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The long-run performance of U.S. firms pursuing IPOs in foreign markets

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The Long-run Performance of U.S. firms

Pursuing IPOs in Foreign Markets

1. Introduction

This study examines the pricing of foreign IPOs (FIPOs) made by U.S. companies compared to purely domestic offerings (DIPOs). Doidge et al. (2013) suggest that IPO activity in the U.S. has fallen compared to the rest of the world and U.S. firms go public less than expected. During the 1990s, U.S. IPO issues comprised 26.7% of IPO issues worldwide while the U.S. accounted for 27% of global Gross Domestic Product (GDP). Since 2000, the U.S. share of worldwide IPOs issues has fallen to 11.7% whereas its share of global GDP has averaged 30%. Further, The New York Times reports that between 2000 and 2009, 75 U.S. firms chose to bypass the U.S. exchanges completely and listed in a foreign market.[1] This is a strikingly upward trend from the previous decade where only 2 U.S. companies chose to totally bypass U.S. exchanges.

There are three reasons why the study of FIPOs offering by U.S. firms is important. First, the globalization of equity markets has transformed the capital raising activities of firms worldwide; therefore, it is important to investigate the impact of this transformation on initial public offerings and their performance. Secondly, Gagnon and Karolyi (2010) suggest that the current literature focuses mainly on foreign firms seeking equity in U.S. markets. We have seen a significant number of U.S. firms bypassing the U.S. market in the past decade yet little research has been done on the performance of these firms. Finally, in addition to cost considerations,

[1] "U.S. Falls behind in Stock Listings," by Aaron Lucchetti, The New York Times, June 23, 2011, A1.

factors such as the increased globalization of investment banking services (e.g. Ljungqvist et al. (2003)), the rise of book building methods around the world (e.g. Jagannathan et al. (2010)), and an increased ability to raise capital on more advantageous terms outside an IPO's home country (e.g. Kim & Weisbach (2008) and Caglio et al. (2016)) may explain why U.S. firms choose to issue equity solely abroad. None of the aforementioned studies however ~~i~~nvestigate firm performance; therefore, this research contributes to fill such gap. This research may be of interest to practitioners such as potential issuers, venture capitalists, and investment bankers who can use this research to better understand some of the options, complications, and performance of issuing equity outside of the U.S. The research also provides insight to global regulators on the potential impact that new regulations may have on firms seeking to issue equity in their markets and the pricing impacts of such regulations.

We follow Wu and Kwok (2007) who examine the long-term pricing of global IPOs made by U.S. companies and find that global IPOs not only underperform the market but also underperform their domestic counterparts in the three years after issuance. This research differs from Wu and Kwok (2007) in several ways. They focus on the performance of global IPOs originating from the U.S. This study examines a unique sample comprised of firms that are totally bypassing U.S. securities markets. Unlike global IPOs, FIPOs are exempt from regulation by the SEC and are strictly regulated by the foreign markets security regulators. FIPOs are also much smaller than global IPOs which tend to be even bigger than domestic IPOs. We employ a propensity score matching methodology that differs from the traditional matching methodology employed by Wu and Kwok (2007). Finally, this paper covers a sample period from 2000 to

2011 which captures the globalization of financial markets (including new security regulation) and the financial crisis of 2008-2009.

Using a sample of FIPOs and purely domestic IPOs (DIPOs) made by U.S. firms, this study reveals that FIPOs underperform the general equity market, a broad sample of DIPOs, and a sample of matched DIPOs in the long-run (1-, 2-, 3-year). Additionally, FIPOs underperform the index of the two countries that they use the most (UK and Canada). Although the choice of a reputable underwriter mitigates underperformance, the choice of listing in a foreign country only may be a result of possible high valuations accorded by foreign investors who buy U.S. listed companies on the domestic exchange possibly for reducing exchange rate risk and gaining US diversification without incurring additional costs. It is thus possible that US companies that undertake FIPOS not only escape potentially higher SEC regulations and disclosure but also benefit from higher valuations in the foreign markets. Finally, the findings of this study confirms previous studies such as Loughran and Ritter (1995) along with Wu and Kwok (2007) who suggest firms issuing equity during "hot" markets tend to experience higher initial IPO pricing and thus underperform in the long-run.

The remainder of this paper is as follows. Section 2 provides an overview of the relevant literature on the IPO market; Section 3 describes the data and sources and presents descriptive statistics; Section 4 introduces the methodology; Section 5 discusses the results and Section 6 provides the implications and conclusions of the research on foreign IPOs.

2. Literature Review

2.1 The Evolution of the IPO Market

In frictionless markets, the fundamental Modigliani and Miller (1958) theorem implies that neither the type of securities a firm issues nor the location in which these securities are issued is relevant. However, market frictions such as imperfectly integrated markets, taxes, and market regulations render the choice of location of stock issuance an important consideration for practitioners. As more countries further develop their financial markets, firms have more options to raise capital. The global competition among financial exchanges has increased since many exchanges have evolved into for-profit companies that need to maximize shareholders' wealth. In response to the increased competition, some larger and well-established exchanges have created new sub-exchanges such as the Alternative Investment Market (AIM) by the London Stock Exchange (LSE) and the Toronto Venture Stock Exchange (TSX-V) by the Toronto Stock Exchange (TSE). These new markets were created to allow younger and smaller firms, which may not yet meet the listing requirements of the major markets (e.g. NYSE, LSE, TSX), to have access to a wider range of investors.

Recent literature suggests that due to the globalization of equity markets and increased international competitiveness among exchanges, U.S. exchanges such as the NYSE and NASDAQ may be losing their status as the premier listing destination. Globalized competition among exchanges has led to increased development of global IPOs. Zingales (2007) finds that while in the late 1990s the U.S. capital market attracted 48% of all global IPOs, its share dropped to 6% in the mid-2000's. Zingales (2007) also hints at the idea of U.S. based firms bypassing the U.S. equity markets in favor of European markets and suggests that it has been a recent (yet surprising) phenomenon.

Although no one single factor has caused this shift in global IPO activity, new regulations in the U.S. markets may have played a contributing role. Many researchers and practitioners suggest that the Sarbanes-Oxley Act (SOX) of 2002 placed undue hardship on firms' reporting requirements to the Securities Exchange Commission (SEC). Coates (2007) suggests that U.S. regulation might benefit foreign companies, especially from developing countries, as it allows them to bind to better disclosure and practices, however, such regulation also implies some added costs.

2.2 SOX background and its impact on IPOs

The main purpose of SOX (also referred to as the Act) is to improve transparency in public companies by enhancing disclosure and monitoring requirements, preventing gatekeeper failure, and improving risk management systems. The provisions on internal controls (Section 404) require public companies to thoroughly disclose risks and to report on its control and procedures disclosures. The Act also requires auditing organizations to assess and audit firms' internal control structures ranging from operating performance systems to reporting internal liabilities to an independent audit committee.

