Corporate Governance as a Value Driver in Canada

by

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Abstract

Assessing a firm's corporate governance is an integral part of an equity valuation; however it is gradually becoming less and less of the process. A large separation between shareholders and manager has formed – each with distinctly different motivations. It is our belief that Democracy firms (corporations with motivations aligned with shareholders) should outperform Dictator firms (corporations with motivations aligned with management) in the long-run in Canada. Our results do not demonstrate statistical significance regarding our hypothesis; nonetheless, we caution investors who are enthusiastic about investing in firms who knowingly express their motivations away from their investors.

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Dedication

To Nicole, Mom and Dad, thanks for your support over the last year.

Love, Jeremy

Carrie, Mom, Dad, Mel, Katie and Rich you have helped me through this journey. Thank you.

Love, Richard

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Introduction

Corporate Governance has generally been a forgotten metric when looking at valuations of public equities. During the 1980's, a large fundamental change to corporate America enabled what were once idle acquisition markets turn into a time where management not only had to be concerned with daily operations, but whether their assets were being bid in a hostile takeover. It can be argued it was at this moment that the division between principals (shareholders) and agents (management) became overwhelmingly clear. For some corporations, corporate governance became a tool to protect existing management from being replaced, instead of a mechanism to maximize shareholder value.

The division between management and corporations has continued to widen during the 1990's and into the first decade of the 21st century. Management has become increasingly particular in how their legacy is going to be protected, without signalling to shareholders that this is their primary motivation. In academic literature, a large amount of research has been conducted to attempt to unfold management's motivations. While researching motivations, the primary underlying concern was - what will happen to the stock price? A large portion of the academic research has been conducted on American markets; therefore we felt it was appropriate to add depth to the Canadian research. The results for Canada and the United States are mixed regarding governance as a driver for stock returns.

Underestimating the role of governance has been a negative trend in security valuations. Generally, governance does not make public headlines unless devastating performance is the direct result of an imperfect governance structure. In the American setting,

the case of Enron has acted as a stimulus to revisit transparency and prudency in governance. The same can be said of the Nortel case in Canada. The point to be made is that by investing in one of these two companies, or one of similar deceit, a shareholder would lose everything invested – regardless of when the position was purchased. Valuations of quantitative factors may have looked impressive or at least on par to its peers; however by analyzing corporate governance, it is our belief that some portion of the losses could of have been avoided. We confess, that we have the benefit of hindsight in our favour, however, similar to how equity valuations use historical information to forecast relevant variables, the same can be done with corporate governance.

We make the argument that by analyzing corporate governance and reserving a value for it, a shareholder can generate greater returns in the long-run. Utilizing the concepts of Capital Asset Pricing Model, a corporation that knowingly places management's value ahead of shareholder's value needs to prepare to deliver a higher expected rate of return, given that it is a riskier investment because shareholders do not maintain control. It is with this idea in mind we research corporate governance in Canada and attempt to find if it is a catalyst for stock returns.

Literature Review

The initial motivation for our topic on corporate governance came from the year spent analyzing various securities during our graduate studies. The idea became a functioning project after looking at a paper done by three researchers, who performed a similar analysis for US markets. The precedent paper Corporate Governance and Equity Prices, Gompers, Ishii, Metrick

2003, concluded that corporations that implemented governance tactics that were aligned with shareholders, rather than management, out-performed the latter by 8.5% per year. They separated approximately 1,500 American stocks, from September 1990 to December 1999, into deciles and focused on the bottom and top groups. The bottom group (Democracy corporations)[1] represented the lowest index score, but most in line with shareholder's value. The top group (Dictator corporations) represented the highest index score, but most in line with management's benefit.

Most research on the effects of acquisitions use an event-study approach.[2] Looking at stock returns before and after a major announcement would only marginally help explain the relationship between corporate governance and returns. Correspondingly, Gompers et al. resolve this issue by using a long-term investment horizon –'long-run event study'. Utilizing the entire 1990's decade, and creating their own Governance Index, the full-effects of the principal-agent paradigm can be analyzed to determine what is better for stock returns.

Gompers et al. built their Governance Index by gathering data on 24 distinct parameters from the Investor Responsibility Research Centre (IRRC). The parameters were further sub-indexed into 5 groups (Delay, Voting, Protection, Other, State). Each parameter represented a 'dummy' variable, whereby 1 point was given to a parameter if it favoured management's goals; conversely 0 points if it favoured shareholders. By using the 'all-or-nothing' approach the Index was built with minimized subjectivity. In most cases, the parameter would be clearly aligned with one party, and left little ambiguity towards which side of the spectrum it related

[1] Note that in our study, our index has the lowest score relating to the Democracy group and highest score for the Dictator group.
[2] Bhagat and Romano [2001], Bittlingmayer [2000], Comment and Schwert [1995], and Karpoff and Malatesta [1989]

too. The downfall in 'all-or-nothing' is that the actual strength in relation to where it lies on the spectrum is not considered. Therefore, all parameters are deemed equally weighted regardless of whether they lie in a more neutral territory or on the extreme ends. For the purpose of Gompers et al. and our study, it is believed that minimizing the subjective nature by not determining the actual strength of the parameters far outweighs the merits of calculating this value.

Gompers et al. used regression analysis to determine if there are correlations between their Index and individual firm characteristics. Determining if managements employ certain characteristics to reach short-term performance measures is important to supplement their tactics with governance strategies. The individual firm characteristics regressed were: book-to-market ratio, firm size, share price, monthly trading volume, Tobin's Q, dividend yield, S&P inclusion[3], past five-year stock return, past 5-year sales growth, and percentage of institutional ownership. Gompers et al. found that their Index was positively correlated with size, share price, trading volume and institutional ownership[4]. Further, they found that the 5 year sales growth and stock market performance were negatively correlated with the Index.

Corporate Governance research on the effect of performance runs deeper than Gompers et al. Research demonstrating a consistent positive relationship between excess returns and governance aligned with shareholders is unheard of. While the previous study has conclusive results, Black [2001] argues that there is not a decisive relationship – at least for US

[3] Not all firm studied were part of the S&P 500. Some were from the American Stock Exchange (AMEX) and the NASDAQ markets.
[4] Gompers, Ishii, & Metrick [2003]

stocks. Further Klein, Shapiro and Young [2004] find mixed results regarding governance in Canada.

