IPO Pricing and Allocation: A Survey of the Views of Institutional Investors

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Despite the central importance of investors to all initial public offering (IPO) theories, relatively little is known about their role in practice. This article is based on a survey of how institutional investors assess IPOs, what information they provide to the investment banking syndicate, and the factors they believe influence allocations. We find that investor characteristics, in particular brokerage relationships with the bookrunner, are perceived to be the most important factors influencing allocations, which supports the view that IPO allocations are part of implicit *quid pro quo* deals with investment banks. The survey raises doubts as to the extent of information production or revelation. (*JEL* G23, G24)

Most existing theories that seek to explain persistent initial public offering (IPO) underpricing assign an important role to investors, and, in particular, informed investors. Theories differ on the role that investors play. At the benign end of the spectrum, investors may have (or be able to produce) information that is valuable in pricing the issue, and a key design feature of the IPO process is then to incentivize investors to acquire and reveal this information to the investment banks running the IPO. On the other hand, the nature of integrated investment banks, combining advisory, research, and trading activities, creates the potential for conflicts of interest. At this conflicted end of the spectrum, IPO allocations are a *quid pro quo* for brokerage business. Although investors are central to the IPO process, little evidence has been produced as to how they assess IPOs, how they interact with the investment banks that run the issue, how they bid during the bookbuilding, and their perceptions of the factors that influence allocation. This article provides the first analysis of the IPO process from the viewpoint of the investors, using survey evidence from a sample of fund managers who regularly participate in IPOs.

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Given the pivotal role that investors play in all the major IPO theories, the investor survey allows us to throw light on the various views of the IPO process. We focus on IPOs conducted by the bookbuilding, which has become the dominant method of issuing in most countries. The bookbuilding approach gives considerable discretion to the investment bank regarding allocation, and explaining allocation has become a key research question (Ritter and Welch 2002). As noted by Jenkinson and Jones (2004), three main explanations have been advanced to explain IPO allocations and pricing, which can be broadly categorized as information revelation, targeting particular investors (such as long-term investors or repeat customers of the investment bank), and conflicts of interest. Our survey covers all three explanations, and is designed to differentiate, as far as possible, between them.

Contributions to the literature have provided evidence on all of these theories, but the results have not always been conclusive. For instance, in relation to information revelation theories, Cornelli and Goldreich (2001, 2003) find that allocations in European IPOs are related to certain characteristics of bids submitted during the bookbuilding that might be thought of as being more informative (such as putting price limits on bids, or bidding early during the bookbuilding period). In contrast, Jenkinson and Jones (2004) find rather different results for their sample of European IPOs and conclude that allocation is mainly influenced by whether the investor is viewed as a long-term holder of the stock and whether she places her bid with the bookrunner. However, both papers are based on limited samples of IPOs run by particular investment banks, and to some extent the differences in the results appear to be related to the degree of oversubscription observed in the two samples. Our survey method allows us to investigate such issues in detail, and we indeed find that bidding behavior of investors does differ according to the perceptions of how hot the issue is.

Much of the academic literature on IPOs abstracts from potential conflicts of interest, despite the clear financial incentives, and even though regulators in various countries—most notably the United States—have found evidence of IPO allocations being influenced by relationships with investors and corporate financing clients. However, some research has focused on the potential for agency problems between investment banks and issuers. An early contribution from Baron (1982) noted that if investment banks had superior information than issuers, the effort of the investment bank in marketing the issue, and the offer price, might be below the first best. More recently, Biais, Bossaerts, and Rochet (2002) assumed that the interests of the investment bank and issuer are not aligned and suggest that auction-like mechanisms may then be superior to the bookbuilding. The importance of agency problems has also been noted by Loughran and Ritter (2002, 2004) and Degeorge, Derrien, and Womack (2007).

In addition, several recent empirical papers have investigated the relationship between IPO allocations and the generation of trading commission. Reuter (2006) finds a strong positive correlation between brokerage commissions paid by mutual funds to a particular underwriter and their holdings of stocks that have recently conducted an IPO managed by that underwriter. This provides some support for the conflicts of interest view, although the paper is also instructive in demonstrating the problems researchers face while analyzing these important issues. In particular, a major constraint encountered by this paper, and most others in the IPO literature, is the lack of direct evidence on IPO allocations, and so it is necessary to infer allocations from month-end holdings of funds that reported their asset allocation in the same month as the IPO. Even then it is not possible to know how the fund management group as a whole—comprising the whole family of funds—had been allotted at the IPO. This constraint, as well as a lack of direct evidence on trading commissions, is also faced by Ritter and Zhang (2007), who investigate whether IPO underwriters favor affiliated mutual funds, and Nimalendran, Ritter, and Zhang (2007), who investigate whether there is a positive relationship between trading volume, and hence trading commission payments, in liquid stocks and subsequent money left on the table in IPOs. In the latter paper, the authors find a significant relationship during the Internet bubble period, but no economically significant impact in normal market conditions. Some of the most direct evidence that IPO allocations and trading commission are related, at least for the bubble period of 1999–2001 in the United States, is found by Goldstein, Irvine, and Puckett (2007). They exploit data on individual trades and commission payments around the time of IPOs, and find that these are related to net sales in the immediate aftermath of the IPO (which are used to proxy IPO allocations). However, there are two common shortcomings with the literature to date: first, that many of the results are for quite specific time periods (in particular the US bubble period) before conflicts of interest in IPOs hit the headlines, and second, that it is impossible to disentangle competing hypotheses, for instance whether allocations were related to information production, conflicts of interest, or the nature of the investor.

The first major advantage of conducting a survey of investors is that it is possible to construct the questions to provide information on all the major theoretical issues in a way that is simply impossible with the existing available data. A similar survey approach has been taken in respect of chief financial officers' views on IPOs by Brau and Fawcett (2006). In our survey, we are able to ask directly which factors investors perceive as being most important to receiving a favorable allocation. We divide the factors into three groups: those associated with information production and exchange before the bookbuilding; those associated with bidding behavior during the bookbuilding; and those associated with the characteristics of the investor. Our clear finding is that the latter groups are perceived to be by far the most important in terms of receiving a favorable allocation. In particular, when we rank the responses, the most important factor is perceived to be the extent of brokerage business with the investment banks running the IPO. Our article therefore supports, albeit using very different methodology and a sample of investors mainly based in

Europe, Reuter's results.[1] Other features of investors—such as being viewed as a long-term holder of the stock or being a large fund—are also viewed as being very important in determining allocation. Factors reflecting bidding behavior during the bookbuilding—which the existing literature has interpreted as being a proxy for information revelation—are generally viewed as the least important determinants of allocation.

The second advantage of our survey methodology is that it enables us to look in detail at the nature of information exchange during IPOs. The Benveniste and Spindt (1989) insight that investment banks' discretion over allocation could be used to incentivize information revelation, and therefore be beneficial for issuers, has been extremely influential, spawning a number of important papers (Benveniste and Wilhelm 1990; Sherman and Titman 2002), and has arguably become the dominant theoretical paradigm in the IPO literature. Yet there is virtually no systematic evidence about the nature of the information exchange between investors and the investment banks.[2] In practice, it is clear that the buy-side and sell-side interact extensively in the period before the bookbuilding (we refer to this preceding period as the premarketing period), and yet the existing empirical work focuses almost entirely on the nature of the bids submitted during the bookbuilding. Such evidence is interesting but inevitably partial. For instance, it may be that an investor provides the investment bank with extensive feedback during premarketing that is useful in setting the initial price range, but then submits a strike bid (i.e., a bid with no price limit) during the bookbuilding phase. The few papers, cited above, that have managed to obtain details of bids submitted during the bookbuilding would tend to characterize such bids as "uninformative" relative to price-limited bids. But the views of such investors may have already influenced the price range that is established for the bookbuilding, in which case the submission of a strike bid cannot be inferred to be informative or uninformative. The potential importance of premarketing interaction between investors and the investment bank is explored theoretically by Jenkinson, Morrison, and Wilhelm (2006), but this is the first article to provide systematic and detailed evidence on the nature of such interaction, as well as the bidding behavior during the bookbuilding phase. This provides insights into the information institutional investors rely on to form their judgments regarding IPOs.

