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## Ownership, regulation, information and the capital acquisition process

### Abstract

This study examines the seasoned equity issues of companies traded on the London Stock Exchange, in the context of regulatory changes that have allowed UK firms more discretion in choice of issue approach. This has led many firms to issue through placing in preference to a rights issue. We examine the choice of seasoned equity issuance method, focusing on the choice between placings versus rights issues and develop a model to explain the choice of equity issue method that achieves a high level of predictive accuracy. In particular, information that firms disclose around the issuance process has significant explanatory power for issue method choice.

**Keywords:** equity issuance, flotation method, rights issues, placings, information, market reaction, ownership.

**JEL Classification:** G14, G32, G38.

### Introduction

This paper examines the seasoned equity issues of companies traded on the London Stock Exchange. There is a considerable empirical literature on the equity issues of US companies (see e.g., Eckbo and Masulis (1995), for a survey). However, our understanding of these particular financing decisions is incomplete, and much work remains to be done. The 'Rights Offer Paradox' is a case in point. The US capital markets explicitly advocate a policy of dispersed ownership (Bhide, 1993), and a strong emphasis is placed on the importance of market liquidity. Public issues (PI) better facilitate dispersed ownership and minimization of trading spreads, the conventional measure of stock liquidity, than do issues by rights. Smith (1977, 1986) and Eckbo and Masulis (1992) document direct costs of equity issuance which are larger for public issues vis-à-vis rights offers, but note that there are indirect costs associated with ROs which render them less attractive to firms generally than PIs. In consequence the vast majority of US offers are public. Kothare (1997), among others, has documented that only about 10% of seasoned equity issues (SEOs) are made by rights offering (RO) in the US.

It has long been assumed that the opposite issuance pattern prevails in the UK. The presumption has been that virtually all SEOs occur by rights, where the preemption rights of existing shareholders in quoted firms dictate that they be offered a stake in any new issue in proportion to their existing cash-flow claim at the time of the seasoned issue. However, in recent years, placings have become more popular in the UK and the aim here is to study the determinants of placings versus rights issues for this important market. Slovin et al. (2000) was the first paper to examine the market reaction to seasoned equity issues by UK firms, by issue type, partition-

ing their sample according to whether an issue was conducted by rights offer (RO) or by firm placing (PL). Event study analysis and cross-sectional regressions are utilized to assess the impact of choice of issue method, the offering and issuing firm characteristics on share price. This study extends Slovin et al. by focusing on the effects of regulatory changes that have allowed firms more discretion in choice of issue type. Since the mid-1990s and particularly evident since 1996, there has been a marked decline in the *relative proportion* of all issues occurring by rights (RO), and by implication a comparable increase in the *relative proportion* of issues by firm placing (PL). In light of these changing trends, an analysis of the influences on issue method choice is potentially interesting. This study of issuance method choice complements the work of Slovin et al. (2000), who noted an increased use of placings but did not attempt to model the choice between placings and rights issues. Furthermore, in 1996 the LSE relaxed the rules on the maximum size of a placing issue, and so that for this study it is possible to examine issuance decisions both before and after this regulatory change. The Slovin et al. (2000) sample period ended in 1994 while this sample extends to 2006.

A variety of characteristics, both of issue and issuer, possibly have a role to play in the flotation method decision. The model of issue method choice applied here encompasses variables to represent regulation, information effects, ownership, market environment, issue characteristics, and issuer characteristics. For the US, Kothare (1997) highlights ownership structure and Hodrick (1999) identifies expected stock elasticity of demand as being influential in US companies' choice between PIs and ROs. However results presented here suggest that these variables do not appear to play a significant role in choice of equity issue method for the UK sample. The desire to increase liquidity appears not to be a strong driver of issue method choice in the UK, nor does Hodrick's

thesis fit well with our sample where issue method choice typically lies between ROs and PLs.

The next section discusses the potential drivers of this important firm choice. The following section describes our data sources and sample selection issues together with the variables in our model. The third section provides a brief discussion of the model we apply to prediction of issue method choice while a presentation and discussion of the results of the choice model appear thereafter. Finally, we summarize and conclude.

### 1. Drivers of the flotation method choice

Bringing new issues of shares successfully to market necessarily involves consideration of a variety of potentially conflicting themes. For the purposes of this analysis we consider four main types of drivers of flotation method choice – institutional characteristics of the market in which firms trade, characteristics of issuer and issue, issues of control and issues of proprietary information respectively.