The Klein et al. study resembles that of Gompers' due to the similar findings between family-owned businesses and the Dictatorship group. Both demonstrate a relationship between shareholders aligned governance and excess returns. While the relationship regarding family owned businesses is not statistically significant, Klein et al. argue that investors should be put on alert for these types of situations. Further, similarities between the two studies extend to the idea of firm specific characteristics influence over returns. Trying to bridge the separation between principals and agents is done by situating competitive wages for managers, prudency with disclosure and shareholder's rights. Investing in this mindset correlates with higher returns.

In similar context, La Porta et al. [1999] deal with the choice between widely and not-widely dispersed ownership. The similarity stops there as the optimal choice in regards to governance-returns is with non-widely dispersed firms. Concentration amongst only a few owners make it nimble to act to changes in the market. Additionally, family owners, or those handful in control, can exercise their influence over the majority.[5]

The diversity of opinions regarding this topic is challenging. Statistically significant data is difficult to find across all studies. Supplementary, being submersed in the data, the big picture is lost. Rational investors will obviously want to have strong rights, complete disclosure from management and long-term shareholder value at the forefront of management's agenda. For our study it is this thought that needs to be otherwise proven wrong. Rational investing as

[5] Majority does not necessarily mean in voting terms, but rather a vast number of minority shareholders.

an assumption is basic and mandatory for all economic analysis. Therefore, when data suggests a compromise to this assumption – the results need to be not taken for full value. For example, intuitively investors would be reluctant to invest in a firm, knowingly that a board is not independent but rather built around senior management. However, Klein et al. find that independence is not "valued as governance mechanisms" across all ownership structures. However, they do find a negative correlation between family owned firms and board independence.

Bebchuk, Cohen & Ferrell [2005] generate a trading strategy such that they would purchase a sub-group of firms that have low Index (strong shareholder rights) and jointly short sell a sub-group of high scoring firms. The strategy proved to be robust in all 72 sub-periods of two or more years from 1990 - 2003. An approximate abnormal return of 7% is dignified with statistical significance. The point to be made is that while many studies when combined leave corporate governance as an ambiguous performance driver; rational trading strategies amongst two divided sub-groups can generate alpha. The individualistic reasoning behind the alpha may not be known with statistical significance; nonetheless it is difficult to argue with a strategy that was robust in all economic cycles.

Capital market finance has argued that returns need to be measured on a risk-adjusted basis. Further, applying the ideology of the Capital Asset Pricing Model (CAPM) mean-variance approach to an investment, it is not rationale to invest in a riskier asset, holding all else constant, if the riskier asset is returning the same or worse. If you think of a corporation that has their interests more aligned with management than with shareholders; the standard deviation of their returns may not necessarily indicate risky behaviour; however a rational

investor would see through this even without the risk being captured in a standardized format. The empirical data may say otherwise, but stepping back once again to gain composure on the situation, this type of investment resembles that of an illiquid asset. Calculating standardized risk measurements for an illiquid asset can be very challenging, because it is not marked-to-market frequently; therefore the total risk may not be completely revealed. While the risky asset may be liquid and readably convertible to cash; the resemblance lies within the unique obstacle between the investor and their optimal returns and the investor's need to be compensated for that obstacle. By looking at corporate governance in this manner, an investor is more easily able to optimize returns. If a security has similar characteristics to those in the Dictator group, investors should demand a higher expected return, similar to any other risky assets, for holding that risk.

Masulis, Wang and Xie [2006] find that empire building – a set of acquisitions that generally are not aligned with shareholder's interest, but rather lead to personal benefit of management are more likely to occur with corporations that have higher anti-takeover provisions (ATPs). Correspondingly, the higher agency costs result in lower abnormal returns. Masulis et al. find with statistical and economic significance that once Dictator firms[6] make an "acquisition announcement, [they] generate lower abnormal bidder returns than those made by [Democracy] firms." Masulis et al. go deeper than we do into the reasoning behind 'good or bad' governance by looking in terms of takeover defences. The significance of this literature to our idea is that by knowingly investing in an asset with 'bad' governance - you would want a higher expected return. You as the investor are giving up control and in lieu want the

[6] Masulis, Wang and Xie do not use this term, but we make the case to characterize firms with a high level of ATPS as Dictators to simplify all of the sub-groups from other studies.

compensation. If empirical data, such as Masulis et al., demonstrate the reverse in terms of expected returns, then a rational investor would avoid 'bad' governance firms. However, this is not the case. Public exchanges trade these types of assets daily, therefore the only plausible idea that logically makes sense is that investors are not looking at corporate governance as one of their primary valuation metrics. In reality, do everyday investors really care about corporate governance? Looking into literature regarding asset valuation concludes that corporate governance is not likely to be one of the key metrics in buying or selling. Unless something is compellingly obvious, for example a negative portrayal in the media, it is quite possible the reasoning behind the balance of power shift towards management is that investors are not paying attention. One argument against our idea about receiving additional expected returns for taking on the risk for the Dictator securities would be a sell-off trend in these securities because of the risk-return relationship. Under these circumstances, efficient market literature would tell us that mispricing in securities would lead to a 'bidding up' rally until some form of market equilibrium is reached. This argument falls short due to the empirical data found in at least two studies mentioned so far – trading a long Democracy portfolio is robust in all periods. From this, we argue that a rational investor should stay away.

Based upon the review of the literature, it appears that corporate governance has mixed results. Like most topics, for every pro-argument, there will be an off-setting study. However, underlying all of this is that there has been a perverse change in how companies are managed. The division between shareholders and management has never been so clear. The mixed results can lead to the argument that, maybe researchers are trying to find a pattern when there really is no pattern at all. However, what we can defend is that a rational investor should know what

they are getting when they buy a trade ticket. If they knowingly buy a security, when management intentions are from within, they ought to be compensated for this incurred extra risk. Empirical data, from our point of view, correlates to extra reward for buying Democracy securities. Therefore, we believe, companies with management's interest in the forefront should be avoided.

