The Role of Underwriters in Non-traditional Offerings: Empirical Evidence

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THE ROLE OF UNDERWRITERS IN NON-TRADITIONAL OFFERINGS: EMPIRICAL EVIDENCE

by

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ABSTRACT

This study fills a gap in the academic literature by examining the willingness of firms to utilize the Internet to conduct a securities offering without an underwriter, thereby replacing the traditional book-built offering. Through both qualitative and quantitative data collection, we find that although underwriters are costly because of their rent, firms believe that the services and other benefits that underwriters provide, in particular with respect to marketing and distribution, outweigh these costs. In addition, we find that investors value the verification function provided by underwriters. Furthermore, lack of familiarity with the DPO process is a barrier to undertaking and participating in these transactions for both issuers and investors. Thus, despite the apparent cost savings of raising capital over the Internet, few firms are likely to undertake this means of capital finance.
1. Introduction

Few dispute the underwriter’s importance in a traditional book-built securities offering. The underwriter prices the offering, herds investors and provides a sales force for the securities to be issued. Further, in securities markets characterized by asymmetrical information, firms have difficulty in developing a reputation since each of them enters the primary market infrequently. As a third party intermediary, the underwriter emerges as a specialist in establishing the issuer’s reputation. The underwriter is thus able to decrease the issuer’s transaction costs in the offering process.

This article responds to the issue of whether the underwriter’s role becomes less important to the firm in a non-traditional offering, such as the 2004 Dutch auction completed by Google Inc. or other variations of the direct public offering (DPO). The empirical evidence presented here suggests that firms consider underwriters to be crucial in the offering process regardless of potential costsavings from dispensing with the underwriter in the transaction. The underwriter’s staying power raises questions about the success of recent non-traditional offerings. We argue that this success does not indicate the importance of the underwriter but relates primarily to the business of the issuer and the product being sold.

Technically, a DPO is a financing in which securities are offered to the public without an underwriter. In North America, DPOs have been popular among governments at all levels for debt issues but thus far not among corporations. Using transaction cost analysis, Anand has contended corporations could benefit greatly from
conducting DPOs (Anand 2003). In particular, Anand argued that if the DPO occurs over the Internet and involves seasoned issuers, debt securities, or institutional investors, information asymmetries can be reduced and the DPO can be completed more cost effectively. Others too have questioned the efficiency of non-traditional offerings, favouring the Dutch auction format (Derrien and Womack 2001).

In this article, we examine, from an empirical standpoint, factors that affect a firm’s decisions regarding the offering process. We use focus groups and survey methodology to define and collect qualitative and quantitative data. In particular, we examine the issue of why firms are reluctant to raise capital on the Internet without an underwriter. Thus we probe reasons for the infrequency of DPOs and whether this infrequency stems from issuers’ general fear of being ostracized by investors in undertaking these transactions or their belief that they could not duplicate the functions of the underwriter.

We find that although underwriters are costly because of their rent, firms view the services and other benefits that they provide, in particular with respect to marketing and distribution, to outweigh these costs. In addition, we find that investors value the verification function provided by underwriters. Furthermore, lack of familiarity with the DPO process is a barrier to undertaking and participating in these transactions for both issuers and investors. This situation will not change until more, and more well-known, firms begin to conduct DPOs. Thus, despite the cost savings of raising capital over the Internet, few firms are likely to undertake this means of capital finance in the near future. Admittedly, our survey response rate of 5% suggests the possibility of
response bias in these results, but this figure is not out of line with other corporate survey studies.\(^1\)

Our study highlights that established underwriters have a comparative advantage in persuading investors to purchase the issue. In addition, we uncover a belief among issuers and investors that underwriters are the first parties in the market to invest in information about a new security. They can therefore be trusted as a third party to lend credibility to the issuer and the securities to be issued. We also identify a perceived need for the services that underwriters provide: underwriters constitute a market mechanism that avoids the inherent problems with information as a public good (such as unverifiability).

The results of this study fill a conspicuous gap in the literature. The advent of the Internet has occasioned much efficiency in the securities regulatory field, especially in regards to disclosure of information. In addition, after the Google IPO, many market observers believed that an evolution in the role of the underwriter had indeed begun. Yet, until this study, it was a wholly open empirical question as to why firms generally are not willing to utilize the Internet to conduct an offering without an underwriter. We found that the marketing and distribution functions of the underwriter are so crucial that firms are not willing to dispense with this integral party to the offering process. To date, ours appears to be the only empirical work conducted on the willingness of firms to undertake non-traditional offerings.

\(^1\) Graham and Harvey (2001), e.g., report a response rate of 9% in their survey of US Chief Financial Officers.
This research is significant for many capital market participants, including firms, regulators, investors and, of course, underwriters themselves. Our research indicates that the underwriter is not being “phased out” as a result of cost efficiencies afforded by the Internet. On the contrary, according to most firms, the underwriter’s services and other associated benefits outweigh the aggregate costs of retaining an underwriter. Thus, the infrequency of DPOs does not stem from issuers’ fear of being sanctioned by the investment community. As suggested below, these results may be particular to Canadian capital markets which are comprised of a preponderance of small cap firms.

The article proceeds as follows. Part 2 reviews theory and academic literature underpinning DPOs. Part 3 outlines our qualitative data collected from a series of focus group discussions. Part 4 discusses our survey methodology for collecting quantitative data and the results from the survey. Part 5 contains our analysis and discussion of the results. Part 6 concludes.

2. Theory and Literature Review

Academic inquiry into DPOs has been minimal. This may be because the frequency of DPOs itself is not high. The first Internet DPO by Spring Street Brewery in 1996 began the US debate on the effect of the Internet in the offering process. Academic opinion varied on the issue. Fisch (1998) argued that small businesses may sacrifice managerial capital and gatekeeping expertise if the Internet is used to access public equity markets. Similarly, Black (1998) raised significant doubts about whether the Internet can significantly reduce the cost of obtaining capital in the offering process.
because of the “lemons” problem. Black contends that an adverse selection problem exists because investors are unable to discern which issuers are truthful; investors therefore discount the prices that they will offer for all securities.\(^2\) High-quality issuers exit the market, forgoing a potentially valuable investment opportunity, because they are unable to obtain a fair price for their securities.\(^3\) Low-quality issuers remain in the market and “[a]s a result, investors discount still more the prices they will pay. This in turn only drives more honest issuers away from the market and exacerbates the adverse selection problem.”\(^4\)

The question, then, is whether companies can avoid the effect of this “death spiral”\(^5\) so that information asymmetry and the resulting discount that investors apply to the securities of a DPO issuer do not drive them out of the market. In a traditional offering, underwriters perform due diligence and provide comfort to investors that the issuer is *bona fide* and that the offering is fairly valued. The underwriter also provides its reputation to reassure investors as to the quality and value of the issuer.\(^6\) But in a DPO where no underwriter is present, how can the DPO market avoid the death spiral?

