

**Stock Repurchases in Canada:
Performance and Strategic Trading**

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ABSTRACT

During the 1980s, U.S. firms that announced stock repurchase programs earned favorable long-run returns. Recently, concerns have been raised regarding the robustness of these findings. This comes at a time of explosive worldwide growth in the adoption of repurchase programs. This study provides out-of-sample evidence for 1,060 Canadian repurchase programs announced between 1989 and 1997. As in the U.S., the Canadian stock market seems to discount the information contained in repurchase announcements. Value stocks announcing repurchase programs have particularly favorable returns. Canadian law requires companies to report how many shares they repurchase on a monthly basis. We find that managers are sensitive to mispricing as completion rates are higher in cases where undervaluation may be a more important factor. Moreover, trades are linked to price movements; managers buy more shares when prices fall and reduce their buying when prices rise.

1. Introduction

In recent years, corporations have dramatically increased the amount of capital devoted to repurchasing their own shares. In the mid-1980s, repurchase program announcements in the U.S. amounted to roughly \$25 billion per year. Between 1996 and 1998 however, more than 4,000 open market repurchase programs were announced which, if fully completed, amount to roughly \$550 billion.¹ During the first quarter of 1999 alone, Securities Data Company reports nearly 350 program announcements totalling \$40 billion. Interest in corporate repurchase programs is not limited to the U.S. as repurchase activity worldwide has grown in recent years. Countries such as Hong Kong and Japan recently implemented new regulations allowing companies for the first time to repurchase their shares. A recent Goldman Sachs study (March 1999) foresees stock repurchases becoming more common in Europe and discusses the potential impact on European equity values.

The literature is rich with motives as to why firms might repurchase their own stock. The list includes, for example, tax benefits, distributing excess cash and adjusting capital structure. Yet these reasons are not as popular with managers who often suggest when announcing buyback programs that current market prices are too low and hence their stock is an attractive investment (Dann (1983) and Wansley, Lane, and Sarkar (1989)). Several studies report evidence consistent with this managerial story of undervaluation. In a comprehensive examination of U.S. open market repurchase programs during the 1980s, Ikenberry, Lakonishok and Vermaelen (1995) find that the market's initial response to repurchase announcements is not complete. They report annualized abnormal performance of 2.9% over a four-year period following the announcement. For value stocks, where a stronger case can be made for undervaluation, the annual abnormal return was 6.4% over the same post-announcement period.²

¹ For comparison, the NYSE reports that aggregate cash dividends paid by member firms over this period was approximately \$490 billion.

² In an earlier paper on fixed-price tender offer repurchases, Lakonishok and Vermaelen (1990) also find evidence of positive abnormal returns lasting at least two years following the announcement.

Although previous studies have examined hundreds of repurchase program announcements, the history of this transaction is rather short, only becoming pervasive in the U.S. in the late 1980s. Moreover, international evidence regarding repurchases is limited as many countries have only recently allowed firms to repurchase stock. Thus, a degree of skepticism regarding the existing evidence on share repurchases is warranted. As Merton (1985) suggests, we are biased toward publishing "exciting" results. Indeed, recent papers have drawn into question the results of several studies that examine long-run stock performance because of the sensitivity of the results to the methods used to calculate abnormal returns.³ Studies on stock repurchases have been included in these critiques.

Given the recent growth in repurchase activity worldwide, fresh evidence on long-run performance of repurchasing firms is of interest. While many countries now allow repurchases, the only country outside the U.S. that has a reasonable sample at this point is Canada. Thus, we examine open market programs announced by firms trading on the Toronto Stock Exchange (TSE). Moreover, we utilize programs announced between 1989 and 1997, a time period that generally follows the sample period examined in earlier U.S. studies. Our sample is comprehensive and contains 1,060 program announcements authorizing \$35 billion in repurchases. This analysis is supplemented with evidence of long-run stock performance following the issuance of shares. Specifically, we consider Canadian seasoned equity offerings and acquisitions that were at least partially financed with equity. A result consistent with repurchases would show a downward drift in stock performance after an announcement of an increase in shares outstanding.