Hypotheses

The first hypothesis we want to test is Hypothesis 1 found in Gompers et al. [2003] but using Canadian data.

Hypothesis 1 – Governance provisions[7] cause higher agency costs

Predicting that lower corporate governance firms (Dictator) have higher agency costs[8], we are implying that they should as well have lower abnormal returns when compared with higher corporate governance firms (Democracy). Gompers et al. [2003] found that higher agency costs would affect lower performance.

The second hypothesis relates to how firm value is affected by corporate governance. Firm value, as measured by Tobin's Q, should be highly – positively correlated to abnormal returns.

Hypothesis 2 – Large amounts of governance provisions cause lower firm value

[7] Corporate Governance measures not conducive to maximizing shareholder wealth.
[8] Externalities from not having the shareholder and management's motivations aligned.

Therefore, we predict that the Dictator group will have a lower firm value when compared with the Democracy Group. Gompers et al. [2003] found that an increase in the amount of governance provisions would cause lower firm value.

The third hypothesis is that in the short-run (defined by less than a year) corporate governance does not have enough time to impact performance. However, in the long-run we would expect to see the first two hypothesises hold.

Hypothesis 3 – Large amounts of governance provisions effect returns in the long-run

The last hypothesis we do not directly test but have chose to include it as part of the third hypothesis - we predict that on a risk basis that the Dictator group is riskier because an investor is giving up control. Therefore, for an optimal portfolio, if expected excess returns above the Democracy portfolio are not achieved then a rational investor would not allocate capital towards the group, unless on an individual basis there is an undervalued asset. By using the data collected from Hypothesis 3, we can determine the expected returns from both groups.

Data

In order to rank the stocks found on the Toronto Stock Exchange, we used the corporate governance index found on Bloomberg L.P. Institutional Shareholders Services Inc. (ISS). ISS ranks publicly traded companies based on the Corporate Governance Quotient (CGQ) Index – a relative based ranking system ranging 0.1 – 100. Employing a relative index removes a bias towards determining the actual strength of the governance rating. For example: company A who has the highest possible rating of a 100 is not 50 points higher than company B, but rather

is merely ranked higher. CGQ has become the industry norm in reporting corporate governance rankings for valuations and risk measurements. It utilizes a weighted average relative ranking for two distinct sub-groups – industry peers and the total index (in our case the Toronto Stock Exchange). Each Canadian firm is rated on four core categories, with its aggregate score being a weighted average of the category scores: board structure and composition (40%); executive and director compensation (30%); audit issues (10%); and anti-takeover provisions (20%).

Arguments against the subjective use of a weighted average approach for the index are appropriate, however to simplify the analytical process we maintained the weights as given.

Separating into sub-groups of 10 (deciles) helps to determine the top and bottom 10% of the sample. The benefits of not performing subjective tests to determine absolute scores, we believe out-weigh the value-added from determining these calculations. Summary statistics for the construction of the ten portfolios are listed in Table 1.

Table 1 - Summary Statistics for Corporate Governance Portfolios

Firms per Portfolio	2005	2006			2007				2008				2009			
	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul
1) Dictatorship	16	16	17	17	17	16	16	16	15	14	13	13	17	17	16	15
2)	16	16	17	17	17	16	16	16	15	14	13	13	17	17	15	15
3)	16	16	17	17	15	16	16	15	15	14	13	13	17	16	15	15
4)	16	15	17	17	16	16	16	15	14	13	13	13	16	16	15	15
5)	15	15	16	16	16	15	15	15	13	12	13	12	16	16	15	14
6)	15	15	16	17	16	15	15	15	14	13	13	12	16	16	15	14
7)	15	15	17	17	16	15	15	15	15	13	13	13	17	16	15	15
8)	16	16	17	17	16	16	16	15	15	14	13	13	17	16	15	15
9)	16	16	17	17	17	16	16	15	15	14	13	13	17	17	15	15
10) Democracy	16	16	17	17	17	16	16	16	15	14	13	13	17	17	16	15
Total	157	156	168	169	163	157	157	153	146	135	130	128	167	164	152	148

Fluctuations in the number of firms available for our study each quarter are mainly due to changes in the composition of the index from de-listings, mergers, and bankruptcies. For

simplicity reasons, if a firm is de-listed in the middle of a period, its return is calculated as if its end-of-period price is equal to its last traded price. The maximum number of firms per quarter is 169 and the minimum is 128. There are a sufficient number of data points to be able to draw statistical conclusions from the data.

Stock returns are the primary dependent variable that we use in gauging the impact of corporate governance on firm value. As we will see in the following sections, we condition the data using commonly used market factors and firm characteristics to ensure there are no spurious results nor omitted variable bias. Since we will be testing both short-run and long-run relationships with corporate governance, we look at monthly returns as well as three-year returns. The summary statistics (correlation, mean, and standard deviation) for relevant variables used in our study that relate to short-term stock returns are listed in Table 2. Summary statistics for variables related to tests of long-term returns are listed in Table 3. Descriptions of the variables can be found in the Appendix.

Table 2 - Summary Statistics: Short Term Returns and Related Variables

Panel 1: Correlations with Monthly Returns	MRP	SMB	HML	UMD
1) Dictatorship	0.545	0.328	-0.288	-0.255
2)	0.815	0.464	-0.19	-0.395
3)	0.639	0.425	-0.354	-0.32
4)	0.779	0.434	-0.335	-0.243
5)	0.792	0.527	-0.189	-0.466
6)	0.822	0.553	-0.178	-0.364
7)	0.649	0.344	-0.198	-0.252
8)	0.789	0.478	-0.118	-0.456
9)	0.864	0.521	-0.179	-0.337
10) Democracy	0.824	0.645	-0.367	-0.412

Panel 2: Selected Statistics: Mean | St. Dev.	Monthly Return	Factors
1) Dictatorship	-0.0027 | 0.0499	MRP
2)	-0.004 | 0.0503	-0.0126 | 0.0683
3)	-0.0016 | 0.0588	SMB
4)	-0.0151 | 0.0887	-0.0039 | 0.0379
5)	-0.0139 | 0.0988	HML
6)	-0.006 | 0.0568	-0.0115 | 0.0422
7)	-0.0039 | 0.0539	UMD
8)	-0.0031 | 0.0542	0.0146 | 0.0376
9)	-0.0123 | 0.0744	
10) Democracy	-0.0034 | 0.0678	

From the above table we can see that the four factors do have moderate to strong relationships with the dependent variable, short-term returns. However, there does not appear to be a distinct trend when moving from the Dictatorship portfolio to the Democracy portfolio for any of the four variables. We can also see that each portfolio exhibits negative returns on average due to the selection of time period (2005 – 2008).We will further examine the results of a regression analysis in the next section.