In response to Black’s argument, Anand (2003) notes that it is well documented that firms can signal firm value and credibility.\(^7\) Issuers routinely signal the value of an IPO or the firm itself by the willingness of its original shareholders to retain equity.\(^8\)

\(^3\) Myers and Majluf (1984).
\(^4\) Black (1998) at 92.
and the firm’s choice of debt-to-equity ratio.\textsuperscript{9} Of course, effective signalling may occur with many signals rather than one.\textsuperscript{10} Thus, in the DPO context, signalling may be useful for issuers to avoid the death spiral referred to above and offers a number of possible signalling techniques in the DPO, such as: voluntary lock-up agreements between management and significant security holders that are equivalent to, or more stringent than, those typically demanded by underwriters; management compensation schemes that include real performance-based compensation; financial signals such as earnings forecasts, disclosures relating to how well the issuer has performed in previous issues, and valuations of the company or of the company’s stock to signal value.

Further there are specific instances in which DPOs can be more efficient than a traditional book-built offering. This is the case when the additional transaction costs that arise in the absence of an underwriter are less than the underwriting fee. The result is that aggregate transaction costs are lower and net proceeds from the offering are higher. Aggregate transaction costs in a DPO are more likely to be lower than a traditional underwritten offering in certain circumstances, such as when an offering is conducted over the Internet, the issuer is seasoned, the investors are sophisticated, or the offering consists of debt rather than equity securities. The presence of each of these factors can result in lower information costs, thereby increasing the potential for an efficient DPO. (Anand, 2003)

\textsuperscript{9} Heinkel (1982) at n.1.
\textsuperscript{10} Engers (1987).
Derrien and Womack (2003) also stress the relative inefficiency of the book-built offering process. The authors study underpricing in French IPOs and find that the initial price of offerings in the auction-like mechanism used in France incorporates more information about the current and recent past market conditions than in the offerings done by way of traditional book-building method. Furthermore, they find that the auction mechanism “is associated with less underpricing and lower variance of underpricing.” 11

To some extent, the notion that non-traditional offerings can be more efficient than book-built ones bears itself out in practice since governments at all levels have chosen to raise capital by DPOs primarily of bonds and other debt securities.12 However, in Canada, CI Fund Management caused a strong investment industry reaction when it attempted to market a $300 million closed end fund directly to investors in December 2004. The rationale was to save on the issuing cost and to pass on the savings to investors. CI Fund Management attempted to enhance the issuance by doubling sales commissions.13 The investment industry reacted to this initiative by arguing against the deal with the Ontario Securities Commission and other regulators,

12 Since 1999, the amount of debt auctioned and placed by the United States government (through TreasuryDirect and the Commercial Book-Entry System) is $503,502,699,322.11. The main website of Bureau of the Public Debt Online, Today’s Auction Results, at http://www.publicdebt.treas.gov/ai/AlGateway (last updated Sept. 10, 2003) also contains numerous other press releases indicating the success of previous U.S. government auctions. The figures for auctions of securities in Canadian provincial jurisdictions are more difficult to ascertain. However, the Canadian federal government has been extremely successful and active in raising capital directly through debt auctions. See Government of Canada Securities Auctions, at http://www.bank-banque-canada.ca/en/cars.htm.
13 These commissions may suggest that the offering was not direct and that there were some intermediaries involved. However, the transaction worked as follows: In the typical syndicate, there is a pyramid of parties, with the underwriters at the top and lesser players at the bottom. These lesser players earn a portion of the sales commission only (no fees). CI sought to bypass the top of the pyramid and go straight to the front line sales force.
and there was concern that they might bar CI Fund management from access to their stockbrokers and financial planners. A senior vice-president of the Investment Dealers’ Association stated the industry’s perspective: “The concern in the dealer community is investor protection. The role of the underwriter is to structure and scrutinize, and these closed-end funds can be higher-risk products with complex derivative instruments and leverage”. In the end, CI did not undertake the financing.

Despite various attempts at varying the traditional book-built offering process, the increased frequency of DPOs has not occurred. Some may point to the Google Dutch auction, whereby Google priced its IPO by receiving bids over the Internet, as the beginning of a trend towards a reduced role for the underwriter in IPOs. But even this type of IPO may be a rare occurrence since Google’s business (Internet search engine) enabled it to conduct the Dutch auction more effectively than other companies not in the technology sector. Further, some would argue that although Google attempted to complete a non-traditional offering, it set its price artificially low in order to increase demand after the IPO. The appearance of intentional underpricing in the Google offering suggests that characteristics of the book-built method, including the

15 Specifically, Google set a price range for its shares. Potential investors had to open an account with one of the underwriters on the transaction in order to bid. If the investors met the underwriters’ eligibility and suitability requirements, received a copy of the prospectus and were able to bid by phone, fax or over the Internet providing the number of shares they wanted to purchase and the price they were willing to pay. Investors were permitted to bid outside of Google’s established range. See Wall Street Journal (2004).
16 Google sold its shares at $85 despite its projected price range of $108-$135 per share. Some question whether Google was a “true” Dutch auction because it decreased its price in this way. See Allan Sloan, “IPO’s Success Doesn’t Justify Google’s Price” online www.washingtonpost.com/wp-dyn/articles/A27391-2004Aug23.html.
extensive role of the underwriter that it involves, will not be easily surpassed by innovative financing techniques such as the Dutch auction.  

It is true that Canada has a large concentration of small to mid cap firms and perhaps this explains a bias in favour of traditional offerings (i.e. where an underwriter is used). It would be useful to consider whether this bias would persist in markets populated by a larger propensity of seasoned, larger issuers. These issuers have a well-established investor and analyst following as well as a relatively long disclosure record. They have likely raised capital many times in the past. Their reliance on the underwriter may be less as a result. From the investor’s perspective, they are not as high-risk as investing in smaller cap firms. We do not test the differences between markets in this paper, however they should be borne in mind when considering the empirical results that follow.