Eldridge and Kealey (2005) report an average increase in audit fees from 2003 to 2004 of $2.3 million. They find that SOX audit costs increase with firm size, however, large companies benefit from economies of scale. Kaserer et al. (2008) conclude that SOX has increased the cost of going public by about 90 basis points of gross proceeds due to substantially higher accounting and legal fees. Krishnan et al. (2008) find that the economic consequences of SOX, measured by the cumulative abnormal return of equities around the legislative events leading to SOX, is significantly negative. The evidence reveals that investors likely consider the Act to be costly

and the information conveyed by the passage of the Act to be unfavorable for business. Ritter (1987) and Lee et al. (1996) separate the total costs of going public into direct costs (gross underwriter spread plus other expenses related to the offering) and indirect costs (initial underpricing) with the IPO gross spread representing the main direct cost. The introduction of SOX has affected these cost components in at least two ways: 1) higher compliance costs in general and 2) additional costs associated with the implementation of SOX.

Gao et al. (2013) document an unintended consequence of SOX and its subsequent implementation. They suggest this regulation creates incentives for firms to remain small. The SEC has on various occasions between 2003 and 2008 postponed compliance with Section 404 of SOX for "non-accelerated filers" (i.e. firms with public floats less than $75 million). They find that these firms are more likely to remain below this bright-line threshold. They document that compared to control firms, non-accelerated filers remain small by: 1) undertaking less investment and making more cash payouts through dividends and share repurchases; 2) reducing the number of non-affiliated shares (shares used to compute public float); and 3) releasing more bad news disclosures, reporting lower earnings, and engaging in more insider selling in the second fiscal quarter than control firms.

2.3 Overall IPO Performance

As first documented by Ritter (1991) and Loughran and Ritter (1995), IPOs have underperformed other firms in the same size category by an average of 3.8% per year (excluding first-day return) during the five years after issuance. When size and book-to-market matching is used, the underperformance shrinks to 2.2% per year for the IPOs. Levis (1993) and Goergen et al. (2006) have confirmed similar findings in the European market suggesting that the

underperformance of UK IPOs extends over 36 full months after the first issue date. In contrast, Brav and Gompers (1997) show that firms that go public perform better than their benchmarks matched by size and book-to-market ratios. These contrasting findings have spurred debate amongst academics as to the correct method to measure long-term performance.

Ritter and Welch (2002) point out that some of the IPO performance findings (both short- and long-term) may depend on the period being examined. Johnston and Madura (2009) find that initial returns of IPOs in the United States have declined since SOX. Using a sample of U.S. domestic IPOs during the 1990 – 2006 periods, they find that the mean initial return is 25.5% in the pre-SOX period versus 10.6% in the post-SOX period. The mean one-year abnormal return following the IPO is -8.5% during the pre-SOX period and the abnormal return in the post-SOX period is 5.1%. The broad difference in long-term returns results may be due to methodology issues and period used to calculate the actual returns.

2.4 Global IPO Performance

Wu and Kwok (2003) examine the pricing of global initial public offering made by U.S. companies compared to purely domestic (U.S. only) offerings. Their key finding suggests that global participation can significantly reduce underpricing by about four percentage points compared to purely domestic issues. Further, the degree of underpricing is inversely related to the relative size of the global tranche. They attribute the lower initial returns associated with global IPOs to the existence of a foreign clientele that are willing to pay higher prices in exchange for the benefit and convenience of global diversification provided by these offers. They conclude that global issuing companies can take advantage of the window of opportunity that

occurs when foreign demand for U.S. shares is high which is measured by the relative strength of the U.S. stock market compared to other major markets.

Wu and Kwok (2007) focus on the long-term performance of global offerings and test the window of opportunity hypothesis suggesting global issues are more prone to investor over-optimism than purely domestic ones. Foreign investors' interest in U.S. shares is not only affected by the fundamentals of the IPO firm, but also by other factors such as the attractiveness of the U.S. stock market relative to their national market, the convenience of share ownership, and desire for global diversification. In cross-sectional tests, global IPO firms underperform their purely domestic counterparts in the three years after issuance.

Chan et al. (2007) study the impact of global offerings on U.S. IPOs offer price using the stochastic frontier approach. Testing the demand inelasticity, certification effect, and investor recognition/participation hypotheses, they find that the average valuation efficiency of global offerings firms exceeds that of the domestic offering by 3.1 percentage points. They suggest that global IPO firms are better able to ease the price pressure if a significant portion of total shares is allocated to the global tranche. Less reputable and risky firms benefit more from global offerings, due to the certification and investor recognition effects.

Caglio et al. (2016) examine the increasing trend of firms pursuing equity abroad via foreign and global IPOs. They explore the reasons why firms partake in such capital raising activities and suggest two main motivations. First, by partaking in a foreign or global IPO, firms can reduce information asymmetry problems associated with domestic capital raising efforts. Their study suggests that foreign and global IPOs come from countries where information asymmetries are likely high. Second, they find strong evidence that foreign and global IPOs

originate from countries whose security market is less developed consistent with the bonding hypothesis developed by Coffee (2002). Caglio et al. (2016) however ignores the upward trend of U.S. firms bypassing U.S. equity markets in search of capital.

3. Data

Following Caglio et al. (2016) we define domestic IPOs (DIPOs) as IPOs that go public in their home country but not in any foreign country and foreign IPOs (FIPOs) as IPOs that go public in at least one foreign country but not in their home country.

We use the Securities Data Company's (SDC) New Issue database to collect the complete sample of FIPOs and DIPOs of U.S. firms from 2000 to 2011. The initial sample included 131 FIPOs and 3954 DIPOs. We exclude issues with unit and right offers, issues made by financial institutions (SIC 60-67), regulated electricity and gas companies (SIC 491-494), closed-ended funds, and real estate investment trusts (REITs). To be included in our sample, the issuers must be available on the Bloomberg securities database or Center for Research in Security Prices (CRSP) database on the offering dates. The majority of firms' offering information such as offer price, proceeds, underwriter, etc. is collected from SDC database.

