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Canadian Investment Opportunities and Electoral Regimes

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Canadian Investment Opportunities and Electoral Regimes*

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Based on historical returns from 1951 to 2009 and mean-variance frontier analysis, this paper finds that investors should expect significantly better Canadian stock market opportunities in the late versus early parts of the federal government's mandate, as well as when a Democratic versus Republican American president is in power. No significant difference in performance is observed with respect to the Canadian government's minority status or ruling party. We explore the implications of these findings for optimal asset allocation and market efficiency.

1. Introduction

Canadian political parties spend large amounts of time, money and effort to convince electors that their policies are the most appropriate for the country. In particular, they argue that their economic policies are the best for the finances and growth of the country, that they are the best equipped to foster solid relations with the United States (US) and that they should be given “strong” mandate to operate efficiently and reduce uncertainty. Political analysts and economists regularly comment on these claims and discuss whether the “timing” is right for an election. They further analyze the outside influence of American politics. The media and ultimately many citizens show tremendous interest for Canadian federal elections and the resulting parliaments. Should investors pay attention to election outcomes?

Using monthly returns on Canadian bills, bonds and stocks from 1951 to 2009, this paper investigates this issue through five sub-questions. Are investment opportunities different in:

- 1- Minority versus majority governments?
- 2- Left-leaning Liberal versus right-leaning Conservative governments?
- 3- The early versus late parts of the federal mandates?
- 4- Left-leaning Democratic versus right-leaning Republican presidential administrations?
- 5- The early versus late parts of the American presidential mandates?

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We answer these questions about investment opportunities in different “electoral regimes” with a traditional mean-variance analysis. Specifically, using bonds and stocks, we compute the investor opportunity set, which is delimited by the mean-variance frontier, conditional on the electoral regimes. We then evaluate the Sharpe ratio performance of the individual assets and optimal portfolios, and formally test for the equality of Sharpe ratios across regimes. Finally, we examine the optimal asset allocation between bills, bonds and stocks across regimes by computing the asset weights for selected optimal portfolios.

Apart from being motivated by the common rhetoric of political actors and pundits, our study contributes to a growing academic literature examining the relationship between electoral regimes and returns. For the US, Huang (1985) Hensel and Ziemba (1995), Chittenden, Jensen and Johnson (1999), Santa-Clara and Valkanov (2003) and Booth and Booth (2003) show that large and small-capitalisation equities yield higher returns under Democratic presidencies and in the last two years of a presidential term, while US Treasury bonds and bills produce higher returns under Republican presidencies. As no corresponding differences in volatility or macroeconomic conditions are found, the “Democratic equity premium” and “presidential cycle effect” have been called puzzles.

For Canada, Foerster (1994) and Chrétien and Coggins (2009) are the main references. Focusing on estimates of expected return and standard deviation, they document a “prime ministerial cycle effect” as well as a Democratic equity premium and presidential cycle effect in Canadian stocks, but no robust “Liberal equity premium” or minority government differential. This paper expands on their results by looking at mean-variance frontiers, Sharpe ratios and optimal asset allocations across regimes, offering a clearer overall picture of investment opportunities.

The results of this paper indicate that investors and portfolio managers should pay close attention to electoral regimes. The Canadian investment opportunities are significantly better in the late parts of the federal election cycle than in the first two years and in Democratic versus Republican administrations. The performance spread is economically important: The Sharpe ratios of the optimal portfolios are more than three times higher in the favourable regimes. The differential performance of the stock market is particularly striking, with *negative* Sharpe ratios in early mandates or in Republican presidencies.

While total investment opportunities are not different in minority versus majority parliaments, under Liberal versus Conservative governing parties, or in the late versus early parts of the US presidential cycle, bonds and stocks perform significantly better in majority parliaments and late US mandates, respectively. Also, stocks perform worst when the Canadian and US governments are simultaneously in the early part of their mandates, but having ideologically aligned leaderships in the two countries does not lead to a difference. Finally, following electoral regimes would result in large optimal asset allocation shifts for managed portfolios.

The remainder of the paper is divided as follows. Section two describes the electoral regimes, the methodology for measuring the investment opportunities and the data sample. Section three presents and interprets the results. Section four concludes the paper with a look at the implication of our results for market efficiency.

