# A Study of the Relationship between Cross-listed Canadian Companies, Corporate Governance, CEO/Chairman Duality and Firm Performance

**Dr. Peter DelPiano**
Johnson &Wales University
1701 NE 127 St
North Miami
FL 33181

**Dr. Claudette Chin-Loy**
Nova Southeastern University
H. Wayne Huizenga School of Business
3301 College Avenue
Ft. Lauderdale
FL 33314

## Abstract

*Many studies have examined the role of corporate governance, CEO/chairman duality, and board composition as each relates to shareholder value. There have also been numerous studies on cross-listed companies, foreign firms listed on a U.S. exchange, to determine what benefits or costs are derived from listing on the U.S. as well as the home* market. *No studies have been done with statistics completely post Sarbanes-Oxley. Therefore, the increases in reporting requirements have not been taken into consideration by previous studies. The purpose of this paper is to study Canadian firms listed on the Toronto Stock Exchange (TSX) cross-listed on the New York Stock Exchange (NYSE) for the years 2005 – 2007 versus Canadian only listed firms to examine the effect of Sarbanes-Oxley on shareholder value. The key research questions in this study are as follows: do Canadian companies that become cross-listed add firm value after a three year period? Is there a difference in corporate governance between Canadian only and cross-listed Canadian stocks?The data was collected for the years 2005 through 2007. The sample for the study consisted of Canadian firms listed on the TSX that were cross-listed on the NYSE. The final sample consisted of 31 companies of the 79 that are cross-listed. These companies were matched with TSX only listed firms according to industry. The results indicated the percentage of inside directors is significantly higher for TSX only listed companies. The independence of the board is expected to increase due to a greater percentage of outside board members anticipated for companies cross-listed. The results show that the percentage of inside directors is significantly higher for TSX only listed companies. Duality of the CEO/chairman is expected to be higher with TSX listed firms and this did not prove to be statistically significant from the results of this study.*

**Key Words:** Corporate governance, cross listed companies, firm performance, Sarbanes-Oxley, CEO/Chairman duality

## *Introduction*

Many studies which have examined the role of corporate governance, top management turnover, ownership structure, CEO/chairman duality, top executive turnover, board composition, global and industrial diversification, and types of compensation as each relates to shareholder value (Doukas and Travlos 1988), (Freund, Trahan, and Vasudevan 2007), (Doukas and Kan 2006), (Kang and Shivdasani 1995). Theories focused on in these studies have included agency, corporate multinationalism, internalization, synergy, managerialism and bonding.

Studies by Charitou, Louca, and Panayides (2007), Foerster and Karolyi, (1993), and Eun and Saherwal (1993) of cross-listed companies, foreign companies also listed on U.S. exchanges, have been done to determine what benefits or costs are derived from listing on the U.S. as well as the home market. Benefits including liquidity, lower cost of capital, increased trading volume, and price discovery have been examined.

There are additional costs of listing, accounting, legal, and possibly additional taxes that must also be considered. The share price of companies prior to and after cross-listing has been measured to determine whether abnormal gains were produced.

### *Literature Review*

A review of the literature indicates the significance of continued examination of foreign companies who chooses to cross-list in the US despite the additional cost of compliance related to the Sarbanes-Oxley Act of 2002 (SOX). A significant body of literature exists today with cost benefit analysis of SOX, with many different conclusions. This is a result of the many variables affecting the stock market corporate earnings and shareholder values. Corporate governance is generally viewed as ethics and moral duties of the corporate board to shareholders values.

Increasing costs leads to diminishing profits and will have a negative economic impact on firm performance. Piotroski and Srinivasan (2008) found smaller firms less able to absorb the additional costs imposed by SOX and therefore more likely to cross-list on the London Stock Exchange Alternative Investment market after the enactment of SOX. There has been a surge in foreign deregistrations since 2007 (Yang, 2013). This paper includes data from 2005 through 2007 to observe the cross listed companies prior to the large number of deregistrations.

Various studies have looked at different corporate governance mechanisms as related to firm value. Kang and Shivdasani (1995) studied Japanese firms and found a negative relationship between non-routine top executive turnover likelihood and firm performance as measured by earnings relative to other firms in the industry. Their study established the importance that the main bank system in Japan performs an important governance function and that outside succession is more likely for firms with large shareholders.