It is noted that the SDC database contains substantial errors in firms' number of shares outstanding which is why we cross-reference the Bloomberg database on shares issued and outstanding.[2] First-day trading prices, as well as daily and monthly price data for a period of 3

[2] The discussion of the data problem contained in the SDC database can be found at http://pages.stern.nyu.edu/~aljungjv/research.htm

years from the IPO date, are obtained via Bloomberg or CRSP. The final FIPO sample contains 64 firms while the DIPO sample contains 962 firms. The independent variables include a FIPO dummy variable, size, ranking of the lead underwriter, the age of the firm at the time of the IPO and other variables reported in Table 1. To gain further insight into our sample, Table 2 Panel A reflects the yearly distribution of FIPOs and DIPOs over our sample period, Panel B decomposes our sample by industry, and Panel C breaks down the FIPO sample by country listing destination. From Panel A we see that over half of our FIPO sample (36 out of 64 firms) had their initial offering between 2005 and 2007 which covers a period of U.S. economic expansion and includes the onset of the great recession of 2007-2009 that officially began in December 2007. From Panel B we find that over 70% of our FIPO sample (46 out of 64 firms) are from either the: services, mining, or transportation/communication industry with the service industry FIPOs accounting for 25% of the total sample. Panel C reports that the United Kingdom (35 firms) and Canada (18 firms) dominated the country listing destination for FIPOs.[3]

{Insert Table 1 Here}

{Insert Table 2 Here}

{Insert Table 3 Here}

Table 3 presents summary statistics of the FIPO sample compared against the portfolio of matched DIPOs via issue year and size (see Panel B) along with summary statistics for FIPOs and DIPOs using the propensity score matching methodology (refer to Panel C). As reflected in Panel A, FIPOs are smaller and younger when compared to the full sample of DIPOs. In Panels B and C we observe that the characteristics of the FIPOs and DIPOs become more similar on

[3] We thank an anonymous reviewer for the suggestion to decompose our FIPO sample by country listing, industry, and year which allows us to offer additional insight regarding our sample.

several different measures. Size, Age, Rank, and the relevant run-up variables become more similar amongst the portfolios which allows for more robust comparisons in the multiple regressions.

4. Methodology

Following Wu and Kwok (2007), we use the buy-and-hold return (BHAR) and the cumulative abnormal return (CAR) to test the long-run returns of newly listed companies. Wu and Kwok (2007) suggest that BHAR is commonly used in the literature since it precisely measures investor's experience. The BHAR for firm *i* over the period from T_1 to T_2 is calculated as:

$$BHAR_{(T_1,T_2)} = \left[\prod_{t=T_1}^{T_2}(1 + R_{it})\right] - \left[\prod_{t=T_1}^{T-2}(1 + R_{mt})\right] \quad (1)$$

where R_{it} is the monthly return for firm *i* in month *t*, and R_{mt} is the return on the CRSP value (equal) weighted index in the same month. We compute BHARs using monthly returns data obtained from the CRSP or Bloomberg database.

Next, we calculate the long-term abnormal performance using the cumulative abnormal return (CAR) approach. Fama (1998) and Mitchell and Stafford (2000) concur that CARs may be a less biased method to gauge long-run returns. In addition to the problem caused by skewed distributions associated with BHARs that make statistical inferences difficult, the BHAR method can also magnify underperformance as a consequence of compounding single-period returns. CARs can eliminate the compounding effect of a single period's abnormal performance associated with BHARs. CARs are calculated as follows:

$$CAR_{T_1,T_2} = \sum_{t=T_1}^{T_2}(R_{it} - R_{mt}) \quad (2)$$

where R_{it} is the monthly return for firm i in month t, and R_{mt} is the monthly return on the CRSP value (equal) weighted market index. Both equally-weighted and value-weighted averages are calculated for each sample.

4.1 Propensity Score Matching

We follow the methodology of Cheng (2003) and Li and Zhao (2006) who have used propensity score matching to determine performance differences amongst firms who issue equity and those who do not. According to the Propensity Score Theorem established by Rosenbaum and Rubin (1983), finding a match for a FIPO firm based on a vector of firm characteristics is equivalent to finding a match based on the probability of equity offering conditional on the vector of firm characteristics. Thus, the problem reduces to matching the FIPO and non-FIPO firms along their conditional probability of issuing equities, a scalar variable that we estimate from our empirical model.

The propensity score P(x) is the probability of issuing a FIPO conditional on x:

$$P(x) = \text{Prob}\,(D = 1 \mid x) \qquad (3)$$

where D is the event indicator: D = 1 for FIPO firms and D = 0 for non-FIPO firms. We choose conditioning variables (x) based on finance theory and empirical evidence which include: the rank of the lead underwriter (RANK), age of the firm in log days (AGE), market capitalization (SIZE), (VC) dummy variable that equals one if the offering is backed by a venture capitalist and

zero if it was not, (WRDRUNUP) measures the run-up in the world market one year prior to the IPO date, (USRUNUP) measures the run-up of the US market one year prior to the IPO date.[4]

4.2 Estimation of the Logit Model

Table 4 presents the results of the logit analysis which models the firm's equity offering decision (Domestic or Foreign), incorporating the independent variables discussed in previous sections. Four of the six predictor variables in the regression are significant (i.e. RANK, VC, USRUNUP, and WRDRUNUP). The negative coefficient of -0.1597 on the rank variable implies that firms choosing lesser ranked lead underwriters may be more willing to venture overseas to equity markets outside of their own. The odds for a FIPO is expected to decrease by 14.76% based a one unit increase in the rank of the lead underwriter assuming all else constant.

We anticipated that firms going overseas would choose higher ranked lead underwriters with more valued experience to accommodate firms that are venturing outside of the U.S. A possible explanation for the negative result may be that firms going overseas are more economical in their choices of lead underwriters and prefer lesser ranked lower-cost alternatives. The VC variable that indicates whether the firm has venture capital backing shows a significant and positive coefficient of 0.1651. The odds ratio of 1.1795 indicates that for venture capitalist backed firms the likelihood of pursuing a FIPO increases by 17.95%. This result has some

[4] We thank an anonymous reviewer for suggesting the inclusion of an industry related variable to control for the substantial proportion of the sample in the mining and services sectors. When adding this control variable to our model, the results from propensity score matching and our overall findings remain qualitatively unchanged (e.g. mean difference in 3-year BHARs /CAR incorporating the industry variable were: 1.26 and 1.09 for the value weighted matched sample. Refer to Table 5 Panel C for comparable results excluding the industry variable. Regression Industry dummy variable coefficients were statistically insignificant). We acknowledge that there may be self-selection bias in the FIPO sample as pointed out by an anonymous reviewer. We believe that the propensity score methodology should mitigate some of the self-selection bias.

interesting, plausible explanations. First, firms that have venture capital (VC) backing could have VCs that exhibit expertise in overseas markets or may have had previous experience in FIPOs leading to some VC-backed firms being more comfortable in pursuing equity overseas. An alternative interpretation could be that firms backed by the VCs may have difficulty going through the U.S. equity market regulations (SOX, etc.) and the VCs may be eager to cash out of these firms for some reason. Hence the VCs push the firm to pursue a FIPO, bypassing the U.S. regulations, leading to a faster more cost effective way of allowing VCs to cash in their shares.