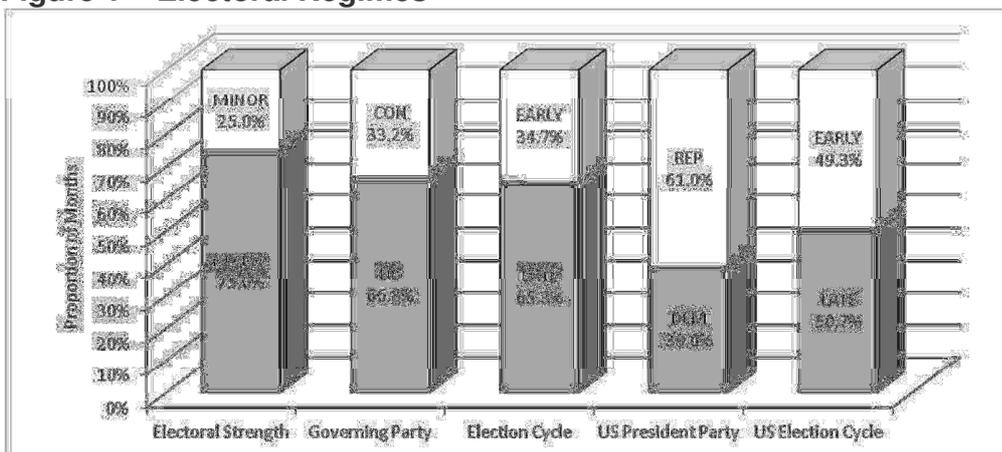
2. Methodology and Data

This section defines the electoral regimes, and describes the financial assets and performance measures used to compare the investment opportunities across regimes. Our database starts in January 1951 and ends in December 2009, for a total of 708 monthly observations covering 19 different Canadian elections.

2.1 Definitions of Electoral Regimes

Using publicly available information on Canadian and American election results, we form electoral regime variables organized into five categories: electoral strength of the government, governing party, election cycle, US President party and US election cycle. In each category, we classify each month into one of two mutually exclusive regimes as defined below, based on information *at the start of the month* so that the regimes are publicly known when examining the investment opportunities up to the end of the month. Figure 1 shows the proportion of months in a given regime.

Figure 1 – Electoral Regimes



Electoral Strength: The MINOR regime includes all months for which the parliament was in minority status (the governing party has less than half the total number of seats). The remaining months form the MAJOR regime. Minority governments represent just 25% of the months in our sample, although 9 (out of 19) elections resulted in such status.

Governing Party: The LIB regime regroups the months under a Liberal federal government, while the CON regime includes the other months. The (left-leaning) Liberal Party of Canada is in power for 66.8% of the months, while the (right-leaning) Conservative Party of Canada (in its current appellation) rules for 33.2% of the time.

Election Cycle: The EARLY regime includes the months in the first two years after an election resulting in a majority, while the LATE regime has the other months. The restriction to majority months ensures governmental control on policy implementation and election calling in the early part of the mandate, creating conditions where “tough” long-term policies could be implemented more easily. With such a definition, 34.7% of the months fall in the EARLY part of the mandate.

US President Party: The DEM regime regroups the months under a Democratic President, while the REP regime includes the months with a Republican President. Democratic and Republican Presidents are in the White House for 39% and 61% of the months, respectively.

US Election Cycle: The EARLY_US regime includes the months in the first two years after a fixed-date US presidential election, while the LATE_US regime has the months in the last two years of the four-year mandate. Thus, about half the months are in each regime.

2.2 Measures of the Investment Opportunities

The investment opportunities we investigate are composed of four assets representing three common financial asset classes: bills (denoted RF, based on three-month Treasury bills), bonds (denoted RGOV, based on long-term government bonds) and stocks (two assets denoted RVW and REW, based on respectively value-weighted and equally-weighted portfolios of all exchange-traded stocks). While RVW is similar to the TSX Composite Index and is highly weighted in large-cap stocks, REW can be thought as representing the small- and medium-cap equity asset classes as they are the dominant portfolio components. The series of monthly realized returns for these assets are obtained from the TSX Canadian Financial Markets Research Centre (CFMRC).

Table 1 presents the annualized mean return (monthly value $\times 12$), the annualized standard deviation (monthly value $\times \sqrt{12}$) and correlations for the four assets. The historical risk-reward opportunities look good compare to the ones of the last few years. More importantly for our purpose, we can observe the expected risk-return trade-off between the assets.

Table 1
Investment Opportunities: 1951 to 2009

	RF	RGOV	RVW	REW
Mean	5.62%	7.14%	10.80%	17.45%
St Dev		8.41%	15.54%	19.78%
Corr		RGOV	22.31%	12.23%
		RVW		83.68%

To examine how the investment opportunities vary across electoral regimes, we rely on simple mean-variance (MV) analysis. Specifically, we first estimate the means, standard deviations and correlations, conditional on being in a given regime. We then compute the corresponding MV frontiers, which represent the limit of the investors' opportunity set.

Next, we compare the Sharpe ratios of the individual assets and of the MV tangency portfolio (the portfolio with the maximum Sharpe ratio) across regimes. The Sharpe ratio (Sharpe, 1966), also called the reward-to-variability ratio, is a portfolio's excess return over the risk-free rate divided by its standard deviation. This commonly used performance measure is intuitively interpreted in the mean-standard deviation space as the slope of a line from the risk-free asset to a specified portfolio. The higher is the slope, the better located is the portfolio. We formally test for the equality of Sharpe ratios across regimes with a statistic proposed by Jobson and Korkie (1981). When applied to the maximum Sharpe ratio portfolio, this test becomes a test on the equivalence of the optimal MV opportunities across regimes.