Kothare (1997) examines the impact of seasoned issues on *liquidity* in firm shares for the US market, noting that ownership concentration and liquidity are significantly negatively related and arguing that public issues (PI) increase liquidity relative to offerings by rights (RO). In the US market, policy explicitly favors dispersed ownership, and public issues facilitate this. Wider ownership and consequently greater trading volumes enhance liquidity; reducing trading costs via the reduction in bid-ask spreads, which are typically smaller for widely and frequently traded shares than for those more closely held. For large, widely held firms, the costs of reduced liquidity are important for short-horizon investors, because they decrease market value and increase trading costs. Such firms have an incentive to increase ownership dispersion by making public issues. Kothare suggests a measure of liquidity, which is based on the difference in bid-ask spreads around a seasoned offering. In the UK, public issues are rare, but a potential parallel exists in the choice between placings and ROs. Relatively speaking, issues by rights have greater potential to enhance liquidity and reduce ownership concentration as any rights not exercised by existing shareholders may find their way onto the market. Placings are typically made to a small number of large, possibly pre-existing, shareholders and in consequence have potential to weight ownership towards large shareholders and thus increase concentration and reduce liquidity. To the extent that *existing* institutional investors have Board representation and effectively vote with management, a placing to such investors

increases relative inside ownership and control. Where a placing is made to *new institutions*, this flotation approach may still increase *inside ownership* at the expense of minorities, although we recognize that a potentially important variable is whether participants in a placing are new or existing blockholders. We compute a metric based on *average proportionate spread* in the run-up to an offering as our proxy for demand liquidity. Proportionate spread is defined here as the bid-ask spread divided by ask-bid midpoint price. Specifically it was hypothesized that this liquidity variable would have negative sign in the choice model, lower liquidity in a firm's shares making an issue by placing less likely.

A firm's status as a constituent of the main share listing is a further potential proxy for the demand for liquidity. Most analysts follow the corporate fortunes of firms that are constituents of the main list, and their shares are typically bought and held by index tracking fund managers. If firms are members of the main list, they enjoy substantial liquidity before an issue announcement is made. However those firms outside the main listing may be under pressure to improve liquidity in their shares and may thus be more likely to issue by rights given its greater potential to reduce ownership concentration and thus enhance liquidity. Investors tend to prefer investments in shares which are liquid so that purchase/sell orders can be implemented with minimal implications for price. Thus a firm's status as constituent of the main list at issue announcement date was utilized as an additional, alternative proxy for the demand for liquidity. A dummy variable was constructed, which took the value of 1 where a firm was a constituent of the FTSE100 at issue announcement, and 0 otherwise. It was hypothesized that this FT100 variable would have negative sign in the LOGIT model, a placing being less likely for firms that are not constituents of the main list.

Armitage (2000) argues that the offer price discount is instrumental both in explaining market reaction to equity issue decisions and in influencing firm choice of the equity flotation method. He reports evidence to the effect that discount % has indeed significant explanatory power for event study returns. Furthermore, the London Stock Exchange Listing Rules prohibit a placing if price is to be at a discount of more than 10% to the middle market price of those shares at the time of the placing (Listing Rules, LSE, Section 4.11). Prevailing market conditions, particularly in respect of volatility and information asymmetry, may dictate that a new issue be brought to market at a significant discount to prevailing market price, and this obviously narrows the range of flotation choice available to managers, rendering

the effective decision beyond managerial control. A metric for offer price discount (DISC) may have potential to explain a particular choice of issuance technology. The chosen metric was the difference between offer price and market price prevailing before the issue announcement, as a percentage of that pre-issue market price. As all discounts have negative sign, it was hypothesized that the DISC variable would have positive sign in the LOGIT model, a smaller discount in absolute terms making an issue by placing more likely.

The London Stock Exchange also imposed restrictions on the size of issue by placing that would be permitted, during part of the study period. Before January 1996, seasoned equity offerings in excess of £15 million could not be conducted by firm placing, which restricted firms' effective flotation choice. However in January 1996, this ceiling on issue size was removed, so that for the period 1996-2006 of this study, firms had a 'freer choice' of flotation technology. Alternatively, where firms seek to implement a fund-raising of significant magnitude relative to existing market capitalization, they may experience problems in identifying sufficient institutional support for such a large issue. They may consider that an appeal to existing shareholders may be the only feasible method of making a successful issue so that a RO may be considered necessary. To model this change of regulatory regime, a dummy variable was constructed which was coded 1 for any firm which made an SEO during 1996-2006 inclusive and 0 otherwise. It is hypothesized that this dummy variable will have positive sign in the flotation choice model. *Ceteris paribus*, a placing should be more likely in the latter years of the study when firms seeking to raise significant funds were not constrained to the rights approach by virtue of issue size.

Hodrick (1999) examines the role of stock price elasticity in corporate financial decisions, where stock price elasticity reflects the percentage change in quantity of shares outstanding associated with a percentage change in price. Specifically he posits that decisions, which affect the supply of or demand for shares, such as new issues of stock, may be informed by this elasticity metric. It seems sensible that where a variety of methodologies for bringing new issues to market are permitted, managers might prefer the method, which has least implications for price. If the market for a firm's stock is highly elastic, arguably a substantial increase in the number of shares outstanding could be affected without causing significant demand-related price changes, unless of course it is suspected that there are issues of private information at stake. Alternatively if the market is inelastic, a substantial increase in the volume of

shares outstanding is unlikely to be marketed without driving down price significantly. Hodrick defines two *inverse stock price elasticity* measures as the difference between (offer) price paid and the price prevailing pre(post)-issue announcement, as a percentage of the number of shares tendered at that offer price. In the context of the SEO flotation method choice, if a seasoned issue can be brought to market and sold only at significant discount to prevailing market price, this suggests inelastic demand, thus *inverse elasticity of demand* would be expected to be highly negative. Alternatively placings occur at much lower percentage offer price discounts, suggesting less inelastic demand and in consequence much smaller *inverse elasticity of demand*. If stock price elasticity has power to explain managerial choice of flotation technology, it seems sensible that they would focus on elasticity prevailing before issue announcement, therefore for this study, we define a pre-elasticity measure which utilizes market price on day  $t-2$  relative to the issue announcement. It is hypothesized that this metric will have a positive sign, a smaller inverse elasticity of demand making an issue by placing more likely<sup>1</sup>, if stock price elasticity has a role to play in flotation choice.