In our research, we sought to determine why issuers have been reluctant to utilize the Internet to raise equity. In particular, we ask whether the fear of being ostracized or sanctioned by the investment community has undermined the emergence of DPOs or whether DPOs are unpopular because of their inability to duplicate the underwriters’ functions. We conducted both qualitative and quantitative research as discussed below.

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17 Michael Brush, “IPOs return to make the rich richer – again” November 9, 2004 online at www.currentofferings.com/ipostory.cf who states, “...you shouldn’t expect…[the] auction system to catch on anytime soon. There’s simply too much money at stake for those in control to expect any real changes…”

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3. **Focus Groups**\(^\text{18}\)

We held two focus groups in Toronto, Canada in June 2003. The series of questions posed to focus group participants were based on our theoretical analysis above. The participants were grouped according to expertise. The first group consisted of buy-side constituents in the form of institutional investors as well as regulators and was labelled the “think tank group.” The second group consisted of constituents primarily from sell side and was referred to as the “issuer/underwriter group.” Participants included asset management and private equity professionals as well as the heads of major hedge funds. The groups also consisted of investment banking associates, a major Canadian technology company, and securities lawyers with expertise in technology company underwriting. One of the participants in the second group was the chairman of the first Canadian company to complete a DPO in Canada.

3.1 Barriers from the issuers’ perspective

Our first question sought to isolate factors that deter issuers from completing Internet securities offerings. Both focus groups expressed concerns relating to the actual sale of the offering. Participants were concerned that Internet offerings inhibited access to potential buyers since there was no direct sales force and that these types of offerings contained little secondary market support. That is, in a traditional offering, the brokerage side of the underwriter’s organization would typically ensure that there was a market for newly issued underwritten shares. A consensus developed around the

\(^{18}\) This section is based on Anand and Johnson (2004).
concept that “securities are sold not bought”. This turn of phrase refers to the notion that there is a lack of organized, inherent demand in the absence of organized selling and marketing of a firm’s securities. In the focus group discussions, the terms also referred to the notion that issuers want their issue to be bought by high-quality investors, but this is not possible because of the lack of knowledge/confidence in conveying information through the Internet.

The think tank group thought secondary market support and the sale of the issue was the main concern for large cap issuers while the issuer/underwriter group emphasized the importance of the investment banking relationship to the large cap issuer and the importance of this relationship in obtaining credit. Both groups stressed that in the absence of an underwriter, issuers face a regulatory hurdle which will be costly to overcome in terms of legal fees. Because regulators tend to be unfamiliar with the DPO, they therefore devote considerable attention to the transaction. In turn, DPO issuers are required to expend significant resources in convincing regulators that all of the necessary disclosure has been made and investors have been treated in fair manner.

With regards to barriers for small cap companies, the think tank group again stressed the lack of sales force issue, as well as the lack of knowledge of these issuers stemming from less expertise in the offering market. This lack of expertise increases the cost of completing offerings generally and DPOs specifically. The issuer/underwriter group also emphasized the steep learning curve required of small cap companies especially if no investment dealer experience and knowledge is present internally.
Both groups raised as other barriers the novelty of the DPO concept, lack of investor demand and the need for an established distribution network to create traffic to attract a large enough pool of investors. With respect to all of these concepts, participants continually raised the idea raised above that securities are “sold not bought”.

3.2 Barriers from the investors’ perspective

The focus group participants discussed factors that deter investors from participating in Internet securities offerings. Almost all of the participants’ responses related to the credibility of the issuer: investors need to be able to trust the issuer in which they are investing. Many participants questioned the security of the Internet in addition to how well it is regulated, focusing in particular on investors’ inability to independently verify information they receive from the issuer over the Internet.

Both groups questioned the efficiency of a DPO in terms of dissemination of information and pricing. Regarding dissemination of information: who gets it first? How can objective information be delivered by the issuer itself? A filter is needed to reduce information overload. Regarding pricing of the issue, will there be a price pop? How can the price be verified or compared, what is fair value? Many participants asked why bother using this method as opposed to traditional capital financing methods. Others stated that by raising capital through a DPO firms could undermine their own credibility.
The think tank group noted that investors have a number of reasons to avoid a DPO completed by large cap issuers. These included: information overload and the need for a third party filter, the credibility/risk of the Internet, the lack of verification methods for the offering price, and the centralized nature of offering information (dealers/brokers can’t speak for the issue). Others raised liability issues such as who would be liable for technical problems and how the need for independent verification would be satisfied.

The think tank group suggested that the lack of a liquid secondary market was a barrier for investors investing in small cap companies. DPO securities may be easy to purchase yet likely difficult to sell. Also, information overload, and the need for a filter or clearing house for DPOs that could verify quality and price were also important concerns. From the issuer/underwriter standpoint the fact that “real” companies do not use DPOs and the lack of due diligence/independent verification being performed were the most important barriers to investor participation.

Unique ideas contributed included broker reluctance and monopolies of issuance. Broker reluctance is a consequence of the majority of investors using their brokers to purchase securities. Without a commission, brokers are unlikely to recommend that their clients purchase the securities of a DPO issuer. Monopolies of issuance occur when some brokerages can handle new issues better than others, which results in an issue price which will reflect the ability to execute rather than the stock’s value.
3.3 Possible efficiencies and inefficiencies from DPOs

We asked participants to identify what efficiencies would be gained in using the Internet to complete securities offerings. Both groups felt that investors would have better or equal access to information, as well as better access to deals in terms of share allocation. This, to some, meant that investment bank “spinning,” the practice of allocating shares for improper reasons, would be reduced as a result of DPOs.

Both groups felt that the cost saving from eliminating the underwriter was the obvious benefit for issuers. Also, the groups felt that issuers would have access to a broader/more global investor base by utilizing the Internet. Further, issuers would have better access to capital because they avoid the underwriter “pipeline of product or sequence of deals” which would enable them to get to the market faster.

