Exploring the dark side of third-party certification effect in B2B relationships: A professional financial services perspective

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Abstract

This paper extends the growing research on the dark side of B2B relationships by exploring the differences in the effects of third-party certification based on the social capital among professional financial service firms. Such investigation applies a proprietary dataset with confidential voting records of the nominations for Investor Relation Awards in Hong Kong. The results confirm the dark side of these relationships by showing that the nominated firms with more favorable voting from international (vs. local) analysts experience a stronger certification effect with higher valuations upon announcement. Moreover, nominated (but not awarded) firms with lower levels of information transparency demonstrate a larger certification effect, but they also show significant improvement in their information transparency after the event, which represents an unexpected bright outcome from the dark side of B2B relationships. Overall, these findings extend the social capital argument that international financial service firms bring higher positive returns through the support of their own professional and social network.

Keywords: B2B relationships; certification effect; dark side; investor relations; social capital

1. Introduction

Research provides ample evidence for the importance of a stable and long-term trusting relationship, especially in Chinese cultures, such as Hong Kong, where guanxi is a vital mechanism to conduct business and build relationships (Gu, Hung, & Tse, 2008; Yen & Abosag, 2016; Lee et al., 2017; Lee et al., 2018). This emphasis on long-term relationship based on trust can also lead to challenges and negative outcomes, which has been referred to as the dark side of B2B relationships. For instance, Anderson and Jap (2005) reveal a dark side of close relationships such as joint ventures and alliances. Similarly, Grayson and Ambler (1999) examine the dark side of long-term B2B relationships in marketing services. Hence, despite being conceptualized as an important driver of long-term relationships (Dwyer & Oh, 1987; Crosby, Evans, & Cowles, 1990; Moorman, Zaltman, & Deshpande, 1992), trust can be destroyed or manipulated, which can lead to dysfunctional operations and eventual dissolution. However, the dark side of B2B relationships in professional financial services remains an important yet under-explored topic (Hoffmann, Pennings, & Wies, 2011; Jia, Wang, & Xiong 2017; Madhavaram & Hunt, 2017).

A firm's reputation is an important resource that acts as a signal to its key stakeholders and helps reduce information asymmetry and uncertainty about the firm, which in turn enhances the firm's market value (Bajo, Croci, & Marinelli, 2020; Liu, Vredenburg, & Daellenbachet, 2019; Melewar, Foroudi, & Jin, 2020). Because most external stakeholders (e.g., customers, investors, and general public) do not have the complete information about the firms and their internal processes, a favorable reputation helps a firms build trust and create profitable relationships with external partners (da Silva Lopes, 2016). Building firm reputation is a complex exercise, as it requires a combination of tangible products or services with features and performance more superior than those offered by the competition and intangible associations such as brand image, corporate identity, and core values created over

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time (Gregory, 2020). The task also requires the accumulation of social capital by leveraging outside directors' connections and cross-border acquisitions (Basuil & Datta, 2017).

One way in which firms can accelerate the process of creating their own reputation is through third-party or even second-party (i.e., pay-services from a related professional firm such as the Big-four auditor or well-known underwriter) endorsements or certification. These certifiers possess sufficient knowledge about the firm's business and the expertise to evaluate its capabilities and performance in an objective and trustworthy manner for stakeholders (Courtney, Dutta, & Li, 2017; da Silva Lopes, 2016). Past research shows that these certifications are effective, because they validate and complement the firm's own efforts and signals regarding its performance (Courtney et al., 2017), which is particularly important for firms (Harvey & Mitchell, 2015). Interestingly, the certified firm's failure to deliver its promised performance can even backfire on the endorsers and cause damage to their own reputation (Gomulya et al., 2019). Hence, the process of third-party certification should be credible and self-regulated in order to avoid such damage.