Table 3 - Summary Statistics: Long Term Returns and Related Variables

Panel 1: Correlations with 3-Year Returns	G	LN(Turnover)	SGrowth	Yield
Oct-05	-0.0289	0.1086	-0.0354	0.0437
Jan-06	-0.0787	0.1118	-0.0791	-0.0401
Apr-06	-0.1341	0.1816	0.0529	0.0957
Jul-06	-0.097	0.2509	0.0097	-0.0503
Oct-06	-0.0916	0.1584	0.1203	-0.1164
Jan-07	-0.0387	0.1009	0.1231	-0.1122
Apr-07	-0.036	0.1453	0.0921	-0.1224
Jul-07	-0.0477	0.1119	0.0228	-0.1002

Panel 2: Selected Statistics: Mean | St. Dev.	Return	G	LN(Turnover)	SGrowth	Yield
Oct-05	-0.112 | 0.821	53.75 | 28.432	19.069 | 1.428	1.906 | 8.781	0.012 | 0.015
Jan-06	-0.38 | 0.935	50.958 | 29.249	18.914 | 1.324	2.041 | 13.452	0.013 | 0.021
Apr-06	-0.578 | 1.091	50.948 | 29.758	19.177 | 1.289	1.174 | 1.997	0.01 | 0.012
Jul-06	-0.391 | 0.984	50.646 | 29.951	18.886 | 1.374	4.651 | 36.155	0.012 | 0.018
Oct-06	-0.277 | 0.948	52.565 | 29.041	18.94 | 1.4	1.478 | 2.557	0.012 | 0.021
Jan-07	-0.331 | 0.955	52.158 | 29.06	19.027 | 1.282	1.407 | 2.646	0.012 | 0.021
Apr-07	-0.338 | 0.95	52.704 | 29.533	19.311 | 1.269	1.515 | 3.218	0.014 | 0.024
Jul-07	-0.434 | 0.905	53.101 | 29.333	19.298 | 1.396	1.792 | 5.446	0.013 | 0.019

The most important conclusion about the relationship between long-term returns and the variables included in the above table is the negative correlation with the corporate governance index, although the relationship is rather weak. This suggests that firms with poorer corporate governance scores actually outperformed good governance companies. We will delve into these relationships further once we run the regressions for all relevant variables in a later section.

Firm value as measured by Tobin's Q (Q) is another metric we use to test whether or not good governance matters. In order to isolate the portion of Q that can be attributed to governance, we condition the data with the same variables used by Shin and Stulz [2000][9] in their study on Q. The summary statistics for the relevant variables are listed in Table 4, and the descriptions of the variables can be found in the Appendix.

Table 4 - Summary Statistics – Tobin's Q and Related Variables

Panel 1: Correlations with Tobin's Q	G	LN(Firm Age)	LN(Book Assets)
Oct-05	-0.0006	-0.1532	-0.4081
Jan-06	-0.018	-0.1617	-0.3969
Apr-06	-0.0662	-0.2007	-0.4464
Jul-06	-0.1519	-0.2015	-0.417
Oct-06	-0.1317	-0.1924	-0.3949
Jan-07	-0.122	-0.1703	-0.3858
Apr-07	-0.1245	-0.1574	-0.3685
Jul-07	-0.0644	-0.1322	-0.322
Oct-07	0.1085	-0.1115	-0.3533
Jan-08	0.1422	-0.1002	-0.253
Apr-08	0.0424	-0.116	-0.2621
Jul-08	0.0438	-0.0892	-0.256
Oct-08	0.1311	-0.151	-0.4233
Jan-09	0.0597	-0.0752	-0.3443
Apr-09	0.0498	-0.0902	-0.364
Jul-09	0.0742	-0.1236	-0.3707

Panel 2: Summary Statistics: Mean | St. Dev.	Q	G	LN(Firm Age)	LN(Book Assets)
Oct-05	1.746 | 0.946	52.647 | 28.286	2.871 | 0.877	8.315 | 1.636
Jan-06	1.898 | 1.164	50.237 | 29.275	2.902 | 0.851	8.333 | 1.638
Apr-06	2.101 | 1.479	50.585 | 29.296	2.86 | 0.832	8.174 | 1.692
Jul-06	1.917 | 1.192	50.63 | 29.576	2.868 | 0.831	8.186 | 1.689
Oct-06	1.906 | 1.599	52.593 | 29.447	2.87 | 0.803	8.26 | 1.706
Jan-07	1.976 | 1.647	52.585 | 29.519	2.895 | 0.823	8.395 | 1.678
Apr-07	1.858 | 1.576	52.394 | 29.807	2.91 | 0.813	8.385 | 1.689
Jul-07	1.744 | 1.06	52.085 | 30.183	2.928 | 0.8	8.451 | 1.667
Oct-07	1.73 | 1.027	52.97 | 29.906	2.933 | 0.774	8.524 | 1.679
Jan-08	1.837 | 1.482	53.392 | 29.222	2.987 | 0.77	8.678 | 1.646
Apr-08	1.742 | 1.204	53.777 | 29.644	3.029 | 0.75	8.748 | 1.644
Jul-08	1.658 | 1.064	54.111 | 29.87	3.056 | 0.742	8.836 | 1.617
Oct-08	1.886 | 2.024	55.996 | 28.524	2.859 | 0.823	8.427 | 1.725
Jan-09	1.389 | 1.344	57.623 | 28.445	2.819 | 0.833	8.503 | 1.715
Apr-09	1.389 | 1.288	56.843 | 28.494	2.89 | 0.797	8.56 | 1.759
Jul-09	1.446 | 1.095	57.298 | 28.736	2.915 | 0.776	8.606 | 1.74

[9] Shin and Stulz 2000

The correlations in the above table yield interesting information about their relationship with Q. First, it is seemingly unrelated to governance, though the correlation switches from negative to positive in July 2007. We also see that the log of firm age is in fact negatively related to Q, when it would have been reasonable to assume that a firm that has been in existence longer may have a greater separation between market value of assets and their replacement cost. For thoroughness, we also found that the correlation is also negative when firm age is not in logs. The log of book value of assets is negatively correlated with Q, which is not surprising considering its non-log value is the denominator of Q. We will revisit these relationships in regression form in a later section.

