. Likewise, the median differences for the same two windows between the Quebec sample and the sample of 24 firms that relocated from other regions out of their original provinces are significant at the 1% level ($z = 2.99$) and 10% level ($z = 1.84$), respectively. There is, however, no difference between the Quebec sample and the sample of 28 firms that moved within the same province in other parts of Canada. These results lend further support to our hypothesis that firms' relocation decisions out of Quebec is viewed more positively compared to similar decisions from other regions in Canada and that this positive reaction is due primarily to the political uncertainty in the Province. This is the only factor that is different between the Quebec and non-Quebec samples.

6. Summary and conclusions

This paper attempts to empirically measure the effect of political risk on asset valuation by studying the stock market's reaction to announcements of business relocations of corporate headquarters or divisions or plants from the politically unstable Province of Quebec, Canada, to other Canadian provinces. The ongoing political instability in Quebec, resulting from the Province's separation drive over the last

three decades, provides us with a unique opportunity to investigate empirically the impact of political uncertainty in a G-7 country.

Recent papers have considered how investors' behavior of "wait and see" under political uncertainty affects the volatility of (especially emerging) stock markets (Bittlingmayer, 1998; Mei, 1999) and the flow of investments (ADD, 2000). In addition, the impact of political uncertainty surrounding elections and its effect on the stock markets have been examined in Brander (1991), Gemmill (1992) and Shum (1996). In this paper, we employ the event-study methodology to study the wealth effects of decisions by firms that re-deploy their investments away from a politically uncertain environment.

We report evidence of significant positive stock price response to business relocation announcements from Quebec. Announcements of relocations from Quebec seem to be anticipated, as there is a significant price run-up in the two-week period prior to the announcement. In contrast to business relocations from Quebec, firms moving out of Toronto do not exhibit any significant stock price response around the announcement, but experience a negative drift in the stock price in the four weeks surrounding the announcement. However, firms moving to Toronto show a significant positive stock price reaction around the announcement while the small sample of firms that move to Quebec experience negative abnormal returns, though insignificant. The difference in the stock market's reaction to the sample of firms relocating from Quebec is statistically significantly different when compared with the reaction for firms relocating from Toronto. For the overall sample, we report that business relocations within Canada are accompanied by positive announcement period returns which is consistent with the evidence reported for the US market in Chan et al. (1995) and others.

Our results demonstrate that political risk plays an important role in asset valuation. The findings of this study contribute to the growing literature on the empirical link between political risk and its effects on financial assets and markets.

Appendix A. The chronology of the separatism in Quebec

Source: "<http://www.premier.gouv.qc.ca/projet/historia.htm>", The History of Separatism in Quebec.

A.1. Timeline during the Quiet Revolution

June 1960: Victory of provincial Liberal party – then nationalistic – in Québec. Slogan: "It's time for a change." Jean Lesage, plunges into a policy of emancipation, under the name of the 'Quiet Revolution.'

March 1963: First bombs by the Québec Liberation Front (FLQ).

May 1967: Invited for the Montréal Expo, French President Charles de Gaulle ends a speech with his notorious "Vive le Québec libre!" He cancels his visit to

Ottawa, following a protest from the Canadian government; Oct: René Lévesque leaves the Liberal party and founds the sovereignty-Association Movement.

October 1968: Creation of the Parti Québécois, PQ, which absorbs the small independent movements.

A.2. Timeline since the first PQ victory

November 1976: Parti Québécois led by René Lévesque wins Québec provincial election, promises to hold a referendum on sovereignty-association.

August 1977: Bill 101 becomes Québec law. It restricts attendance at English-language schools and bans the use of any language other than French on commercial signs.

May 1980: Québec's first referendum, federalists win with 59.56% of vote. René Lévesque adopts constitutional strategy known as the *beau risque* based on the idea that a political reconciliation with the rest of Canada is possible.

April 1981: Parti Québécois led by René Lévesque is re-elected in Québec provincial election.

November 1981: The federal government and nine of ten provincial premiers agree to a new constitution; Québec does not approve the deal.