Finally, we examine the optimal asset allocation between bills, bonds and stocks across regimes by computing the asset weights for selected MV efficient portfolios.

3. Empirical Results

This section analyses our empirical results. We first focus on comparing the investment opportunities across regimes and then provide some evidence on the effect of the regimes on the optimal asset allocation.

3.1 Investment Opportunity Set and Sharpe Ratios

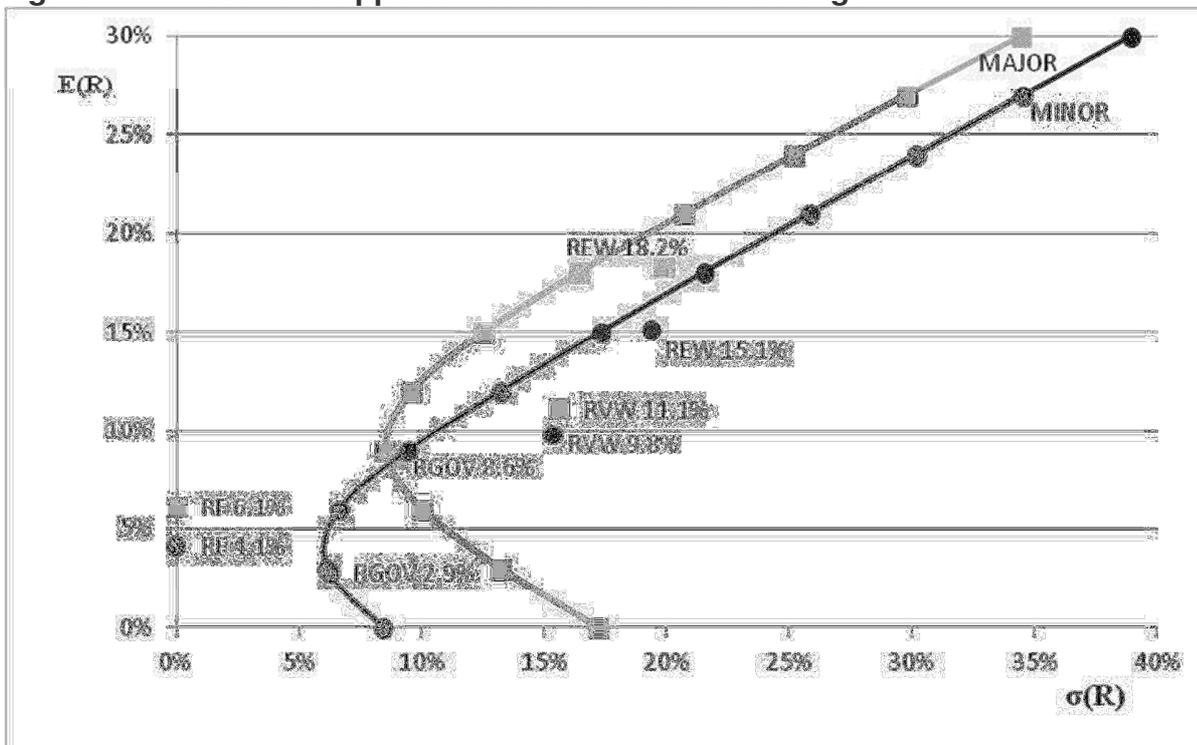
This section first presents our results with the help of a figure and a table for each electoral regime category. The figure shows, in the mean-standard deviation space, the risk-free asset RF, the risky assets RGOV, RVW and REW, and their MV frontier, across the two relevant regimes differentiated by black circle and grey square markers. The assets' annualized mean returns conditional on the regimes are also provided in their labels. The table gives the Sharpe ratio across regimes of the assets and of the tangency portfolio. It also provides the p -value and associated significance level for a test on the equality of the ratios across regimes.

The last part of this section discusses further considerations, including robustness checks, for our main findings.

3.1.1 Electoral Strength

Figure 2 and Table 2 show the results for the minority versus majority government regimes.

Figure 2 – Investment Opportunities and Electoral Strength



Note: Black circle (grey square) markers represent investment opportunities in the minority (majority) government regime.

Figure 2 shows that the MV frontiers are relatively similar across government strength regimes. The most noticeable difference is for bonds, as RGOV provides a higher mean return in minority than majority situations (8.6% versus 2.9%).

Table 2 confirms these impressions. While the resulting RGOV Sharpe ratios (0.27 versus -0.21) are significantly different at the 10% level, the other Sharpe ratio differences are not significant. In particular, the test for the maximum Sharpe ratio portfolios indicates that the optimal MV opportunities are equivalent across government strength regimes.

