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The impact of company responses to exchange queries on the Australian equity market

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Abstract

This study examines the impact of company responses to trading-induced queries made by the Australian Securities Exchange over the period January 2007–December 2008, inclusive. We utilise event study methodology and a matched sample approach to assess the impact of trading query announcements. We use multivariate analysis to investigate any cross-sectional determinants affecting abnormal returns and volume, and find significant positive shareholder wealth and volume effects associated with query announcements. Further, the unexplained abnormal returns observed prior to the announcement of the trading query persist post-announcement. Subsequent analysis reveals the industry effect reported in the literature loses significance after accounting for sample selection bias.

Key words: Exchange query announcement; Event study; Matched firm approach

JEL classification: G14

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1. Introduction

This paper provides an empirical examination of query announcements as value-relevant information signals in the framework of financial market efficiency. Specifically, a trading-induced query is a set of questions issued to a publicly traded entity by the exchange following an unjustified movement in the share price or volume of that particular company. This form of announcement is

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able to signal to the market any information that could justify the pre-announcement overreaction or underreaction observed in the company's equity. Specifically, this event is able to provide the market with value-relevant information either by dismissing the pre-announcement activity as speculative trading or by contributing new information that can be disseminated into the marketplace. As such, trading-induced queries play an important role within the continuous disclosure system to ensure that securities are accurately priced.

Our study is motivated by a lack of available research associated with the impact of company responses to trading-induced exchange queries. The Australian query regime is intended to support a timely flow of information, enabling securities and their associated risks to be priced efficiently. Further, the Australian market offers a unique setting as the Australian Securities Exchange (ASX) enforces a continuous disclosure query regime distinct from disclosure regulation administered in other countries, including the United States, United Kingdom and Japan. Within these countries, there is no public communication of any concerns regarding price fluctuations. The securities legislation in these markets stipulates a civil remedy for a breach of disclosure statutes, and the exchanges themselves are not responsible for enforcing and monitoring these requirements. Additionally, the computerised monitoring systems operating on these securities exchanges are primarily used to protect market participants against order flow manipulation and insider trading. Further, given the Australian government's recent approval of a new electronic market exchange (CHI-X) to compete with the ASX, this study provides a timely examination of the trading-induced query system and its impact on equity prices for all market stakeholders and regulators.

Within Australia, exchange queries are a response to ASX Listing Rule 3.1, which requires that an entity immediately disclose any information that is expected to have a material impact on the price or value of the entity's equity.[1] The emergence of unexplained variations in trading activity may denote listing rule violations, causing the ASX to submit to the company of interest, a standardised set of questions requesting that the entity disclose any information in compliance with Listing Rule 3.1. The query is submitted by the exchange without standardised guidelines or thresholds that dictate the exact extent of fluctuation required to warrant a query.[2] Failure to respond by the deadline outlined in the request would result in a trading halt of the company's traded equity. Once a reply is received from the company, both it and the query are disclosed via announcement to the market at the same time. Hence, the market is informed of

[1] Australian Securities Exchange Listing Rules Chapter Three – Continuous Disclosure (http://www.asx.com.au/ListingRules/chapters/Chapter03.pdf).

[2] Gong (2007) confirms this and finds that the variation in share prices which triggered a trading inquiry is approximately 20 per cent or greater. This is consistent with the findings of this paper (refer to Table 4, Panel A).

the exchange query only upon the submission of the reply by the firm, prompting our study to focus on query response announcements.

Company responses to exchange queries are diverse and range from a simple 'no' to a vague array of conjectures that answer the inquiry in an incomplete manner. The extant literature (Gong, 2007; Marsden *et al*., 2008) broadly partitions company responses to trading-induced queries into two distinct groups. The 'no new information' release sub-sample consists of companies not disclosing any new information. The 'new information' release sub-sample consists of two possible announcements. First, companies can state that new investment opportunities are being investigated but refuse to disclose concrete information to the full extent (the 'carve-out' rule[3]), citing incomplete and confidential lines of dialogue. This is an example of a new but partial information release. Second, firms opt to release new information that consists of, for example, variations in earnings forecasts, upcoming project details or clarification of existing market speculation. Nonetheless, both types of query responses convey or confirm new information not fully crystallised prior to the announcement.

Gong (2007) investigates how Australian companies respond to ASX queries and how the market reacts to such replies. The paper partitions the sample on the basis of share price direction prior to the query. In the case of prior price declines, Gong (2007) finds that a downward trend of the share price is reversed with the security price increasing 5.2 per cent (1-day event window) to 9.2 per cent (5-day event window) after the firm denies knowledge of any adverse information ('no new information' response). In the case of prior price upswings, the analysis only documents significant results with respect to partial information releases. Specifically, following a significant share price increase, the price of the company's securities continues to increase upon the release of partial information. On average, the share price continues to increase by 4.6 per cent over the first trading day after such a response and a further 3.9 per cent over the next four trading days.

Marsden *et al*. (2008) examine the query system employed by the New Zealand Exchange to ensure that listed companies comply with its continuous disclosure

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[3] The carve-out rule classifies as an exception to continuous disclosure Listing Rule 3.1. Under Listing Rule 3.1A, Listing Rule 3.1 does not apply to particular information if all of the following are satisfied:
3.1A.1 A reasonable person would not expect the information to be disclosed;
3.1A.2 The information is confidential, and ASX has not formed the view that the information has ceased to be confidential; and,
3.1A.3 One or more of the following applies:
(a) It would be a breach of a law to disclose the information;
(b) The information concerns an incomplete proposal or negotiation;
(c) The information comprises matters of supposition or is insufficiently definite to warrant disclosure;
(d) The information is generated for the internal management purposes of the entity; and,
(e) The information is a trade secret.

requirements. The paper applies traditional event study methodology and only focuses on scenarios under which companies respond to queries via 'no new information' releases with respect to unexpected trading fluctuations. In terms of queries generated by price increases, the study reports an abnormal return of 14.7 per cent over a 1-day event window prior to the query and a further 9.0 per cent abnormal return following a company's 'no new information' reply (1-day event window). In terms of queries generated by price decreases, the study reports an abnormal return of −12.16 per cent over a 1-day event window prior to the query and a further −4.8 per cent abnormal return following a company's negative reply (1-day event window). The study argues that the absence of a reversal in share prices suggests that the query system is only partially effective as a mechanism for remedying an uninformed market.