The think tank group proffered the unique idea that, in cases of companies with a specific investor following which related to the product being sold, issuers could target investors and reach them more efficiently because there would be a pool of investors who are familiar with and believe in the company. Both groups noted that the DPO could lower the cost of issuance if the issuer provided information directly to investors, thereby mitigating effects of biased investment bank research. Furthermore, if DPOs were to become a viable financing option, they may serve as price competition for traditionally inflexible underwriting fees.

Inefficiencies were also identified and answers varied between the groups. The think tank group focused on the chaos that a viable DPO market would bring to the
traditional broker network mechanism. They also discussed the fragmented markets in Canada, and the fact that a DPO would probably be harder to bring to market because of heterogeneous legislation across Canada. The selection process in capital markets, which is driven by underwriters that weed out bad issuers, was at this risk of being damaged if DPO issues continue.

3.4 Replacing the verification process

With the verification function of the underwriter absent in DPOs, participants discussed alternatives that could be adopted to replace the underwriter. The most popular idea was to standardize the process through issuance requirements. Some suggestions included forming and utilizing a central body, quality based requirements, and mandatory regulator approval of prospectuses/Internet sites all of which could create a requirements standard.

The issuer/underwriter group suggested reform in which the onus to verify information was shifted to other parties. One participant indicated that investors can and should do research by themselves, thereby encouraging transaction costs associated with information gathering to be shifted to investors. The issuer could use technology such as hyperlinks in a prospectus to direct investors to other information which verifies claims in the prospectus. Some suggested that the onus to verify information should shift to auditors and lawyers. Others suggested that an independent third party should be responsible for verification. We recognize that the issue of who would compensate this third part remains the main stumbling block to implementing this plan,
although presumably investors themselves could coordinate their efforts and together fund this service. Suggested entities capable of filling this third-party role included trade organizations, rating agencies, or equity/credit analysts.

3.5 Regulatory implications

The focus group participants unanimously agreed that regulation should be streamlined and uniform. Regulatory reform should accelerate the timeline for issuing DPOs so that they are more cost effective than registering normal securities. They also stressed that a single national securities regulator in Canada (as opposed to the current fragmented system of thirteen provincial and territorial regulators) would further streamline the DPO process. Both groups emphasized that legislation should be customized to accommodate small cap companies and should be based on principles (such as minimum financial standards) rather than rules. They stressed that tough enforcement with severe penalties would discourage issuers from bending principles. There was an understanding among the focus group participants that because of the novelty of the transaction, investors would rely to a greater extent than usual on vetting the DPO. There seems to be an association in investors’ minds between Internet transactions and the “pump and dump” schemes.19

19 Werner Antweiler and Murray Z. Frank, “Is All that Talk Just Noise? The Information Content of Internet Stock Message Boards” SSRN (August 21, 2001). The authors provide evidence to reject the hypothesis that Internet stock message boards are merely noise. Rather, they contain information that investors find relevant, especially with regards to trading volume and volatility.
3.6 Summary

The evidence obtained from the focus groups supports the belief that issuers are reluctant to undertake DPOs because there is no ability in these transactions to duplicate the function of the underwriter. This concern seemed to be more prevalent than the notion that the issuer will be ostracized by the investment community if it does not use an underwriter. Three points stand out. First, the idea that securities are “sold, not bought” suggests that established underwriters have a comparative advantage in persuading investors to purchase the issue. Second, the concern regarding pricing of the security conveys a belief that underwriters are the first parties, or at least they are understood to be the first parties, in the market to invest in information about a new security. Their importance in this process is recognized by the issuer community. Finally, focus group participants raised the concern that retail investors can free ride on information provided by institutional investors. Underwriters thus stand as a market mechanism that avoids the inherent problems with information as a public good (such as unverifiability).

Why then were the Google and Spring Street Brewery IPOs successful? Google was naturally in place to complete its Internet DPO because of its world-renowned and heavily utilized product. Furthermore, it relied on the Internet to take its bids in the

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20 We recognize that the definitions of “success” in terms of describing an IPO can be varied. Broadly, success can be described as the ability to raise the desired amount of capital in a timely manner, without grossly underpricing the offering. Google Inc raised $1.67 billion which is less than the desired $3.3 billion that the company hoped to raise. However, many argue that it was successful because it completed a large scale offering with limited assistance from the investment banks. Certainly Google has been incredibly prosperous since its IPO. Spring Street was a much smaller offering but successful on its own terms. Spring Street was a new issuer without an established reputation or investor following. Spring Street created its own web page from which potential investors could download offering documents. Thirty-five hundred investors bought Spring Street stock totaling $1.6 million in aggregate.
Dutch auction. In essence, it relied on its own product to complete its offering. Similarly, Spring Street Brewery had a popular product (beer) and Internet-based transactions were just beginning to catch on. As Andy Klein, founder of the company, stated, “Most people misunderstood what happened with my beer company and, most important, why the offering was successful. It had nothing to do with the appetite for venture capital or investors’ interest in beer companies. It was that we had the good fortune of being the first company to raise money using the Internet. And that led to hundreds of stories about the offering as it was occurring, which led, in turn to...hundreds of thousands of people on our Web site.”

In short, there are explanations for the success of these offerings despite the fact that the issuer modified or eliminated the underwriter’s role in each transaction.

The focus groups suggested that a lack of familiarity with DPOs was a barrier to the proliferation of these transactions in terms of both issuers’ and investors’ willingness to undertake them. But if familiarity with a transaction were indeed a barrier for issuers, then one might expect a market to emerge for advice about how to proceed in these transactions. (This role would be analogous to the “one-percent broker” in real estate markets who provides advice but few if any other services.)

We may yet see the development of the underwriters’ role to a provider of advice as opposed to its full-blown functions shown to be necessary in this paper. The Google IPO suggested that a limited role for underwriters can be efficient especially where

pricing is completed over the Internet according to terms of an auction predetermined by the issuer. However, Google was likely the exception not the norm. Our research indicates that underwriters are viewed to be integral to the offering process for a variety of reasons including the reputational role that is not present in the DPO transaction. Unfamiliarity with the transaction is, if anything, a secondary reason for the infrequency of these transactions.

4. Collection of Data by Survey and Results

4.1 The Survey

Based on the results of the focus group discussions, we constructed a survey (attached as an Appendix 1) and administered it electronically to all companies listed on the Toronto Stock Exchange (approximately 1300 firms). The survey was pre-tested on a subset of focus group participants, and the final version was then sent to a contact person (usually the CFO) at each listed company. The survey asked participants to indicate their relative receptiveness to the use of DPOs for equity, debt, and income trust securities. Participants were then asked to indicate their level of agreement or disagreement on a number of potential explanatory factors, and to provide some firm-specific demographic information.