Despite the possibility of such drastic outcomes due to the failure of any certification process, there are examples of the emergence of a dark side to the B2B relationship between the certification agencies and the firms being certified and its impact on the performance of certified firms. For example, Jia et al. (2017) extend a general dark-side effect known as the home (local) bias phenomenon (Van Nieuwerburgh & Veldkamp, 2009) to show that the presence of a social connection between stock analysts and investors can motivate foreign investors to pay more attention to the analysts employed by international financial firms. In contrast, local investors can place greater value on the local analysts' advice, which could lead to very different valuations for the same stock. These differences in the impact of voting by international versus local analyst firms on the valuations of nominated versus non-nominated firms has been identified as the dark side of this B2B relationship in the

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professional financial services context (Jia et al., 2017). Gennaioli, Shleifer, and Vishny (2015) report similar results for the relationships among investors and money managers.

This paper extends the growing research in this area by investigating the differences in the certification effects of voting by international (vs. local) analyst firms in investor relations (IR) awards in terms of the abnormal announcement returns for the certified (nominated) firms. It also examines the impact of firm-level transparency on the differences in this certification effect between the international (vs. local) analysts in terms of the firms' stock valuations upon IR award announcement. Specifically, this study employs proprietary data on voting by analysts employed in both local and international financial service firms and on the listed firms for the Investor Relation (IR) Award in Hong Kong. Hong Kong is an appropriate setting for this study, because it is an important capital market in Asia and attracts participation from major global financial institutions. Through the voting pattern and preference of international versus local professional firms, this study examines the possible differential third-party certification effect of their targeted stocks within the same market, thereby shedding light on the dark side of the B2B financial services.

The results of this study support a stronger positive third-party certification effect for the IR award announcements based on the international analysts' voting compared to the local analysts in terms of the greater abnormal returns for the nominated firms. Moreover, as expected, less-transparent firms seem to benefit more from international analyst voting in terms of a larger certification effect than more-transparent firms. As the voting record of analysts are not publicly available, the voters/investors could share their views on these voted firms in the own social networks, which could explain the differences in the certification effects between the two groups. These findings are consistent with dark-side argument by Jia et al. (2017) and the authors' argument that international financial firms are likely to have a more powerful network of investor groups, which could lead to a more positive market

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reaction compared with the locally supported stocks. Interestingly, the nominated (but not awarded) firms experience significant improvement in transparency after the award announcement, which seems to represent an unexpected bright aspect of this dark side of B2B relationships in the professional financial services context. The authors discuss the theoretical contribution and practical implications of these findings along with their limitations and directions for future research.

2. Literature review and hypotheses development

2.1. Third-party certification of professional services

Early research on initial public offers (IPO) shows that third-party certification has value in capital markets in reducing information asymmetry between insiders and outside investors (Megginson & Weiss, 1991). Recent examples of third-party certifications include quality standards for manufacturing (Terlaak & King, 2006) and service sectors (Hernández-Perlines, 2016), credit ratings (Bosch & Steffen, 2011), and even CSR ratings (Dahlin et al., 2020). In this context, professional financial services providers are also shown to play a certification role. For instance, DeAngelo (1981) highlights the significant certification effect on accounting statements through auditor reputation. Similarly, Wakeman (1981) finds a certification effect from bond rating agencies. Booth and Smith (1986) find that investment bankers help to mitigate asymmetric information between insiders and outsiders during underwriting activities. More recently, underwriters' reputation has been shown to improve credit rating and reduce the corporate bond yield (Chen, Zhao, & Zhao, 2019).

One common approach to examine the certification effects is through best practice, commendations, and awards from industry associations and professional bodies (Nicolau & Sellers, (2010). For instance, the CFA Institute's ratings of IR disclosure provide a positive certification effect, as documented in the literature (Bushee & Noe, 2000). In addition, the IR magazine ratings of investor relations are also found to demonstrate a positive certification

effect (Chang et al., 2008). Agarwal et al. (2016) also show that, after controlling for risk factors, firms that receive the overall IR awards in the US experience more analysts' following and stronger liquidity for small firms during the following year. This shows that effective investor relations lead to a value increase of 6.7% for large firms and 15.8% for small firms. This paper extends the literature on the third-party certification effect by exploring the possible asymmetry in investor recognition due to segmented professional and social networks and their subsequent impact on certification effects.