Finally, the survey provides interesting evidence on the way investors formulate their views about the valuation of IPOs, and whether to invest. We find, on

[1] It is worth noting that Reuter's analysis covered a period in the late 1990s, before the various conflict-interest cases brought against investment banks in the United States acted as a catalyst for investigations in other countries, such as the UK Financial Services Authority, which issued a consultation paper in October 2003 on "Conflicts of Interest: Investment Research and Other Issues" (FSA Consultation Paper 205). The survey in this paper was conducted during 2005, well after the awareness of potential conflicts of interest in IPOs was raised.

[2] Nor is there much evidence regarding whether investment banks restrict their interaction to certain investors, as suggested by Sherman and Titman (2002). However, the average IPO in the sample analyzed by Jenkinson and Jones (2004) involved around two hundred investors bidding in the bookbuilding, which suggests that the extent to which bookrunners restrict entry into the IPO process may be limited.

average, that only around one-half of the investors produce their own valuation models, which might serve as a proxy for incremental information production. We also present evidence on how investors bid, and how their bids relate to their valuations. The survey finds considerable heterogeneity, with the incidence of limit bids depending on the perceived level of subscription, such limit bids being set below true valuation for the majority of investors, and these discounts typically increasing when the offering is perceived to be poorly subscribed.

Balanced against these considerable advantages of a survey methodology, there are, of course, some important limitations. The responses to surveys are heavily influenced by the nature of the questions and by the sample of respondents. We reproduce our survey in full in the Appendix. Although our sample of fifty-seven respondents is limited, between them they assess, in an average year, around two thousand (nondistinct) IPOs. We have coverage from most of the largest asset management companies, and also from a reasonable sample of smaller companies, including hedge funds. It is noteworthy, however, that our sample generates some clear statistical patterns, which suggests that the incremental value of increasing the sample size might be limited.

Our respondents were mainly based in Europe, where IPO practices differ in some respects from those in the United States, notably in allowing more interaction between research analysts and investors before the bookbuilding. However, half of our respondents managed portfolios that were either US, Asian, or global, counterbalancing the European weighting in the responses. Later on we note how the differences in IPO methods may affect the generalizability of our results.

In a survey of the opinions of interested parties, like this one, there is of course a risk that responses are strategic. However, respondents participated in the survey confidentially and in return for anonymity. We also conducted a number of cross-correlations between responses to different questions as a check on consistency, as reported below.

The remainder of the article is structured as follows. In the next section we describe our survey and the sample of respondents. We then report the findings of the three parts of the survey. In Section 2, we consider pre-bookbuilding information production and exchange. How investors bid during the bookbuilding phase is considered in Section 3. In Section 4, we analyze investors' perceptions of the factors that influence IPO allocations. Section 5 contains a summary of our results and our conclusions.

1. The Survey

1.1 Distribution and coverage of the survey

One of the main challenges in conducting a survey of institutional investors is to find an effective distribution channel to the relevant individuals within fund management companies, and to entice them to complete the questionnaire. Not only are the potential respondents extremely busy, but they are also bombarded with questionnaires from various quarters (including their clients, the various organizations that monitor institutional investors, regulatory agencies, etc.). We were fortunate in having the support of two industry bodies: the Investment Management Association (IMA) and the Alternative Investment Management Association (AIMA). Both organizations are based in London, and are trade associations for the UK-based asset management industry. The IMA counts among its members most of the large investment management groups along with the investment arms of insurance, banking, and investment banking groups. The AIMA is focused on hedge funds. Outside the United States, the United Kingdom is the country where the largest volume of assets is managed according to a P&I/Watson Wyatt September 2005 survey. According to these firms' own information, all the thirty largest non-UK-owned asset management groups listed in the P&I/Watson Wyatt survey manage assets from the United Kingdom, through either subsidiaries or representative offices. Indeed, although most of our respondents were UK-based, nearly half of these worked for firms owned outside the United Kingdom. None of the respondents managed UK-only portfolios. Half managed pan-European funds and half managed US, Asian, or global portfolios. Our respondents therefore participated in IPOs from all over the world, not just from the United Kingdom or Europe. Hedge funds, which were part of our survey, are also heavily represented in the United Kingdom.

The survey was distributed to around 150 members of the IMA and 242 members of the AIMA. Both of these bodies circulated the survey via e-mail to their members with an accompanying message encouraging their members to support the research.[3] The original e-mail was sent during June 2005, and was followed up by a number of reminders. The responses were received in the following three months. There was some overlap between the memberships of these bodies, and so the total distribution was probably about 300. The survey, which is reproduced in the Appendix, included a preamble assuring respondents that their answers would be treated in confidence, and that the analysis of the responses would be reported as averages or distributions. We gave three options for returning the questionnaire: either by e-mail, fax, or post, which gave respondents the option of concealing their identity or that of their firm. In practice, almost all respondents returned the questionnaire with a covering note or e-mail clearly identifying who they were and which asset management firm they worked for.[4]

[3] For instance, the e-mail sent by the chief executive of the IMA to accompany the survey included the following encouragement: "We think the research is interesting and topical and it should fill a gap, in particular by analysing the IPO process in the round. We therefore strongly urge you to support this research by asking those of your fund managers involved in IPOs—we assume it will be several people—to complete the attached short questionnaire. The questionnaire should take no more than 15 minutes to complete, if that. It is designed to be completed on-screen."

[4] Thirteen individuals chose not to reveal their own identity, but in only four of these cases was the fund management company for whom they worked not evident from the fax or postmark.

Table 1
The respondents

	fund manager	analyst	CIO	dealer	total respondents
job function of respondents	74%	9%	14%	4%	57
	<5	5–18	18–36	36–90	>90
funds managed by firm ($ billion)	21%	11%	13%	14%	41%
	median	mean	min	max	total
funds managed by individual ($ million)	1140	1919	40	10,800	72,904
IPOs assessed in a typical year	20	36	3	500	2017
	Global	Europe	Asia/ emerging markets	United States	
geographical focus of fund manager	21%	51%	18%	11%	

The survey is split into four sections. The first section asks for information about the respondents and the asset management company they work for. The second section focuses on pre-bookbuilding evaluation of IPOs. The third section asks questions about how the investor bids during the bookbuilding, and the fourth section asks for the perceptions of the investors as to which factors influence allocations. The survey consists of thirty-six questions, and in most cases the answers are chosen from drop-down boxes giving a fixed set of alternative responses.[5]

1.2 The respondents

The fifty-seven respondents are employed by forty-nine separate firms; the difference represents more than one respondent from a single firm.[6] Details about the sample are presented in Table 1. Most responses (42 in total) came from fund managers; another eight came from chief investment officers (CIOs), five from analysts, and two from dealers. We asked respondents for information about the asset management company for which they worked, and the funds that they personally managed. Of the responses received, thirty-one were from firms with total assets under management (AUM) of over $36 billion, and twenty-six were from firms with less than $36 billion. Later in the article we use this $36 billion threshold to define "larger" and "smaller" investors. Many

[5] We used an editable Acrobat (PDF) format for the survey, which enabled us to integrate drop-down boxes for responses into the survey, and had the advantage of being both small and only requiring respondents to have Adobe Reader on their computers. We are very grateful to Andrew Goodwin for showing us how to create such a format.