The two measures of stock market run-ups, USRUNUP and WRDRUNUP, indicate positive and significant coefficients. The U.S. market run-up variable has a greater impact on the decision to pursue a FIPO (coefficient and odds ratio of 0.1589 and 1.1722, respectively) than the world market run-up variable (coefficient and odds ratio of 0.0548 and 1.0563). Both variables indicate that as equity markets (both in the U.S. and World) heat up, firms from the U.S. are more likely to pursue a FIPO. This result is consistent with Wu and Kwok (2003 and 2007) who find that firms may pursue global IPOs in periods of positive stock market returns. Our result provides additional support to the popular market timing hypothesis suggested by Loughran & Ritter (2004) and further supported by Schultz (2003) and Baker & Wurgler (2002).

{Insert Table 4 Here}

4.3 Multiple Regression Models

We employ ordinary least squares estimation to model the impact of firm equity issuance choice (i.e. FIPO vs. DIPO) on long-run abnormal return behavior. The model incorporates firm specific and equity market variables previously described. The model is expressed as follows:

$$ABR = \beta_0 + \beta_1 (FD) + \beta_2 \ln(SIZE) + \beta_3 (AGE) + \beta_4 (RANK) + \beta_5 (VC) + \beta_6 (VEX) + \beta_7 (STD60) + \beta_8 (USRUNUP) + \beta_9 (WRDRUNUP) + \beta_{10} (MarketSD) + \beta_{11} (SOX) + \varepsilon_i \quad (4)$$

We use the two long-run abnormal return (ABR) measures discussed previously (i.e. BHARs and CARs) as our dependent variable-under separate estimations. The foreign dummy (FD) variable equals one if the firm is classified as a foreign IPO and zero otherwise. Firm size (SIZE) is the log of the market capitalization calculated at the offering date. The age of the firm (AGE) is measured as the log of the number of days from founding date to offer date. Rank of the lead underwriter (RANK) is the rank used developed by Carter et al. (1998) and later updated and modified by Loughran and Ritter (2004) which assigns integers from 0 (lowest) to 9 (highest). The venture capital dummy (VC) equals one if the firm was backed by a venture capitalist and zero if it was not. (VEX) represents a dummy variable which equals one if the firm is listed on a venture exchange and zero otherwise. STD60 represents the standard deviation of the first 60 daily returns taken from Bloomberg after the offering. Market standard deviation (MarketSD) is the standard deviation of the Morgan Stanley Capital International EAFE index from -90 to -2 days prior to the offer date. U.S. stock market run-up (USRUNUP) is measured as the cumulative abnormal return of the CRSP equally weighted market from -365 to -2 days prior to the offer date. Non-US world market run (WRDRUNUP) is the cumulative abnormal return of the Morgan Stanley Capital International EAFE index from -365 to -2 days prior to the offer date. (SOX) is a dummy variable equal to 1 if the firm was not exempt of SOX regulations at the time of the IPO and 0 if it was exempt (small-firm exclusion).

Our primary focus is on the dummy variable (FD) which test our primary null hypothesis that there is no difference in long-run performance between FIPO and DIPO firms (i.e. $\beta_1=0$ in equation 4). We also examine the RANK and USRUNUP variables which test the long-standing prestigious underwriter hypothesis ($\beta_4>0$ in equation 4) originally uncovered by Carter et al. (1998) and the window of opportunity hypothesis respectively ($\beta_8<0$ in equation 4) developed by Loughran and Ritter (1995), respectively.

5. Results

The one-, two-, and three-year BHARs and CARs are reported in Table 5. When returns are equally-weighted, both foreign and domestic IPO firms underperform the market index up to three years after the offer. For an investor buying shares at the end of the month and holding them for one, two, and three years, foreign IPO BHARs on average trail the CRSP equally-weighted market measure by -3.44%, -5.98%, and -8.16%, respectively(refer to Panel A). In comparison during the same time periods, domestic IPOs underperform the CRSP equally-weighted market index by -1.22%, -1.59%, and -2.68% (refer to Panel A). Results indicate that FIPO firms experience negative downward price pressure over time which is consistent with the long-standing IPO literature of Ritter (1991), Loughran & Ritter (1995) and Wu & Kwok (2007) who find long-term underperformance of the general IPO market. Value weighting the portfolio does not materially change the return results for the foreign and domestic IPO samples. When value weighted, foreign IPOs underperform the market by -2.54%, -5.17%, and -7.56% for the one-, two-, and three-year holding periods based on BHAR measures (refer to Panel A).

{Insert Table 5 Here}

Table 5 Panel B shows the results of the traditional matched sample set of firms. As in the non-matched sample case, FIPOs and DIPOs continue to underperform the market in the 2- and 3-year period. When we use issue year and size to build the DIPO sample, the results from the equally- and valued- weighted benchmarks continue to reflect that FIPOs underperform in the long-run. Lastly, Panel C of Table 5 reflects the results of the propensity score matched sample. The equally-weighted results show both FIPOs and DIPOs experience negative long-run returns with the only statistically significant difference between the two samples noted in the two-year CARs. The value-weighted portfolio still produces significant differences in the 2 & 3 year BHARs and CARs results.

Overall, we can conclude that FIPOs and DIPOs experience long-term negative abnormal returns over the 1-, 2-, and 3-year time periods assessed. When examining our full sample of FIPOs and DIPOs, the absolute difference in abnormal returns between these two groups is relatively large with FIPOs exhibiting weaker long-run abnormal returns compared to DIPOs. However, the absolute difference in long-term negative abnormal returns between FIPOs and DIPOs is dramatically reduced when we construct a matched portfolio based on issue year and size and when we apply propensity score methodology to build our matched portfolio.

{Insert Table 6 Here}

Table 6 shows the results of the cross-sectional regressions described in the methodology section. In the BHAR and CAR regressions, the coefficients on the foreign dummy (FD) variable are negative and statistically significant across all models. Under the BHAR regressions, the foreign dummy coefficient ranges from -0.274 to -0.314 while the CAR regressions reflect foreign dummy coefficients ranging from -0.141 to -0.192. To illustrate the investment impact,

the magnitude of the FD coefficient in the second BHAR estimation in Table 6 implies that foreign IPOs underperform domestic IPOs by approximately 10.704% (= $(1-0.314\%)^{36} - 1$) and by 11.304% (=0.314%x36) on a monthly cumulative basis. In sum, after controlling for firm and offer characteristics, FIPOs significantly underperform domestic IPO firms in the long-run. The impact using different abnormal return measures seem to be comparable in magnitude, and thus we conclude that there is a difference in the long-term performance between FIPOs and DIPOs which is robust to the abnormal return measurement employed and supports our primary hypothesis.

The only variable that shows consistently significant results among the control variables is the rank of the lead underwriter (RANK); the coefficient for this variable is positive and statistically significant. This result is in line with Carter et al. (1998) who uncovered the certification role of prestigious underwriters. This result has also been confirmed in several other academic and practitioners papers such as Wu & Kwok (2007) and Loughran and Ritter (2004).