Table 2
Sharpe Ratios and Electoral Strength

	MAJOR	MINOR	Diff p-val
RGOV	0.273	-0.205	0.090 *
RVW	0.321	0.367	0.867
REW	0.607	0.568	0.891
Maximum	0.724	0.675	0.882

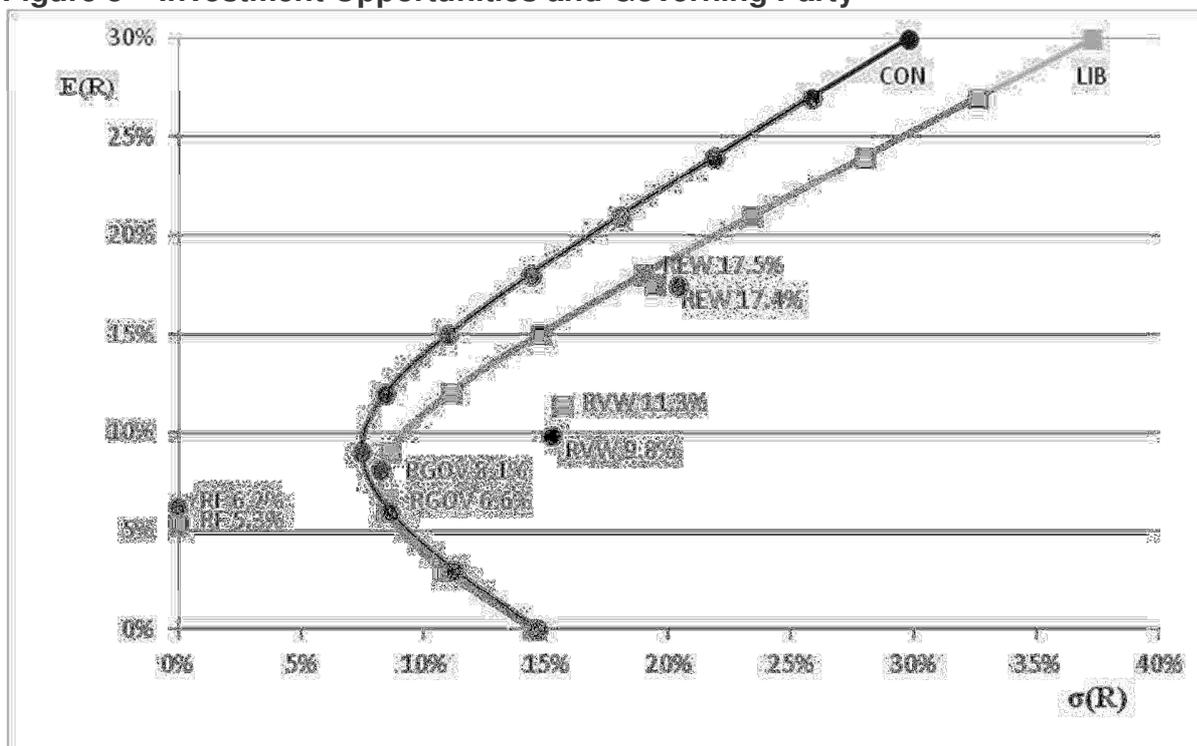
Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Hence, with regards to overall investment opportunities, our results do not support the commonly-stated request by politicians that they should be given “strong mandate” to reduce uncertainty, although there is some weak evidence that the bond market performs worst in minority parliament.

3.1.2 Governing Party

Figure 3 and Table 3 show the results for the Liberal versus Conservative government regimes.

Figure 3 – Investment Opportunities and Governing Party



Note: Black circle (grey square) markers represent investment opportunities in the Conservative (Liberal) government regime.

The resulting MV frontiers are comparable in Liberal versus Conservative regimes, with all four assets being located similarly under both regimes. While the tangency portfolio shows a slightly better Sharpe ratio in the Conservative regime (0.82 versus 0.67), none of the Sharpe ratio differences are significant.

Table 3
Sharpe Ratios and Governing Party

	LIB	CON	Diff p-val
RGOV	0.156	0.231	0.794
RVW	0.381	0.232	0.588
REW	0.622	0.550	0.797
Maximum	0.671	0.822	0.610