We have chosen to use Canadian data only, for a couple of reasons. Firstly, there has been large interest in this field during the past decade in the United States. The disproportionate amount of research done in this field compared with Canada was our primary consideration. Canadian and US markets are highly integrated and conducting research on Canadian firms was deemed appropriate. Lastly, while similar to the previous reason, American markets are analyzed more than any other in the world; therefore the opportunity for abnormal returns (alpha) is very minute. It is not to say the Canadian markets are immature by continuous mispricing of securities; however it can be noted that alpha situations may appear more frequently with less analysis by sophisticated investors.

Corporate Governance and Short-Term Returns (Regression 1)

Companies with good corporate governance should create more value for shareholders when compared to those with poor corporate governance. To test this notion, we look at the

monthly returns on ten equally sized portfolios grouped based on their corporate governance ranking. The portfolio returns are value-weighted based on market capitalization on individual companies. We dub the portfolios in the lowest and highest decile of the corporate governance index the Dictatorship and Democracy portfolios, respectively.

Researchers have traditionally dissected returns on individual firms or portfolios based on their style, with common characteristics found to impact returns being: the firm's exposure to the market risk premium ("beta"); the firm's market capitalization ("size"); the market value of the firm's equity relative to its book value ("book-to-market"); and the firm's immediate past returns ("momentum"). Although there have been a number of criticisms as to whether these differences in portfolio style do have a statistically significant influence on returns, we take no explicit position on the issue and simply use the four-factor model as a method of performance attribution, similar to [Gompers et al.][10]. If the return on the Dictatorship Portfolio differs significantly from the Democracy Portfolio, then part of this difference should be accounted for by differences in style.

We use the time-series four-factor model proposed by Carhart [1997][11]:

$$R_t = \alpha_t + \beta_1 MRP_t + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + e_t$$

where R_t is the monthly return on the asset in excess of the risk-free return; MRP_t is the monthly return on the market portfolio in excess of the risk-free return; and SMB_t, HML_t, and UMD_t are the monthly returns on value-weighted, zero-investment, factor-mimicking portfolios for size (small minus big), book-to-market value (high minus low), and momentum of stock

[10] Gompers, Ishii, Metrick 2003
[11] Carhart 1997

returns (up minus down). These factors are specific to Canadian firms and have been kindly provided by Professor Francouer who follows the same methodology as Kenneth French in calculating the factors. The intercept coefficient "α" is interpreted as the abnormal return that could be achieved with passive investment in the four above-listed factors. If corporate governance matters, then the alpha of portfolios with higher corporate governance scores should be higher than those with lower scores.

We run one Ordinary Least Squares (OLS) regression for a long position in each individual decile of the corporate governance index, and one regression for a long position in the Democracy Portfolio combined with a short position in the Dictatorship Portfolio. We update the constituents of each decile on a quarterly basis due to the availability of the data. The results of the regression are in Table 5. T-stats are in parentheses.

Table 5 – Performance Attribution Regressions for Decile Portfolios

Portfolio Decile	*α*	*MRP*	*SMB*	*HML*	*UMD*
1) Dictatorship	-0.0011	0.4914	-0.5472	-0.3970	-0.3523
	(-0.1466)	(3.5179)	(-1.7668)	(-2.14179)	(-1.5455)
2)	0.0030	0.7426	-0.6532	-0.2416	-0.4087
	(0.6496)	(8.3111)	(-3.2969)	(-2.0377)	(-2.8021)
3)	0.0017	0.6301	-0.6291	-0.5453	-0.4829
	(0.2200)	(4.3684)	(-1.9669)	(-2.8486)	(-2.0508)
4)	-0.0085	1.2922	-1.1471	-0.7027	-0.4038
	(-0.9695)	(7.6446)	(-3.0603)	(-3.1329)	(-1.4633)
5)	0.0039	1.2587	-0.8950	-0.4202	-0.9074
	(0.3861)	(6.5245)	(-2.09215)	(-1.6413)	(-2.8816)
6)	0.0010	0.7288	-0.2667	-0.1117	-0.2155
	(0.1721)	(6.4252)	(-1.0602)	(-0.7420)	(-1.1641)
7)	0.0001	0.6659	-0.6279	-0.2727	-0.2843
	(0.0101)	(4.8268)	(-2.0527)	(-1.4895)	(-1.2626)
8)	0.0063	0.7352	-0.5851	-0.1568	-0.4955
	(1.1528)	(6.9991)	(-2.5123)	(-1.1247)	(-2.8898)
9)	-0.0020	1.1037	-0.6148	-0.1880	-0.2733
	(-0.2961)	(8.7477)	(-2.1977)	(-1.1229)	(-1.3271)
10) Democracy	0.0030	0.7680	-0.2347	-0.4575	-0.4077
	(0.4729)	(6.3031)	(-0.8687)	(-2.8295)	(-2.0499)
Democracy - Dictatorship	0.0011	0.2718	0.3185	-0.0604	-0.0588
	(0.1347)	(1.7304)	(0.9145)	(-0.2900)	(-0.2294)

Interpretations Regression 1

With none of the portfolios exhibiting a statistically significant abnormal return in this time-series regression, we cannot conclude that holding a strong corporate governance portfolio during the sample period will outperform a weak corporate governance portfolio. Therefore, we cannot suggest that governance provisions cause higher agency costs – as predicted in Hypothesis 1. Our results mirror the aggregate of all available conclusions on this topic – ambiguity.