Canadian data is of particular interest, however, because firms must report each month the number of shares they actually repurchase. This information is summarized by the exchanges and published on a timely basis. Precise, periodic information on repurchase activity does not exist for U.S. firms. Moreover, U.S. reporting conventions even make it difficult to obtain good estimates of overall

³ For example, Fama (1998) and Mitchell and Stafford (1997).

completion rates (Stephens and Weisbach (1998)). Our unique data allow us to accurately measure program completion rates and examine factors that affect these managerial decisions.

Access to monthly repurchase data allows us to study whether managers execute share repurchases strategically in response to market movements. Managers repurchase stock for a variety of reasons, many of which may not relate to mispricing. For example, to the extent that firms repurchase shares to avoid dilution in earnings from the exercise of options, or use repurchases as a tax efficient alternative to paying cash dividends, one would not expect to find a relation between price movements and the level of repurchase activity in a given month. Also, if managers view the market as efficient, we would not expect them to react to price movements. However, managers often mention undervaluation as an important motive for repurchasing shares. To the extent that they believe prices deviate from their intrinsic value, we expect to observe managers repurchasing shares more aggressively when prices are falling. Likewise, we expect the incentive to repurchase shares to diminish after a rise in prices. Data from Canada enable us to assess the extent to which managers trade strategically and thus should help us better understand what motivates repurchase activity.

We find that undervaluation appears to be just as important a consideration for repurchasing shares in Canada as earlier findings suggest for the U.S. Using the Fama-French (1993) three-factor model, Canadian firms repurchasing shares show abnormal performance of 0.59% per month over a three-year period following the announcement. In the year prior to the announcement, abnormal returns are negative, -0.35% per month. Such poor pre-announcement performance and subsequent out performance are consistent with undervaluation being a motivating factor for stock repurchases. A stronger case for undervaluation as a motive for repurchasing shares can be made for value stocks. The results are consistent with this hypothesis. Canadian value stocks that announce repurchases experience abnormal returns of 0.76% per month whereas the comparable return for growth stocks is only 0.28% per month.

We also evaluate performance subsequent to an increase in shares where firms either issued seasoned equity or acquired other firms with stock. Here, the results are again consistent with the notion that mispricing is a factor in managerial decision making. Abnormal returns are high prior to SEOs or equity-financed acquisitions made by TSE firms, yet subsequent abnormal return performance is substantially negative.

The results suggest that managers trade strategically. Price changes seem to have a major impact on repurchase activity. Consistent with the undervaluation story, an increase in prices leads to a reduction in the number of shares repurchased, whereas a drop in stock prices leads to a larger fraction of shares repurchased. Completion rates are also higher for value stocks than for growth stocks. Moreover, firms that actively repurchased shares experience only modest returns while the program was in effect. Yet, these firms enjoy sizeable abnormal returns in subsequent years. Conversely, companies that did not buy any shares show strikingly large excess returns while the program is in effect, yet no evidence of positive abnormal returns in subsequent years. Overall, the results suggest that managers' repurchase decisions are sensitive to prevailing market prices, a result consistent with the undervaluation hypothesis.

The paper is organized as follows. Section 2 briefly describes the institutional setting surrounding repurchase programs in Canada and also describes how we formed our sample. Section 3 reviews the methodology used to evaluate long-run performance. Section 4 provides descriptive information regarding sample programs and documents the short-run market reaction to repurchase announcements. Section 5 presents evidence on subsequent long-run performance. Section 6 reports evidence on program repurchase completion rates and the extent to which managers execute repurchase programs strategically. Section 7 further examines the strategic nature of repurchase decisions by examining long-run performance conditional on various levels of repurchase activity. Section 8 provides results for the opposing case where managers issue equity either through SEOs or stock-financed acquisitions. Concluding remarks are provided in section 9.