[6] In the case of six companies, we had responses from two fund managers, and in the case of one company, we had responses from three fund managers. As stated in Footnote 4, we do not know the asset management company in the case of four responses, so the figures quoted assume these were from unique companies not represented elsewhere in our dataset. Similarly, figures quoted later that refer to the size and ultimate ownership of the asset management company also exclude these four responses.

respondent firms form part of larger asset management organizations. If we take the total AUM of these groups, we received responses from six of the top 10 asset managers in the world by this measure according to Watson Wyatt's September 2005 survey—11 of the top 20 and 16 of the top 100. Funds of all sizes were represented, and large groups were well represented among our respondents.[7]

All but nineteen respondents stated an amount of funds that they managed themselves. The others, mainly CIOs and analysts, did not give a figure, but were assumed to be aware of how decisions to bid for IPOs were made in their firm. The size of the funds managed by individual fund managers ranged from \$40 million to \$10.8 billion, with a mean of \$1.92 billion and a median of \$1.140 billion. CIOs tended to give the total AUM of their firm, or a large fraction, as the funds managed by them, but we exclude these from the figures presented in Table 1.

All but ten of our respondents were based in the United Kingdom. The others were based in Asia, Germany, Italy, Switzerland, South Africa, and the United States. The breakdown by nationality of respondent firm according to its ultimate owner (when we could identify the respondent's company) was as follows: twenty-five United Kingdom, fourteen United States, three Switzerland, and two each from France, Germany, the Netherlands, and South Africa. Respondents were asked for their geographical investment focus: 51% had a European focus, 21% had a global focus, 18% were focused on Asia or emerging markets, and 11% had a US focus.

As for investment style, respondents were invited to specify their investment approach. Around one-half did so, and the responses, in order of frequency, were growth, core, value, hedge, small/mid-caps, and income. Finally, we asked respondents how many IPOs they typically assessed in a year. The number ranged between 3 and 500, with a mean of 36 and a median of 20. The respondent who assessed 500 a year was a specialist IPO investor and had the smallest AUM figure. In a typical year, therefore, our respondents make nearly two thousand evaluations of (nondistinct) IPOs. Clearly, the only respondents to the questionnaire were firms actively involved in IPOs. The questionnaire therefore did not allow us to determine the characteristics of firms participating in IPOs as against those which do not participate. The respondents were representative of UK-based asset managers in general. We have addressed the fact that our respondents were larger than average by splitting some of our analyses between large respondents and others. The (minor) differences between the two groups will be noted below.

[7] This is confirmed if we compare the respondents who are members of the Investment Management Association (IMA) with the total membership of the IMA. The average ranking by the size of UK funds of our respondents was 29 out of a membership of 150 firms; however, every quintile in this ranking of 150 is represented in the survey.

2. Pre-bookbuilding Information Production and Exchange

In most countries outside the United States and Japan, the interaction between the buy-side and sell-side starts when research is circulated by analysts working for the lead managers and, sometimes, more junior syndicate members (see Jenkinson, Morrison, and Wilhelm 2006 for an analysis of the differences in IPO procedures across jurisdictions). In larger issues, research will often be produced by analysts whose banks are not part of the syndicate. The buy-side then evaluates the IPOs and decides whether to seek meetings with the lead managers and/or the management, and/or to attend the road show. The pre-bookbuilding evaluation will often involve the buy-side giving their views to the sell-side regarding the issue. The survey produced evidence on each of these steps.

2.1 Sell-side research

The survey asked respondents how many research reports they received for a typical IPO. The responses (see Table 2, panel A) were tightly clustered in the 2–5 range, with a mean of 3.6 and the mode being 3. As expected, those fund managers who focused on smaller company IPOs reported receiving fewer research reports, where one to two reports were more typical.

Fund managers were then asked which research reports they actually read, and the structured response offered to them distinguished between the analysts associated with the lead managers and "trusted analysts." Of course, the analyst of a lead manager may also be "trusted," but the structuring of the responses was designed to ascertain whether fund managers tended to focus on the research of particular analysts because they were associated with the lead manager per se, or because they were, from past experience, trusted. The results of the survey show that fund managers rely not only upon the research produced by analysts associated with the underwriting syndicate, and that whether the analyst is trusted is, of itself, more important than whether the analyst works for a syndicate member. It is interesting to note that these research reports—which, as mentioned earlier, are not distributed in US IPOs—are clearly widely read, as all respondents read some of the reports, and 31% of investors read all the reports they receive.

2.2 Discussions with the sell-side, management, and the road show

After receiving the research reports, a variety of discussions can take place involving investors. Those members of the underwriting syndicate who are charged with selling the issue will usually approach investors with a view to discussing the IPO. It may also be possible for investors to have one-on-one meetings with the management (subject to time constraints). And there is also the road show, in which investors can participate either in person or, increasingly, via webcast. Panel B of Table 2 presents evidence on the extent of participation in these meetings, and whether investors find them useful in forming a view about valuation.

Table 2
Information production and revelation

Panel A: Sell-side research

	none	only analysts of lead managers	only trusted analysts	only analysts of lead managers and trusted analysts	all
which research reports do you read?	0%	12%	27%	29%	31%

Panel B: Meetings

	never	in a minority of IPOs	in around one-half of IPOs	in a majority of IPOs	always
do you have meetings with the sell-side?	4%	18%	14%	44%	21%
do you seek one-on-one meetings with management?	0%	16%	12%	25%	47%
do you attend the roadshow?	0%	39%	15%	31%	15%

in forming a view on valuation, how useful are	of no use	marginally useful	useful	very useful	essential
sell-side meetings	7%	28%	49%	7%	9%
one-on-one meetings with management	0%	7%	21%	42%	30%
the road show	0%	44%	27%	25%	4%

Panel C: Valuation

	never	in a minority of IPOs	in around one-half of IPOs	in a majority of IPOs	always
do you build your own valuation model?	19%	30%	9%	18%	25%
do you give your views on valuation to the sell-side?	7%	18%	14%	40%	21%

	never express views	absolute price, or range	valuation multiple	discount or premium to comparables
how do you typically express your views on valuation?	7%	44%	33%	16%

Starting with meetings with the sell-side, 21% of investors said they always had such meetings and a further 44% reported that these meetings took place in a majority of IPOs. A simple summary of the responses—interpreting the responses "in a minority of IPOs" and "in a majority of IPOs" as 25% and 75%, respectively—suggests that sell-side meetings take place for 65% of investors. However, the survey shows that fund managers are more likely to seek one-on-one meetings with management, with nearly one-half of investors always seeking such meetings and only 16% seeking meetings in less than one-half of IPOs. Our summary measure of the incidence of one-on-one meetings (or strictly, the desire on the part of the investors to have such meetings) is 76%. In contrast, attendance at road shows is less frequent, with a summary incidence of 56%.

The three main reasons why investors might participate in such meetings are (1) that they are helpful in forming a view about valuation and whether to invest; (2) that investors might learn "soft" information about the offering (i.e., whether the issue was proving popular with other investors); and (3) that having such meetings might influence the likelihood of receiving a favorable allocation during the bookbuilding. We consider the third hypothesis in Section 5. When asked to describe how useful meetings were in terms of forming a view on valuation, the results clearly show that one-on-one meetings with management are viewed as the most useful: 42% of fund managers described these meetings as "very useful" and 30% viewed them as "essential." In contrast, sell-side meetings and the road show were, on average, viewed as between "marginally useful" and "useful."

2.3 Valuation and feedback to the sell-side

One of the main reasons for the design of the bookbuilding approach to conducting IPOs is in order to facilitate information production, and to incentivize investors to reveal valuable information to the investment bank running the IPO. In practice, it is difficult to ask direct questions regarding the extent of information production. However, in order to become informed—beyond reading the analyst reports (outside the United States) or attending various meetings—it might be thought necessary to build a valuation model on the issuing company. Investors could, strictly speaking, form a view on valuation without building their own model, for example, by using static earnings and cash-flow ratios, or by following a perceived consensus among other investors. However, the extent of information production in such cases might be quite limited, and so one plausible proxy for information production is the building of a valuation model. It should be noted here that this part of the questionnaire relates to information *production* rather than to information *revelation*. It could be argued that any price-limited bid reveals information, truthful or otherwise, which is useful to the bookrunner. Here, however, we are trying to answer the question of how much *incremental* information lies behind any information revealed.