Even in an economic sense, there does not appear to be any correlation between abnormal returns and level of corporate governance. As will be discussed in a later section, this suggests that differences in corporate governance are already priced into the securities being tested.

Since we did not find statistical significance with the corporate governance variable, it would be prudent to run similar regressions before we condition the data for the four factors (namely market risk premium, size, book-to-market value, and momentum). We do find similar results with no statistical significance when using market risk premium as the only independent variable on the same data grouped into 11 portfolios (one for each decile and one for a long position in the democracy portfolio and a short position in the dictatorship portfolio). This regression is also known as the Capital Asset Pricing Model.

Additionally, the results found during the 1990's could have been a case of sample period bias, such that abnormal returns in favour of the Democracy group can only found in this small time period. Lastly, in accordance with previous comments, we argue that because this

topic has been analyzed, at least in the United States, for quite some time the level of governance is already priced into the security. Correspondingly, our results of not achieving statistical significant abnormal returns are perfectly valid.

Corporate Governance and Firm Value (Regression 2)

In this section we examine whether there is a relationship between our corporate governance index and firm value as measured by Tobin's Q (Q). Q is a measure of market value of assets to book value of assets and is a relative measure that is comparable among firms of different sizes. A value for Q of greater than 1 implies that the market sees more value in the firm's assets than their replacement cost, which is highly desired by shareholders as opposed to the alternative. Besides the fact that Q was used by Gompers et al, we feel it is a superior measure of relative firm value to other measures such as price-to-book or price-to-earnings for a number of reasons: it incorporates the value of the firm's debt; it is not a backward looking measure like price-to-earnings is; and in theory, replacement cost of assets is more appropriate than historical cost. There has also been some criticism of Q, specifically that it is not consistent between periods with different inflation levels.

Although there are many variations of the traditional Tobin's Q measure, we follow the method of Kaplan and Zingales [1997][12] as described above. Since the value of Q can vary significantly between industries, we follow Gompers, Ishii and Metrick [2003][13] and run regressions for both firm Q and industry-adjusted Q, which is calculated as firm Q minus industry-median Q for the ten industries classified by Global Industry Classification Standard

[12] Kaplan and Zingales 1997
[13] Gompers, Ishii, Metrick 2003

(GICS). As controls for the relationship between Q and corporate governance, we add a vector of firm characteristics which includes the log of firm age as measured by the IPO date and the log of total assets, the same characteristics used by Shin and Stulz [2000][14] in their test of Q. After making the necessary adjustments and selecting the appropriate variables, we regress:

$$Q_t = \alpha_t + \beta_1 G_t + \beta_2 Age_t + \beta_3 Assets_t + e_t$$

where Q is firm Q or industry-adjusted Q, G is the corporate governance variable, Age is the log of firm age in years, and Assets is the log of book value of assets. The intuition behind including firm age in the regression is that we would expect firms with longer histories to have built up their levels of intangible assets in excess of their replacement cost to a greater degree than firms with shorter histories. The book value of assets accounts for the size effect, which has been the focus of many studies to determine if returns and relative valuations are related to the market capitalization of a firm. We run cross-sectional regressions for each quarter between October 2005 and July 2009 inclusive. The number of firms in each cross-sectional regression varies between 125 and 163 based on the availability of data. If corporate governance does in fact have an impact on firm value, we would expect to see a positive and statistically significant coefficient for β_1. The results of the two sets of regressions are in Table 6 for firm Q and Table 7 for industry-adjusted Q. T-Stats are in parentheses.

[14] Shin and Stulz 2000

Table 6 - Firm Q and Corporate Governance

Quarter	α	G	Age	Assets
Oct-05	3.741	0.0008	-0.0448	-0.2297
	(9.0197)	(0.3258)	(-0.5142)	(-4.9392)
Jan-06	4.3265	0.0006	-0.0649	-0.2727
	(8.5661)	(0.2041)	(-0.5866)	(-4.7674)
Apr-06	5.4798	-0.0011	-0.0981	-0.3721
	(9.5964)	(-0.3046)	(-0.727)	(-5.6167)
Jul-06	4.5094	-0.0032	-0.0706	-0.2721
	(9.8876)	(-1.0889)	(-0.635)	(-4.945)
Oct-06	5.2783	-0.0041	-0.1251	-0.3388
	(7.9827)	(-0.9819)	(-0.7739)	(-4.4074)
Jan-07	5.4006	-0.0034	-0.0937	-0.3544
	(7.761)	(-0.7846)	(-0.5814)	(-4.4475)
Apr-07	4.9599	-0.0033	-0.0803	-0.3214
	(7.4487)	(-0.8038)	(-0.515)	(-4.2308)
Jul-07	3.5303	0.0004	-0.0389	-0.2
	(7.459)	(0.1234)	(-0.3483)	(-3.6347)
Oct-07	3.4404	0.0015	0.0068	-0.2122
	(6.643)	(0.5215)	(0.0591)	(-3.9535)
Jan-08	3.4773	0.0052	-0.0484	-0.2042
	(4.2623)	(1.169)	(-0.2774)	(-2.4589)
Apr-08	3.381	0.003	-0.0375	-0.1929
	(5.3531)	(0.8507)	(-0.2536)	(-2.8383)
Jul-08	3.0551	0.0026	-0.0006	-0.174
	(5.234)	(0.8371)	(-0.0048)	(-2.8307)
Oct-08	5.4091	0.0089	0.1028	-0.5121
	(6.4973)	(1.7392)	(0.5326)	(-5.6255)
Jan-09	3.3193	0.0029	0.1909	-0.3098
	(5.6769)	(0.7997)	(1.3785)	(-4.6855)
Apr-09	3.3329	0.0023	0.1675	-0.2989
	(5.7606)	(0.646)	(1.1782)	(-4.7324)
Jul-09	3.1738	0.0028	0.0865	-0.2486
	(6.2587)	(0.9171)	(0.6937)	(-4.5454)