2.2. Investor relations

The effect of investor relations has long been a research subject for both practitioners and the academic community (Farragher, Kleiman, & Bazaz, 1994; Brennan & Tamarowski, 2000; Bushee & Miller, 2012; Kirk & Vincent, 2014; Agarwal et al., 2016; Brown et al., 2019). In theory, the major functions of investor relations are to provide strategic information disclosure (to key institutional investors) and efficient information dissemination to analysts and general investors (e.g., conference calls for earnings announcements and press releases for specific events). The fundamental goal of IR activities is to facilitate the market to recognize the fair value of the company at all times. The literature in general confirms the positive roles of IR. Brennan and Tamaronski (2000) establish the linkage of firms' investor relations and stock prices. In addition, recent research (Bushee & Miller, 2012) discovers some additional strategic benefits of IR: to improve institutional investor ownership, analyst following, media coverage, and market value.

An IR program can increase the visibility of the small and mid-cap firms, which in turn increases their stock returns, particularly in the Seasoned Equity Offerings (SEO) context (Cline, Fu, & Tang, 2015). The Association for Investment Management and Research (AIMR), now the CFA Institute, previously provided ratings of IR disclosure and activities. Firms with higher AIMR scores show wider analyst coverage (Farragher et al., 1994) and

higher institutional ownership (Bushee & Noe, 2000). In addition to AIMR scores, recent

researchers have used other proxies to measure the effectiveness of IR activities. Based on

the IR magazine ratings of investor relations, Chang et al. (2008) show that firms with greater

transparency in IR web pages have lower information asymmetry, thereby suggesting a less

serious problem of the dark side for firms with IR recognition.

2.3. Investor relations recognition (certification) effect

Merton (1987) proposes an investor recognition hypothesis, which indicates a positive

association between the recognition of a stock and the demand for it. Lehavy and Sloan

(2008) suggest that investor recognition is important to determine the expected stock return,

but it is difficult to find appropriate proxy for investor recognition. While all of these event-

studies on corporate announcements have been used as an assessment tool to provide

empirical evidence for investor recognition, one way to warrant better investor recognition is

the involvement of a third-party certification, such as the IR award. Accordingly, the authors

hypothesize the main certification effect on firm performance, as follows:

H1. There is a significant certification effect in terms of abnormal announcement returns for

the certified (nominated) firms.

Bushee and Miller (2012) suggest that analysts' coverage is related to IR recognition. In

other words, the correlation between analysts' understanding of a firm's value and IR

recognition is high. In practice, the direction of the information transmission channel between

analysts' coverage and IR recognition is not clear. Consequently, by exploring the voting

behavior of analysts for IR recognition employed by international versus local firms, one can

draw influence on how value is perceived through international versus local social capital. In

this context, Jia et al. (2017) show that local (international) analysts are socially closer to

local (international) investors and thus have an advantage in catering their reports to concerns

and excitements of local (international) investors. Such catering behavior breeds trust among

local (international) investors in terms of the recommendations made by local (international) analysts. Of course, a trusting relationship is needed for the subsequent segmented influence on stock valuations. However, this trust can also be manipulated in the long run (Grayson & Ambler, 1999), another dark side issue in financial services that warrants more research. In short, these intermingled mechanisms work together and jointly lead to differences in the impact of social capital, wherein local investors react more strongly (relative to international investors) to the recommendations provided by local analysts, and vice versa.

The main research focus of this study is to explore the dark side that, through third-party certification, analysts from international financial firms are more influential over stock prices of their preferred nominees/awardees than their local counterparts are. The authors use two arguments to support this assertion. First, international investment banks extend local wisdom by hiring local employees for data collection and analysis of local firms. For instance, the workforce in the financial sector in Hong Kong increased continuously during the sampling period (VTC, 2017). At the same time, the number of expatriates in the financial sector has been reduced due to the localization of needed talents in terms of bilingual skills and the local network (Boey & Geiger, 2017; Mortlock, 2017). As almost all large international financial firms in the sample have a branch locally in Hong Kong and/or the Mainland, these observations confirm the reality that international financial firms in the sample hire more local staff members to achieve local wisdom.