A substantial literature has amassed in recent years, which concludes that characteristics of both issue and issuer have potential explanatory power for event study returns. Stolin (1999) posits that where an event study sample is unrepresentative of the general population in respect of age since initial listing, failure to control for that feature of the data may account for a portion of abnormal performance subsequently reported. The occurrence of certain corporate actions such as fund raising tends to be more frequently a feature of young firms. Stolin documents evidence that median age since listing for (first) rights offering UK firms is 4 (13.2) years respectively, although no comparable data in respect of placings are reported. Importantly the proportion of firms younger than their matched firms in Stolin's LSPD sample is 71% (51.8%) respectively. For our sample of firms that are active in the market for funds, we might expect older firms with an established shareholder base to be able to successfully bring new shares to market via an RO. On the other hand, a RO might not be feasible for young firms who might also wish to develop their relationships with institutions and block-holders to gain visibility and recognition in the market, thus preferring to is-

<sup>1</sup> Given that both placings and issues by rights invariably occur at a discount to prevailing market price, elasticity measures are negative. Smaller inverse elasticity implies a less negative metric for placings, suggesting a positive association with the likelihood of a placing, coded 1 in the decision choice model.

sue by firm placing. Thus, listing age may have explanatory power for flotation method choice. Listing age is defined here as the number of (whole) years between initial stock exchange listing and the announcement of the seasoned equity offering which is the subject of this analysis, for each firm. It was hypothesized that the age variable would feature negatively in the LOGIT model, older firms being less likely to issue by firm placing.

Firm size is also a feature of firms that may have potential to influence flotation methodology. For reasons articulated above, larger firms are likely to be confident *ex-ante* that an issue by rights would be successful. On the other hand, smaller firms are less likely to attract analyst interest and may face serious issues of information asymmetry and a risk of low uptake/offer failure. Such firms might be predicted to prefer issues by placing, which avoid the need for extensive and expensive marketing initiatives and the risk of significant price declines at issue announcement. Equally an issue by placing would facilitate development of a solid institutional base for such firms, which would mitigate information asymmetries and the adverse selection problem associated with future issues. To obtain a measure of relative size, which was as uncontaminated as possible from effects of the issue announcement, market capitalization on day  $t-2$  relative to issue news, was utilized. It was hypothesized that this metric would be negatively associated with the probability of an issue by placing, a rights offering being more likely for large firms, and less so for small ones.

Issue size may also influence flotation method. Given the ceiling on permitted issue size for placings, larger issues would be expected to occur by rights. Even absent regulatory restrictions, a significant funding requirement suggests a substantial offer price discount if the issue is to be marketed successfully and again this would militate against observation of the placing approach. Thus we expect an issue proceeds metric to have negative sign in the decision choice model, placings being less likely for large funding exercises. Issue proceeds (£m) were defined as the number of new shares being issued times the offer price per share.

The need to signal quality to the market has long been recognized as a driver of security preference under conditions of information asymmetry and adverse selection (Ross, 1977, Leland and Pyle, 1977). Managerial ownership is commonly considered to indicate confidence in a firm's future prospects. This feature of ownership is critically important where a firm is young and lacks sufficient history to have acquired reputation for quality and honesty in communication with the market. The market

may simply not have acquired sufficient insight into a firm's activities and performance to formulate coherent benchmarks against which a corporate announcement (such as flotation method choice) can be evaluated. Alternatively, the market may be distrustful of company prospects or accounting policies particularly during periods of severe volatility and/or information asymmetry. In this context, if a company can market or place its shares with a recognized large investor which has acquired a reputation for investment performance itself, the inclusion of such an investor in the shareholder list may in itself signal quality to the wider market. These benefits of the change in ownership concentration would be expected to outweigh the adverse impact on liquidity in the market for the company's shares. Thus, absence or presence of a significant external shareholder might have potential to explain flotation method choice. Firms without such a significant investor may consider that a large offer price discount is required to market an SEO successfully, dictating choice of the rights offering approach. Alternatively firms which include a significant block-holder in their shareholder register may be more likely to make a firm placing than an issue by rights, if the presence of this investor is instrumental in attracting further institutional support. Additionally, where significant block-holdings exist before a seasoned issue, it is possible that such block-holder(s) may importantly influence flotation choice. Block-holders may be more likely to favor a placing, which increases their relative cash-flow stake, where an issue is being made in the context of a 'good corporate news story'. In summary, this 'Big Block' metric is hypothesized to be positively related to the choice of the placing methodology. For the purposes of this study, a dummy variable was constructed, which took the value of 1 where a firm had a single block-holding in excess of 10% of outstanding shares before the seasoned offering, and 0 otherwise.