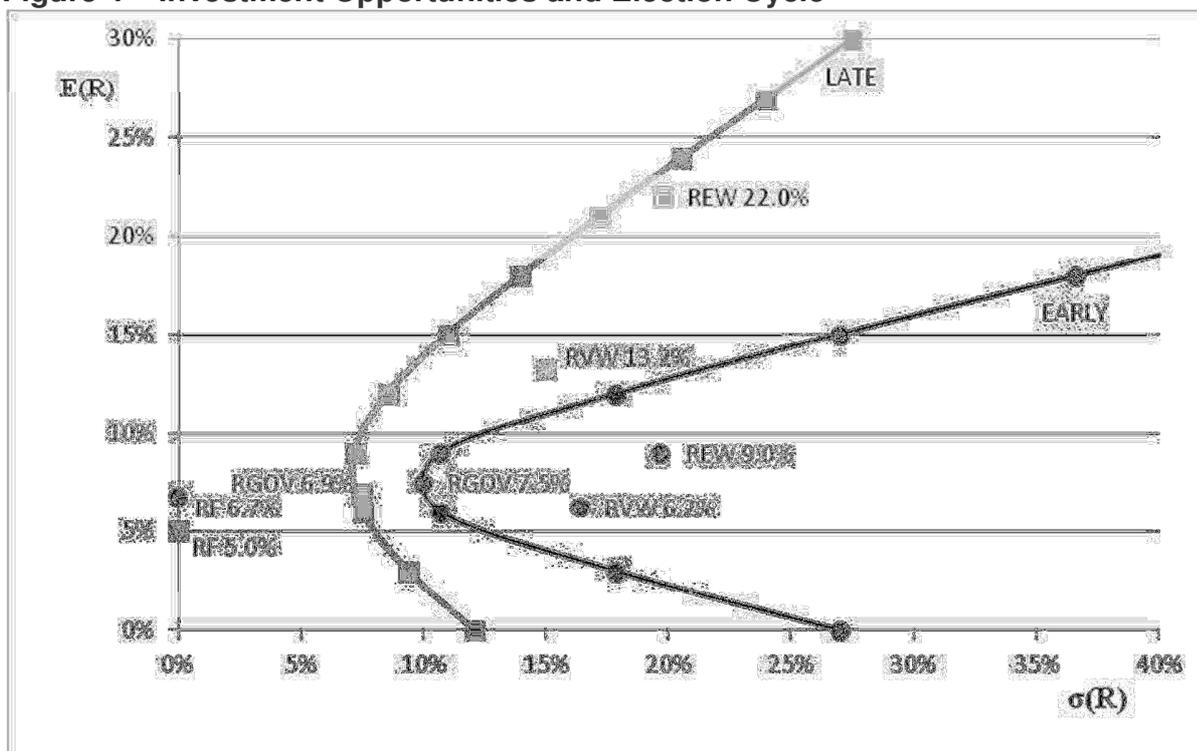
Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Even though politicians spend a considerable amount of time and efforts on their economic agendas, we find no evidence that the right-leaning Conservative policies and the left-leaning Liberal policies produce different investment opportunities. This finding is in contrast to the puzzling US evidence that stock market performs better under a Democratic president. However, it is consistent with the view that both governing parties are relatively in the center of the political spectrum with respect to their economic policies.

3.1.3 Election Cycle

Figure 4 and Table 4 show the results for the late versus early parts of the election cycle.

Figure 4 – Investment Opportunities and Election Cycle



Note: Black circle (grey square) markers represent investment opportunities in the early (late) regime of the election cycle.

Figure 4 illustrates striking differences in investment opportunities. In particular, there is strong evidence that the stock market performs much better in the LATE regime. Without any

difference in the risk, the historical returns on RVW and REW average, respectively, 13.2% and 22.0% in the LATE regime versus 6.2% and 9.0% in the EARLY regime. These return differences, combined with the lower risk of RGOV in the LATE versus EARLY regimes (6.9% versus 10.0%), produce materially better opportunities in the months leading to an election.

Table 4 confirms the significance of these differences. RVW has Sharpe ratios of 0.55 in late mandate and -0.03 in early mandate, while the figures for the tangency portfolio are 0.93 and 0.31, respectively. While the Sharpe ratio of RGOV is three times higher in the LATE regime, the difference is not statistically significant.

Table 4
Sharpe Ratios and Election Cycle

	LATE	EARLY	Diff	p-val
RGOV	0.257	0.077	0.524	
RVW	0.546	-0.031	0.039	**
REW	0.857	0.113	0.010	***
Maximum	0.932	0.308	0.036	**