In light of the above, our study is the first to examine trading queries by simultaneously applying event study methodology, a matched sample approach and multivariate analysis utilising the Heckman (1979) procedure to correct for sample selection bias. We argue that sample selection bias is likely to arise as our data set is not constructed in a random manner, consisting solely of firms subject to an exchange query announcement. As such, the application of the Heckman procedure is an obvious inclusion to our analysis. Moreover, this paper inspects the extent of market reaction to exchange queries as a function of both the announcement content and firm-specific characteristics for the period January 2007–December 2008, inclusive. In addition, we assess whether 'no new information' query replies result in a reversal of the unexplained returns observed prior to the announcement.

Our findings demonstrate significant positive shareholder wealth and volume effects associated with query announcements, robust to applied stratification and a matched sample approach. Further, unexplained abnormal returns observed prior to the announcement persist as we fail to identify a reversal in the share price following a company announcing an absence of any information that would justify the pre-query trading activity.

The multivariate analysis with the application of Heckman's (1979) two-stage correction procedure aims to identify significant cross-sectional determinants of abnormal returns and abnormal volume. Once sample selection bias is taken into account, we fail to document industry classification as a significant variable in the augmented multivariate analysis. This contradicts the role of industry as a significant explanatory variable reported in the extant literature (Gong, 2007). Moreover, our findings show prior security price direction as significant with respect to abnormal returns while firm size and the source of the query prove significant with respect to abnormal trading volume (ATV).

2. Model Specification

To examine abnormal profits in the Australian equity market, we employ a 0/1 Market Model (Fama *et al.*, 1969) to avoid endogeneity concerns and the

consequent use of a biased company beta.[4] Endogeneity is expected to arise as, prior to a query announcement, the sample of firms is likely to experience abnormal returns, resulting in a biased beta coefficient. In addition, we employ the Barber and Lyon (1997) matched firm study to account for company-specific risk factors, size characteristics and growth opportunities of sample firms in measuring abnormal returns. Control firms are selected based upon industry classification, size and book-to-market values.

The buy-and-hold abnormal return (BHAR) for a sample company is estimated as follows:[5]

$$BHAR_{i,[a,b]} = \prod_{t=a}^{b}(1 + R_{i,t}) - \prod_{t=a}^{b}(1 + R_{m,t}) \quad (1)$$

where:

$BHAR_{i,[a,b]}$ = The BHAR for sample firm i over the event window $[a,b]$;
$R_{i,t}$ = The discrete observed return for sample firm i in period t; and,
$R_{m,t}$ = The discrete observed return for the market in period t.

Subsequent to identifying the control firm sample, we formally define the Barber and Lyon (1997) Buy-and-Hold Abnormal Returns as follows:

$$BLBHAR_{i,[a,b]} = \prod_{t=a}^{b}(1 + R_{i,t}) - \prod_{t=a}^{b}(1 + R_{c,t}) \quad (2)$$

where:

$BLBHAR_{i,[a,b]}$ = The Barber and Lyon (1997) BHAR for sample firm i over the event window $[a,b]$;
$R_{i,t}$ = The discrete observed return for sample firm i in period t; and,
$R_{c,t}$ = The discrete observed return for control firm c in period t.

[4] Prior to a trading-induced exchange query, sample firms are likely to experience abnormal returns. In fact, this will most likely be the source of the query in the first place. If the sample company experienced a significant price increase, then the ordinary least squares (OLS) regression would overstate the beta as a result of pre-announcement trading. Applying an overstated beta in the post-announcement period would result in artificially negative abnormal returns. If the sample company experienced a significant price decrease, then the OLS regression would understate the beta as a result of pre-announcement trading. Applying an understated beta in the post-announcement window would result in artificially positive abnormal returns.

[5] The reported findings with respect to shareholder wealth effects are subject to winsorising at the 1 per cent level. This is in response to performed diagnostics that identify the presence of extreme values (outliers).

In addition, we examine the impact of company responses to trading-induced queries on trading volumes through the use of historical and control firm volume data. Historical daily trading volumes are measured over 10–30 trading days prior to the query announcement. This datum is applied to generate firm-specific volume benchmarks that are compared to the realised trading volume over the event window of interest in an effort to assess the presence of abnormal trading activity.

Therefore, abnormal trading for a sample company over the event window of interest is calculated using the abnormal trading volume (ATV) measure, which is expressed as follows:

$$ATV_{i,[a,b]} = \frac{\sum_{t=a}^{b} V_{i,t}}{(b-a)\left(\frac{1}{y-x}\right)\sum_{t=x}^{y} V_{i,t}} - 1 \tag{3}$$

where:

$ATV_{i,[a,b]}$ = The ATV for sample firm i over the event window $[a,b]$;
$V_{i,t}$ = The daily trading volume of sample firm i in period t;
$[x, y]$ = A historical daily trading window, 10–30 trading days prior to the query announcement dissemination date;
$[b - a]$ = The number of trading days over the specified event windows (equal to 1, 2, 3, 4 or 5); and,
$[y - x]$ = The number of trading days between the start and the end of the control period for determining the historical trading volume (equal to 20).

In the assessment of ATVs with respect to a matched firm approach, we implement a scaling factor to account for differing degrees of volume turnover between sample firms and control firms. Therefore, we express the volume scaling factor as follows:

$$VFACTOR_i = \frac{\sum_{t=x}^{y} V_{c,t}}{\sum_{t=x}^{y} V_{i,t}} \tag{4}$$

where:

$VFACTOR_i$ = The trading volume scaling factor for sample firm i;
$V_{c,t}$ = The daily trading volume of control firm c in period t;
$V_{i,t}$ = The daily trading volume of sample firm i in period t; and,
$[x, y]$ = A historical daily trading window, 10–30 trading days prior to the query announcement dissemination date.

Subsequently, the trading activity for a sample company over the event window of interest is calculated using the Barber and Lyon (1997) abnormal trading volume (BLATV) measure, which is expressed as follows:

$$BLATV_{i,[a,b]} = \left(VFACTOR_i \frac{\sum_{t=a}^{b} V_{i,t}}{\sum_{t=a}^{b} V_{c,t}} \right) - 1 \tag{5}$$

where:

$BLATV_{i,[a,b]}$ = The Barber and Lyon (1997) abnormal trading volume for sample firm i over the event window $[a,b]$;
$VFACTOR_i$ = The trading volume scaling factor for sample firm i;
$V_{i,t}$ = The daily trading volume of sample firm i in period t; and,
$V_{c,t}$ = The daily trading volume of control firm c in period t.