An important metric in the market assessment of firm quality is the management team's record where past investment performance has plausible explanatory power for future returns. A record of strong past performance would also render the market more willing to take firm briefings at face value and to attach credibility to firm specific information releases in respect of potential growth developments. These firms would therefore confront a reduced adverse selection problem and might be expected to be able to bring a seasoned issue to market at minimal offer price discount, by firm placing. Firms without a strong performance history might need to issue at a significant discount to prevailing market price in order to market a seasoned issue success-

fully, necessitating an issue by rights. While recognizing the difficulty in separating out the effects of assets in place and growth opportunities on firm performance, nevertheless a measure of past performance may have explanatory power in a model of flotation method choice. The metric chosen as proxy for performance/profitability was cumulative excess returns (CERs) relative to the FT Allshare Index in the run-up to the issue announcement, the 150 trading days prior to 20 trading days pre-issue announcement. Where management has performed well in the recent past, a placing would be more likely, enabling the firm to raise funds easily, quickly and with minimal leakage of project-specific information, implying a positive coefficient for the past performance variable in the choice model. Where past investment performance has been poor a new issue is more likely to occur by rights if it is to be successful.

A potential influence on flotation method choice might be the desire of an entrenched management team to retain control over corporate resources, hence the potential information content of a 'management control' proxy. Where founding members retain significant control or where the free float in a company's shares is small, one might expect issues of concern over control loss to have substantial explanatory power in a model of flotation method choice. Kothare (1997) argues that in the US, firms characterized by concentrated ownership prefer issues by rights vis-à-vis public issues as they have relatively less potential to dilute existing ownership. It is argued here that issues by rights have relatively greater potential to reduce ownership concentration vis-à-vis placings which are a feature of the UK market and which are more likely to increase *effective insider ownership concentration*. Placings weight control towards large blocks, typically held by managers/directors and institutional shareholders. Thus in the UK a firm placing might be preferred and more likely for firms characterized by concentrated ownership before the issue<sup>1</sup>. If managers have limited additional wealth with which to participate in new issues, which is more likely if their existing ownership is large, and if institutions tend to support management in matters of policy, a placing to institutions would dilute managerial cash-flow rights but not their benefits of control. In this regard, percentage of pre-issue outstanding equity owned by managers/directors is the proxy for control and the director ownership variable should be positively associated with the probability of an issue by placing.

Holland (2000) argues that the extent and quality of investor relations with fund managers inform the majority of corporate decisions in today's UK market. Public companies, particularly large, widely held, liquid concerns, value stability of shareholdings above all else, and fund managers frequently hold a balance of power, extracting concessions in respect of governance and accountability from companies in return for continued and/or increased support for investment. In the context of new financing exercises, fund managers may informally demand first rights of participation in seasoned issues where there is a corporate 'good news story'. Conversely they may be willing to participate in an SEO when the corporate news is less favourable, in exchange for management changes or various alternative governance improvements. Holland's arguments suggest that the direction of any association between external block-holdings and flotation method choice is uncertain. Corporate finance theory (Agrawal and Knoeber (1996), among others) suggests that significant external (block) ownership acts as a constraint on managerial discretion, and that large block-holders monitor and control firm policy at least indirectly through the voting power conferred by their substantial ownership stake. In the absence of valuable investment opportunities, firms with significant external block-ownership are predicted to be less likely to issue by placing, if large external investors truly curb managerial excess, resulting in a negative coefficient on this variable in the choice model. However, if Holland's thesis is correct and block-holders provide investment funding in exchange for corporate governance changes even in the absence of favourable corporate opportunities, significant external block-ownership is predicted to render a placing *more likely*, which suggests a positive model coefficient.

The extent and strength of fund manager interactions is likely to be strongly related to the quality of firms' *investor relations (IR) departments*, fund managers exerting more influence and control over corporate governance in firms with well established and managed IR. Where firms are well established, fund managers are more likely to have formulated and established benchmarks for performance and evaluation. It seems sensible that IR departments would be most sophisticated for large, liquid firms as they have potentially most to lose through any deterioration in their relationship with powerful fund managers. Given the scope for frequent and informative communications with institutions which are facilitated by established IR departments, and if one assumes that adequately informed institutions will want to participate (disproportionately) in seasoned issues of their client firms, Holland's arguments suggest that

<sup>1</sup> Slovin et al. (2000) document evidence to the effect that in the UK, firms making seasoned equity issues by placing are characterized by greater institutional ownership concentration than issuers by the rights method.

issues by placing might be predicted for these firms. On the other hand, extensive institutional following limits managerial discretion to waste resources through inefficient investment. Absent favorable corporate news, a substantially discounted rights offer would be predicted. A number of plausible proxies for the institutional ownership metric exist. Pre-issue percentage institutional ownership should proxy well for the extent of independent monitoring of management. Alternatively market capitalization (size) might reliably proxy for existence of developed IR departments, as might membership of the main stock exchange list, and in consequence the extent of institutional control. Another feasible metric is represented by firm age. The institutional ownership variable will be viewed as the principle proxy for the extent of external control and is hypothesized to have negative sign in a LOGIT model of flotation method choice if external ownership, acting to constrain management discretion, is the dominant force. Issues by placing are predicted to be less likely for firms with significant external institutional ownership, *ceteris paribus*.