Second, international firms have a social network with stronger aggregate financial resources (i.e. purchasing power) globally compared to that of the local firms. Based on a Hong Kong Securities and Futures Commission (SFC) report for 2016 activities, over 66% of the HKD18.3 trillion in the fund management business come from international investors, indicating that international investors play a dominant role in the securities market in Hong Kong. Combining these two advantages, the authors argue that international analysts have

access to local talents and therefore have firm-level information similar to the local financial firms in the local market. However, international firms are socially connected to international investors who have stronger financial resources to support the IR nominees/awardees recommended by the international analysts. Hence,

H2. The voting of analysts from international financial service firms leads to a more positive certification effect than that of analysts from local firms.

2.4. Moderating role of firm-level transparency

Improving firm-level transparency is a major milestone for listed firms to create IR activities that help them achieve fair valuations in the stock markets. Thus, the benefit of improving transparency for IR nominees should vary, depending on the level of firm-level transparency. Brennan and Tamaronski (2000) establish the linkage between firms' investor relations and the stock price. Bushee and Miller (2012) further suggest that IR programs can increase the visibility of the small- and mid-cap firm. Closely held shares are common in the firms in East Asia (Claessens, Djankov, & Lang, 2000). Firms with closely held shares in Hong Kong are normally family-controlled firms. The concentrations of control create the agency problem that large shareholders could expropriate the minority shareholders. They could also hide corporate information through less-transparent reporting (Hong, Kim, & Welker, 2017; Attig et al., 2006). Firms with closely held shares are less likely to disclose firm information and are less transparent than firms with widely held shares. Similarly, previous research (e.g., Morck, Yeung, & Yu, 2000) shows that stock price synchronicity, that is, when a firm's stock prices reflect general market-wide information rather than firm-specific information, is high in less-transparent firms, especially in firms with concentrated family control or government ownership. Therefore, the authors investigate the differences in the stock prices of nominated firms with different transparency levels upon IR award announcement. Through ownership concentration (by closely held shares percentage) and

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stock price synchronicity (R-square measure by Morck, Yeung, & Yu, 2000), the authors hypothesize that less-transparent firms could benefit more through international analyst voting compared to more transparent firms, as follows:

H3. Less-transparent firms with stronger international analysts voting will receive higher stock valuations upon IR award announcement, compared to more transparent firms.

3. Methodology

3.1. Pilot study

Before analyzing the investor relations (IR) awards data, the authors explored the opinion from investment professionals about their view on the dark side effects of international versus local analysts on stock valuation using a survey with the participants in the CFA Society workshops held in Hong Kong (HKSFA), Shenzhen (CFA Society Shenzhen), and Shanghai (CFA Institute China Shanghai) during the period of July-October 2018. The number of respondents per question varies between 86 and 101. The findings show that 99% of the respondents think that there is a difference between the voting preferences of international analysts versus local analysts. Next, 97% of the respondents support a certification effect (in terms of higher stock valuations and liquidity) for firms receiving IR awards. Third, 93% of the respondents believe that, if analysts vote for a firm for an IR award, it is because they have recently evaluated the stock and think positively about the voted stock. Finally and most importantly, less than 50% of all the participants attribute these effects to the lack of knowledge among the international (vs. local) analyst firms and investors about each other. Therefore, these results support the dark-side conjecture that international analysts' voting (grouped at voted-firm level) leads to higher abnormal returns (relative to the stock price effect of local analyst voting) during the announcement period of the IR award.

3.2. Data and sample

The main study uses proprietary data from the online voting activities for the annual

Investor Relations (IR) Awards organized by the Hong Kong Investor Relations Association (http://www.hkira.com/en/global/index.php). The IR award was first launched in 2015 to recognize IR performance for listed firms in Hong Kong. The authors obtained all raw voting data for 2015-2017. To participate in the voting activities, the voters must be relevant employees from institutions that have legitimate reasons to invest in the stock markets. The voters must use the official company email account to vote through the HKIRA online platform. They must also provide their affiliated departments and their positions. The authors manually checked all the votes and voters' identity to make sure that they are valid. The final voting data consist of 418 nominated firms with valid votes during the three-year period examined.[1] The total votes and mean votes per firm are 18,172 and 40.96, respectively.