In addition, we investigate the joint impact of a set of firm- and query-specific determinants in assessing the extent of cross-sectional variation in abnormal returns and abnormal volume. Specifically, we evaluate this variation as a function of the security price direction prior to the query, type of company response to the query, industry classification, company size and the reason for the query as stated by the ASX upon submission. Testing is performed using abnormal returns and volume generated via the event study methodology and the matched sample approach. The models we fit to conduct our multivariate analysis are formally defined as:

Abnormal Return Multivariate Model

$$\begin{aligned} AR_{i,[a,b]} = {} & \alpha_i + \beta_1 PRIORPRICE_i + \beta_2 NONEWS_i + \beta_3 RESOURCE_i \\ & + \beta_4 LN(SIZE)_i + \beta_5 PVQUERY_i + \varepsilon_i \end{aligned} \tag{6}$$

Abnormal Trading Volume Multivariate Model

$$\begin{aligned} ATV_{i,[a,b]} = {} & \alpha_i + \beta_1 PRIORPRICE_i + \beta_2 NONEWS_i + \beta_3 RESOURCE_i \\ & + \beta_4 LN(SIZE)_i + \beta_5 PVQUERY_i + \varepsilon_i \end{aligned} \tag{7}$$

where:

$AR_{i,[a,b]}$ = The abnormal return for sample firm i over the event window $[a,b]$;
$ATV_{i,[a,b]}$ = The ATV for sample firm i over the event window $[a,b]$;
$PRIORPRICE_i$ = Dummy variable equal to 1 if the traded securities of sample firm i experienced a price increase prior to the query announcement, and 0 otherwise;
$NONEWS_i$ = Dummy variable equal to 1 if sample firm i responded to the query by releasing no new information, and 0 otherwise;

$RESOURCE_i$ = Dummy variable equal to 1 if sample firm i operates in the resource industry, and 0 otherwise;
$SIZE_i$ = The market capitalisation of sample firm i;
$PVQUERY_i$ = Dummy variable equal to 1 if the reason for the query is ATV in addition to price fluctuation in the securities of sample firm i, and 0 otherwise;[6] and,
ε_i = The error term.[7]

The validity of the multivariate analysis could be compromised as a result of a number of potential impediments. The cross-sectional analysis in our paper is likely to exhibit sample selection bias as a result of a distinction between the population distribution and the distribution within our selected sample. Sample selection bias is of particular interest in our analysis because abnormal returns and abnormal volume are only calculated for queried firms selected by the regulator (ASX). As such, our data set is not constructed in a random manner, compromising the generalisability of this study.

The two-stage correction procedure proposed by Heckman (1979) provides a widely employed technique for mitigating sample selection bias in empirical studies. In the first stage, we estimate a probit model over the full sample of both event and control firms to measure the conditional probability of a company being included in our sample (Inverse Mills ratio). The probit model is formally defined as:

Heckman Selection Equation (Probit Model)[8]

$$D_i = f(\gamma_0 + \gamma_1 RESOURCE_i + \gamma_2\ LN\ (SIZE)_i + \gamma_3 YEAR_i + \gamma_4 DEBT_i + \gamma_5 ROA_i + \gamma_6 PREP_i + \gamma_7 PREV_i + \mu_i \quad (8)$$

where:

D_i = Dummy variable equal to 1 if firm i is a sample firm, 0 otherwise;
f = The normal link of the function;
$RESOURCE_i$ = Dummy variable equal to 1 if firm i operates in the resource industry, 0 otherwise;
$LN\ (SIZE)_i$ = Natural logarithm of the market capitalisation of firm i as at the last year-end reporting date prior to the query announcement;

[6] Note that all of the query announcements in our sample are generated at least as a result of unexplained security price fluctuation. Hence, the tested dummy variable is equal to 1 if the trading-induced exchange query is caused by (both) abnormal share price and trading volume fluctuation.

[7] The conducted regression analysis is estimated using Newey–West heteroskedasticity and autocorrelation consistent covariances (Newey and West, 1987) in an effort to correct the standard error estimates.

[8] Firm leverage is estimated through the use of the Debt Ratio (Total Debt divided by Total Assets), and firm profitability is assessed by employing the Return on Assets Ratio (Earnings before Interest and Tax divided by Total Assets).

$YEAR_i$ = Dummy variable equal to 1 if firm i is subject to a query in the 2008 calendar year, 0 otherwise;
$DEBT_i$ = Debt-to-Asset ratio of firm i prior to the query announcement;
ROA_i = Return on Assets ratio of firm i prior to the query announcement;
$PREP_i$ = Pre-announcement abnormal returns of firm i, for a 1-week period prior to the query announcement;
$PREV_i$ = Pre-announcement ATV of firm i, for a 1-week period prior to the query announcement; and,
μ_i = The error term with $\mu_u = 0$ and $\sigma_u = 1$.

The query year, defined as a dummy variable equal to 1 if the query announcement occurred in the 2008 calendar year (and 0 otherwise), is selected to account for potential differences in the use of queries across the two calendar years. Pre-announcement abnormal returns and trading volume, the likely causes of trading-induced exchange queries, are measured over a 1-week interval immediately prior to the query announcement date. Thereafter, such measurements are benchmarked against historical price and volume trading activity, 30 trading days prior to the start of the 1-week pre-announcement window. In addition, the presence of firm leverage and company profitability ratios in the selection equation account for firm-specific characteristics that may influence the occurrence of a query.

3. Data

The initial data set consists of trading-induced query announcements on securities of ASX-listed corporations over a 2-year sample period between 1 January 2007 and 31 December 2008, inclusive.[9] The applied event period allows for the use of the most recent data with respect to assessing potential abnormal market activity in response to such announcements. We engage the Aspect Huntley DatAnalysis database to obtain a complete list of query announcements applicable to all public companies over the entire sample period, including announcement date and time. This approach yields information in terms of the submitted ASX query and the company response to such a query in a single document that is subsequently made available to the market. Individual query announcements are manually examined to determine the nature of the query, the company response to the query and the direction of the pre-announcement share fluctuation. Subsequent filtering procedures are applied to exclude query announcements not prompted by unexplained market trading (technical queries) or subject to data omissions. The resulting final data set contains 713 query announcements relating to 511 unique firms.

[9] The examination of a 2-year period is consistent with Gong (2007) who examines the market reaction to exchange queries in Australia over the period July 1998–June 2000. Further, the number and type of firms in our study are comparable to those in Gong (2007).