In spite of four mailings, the survey had a disappointing response rate, with only 60 valid responses. This represents a response rate of about 5%. This low response rate

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22 Income trust securities are hybrid securities, where the holders get access on a (mostly) tax-free basis to the operating income of the underlying company. They have dominated the IPO market in Canada, comprising 94% of all issues in 2002. They are gaining popularity in the US in the form of income deposit securities.
could be interpreted as an indication of the general level of interest in the market for DPOs but more likely it was a function of lack of time at the senior corporate level to complete the survey. It does raise the possibility of selection bias: those executives who did reply are presumably more knowledgeable about and possibly more interested in DPOs as an alternative financing medium. The implication of this selection bias is that we should treat our results with caution, as they may represent the sentiment of a subset of the market, not the entire market. However, the response rate is not out of line with other surveys of corporate executives (e.g. Graham and Harvey, 2001). Further, the number of responses does provide us with enough data to conduct statistically meaningful empirical tests, to which we turn in the next section.

As discussed below, some responses to the survey instrument were qualitative (Questions 2 and 17) and some were quantitative. We first summarize the non-parametric comments, and then examine in some detail the parametric responses. For the latter, we use both ordinary least squares (OLS) and multinomial logistic regression (logit) analyses.

4.2 Qualitative Responses

In Question 2, those respondents who indicated that they had not considered using the Internet to facilitate the completion of an offering of equity securities were asked to say why they would not do so. Several firms said they had not been in the market for an offering of any kind. Another group never had the option proposed. Most firms had a complete lack of information about DPOs. Even the firms with some
knowledge and awareness still had uncertainty about how to go about it. Firms have not seen it done in the past and are, therefore, hesitant. A longer track record was said to be a prerequisite, suggesting that a DPO would be more useful for a secondary financing offering. Also, larger and more experienced firms would likely possess more credibility in this market. Some firms were unsure if securities law would allow for DPOs. A DPO was considered to raise risk of non-compliance with applicable laws, both in Canada and, more importantly, in other jurisdictions.

The responses suggested that some issuers view DPOs to be too complicated and difficult. A major concern is the marketing constraint as firms want to confirm enough buyers, timing and the right price. Firms do not feel they need to go through the DPO channel as there currently are strong and specialized conventional markets. Underwriters have the skills and experience necessary to successfully complete an offering. Corporate finance is seen to be a relationship business and it is hard to reconcile this with raising capital over the Internet, however price effective it may be. A REIT representative said that a very large percentage of their target investor market is retail; thus, they need the support of the underwriter’s retail systems to successfully sell equity.

In Question 17, respondents were asked to specify which “other issues” (besides those listed in Questions 14-16) act to inhibit their use of DPOs. A recurring theme was that “securities are sold, not bought”. It was felt that the services of the underwriter, in
particular marketing and distribution, were irreplaceable.\textsuperscript{23} For securities offerings, it appears that firms prefer to use push channels rather than pull channels in order to enhance visibility. Securities offerings are all about marketing, sales, and distribution, not simply order fulfilment. Also, smaller firms also need the external resources in completing an offering. There is definitely the fear that the investor base would not be comfortable with a DPO. Shareholders find solace in an investment bank backing the issue.

Part of the added value from the underwriter is from the critical research follow-up. Underwriters also offer “psychological support” to an offering by providing investors with the comfort they seek about the issuer and the securities in which they are investing. Furthermore, the lead underwriter makes a secondary market in the issue since a lack of a secondary market would negatively affect any subsequent offering by the issuer in terms of price support after the offering. Investment banking expertise and relationships are very difficult to replace. An issuer electing to complete a DPO may encounter hostility among brokerage firms. Finally, having investment banks involved allows for further due diligence and comfort.

These qualitative results are consistent with those of the focus groups, summarized in Section 3. In general, it would appear that the biggest impediment to DPOs is fear of the unknown, and the related fear of leaving the certainty of the known.

\textsuperscript{23} The prevalence of this theme is noteworthy, since respondents were asked to identify “other issues”, and Question 15 already states: “Investment banking expertise cannot be replaced”.
The market needs more “Google-like” and more non-government deals before it will be willing to embrace the DPO concept.
4.3 Quantitative Analysis – Data Description

Of the 60 valid responses, analysis of the data revealed two problems. First, many of the responses to the firm demographic questions (#’s 19-24) were incomplete or incorrect. We did attempt regression analysis using subsets of those responses with complete data for each of these questions in turn, but results were inconclusive, and the loss of degrees of freedom outweighed any additional information contained in these variables. Accordingly, the analysis to follow will focus only on Questions 5-16 as explanatory variables, along with industry dummy variables constructed from the responses to Question 18. Table 1 provides descriptive statistics for the core variables, while the Appendix shows the definition of variables.

[Table 1 here.]

A second problem concerns significant multicollinearity among many of the variables. Multicollinearity makes it difficult to interpret the regression results. The precision of parameter estimates declines, variables are incorrectly dropped from the analysis because of inflated standard errors, and parameter estimates are sensitive to sample selection.

Table 2 provides the correlation matrix for the core variables. With a sample size of 60, the critical level of simple partial correlation (using a t-test) at the 5% level is 0.254. Inspection of Table 2 indicates the pervasive nature of this problem.

[Table 2 here.]
The standard remedies for multicollinearity are to increase the sample size (not feasible here), to use a seemingly unrelated regression (not feasible here), to drop one of the correlated variables (not feasible given the widespread multicollinearity), or to use stepwise regression analysis. With this approach, the model selects the most significant variables, and then iterates, sequentially selecting the remaining variables which are significant, given the effect of variables already selected. As discussed below, this is the approach that we used.

4.4 Regression Analyses

The OLS and logit regression approaches are based on different distributional assumptions, and measure different response attributes. OLS is based on the assumption of a cumulative normal distribution function, while logit is based on a cumulative logistic function. The two distributions are similar in form, and converge asymptotically. The more important difference between the two approaches is that OLS estimates the contribution of an explanatory variable to the dependent variable, while logit estimates the probability that an explanatory variable has an impact on the dependent variable. Hence, the estimated regression coefficients will in general have different values between the two approaches, but both should (asymptotically) result in the same variables being found to be significant.