The venture exchange dummy (VEX) and US market run-up (USRUNUP) variables exhibit negative coefficients. These results suggest that firms listing on venture exchanges exhibit weaker long-term returns relative to firms issuing on the main exchange. It is understandable that firms listed on venture exchanges could underperform due to higher uncertainty regarding firms' future cash flow streams. The negative coefficient on the U.S. market run-up variable implies that offers made at a time when the U.S. equity market is strong are associated with poor post-issue performance. This result is in line with the window of opportunity hypothesis introduced by Baker & Wurgler (2002), and re-examined in our research, stating that managers try to time the market so that the offer is made when the market condition

is most favorable for issuing equity. Therefore over time, the market corrects itself leading to long-term underperformance for IPOs issued during these "windows of opportunity" time periods. Our results are also consistent with Wu & Kwok (2007).

{Insert Table 7 Here}

{Insert Table 8 Here}

Tables 7 & 8 reflect the cross-sectional regression estimations using as our dependent variable the difference between BHARs and CARs of the FIPO sample minus the BHARs and CARs of the matched DIPO firms. In Table 7 the firms are matched using the traditional method based on two dimensions (i.e. issue year and size) and in Table 8 the firms are matched using the propensity score methodology with both tables displaying similar results. The only significant variable in all models is the rank of the lead underwriter (RANK). The positive coefficients, ranging from 0.011 (third BHAR estimation in Table 8) to 0.021 (first CAR estimation in Table 7) suggest that when FIPOs choose a higher ranked underwriter, they tend to perform better in the long-run. As previously mentioned, this finding is consistent with Carter et al. (1998), Wu and Kwok (2007), and others that uncover and confirm the certification role of prestigious underwriters.

The venture capital backing (VC) variable shows a negative statistically significant coefficient in 3 of the 6 models shown in Table 7 and suggests that firms (matched by issue year and size) that have backing by venture capitalists experience poorer long-term results. This result dissipates when firms are matched using the propensity score method as seen in Table 8. Nonetheless, the impact of VC on abnormal returns captured in Table 7 is most likely attributed to the venture capitalist cashing out of the firm after the lock-up period which results in

downward pressure on the firm in the long-run. This finding is in contrast with Brav and Gompers (1997) and Ritter (2014) who suggest that VC-backed IPOs experience better long-run performance.

When incorporating the USRUNUP run-up variable to the model, the results confirm what our previous regressions showed suggesting that firms issuing equity during periods of run-ups tend to underperform in the long-term. The significant regression coefficients ranging from -0.017 to -0.023 in Table 7 suggest that investors purchasing these assets at times of "hot" markets will underperform; our results are in step with the findings of Wu and Kwok (2007) and Ritter (1991) who document the market timing effect and the long-run underperformance of the IPO market.

5.1 Robustness Checks

Due to the small sample size of our study and the likelihood of skewness in the BHAR and CAR distributions, we apply the Kolmogorov-Smirnov (K-S) non-parametric test for normality to the returns generated by our sample of IPO firms. The statistically significant K-S test statistics suggest that our BHARs and CARs do not follow a normal distribution. The K-S test results diminish the importance of statistically significant returns differences, based on *t*-tests, as reported in Table 5. To examine the robustness of the return differences, we conduct a Wilcoxon signed-rank test to assess whether there is a statistical difference in returns between FIPOs and DIPOs in the matched sample and the Mann-Whitney U test to compare the returns in the full sample of FIPOs and DIPOs. The findings of these two non-parametric tests, which are reported in Table 5, support a significant difference in long-run BHARs and CARs between FIPOs and DIPOs and are in line with our original conclusions. To minimize the potential impact

of outliers and before applying the Wilcoxon signed-rank and Mann-Whitney U tests, we implement box-plot methodology which uses the median and the Inter-Quartile Range (IQR) as the location and dispersion metrics. This approach provides a "non-parametric" perspective on outlier detection. The outlier detection exercise eliminated 3 matched paired firms and 59 firms from the overall DIPO sample.

To gain further insight with regards to our sample, we take the FIPO firms listed in the two most popular listing destinations (U.K. & Canada) and use those corresponding country exchange indices as benchmarks to compare the long-run performance of these FIPOs. Table 9 shows the results of the 35 firms listed in the U.K. and the 18 firms listed in Canada. Both sub-samples are robust to their respective country listing exchanges with FIPO firms continuing to exhibit weaker underperformance when compared to domestic IPOs based on BHARs and CARs over the 1-, 2-, 3-year time periods.

{Insert Table 9 Here}

6. Conclusion

This study investigates the long-term performance of a unique data set comprised of U.S. firms bypassing the U.S. capital markets in pursuit of raising equity capital. Ritter (1991) and Loughran and Ritter (1995), among others, have documented the long-term underperformance of IPOs caused by investor optimism on firm's earning potential and the ensuing market correction reflecting actual firm performance. Using both buy-and-hold-abnormal returns (BHARs) and cumulative abnormal returns (CARs), we find that FIPOs underperform the market in the long-run. Our results suggest that FIPOs also underperform strictly domestic IPOs over the long-term.

Further, we test the window of opportunity hypothesis developed by Loughran and Ritter (1995) by adding run-up variables for the U.S. and World markets. Our findings suggest that firms issuing equity overseas may time their FIPO and investors initially over pay for the possible U.S. diversification and thus tend to perform poorly over the long-term. An alternative explanation may be that non-U.S. based investor's pay a premium for a FIPO during the offering to gain international diversification without partaking in foreign exchange rate risk. FIPOs are issued in the foreign destination country and listed in the foreign destination currency thus potentially minimizing the exchange rate risk that non U.S. based investors have when investing directly in U.S. based firms listed on an exchange in the U.S.[5]

Our results support that firms hiring respected ranked lead underwriters tend to experience better long-run returns. This result is consistent with Wu and Kwok (2007) and Carter et al. (1998) who uncover the certification role of prestigious underwriters. The regression results imply that venture-backed firms experience weaker long-run performance than those who do not have VC backing. This finding is in contrast to Brav and Gompers (1997) and Ritter (2014) who suggest VC-backed IPOs experience better long-run performance. A possible explanation is that the VCs backing FIPO issues liquidate their positions more aggressively due to political risk thus putting more downward selling pressure on FIPOs as compared to domestic IPOs that may not hold such additional risk.

[5] We thank an anonymous reviewer for pointing out exchange rate risk as a potential added benefit for investing in FIPOs. A cursory review of annual returns (i.e. minimum investment holding period) derived from monthly exchange rate data (Canadian Dollars/US dollars and Euros/US dollars) covering our sample time frame does not strongly support exchange rate risk as a motive for non-U.S based investors to pay a premium for FIPOs. Both exchange rate series reflect significant fluctuations and short term gains and losses. Over the sample period, the mean exchange rate return was a negative 2.9% for each series suggesting a weakening of the dollar against the Canadian and Euro currencies.