Zhu and Small (2007) reviewed the literature looking at the concerns of financial professionals who were questioning the cost of SOX and whether or not it had a chilling effect on the cross-listings of international companies in U.S. markets. The result of their study indicated that the literature supports that there are several motives for cross-listing, including a desire to increase the visibility of the company, to tap into a more liquid market, to signal strength, or to follow tougher exchange requirements. This allows investors to take advantage of international diversification (Zhu and Small, 2007).

Charitou, et. al. (2007) examined the relationship between cross-listing and corporate governance for Canadian firms cross-listed on U.S. stock exchanges. The study found that cross-listed firms experience changes in their ownership structure after listing and that cross-listed firms have more independent boards and audit committees after listing compared to a matched sample of non-cross-listed companies and relative to the pre-listing period. The study was of companies cross-listed between 1997-2003, and statistics run for one year prior to listing and one year after cross-listed. The authors found corporate governance does not have an impact on the decision to cross-list. However, improvements that relate to the independence of board and audit committees were only found in cross-listed firms.

Foerster and Karolyi (1993) also studied Canadian companies cross-listed on U.S. exchanges. They found expected stock returns for the overall sample significantly lower subsequent to cross-listing and liquidity of the stocks substantially increased when cross-listed. The stocks significantly increased 100 days prior to cross-listing and during the cross-listing period, but significantly dropped in the 100 days after cross-listing.

Another study of U.S. listed Canadian stocks was done by Eun and Sabherwal (2003). The study looked at 62 firms traded on the Toronto Stock Exchange that were cross-listed on a U.S. exchange covering a six month period in 1998. The purpose was to examine the contribution of cross-listing to price discovery. They found that prices on the Toronto exchange and U.S. exchanges were co-integrated and mutually adjusting. Price adjustments due to cross-market information flows took place on the Toronto as well as U.S. exchanges. Therefore, U.S. exchanges also contributed to price discovery.

### *Purpose of the Research*

The purpose of this paper is to compare Canadian companies that are cross-listed on an American exchange with Canadian firms solely listed in Canada. Specifically this study looked at Canadian companies that cross-listed for three years (2005 – 2007) and compared the results over that time period with those listed for the same period exclusively in Canada.

The key research questions in this study are as follows: do Canadian companies that become cross-listed add firm value after a three year period? Is there a difference in corporate governance between Canadian only and cross-listed Canadian stocks? A comparison of cross-listed Canadian companies on both the Toronto Stock Exchange (TSX) and on the New York Stock Exchange (NYSE) with Canadian only listed stocks, on the TSX, was made to establish if there is firm value added by such cross-listing. Board composition, net profit margin, and change in chief executive/chairman duality were also considered in this study. While one such study (Charitou, et. al. 2007) exists, this study examined a longer time period and with some different variables, and the period covered was almost completely pre SOX (1997-2003. The number of internationally cross-listed stocks in 1997 was 4,700 and this number declined to 2,300 by the end of 2002 (Karolyi, 2006). The findings of this paper will contribute to the existing literature for several reasons. First, while there have been studies regarding cross-listed firms none have been done with statistics that are completely post Sarbanes-Oxley. Therefore, the increases in reporting requirements have not been taken into consideration by previous studies. Second, it specifically looked at changes in firm value over a three year period post cross-listing versus Canadian only listed companies controlling for variables which are being investigated at this time. Finally, this study combined cross-listed studies from the literature review with those that looked at other variables such as corporate governance issues while concentrating on firm value.

## *Research Methodology, Sample, and Data Sources*

There are 79 Canadian companies currently cross-listed on the New York Stock Exchange (NYSE) which is the dataset for this study. These firms were identified from the NYSE website. To qualify for this study a company needs to have been cross-listed from the Toronto Stock Exchange (TSX) to the NYSE prior to January 2005 and have annual sales of $175 million, the minimum revenue amount required for a company to be in full compliance with Sarbanes-Oxley as of November 2004.