Table 7 - Industry-Adj. Q and Corporate Governance

Quarter	α	G	Age	Assets
Oct-05	1.6126	-0.0007	0.0106	-0.1727
	(3.9167)	(-0.2638)	(0.1229)	(-3.7399)
Jan-06	2.1552	-0.0012	-0.0409	-0.2025
	(4.4723)	(-0.4219)	(-0.388)	(-3.7101)
Apr-06	3.0696	-0.0032	-0.1085	-0.2718
	(5.5388)	(-0.9005)	(-0.8283)	(-4.2272)
Jul-06	2.2859	-0.0048	-0.0641	-0.1919
	(5.168)	(-1.6755)	(-0.5939)	(-3.5959)
Oct-06	3.1683	-0.0048	-0.1413	-0.2669
	(4.7709)	(-1.1472)	(-0.8704)	(-3.4568)
Jan-07	3.1898	-0.0045	-0.1285	-0.266
	(4.5801)	(-1.0331)	(-0.7968)	(-3.3349)
Apr-07	2.9516	-0.0038	-0.0879	-0.2574
	(4.4483)	(-0.9251)	(-0.5657)	(-3.3997)
Jul-07	1.4418	0.0002	-0.0231	-0.1339
	(3.0962)	(0.0847)	(-0.2109)	(-2.4736)
Oct-07	1.321	0.0011	0.0341	-0.1468
	(2.5866)	(0.394)	(0.3026)	(-2.7734)
Jan-08	1.4561	0.004	-0.0408	-0.1364
	(1.8094)	(0.9131)	(-0.237)	(-1.6656)
Apr-08	1.4059	0.0022	-0.0461	-0.1224
	(2.248)	(0.6331)	(-0.3146)	(-1.8186)
Jul-08	1.1294	0.0022	-0.0052	-0.1088
	(1.9633)	(0.699)	(-0.0395)	(-1.7953)
Oct-08	3.609	0.0074	0.0957	-0.4514
	(4.3262)	(1.4474)	(0.4948)	(-4.9489)
Jan-09	2.0781	0.0029	0.1722	-0.2894
	(3.5525)	(0.8019)	(1.2432)	(-4.3761)
Apr-09	2.0722	0.002	0.1566	-0.2788
	(3.5812)	(0.5585)	(1.1012)	(-4.4135)
Jul-09	1.5876	0.0021	0.1089	-0.2099
	(3.161)	(0.6846)	(0.8821)	(-3.8742)

Interpretations Regression 2

We find that the only variable with statistical significance in both sets of regressions is the log of book value of assets, whose non-log value is also the denominator in the calculation of Q. We cannot draw any conclusions about the relationship between corporate governance and firm value in either set of regressions other than the fact that there is a shift from negative to positive coefficients in July 2007 for the industry-adjusted Q regressions. This trend may have economic meaning but is not statistically significant. Therefore, we cannot suggest that governance provisions cause lower firm value – as predicted in Hypothesis 2. These results

suggest that at any given time, the value of a firm's assets as perceived by the market either has no relation to corporate governance levels or this relation has already been priced in by market participants.

Corporate Governance and Long-Term Returns (Regression 3)

Having already examined the relationship between changes in firm value and corporate governance on a short-term basis, we now turn our attention towards long-term performance. A firm that ranks in the highest decile in terms of corporate governance is said to be implementing processes aimed at maximizing value creation for the benefit of shareholders. The effects of good corporate governance may be more prominent in the long run when we ignore interim volatility and firm-specific events (unsystematic risk).

In a modification of the method used by Gompers, Ishii and Metrick [2003][15] for attributing stock returns to various business characteristics, we look at three-year stock returns as our dependent variable with the following cross-section regression over eight quarters from October 2005 through July 2007:

$$R_t = \alpha_t + \beta_1 G_t + \beta_2 Turnover_t + \beta_3 SGrowth_t + \beta_4 Yield_t$$

where R is the three-year return on the stock adjusted for dividends, G is the corporate governance variable, Turnover is the dollar trading volume for the stock in the month preceding the regression, SGrowth is the growth in sales over the preceding three years, and Yield is the dividend yield on the stock based on the latest year of dividend payouts. We feel the partial correlations with these variables and long-run returns make their inclusion appropriate.

[15] Gompers, Ishii and Metrick 2003

Gompers et al. included firm size as measured by market capitalization in the above equation, as well as some variables exclusive to US markets (such as S&P 500 inclusion). Seeing as Turnover and Size are highly correlated (average correlation is 0.813 over the eight quarters), including this extra variable would create significant multicollinearity in the regression. The effect of this characteristic would be for the coefficients to be inaccurate, although the overall statistical significance of the model as measured by the F-statistic would not be affected. The number of firms in each of the eight cross-sectional regressions varies between 98 and 139 based on the availability of data. If corporate governance does have an impact on long-run stock returns, we would expect to see a positive and statistically significant coefficient for β_1. The results of the regressions are listed in Table 8. T-Stats are in parentheses.

Table 8 - Long-Run Stock Return and Corporate Governance

Quarter	*α*	*G*	*Turnover*	*SGrowth*	*Yield*
Oct-05	-1.287	-0.0016	0.0651	0	1.709
	(-1.346)	(-0.6168)	(1.2674)	(-0.2104)	(0.3705)
Jan-06	-2.0756	-0.0032	0.1004	0	-2.7136
	(-1.5614)	(-1.0053)	(1.3946)	(-0.5882)	(-0.6085)
Apr-06	-3.5682	-0.0063	0.169	0.0196	4.9097
	(-2.3107)	(-1.8045)	(2.043)	(0.3829)	(0.5766)
Jul-06	-4.1874	-0.0055	0.2187	0.0016	-5.4619
	(-3.3068)	(-1.7682)	(3.1915)	(0.6385)	(-1.098)
Oct-06	-2.339	-0.0032	0.1193	0.0318	-6.1788
	(-1.8612)	(-0.9738)	(1.7947)	(0.8541)	(-1.3903)
Jan-07	-1.7756	-0.0019	0.0825	0.0342	-5.8291
	(-1.2417)	(-0.563)	(1.0728)	(0.9206)	(-1.2335)
Apr-07	-2.4639	-0.0026	0.1198	0.0184	-5.5937
	(-1.6821)	(-0.7752)	(1.5419)	(0.6103)	(-1.3854)
Jul-07	-2.0022	-0.0026	0.0919	-0.0011	-5.0054
	(-1.5398)	(-0.7688)	(1.3191)	(-0.0604)	(-1.0428)

Interpretations Regression 3

The output of the regression suggests no statistically significant relationship exists between long-run returns and any of the random variables. Therefore, we cannot suggest that large amounts of governance provisions affect returns in the long-run – as tested for in Hypothesis 3. Of even greater surprise is the recurrence of negative coefficients on the corporate governance variable, which although are not statistically significant, do indicate that there is a tendency for firms with lower corporate governance scores to outperform the alternative in an economic sense in the long run. Holding all other variables constant, this does seem to suggest that investors that forego some of their rights are compensated with higher returns in the long run.