In our analysis, we employed seven regression equations. The left-hand-side, or dependent variable, is either Question 1 (whether the firm has considered using the Internet to facilitate the sale of securities) or it is the likelihood that the company would
use the Internet, in whole or in part, to complete an offering of equity, debt, or income trust securities in the future (Questions 3 a,b,c and 4 a,b,c, respectively).

Question 1 required a “Yes” or “No” answer, while Questions 3a-c and 4a-c requested an attitudinal response between 1 and 7, with “1” being “Not likely” and “7” being “Likely”. For Question 1, the breakdown between “Yes” and “No” answers was 10 and 50, respectively. For the attitudinal questions, responses tended to be clustered around the lower half of the scale (see Table 1). These results suggest a general disinclination toward the use of the Internet to issue securities.

The right-hand-side, or explanatory variables, comprises the responses to Questions 5-16, as well as dummy variables for industry groupings. Companies were sorted into four industry groupings: Investment/Trust/Financial (10), Technology (12), Oil/Gas/Resource (20), and Industrial/Transportation (14). Four responses did not indicate their industry, which we deal with in our analysis. In order to avoid mis-specification due to over-identification of the X matrix (the “dummy variable trap” induced by the inclusion of dummy variables for each state of the world), we suppressed the constant term in all regressions.

Our core results are shown Table 3. This table shows the p-values (for those variables which are significant) for each of the seven equations. Panel A shows the basic OLS results, Panel B shows the stepwise OLS results, while Panel C shows the

\footnote{For ease of presentation, we do not show the complete regression results, as the numerous output tables (particularly for the iterative stepwise tests) provide little additional information. As indicated above, the values of the coefficient estimates themselves have little economic meanings; we therefore restrict our analysis to the statistical significance of the variables. Detailed results are available from the authors upon request.}
stepwise logit results. We do not show OLS results for Question 1 as OLS is inappropriate for binary dependent variables.

The columns of Table 3 represent the left-hand-side (dependent variables) of the seven regression equations. To test for robustness, we also report the results for the full sample of 60 companies (omitting the industry dummies) and for the sub-sample regressions without the dummy variables. In this way, we are able to identify both the effect of the dummy variables (comparing the two sets of sub-sample regressions) and the additional information from the four extra companies (comparing the 56- and 60-company results without the dummy variables). The results of these robustness checks are discussed later in this Section. The rows labeled “56-W/D” represent the results for the sub-sample of 56 companies for which industry identifiers are available. The rows labeled “60-W/O-D” represent the full sample of 60 companies, omitting the industry dummy variables. The rows labeled “56-W/O-D” represent the sub-sample of 56 companies, omitting the dummy variables.

[Table 3 here.]

To facilitate the interpretation of results, we have developed a single word descriptor for each of the explanatory variables (the full description of each variable is contained in the survey instrument, attached as Appendix 1). The code is as follows:

#5 – “Savings”

The high standard errors induced by the multicollinearity cause the basic logit tests to give insignificant results.
4.5 OLS Results

We give more weight to the OLS stepwise results in Panel B, since the basic OLS results are distorted by multicollinearity. We show the basic results, however, for completeness. The usual cut-off p-value is 5%, but here, due to the data limitations, we accept values up to the 10% level, with reservations.

Question 1: Has your firm ever considered using the Internet to facilitate the completion of an offering of equity securities?

OLS is not appropriate for Question 1.

Question 3a: What is the likelihood that your firm would consider using the Internet to complete a future offering of equity securities without using an underwriter?

For the OLS stepwise regressions, variable #7 (If more firms completed DPOs, the DPO would become more credible...) and variable #15 (Investment banking expertise cannot be replaced) are both significant. In the basic OLS test, variable #10 (Because we are a well known firm...) replaces variable #15.

Question 3b: What is the likelihood that your firm would consider using the Internet to complete a future offering of debt securities without using an underwriter?

The OLS stepwise results indicate that variable #’s 7 (Participation), 10 (Profile), and 15 (Expertise) are significant, along with the dummy variable for Investment, Finance, and
Trust firms. For the basic OLS test, variable #’s 10 and 15 remain, along with # 13 (Institutional shareholders would be more likely to invest in a DPO than retail investors).

**Question 3c:** What is the likelihood that your firm would consider using the Internet to complete a future offering of income trust securities without using an underwriter?

The OLS stepwise results show that variable #’s 7 (Participation) and 15 (Expertise) are significant, along with the dummy variable for the Industrial and Transport companies. For the basic OLS run, only variable # 15 is significant.

**Question 4a:** What is the likelihood that your firm would consider using the Internet to complete an offering of equity securities using the underwriter to perform limited functions?

The stepwise results favour variable # 5 (Savings), variable # 7 (Participation), and variable # 16 (Legal) as well as the dummy variable for investment, Finance, and Trust firms. The basic OLS test has variable #’s 7 (Participation), 13 (Institutions), and 16 (Legal) as significant.

**Question 4b:** What is the likelihood that your firm would consider using the Internet to complete a future offering of debt securities to perform limited functions?

For the stepwise test, variable #’s 7 (Participation), 12 (Customers), and 13 (Institutions) are significant. For the basic test, only variable # 12 is significant.

**Question 4c:** What is the likelihood that your firm would consider using the Internet to complete a future offering of income trust securities to perform limited functions?

The stepwise results show that variable #’s 7 (Participation) and 12 (Customers) are significant, along with the dummy variable for Industrial and Transport companies. The basic results, in contrast, have variable #’s 12, 14 (Unsafe), and 15 (Expertise) as significant.

4.6 Logit Results

**Question 1:** Variable # 12 (Customers) is significant.

**Question 3a:** Variable # 15 (Expertise) is significant.

**Question 3b:** Variable # 8 (Banking) is significant.

**Question 3c:** Variable # 15 (Expertise) is significant.
**Question 4a:** The dummy variable for Industrial and Transport companies is significant.

**Question 4b:** Variable # 12 (Customers) is significant.

**Question 4c:** Variable # 15 (Expertise) is significant.
4.7 Robustness Checks

We here summarize the robustness checks for the results for all three data sets: the 56 companies, with and without dummy variables, and the 60 companies, without dummies. For purposes of clarity, we show only the significant variables and their p-values.