The final sample consisted of thirty-one companies. Companies eliminated from the study included those cross-listed after December 2004, ones that merged with other firms after 2004, mutual funds or trusts that do not operate a business, firms with unavailable governance data or firms that could not be matched with like businesses solely listed on the TSX. December 2004 is used as the cut-off to be able to compare three years of data (2005 – 2007) for these cross-listed companies, under SOX requirements, with their Canadian only listed counterparts. The companies, shown in table one by industry; have been paired with Canadian firms listed on the TSX only. The matching was determined by industry and amount of revenue. The purpose is to determine the effect of SOX during the 2005 through 2007 period to the cross-listed firms, compared to the Canadian cross-listed firms. Governance data was retrieved from statements filed with the Security and Exchange Commission and the System for Electronic Document Analysis and Retrieval as well as corporate annual reports. The bonding hypothesis will be tested in this study. The bonding hypothesis credits premiums resulting from cross-listing to the bond that forms between stockholders and managers when non U.S. firms relent to U.S. regulations. The increased enforcement by the SEC may reduce information asymmetry between the management of the firm and its shareholders (Charitou, et. al.). Thus, it is expected that the increased reporting due to being listed on the NYSE will create value to the shareholders. The study utilized the independent t-test to perform analysis on the data.

## *Research Questions and Hypotheses*

The purpose of the study is the Following: 1) to determine if Canadian companies that become cross-listed on the NYSE add firm value after a three year period compared those Canadian only listed companies, 2) to determine if a difference exist regarding corporate governance between cross-listed and TSX only listed companies. A comparison of cross-listed Canadian companies on a U.S. market with Canadian only listed stocks will be made to establish if there is firm value added by such listing. Board composition, net profit margin, and change in shareholder value will be considered in the comparison.

The bonding hypothesis will be tested in this study. The bonding hypothesis credits premiums resulting from cross-listing to the bond that forms between stockholders and managers when non U.S. firms submit to U.S. regulations. The increased enforcement by the SEC may reduce information asymmetry between management of the firm and its shareholders (Charitou, et. al., 2007). Thus, it is expected that the increased reporting due to being listed on the NYSE will create value to the shareholders.

This study compares corporate governance measures and profitability between the two groups of firms to find the impact of SOX on board independence, CEO duality, and net profit margin.

Therefore, the following hypotheses are proposed:

**Hypothesis 1**: Canadian firms cross-listed on the NYSE will have boards of directors with a greater percentage of outside directors than Canadian firms solely listed on the TSX.
**Hypothesis 2:** Canadian firms cross-listed on the NYSE will have a higher net profit margin than Canadian firms solely listed on the TSX.
**Hypothesis 3:** Canadian firms cross-listed on the NYSE will have a lower percentage of CEO/Chairman Duality than those firms solely on the TSX.

### *Results and Findings*

In this section the relationship between the cross-listed firms and Canadian companies solely listed on the TSX were analyzed, and the governance and profitability variables were discussed in relation to the results of the tests performed. The independence of the board is expected to increase due to a greater percentage of outside board members anticipated for companies cross-listed. The results show that the percentage of inside directors is significantly higher for TSX only listed companies. Specifically, the average of inside directors of TSX only firms ranges from 19 to 20.6%, while cross-listed companies average between 11.7 and 12.4%. The independent t-test performed showed this to be statistically significant. (See Appendix)

It is expected that cross-listed companies will have a higher net profit margin than those listed solely on the TSX. No significant difference was found from the independent t-test performed. It is noteworthy, however, that the average for the cross-listed companies increased from an average return of 9.2% in 2005 to 15.3% in 2007. The TSX only listed companies performed better than the cross-listed firms in 2005 and 2006. (See appendix)
Duality of the CEO/chairman is expected to be higher with TSX listed firms and this did not prove to be statistically significant from the results of this study. TSX only listed companies had 29% dual CEO/chairmen in 2005 and 23% in both 2006 and 2007. Cross-listed companies had 13% in each of the three years.