Table 3
Correlations between building a valuation model, IPO evaluation, revelation, and bidding

	attend sell-side meeting	find sell-side meeting useful	attend one-on-one meeting	find one-on-one meeting useful	attend road show	find road show useful
Correlations between building a valuation model and	12%	−15%	10%	10%	4%	11%
	express views on valuation	submit a price sensitive bid	bid below true valuation			
	−21%	23%	7%			

This table shows the correlation coefficients between the response to the question "Do you build a valuation model?" and various other responses. In the case of questions where the possible responses are "never," "in a minority of IPOs," "in 50% of IPOs," "in a majority of IPOs," and "always," these are translated, respectively, into numerical scores of 0–4. A similar numerical translation is used for the questions where the possible responses are "of no use," "marginally useful," "useful," "very useful," and "essential." Price-sensitive bids include limit bid and step bids, which are both given a score of 1; strike bids are designated 0. If, when submitting limit bids, investors typically bid below (equal to) their true valuation, then their response is designated 1 (0).

The responses to the question "Do you build your own valuation model" were fairly evenly spread, as reported in panel C of Table 2. Perhaps surprisingly, 19% of respondents said that they never built a valuation model and only 25% of investors always built their own model. The survey suggests that, in the average IPO, valuation models are only built by around one-half of investors.[8] All of the respondents were institutions managing equities on a fully discretionary basis; they were not therefore reflecting the sentiment of retail or other end investors, which might have otherwise explained a low percentage building their own model. On the other hand, respondents attended information sessions of all three types in the majority of IPOs. This begs the question of why so many investors attended meetings if they did not intend to produce information. To investigate this question, we consider the correlation between building a valuation model and the responses to other questions, which we present in Table 3. As can be seen, there is a very low correlation between building a valuation model and attending the road show, and modest positive correlations for sell-side meetings and one-on-one meetings with management. When we look at the relationship between building a valuation model and the perceived usefulness of these meetings, there is a modest positive correlation in the case of one-on-one meetings and road shows. However, in the case of sell-side meetings, there is a negative correlation of −15%. Recall that the question in the survey asks: "In forming a view on valuation, how would you characterise a typical meeting. . . ?" These findings are consistent with the view that many

[8] As in the previous section, this assumes that the responses "in a minority of IPOs" and "in a majority of IPOs" correspond, on average, to 25% and 75%. This results in a summary measure of 50%.

investors use these sessions for reasons other than forming their own independent view regarding valuation, for example, to find out about the level of demand or information about what other institutions think of valuation. This explanation accords with a model that sees the IPO bookbuilding in terms of an informational cascade, with later investors basing their bidding decisions on the perceived bidding behavior of other investors (see Welch 1992), although at the premarketing stage, the attitude of investors is communicated by hearsay rather than through bids. It is, of course, useful for all investors to collect such information, which may be reflected back to the bookrunner in any limit they place on their bids. In the case of investors who build a valuation model, any price limit will reflect both the output of the model and the sort of market intelligence gathered at sell-side meetings. However, the survey responses suggest that such meetings may play a limited role in terms of incremental information production. Information seems to be flowing from the underwriter to investors, as well as vice versa, at this stage.

Alternatively, it might be conjectured that larger investors build models more often than small investors and so are better informed, since they presumably have access to more resources and the relatively fixed costs of constructing a valuation model will be spread across larger investments. This is not the case in our sample: the building of valuation models does not correlate with investor size. Larger investors (as defined earlier are those with AUM over \$36 billion) build valuation models in 47% of IPOs, whereas smaller investors build valuation models in 53% of IPOs.

The survey next asked whether the investors gave their views on valuation to the investment banks: 40% of respondents gave their views in the majority of cases, with 21% always doing so. We correlated these responses with those relating to the building of a valuation model, and found a correlation of -21%, which does not support the hypothesis that those investors who are more likely to have produced incremental information are more likely to reveal it. Indeed, this suggests that those who have *not* built a valuation model are more likely to express their views on valuation. By combining the responses on whether the investors build a valuation model and whether they reveal it, we can produce a summary measure of how much information the underwriters learned. If we give a value of 4 to “always produce a valuation model” and 0 to “never produce a valuation model,” and combine these with the summary frequencies for revelation (as explained in Footnote 8), this produces a scale of 0–4. A score of 4 would indicate that all investors built models and always revealed their valuations to the underwriters. A score of 0 could be obtained if investors never built models and/or never revealed their views. On this basis, the results of the survey produce a value of 1.1, which reflects the negative correlation noted earlier: investors are more likely to reveal their views on valuation if they have not produced a valuation model.

This suggests that rather limited information is flowing to underwriters during the pre-bookbuilding stage. It also suggests that those who have not produced incremental information have nothing to lose by revealing their views on valuation, while those who do produce such information are unwilling to give up any informational advantage before the bookbuilding.

The final question in this section of the questionnaire asks *how* investors express their views on valuation. The most common approaches are to express the valuation as a price or as a valuation multiple, with somewhat fewer investors using discounts or premia to comparable companies.

The responses to this part of the questionnaire are interesting in four respects. First, although it is inevitably difficult to identify via a survey (or most other means) the extent to which investors engage in incremental information production, our proxy measure of building a valuation model suggests that only around one-half of investors produce such information. Second, the extent to which such incremental information regarding valuation is revealed during pre-bookbuilding may be quite limited. Third, there clearly is a flow of information between investors and underwriters at the pre-bookbuilding stage—as witnessed by the widespread attendance at the various meetings. But the flow is likely to include information from underwriter to investor, as well as vice versa. Fourth, the information revealed to the bookrunner in price limits is not necessarily produced by the investors who reveal it. It may also include secondhand valuations of others reflected to the underwriter, or may be a response to the investors' perception of the state of potential demand.

Finally, as noted earlier, more interaction between analyst and investor is allowed in Europe than in the United States, and so it may be that European investors feel less need to produce their own information before the bookbuilding than their US counterparts. However, when we analyze the subset of respondents who manage portfolios focused on the United States, few significant differences are observed in the pattern of responses. For instance, in terms of building valuation models, the summary average for those investing in US IPOs is 54% compared with 49% for those focused outside the United States. The main questions where the responses do differ relate to sell-side meetings. As might be expected, given that sell-side analysis is not published for US IPOs, US-focused investors engage in more sell-side meetings (summary average 83% versus 63%) and rate them as more useful (63% versus 44%). However, the relatively small number of responses from US investors evaluating IPOs suggests that a similar survey focused on US investors would be worthwhile.

3. Bidding during the Bookbuilding

During the bookbuilding, investors may bid in one of three ways. First, by submitting a strike bid (a bid with no price limit) they accept whatever price is set for the issue up to the top of the indicative range, and so the only decision is how many shares to bid for. Second, with a limit bid the investor sets a maximum price for the quantity they demand. Third, if the investor wants to vary the quantity and price in a more complex way they can submit a step bid,

Table 4
Bidding during the bookbuilding

	Strike	Limit	Step
What type of bid do you typically submit when			
the issue is perceived to be well subscribed	46%	45%	9%
the issue is perceived to be poorly subscribed	7%	80%	13%
If you submit a strike bid, is this because			
you are uncertain about valuation and prepared to accept consensus pricing	13%		
your valuation is at least at the top of the price range	63%		
you never submit strike bids	23%		
	equal to true valuation		below your true valuation
If you submit a limit bid, would it generally be	29%		71%
	consistent across issues		higher in poorly subscribed issues
If you bid lower than your valuation, would the discount be	26%		74%

which is equivalent to a series of limit bids. The next part of our questionnaire asked respondents what sort of bid they place and why. The results are reported in Table 4.