[Insert Table 1 about here]

Table 1 reports the voting data and the characteristics of firms voted for by the financial institutions. Panel A presents the percentages of firms nominated and awarded in each category for the three years in the sample. Among all nominated firms, 92% are nominated for the overall IR awards. In the nominated sample, 21% receive the best overall IR award in the three-year period. Around 10-11% of firms in the sample are awarded with the best IR by Chairman/CEO, CFO, IRO (Investor Relations Officer) and best COL (IR Presentation Collaterals). As firms can be awarded for multiple categories, a total of 27% of nominated firms are given awards.

Panel B presents the summary statistics of votes for the nominated firms in the sample. While the awarded and nominated firms are publicly announced during the awards ceremony, the votes and marks are considered to be proprietary data and are not disclosed. A voter can choose up to three choices in assigning votes to nominees for each award category. All voting

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[1] The sample of 418 nominated firms is used to explore the differences of certification effect of international vs. local analysts (the dark side) and its impact (Hypotheses 2 and 3). A sample of nominated firms and their matched firms is constructed to test the certificated effect of IR award and nomination (Hypothesis 1).

information for each nominated firm for each year is collected. Two variables are constructed to measure a firm's intensity. The first variable is the total number of votes that a firm receives in a year, regardless of the ranks (marks) affiliated with the vote. Next, the total marks from voters, which is the weighted sum of the votes by the marks. The numbers of votes, as well as the marks of votes, are calculated for each nominated firm in each year.

Voters are required to send in votes through their company email address and fill in the position held as well as company name in order to qualify for a valid vote. The affiliation (i.e., the financial services firm) of the voters (analysts) is checked manually. The voters represent both local and international investment communities; hence, these were divided into international and local groups according to the financial service firm by which they are employed. The authors follow a similar mechanism by Jia et al. (2017) in defining local versus international analysts. They count a securities house as a local entity if its controlling shareholders are Chinese corporations. Otherwise, the houses are classified as foreign.

In this study, a similar approach is adopted by identifying voter firms' origin by their headquarters location. If the voter's company headquarters is physically located in Hong Kong or mainland China, the voter is assigned to the local group; otherwise, the voters are classified as foreign (international). This is because the headquarters location determines the origins of a financial institution and the corporate culture from the headquarters also affects the network and even investment styles of subsidiaries. As this is a regional IR award for Hong Kong-listed firms, the percentage of international analysts is 38% (or 212 institutions), which is considered large and consistent with the argument and statistics from SFC that international sources of funds dominate the financial investments in the Hong Kong market. Thus, the corresponding and strong participation in the Hong Kong IR award from analysts affiliated with international financial firms is expected.

Stock prices, trading volumes, and firm characteristics are extracted from the Datastream.

The stock price data are used to calculate cumulative abnormal returns around the IR award events. Appendix 1 lists the definitions of all of the variables used in this study, including the control variables from financial statement data, such as book-to-market ratio (BM), firm size, ROA, and prior stock return for each nominated firm in each year. The firm size (LNTA) is measured by the natural logarithm of total assets. The prior stock return (MOM) is the return from January to March in each year for each firm. Two variables are used to measure the information asymmetry in a firm: closely held shares (CLOSE) and stock price synchronicity (R2) (Lang, Lins, & Maffett, 2012). The ratio of closely held shares includes the number of shares held by managers or major shareholders in the outstanding total number of shares. The stock price synchronicity is measured by the R-square from the market model using daily stock return and market return in the calendar year before the IR nomination/award year. Panel D of Table 1 shows the summary statistics for these variables.

Now, voting behaviors and firm characteristics grouped at the voter institutional level for the international and local subsamples are reported in Panel E. Some interesting observations can be found therein. First, while 38% (or 212 institutions) of the 552 voter firms are international, their voting participation (average vote per voter firm is 39) is much stronger than the local counterparts (average 26 votes per institution). In terms of firm characteristics preferred by international versus local voters, international subsamples demonstrate higher momentum returns, slightly lower ownership concentration, and slightly more information transparency than those nominees preferred by the local group.