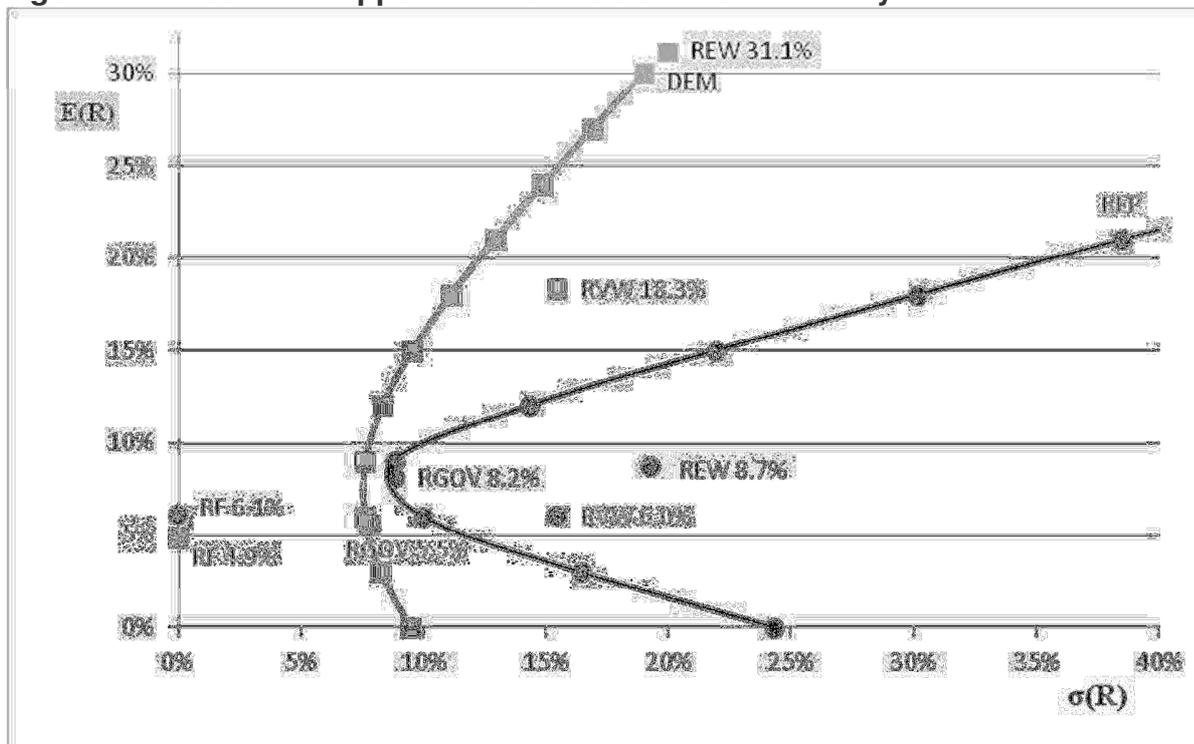
Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

While confirming these hypotheses is beyond our scope, plausible explanations in the literature include strategic policy timing and opportunistic election calling. Governments have an incentive to choose “tough” policies in early mandate and to delay more popular measures to late mandate, near the next election. They also have the option to call an election at the right moment, including when markets are performing well or before anticipated difficult times.

3.1.4 US President Party

Figure 5 and Table 5 explore the Democratic versus Republican US presidential regimes.

Figure 5 – Investment Opportunities and US President Party



Note: Black circle (grey square) markers represent investment opportunities in the Republican (Democratic) presidential regime.

Figure 5 indicates that the Canadian MV frontier under Democratic US presidents is convincingly better located. This finding is the consequence of the differential in stock market performance. For apparently similar risk, RVW and REW earn 12.3% and 22.4% higher mean return, respectively.

The corresponding Sharpe ratios confirm that the stock market performance difference is significant at the 1% level, leading to a similar conclusion for the overall investment opportunities. The reward per unit of risk available on the MV frontier is more than three times higher under Democratic versus Republican administrations.

Table 5
Sharpe Ratios and US President Party

	DEM	REP	Diff p-val
RGOV	0.085	0.235	0.596
RVW	0.868	-0.007	0.003 ***
REW	1.314	0.136	0.000 ***
Maximum	1.340	0.412	0.003 ***