Limitations and Recommended Further Research

The most significant limitation in our research was the availability of Canadian data for the past decade. In hindsight we were forced into using a time horizon that was shorter than we would have liked. However, in order to accommodate for this timeframe we would have had to build an index similar to Gompers, Ishii, and Metrick [2003]. Generating a new index, in our opinion, would take away from levels of comparability. While research on corporate governance is relatively new in Canada – by creating our own index instead of using a readily available one would restrict further research in this area. The consequence is that we were limited to the time period used in our study.

The second limitation was the lack of using absolute scoring when characterizing the securities into the different groups. Instead, we followed the generally accepted usage of relative rankings. Without knowing the absolute severity of the governance for the Democracy

or Dictator groups – we are subject to some form of data skewness. Utilizing relative rankings defends us against subjective biases. Determining the absolute score would require making decisions outside of simply inputting parameters, therefore allowing the entrance of subjectivity. We feel that the limitations of relative rankings outweigh the strengths of absolute scoring.

The third limitation involves the nature of our time period. Due to the extremes regarding the lead up to the peak in 2007 until the bottoming of the 2008 recession, our data will suffer from not being part of a 'typical' cycle. The catalyst behind the volatility – fear – is very difficult to quantify; therefore adjusting for this factor cannot be done.

After reviewing governance literature in both Canada and the United States, we have mixed results regarding governance as a driver for returns. All literature we have come across, regardless of the conclusion, use some form of relative ranking. Setting aside personal views, we think it would be a positive exercise for researchers to create an absolute scoring study. This would serve two distinct purposes. Firstly, our research accepts the limitation of possible skewness, therefore by calculating an absolute platform, you would be able to have an idea of just how much skewness exists. Secondly, by calculating an absolute score, you would be able to put to rest any counter-arguments to relative rankings; or pending positive results have a first-movers advantage into a new research field.

Lastly, the challenge of using a governance index is that this can be vastly different from the way that firms actually carry about their practices. Therefore, from this perspective governance scores can be irrelevant. In order to get around this, researchers could look at how firms depict their governance provisions and how they handle them in reality. Unfortunately,

the difficulty that resides in this process comes from management's reliability in hiding what they don't want the public to see. In turn, 'bad' behaviour is usually only transparent after the fact.

Conclusion

Our project's intention was to add depth to the literature on corporate governance in Canada, and in turn hopefully provide a set of results that would provide some clarity in an otherwise ambiguous setting. While, we lack statistical significance in all of our hypotheses - we do caution investors. Our third hypothesis had a sub-argument related to the riskiness of the Dictator group; while there was some evidence to move against our thoughts, there was little in the form of conclusive results. Therefore we maintain our position that the Dictator group is riskier, and in turn would require a higher than expected return in order to invest in these securities.

The separation between shareholders and management has become very clear. What needs to continue is transparency on behalf of management. In a perfect investing environment, management would clearly state their intentions, and through the market place the security would be priced. In reality it is not that simple. Even in this study, we deferred quantifying the significance of management's intentions in favour of a ranking system. Therefore, cautious use of intuition needs to be placed with investors.

After all is said and done, we continued to demonstrate the complexity of corporate governance in the current investment environment. In terms of what we take out of this project is that corporate governance aligned with shareholders is a form of insurance. You may not see

any of the day to day benefits, but it does allow you to sleep knowing that management is determined to maximize shareholders value. To us that is better than trying to figure out what management may or may not be doing. We can leave the reader with one final comment and that is when evaluating the investment potential of a company, as simple as it may sound, don't forget to analyze the corporate governance. If you are going to give up control, than at least choose a security that will compensate you for it.

Appendix

Corporate Governance Quotient (G). The relative ranking of index members from 0.1 to 100 based on corporate governance criteria.

The following three factors are based off of the Fama-French Canadian Factors.[16]

Market Risk Premium (MRP). The average market return minus the 90 day Canadian Treasury Bill (T-Bill) rate.

High Minus Low (HML). The average return on a portfolio of value stocks minus the average return on a portfolio of growth stocks. The value portfolios are characterized by a high book to market ratio. Conversely, the growth portfolios are characterized by a low book to market ratio.

Small Minus Big (SMB). The average return on a portfolio of small stocks minus the average return on a portfolio of large stocks. Fama-French originally created 6 portfolios and divided them into the two groups based on the firm's size.

The following Factor is based off of the Carhart Momentum Factor[17]

Momentum – Up Minus Down (UMD). According to Chi-Hsiou Hung "the average monthly returns difference between the returns on the high and low prior return portfolio"[18]

Tobin's Q (Q). "The market value of assets divided by the book value of assets[19]." In order to calculate market value of assets you take the sum of the market capitalization and book value of liabilities. Tobin's Q is used to determine a firm's value.

[16] Francoeur (2010) and Fama & French (2010)
[17] Carhart (1997)
[18] Hung (2006)

Turnover. The dollar trading volume over one month.

3-Year Sales Growth (SGrwoth). The growth in gross sales over the previous three years.

Firm Age (Age). The age of the firm in years since the firm's initial public offering.

Dividend Yield (Yield). Total dividend payments per share made in the previous year as a percentage of current stock price.

[19] Gompers, Ishii & Metrick (2003)

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