The presence of the industry dummy variables does not materially affect any of the results. With the OLS tests, for Question 4a, variable # 12 (Customers) enters when the dummy variables are removed, and, in Question 4b, variable # 7 (Participation) and # 13 (Institutions) enter with marginal significance. With one exception (Question 4a), the logit results are consistent across all samples. In the case of Question 4a, the dummy variable necessarily disappears in the samples with no dummies, to be replaced by variable # 8 (Banking).

Similarly, in going from the 56 company sample to the 60 company sample, results remain essentially unchanged. With OLS, some variables enter with marginal significance, but the core results remain unchanged. The logit results are identical across both sample sizes.

Our results, then, appear to be reasonably robust to sample size and the presence of the dummy variables. The fact that there are some minor differences among the samples attests to the small size of our sample, but we are fairly confident that the results are representative.
There does not appear to be a significant persistent industry effect. The OLS stepwise tests show that the dummy variable for Investment, Finance and Trust firms has an effect on Q3B and Q4A, and that the dummy variable for Industrial and Transport firms has an effect on Q3C. These results are not corroborated by the logit tests; indeed, for Q4A, the dummy variable for Industrial and Transport firms replaces that for the finance group.

4.8 Summary and Comparison of OLS and Logit Results

As mentioned earlier, OLS and logit are measuring different influences on the dependent variables, so we may expect some differences with results, especially with a small sample size. We here summarize and compare the results for both versions, focusing on the more significant variables, and giving more weight to the stepwise results. In the next section of the paper, we will turn to analysis and discussion of these results.

**Question 1:** As noted above, OLS is inappropriate for Question 1. The logit results support variable # 12 (Customers).

**Question 3a:** Both approaches strongly support variable # 15 (Expertise), while OLS also gives strong weight to # 7 (Participation). Some weight should also be given to variable # 10 (Profile).

**Question 3b:** OLS strongly supports variable #’s 7 (Participation), 10 (Profile), and 15 (Expertise), as well as the dummy variable for Finance, Investment, and Trust companies, while logit supports # 8 (Banking).

**Question 3c:** Variable # 15 (Expertise) is consistently supported, and some weight should also be given to # 7 (Participation) and the dummy variable for Industrial and Transport companies.

**Question 4a:** This question has the most inconsistency across approaches and samples. OLS stepwise supports variable #’s 5 (Savings), 7 (Participation), and 16 (Legal), along with the dummy variable for Finance, Investment, and Trust companies while logit
supports variable # 8 (Banking) when the dummies are removed. Variable # 13 (Institutions) should also be given some weight.

**Question 4b:** Variable # 12 (Customers) is uniformly and strongly supported. Variable #’s 7 (Participation) and 13 (Institutions) should also be given some weight.

**Question 4c:** Logit supports variable # 15 (Expertise), while OLS stepwise supports variable #’s 7 (Participation) and 12 (Customers), and the dummy variable for Industrial and Transport companies.

5. **Analysis and Discussion of Results**

Because no underwriter is present in the DPO, the information and reputation functions that the underwriter traditionally performs are unfulfilled and issuers are therefore reluctant to undertake them. There is also an adverse selection argument that protects the underwriters from DPOs: the underwriters are better informed prior to opening of an IPO as to the inherent value of a firm (through their due diligence). A firm of a high “true” inherent value has an incentive to stick with an underwriter if its value is high because the underwriter will price it correctly, whereas the equity market via a DPO would price it according to the average of firms with its observable characteristics. But then any firm just outside the margin of using an underwriter will be drawn into the market to avoid being associated with the average of the population not using the DPO – a classic case of “unraveling” that supports the informed intermediaries. Underwriters exist because of their informational role, but ironically the market supports this role to an excessive degree. Perhaps a more vibrant DPO market could make the issuing process more efficient.
Nevertheless, a vibrant DPO market does not exist and we have sought an explanation for this state of affairs. The most uniform explanatory variable is the perception that investment banking experience cannot be replaced. The next most significant determinant is the degree of unfamiliarity (hence discomfort) with DPOs. This is evident in the recurring significance of more firms, and more well known firms, needing to do DPOs before the practice becomes widely accepted. The other variables which seemed to have some explanatory power (the perception that the Internet is unsafe, the absence of a well-defined rule of law, and the role of a loyal customer base) are also consistent with the unfamiliarity hypothesis. The result is that when firms are faced with an uncertain environment, they tend to rely on the traditional approach to raising capital. That is, they use an underwriter to complete the offering.

Our findings relating to the perceived importance of underwriters are consistent with the popularity and persistence of the book-building mechanism across countries. Sherman (2003) has found that in all countries in which the book-building mechanism has been introduced, pre-existing auction systems have decreased in popularity or disappeared altogether. For instance, in France and Japan, auctions have disappeared in favour of the book-building method (Degeorge, Derrien and Womack, 2004). These authors find that issuers favour the book-building method because of quid pro quo benefits from the lead underwriter. In particular, book-built issues were more likely to be followed by the lead underwriters who would also provide a positive recommendation. This is a point that emerged from our empirical data collection.
In light of the persistence of the book-built offering, the question arises as to why the Spring Street Brewery IPO and the Google IPO were so successful. Both of these offerings were variations on the book-built form and received very positive market response. One distinguishing feature of these offerings is that both firms, especially Google, were able to build a market following prior to going public. Both firms benefited from the novelty of the transaction undertaken as well as a popular generic product (beer and Internet search engines). These are products that a vast majority of the adult population utilize. In a sense, therefore, their successful IPOs related to their own “marketing” prior to the actual IPO. The need for an underwriter is less in such a case. Furthermore, the Google IPO was a Dutch auction; while underwriters were largely cut out of the pricing process, two investment banks were retained to serve other functions including assisting with the auction process. So the Google IPO actually underscores the point in this article, which is that underwriters provide services that are indispensable even to firms that are completing non-traditional offerings.

One reason that the Google founders chose to involve underwriters despite pursuing the Dutch auction is that they likely recognized the importance of maintaining a solid relationship with the investment banking community over the long run. Google likely understood that if it wishes to raise capital in the future and if it wishes to benefit

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26 Consider the comment made by Michael Brush, “IPOs return to make the rich richer – again” November 9, 2004 online at www.current offerings.com/ipostory.cf that “few companies have the cachet and broad consumer appeal that emboldened Google to take on the system.” Brush cites industry experts and predicts no “sea change” in how IPOs get done despite Google’s success.
from analysts following its stock, there is value in remaining on good terms with this community. Thus the underwriter has both present and prospective importance in the life of an issuer.