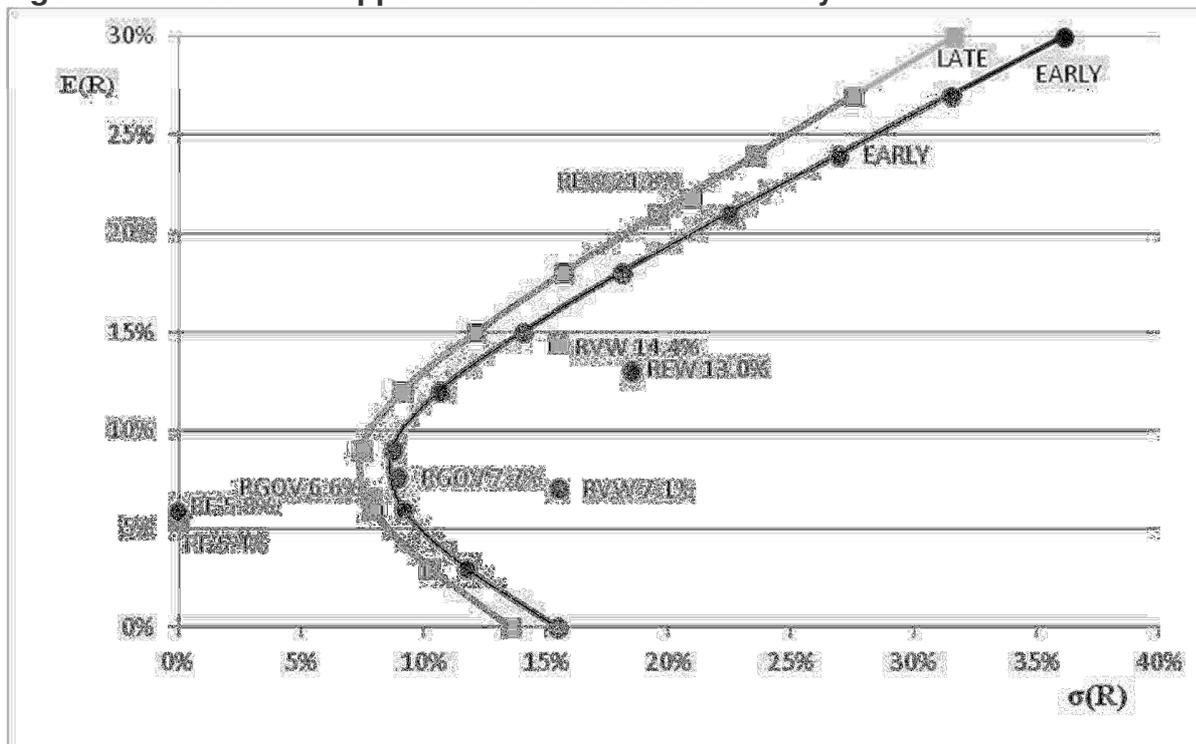
Note: ***, ** and * indicate significance at the 1%, 5% and 10% levels, respectively.

Given the existing works on the cross-border effect of US politics and on Canada-US financial markets integration (for examples, Mittoo, 1992, Foerster and Schmitz, 1997, Normandin, 2004), our Canadian finding is not unexpected, although its explanation is as puzzling as the so-called Democratic premium documented in the US stock market.

3.1.5 US Election Cycle

Figure 6 and Table 6 show examine the late versus early US presidential mandate regimes.

Figure 6 – Investment Opportunities and US Election Cycle



Note: Black circle (grey square) markers represent investment opportunities in the early (late) regime of the US presidential cycle.

The figure illustrates that the overall investment opportunities are similar, even though the late mandate opportunities dominate the early mandate opportunities for all expected returns. While the MV frontiers are close, there are large spreads in annualized mean return for the stock market assets. For example, RVW earns twice as much return in the late versus early parts of the presidential cycle.

Although economically important, this difference only results in a weak statistical significance in the Sharpe ratio equality test of table 6. The Sharpe ratios for the other assets and the optimal MV portfolio are not significantly different across the US election cycle regimes, confirming that the investment opportunities are similar.

Table 6
Sharpe Ratios and US Election Cycle

	LATE	EARLY	Diff p-val
RGOV	0.157	0.202	0.876
RVW	0.582	0.079	0.073 *
REW	0.780	0.389	0.171
Maximum	0.802	0.676	0.669

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

It is noteworthy that this finding is somewhat not in accordance with the results in Foerster (1994), Foerster and Schmitz (1997) and Chrétien and Coggins (2009). The reason is the inclusion of data from 2007 to 2009 in the current study. The exceptionally difficult times in the last two years of the George W. Bush presidency, culminating with the subprime crisis at the end of 2008, result in both a reduction of the previously highly significant LATE versus EARLY differences and an increase in the uncertainty around our estimates.

3.1.6 Further Considerations

This section summarizes the findings of a number of additional steps taken to expand our results and check their robustness.