3.3. Data modeling

Event study methodology is employed to explore the information contents of the certification effect for the IR awards and the votes by different groups of investment communities. The cumulative abnormal return (CAR) around the IR events is generated for each nominated firm in each year. The abnormal return is calculated by both the market-

adjusted model and market model. The estimation window for the market model starts from day -150 to day -50. The market return is measured by the Hang Seng Index. The CAR across event windows is calculated. As the information and market gossip of the IR awards and votes can be revealed to the nominated firms then to the market before the announcements, this study employs two event windows. The long event window starts from the IR Panel Judge meeting date to two days after the IR award date (day -25 to day 2), and the short event window starts from one week before the IR award announcement date to two days after IR award date (day -5 to day 2). On the Panel Judges Meeting date, the nominated firms with top votes are shortlisted. The awardees would also be determined. HKIRA sends the award invitations to the awardees around one week before the IR awards events. Thus, the high probability of receiving awards is revealed to the selected nominated firms about five trading days before the official announcement.

As the event dates in the sample are common for all firms and therefore cluster during each of the three years, it is possible that the cross-sectional abnormal returns are not independent. The standardized cumulative abnormal return (SCAR) for each nominated firm in each year is calculated as the CAR divided by the product of the square root of estimation window length and the residual from the market model (Boehmer, Masumeci, & Poulsen, 1991). The SCAR is similar to the deflated CAR in Jia et al. (2017), which deflates the CAR by the stock's idiosyncratic volatility (the residual) from the market model. The average CARs and SCARs using the market adjusted model (CAR1 and SCAR1) and market model (CAR2 and SCAR2) are given in Panel F of Table 1.

On average, CARs are slightly positive in the seven-day event window for the total sample, including all nominated firms. To confirm that the positive market reaction arises due to the certification effect of IR events, a sample of the IR-nominated firms and their matched

firms is used to test the certificate effect of IR award and nomination.[2] The propensity score

matching is adopted to identify a matched firm for each IR nominated firm based on firm

size, ROA, industry, and year. The following regression is employed:

$$CAR_{i,t} = \alpha_0 + \alpha_1 IR\ certificated_{i,t} + \alpha_2 BM_{i,t-1} + \alpha_3 LNTA_{i,t-1} + \alpha_4 ROA_{i,t-1} +$$

$$\alpha_5 MOM_{i,t} + Year + Industry + \varepsilon_{i,t} \tag{1}$$

The dependent variable in the equation is the cumulative abnormal return (CAR) or

standardized cumulative abnormal return (SCAR) in the seven-day period around IR award

events for stock i in year t. The key independent variable is a dummy variable indicating

whether a firm receives IR nomination in each year. The firm-level variables are book-to-

market ratio, firm size, ROA, and past stock return. The financial statement variables are

measured in previous calendar year t-1. The stock return is measured from January to March

in year t. The year-fixed and industry-fixed effects are also included in the regression. A

positive coefficient on the IR nomination (*IR certificated*) support the Hypothesis 1 that IR

event yields a significant certification effect on the nominated firms.

The impacts of investor reputation on the market responses of IR events for the

nominated firms are further explored. The certification effect from the votes by international

analysts could be stronger than by local analysts. The differences of CAR and SCAR for the

firms covered mainly by international voters and local voters are tested. The abnormal return

of IR award announcement on a firm could be affected by firm characteristics such as book-

to-market ratio and past stock returns. The awardees can receive more significant and positive

abnormal returns than those nominated but not awarded firms. To mitigate these potential

impacts, the following regression is used:

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[2] An IR certificated firm is matched to a non-certificated firm based on lagged firm size, lagged ROA, industry, and year. Before the matching, the following procedure is applied: (1) small and thin trading firms are excluded from the potential list for non-certificated firms, (2) CARs on the non-certificated firms are winsorized at the 1% and 99% levels, and (3) the firms that received IR certifications in any year are dropped in the control sample.