We asked fund managers which of these three types of bid they place according to whether the IPO is perceived to be well or poorly subscribed. We found strong evidence that bidding behavior indeed differs if the IPO is perceived to be hot. In such situations, 46% of investors reported that they would typically submit a strike bid, with a similar proportion submitting limit bids and 9% using step bids. In contrast, in IPOs which are not perceived to be well subscribed, the vast majority of investors employ price-limited bids (either limit or step) with only 7% of investors submitting strike bids. This helps to explain one of the differences between Cornelli and Goldreich (2001), who observe a much higher proportion of price-sensitive bids in their sample, and Jenkinson and Jones (2004), whose sample of IPOs has a much higher average level of subscription.

Theoretical models of information revelation are generally silent on how and when information is revealed. If such information relevant to valuation was mainly being revealed through price limits on bids during the bookbuilding (as suggested by Cornelli and Goldreich 2001) and if that revelation was being incentivized by more generous allocations, one might expect investors to express their views on valuation through limit bids more readily in well-subscribed offerings, as it is in those that allocations are more likely to be valuable. We return to the question of whether investors believe that bidding behavior influences allocations in the next section, but the survey explores two further issues regarding bidding behavior, which relate to the information revelation view.

First, we asked why investors submit a strike bid. It could be that investors are uncertain about valuation and simply prepared to accept consensus pricing, rather than exerting effort in arriving at their own valuation. In this case, no information is being either generated or revealed. Alternatively, it is possible that investors place a value on the shares that is at least at the top of the indicative price range. Therefore, a strike bid could be read as a limit bid at the top of the range. In this case, informativeness depends on whether or not the price range can be raised. If it can, a strike bid sets a floor to the bidder's valuation and is partially informative. If not, a strike bid could be seen as fully informative because any readiness to pay more is information irrelevant to the bookrunner. When asked why they submitted strike bids, 13% of the respondents were prepared to accept consensus pricing while 63% did so because they valued the shares at least at the top of the indicative range. An important issue, therefore, is whether the indicative price range is itself revised, so that investors can rebid in a potentially more informative way. Jenkinson, Morrison, and Wilhelm (2006) discuss the relationship between the stickiness of the indicative price range and information revelation prior to the bookbuilding period, and suggest that in those countries where price ranges are seldom revised, information revelation may be occurring during the premarketing period. However, we report in the next section that investors perceive their actions before or during the bookbuilding to have only a marginal impact on allocation.

The second issue we explore is whether, in the case of limit bids, investors bid their true value. Information revelation theories suggest that discretion over allocation can be used to incentivize information production, and its revelation. According to the Revelation Principle (Myerson 1979), it is not necessary for investors to bid their true value for their bids to be informative to the investment bank acting as the trusted central mediator. An equivalent mechanism could be for investors to bid systematically below their true valuation, and, if the issue price was set by the investment bank on the basis of these bids, then investors would automatically receive payoffs for participating in the bookbuilding. Therefore, the fact that 71% of the survey respondents—including the largest ten investors as measured by AUM—report that the price limits they set were typically below their true valuation cannot be interpreted in itself as evidence against information extraction.

Our next question asked whether investors applied a consistent discount across IPOs, which would allow a simple grossing-up of bids to infer true valuations. Only 26% of respondents applied a consistent discount. The remaining 74% said that the discount they applied increased in poorly subscribed offerings. Again, this is not in itself evidence against an indirect information revelation mechanism, although the heterogeneous bidding strategies across investors and across issues that are reported in the survey suggest that, in practice, it may be very hard for the investment bank to interpret the varied information obtained during the bookbuilding, and thereby to operate an optimal mechanism.

There are clearly other aspects of bidding during the bookbuilding—such as whether to bid early or late—but, since they do not influence valuation accuracy, these are interesting, in the main, only to the extent that investors believe that their actions influence allocation. We address such issues in the next section.

4. What Factors Do Institutional Investors Believe Influence IPO Allocation?

The previous two sections have focused mainly on the role of investors in information generation and exchange. However, as noted in the introduction, there are alternative views of the factors that influence allocation that relate more to features of the investor per se than to actions they take during the IPO. In this section, we present the results from the final part of the survey where we asked investors for their perceptions of the factors that influenced allocation (relative to demand). We focus on actions or characteristics that are observable to the bookrunner. These fall into three groups: engaging in pre-bookbuilding meetings, bidding behavior during the bookbuilding, and investor characteristics. Among the latter group, we include the extent of brokerage business with the bookrunner, whether investors are perceived as long-term holders of the stock, and whether the investor is a regular subscriber to IPOs conducted by the bookrunner.

4.1 The distribution of responses

Starting with pre-bookbuilding meetings, in Figure 1 we present the distribution of the responses. Most respondents perceive that meetings have at most a marginal impact on allocation. It is interesting that this applies particularly to meetings with the sell-side and attendance at road shows: in both cases, nearly 80% of respondents answered there was either no impact or a marginal impact on allocation. It seems likely that these meetings would be the ones where information might flow from investors to the investment banks and/or issuer.[9] Attending one-on-one meetings with management is viewed as slightly more influential on allocation, but the overall impact on allocation is viewed as quite marginal.

In Figure 2 we present the perceptions of respondents regarding the impact of bidding behavior. We consider three types of behavior: the size of the bid, the timing of the bid, and the type of the bid. Of course, the size of the bid is related in part to the size of the fund, which we consider below under bidder

[9] It might have been instructive to ask respondents explicitly whether they thought that giving their views on valuation at the pre-bookbuilding stage had a positive impact on allocations. However, as such meetings were thought to have only a minor effect on allocations whichever way the information was flowing, it is unlikely that the responses would have been different if the question had focused only on information provided in one direction.

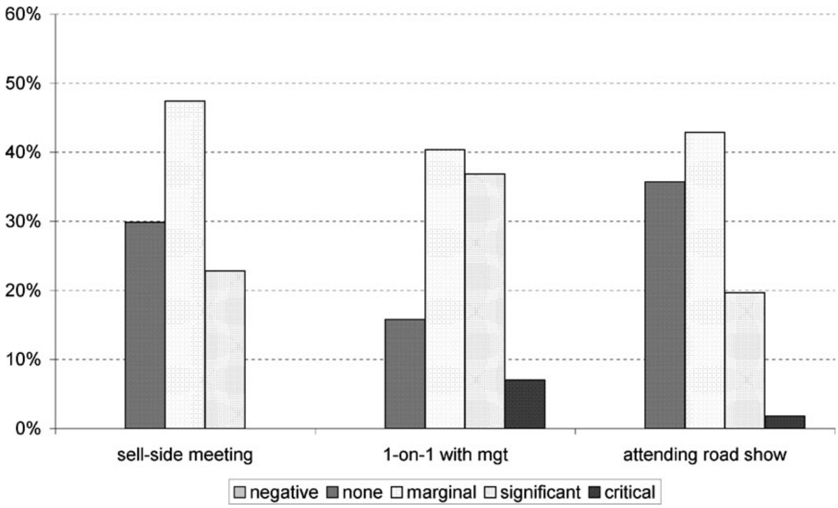

Figure 1
Do meetings influence allocation?