2. Repurchases in Canada

a. Institutional aspects of repurchases in Canada

The regulatory environment affecting Canadian open market repurchase programs differs from that in the U.S. In Canada, these programs are referred to as "Normal Course Issuer Bids." The primary oversight mechanism for these programs is provided by the exchange where the company's stock trades. Unlike U.S. firms, Canadian firms must receive approval from the exchange before initiating a repurchase program. The application process to repurchase stock at the TSE is generally straightforward and is usually completed in a limited number of days. As in the U.S., these programs are the most common mechanism firms use to repurchase shares.⁴ Once authorized, programs last one year and are limited to the maximum of either 10% of public float or 5% of shares outstanding. Thus, in many cases, the number of authorized shares exceeds 5% of the share base.

TSE rules also govern how listed firms execute their repurchase programs.⁵ Briefly, these rules state that TSE firms may commence repurchasing stock two days after receiving approval from the TSE. Programs must be executed through a single broker. Cumulative repurchases over the trailing 30 calendar days must not exceed 2% of the outstanding shares. Firms are also restricted from repurchasing shares on an up-tick. Similar rules exist in the U.S.⁶

⁴ Fixed-price tender offers, referred to as "Substantial Issuer Bids," are also permitted in Canada and do not have limits on the amount of stock that can be repurchased. As in the U.S., this form of repurchase is not common. Dutch-auction tender offers, though permitted by law, have only recently occurred in Canada. In this study, we only examine repurchase programs executed via open market transactions, or Normal Course Issuer Bids.

⁵ See Part 28 of the Policies of the Toronto Stock Exchange.

⁶ U.S. securities law governing stock repurchases has evolved gradually, adopting its present form in 1984 when Congress adopted S.E.C. Rule 10b-18, a "safe-harbor" provision relating to stock repurchases. This rule does not impose strict limits as is the case in Canada, but rather provides firms protection from legal liability for price manipulation when repurchasing stock if firms execute repurchase trades within certain limitations relating to price, volume and time-of-day. These provisions are not statutory rules. Companies often voluntarily repurchase shares outside of these limits (Cook, Krigman and Leach, 1997). Moreover, Rule 10b-18 does not apply to all types of repurchase transactions including, for example, pension-plan related (ERISA) trades. In addition, at certain times (for example, following the crash of 1987), some of the Rule 10b-18 limitations are lifted.

b. The Sample

We obtained the complete record of common stock repurchase programs announced by TSE-listed firms between 1989 and 1997. Information regarding all authorized repurchase programs is published periodically in *The Daily Record*, a TSE publication. Once a month, the TSE publishes a comprehensive overview of the status of all authorized programs including the program's size, termination date, the number of share purchased in the previous month (including those purchased on other exchanges) and the total shares repurchased to date in the program. During this time period, 1,159 program authorizations were announced by TSE firms.

Monthly stock returns were obtained from the TSE/University of Western Ontario database, a dataset free of survivor bias. However, our returns from this database end in December 1995. Thus, from January 1996 to December 1998, monthly returns were obtained from Compustat and Datastream. From these sources, we located returns for 1,060 repurchase programs.

Some of our analysis requires fundamental information, specifically the book-to-market ratio. Compustat was our primary source for this information. However, Compustat's coverage of Canadian firms is not complete. In addition, Canadian firms that are de-listed are not included in Compustat's research file. For these cases, we obtained book-equity values from a special file prepared for us by Standard and Poor's. As a further step, we hand collected missing book-equity values from Moody's International Manuals. From these sources, book-to-market ratios were obtained for 86% of our sample.

3. Methodology

a. Portfolio formation

Our examination of long-run performance focuses on portfolio returns produced in calendar-time. Several recent papers report evidence based on this approach including Ikenberry, Lakonishok and Vermaelen (1995), Loughran and Ritter (1995), Womack (1996) and Mitchell and Stafford (1997). To use this approach, we calculate monthly returns in calendar-time for a portfolio of repurchase firms.

Firms are added to the portfolio at the beginning of the month following their repurchase announcement and retained for the next three years or until the stock no longer trades. At the beginning of each month, the portfolio is rebalanced so that each stock receives the same weight. Over time, new companies enter the portfolio and old companies leave, causing the number of stocks in the portfolio to vary. In some months, the number of stocks in the portfolio is small. To reduce the impact of idiosyncratic noise, particularly when we partition our dataset into various sub-samples, months where a portfolio contains six stocks or less are dropped from our analysis.