December 1988: Québec government introduces Bill 178 after the Supreme Court of Canada rules that a section of the province's language law is unconstitutional. Québec invokes the notwithstanding clause to override the Supreme Court.

July/August 1990: Bloc Québécois is formed by a group of six Québec MPs who elect Lucien Bouchard as their leader. In federal by-election, Gilles Duceppe becomes the first MP to be elected as a member of the Bloc-Québécois.

September 1994: Parti Québécois led by Jacques Parizeau wins Québec provincial election, promises to hold a referendum on sovereignty.

October 1995: Québec's second referendum, federalists win with 50.58% of votes. Jacques Parizeau blames the sovereignty defeat on "money and the ethnic vote" and declares that "we will have our country and we will get our revenge".

December 1998: Lucien Bouchard is elected as premier of Québec.

April 2003: Parti Québécois loses the provincial elections. Liberal Party of Quebec comes to power.

References

- Agmon, T., Findlay, M.C., 1982. Domestic political risk and stock valuation. *Financial Analysts Journal* 38 (6), 74–77.
- Alli, K.L., Ramirez, G.G., Yung, K., 1991. Corporate headquarters relocation: Evidence from the capital markets. *Real Estate Economics* (formerly, *AREUEA Journal*) 19, 583–599.
- Alberts, S., Clark, C., 1999. Japanese ask Bouchard about separation fallout. *National Post*, A6.
- Altug, S., Demers, F.S., Demers, M., 2000. Political risk and irreversible investment: Theory and an application to Quebec. Discussion Paper No. 2405, Centre for Economic Policy Research, 90–98 Goswell Road, London, UK, EC1V 7RR.
- Aubin, H., 1999. The drain surgeon. *The Montreal Gazette*.

- Bailey, W., Chung, P.Y., 1995. Exchange rate fluctuations, political risk, and stock returns: Some evidence from an emerging market. *Journal of Financial and Quantitative Analysis* 30 (4), 541–561.
- Bittlingmayer, G., 1998. Output, stock volatility, and political uncertainty in a natural experiment: Germany, 1880–1940. *Journal of Finance* 53 (6), 2243–2257.
- Bonner, S., 1999. CBC 10PM News Report.
- Brander, J.A., 1991. Election polls, free trade, and the stock market: Evidence from the 1988 Canadian general elections. *Canadian Journal of Economics* 24, 827–843.
- Butler, K.C., Joaquin, D.C., 1998. A note on political risk and the required return of foreign direct investment. *Journal of International Business Studies* 29 (3), 599–607.
- Clark, E., 1997. Valuing political risk. *Journal of International Money and Finance* 16 (3), 477–490.
- Chan, S.H., Gau, G.W., Wang, K., 1995. Stock market reaction to capital investment decisions: Evidence from business relocations. *Journal of Financial and Quantitative Analysis* 30, 81–100.
- Citron, J., Nickelsburg, G., 1987. Country risk and political instability. *Journal of Development Economics*, 385–392.
- Cosset, J.C., Rianderie, B.D., 1985. Political risk and foreign exchange rates: An efficient markets approach. *Journal of International Business Studies* 16 (3), 21–55.
- Cosset, J.C., Suret, J.M., 1995. Political risk and the benefits of international portfolio diversification. *Journal of International Business Studies* 26 (2), 301–318.
- Demers, F.S., Demers, M., 1995. *European Union: A Viable Model for Quebec–Canada?* Center for Trade Policy and Law, Ottawa, Canada.
- Desta, A., 1985. Assessing political risk in less developed countries. *The Journal of Business Strategy* 5 (4), 40–54.
- Diamonte, R.L., Liew, J.M., Ross, S.L., 1996. Political risk in emerging and developed markets. *Financial Analysts Journal* 52, 71–76.
- Dixit, A., Pindyck, R.S., 1994. *Investment Under Uncertainty*. Princeton University Press, Princeton, NJ, USA.
- Dun and Bradstreet Canada, 1996. *Quebec Migration and Business Survey Package*.
- Erb, C.B., Harvey, C.R., Viskanta, T.E., 1996. Political risk, economic risk, and financial risk. *Financial Analysts Journal* 52, 29–46.
- Gemmill, G., 1992. Political risk and market efficiency: Tests based in British stock and options markets in the 1987 election. *Journal of Banking and Finance* 16, 211–231.
- Ghosh, C., Rodriguez, M., Sirmans, C.F., 1995. Gains from corporate headquarters relocations: Evidence from the stock market. *Journal of Urban Economics* 38, 291–311.
- Hirschman, A.O., 1974. Exit, voice, and loyalty: Further reflections and a survey of recent contributions. *Social Science Information* 13 (1), 7–26.
- Ingersoll, J., Ross, S., 1992. Waiting to invest: Investment and uncertainty. *Journal of Business* 65, 1–29.
- Jorgenson, D., 1963. Capital theory and investment behavior. *American Economic Review* 53, 47–56.
- Kane, E., 1996. De jure interstate banking: Why only now? *Journal of Money, Credit, and Banking* 28 (2), 141–161.
- Korbin, S.J., 1979. Political risk: A review and reconsideration. *Journal of International Business Studies* 10 (1), 67–80.
- MacKinlay, C.A., 1997. Event studies in economics and finance. *Journal of Economic Literature* 35, 13–39.
- Mahajan, A., 1990. Pricing expropriation risk. *Financial Management* 19, 77–86.
- Manning, D.N., 1989. The effect of political uncertainty on the stock market: The case of British Telecom. *Applied Economics* 21, 881–889.
- Mei, J.P., 1999. Political risk, financial crises and market volatility. Paper presented at the 2000 American Finance Association Meetings, Boston, MA, USA.
- Murphy, K.M., Shleifer, A., Vishny, R.W., 1993. Why is rent-seeking so costly to growth? *American Economic Review*, 409–414.
- Niederhoffer, V., Gibbs, S., Bullock, J., 1970. Presidential elections and the stock market. *Financial Analysts Journal* 26, 111–113.
- Olson, M., 1982. *The Rise and Decline of Nations*. Yale University Press, New Haven, CT.