## 2. Information asymmetry and proprietary information

In order to successfully market and implement a fund raising, there must be advertizing and dissemination of firm-specific information to existing shareholders and to the wider market. Where firms have information of a commercially sensitive nature, protection of such potentially value-relevant information must be a priority. If certain issue approaches facilitate this process, it is likely that firms for which information effects are important may exhibit a preference for such methods. Thus the question of proprietary information (and the difficulties inherent in conveying a 'quality' message to investors while avoiding simultaneous loss of competitive advantage to rivals) is also potentially an influence on the choice of flotation method. Firms with good corporate news might want to prevent this information from getting to the wider market. Ideally firms would be able to finance desirable projects through retained earnings or private finance. However where incremental funding is necessary, firms will want to minimize the extent of information dissemination. In such circumstances, they be more likely to favor a placing of shares rather than an issue by rights<sup>1</sup>. Placings are typically negotiated

privately among a small number of substantial investors, are much quicker to finalize and involve few of the lengthy and costly advertizing and legal outlays, or extensive investor communication programs characteristic of rights offerings. Firms tend to minimize information releases in respect of prospective investment opportunities, for reasons of commercial sensitivity. Without private channels of communication, an assessment of investment quality can only be made, based on currently available, incomplete information.

So market price may not reflect the fundamental value of a firm's existing assets *and growth prospects*. If markets are efficient, a firm's rating could convey a consensus opinion regarding financial health and future potential/performance based on past experience and currently available information. The market to book ratio could thus be a reasonable metric for expected investment potential (note that M/B could also proxy for managerial performance/profitability). Some firms in high R&D industries such as biotechnology or information technology are able to patent new products or services, so that they can aggressively market their concept while being protected from loss of competitive advantage. Such firms may enjoy high ratings and thus M/B ratios, yet be 'all market and very little book'. Conversely it is very difficult to proxy for profitable, non-patent projects or for profitability of 'acquired, external growth', if firm growth is being sought through mergers or take-overs. The market to book ratio is a potential proxy for the extent of private information albeit an imperfect one. The coefficient on this variable should have positive sign in the LOGIT model, firms with perceived investment potential having high market ratings and being more likely to prefer a firm placing and to be able to implement that placing successfully.

Issue announcements follow different formats for firms. Some announcements contain a wealth of information where firms seek to boost demand for new equity by outlining projected use of funds to the greatest possible extent. These firms typically issue by rights and use the issue announcement to partially market the new issue to existing investors. Firms with commercially sensitive information tend to announce an issue with minimal or perhaps no news detail at all, and should issue by placing *ceteris paribus*. Thus a news detail dummy variable

<sup>1</sup> Barclay and Smith (1995) draw on issues of information asymmetry, in their analysis of the relative merits of private and public debt issuance in the US market. They posit that it is the feasibility of discussion of investment projects with potential investors in private financing, which makes this form of fund raising attractive to firms. They can minimize information dissemination while at the same time conveying a quality message to selected investors. If these investors subsequently advance

funds, the action is interpreted positively by the market as a whole. The parallel for the UK market lies in the placing/rights issue dichotomy. Where a placing is planned, firms can brief a small number of potential places privately as there is no obligation to issue new shares pro rata to existing shareholders. Thus a UK placing of equity may have close similarities to US private debt issuance.

was constructed based on the extent of information dissemination in the issue announcement, coded 1 for substantial disclosure at issue announcement and 0 otherwise, which should feature negatively in the LOGIT model, firms which publish substantial investment-related detail at issue announcement being less likely to issue by firm placing<sup>1</sup>.

### 3. Data sources sample selection and variable definitions

Announcement dates for all ROs and PLs by firms over the period of January 1989-December 2006 inclusively, were obtained jointly from the FT Extel News Cards and the Sequencer database, and confirmed with LSE records. The Sequencer database yielded information on the number of firms that were repeat issuers, together with details of proceeds of issue, number of shares issued and offer price. Issues where firms had made other company announcements simultaneous to the issue news were dropped from the sample<sup>2</sup>. Market price data (adjusted to reflect dividend payments and capital changes) and listing date for all issuing firms were obtained from DATASTREAM. The initial (final) samples contained 921(840) ROs and 618(500) PLs events respectively.

Table 1 presents and describes our sample of SEOs by type of issuer. Of the 625 firms in our sample 403 made just one issue of which 210 were ROs and 193 were PLs. There were 222 firms that made multiple issues, of which 65 only issued by ROs, 41 only issued by PLs, and 96 issued by a mixture of ROs and PLs. Around 70% of all issues were repeats, 61% of all PLs were repeat issues while 75% of all ROs were repeats. 96 (16%) of all issuers applied a variety of issue methods over the period, while 509 (84%) firms used a single approach.

The variables having potential to explain flotation method choice have been discussed above. Drivers related to institutional features of the market include Spread, Timing, Discount % and Elasticity. Drivers reflecting characteristics of issue and issuer are Size, Relative Size, Age and prior Performance. Drivers related to corporate ownership and control include

(pre-issue) Directors' ownership, cumulative External Institutional ownership and the existence of a single significant Block-holder. Finally the drivers related to information asymmetry and proprietary information are Market to Book and News Detail.