To the best of our knowledge, this is the first study to investigate the long-term performance of U.S. firms bypassing the U.S. capital markets in pursuit of their initial equity offering elsewhere. Caglio et al. (2016) investigate why firms decide to pursue such equity issuances but fail to investigate the firms' performance after issuing equity. This research fills such gap in the literature and is important for investors, financial managers, and regulators. Investors can use this information in assessing the quality of such investments in the long-run and firms can utilize such information when determining the different options of issuing equity. We believe that excess regulation and costs are important reasons why U.S. firms choose the FIPO route in pursuing a public offering. Other reasons, as presented in the literature, may include increased globalization of investment banking services, a global rise in book building methods, and an increased ability to raise capital on more favorable terms outside an IPO's home country. Securities regulators may use this research to better understand the potential impacts of increased regulation on the securities markets and how this may influence the decision firms face when raising capital in the new globalized capital market environment.

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Tables

Table 1 – Variable Sources

Independent Variables	*Source*
Foreign Dummy (FD)	1=FIPO 0=Domestic IPO
Size – Market Cap. (SIZE)	SDC Database
Rank of Lead Underwriter (RANK)	SDC Database & Jay Ritter Website (Rankings)
Age of Firm (At time of IPO) (AGE)	Jay Ritter Website or Hand-Collected via firms Website
Venture Capital Backing Dummy (VC)	1=Backed by VC 0=Not Backed by VC 1=Venture
Venture Exchange Dummy (VEX)	1=Listed on VEX 0=Listed on main exchange
Standard Deviation of first 60 days (STD60)	Bloomberg/CRSP Daily Price Data
US Market Run-Up (USRUNUP)	CRSP Equal-Weighted Index– One Year Run-Up prior to IPO
World Market Run-Up (WRDRUNUP)	MSCI World Market Index - One Year Run-Up prior to IPO
Market Standard Deviation (MarketSD)	90 day standard deviation MSCI World Market
Sarbanes-Oxley Dummy(SOX)	1=firm *not* exempt 0 =exempt from SOX (small firm exclusion)

Dependent Variables	*Source*
Cumulative Abnormal Return (CAR)	Bloomberg
Buy-and-Hold Return (BHAR)	Bloomberg

Table 2 – Distributions

Panel A: Yearly Distribution

Year	Foreign IPOs	Domestic IPOs
2000	1 (1.6%)	274 (28.5%)
2001	2 (3.1%)	51 (5.3%)
2002	2 (3.1%)	41 (4.3%)
2003	1 (1.6%)	45 (4.7%)
2004	4 (6.3%)	113 (11.7%)
2005	11 (17.2%)	106 (11.0%)
2006	8 (12.5%)	111 (11.5%)
2007	17 (26.6%)	81 (8.4%)
2008	3 (4.7%)	14 (1.5%)
2009	4 (6.3%)	26 (2.7%)
2010	6 (9.4%)	52 (5.4%)
2011	5 (7.8%)	48 (5.0%)
Total	64 (100%)	962 (100%)

Panel B: Industry Distribution

Two-digit SIC	Industry Group	# of FIPOs	# of DIPOs
10-14	Mining	15 (23.4%)	29 (3.1%)
15-17	Construction	1 (1.5%)	19 (2.0%)
20-39	Manufacturing	9 (14.1%)	366 (38.2%)
40-48	Transportation and Communications	12 (18.9%)	67 (6.9%)
50-51	Wholesale	3 (4.7%)	38 (3.8%)
52-59	Retails	7 (10.9%)	105 (10.9%)
70-89	Services	19 (25.0%)	288 (29.9%)
	Other	1 (1.5%)	50 (5.1%)
Total		64 (100%)	962

Panel C: Listing Destination Distribution

	Number of FIPOs
United Kingdom (U.K)	35 (54.6%)
Canada	18 (28.1%)
Taiwan	4 (6.3%)
Australia	3 (4.7%)
Other (New Zealand, Germany, South Korea)	4 (6.3%)

Table 3 - Summary Statistics

Panel A: Full Sample

	FIPO N=64	Mean	STD	Median	DIPO N=962	Mean	STD	Median
SIZE		88.75	61.21	69.52		119.71	103.81	103.41
AGE		7.26	2.56	7.01		8.12	3.85	7.96
RANK		6.45	2.65	6.70		7.17	2.19	7.50
STD60		0.045	0.038	0.051		0.039	0.031	0.044
USRUNUP		1.49%	12.45%	1.56%		1.21%	11.71%	1.54%
WRDRUNUP		0.49%	6.19%	0.32%		-0.21%	7.2%	-0.06%
MarketSD		0.019	0.011	0.026		0.022	0.012	0.018

Panel B: Matched via Issue Year and Size

	FIPO N=64	Mean	STD	Median	DIPO N=64	Mean	STD	Median
SIZE		88.75	61.21	69.52		95.12	56.34	86.23
AGE		7.26	2.56	7.01		8.33	3.12	7.75
RANK		6.45	2.65	6.75		7.04	2.11	7.14
STD60		0.045	0.038	0.051		0.049	0.042	0.059
USRUNUP		1.49%	12.45%	1.56%		1.13%	10.98%	1.45%
WRDRUNUP		0.49%	6.19%	.32%		0.21%	6.87%	0.35%
MarketSD		0.019	0.011	0.026		0.014	0.010	0.019%

Panel C: Matched via Propensity Score

	FIPO N=64	Mean	STD	Median	DIPO N=64	Mean	STD	Median
SIZE		88.75	61.21	69.52		101.23	68.97	93.21
AGE		7.26	2.56	7.01		7.89	2.67	7.31
RANK		6.45	2.65	6.75		6.87	2.01	7.01
STD60		0.045	0.038	0.051		0.037	0.031	0.043
USRUNUP		1.49%	12.45%	1.56%		1.31%	11.31%	1.54%
WRDRUNUP		0.49%	6.19%	0.32%		0.43%	6.11%	0.39%
MarketSD		0.019	0.011	0.026		0.013	0.009	0.028

Firm size (SIZE) is the market capitalization ($million) calculated at the offer price. Age of firm (AGE) is the log number of days that the firm has been existence prior to the IPO. Rank of lead underwriter (RANK) is borrowed from Carter et al. (1998) and updated by Loughran and Ritter (2004). STD60 represents the standard deviation of the first 60 daily returns taken from Bloomberg after the offering. US stock market run-up (USRUNUP) is measured as the cumulative abnormal market return from -365 to -2 relative to the average CRSP equally weighted market return prior to the offer date. Non-US world market run (WRDRUNUP) is defined as the cumulative abnormal return of the Morgan Stanley Capital International EAFE index from -365 to -2 prior to the offer date. Market standard deviation (MarketSD) is the standard deviation of the Morgan Stanley Capital International EAFE index from -90 to -2 prior to the offer date.