To investigate the wealth impact of company responses to trading-induced query announcements, we assess daily security price data for each sample firm against the market portfolio[10] and thereafter the assigned control firm. The DataStream International database is engaged to expedite security price, volume and index data retrieval to provide the necessary daily trading information. To execute the matched firm approach, we compile a control firm database of all publicly listed ASX companies. Using the Aspect Huntley FinAnalysis database, we collect the corresponding Global Industry Classification Standard categorisation codes, market capitalisations and book-to-market values as at the last year-end reporting date prior to the query announcement for each public firm. Subsequent control firm identification can then be conducted by means of a three-step procedure in accordance with a match sample framework (Barber and Lyon, 1997), namely: intra-industry matching; market capitalisation (between 70 and 130 per cent of the sample firm) matching; and book-to-market (closest value in the affiliated reporting period) matching.

A summary of the security price, trading volume, market portfolio and control firm data we examine in this paper is outlined in Table 1. The table also outlines additional data we collect to conduct the multivariate analysis and the affiliated Heckman (1979) correction procedure. Table 2 presents the descriptive statistics pertaining to the final sample of query response announcements.

With respect to the time of announcement, there appears to be a stable distribution throughout the day with some clustering before and after the ASX trading session. In this regard, it is important to acknowledge that the impact of any company responses to trading-induced queries released after the market close can only be reflected in the following trading day. Accordingly, we adjust the employed event windows for any announcements published after 4 PM to the open of the next trading session (10 AM) the following day. Further, the descriptive statistics indicate a skewness of the sample towards firms operating in the natural resource industry and skewness towards smaller corporations on the basis of market capitalisation (a proxy for company size). In response, we control for the industry classification and company size concerns in the conducted multivariate analysis.[11]

4. Results

Panel A of Table 3 details the aggregate abnormal returns pertaining to query response announcements. Overall, the results detail significant positive abnormal

[10] The Australian All Ordinaries Index is an appropriate proxy for the market portfolio as it represents a capitalisation-weighted index comprised of the largest 500 companies in the Australian equities market or approximately 95 per cent of the total value of the listed equity on the ASX (http://www.standardandpoors.com/indices/sp-asx-all-ordinaries).

[11] In addition, we perform an analysis of the explanatory variable cross-correlation matrix in an effort to assess the potential presence of multicollinearity in our multivariate analysis. The results do not illustrate a cause for concern.

Table 1
Summary of the data requirements of this paper and the sources used to facilitate the construction of such data sets. Category refers to the identity of the associated data requirement. Description provides an explanation as to the nature of the associated data requirement and its intended use in subsequent testing. Data source refers to the identity of the databases employed to retrieve the necessary data.

Category	Description	Data source
Company response query announcements	Company responses to trading-induced ASX queries (with date and time) for the purposes of identifying the event of interest and the characteristics of the announcement	Aspect Huntley DatAnalysis – Signal G
Market portfolio	Daily closing index data for the ASX All Ordinaries for the purposes of calculating market return benchmarks	DataStream International
Control firm database	Industry, capitalisation and book-to-market data for every ASX-listed company for the purposes of Barber and Lyon (1997) control firm matching	Aspect Huntley FinAnalysis
Daily (closing) security prices	Daily closing share price data for each sample and control company over the event windows of interest for the purposes of abnormal return calculation	DataStream International
Daily trading volumes	Daily trading volume data for each sample and control company over the event and associated historical adjustment windows for the purposes of abnormal trading volume calculation	DataStream International
Prior Price Movement	A dummy variable equal to 1 if the traded securities of the sample firm experienced a price increase prior to the query, and 0 otherwise	Aspect Huntley DatAnalysis – Signal G
No new information response	A dummy variable equal to 1 if the sample firm responded to the query by releasing no new information, and 0 otherwise	Aspect Huntley DatAnalysis – Signal G
Resource Industry	A dummy variable equal to 1 if the sample firm is classified by the Global Industry Classification Standard as operating in the natural resource industry, and 0 otherwise	Aspect Huntley FinAnalysis
LN (size)	The natural logarithm of the sample firm's market capitalisation as at the last year-end reporting date prior to the query announcement date	Aspect Huntley FinAnalysis
Price and volume generated query	A dummy variable equal to 1 if the reason for the query is abnormal trading volume in addition to unexplained price fluctuation, and 0 otherwise	Aspect Huntley DatAnalysis – Signal G
Leverage (debt ratio)	Total debt divided by total assets for each sample and control firm as at the last year-end reporting date prior to the query announcement date	Aspect Huntley FinAnalysis
Profitability (return on assets ratio)	Earnings before interest and tax divided by total assets for each sample and control firm as at the last-year end reporting date prior to the query announcement date	Aspect Huntley FinAnalysis

ASX, Australian Securities Exchange.

Table 2
Summary of the distribution of query response announcements. The values in the parentheses reflect the proportion of the sample associated with the affiliated field. Panel A refers to a query distribution breakdown by year. Panel B refers to a query distribution breakdown by time of announcement. Panel C refers to a query distribution breakdown by industry code. Panel D refers to a query distribution breakdown by company size. Panel E refers to a query distribution breakdown by the type of company response to the trading-induced query. Panel F refers to the continuous variable of our multivariate analysis.

Panel A: Distribution on the basis of year of announcement

January 2007–December 2007	January 2008–December 2008
302 (42%)	411 (58%)

Panel B: Distribution on the basis of time of announcement

Before 10 AM	10 AM–12 PM	12–2 PM	2–4 PM	After 4 PM
209 (29%)	103 (15%)	94 (13%)	134 (19%)	173 (24%)

Panel C: Distribution on the basis of industry classification

Resources	Others
439 (62%)	274 (38%)

Panel D: Distribution on the basis of market capitalisation

Size < $50 million	$50 million < Size < $300 million	Size > $300 million
285 (40%)	227 (32%)	201 (28%)

Panel E: Distribution on the basis of company response type

No new information response	New or partial information response
648 (91%)	65 (9%)

Panel F: Continuous variable

Variable	Sample size	Mean	Standard deviation	25th Percentile	Median	75th Percentile
$SIZE_i$	713	1,151,456,302	7,296,133,837	25,451,044	91,036,213	381,089,706
$LN\ (SIZE)_i$	713	20.8643	22.7106	17.0523	18.3268	19.7585

returns associated with company response announcements to trading-induced exchange queries over all event intervals. Specifically, our study reports an aggregate abnormal return estimate of approximately 2.5 per cent over each of the five event windows.[12] Stratification on the basis of security price direction prior to

[12] The use of either cumulative returns or buy-and-hold returns as a metric for measuring abnormal returns generates consistent results. For brevity, we do not report the outcomes pertaining to cumulative returns.