**SPREAD.** Data for bid and ask prices for all seasoned issuers were obtained from DATASTREAM for a period of 150 trading from 170 to 20 days before the issue announcement for each firm. SPREAD was computed as the difference between ask and bid prices, and a measure of average proportionate daily spread over this period was then obtained by applying the bid-ask midpoint price as a deflator.

**MAINLIST.** As an alternative proxy for the demand for liquidity, a dummy variable in respect of membership of the main UK listing was formulated, for which the 99FTSE program in DATASTREAM was utilized. This program gives the original constituents of the FTSE100 list, and subsequently, in reverse chronological order, any changes thereto. Utilizing this list, it was possible to ascertain whether an issuing firm was a constituent of the main list at issue announcement date or not. The dummy variable was coded 1 where a firm was a constituent of the FT100, and 0 otherwise.

**ELASTICITY.** Data to construct the inverse stock price elasticity metric were obtained from the FT Extel news cards (offer price and number of shares offered at that price) and from DATASTREAM (pre-issue market price). ELASTICITY was computed as the offer price discount scaled by the number of new shares being brought to market for each issuing firm.

**TIMING.** A dummy variable in respect of regulatory change of regime (that is, the timing of issue), denoted TIMING, was also formulated. Construction of this dummy variable involved comparing issue date for all seasoned offerings with the schedule of regulatory changes in respect of firm placings. Specifically the TIMING variable was coded 0 for a given issue if it occurred prior to January 1996, when final restrictions on placing size were lifted, and 1 otherwise<sup>3</sup>.

**DISC.** The FT Extel Cards were the source of data for the offer price discount (DISC) variable. The DISC variable was computed by relating the offer

<sup>1</sup> There is a difficulty in establishing cause and effect here. Firms using placings may feel that there is less need for publicity, or alternatively firms may prefer placings *because* there is less need for publicity so the direction of causality is uncertain. If the need to minimize publicity drives flotation choice, firms for which commercial sensitivity is critical are hypothesized to prefer the placing approach, *ex-ante*.

<sup>2</sup> Careful examination of such news items confirms that no other newsworthy event was more associated with one type of SEO announcement than another. Issue announcements that were dropped for reasons of simultaneous information disclosure, occurred proximate to earnings and/or dividend announcements in the main. The number of issue announcements excluded was 30 (47) in respect of placings (rights offers), representing approximately 4% (6%) of all issues, respectively.

<sup>3</sup> Caution is required in interpreting goodness of fit measures with a variable of this type. For all analyses described in the following section, the models were run omitting this TIMING variable. In all cases, model coefficients and marginal effects were qualitatively unchanged, although R<sup>2</sup> measures and % correct prediction measures were slightly lower without the TIMING variable.

price, per the issue announcement, to the quoted share price on day  $t-2$  relative to the issue announcement. It was considered that choice of this pre-issue price would be uncontaminated by announcement news leakage. Data for  $t-2$  market prices were obtained from DATASTREAM, and offer prices were extracted from the FT Extel news detail. DISC percent was then computed as the difference between offer and market price as a proportion of the prevailing, pre-issue market price.

**SIZE.** Market capitalization on day  $t-2$  relative to the issue announcement, was utilized as a proxy for size for the purposes of this study, in order to obtain a measure of equity value as clean of issue announcement effects as possible. These data were obtained for all issuing firms from DATASTREAM.

**AGE.** Listing age was defined here as the number of (discrete) years between original stock exchange listing and seasoned issue announcement date. Initial listing dates were obtained from DATASTREAM and the LSPD tape was used to supplement and act as a crosscheck on this data source. Specifically the LSPD tape was the primary source for firms, which listed before 1968, the first year of DATASTREAM records. In a further small number of cases, the LSPD listing date pre-dated that of DATASTREAM and in such instances the LSPD date was used.

**PROCEEDS.** Issue size or gross proceeds of issue was a further variable included in the LOGIT analysis. Gross proceeds of each issue by rights or placing were obtained from the FT Extel news cards. In the majority of cases, gross proceeds were noted in the issue announcement, and confirmed with the Sequencer Database. In a small number of cases, no issue proceeds were documented but these data were constructed by multiplying offer price by the number of new shares being brought to market. This information was also provided in the news details obtained from FT Extel.

**PERFORMANCE.** Cumulative excess returns were computed as a proxy for prior firm performance or the probability that a new issue was supported by underlying good corporate news. The run-up period was defined as the 150 trading days from 170 to 20 trading days prior to issue announcement. Daily market prices for issuing firms and for the FTSE All Share Index were obtained from DATASTREAM and utilized to compute both raw and excess returns for each firm, using the standard “market model” methodology.

Data on company ownership structure have been published in the annual accounts of UK companies for some years now, such disclosures comprising (a)

material interests exceeding 3%, and (b) aggregate material/non-material interests where these exceed 10%. The disclosures also indicate the extent of any directors’ beneficial and non-beneficial holdings. Ideally ownership data for the final accounts before a seasoned issue were required although data for the earlier years of this study were patchy and hard to source particularly for the pre-1995 period. Given the prohibitive cost both in time of collecting ownership data for all issues over the entire 1989-2006 period, it was considered that the best restricted model would utilize the relevant data for issues that occurred during 1999-2006. In total, ownership data in respect of 737 issues or 55% of all seasoned offerings studied, were obtained from the Hemscott Guru Academic Database.