The portfolio described above assumes that repurchase firms are held for three years, beginning in the month following the announcement. In addition to this strategy, we calculate portfolio returns for other investment horizons including year 1, year 2 and year 3 following the announcement. For example, for the year 1 portfolio, a monthly time-series of returns is calculated for firms that announced a program in the previous 12 months. Similarly, we also report performance for year -1.

b. Benchmark models and index returns

Using the calendar-time portfolio approach, we estimate abnormal performance using two benchmarks. We first evaluate performance using a standard one-factor, CAPM approach. Here, we regress the time-series of monthly excess returns to the repurchase portfolio on excess market returns:

$$r_{p,t} - r_{f,t} = \alpha + \beta_m(r_{m,t} - r_{f,t}) + \epsilon_t \quad (1)$$

where $r_{p,t}$ is the monthly return to a given calendar-time portfolio. The risk-free return, $r_{f,t}$, is the return to the 30-day Canadian government bill. The return to the TSE Index is our market return, $r_{m,t}$. Abnormal performance is measured by α .

The focus of our performance analysis relies on the Fama-French (1993) three-factor model:

$$r_{p,t} - r_{f,t} = \alpha + \beta_m(r_{m,t} - r_{f,t}) + \beta_{vmg}(r_{value,t} - r_{growth,t}) + \beta_{smi}(r_{small,t} - r_{large,t}) + \epsilon_t \quad (2)$$

The first term in equation (2) controls for general market movements in a given month t . The last two terms in equation (2) are value/growth and size factors. These factors are calculated using BARRA's

Canadian style returns for small-cap-value stocks, small-cap-growth stocks, large-cap-value stocks and large-cap-growth stocks.⁷ For its Canadian indices, BARRA defines its large-cap universe as the largest 200 firms trading on the TSE. The next largest 300 TSE firms define the small-cap universe. These two groups are each subdivided into growth and value portfolios. BARRA accomplishes this by calculating a measure that gives two-thirds weight to the market-to-book ratio and one-third weight to dividend yield. The small-cap and large-cap portfolios are sorted on this measure and split into two groups so that the value and growth portfolios have the same total market capitalization. For the three-factor model above, the book-to-market factor is defined as the average return for BARRA's two value portfolios (large-cap-value and small-cap-value) minus the average return to BARRA's two growth portfolios (large-cap-growth and small-cap-growth). This factor is labeled as the value minus growth portfolio, or vmg. Similarly, the size factor is obtained by taking the average return of BARRA's two small-cap portfolios (small-cap, value and small-cap, growth) and subtracting the average return of BARRA's two large-cap portfolios (large-cap-value and large-cap-growth). This factor is labeled as small minus large, or sml. BARRA updates these style indices in January and July of each year. These series start in July of 1990. Thus while we include repurchase programs announced during 1989 and the first half of 1990, we do not begin measuring excess performance until July 1990.⁸

⁷ BARRA is a U.S.-based firm that provides software and information services to investment managers, pension fund consultants, plans sponsors and others in the investment community. The style indices used in this study were obtained from BARRA's Canadian internet site: www.barra.ca. Although not reported in this paper, we examined the behavior of the three-factor model using BARRA style indices. Overall, the model appears to work well in Canada.

⁸ To maximize the number of repurchase firms in our sample, we begin recording repurchase announcements in January 1989, the first month for which copies of *The Daily Record* were available from the TSE archives. We begin measuring performance in July 1990 when the BARRA style factors are available. Of course, an alternative to using BARRA factors would be to construct our own factors, thus allowing us to measure performance for 18 more months prior to July 1990. While possible, the portfolios would have less seasoning and, thus, be less populated and more noisy. Moreover, for much of the 1990 to 1998 period, BARRA calculates and reports its style factors in real-time, thus reducing concerns over potential biases.