Table 3
Shareholder wealth effects of company announcements pertaining to trading-induced exchange queries over five event study windows. Our results are calculated with respect to buy-and-hold abnormal returns ($\prod_{t=a}^{b}(1+R_{i,t}) - \prod_{t=a}^{b}(1+R_{m,t})$, where $R_{i,t}$ and $R_{m,t}$ denote the discrete security returns of sample firm i and the market portfolio, respectively) for the period January 2007–December 2008, inclusive. Panels A and B present overall wealth effects as well as segmented results, stratified on the basis of the security price direction prior to the announcement. *Increase* (*decrease*) denotes sample firms subject to share price increases (decreases) in the pre-announcement period. Return values are presented in decimal form. Two-tailed *t*-statistics are presented in parentheses.

Measure	Abnormal return results					
Window [*a*,*b*]	Market model methodology			Matched firm methodology		
Panel A: Aggregate shareholder wealth effects						
	OVERALL	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	0.0251*** (4.579)	0.0313*** (5.181)	−0.0037 (−0.289)	0.0230*** (3.878)	0.0280*** (4.292)	−0.0004 (−0.027)
[0, + 2]	0.0179*** (2.873)	0.0223*** (3.394)	−0.0024 (−0.138)	0.0154** (2.266)	0.0181** (2.525)	0.0026 (0.137)
[0, + 3]	0.0248*** (3.529)	0.0305*** (4.119)	−0.0021 (−0.106)	0.0200*** (2.614)	0.0223*** (2.753)	0.0095 (0.440)
[0, + 4]	0.0250*** (3.253)	0.0319*** (3.846)	−0.0078 (−0.398)	0.0186** (2.231)	0.0226** (2.538)	−0.0002 (−0.007)
[0, + 5]	0.0253*** (3.151)	0.0317*** (3.679)	−0.0045 (−0.212)	0.0194** (2.162)	0.0241** (2.532)	−0.0025 (−0.100)
Panel B: Stratification on the basis of company response to query						
No information	*OVERALL*	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	0.0248*** (4.264)	0.0307*** (4.803)	−0.0023 (−0.164)	0.0232*** (3.677)	0.0280*** (4.054)	0.0009 (0.057)
[0, + 2]	0.0180*** (2.712)	0.0217*** (3.106)	0.0011 (0.059)	0.0155** (2.147)	0.0179** (2.365)	0.0041 (0.201)
[0, + 3]	0.0239*** (3.276)	0.0285*** (3.733)	0.0026 (0.104)	0.0188** (2.368)	0.0206** (2.471)	0.0108 (0.473)
[0, + 4]	0.0245*** (3.030)	0.0303*** (3.471)	−0.0023 (−0.112)	0.0184** (2.105)	0.0225** (2.429)	−0.0005 (−0.021)
[0, + 5]	0.0235*** (2.835)	0.0288*** (3.255)	−0.0011 (−0.048)	0.0182** (1.975)	0.0231** (2.396)	−0.0046 (−0.175)

Table 3 (continued)

Measure	Abnormal return results					
Window [*a*,*b*]	Market model methodology			Matched firm methodology		
New information[16]	*OVERALL*	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	0.0347*** (2.737)	0.0398*** (2.787)	0.0068 (0.275)	0.0374*** (2.732)	0.0433*** (2.792)	0.0050 (0.206)
[0, + 2]	0.0227 (1.900)	0.0285** (2.186)	−0.0088 (−0.296)	0.0260 (1.774)	0.0287 (1.803)	0.0110 (0.282)
[0, + 3]	0.0329** (2.196)	0.0410** (2.502)	−0.0118 (−0.333)	0.0449*** (2.676)	0.0481*** (2.686)	0.0274 (0.559)
[0, + 4]	0.0322** (2.089)	0.0436** (2.562)	−0.0302 (−0.984)	0.0373** (2.171)	0.0389** (2.020)	0.0288 (0.762)
[0, + 5]	0.0385** (2.166)	0.0463** (2.631)	−0.0046 (−0.071)	0.0430** (2.082)	0.0406 (1.932)	0.0562 (0.785)

***Significance at the 1 per cent level; **Significance at the 5 per cent level.

[16] Results pertaining to 'new information' releases are generated through a sample size of 65 query response announcements.

the query reveals that, on average, shares subject to an unexplained price run-up prior to the exchange inquiring demonstrate a further price increase (approximately 3.1 per cent) in response to the query announcement. In contrast, equity subject to price declines pre-announcement exhibits no significant impacts in response to query replies.

Panel B of Table 3 presents abnormal returns for samples stratified on the basis of the type of company response to the query. Specifically, our results show an aggregate abnormal return of approximately 2.5 per cent with respect to 'no new information' query responses and approximately 3.5 per cent with respect to 'new information' query responses.

The lack of an observed price reversal as a response to 'no new information' releases (Panel B) warrants further consideration. The ASX Surveillance Division resorts to exchange queries in the presence of unexplained market activity relating to a particular security. As such, a 'no new information' release following irregular trading should result in, at least, partial reversals of the prior returns earned in the pre-announcement periods because of the removal of unjustified speculation.[13]

Table 4 presents the discrete return values over 5-day event windows before and after the query announcement date for both sample and control firms. The table indicates economically and statistically significant returns for sample

Table 4
Discrete returns pertaining to the 'no new information' query response sub-sample for both sample firms (Panel A) and matched control firms (Panel B) over a 5-day event window prior to and following a query announcement. *AGGREGATE* refers to the returns for the overall sample of 'no new information' responses to submitted queries (648 observations); *PRIOR INCREASE* pertains to the returns of securities subject to share price run-ups in the pre-announcement period; and *PRIOR DECREASE* pertains to the returns of securities subject to share price declines in the pre-announcement period. Return values are presented in decimal form. Two-tailed *t*-statistics are presented in parentheses.

Window [*a*,*b*]	Discrete returns for 'no new information' responses		
Stratification	[−5, 0] interval	[0, + 5] interval	[0, + 50] interval
PANEL A: Sample firms			
AGGREGATE	0.2330*** (16.546)	0.0201** (2.386)	−0.0401** (−1.967)
PRIOR INCREASE	0.3280*** (23.859)	0.0254*** (2.835)	−0.0222 (−0.932)
PRIOR DECREASE	−0.2073*** (−15.147)	−0.0046 (−0.203)	−0.1232*** (−3.897)
PANEL B: Control firms			
AGGREGATE	0.0043 (1.0135)	0.0019 (0.434)	−0.0364*** (−2.919)
PRIOR INCREASE	0.0151*** (3.428)	0.0024 (0.499)	−0.0220 (−1.575)
PRIOR DECREASE	−0.0461*** (−4.255)	−0.0001 (−0.002)	−0.1027*** (−3.927)

***Significance at the 1 per cent level; **Significance at the 5 per cent level.

[13] Evidence of share price reversal following a 'no new information' reply to a query is consistent with Gong (2007) but inconsistent with Marsden *et al*. (2008).

firms prior to the query and an absence of return reversal in response to 'no new information' announcements over the 5-day windows after the announcement.