**DIRECTOR O/S.** Director ownership was disclosed as number of shares held. Percentage ownership was derived by scaling these numbers by the total number of shares outstanding at the relevant balance sheet date.

**EXTERNAL O/S.** Institutional ownership is generally disclosed in percentage terms where ownership exceeds the 3% mandatory disclosure threshold.

**BIG INSTITUTION.** The same data sources were used to construct a dummy variable to reflect the existence of a significant (>10%) single external block-holder, which metric was coded 1 where a significant external investor existed at the pre-issue balance sheet date, and 0 otherwise.

**NEWS DETAIL.** The Financial Times Extel news cards were the source of news detail from which a dummy variable was constructed in respect of the extent of private information for issuing firms. This dummy variable took the value of 1 if there was publication of detail regarding use of funds at issue announcement and 0 where information publication was minimal and restricted simply to notification to the market of the SEO. Given the voluminous nature of the detail on issue announcements and other corporate news stories at the time, it was decided to construct this variable for the restricted sample of firms for which ownership data were also obtained. Thus issue news was collected for 737 firms or approximately 55% of all issues<sup>1</sup>.

**MARKET TO BOOK.** For comparability market to book ratios were obtained for this sub-sample also. M/B ratios are available from DATASTREAM, and

<sup>1</sup> For this sub-sample of firms as a whole, volatility for firms disclosing issue details was insignificantly different from that of firms which disclosed minimal or no news detail. For firms which issued by placing, volatility was significantly greater at the 7% level for non-disclosers; for firms issuing by rights there was no significant difference in volatility for disclosers vis-à-vis non-disclosers.

were the ratios that applied at day  $t-2$  relative to the issue announcement so that there should be as little contamination of market prices by announcement effects as possible.

#### 4. The logit model

We construct a binary choice (LOGIT) model for the determinants of issue method choice. The focus of our analysis is on the incremental explanatory value of ownership and control considerations, and commercial information protection considerations. In addition we also consider the possibility that flotation method choice could be influenced by concerns about the liquidity of the market for the firm's equity. Because of the non-linear nature of the LOGIT model we build up the overall picture of the determinants of flotation method choice in stages. This allows the incremental predictive value of the main variables of interest to be seen more clearly, and also allows the reader to assess the extent to which the parameters of the variables introduced at an early stage are sensitive to the inclusion of the later stage variables.

In our model  $y_i$ , the value of the dependent variable for equity issue  $i$ , is set equal to 1 if the issue method is a placing and zero otherwise. Under the assumptions of the LOGIT model the conditional probability of  $y_i$  being equal to 1, given the observed values of the independent variables, can be expressed as follows:

$$Prob[y_i=1]=P_i=\frac{\exp(x_i\beta)}{1+\exp(x_i\beta)}. \quad (1)$$

The probability of  $y_i$  being equal to zero is  $(1-P_i)$ . Hence the likelihood function for the full sample can be expressed as:

$$L = \prod_{y_i=1} P_i \prod_{y_i=0} (1-P_i). \quad (2)$$

The maximum likelihood estimate of the vector,  $\beta$ , is generated by maximizing the log of  $L$  over the parameter space. The standard numerical LOGIT procedure in LIMDEP is used to estimate the parameter vector.

#### 5. Results

Table 2 below reports summary statistics for the full sample of seasoned equity issues by rights and by placing (Panel A) and also for the restricted sample for which we have information and ownership details (Panel B). Clearly the median rights issuer in the full sample is larger, older, raises greater proceeds, issues at a larger discount to prevailing market price, has smaller spread and appears to have underperformed prior to issue relative to the median issuer by placing. Results are similar for our re-

stricted sample but additionally M/B is lower, consistent with prior underperformance, and median director ownership is lower for issuers by rights while median external ownership is higher.

Table 3 below presents the results for our LOGIT models, for the full sample of rights offers and placings. Neither liquidity (Spread) nor stock price elasticity feature importantly in any model – these variables may be important in the US context where policy favors public issues and dispersed ownership, but do not appear to significantly influence UK funding practice.

The timing dummy is significant in all models, at conventional levels. When we partition our sample relative to the relaxation of regulatory restrictions on issue size, which occurred in 1996, we are able to explain 91% of all seasoned issues for this earlier period.

Clearly our model captures the important influences on equity issue method choice for this regulated period where there were restrictions on the effective choice of issue approach. For the later period of 1996-2006, where firms were not so constrained, and were allowed to signal quality and differentiate the firm through flotation approach, the overall explanatory power of our model is lower, which suggests that there may be some incremental and important influences on firms' choice of flotation approach which are omitted. In particular, issues of ownership, control and proprietary information are likely to play a role in firm differentiation, and in consequence, in equity issue method choice. Interestingly, the ability of the model to correctly predict PLs increases substantially after 1996. This is what one would expect given the removal of an arbitrary regulatory constraint. Note also that the size of the coefficient on the proceeds variable falls dramatically after 1996. This is because the pre-1996 regulations on PLs were expressed in terms of a maximum recommended issue size.