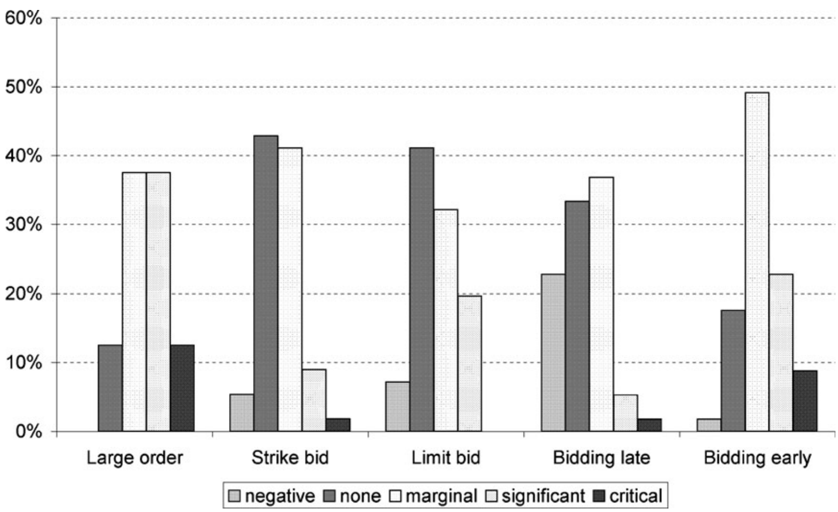

Figure 2
Does the type of bid influence allocation?

characteristics, but in the questionnaire we distinguished between these two factors (after all, a large fund might put in a small order for an IPO). Of all the bidding characteristics, the bid size is clearly viewed as the most significant determinant of receiving a favorable allocation (recall that the question explicitly asked about allocation rates—i.e., allocation relative to shares demanded).

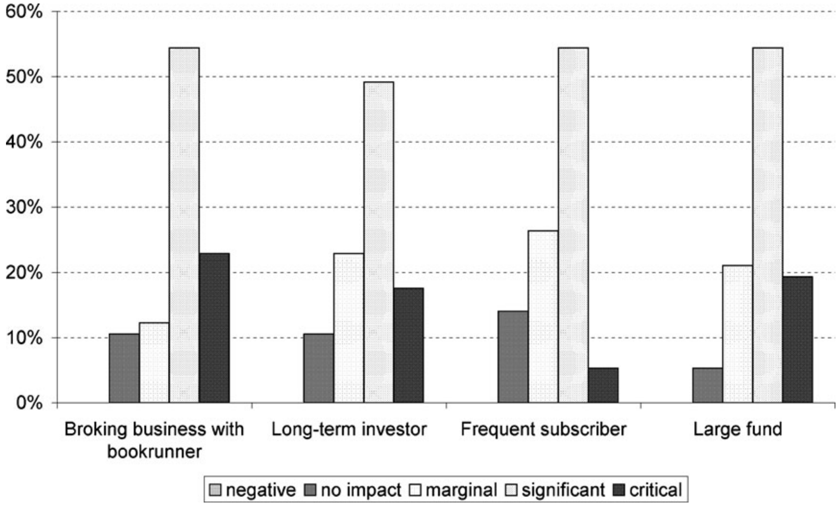

Figure 3
Do investor characteristics influence allocation?

In terms of timing of bids, early bids are viewed as having a positive influence on allocation, whereas the overwhelming majority of respondents viewed a late bid as having at best no impact on allocation, with nearly a quarter of respondents judging that late bids impact negatively on allocation. As to the question of whether strike bids or limit bids are better allotted (in relation to one another), it is interesting to note that the responses related to strike and limit bids are quite similar, with only a modest positive impact associated with submitting limit bids, and very few investors viewing bids per se as a critical determinant of IPO allocations.

We present information on the impact of investor characteristics in Figure 3. It is immediately apparent that investors view this set of factors as a far more significant determinant of allocation than either the pre-bookbuilding interaction or bidding during the bookbuilding. The extent of brokerage business with the bookrunner and the size of the fund are viewed as very significant determinants of allocation. Of course, there will be a correlation between the size of the fund and the extent of brokerage business generated, but it does not necessarily follow that a large fund allocates brokerage business to the bookrunner of a given IPO. So the survey suggests that large funds per se receive significantly higher allocations, perhaps driven by issuers' preference for concentrated ownership. Being perceived as a long-term investor also has a very positive impact on allocation (consistent with the findings of Jenkinson and Jones 2004), as does being a frequent subscriber to the IPOs of the bookrunner. In summary, the raw responses suggest a clear view that investor characteristics are by far the most important determinant of allocation. In the next section we construct two

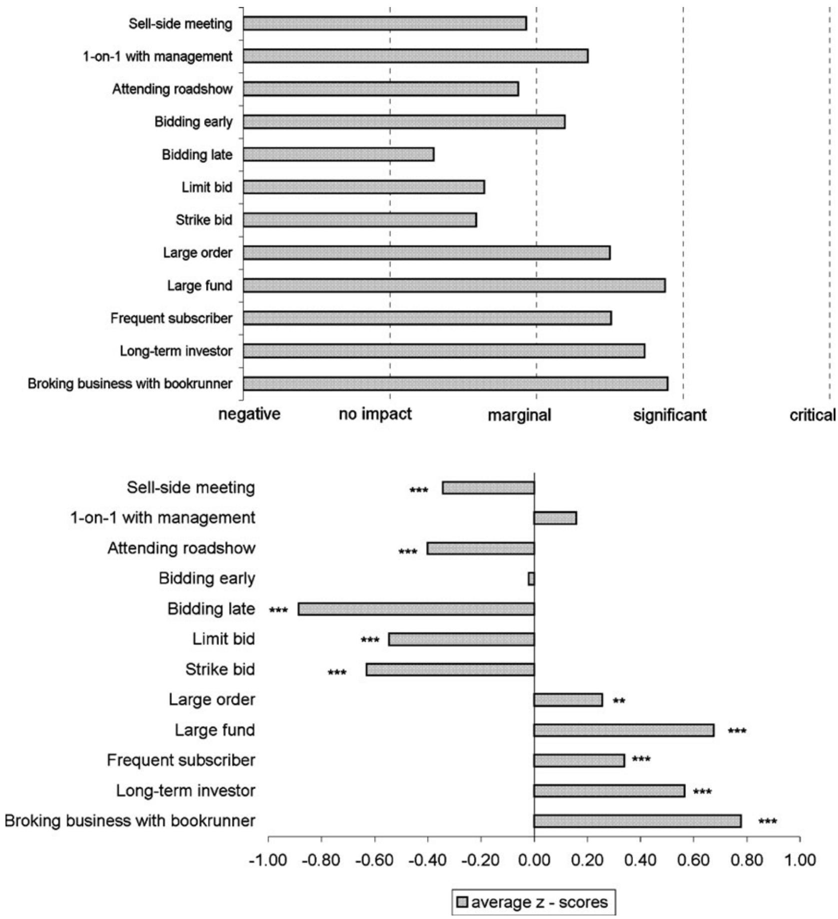

Figure 4
What factors influence IPO allocation?
This figure presents responses to the survey question: "Evaluate how important the following factors are to receiving a good allocation-–relative to demand—of an IPO." The possible responses for the impact of the various factors were "negative," "none," "marginal," "significant," "critical." The top figure presents the average raw responses. In the lower figure, responses are normalized for each respondent by computing the mean and standard deviation of their responses across the twelve categories, using a scale from 0 (negative impact) to 4 (critical impact), and calculating z-scores (how many standard deviations each response is from the mean). These z-scores are then averaged across respondents. ***, **, and * denote significant differences from the average response at the 1%, 5%, and 10% levels, respectively, using a t-test.

summary measures of the average response across investors to allow simple comparisons between all twelve factors identified in the survey.

4.2 Comparing responses

In order to compare the influence of the various factors, in Figure 4 we summarize the average responses in two ways. In the upper panel we simply assign a numerical score, from 0 (negative impact) to 4 (critical impact), and report the average response across the investors. On this basis, the pre-bookbuilding interaction is viewed as being of marginal importance in terms of influencing allocation, with one-on-one meetings with management having a somewhat higher perceived impact than meetings with the sell-side and road-show attendance. Turning to the impact of bidding behavior during the bookbuilding, the only action to reach "marginal" in significance is submitting an early order into the book. Late orders are viewed, on average, as having an impact close to zero (with 23% of the responses suggesting a negative impact on allocation). Interestingly, given the focus of the extant IPO literature, price-limited and strike bids have virtually the same average impact, with both being viewed by investors as having an impact that is well below "marginal." Indeed, bidding late is the only factor with a lower average impact.