A comparison of equivalent pre- and post-intervals for sample firms shows that a security subject to a price run-up exhibits an average return of 32.8 per cent prior to the query and a further increase of 2.5 per cent in response to the 'no new information' reply. Panel B presents discrete returns for matched control firms surrounding the sample announcement dates over identical study intervals. The control firm findings show insignificant returns over the $[0, +5]$ window, indicating that the absence of a price reversal observed for the sample firms is not the result of exogenous shocks (such as industry turbulence or foreign exchange movements) conflicting with post-announcement returns. In addition, a wider post-announcement event window is also presented to discard the possibility of a share price reversal in the near future to control for a delayed market response. This evidence indicates an average cumulative return of approximately 35.3 per cent surrounding the query announcement (over the $[-5, +5]$ interval window) but only a -2.2 per cent return reversal over the $[0, +50]$ window that is not significantly different from zero. Hence, the wider event window documents security returns after the query that do not account for the observed pre-announcement activity.

Table 5 documents the trading volume effects of query announcements in the form of volume ratios over the event intervals relative to the corresponding historical trading activity. Our findings indicate a highly significant positive impact on trading volume in response to query announcements.[14] The one exception, 'new information' releases affiliated with share price decreases in the pre-announcement window (Panel B), yields insignificant outcomes. Panel A of Table 5 documents a historical aggregate trading volume figure of more than six times above the historical benchmark on the first trading day following the query publication. When stratified on the basis of the security price direction prior to the announcement, average abnormal trading activity exceeds 640 per cent over the 1-day window in the case of equity that experienced a prior share price increase. With respect to trading volumes of matched control firms, the results further indicate ATVs consistent with the historical trading benchmarks.

Panel B of Table 5 further outlines a highly significant positive impact of trading volume regardless of the type of query response issued by the firm. The aggregate abnormal trading activity is approximately six times above the historical benchmark with respect to 'no new information' query responses and approximately four and a half times above the historical benchmark with respect to 'new information' query responses.

[14] It may appear that the magnitude of the ATV is associated with the equal-weighted approach of assessing the trading reaction to query announcements. However, winsorising our extreme values at the 1 per cent level yields largely consistent estimates.

Table 5
Trading volume effects of company announcements pertaining to trading-induced exchange queries over five event study windows for the period January 2007–December 2008, inclusive. Panels A and B present overall trading volume effects as well as segmented results, stratified on the basis of the security price direction prior to the announcement. *Increase* (*Decrease*) denotes sample firms subject to share price increases (decreases) in the pre-announcement period. Volume values are presented as ratios with a positive coefficient of 3.5, for example, indicating a turnover of 3.5 times (350%) above the associated benchmark (denoted as the [*x*,*y*] trading window). Historical abnormal trading volume is measured as $\left(\sum_{t=a}^{b} V_{i,t}\right) \div [(b-a)(1/y-x)\sum_{t=x}^{y} V_{i,t}] - 1$, where $V_{i,t}$ denotes the security trading volume of sample firm i over the event windows of interest. Matched abnormal trading volume is measured as $VFACTOR_i(\sum_{t=a}^{b} V_{i,t}) \div (\sum_{t=a}^{b} V_{c,t}) - 1$, where $V_{i,t}$ and $V_{c,t}$ denotes the security trading volume of sample firm i and control firm c over the event windows of interest. $VFACTOR_i$ is the volume scaling factor for sample firm i. One-tailed t-statistics are presented in parentheses.

Measure	Abnormal trading volume					
Window [*a*,*b*]	Historical trading benchmark			Matched firm benchmark		
Panel A: Aggregate shareholder wealth effects						
	OVERALL	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	6.0385*** (12.627)	6.4176*** (11.545)	4.2551*** (5.600)	13.8570*** (12.175)	14.7260*** (11.436)	9.7693*** (4.227)
[0, + 2]	4.3216*** (13.547)	4.6028*** (12.361)	2.9988*** (6.278)	9.3065*** (11.383)	10.0582*** (10.527)	5.7705*** (4.808)
[0, + 3]	3.632*** (14.227)	3.8874*** (12.984)	2.4283*** (6.894)	7.6862*** (9.451)	8.4153*** (8.721)	4.2561*** (4.725)
[0, + 4]	3.2945*** (13.135)	3.5504*** (11.946)	2.0906*** (7.421)	6.1615*** (11.383)	6.7246*** (10.708)	3.5131*** (4.067)
[0, + 5]	2.9533*** (12.973)	3.1893*** (11.799)	1.8431*** (7.638)	5.0132*** (12.456)	5.4226*** (12.117)	3.0878*** (3.432)
Panel B: Stratification on the basis of company response to query						
No information	*OVERALL*	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	6.1772*** (11.907)	6.5495*** (10.832)	4.4520*** (5.446)	14.0769*** (11.440)	14.9451*** (10.714)	10.0532*** (4.049)
[0, + 2]	4.4095*** (12.786)	4.6961*** (11.623)	3.0812*** (6.111)	9.2603*** (10.571)	10.0521*** (9.747)	5.5910*** (4.734)
[0, + 3]	3.6973*** (13.426)	3.9539*** (12.192)	2.5082*** (6.812)	7.6151*** (8.750)	8.4217*** (8.072)	3.8766*** (5.327)

Table 5 (continued)