$$CAR_{i,t} = \alpha_0 + \alpha_1 International_{i,t} + \alpha_2 Awarded_{i,t} + \alpha_3 BM_{i,t-1} + \alpha_4 LNTA_{i,t-1} +$$

$$\alpha_5 ROA_{i,t-1} + \alpha_6 MOM_{i,t} + Year + Industry + \varepsilon_{i,t} \qquad (2)$$

The dependent variable in the equation is also the cumulative abnormal return (CAR) or standardized cumulative abnormal return (SCAR) in the seven-day period around IR award events for stock i in year t. The key independent variable is the international vote/mark dummy or international vote/mark ratio for each stock in each year. As the firms receiving IR awards can have strong price reactions, a dummy variable is included to represent whether the firms are awarded or not. The firm-level variables are book-to-market ratio, firm size, ROA, and past stock return, which are the same as those in Equation (1). The year-fixed and industry-fixed effects are also included in the regression. Hypothesis 2 suggests that the coefficients on international analyst votes should be positive.

The outcomes of investor relations could be more significant in the smaller, less-visible firms (Bushee & Miller, 2012). To examine the relation between the investor relations, international analyst vote, and opacity proposed in Hypothesis 3, the nominated firms are divided into two subsamples each year by the two variables of information asymmetry: closely held shares (Lang et al., 2012) and R-square measure of stock price synchronicity (Morck et al., 2000). International vote ratios are regressed on abnormal returns of IR events in the subsamples with high and low information asymmetries, to test their hypothesized stronger effect in the firms with more information asymmetry.

4. Data analysis and results

The authors first explore the certification effect of the IR award. Due to the arrangement of attending the award ceremony, information leakage of receiving IR awards before the official announcements is possible. Therefore, the authors plot and explore the abnormal return pattern for a longer event window starting from the IR Panel Judges Meeting date to two days after the IR awards date (day -25 to day 2). Figure 1 presents the average

cumulative abnormal returns for the nominated and awarded firms in a long event window from day -25 to day 2 around the HKIRA events in during 2015-17. Specifically, Panel A reports a positive CAR for the awarded firms but not for the nominated firm sample, whereas Panel B reports a similar positive pattern of CARs for the overall sample of all categories of awarded firms and the IR awarded subsample. So far, causal observation indicates that the investor relation awards seem to provide a certification role from investor recognition. Finally, Panels C and D show some interesting results. Firms with high international analyst votes and marks report a positive CAR in the long event period, while firms with low international analyst votes and marks report a distinctively lower CAR pattern. These causal observations warrant further statistical tests for H2.

[Insert Figure 1 and Table 2 about here]

4.1. Certification Effect of IR Award

Table 2 shows the announcement effect of the IR awards using the short-term window. Results for the long window are similar but reported in Section 4.4 on Robustness Tests. The columns "Nominated" and "Nominated IR" (both including awardees and unsuccessful nominees), "Awarded-Total" and "Awarded-IR only" report significant abnormal returns in all cases, indicating an upward certification effect for awardees. For example, in the event window period [-5, 2], the average CARs for awarded firms are 2.11% (*t=4.28*) from the market-adjusted model and 1.74% (*t=3.45*) from the market model. This finding supports the notion that the IR award has a positive certification effect for the winners. Appendix 2 reports the frequency counts of positive verse negative CARs at the firm level to see if this result is not driven by a few outliers. For the column listing the awarded firms, the positive CAR frequency counts are much higher than the negative ones in Appendix 2, indicating that the positive announcement effect is not driven by a few firms with abnormally large price appreciation. Meanwhile, the price reactions are generally positive but insignificant for the

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nominated firms that do not receive awards.

Next, Table 3 reports regression analysis to test H1. The tests are conducted based on the propensity score-matching sample to test the certification effect. In total, 364 non-IR-nominated firms are matched to 364 IR nominated firms. Panel A shows that the matched firms do not have significant abnormal returns to IR events. The regression results using Equation (1) are reported in Panel B. The stock market reactions to IR events are significantly higher in the certificated (or nominated) firms than in the matched firms in all models. For robustness, the analysis is repeated by using only awardees for the certified sample, and the results (which is not reported in the paper) remain. The results confirm H1 by showing that the IR certification effect is significant.