### *Limitations and Future Research*

Although this study contributes to the existing knowledge base, it is not without limitations. One problem of the study was the matching of cross-listed companies with TSX only listed firms. In some instances it was difficult to find a match according to revenue or industry while being solely listed on the TSX. Most large Canadian companies are cross-listed on a foreign stock exchange. This study was intentionally written chronologically close to the passage of Sarbanes-Oxley. Future studies in this area may show different results as cross-listed firms are subject to SOX for a greater period, and as laws are interpreted or enforced differently. Such studies may benefit from increase legislative interpretation and guidance to achieve the new regulatory requirements.

### *Conclusion and Practice Implications*

The purpose of this study was to look at the effect of SOX on corporate governance and profitability. The results of this study show that there is a statistically significant difference in board independence between NYSE/TSX cross-listed companies and those firms listed only on the TSX. The bonding hypothesis, however, which credits premiums resulting from cross-listing to the bond that forms between stockholders and managers when non U.S. firms submit to U.S. regulations, cannot be confirmed.

The findings of this paper will contribute to the existing literature for several reasons. First, while there have been studies regarding cross-listed firms none have been done with statistics that are completely post Sarbanes-Oxley. Although Canadian firms do not have to comply as completely as U.S. firms, the increase in reporting requirements have not been taken into consideration by previous studies. Second, it will specifically look at changes in firm value over a three year period post cross-listing versus Canadian only listed companies controlling for certain variables which are being investigated at this time. Finally, this study will combine the cross-listed studies from the literature review with those that looked at other variables such as corporate governance issues while concentrating on firm value.

**Table 1: Distribution of Cross-listed Canadian Companies on the NYSE**

| Industry | Frequency | %* |
|---|---|---|
| Gold mining | 3 | 9.68% |
| Exploration and production | 6 | 19.36 |
| Gas distribution | 1 | 3.23 |
| Banks | 4 | 12.90 |
| Insurance/ financial services | 5 | 16.13 |
| Railroads | 1 | 3.23 |
| Chemicals | 3 | 9.68 |
| Pharmaceuticals | 1 | 3.23 |
| Metals | 1 | 3.23 |
| Auto parts | 1 | 3.23 |
| Oil services/equipment | 1 | 3.23 |
| Electricity | 1 | 3.23 |
| Medical equipment | 1 | 3.23 |
| Computer services | 1 | 3.23 |
| Aerospace | 1 | 3.23 |

* Rounded to the closest 1/100th

All companies cross-listed to the NYSE prior to 1/1/05 and all with sales in excess of $175 million per year.

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## *Appendix*

**Cross-listed Companies NYSE and TSX**

| | NPM% | | | Chairman/CEO | | | Percent Inside Directors | | |
|---|---|---|---|---|---|---|---|---|---|
| | 05 | 06 | 07 | 05 | 06 | 07 | 2005 | 2006 | 2007 |
| CP | 12% | 17% | 20% | N | N | N | 20% | 17% | 17% |
| AGU | 9 | 1 | 8 | N | N | N | 8 | 8 | 8 |
| NCX | (2) | (11) | 5 | N | N | N | 9 | 8 | 9 |
| POT | 14 | 16 | 20 | N | N | N | 9 | 9 | 9 |
| BVF | 26 | 20 | 24 | Y | Y | Y | 25 | 20 | 20 |
| TAC | 7 | 0 | 11 | N | N | N | 9 | 9 | 9 |
| CAE | (20) | 6 | 10 | N | N | N | 8 | 9 | 9 |
| MGA | 2 | 3 | 5 | N | N | N | 17 | 17 | 15 |
| CGI | 6 | 4 | 6 | N | N | N | 27 | 17 | 17 |
| MDS | (8) | (5) | (9) | N | N | N | 9 | 9 | 8 |
| CCJ | 16 | 21 | 18 | N | N | N | 8 | 8 | 8 |
| TRP | 20 | 14 | 14 | N | N | N | 8 | 8 | 8 |
| CNQ | 11 | 24 | 23 | N | N | N | 8 | 9 | 9 |
| ENB | 7 | 6 | 6 | N | N | N | 9 | 8 | 8 |
| ECA | 23 | 35 | 18 | Y | Y | Y | 7 | 7 | 7 |
| NXY | 29 | 15 | 19 | N | N | N | 8 | 8 | 9 |
| PCZ | 10 | 9 | 13 | N | N | N | 9 | 9 | 9 |
| SU | 10 | 19 | 16 | N | N | N | 9 | 8 | 8 |
| TLM | 17 | 18 | 13 | N | N | N | 10 | 11 | 9 |
| ABX | 17 | 27 | 18 | N | N | N | 12 | 19 | 20 |
| KGC | (30) | 18 | 31 | N | N | N | 9 | 9 | 9 |
| AEM | 15 | 32 | 30 | N | N | N | 22 | 22 | 22 |
| ABX | 17 | 27 | 18 | N | N | N | 12 | 19 | 20 |
| RY | 20 | 21 | 21 | N | N | N | 6 | 6 | 7 |
| SLF | 9 | 9 | 11 | N | N | N | 8 | 8 | 8 |
| BNS | 23 | 20 | 19 | N | N | N | 13 | 13 | 13 |
| FFH | ( 8) | 3 | 15 | Y | Y | Y | 20 | 14 | 14 |
| MFC | 10 | 12 | 12 | N | N | N | 7 | 7 | 7 |
| BMO | 23 | 26 | 20 | N | N | N | 7 | 6 | 6 |
| CM | (3) | 23 | 27 | N | N | N | 6 | 6 | 6 |
| TD | 17 | 29 | 22 | N | N | N | 12 | 12 | 11 |
| OPY | 3 | 6 | 8 | Y | Y | Y | 43 | 43 | 43 |