- Patell, J.M., 1976. Corporate forecasts of earnings per share and stock price behavior: Empirical tests. *Journal of Accounting Research* 14, 1587–1600.
- Phillips-Patrick, F.J., 1989. The effect of asset and ownership structure on political risk: Evidence from Mitterrand's election in France. *Journal of Banking and Finance* 13, 651–671.
- Riley, W.B., Luksetich, W.A., 1980. The market prefers republicans: Myth or reality. *Journal of Financial and Quantitative Analysis* 15, 541–560.
- Rodrik, D., 1991. Policy uncertainty and private investment in developing countries. *Journal of Development Economics* 36, 229–242.
- Ross, S.A., 1995. Uses, abuses, and alternatives to the net-present-value rule. *Financial Management* 24 (3), 96–102.
- Safer, M., 1998. War of words. CBS 60 Minutes.
- Shalom, F., 1996. Zeller's head office moving to Toronto. *The Montreal Gazette*.
- Shapiro, A.C., 1978. Capital budgeting for the multinational corporation. *Financial Management* 7, 7–16.
- Shapiro, A.C., 1985. Currency risk and country risk in international banking. *Journal of Finance* 40 (3), 881–891.
- Shum, P.M., 1996. Stock market response to political uncertainty: Evidence from the 1992 constitutional referendum. *Canadian Journal of Economics* 29, 213–218.
- Siegel, S., Castellan, H.J., 1988. *Nonparametric Statistics for the Behavioral Sciences*. McGraw Hill, New York.
- Symonds, W.C., 1996. Business in Quebec is voting with its feet. *Business Week* (Issue 3461, 5 February), p. 6.
- Thompson, E., 2000a. Both sides cite Ontario studies planning for Quebec secession. *The Montreal Gazette*.
- Thompson, E., 2000b. Sovereignty follows Bouchard in LA. *The Montreal Gazette*.