Table 4 Propensity Score Model Coefficient Estimates- Logit regression

Variables	Estimate	Chi-square	Pr > Chi Square	Odds Ratio
Constant	0.1745	3.1441	0.0178	
Size	-0.0082	1.2489	0.3547	0.9918
Age	-0.0904	1.5413	0.2158	0.9135
Rank	-0.1597	9.4198	0.0001	0.8524*
VC	0.1651	7.8952	0.0013	1.1795*
USRUNUP	0.1589	7.1124	0.0011	1.1722*
WRDRUNUP	0.0548	4.2358	0.0215	1.0563*
Likelihood Ratio	139.2864 (<.001)			
Score Test	136.8661 (<.001)			
Wald Test	12.5624 (<.001)			
Pseudo R^2	29%			
Hosmer/Lemeshow GOF		7.8721	0.2569	

Odds ratio represent the increase in the odds (the probability of pursuing a FIPO over the probability of pursuing DIPO) when the dummy variable changes from 0 to 1. Likelihood ratio (LR) tests the null hypothesis that all slope coefficients are simultaneously equal to zero. Coefficient significance is indicated by * if the 95% Wald Confidence Limits do not contain an odds ratio (OR) of 1 which implies an equal probability of an event occurring (pursuing a FIPO) vs. not occurring (probability of pursuing a DIPO instead of a FIPO) The Wald and Score Tests approximate the LR test and their respective statistic are also Chi-square distributed. The Hosmer/Lemeshow goodness of fit (GOF) test assesses whether there is evidence of lack of fit in a logistic regression model under the null hypothesis of no statistical difference in the distribution of the actual and predicted dependent values which implies good model fit.

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Table 5 - Buy-and-hold and cumulative abnormal returns

Panel A: Non-matched Sample

		Equal-Weighted			Value-Weighted		
Long-run Return	Holding Period	FIPO (N=64)	DIPO (N=962)	Difference	FIPO (N=64)	DIPO (N=962)	Difference
BHAR	One Year	-3.44	-1.22	2.22*±	-2.54	-1.55	0.99*±
	Two Year	-5.98	-1.59	4.39*±	-5.17	-1.89	3.28*±
	Three	-8.16	-2.68	5.48*±	-7.56	- 3.14	4.42*±
CAR	One Year	-2.17	-1.09	1.08*	-2.66	-1.62	1.04*±
	Two Year	-4.41	-1.88	2.53*±	-5.23	-2.05	3.18*±
	Three	-7.34	-3.01	4.33*±	-7.39	-3.69	3.70*±

Panel B: Matched Sample – Issue Year, Size

		Equal-Weighted			Value-Weighted		
Long-run Return	Holding Period	FIPO (N=64)	DIPO (N=64)	Difference	FIPO (N=64)	DIPO (N=64)	Difference
BHAR	One Year	-3.44	-3.19	0.25	-2.54	-2.71	0.17
	Two Year	-5.98	-3.66	2.32*^	-5.17	-3.54	1.63*^
	Three	-8.16	-5.65	2.51*^	-7.56	-5.21	2.35*^
CAR	One Year	-2.17	-2.57	0.40	-2.66	-2.45	0.21
	Two Year	-4.41	-3.18	1.23*	-5.23	-3.08	2.15*^
	Three	-7.34	-5.14	2.20*^	-7.39	-4.95	2.44*^

Panel C: Matched Sample – Propensity Score

		Equal-Weighted			Value-Weighted		
Long-run Return	Holding Period	FIPO (N=64)	DIPO (N=64)	Difference	FIPO (N=64)	DIPO (N=64)	Difference
BHAR	One Year	-3.44	-3.21	0.23	-2.54	-3.09	0.55
	Two Year	-5.98	-6.17	0.19	-5.17	-6.59	1.42*^
	Three	-8.16	-8.45	0.29	-7.56	-8.89	1.33*^
CAR	One Year	-2.17	-2.98	0.81	-2.66	-3.12	0.46
	Two Year	-4.41	-6.02	1.61*^	-5.23	-6.21	0.99*
	Three	-7.34	-8.21	0.87	-7.39	-8.55	1.16*^

*Indicates t-test significance in difference of means at 5% level.
±Indicates Mann-Whitney U significance in difference between groups at 5% level.
^Indicates Wilcoxon Signed Rank significance in difference between matched samples.
This table reports the one-, two-, and three year buy-and-hold abnormal returns (BHAR) and cumulative abnormal returns (CAR). The t-statistic is for the significance of the differences between the means of the two groups. The Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is continuous, but not normally distributed. The Wilcoxon signed-rank test is for the equality of the medians used when comparing matched samples.

Table 6 - Cross-sectional regression of long-run abnormal returns- 3-Year BHAR&CAR

Variable	BHAR (3)	BHAR (3)	BHAR (3)	CAR (3)	CAR (3)	CAR (3)
Constant	0.041	0.042	0.044	0.024	0.035	0.031
	[1.63]	[1.59]	[1.56]	[1.812]*	[1.912]*	[1.902]*
FD	-0.274	-0.314	-0.291	-0.185	-0.192	-0.141
	[-2.10]**	[-2.38]**	[-2.15]**	[-1.921]*	[-1.969}**	[-1.785]*
SIZE	0.018	0.016	0.011	-0.009	0.006	0.004
	[0.987]	[0.845]	[0.798]	[-0.269]	[0.845]	[0.785]
AGE	0.004	0.006	0.006	0.011	0.017	0.007
	[0.495]	[0.547]	[0.589]	[.698]	[.709]	[.549]
RANK	0.067	0.059	0.057	0.052	0.044	0.047
	[4.982]***	[4.589]***	[4.574]***	[4.394]***	[3.975]***	[4.021]***
VC	-0.042	-0.031	-0.030	-0.049	-0.047	-0.039
	[-1.842]*	[-1.496]	[-1.491]	[-1.905]*	[-1.882]*	[-1.809]*
VEX	-0.021	-0.017	-0.015	-0.011	-0.008	-0.009
	[-1.941}**	[-1.821}*	[-1.819]*	[-1.659]	[-1.587]	[-1.489]
STD60	-0.014	-0.006	-0.004	0.006	-0.007	-0.005
	[-0.587]	[-0.417]	[-0.023]	[0.487]	[-.568]	[-0.447]
USRUNUP		-0.189	-0.182		-0.145	-0.114
		[-1.892]*	[-1.886]*		[1.779]*	[1.727]*
WRDRUNUP		-0.112	-0.106		-0.089	-0.074
		[-1.792]*	[-1.712]		[-1.664]	[-1.541]
MarketSD		0.019	0.011		0.002	-0.005
		[0.895]	[0.523]		[.455]	[-.258]
SOX			0.028			0.014
			[1.458]			[1.245]
Adj. R^2	0.069	0.056	0.041	0.051	0.042	0.034
F-statistic	12.41***	9.87***	6.87***	8.78***	6.12***	5.33***

*Indicates significance at the 10% level, **at the 5% level, *** at the 1% level

The sample contains 64 foreign IPOs (FIPO) and 962 Domestic IPOs made by US industrial firms from 2000-2011. FD represents whether the firm is a FIPO and takes a value of 1 if so and 0 if it is not. Venture Capital (VC) backing is represented by a dummy variable; 1 indicated backing by a VC and 0 if not. VEX is a dummy variable equal to one if the firm is listed on a venture exchange and zero if not. SOX is a dummy variable equal to 1 if the firm was not exempt of SOX regulations at the time of the IPO and 0 if it was exempt(small-firm exclusion). See table 3 for a detailed description of the additional non-dummy variables.