We do not believe it to be the case that what are now considered to be innovative offerings will never become the norm. However, our research highlights a classic chicken-and-egg situation. DPOs will not be routinely accepted until more firms complete them, and more firms will not undertake them until others do so. With the obvious disinclination of the investment industry to disrupt the current economics, a resolution of this situation is not apparent in the near future. However, it may be the case that the role of the underwriter shifts over time; that is, the underwriter will be used for certain services (e.g. book-building) but not others (e.g. pricing). Again, the Google IPO is instructive on this point.

4. Conclusion

DPOs are not widely used for issuing corporate securities. On the one hand, theory suggests that asymmetric information and moral hazard support the need for an unbiased intermediary (such as an underwriter) in securities issuances. On the other hand, there are alternative ways in which issuers can verifiably signal their true worth. The empirical evidence from this paper suggests that Canadian capital market participants are not currently prepared to leave the security and comfort of the intermediated security issue. The Google and Spring Street Brewery DPOs highlight the
close relationship between comfort with Internet transactions and a willingness to undertake them.

The consequences of this research are significant for firms, regulators and underwriters themselves. Many may question whether such transactions as the Spring Street IPO and Google IPO signal the beginning of a trend in public offerings: is it the case that the underwriter’s role is becoming less important? Our research indicates that the underwriter does in fact have “staying power” in the current market. While we would not be surprised to see this role evolve over time, we have found that firms have little interest in dispensing with the book-built process, including the role of the underwriter that this process involves.
### Table 1: Descriptive Statistics

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Table 2: Correlation Matrix

Critical value of r (5% level) = 0.254.

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Table 3  
Summary of Regression Results

Panels A, B, and C display, respectively, the results of the ordinary least squares (OLS), stepwise OLS, and multinomial logistic (logit) regressions. Values shown are the identification numbers of the significant variables (from the survey instrument) and their p-values. The columns of Table 1 represent the left-hand-side (dependent variables) of the seven regression equations. See the survey instrument (Appendix 1) for the definitions of these variables. The rows labeled “56-W/D” represent the results for the sub-sample of 56 companies for which industry identifiers are available. The rows labeled “60-W/O-D” represent the full sample of 60 companies, omitting the industry dummy variables. The rows labeled “56-W/O-D” represent the sub-sample of 56 companies, omitting the dummy variables.

**PANEL A – OLS**

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**PANEL B – OLS Stepwise**

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## PANEL C – Logit Stepwise

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<td>12(.000)</td>
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Appendix 1

Survey Instrument

Queen’s University DPO Survey

Please respond to all questions in the questionnaire below to the best of your ability and click “Submit Survey” when you are finished.

1. Has your firm ever considered using the Internet to facilitate the completion of an offering of equity securities?

☐ yes  ☐ no

2. If you responded “no” to question 1, why not?

3. a. What is the likelihood that your firm would consider using the Internet to complete a future offering of equity securities without using an underwriter?

   1  2  3  4  5  6  7

   Not Likely  Possible  Likely

b. What is the likelihood that your firm would consider using the Internet to complete a future offering of debt securities without using an underwriter?

   1  2  3  4  5  6  7

   Not Likely  Possible  Likely

c. What is the likelihood that your firm would consider using the Internet to complete a future offering of income trust securities without using an underwriter?

   1  2  3  4  5  6  7
4. a. What is the likelihood that your firm would consider using the Internet to complete an offering of equity securities using an underwriter to perform limited functions (e.g. marketing the deal but not distributing the securities)?

Not Likely  Possible  Likely

b. What is the likelihood that your firm would consider using the Internet to complete a future offering of debt securities using an underwriter to perform limited functions?

Not Likely  Possible  Likely

c. What is the likelihood that your firm would consider using the Internet to complete a future offering of income trust securities using an underwriter to perform limited functions?

Not Likely  Possible  Likely

5. In order for your firm to consider completing a DPO, the savings from the transaction compared to an underwritten offering would need to be at least:

5%  10%  15%  20%

6. Different legal requirements in Canadian jurisdictions relating to registration by a firm seeking to complete a DPO makes this transaction unattractive as a financing option.

Strongly Disagree  Disagree  Uncertain  Agree  Strongly Agree

7. If more firms completed DPOs, the DPO would become more credible as a method to raise
capital.

[ ] Strongly Disagree [ ] Disagree [ ] Uncertain [ ] Agree [ ] Strongly Agree

Please indicate your agreement with the statements below by placing a checkmark in the box accompanying the statement. If you disagree with a statement, simply leave the space blank.

8. [ ] In deciding whether to complete a DPO, our firm would be concerned about the effect that a DPO would have on our banking relationships.

9. [ ] Our firm has benefited from the non-underwriting services that our investment bank has provided.

10. [ ] Because we are a well-known firm within our industry, we would have less difficulty completing a DPO than other firms within our industry that are less well-known.

11. [ ] A DPO would hurt our credibility if we chose this method of raising capital over an underwritten offering.

12. [ ] A DPO would be welcomed by our loyal customer base.

13. [ ] Institutional shareholders would be more likely to invest in a DPO than retail shareholders.

Please indicate which issues inhibit your firm from considering a DPO by placing a checkmark in the space accompanying the statement.

14. [ ] The Internet is an unsafe place to conduct a securities offering.

15. [ ] Investment banking expertise cannot be replaced.

16. [ ] The absence of precise legal rules relating specifically to DPOs.

17. [ ] Other issue(s) – please specify

Company Information

18. [ ] Industry
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<td>Years since incorporation</td>
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<td>20.</td>
<td>Years as a Public Corporation</td>
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<td>21.</td>
<td>Dispersion of share ownership present</td>
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<td>22.</td>
<td>Shareholder holding more than 20%</td>
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<td>23.</td>
<td>Total Cost/Proceeds (%) of most recent equity offering</td>
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<td>24.</td>
<td>Time taken, in days, to complete most recent equity offering (from registration to trading)</td>
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</table>

*Queen’s Faculty of Law 2003*
References