**TSX Listed Companies**

| | NPM% | | | Chairman/CEO | | | Percent Inside Directors | | |
|---|---|---|---|---|---|---|---|---|---|
| | 05 | 06 | 07 | 05 | 06 | 07 | 2005 | 2006 | 2007 |
| GBI | 6% | 11% | 9% | Y | Y | Y | 13% | 13% | 13% |
| CHE.UN | 3 | 1 | 4 | N | N | N | 44 | 43 | 33 |
| CUS.UN | 14 | 12 | 13 | N | N | N | 14 | 14 | 10 |
| ECH | 8 | 5 | (6) | N | N | N | 14 | 14 | 14 |
| ATB | 7 | 22 | 20 | N | N | N | 13 | 13 | 10 |
| CU | 10 | 13 | 16 | N | N | N | 8 | 9 | 8 |
| LNR | 8 | 7 | 5 | N | N | N | 33 | 33 | 33 |
| MCH | (6) | 1 | (3) | Y | Y | Y | 12 | 12 | 22 |
| CTY | 5 | 4 | 5 | N | N | N | 17 | 14 | 14 |
| AGO | (6) | 1 | 5 | Y | Y | Y | 25 | 25 | 25 |
| DPM | 20 | 40 | 9 | N | N | N | 36 | 42 | 36 |
| EMA | 10 | 11 | 11 | N | N | N | 13 | 13 | 13 |
| GWE | 20 | 12 | (4) | Y | Y | Y | 33 | 33 | 33 |
| GZ | 13 | 10 | 13 | N | N | N | 33 | 33 | 33 |
| HSE | 20 | 21 | 21 | N | N | N | 8 | 8 | 8 |
| CLT | 24 | 29 | 7 | N | N | N | 20 | 20 | 20 |
| CLL | 19 | 3 | 15 | N | N | N | 17 | 17 | 17 |
| CDH | 29 | 11 | 13 | N | N | N | 43 | 29 | 29 |
| CMT | 19 | 31 | 32 | N | N | N | 17 | 17 | 14 |
| CG | 13 | 17 | 16 | N | N | N | 11 | 11 | 11 |
| INM | 38 | 39 | 20 | Y | Y | Y | 11 | 11 | 11 |
| QUA | (6) | 4 | 28 | N | N | N | 13 | 13 | 13 |
| CCI | 11 | 14 | 12 | Y | Y | Y | 38 | 45 | 45 |
| HSBC | 29 | 33 | 28 | Y | N | N | 22 | 11 | 10 |
| CLPR | 9 | 8 | 6 | N | N | N | 38 | 40 | 36 |
| CWB | 30 | 33 | 36 | N | N | N | 8 | 8 | 8 |
| CCS | 5 | 5 | 5 | N | N | N | 5 | 5 | 5 |
| EGI | 13 | 15 | 11 | N | N | N | 20 | 14 | 14 |
| ETC | 20 | 20 | 17 | N | N | N | 10 | 9 | 11 |
| GWO | 7 | 7 | 7 | Y | Y | Y | 33 | 35 | 32 |
| LB | 7 | 7 | 9 | Y | N | N | 17 | 17 | 8 |