Measure	Abnormal trading volume					
Window [*a*,*b*]	Historical trading benchmark			Matched firm benchmark		
[0, + 4]	3.3651*** (12.367)	3.6302*** (11.216)	2.1361*** (7.291)	6.0495*** (10.781)	6.7158*** (10.053)	2.9613*** (5.277)
[0, + 5]	3.0107*** (12.187)	3.2620*** (11.074)	1.8464*** (7.492)	4.8207*** (12.273)	5.3466*** (11.533)	2.3833*** (5.056)
New information	*OVERALL*	*Increase*	*Decrease*	*OVERALL*	*Increase*	*Decrease*
[0, + 1]	4.6549*** (5.381)	5.1392*** (5.204)	1.9914 (1.645)	12.5841*** (5.008)	13.6895*** (4.817)	6.5046 (1.435)
[0, + 2]	3.4454*** (5.328)	3.6989*** (5.166)	2.0517 (1.397)	9.7670*** (4.752)	10.1182*** (4.740)	7.8355 (1.176)
[0, + 3]	2.9763*** (5.423)	3.2430*** (5.350)	1.5100 (1.225)	8.3945*** (4.015)	8.3534*** (4.031)	8.6203 (1.110)
[0, + 4]	2.5906*** (5.692)	2.7767*** (5.533)	1.5666 (1.475)	7.2780*** (3.640)	6.8089*** (3.796)	9.8582 (1.118)
[0, + 5]	2.3810*** (5.817)	2.4855*** (5.592)	1.8060 (1.662)	6.9328** (3.401)	6.1589*** (3.719)	11.1891 (1.124)

***Significance at the 1 per cent level; **Significance at the 5 per cent level.

A univariate analysis pertaining to the Inverse Mills ratio reports a statistically significant regression constant and a statistically significant regression coefficient. The significant intercept term indicates that our abnormal returns and abnormal trading volume findings remain significant after allowing for sample selection bias in our analysis. More importantly, the statistical significance of the regression coefficient demonstrates that the query announcement controls information that was previously unavailable to the market and to which investors react. Such an interpretation stems from the extant literature on self-selection models in corporate finance (see Li and Prabhala, 2005) that applies the Inverse Mills ratio to model private information revealed in events of interest. Such studies employ the variable to assess the information revelation process and estimate conditional announcement effects (Li and Prabhala, 2005).

The multivariate analysis of abnormal returns (Table 6) shows the Inverse Mills ratio to be highly significant in all event windows, indicating the presence of sample selection bias in our sample. This validates the inclusion of the variable in our analysis as the presence of the ratio mitigates the sample selection bias present in our coefficient estimates. With respect to other statistically significant variables, our findings indicate a significant positive effect with respect to the direction of the security price prior to the query. This is consistent with the reported evidence in Table 4, which documents that positive returns earned prior to the query announcement are followed by additional positive returns earned after the query publication.

More importantly, our abnormal return findings report no significant size or industry effects documented in previous studies (see Gong, 2007; and Marsden *et al.*, 2008). Moreover, it is important to note that the omission of the Inverse Mills ratio from our analysis, a variable not considered by the extant literature, would result in a statistically significant industry effect. This highlights that not accounting for this form of bias exerts a significant impact on overall conclusions. That is, after incorporating the Heckman (1979) two-stage correction procedure and generating a statistically significant Inverse Mills ratio, the industry effect modelled in the extant literature loses its significance.[15]

Table 7 documents our cross-sectional variation results with respect to ATV for the five event windows. Again, the Heckman (1979) two-stage procedure shows a statistically significant Inverse Mills ratio. Further, all observed event windows identify a significant negative firm size effect, indicating that the trading volume impact of query response announcements is substantially stronger for smaller firms. In addition, we find that the source of the query has a significant positive relationship with trading volume in all post-announcement intervals.

[15] In results not reported, consistent with Gong (2007), we further stratify our industry analysis by also including a dummy variable for the resource and technology sector and a dummy variable for the resource, technology and biotech sectors. This further industry stratification reveals no other significant effects with all regression coefficients and their significance remaining largely unchanged.

Table 6
Results of our multivariate regression of the cumulative abnormal returns and buy-and-hold abnormal returns pertaining to query announcements. Panels A and B document regression estimates obtained through the use of a *0/1 Market Model* and *Control Firm* benchmarks, respectively. With regard to the explanatory variables: *PRIORPRICE* is a dummy variable equal to 1 if the sampled securities experienced a price increase prior to the query, and 0 otherwise; *NONEWS* is a dummy variable equal to 1 if the sample firm responded to the query by releasing no new information, and 0 otherwise; *RESOURCE* is a dummy variable equal to 1 if the sample firm lies in the resource industry, and 0 otherwise; *LN (SIZE)* is the natural logarithm of the market capitalisation of the sample firm; *PVQUERY* is a dummy variable equal to 1 if the reason for the query is both abnormal price and volume fluctuation, and 0 otherwise; and *MILLS* is the Inverse Mills ratio derived from the residuals of the selection equation. Two-tailed *t*-statistics are presented in parentheses.

Window	Buy-and-hold abnormal returns				
Variable	[0, + 1]	[0, + 2]	[0, + 3]	[0, + 4]	[0, + 5]
Panel A: Historical volume benchmark					
CONSTANT	−0.1142 (−1.621)	−0.1962** (−2.441)	−0.1884** (−2.101)	−0.2186** (−2.200)	−0.2418** (−2.333)
PRIORPRICE	0.0893*** (5.165)	0.0884*** (4.474)	0.0945*** (4.233)	0.1217*** (5.053)	0.1201*** (4.762)
NONEWS	0.0044 (0.243)	0.0108 (0.512)	0.0006 (0.021)	0.0079 (0.317)	−0.0069 (−0.265)
RESOURCE	0.0124 (1.000)	0.0136 (0.966)	0.0205 (1.309)	0.0144 (0.826)	0.0232 (1.267)
LN (SIZE)	−0.0017 (−0.534)	0.0014 (0.382)	0.0007 (0.164)	−0.0004 (−0.100)	0.0012 (0.261)
PVQUERY	0.0019 (0.162)	0.0063 (0.471)	0.0170 (1.124)	0.0155 (0.945)	0.0135 (0.780)
MILLS	0.1218** (6.071)	0.1345*** (5.892)	0.1424*** (5.587)	0.1803*** (6.388)	0.1851*** (6.275)
Panel B: Control firm volume benchmark					
CONSTANT	−0.1211 (−1.599)	−0.2099** (−2.411)	−0.2065** (−2.101)	−0.2658** (−2.474)	−0.2813** (−2.455)
PRIORPRICE	0.0840*** (4.423)	0.0819*** (3.775)	0.0826*** (3.360)	0.1086*** (4.111)	0.1077*** (3.754)
NONEWS	0.0099 (0.497)	0.0104 (0.452)	−0.0023 (−0.096)	0.0117 (0.422)	−0.0007 (−0.026)
RESOURCE	0.0091 (0.686)	0.0150 (0.982)	0.0141 (0.824)	0.0080 (0.428)	0.0235 (1.166)
LN (SIZE)	−0.0011 (−0.315)	0.0024 (0.615)	0.0019 (0.435)	0.0019 (0.402)	0.0033 (0.630)
PVQUERY	−0.0026 (−0.214)	0.0009 (0.060)	0.0180 (1.082)	0.0267 (1.488)	0.0217 (1.111)
MILLS	0.1184*** (5.480)	0.1359*** (5.496)	0.1506*** (5.401)	0.1816*** (5.945)	0.1773*** (5.430)