Taken together, these findings raise some doubts about whether allocations are related in a significant way to the actions of investors in the pre-bookbuilding period, or to the form or timing of investor bidding during the bookbuilding. Of course, our survey may not have captured every way in which information is exchanged and rewarded via allocations.[10] However, combined with the earlier evidence that the extent to which investors generate incremental information and share it with the bookrunner is limited, the findings question the importance of information production explanations of IPO pricing and allocation.

In contrast, all the factors that reflect the nature of the investor have a systematically higher perceived impact on allocation. In particular, the extent of brokerage business with the bookrunner, being perceived as a long-term investor, and the impact of being a large fund all have an *average* response, which is close to "significant." The perception of the impact of being a frequent subscriber to the IPOs of the bookrunner is only slightly less positive. Taken together, these results suggest that characteristics of the investors, rather than their actions either before or during the bookbuilding, are perceived to have the dominant impact on allocation.

The top panel of Figure 4, which summarizes the evidence in Figures 1–3, provides information on the average absolute response for each factor, but does not allow for differences in the patterns of response across investors. In particular, the average response of investors can differ significantly, as can the variance of the responses. Consequently, the *relative* importance attached to the twelve allocation factors—both for a given investor and between investors—will not be captured by a simple average of the raw responses. We therefore construct a variable measuring the relative importance of each factor, where we control for the average response of each investor. Specifically, for each investor, we compute the mean and standard deviation of their responses across the twelve

[10] For instance, in the survey we asked about meetings with the sell-side on the assumption that pre-bookbuilding views about valuation would tend to be revealed at such meetings, and we asked about the type of bid since limit bids (in particular) are a way of transmitting information about valuation during the bookbuilding. However, this does not entirely rule out other ways in which information might be shared between investors and the bookrunner.

categories. We then measure how many standard deviations from the mean each response is. We average these deviations across investors, and compute the standard errors of the average responses to test whether each factor has a significantly higher or lower perceived impact than the average.

We present the evidence in the lower panel of Figure 4, which reinforces the earlier pattern from the raw responses. In particular, the extent of brokerage business with the bookrunner emerges as the single most significant influence on IPO allocations, as perceived by investors, with large funds and long-term investors being not far behind. In contrast, the type and timing of bids are viewed as relatively unimportant. In terms of interaction before the bookbuilding, only one-on-one meetings with management have a response that is, on average, above the mean (but is not statistically significant).

We conducted some tests to see how robust these results are, and whether the patterns of responses regarding respondents' views on allocation were broadly consistent with their behavior before and during the bookbuilding. First, we investigated whether the pattern of responses, and significance, which were found for the full sample of respondents, are still found when we restrict the analysis to the forty-two fund managers, who might be thought to have the best information on how IPO allocations are determined. We found that the pattern of responses was very similar, with no changes in the ranking of the influence of the various factors or in the level of significance. Second, as a loose check on the quality of our survey data, we looked at whether the behavior of the respondents—regarding those factors, such as attending meetings and bidding strategy, that were under their control—was broadly consistent with their perceptions regarding allocation. So, for instance, we would expect those investors who think that attending a meeting with the sell-side influences allocation to attend more meetings (although, clearly, investors might attend the meetings for other reasons, such as to obtain information that would be valuable when forming a view about valuation and bidding strategy). In all such cases, we found positive correlations between the actions and the perceptions of their impact on allocations, which suggests that the investors are giving internally consistent answers through the various parts of the survey.

In summary, the survey suggests that investor characteristics are the key determinant of IPO allocations. One interesting question is whether the perceptions of investors differ according to one of the key observable features: the size of their organization (in terms of assets under management). We consider this next.

4.3 Do the perceptions differ according to the size of investor?

It was found in the previous section that the two most important factors that are perceived to influence IPO allocations are the size of the fund and the extent of brokerage business with the bookrunner. Although these are clearly distinct, in practice they may be correlated for many fund management organizations, and they are both related to question 1.3 of the survey, which asks: "What are the

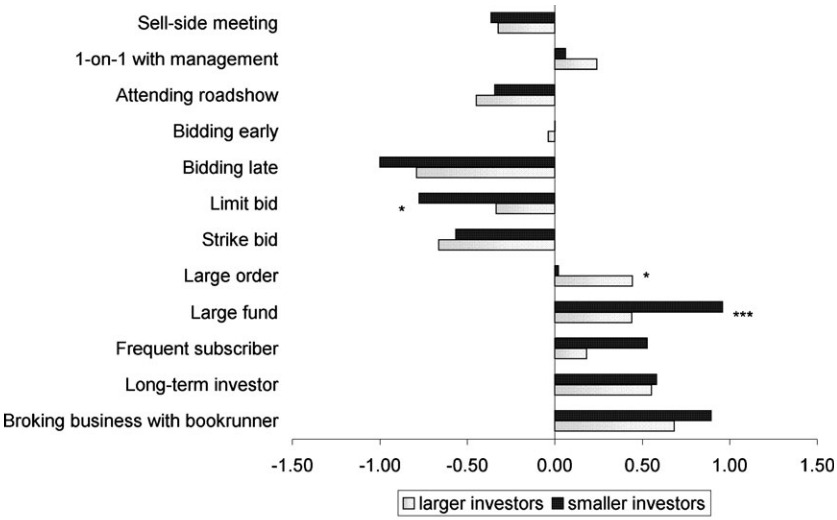

Figure 5
Differences in perceptions between larger and smaller funds.
This figure shows the average z-score for larger and smaller funds, defined according to whether the respondent reports that the organization for which they work has above or below \$36 billion under management. See Figure 4 for details of how the z-scores are calculated. ***, **, and * denote significant differences between the average responses for the two investor groups at the 1%, 5%, and 10% levels, respectively, using a t-test.

approximate assets under management of your organization?" To investigate whether the responses differ according to the size of the investor, we split the sample roughly in half by considering separately those larger investors with total reported AUM above \$36 billion and the smaller investors with AUM of less than \$36 billion. Clearly, AUM is not the only feature that differentiates investors, but it is likely to be correlated with other features, such as whether the organization is a hedge fund or long only, on which we do not have complete information.

In Figure 5, we present the difference in the average responses according to the investor size categories. Perhaps unsurprisingly, the most significant difference between the two groups relates to the perceived importance of the fund size: the smaller funds believe that AUM has a much more important influence on allocation than the larger funds. However, it should be noted that both groups rank the fund size as an important determinant: smaller funds rank it first in terms of influence (with an average z-score of $+0.96$), whereas larger funds rank it third ($+0.44$). In contrast, large investors view the size of the order as a more important determinant of allocation than smaller investors (although the difference is only significant at the 10% level). Interestingly, the groups have similar views on the importance of being perceived as a long-term investor, which ranked second in importance among the larger investors, and third by the smaller investors.

Small investors also perceive the extent of brokerage business with the bookrunner as relatively more influential than larger investors, although the difference is not statistically significant. Indeed, for large investors, brokerage business is perceived as the single most important positive influence on allocation, whereas for the smaller investors, it ranks very slightly behind the fund size (but brokerage business has a higher relative score, compared to the other potential factors, than for the large investors). This result reinforces the findings of the previous section: brokerage relationships are perceived to be a key factor influencing IPO allocations by large and smaller investors alike.

The other differences between the responses of the two investor groups are not very remarkable. The only other factor where there is a statistically significant difference (again at the 10% level) between the average responses of the two groups relates to the impact of submitting limit bids, which are perceived to have a slightly higher relative influence by larger investors. However, recall that limit bids are used more frequently when an offering is perceived to be poorly subscribed, and that investors typically discount their bids more in such cases. Our findings might provide some weak evidence that larger funds are more able to influence pricing and allocation in such situations.