Table 7 - Cross-sectional regression of long-run abnormal returns
(Dependent Variable is $FIPO_{BHAR/CAR} - DIPO_{matchedBHAR/CAR}$)
*Matched via Issue Year and Size *3-Year BHAR&CAR

Variable	BHAR (3)	BHAR (3)	BHAR (3)	CAR (3)	CAR (3)	CAR (3)
Constant	0.017 [1.568]	0.011 [1.348]	0.018 [1.654]	0.021 [1.765]*	0.025 [1.798]*	0.019 [1.612]
SIZE	-0.006 [-0.654]	-0.003 [-0.456]	-0.003 [-0.439]	-0.005 [-0.593]	-0.005 [-0.559]	-0.004 [-0.521]
AGE	-0.014 [-1.514]	-0.011 [-1.439]	-0.010 [-1.396]	-0.009 [-1.332]	-0.007 [-1.239]	-0.006 [-1.121]
RANK	0.019 [2.171]**	0.017 [2.096]**	0.017 [2.065]**	0.021 [-2.211]**	0.020 [-2.198]**	0.018 [2.103]**
VC	-0.009 [-1.761]*	-0.005 [-1.654]	-0.004 [-1.532]	-0.007 [-1.723]*	-0.007 [-1.717]*	-0.005 [-1.612]
VEX	-0.012 [-2.011]**	-0.008 [-1.876]*	-0.006 [-1.796]*	-0.009 [-1.932]**	-0.008 [-1.871]*	-0.004 [-1.654]
STD60	0.002 [0.329]	-0.006 [-0.216]	-0.011 [-0.439]	-0.005 [-0.348]	-0.009 [-0.419]	-0.007 [-0.444]
USRUNUP		-0.023 [-1.887]*	-0.019 [-1.765]*		-0.017 [-1.819]*	-0.015 [-1.659]
WRDRUNUP		-0.015 [-1.562]	-0.012 [-1.432]		-0.013 [-1.441]	-0.011 [-1.385]
MarketSD		0.012 [1.199]	0.011 [1.013]		0.009 [0.993]	0.004 [0.671]
SOX			-0.008 [-0.882]			-0.004 [-0.691]
Adj. R^2	0.057	0.044	0.038	0.043	0.037	0.032
F-statistic	7.98**	6.39**	5.51**	6.21**	5.24**	4.48**

*Indicates significance at the 10% level, **at the 5% level, *** at the 1% level.
See table 6 for a detailed description of the included variables and their sources.

Table 8 - Cross-sectional regression of long-run abnormal returns.
(Dependent Variable is $FIPO_{BHAR/CAR} - DIPO_{matchedBHAR/CAR}$)
*Matched via Propensity Score *3-Year BHAR&CAR

Variable	BHAR (3)	BHAR (3)	BHAR (3)	CAR (3)	CAR (3)	CAR (3)
Constant	0.009 [1.349]	0.007 [1.249]	0.006 [1.219]	0.011 [1.451]	0.010 [1.439]	0.011 [1.478]
SIZE	0.004 [0.673]	0.007 [0.723]	0.006 [0.707]	0.003 [0.482]	0.003 [0.452]	0.004 [0.491]
AGE	-0.008 [-1.218]	-0.009 [-1.312]	-0.007 [-1.156]	-0.004 [-0.934]	-0.004 [-0.894]	-0.003 [-0.749]
RANK	0.015 [1.945]**	0.012 [1.872]*	0.011 [1.819]*	0.018 [2.018]**	0.017 [1.996]**	0.016 [1.983]**
VC	-0.001 [-0.375]	-0.003 [-0.459]	-0.004 [-0.569]	-0.008 [-1.018]	-0.006 [-0.891]	-0.004 [-0.726]
VEX	-0.009 [-1.916]*	-0.008 [-1.884]*	-0.006 [-1.716]	-0.005 [-1.649]	-0.006 [-1.661]	-0.005 [-1.631]
STD60	-0.008 [-0.476]	-0.005 [-0.347]	-0.005 [-0.391]	-0.010 [-0.689]	-0.009 [-0.561]	-0.008 [-0.548]
USRUNUP		-0.017 [-1.583]	-0.014 [-1.349]		-0.019 [-1.717]	-0.016 [-1.539]
WRDRUNUP		-0.008 [-0.749]	-0.008 [-0.712]		-0.011 [-1.293]	-0.009 [-0.937]
MarketSD		0.011 [0.973]	0.009 [0.849]		0.007 [0.764]	0.008 [0.805]
SOX			-0.013 [-1.037]			-0.010 [-0.954]
Adj. R^2	0.045	0.032	0.026	0.038	0.029	0.021
F-statistic	6.67**	4.01**	3.21**	4.67**	3.69**	2.89**

*Indicates significance at the 10% level, **at the 5% level, *** at the 1% level.
See table 6 for a detailed description of the included variables and their sources.

Table 9 - Buy-and-hold and cumulative abnormal returns- Robustness check

		U.K Destination			Canadian Destination		
Long-run Return	Holding Period	FIPO (N=35)	DIPO (N=962)	Difference	FIPO (N=18)	DIPO (N=962)	Difference
BHAR	One Year	-3.19	-1.22	1.97*±	-2.91	-1.22	1.69*±
	Two Year	-4.56	-1.59	2.97*±	-5.74	-1.59	4.15*±
	Three	-6.21	-2.68	3.53*±	-7.45	-2.68	4.77*±
CAR	One Year	-2.03	-1.09	0.94*±	-2.75	-1.09	1.66*±
	Two Year	-4.21	-1.88	2.33*±	-5.71	-1.88	3.83*±
	Three	-6.79	-3.01	3.78*±	-7.33	-3.01	4.32*±

*Indicates t-test significance on the difference between group means at 5% level.
±Indicates Mann-Whitney U significance on the difference between groups at 5% level assuming a non-normal distribution.
This table reports the one-, two-, and three year buy-and-hold abnormal returns (BHAR) and cumulative abnormal returns (CAR).