***Significance at the 1 per cent level; **Significance at the 5 per cent level.

Table 7
Results of our multivariate regression of the abnormal trading volume ratios pertaining to query announcements. Panels A and B document regression estimates obtained through the use of *Historical Company Trading* and *Control Firm* benchmarks, respectively. With regard to the explanatory variables: *PRIORPRICE* is a dummy variable equal to 1 if the sampled securities experienced a price increase prior to the query, and 0 otherwise; *NONEWS* is a dummy variable equal to 1 if the sample firm responded to the query by releasing no new information, and 0 otherwise; *RESOURCE* is a dummy variable equal to 1 if the sample firm lies in the resource industry, and 0 otherwise; *LN (SIZE)* is the natural logarithm of the market capitalisation of the sample firm; *PVQUERY* is a dummy variable equal to 1 if the reason for the query is both abnormal price and volume fluctuation, and 0 otherwise; and *MILLS* is the Inverse Mills ratio derived from the residuals of the selection equation. Two-tailed *t*-statistics are presented in parentheses.

Window	Abnormal trading volume ratios				
Variable	[0, + 1]	[0, + 2]	[0, + 3]	[0, + 4]	[0, + 5]
Panel A: Historical volume benchmark					
CONSTANT	31.7034*** (5.432)	23.5077*** (6.064)	19.2881*** (6.231)	18.1156*** (5.945)	16.2197*** (5.866)
PRIORPRICE	−2.8706 (−1.886)	−2.1302** (−2.123)	−1.6120** (−2.011)	−1.2541 (−1.585)	−1.0893 (−1.152)
NONEWS	0.9184 (0.572)	0.5130 (0.497)	0.3525 (0.426)	0.4576 (0.552)	0.3494 (0.464)
RESOURCE	0.3577 (0.355)	0.2454 (0.364)	0.2050 (0.385)	−0.2534 (−0.487)	−0.2831 (−0.590)
LN (SIZE)	−1.2308*** (−4.715)	−0.9075*** (−5.228)	−0.7410*** (−5.335)	−0.7073*** (−5.185)	−0.6292*** (−5.070)
PVQUERY	3.0715*** (3.001)	2.2089*** (3.264)	1.7913*** (3.322)	1.6767*** (3.154)	1.5333*** (3.175)
MILLS	−5.1916*** (−3.154)	−3.9049*** (−3.567)	−3.232*** (−3.690)	−2.9723*** (−4.211)	−2.7067*** (−4.210)
Panel B: Control firm volume benchmark					
CONSTANT	73.3601*** (5.330)	52.5498*** (5.295)	43.0821*** (4.320)	36.3058*** (5.542)	30.1018*** (6.195)
PRIORPRICE	−4.3752 (−1.201)	−2.5987 (−0.998)	−2.5591 (−0.975)	−1.3930 (−0.807)	−1.2486 (−0.975)
NONEWS	0.3164 (0.082)	−1.3867 (−0.501)	−1.5915 (−0.582)	−1.7691 (−0.979)	−2.5408 (−1.898)
RESOURCE	1.2215 (0.511)	2.1756 (1.275)	2.4070 (1.402)	0.7149 (0.635)	0.2364 (0.287)
LN (SIZE)	−3.1211*** (−5.085)	−2.2030*** (−4.975)	−1.7468*** (−3.935)	−1.5012*** (−5.146)	−1.1650*** (−5.370)
PVQUERY	7.6942*** (3.145)	4.1509** (2.352)	4.0611** (2.302)	3.3041*** (2.845)	2.3988*** (2.795)
MILLS	−6.1030 (−1.575)	−4.4968 (−1.612)	−5.2826 (−1.888)	−3.1907 (−1.738)	−2.7475** (−2.002)

***Significance at the 1 per cent level; **Significance at the 5 per cent level.

This suggests that if the announcement is caused by both unexplained security price and volume fluctuation prior to the query, the subsequent trading activity will be stronger for the sample firm.

5. Conclusion

The aim of this study is to provide the first comprehensive empirical examination of query announcements as value-relevant information signals in the framework of financial market efficiency. Our analysis is motivated by a lack of available research associated with the impact of company responses to trading-induced exchange queries.

We employ event study methodology to examine the impact of query response announcements. This approach is applied to assess abnormal returns and volume in response to the publication of query announcements. For robustness, we also employ a matched sample approach advocated by Barber and Lyon (1997), examining abnormal returns and volume relative to a control sample. Finally, we conduct multivariate analysis to consider the potential joint influence of cross-sectional determinants. This methodology is made more robust with the application of the Heckman (1979) two-stage correction procedure to correct the identified self-selection bias diagnosed through our univariate results.

The findings in this paper demonstrate significant positive shareholder wealth and volume effects associated with query announcements for the period January 2007–December 2008, inclusive. Our findings prove robust to applied stratification and a matched sample approach. The 0/1 Market Model and control firm benchmarks yield largely consistent results over the investigated event windows. Further, unexplained abnormal returns observed prior to the announcement persist, and we fail to identify a reversal in the share price following a company announcing the absence of any information that would justify the pre-query activity. This result proves counterintuitive as any unexplained speculation should be invalidated by the firm expressing no legitimate justification for the fluctuation observed in the pre-announcement period. As such, the absence of a share price reversal with regard to 'no new information' releases proves consistent with Marsden *et al*. (2008) but inconsistent with Gong (2007). Findings pertaining to univariate regressions on the Inverse Mills ratio demonstrate that documented abnormal returns and volume remain significant after allowing for sample selection bias. Once sample selection bias is taken into account with respect to the multivariate analysis, we fail to document a significant industry effect reported in the extant literature (Gong, 2007). Lastly, our findings show prior security price direction as significant with respect to abnormal returns while firm size and the source of the query prove significant with respect to ATV.

The query system examined in this paper is intended to support a well-functioning, continuous disclosure regime by mitigating information asymmetry that may cause a transfer of wealth from uninformed to informed investors. Specifically, a timely flow of information enables securities, or more importantly their

associated risks, to be priced efficiently. Hence, it is vital for all market stakeholders and regulators to enhance their understanding of the impact of exchange query announcements. Such results have implications for policy-makers and researchers who consider market reactions to queries as evidence of such disclosure's usefulness to investors.

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