**Statistics**

**T –Test for Percentage of Inside Directors**

| | listing | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| insidedir05 | cross listed | 31 | 12.3548 | 8.01893 | 1.44024 |
| | tsx listed | 31 | 20.6129 | 11.53163 | 2.07114 |
| insidedir06 | cross listed | 31 | 11.7419 | 7.30738 | 1.31244 |
| | tsx listed | 31 | 20.0323 | 11.97910 | 2.15151 |
| insidedir07 | cross listed | 31 | 11.7097 | 7.28100 | 1.30771 |
| | tsx listed | 31 | 19.0000 | 11.07550 | 1.98922 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | |
|---|---|---|---|
| | | F | Sig. |
| insidedir05 | Equal variances assumed | 7.849 | .007 |
| | Equal variances not assumed | | |
| insidedir06 | Equal variances assumed | 13.108 | .001 |
| | Equal variances not assumed | | |
| insidedir07 | Equal variances assumed | 12.442 | .001 |
| | Equal variances not assumed | | |

| | | t-test for Equality of Means | | | |
|---|---|---|---|---|---|
| | | t | df | Sig. (2-tailed) | Mean Difference |
| insidedir05 | Equal variances assumed | -3.274 | 60 | .002 | -8.25806 |
| | Equal variances not assumed | -3.274 | 53.515 | .002 | -8.25806 |
| insidedir06 | Equal variances assumed | -3.290 | 60 | .002 | -8.29032 |
| | Equal variances not assumed | -3.290 | 49.611 | .002 | -8.29032 |
| insidedir07 | Equal variances assumed | -3.062 | 60 | .003 | -7.29032 |
| | Equal variances not assumed | -3.062 | 51.849 | .003 | -7.29032 |

**T Test for net Profit Margin**

| | listing | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| NPM05 | CROSS LISTED | 31 | 9.1935 | 13.09305 | 2.35158 |
| | TSX LISTED | 31 | 12.8710 | 10.60108 | 1.90401 |
| NPM06 | CROSS LISTED | 31 | 13.6129 | 11.28325 | 2.02653 |
| | TSX LISTED | 31 | 14.4194 | 11.42446 | 2.05189 |
| NPM07 | CROSS LISTED | 31 | 15.2903 | 8.36339 | 1.50211 |
| | TSX LISTED | 31 | 12.2581 | 9.90612 | 1.77919 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | |
|---|---|---|---|
| | | F | Sig. |
| NPM05 | Equal variances assumed | .413 | .523 |
| | Equal variances not assumed | | |
| NPM06 | Equal variances assumed | .044 | .835 |
| | Equal variances not assumed | | |
| NPM07 | Equal variances assumed | .444 | .508 |
| | Equal variances not assumed | | |

**T- Test for duality**

| | listing | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| chairce05 | cross listed | 31 | 1.8710 | .34078 | .06121 |
| | tsx listed | 31 | 1.7097 | .46141 | .08287 |
| chairce06 | cross listed | 31 | 1.8710 | .34078 | .06121 |
| | tsx listed | 31 | 1.7742 | .42502 | .07634 |
| chairce07 | cross listed | 31 | 1.8710 | .34078 | .06121 |
| | tsx listed | 31 | 1.7742 | .42502 | .07634 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | |
|---|---|---|---|
| | | F | Sig. |
| chairce05 | Equal variances assumed | 10.729 | .002 |
| | Equal variances not assumed | | |
| chairce06 | Equal variances assumed | 4.088 | .048 |
| | Equal variances not assumed | | |
| chairce07 | Equal variances assumed | 4.088 | .048 |
| | Equal variances not assumed | | |