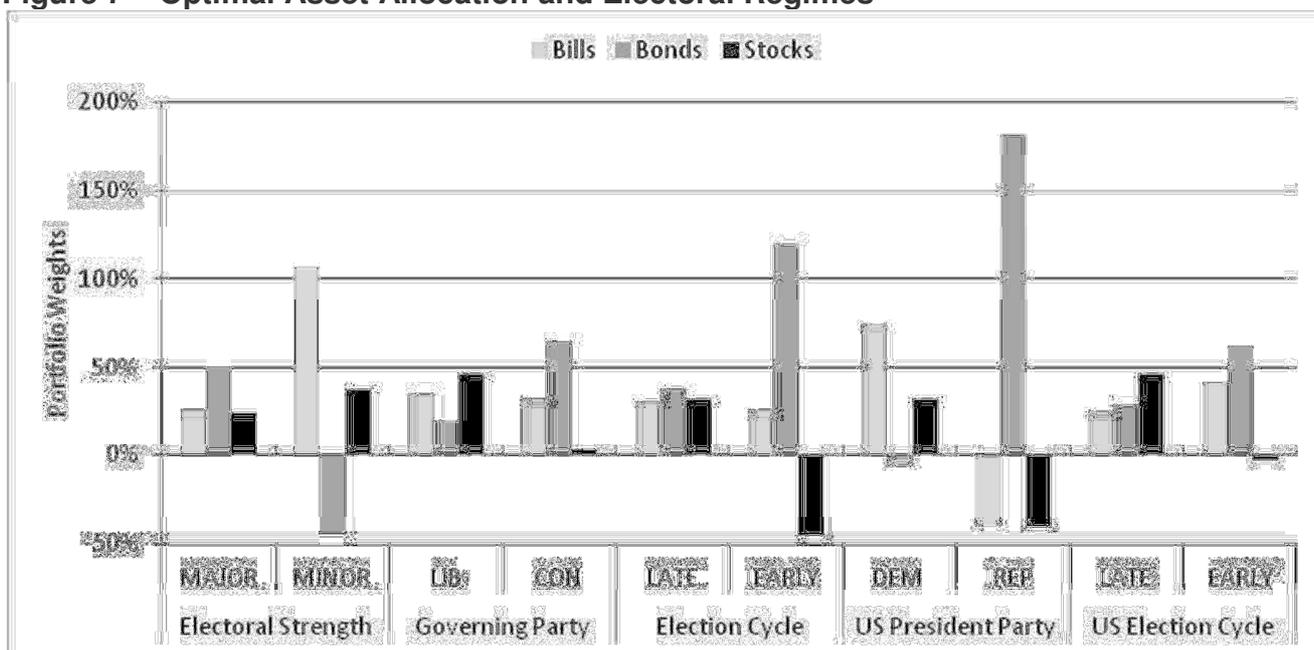
First, we re-examine the investment opportunities in the Liberal versus Conservative regimes, focusing on *majority* governments, where policies are more likely to be effectively implemented. We find little differential effects. Second, we find no evidence that controlling for the US presidential affiliation alters our conclusion on similar investment opportunities in the Liberal versus Conservative regimes, or that ideologically aligned leaderships between the neighbouring countries is beneficial. Third, we find that the combined Canadian and US election cycle effect is stronger than each effect taken separately. For example, RVW has Sharpe ratios of 0.54 when both countries are in late mandate and -0.39 when they are in early mandate. The stock market tends to perform especially poorly when both countries are simultaneously in the first two post-election years.

Fourth, following Santa-Clara and Valkanov (2003) and Chrétien and Coggins (2009), we use predetermined information variables to control our results for the state of the economy. Whether using Canadian or US information variables, our main findings are not affected so that they do not appear to have been expected due to measurable business cycle variations. Fifth, we perform a simulation to account for the concern of Powell et al. (2007, 2009) that the presidential effect might be spurious due to the highly persistent nature of the presidential regimes. Using a procedure similar to Powell et al. (2009) and Chrétien and Coggins (2009), we confirm that our main findings are robust to such concern.

3.2 Optimal Asset Allocation

Figure 7 shows the optimal MV asset allocation between bills, bonds and stocks across regimes for an investor with a 15% annualized required return, which is slightly above the return on the RVW stock index for the period studied. While the portfolio weights for bills and bonds are based on RF and RGOV, respectively, the stock allocation is the sum of the portfolio weights on RVW and REW. Although not illustrated, a decrease in the investor's required return generally results in a larger allocation to bills with proportionally smaller allocations to bonds and stocks.

Figure 7 – Optimal Asset Allocation and Electoral Regimes



Note: The figure shows the optimal asset allocation between bills, bonds and stocks for an investor with an annualized required return of 15%.

The main conclusion from the figure is that an optimally managed portfolio would require considerable shifts in asset allocation across electoral regimes, even in situations where there was little statistical evidence of differential investment opportunities. In accordance with the results presented earlier, we observe large rebalancing of stocks. In particular, while their allocations in the LIB, DEM and LATE regimes are around 40%, they are liquidated or even sold short in the CON, REP and EARLY regimes. The allocations in bills and bonds also vary greatly, especially in the electoral strength and US president party regimes.

4. Concluding Remarks

This paper starts with by asking whether investors should pay attention to election outcomes. Our findings show that they would gain considerably by following electoral regime signals and that doing so optimally would result in large asset allocation shifts. The two most important elements to consider are the election cycle and the US presidential administrations. Investment opportunities, and especially stocks, are much better in the late versus early part of the Canadian and US election cycles, and in Democratic versus Republican White Houses.

While historical in nature, and thus subject to the difficulty of extrapolating past returns into the future, our performance results involve investable, portfolio strategies, using start-of-the-month electoral information to invest for the month. As no apparent variation in risk account for the results, the large differences in opportunities that we document are somewhat puzzling. Given that electoral information is public and easily available, the efficient market theory states that investors should not be able to profit from it, yet portfolio managers following some of the electoral signals would have made huge gains. Since rational explanations for our results are not well developed and are left for future research, it remains to be seen if such opportunities will materialize again in the coming years.

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