5. Conclusions

Despite the central importance of investors—especially informed investors—to all IPO theories, relatively little is known about their role in practice. This article is the first to provide evidence on the IPO process from the perspective of the investors: how they assess IPOs, how they interact with investment banks, how they bid during the bookbuilding, and what factors they perceive as influencing the final allocation decision. Using survey evidence from a sample of fifty-seven institutional investors, who between them assess around two thousand IPOs each year, we are able to provide information relevant to all the main theories in a way that has not been possible before, given the existing limitations on available data.

The first set of interesting findings relates to our evidence on the role investors actually perform before the bookbuilding. Our survey suggests that in a typical IPO only around one-half of institutional investors would build their own valuation model. We take this as a proxy for generating incremental information regarding valuation. The remainder may rely (outside the United States and Japan) on the research reports produced by analysts, which as our survey suggests are widely read, and on discussions with the sell-side and management. Although such meetings are commonplace, investors do not always perceive them to be particularly useful in terms of forming a view on valuation. Alternative conjectures about why the meetings take place include learning about other investors' views and the overall state of demand, and hoping to influence allocation, although our evidence on the latter suggests that investors perceive any such influence to be very marginal.

The second set of results relates to the way investors bid during the bookbuilding. We find strong evidence that investors bid differently according to how well subscribed the issue is perceived to be. Limit bids are employed by the vast majority of investors in cold offerings, but the balance between price-sensitive and strike bids is approximately even in hot issues. Strike bids are mainly submitted because investors' valuation of the shares coincides with, or exceeds, the top of the indicative price range. When submitting limit bids, nearly three-quarters of investors impose a price limit that is below their true valuation, and such discounts increase when the issue is perceived to be poorly subscribed. Taken together, the heterogeneous nature of bidding strategies across investors and across IPOs casts some doubt as to whether bookrunners are, in practice, able to infer bidders' true valuations from what is in fact revealed. Furthermore, investors perceive the influence of their bidding behavior on allocation to be very limited.

The final set of results relates to the relative importance of alternative views of the pricing and allocation of IPOs. When asked to compare the influence of factors associated with pre-bookbuilding interaction, bidding, or investor characteristics, investors view the latter category as having by far the most significant impact on allocation. The survey finds that investors view the single most influential determinant of a good IPO allocation to be the extent of brokerage business with the bookrunner. When the responses of large and small investors are compared, the importance of brokerage relationships is confirmed by both groups. There is similar uniformity of view regarding the importance of being perceived as a long-term holder of the stock. On average, investors also perceive being a regular subscriber to the bookrunners' IPOs, along with being a large fund, as positively influencing allocations although, perhaps not surprisingly, smaller investors believe these factors are more important than larger investors.

In conclusion, although there are clearly limitations to survey methodology, it does enable us to understand how closely the assumptions of theoretical models relate to reality. The results of this article suggest that academic research on IPOs should focus more on the relationships between investors and the investment banks.

Appendix: The Survey

The survey that we used is presented below. Most of the selections were from drop-down menus within an Acrobat file. For those questions with structured answers, the possible responses are detailed in square brackets. For all other questions, no structured response was offered.

Questionnaire

This questionnaire is part of an academic research project investigating the IPO evaluation, pricing, and allocation process. So far the main focus of academic research on the IPO process has been from the investment banks' perspective. For instance, there has been considerable research on the factors that might influence investment banks' allocations of IPOs to a particular investor. This project aims to understand the buy-side role in IPOs—the nature of their interaction with the sell-side, bidding during the bookbuilding, and the factors the buy-side thinks influence allocations. Your answers will be treated in the strictest confidence. The results of the survey will be reported as averages or distributions; individual responses will not be reported. All participants will be sent the results of the survey.

1. Your company and your role

1.1 In which country are you based?
1.2 What is your job function? [fund manager, analyst, chief investment officer, dealer]
1.3 What are the approximate assets under management of your organization? [<$5 billion, $5–$18 billion, $18–$36 billion, $36–$90 billion, >$90 billion]
1.4 What are the approximate assets managed by you (if any)?
1.5 Do you have a particular investment focus (e.g., value, growth, core, hedge, etc.)? If so please describe.
1.6 What is your geographical focus? [Asia, Emerging Markets, Europe, Global, United States]
1.7 How many IPOs do you assess in a typical year?

2. Pre-bookbuilding evaluation of IPOs

2.1 How many research reports do you receive for a typical IPO (if allowed in your country)?
2.2 Which research reports do you read? [none, only analysts of lead managers, only trusted analysts, only analysts of lead managers and trusted analysts, all reports, not applicable—research is not allowed]
2.3 Do you build your own valuation model? [never, in a minority of issues, in around one-half of issues, in a majority of issues, always]
2.4 Do you have pre-bookbuilding meetings/discussions with the sell-side? [never, in a minority of issues, in around one-half of issues, in a majority of issues, always]
2.5 In forming a view on valuation and investment, how would you characterize a typical meeting or discussion with the sell-side? [of no use, marginally useful, useful, very useful, essential]
2.6 Do you seek one-on-one meetings with the management? [never, in a minority of issues, in around one-half of issues, in a majority of issues, always]
2.7 In forming a view on valuation and investment, how would you characterize a typical one-on-one meeting with the management? [of no use, marginally useful, useful, very useful, essential]
2.8 Do you attend the road show? [never, in a minority of issues, in around one-half of issues, in a majority of issues, always]
2.9 In forming a view on valuation and investment, how would you characterize the typical road show? [of no use, marginally useful, useful, very useful, essential]
2.10 How do you typically give feedback to the sell-side? [e-mail, formal questionnaires, orally]
2.11 Do you give your views on valuation? [never, in a minority of issues, in around one-half of issues, in a majority of issues, always]
2.12 How do you typically express your views on valuation? [not applicable—I never give views on valuation, an absolute price or range, as a valuation multiple (e.g., EV/EBITDA) for the issue, as a discount or premium to comparable companies]

3. The bookbuilding

3.1 What type of bid do you typically submit when the issue is perceived to be well subscribed? [strike (no price limit), price limited, step (more than one demand/price bid)]
3.2 What type of bid do you typically submit when the issue is perceived to be poorly subscribed? [strike (no price limit), price limited, step (more than one demand/price bid)]

3.3 If you submit a strike bid, is this because [you are uncertain about valuation and prepared to accept consensus pricing, your valuation is at least at the top of the price range, you never submit strike bids]?
3.4 If you submit a limit bid, would it generally be [below your own valuation, equal to your own valuation, you never submit limit bids]?
3.5 If you bid lower than your valuation, what factors determine the discount? [we apply a consistent discount across issues, the discount increases in poorly subscribed issues, I never apply a discount]

4. Allocations

Please evaluate how important the following factors are to receiving a good allocation—relative to demand—of an IPO. All questions offered the responses [would have a negative impact, has no impact, has a marginal impact, has a significant impact, has a critical impact].

4.1 Pre-bookbuilding meeting/discussion with the sell-side
4.2 Attending the road show
4.3 Bidding early in the bookbuilding
4.4 Bidding late in the bookbuilding
4.5 Submitting a strike bid
4.6 Submitting a price-limited bid
4.7 Being perceived as a long-term holder of the stock
4.8 Extent of brokerage business with bookrunner
4.9 Having a one-on-one meeting with management
4.10 Being a large fund
4.11 Submitting a large order
4.12 Being a frequent subscriber to the bookrunner's IPOs

Many thanks for filling out this questionnaire. To ensure that your responses are recorded, PLEASE NOW SAVE THE FILE, and return to us via e-mail to tim.jenkinson@sbs.ox.ac.uk, or PRINT THE FILE and fax to Tim Jenkinson at +44 (0)1865-288805 or post to Tim Jenkinson, Saïd Business School, Park End Street, Oxford OX1 1HP, UK. If you have any questions, please either e-mail or telephone at +44 (0)1865-288916.

Conflict of interest statement. None declared.

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