We incorporate these potential influences for a restricted sample of firm issues, for which we were able to produce ownership and news detail data. Table 4 reports our findings in respect of this restricted sample. The predictive accuracy of model 4 is remarkably high, at around 89%<sup>1</sup>. In models 1 to 3 the timing dummy is significant at conventional levels, but it is only significant at the 10% level in model 4. Spread is not significant in any model while Discount is significant in all models in the hypothesized direction.

<sup>1</sup> Predicting all firms to issue by rights would have resulted in only 52% correct classifications i.e. 383 out of 737 observations.

The results for Elasticity are slightly ambiguous. The variable is significant at the 5% level in models 1 and 4 but it is not significant in models 2 and 3. These results suggest that there could be some quite complicated interactive effects between Elasticity and some of the other variables. The introduction of variables to reflect ownership and information effects in Model 4, cause Elasticity to become highly significant.

A similar point applies to the Performance variable, although in this case, completion of the model through introduction of our ownership and asymmetric information variables causes this variable to become insignificant. Contrary to conventional beliefs the SIZE variable is significantly positive. It is not the case that PLs are more favored by small firms. Issuer AGE and issue Proceeds are not significant determinants of choice. Again it is not the case that large issues tend to be affected by rights. Relative issue size is significantly negative, consistent with our theoretical development.

Our model suggests that *ownership and information asymmetry issues* are significant determinants of issue method choice. With respect to ownership the Big Institution and the Directors' shareholding variables are both significant, although External O/S is not. The literatures on institutional investor independence and institutional activism do not reflect any consensus that institutions will necessarily vote with managers on matters of corporate policy. When we seek to justify our assumption of friendly block-holders who participate in seasoned PLs by incorporating dummy variables to distinguish between the states of high/low director ownership coupled with presence/absence of a large external shareholder, we find that our results are essentially unchanged. These results for Model 5 are reported in the final columns of Table 4 and suggest that *high director ownership* either with or without a large shareholder significantly enhances the probability of an issue by PL, while a large external owner alone exhibits no such association. With regard to *information asymmetry*, both market to book and news detail are highly significant in the hypothesized direction. It seems clear that those firms who issue by placing have considerable proprietary information concerns, while for those which issue by rights, the need to ensure a successful issue appears to outweigh the need to protect potentially price sensitive information and such firms appear to publish significantly more news detail regarding the issue at time of issue announcement. In summary, ownership and information variables exert an important influence on flotation method choice for our restricted sample of seasoned equity issuing UK firms.

Finally we focus on the 96 (16%) firms in the sample that switch method of issuance, recognizing that

they potentially provide a rich source of insight into the influences on issue choice. Of 29 (38) firms that made a repeat issue by rights (PL) following an initial PL (rights offer), 36% (71%) occurred in the 1996-2006 deregulated period. Of repeat issues by PL, only 26% exceeded the PL size ceiling, while 514 of repeat issues by rights were below the PL size ceiling, so these firms had a realistic choice of flotation method. Looking at any association between changes in firm characteristics and change of issue type, discount and relative issue proceeds were predictably higher (lower) for repeat issues by rights (PL) albeit insignificantly so.

Interestingly there appears to be a significant performance effect, firms having performed significantly better (worse) in the run-up to a repeat issue by PL (rights) than was the case prior to their initial seasoned issue, which is consistent with the signaling separation story and differential market reaction to issues by PL documented by Slovin et al. (2000). This performance effect aside, switchers seem to have been marginal as to optimum issue type and were close to being indifferent between rights and PLs in their first issue. For those firm observations for which we have ownership information, there was no significant change in ownership characteristics between seasoned issues.

## Conclusions

In recent years UK seasoned equity issuance methods have moved away from rights issues in favor of PLs. This contrasts with practice in the US where public offers are the favored issue method. Previous work of Slovin et al. (2000) finds that PLs are received more favorably by the market than rights, a finding which is also supportive of their thesis that in a signaling separation equilibrium this flotation approach would be chosen by quality firms, and offerings by rights would convey a negative signal of firm prospects. We have attempted to model the determinants of issue method choice with some degree of success. Our model finds no support for Kothare's "Spread" argument, but some support, in the restricted sample, for Hodrick's Elasticity argument. The usual suspects of PROCEEDS/MV and SIZE are both significant. However, somewhat surprisingly, SIZE has the opposite effect to what might have been predicted from prior research. Discount is highly significant in all specifications of the model.

Interestingly, we find significant effects for both of our proxies for information asymmetry/proprietary information. Higher levels of asymmetry significantly increase the probability of an issue by PL, such firms being less likely to publish any signifi-

cant news detail at time of issue announcement. We find some evidence of a significant institutional shareholder effect, in the sense that higher institutional ownership seems to decrease the probability of a PL. However this effect becomes insignificant on the introduction of our proxies for information asymmetry/proprietary information. Finally, we find

significant associations with our proxies for insider ownership.

These novel results suggest that there is scope for further work on the security issuance decisions of UK companies where issues of ownership and control interact in complex ways with information asymmetry and/or liquidity issues.

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