[Insert Table 3 about here]

4.2. International analysts' voting and stock abnormal return to nominated firms

The first hypothesis tests whether firms with higher international analyst votes for the investor relations award have stronger CARs than firms with lower international analyst voting firms. Firstly, the differences in price reactions to IR nomination between the groups of firms with high and low international analyst votes are compared. Then, regressions with control variables using Equation (2) are analyzed. Panel A in Table 4 reports the CARs and SCARs for the firms sorted by the international analyst votes. In each year, the nominated firms are divided into two groups by international vote ratio. The high (low) international vote group contains stocks with an international vote ratio larger (lower) than 50% and are recommended by international (local) analysts. The CARs are measured during the (-5, 2) period. Panel A reports CARs and SCARs generated from both the market-adjusted model (CAR1 and SCAR1) and the market model (CAR2 and SCAR2) for the high international analyst voting and low international analyst voting subsamples. Firms with high international analyst votes have significant and positive price reactions.

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The CARs are 1.53% and 1.34% from the market-adjusted and market models, respectively. The SCARs are also positively significant at the 1% level. In contrast, the price reactions are insignificant for the stocks with low international votes. It seems that investors do not positively react to the nominated firms dominated by votes from local analysts. The differential effects on price reactions between high international and low international vote subsamples are significant at the 1% level for all four measures of abnormal returns. Once again, the frequency counts for the positive and negative CARs for the high and low international vote subsamples are checked in Appendix 2 to ensure that the positive announcement effect is not driven by outliers. The positive versus negative counts demonstrate a large difference regarding the high international vote subsample but not for the low international vote group. This result is consistent with the CAR results in Table 4.

[Insert Table 4 about here]

Panel B of Table 4 presents the results of price reactions sorted by international analyst marks. The results are similar to those in Panel A. The CARs are significantly positive for firms receiving high international analyst marks, but abnormal returns are insignificant for firms with low international analyst marks. The differential effects between the two groups (high international marks versus low international marks) are also very significant in all measures of price reactions. The findings confirm H1 that the votes of international analysts lead to stronger price reactions than the votes of local analysts.

One limitation of the analysis in Table 4 is that it does not control for other factors that can affect price reactions to the analyst votes. This issue is addressed through the use of multiple regressions (Equation (2)) to estimate the effects of analyst votes. A dummy variable is included to measure whether a firm receives IR awards (Awarded). In addition, two versions (by votes and marks) of the international analysts voting intensity are captured by the variable (International). The regression model also controls for book-to-market (BM)

ratio, total assets (LNTA), return on asset (ROA), momentum (MOM), and year and industry dummies. Table 5 shows the OLS regression results with CAR/SCAR as dependent variables.

Panel A of Table 5 reports the regression results with the ratio of international analyst votes as the key independent variable. All of the coefficients of the international analyst vote ratio are positive, but only the two in the SCAR models are significant. The coefficients of the awarded dummy are positive and significant in all regressions, indicating support for the award certification effect. This result is consistent with the findings on the awarded firms in Table 2, which shows a positive market certification effect after a firm is recognized to have effective IR strategies. The coefficients on the book-to-market ratio are also positively significant in all regressions, suggesting that the price reactions to nomination are more significant for firms with low market valuations in the previous year. This finding is consistent with Bushee and Miller (2012) and Agarwal et al. (2016), who show that IR activities significantly improve the market valuations for firms. The coefficients for total assets and ROA are insignificant. The coefficients on prior stock returns (MOM) are mixed.

[Insert Table 5 about here]

Panel B of Table 5 reports the regression results of international analyst voting by marks. Similar to the evidence above, this panel shows that the coefficients on the ratio of international analyst marks are all positive but significant only for the two SCAR models. The coefficients on the awarded dummy and BM ratio are also positively significant. The regression results from Equation (2) support the argument that awarded firms receiving the IR award experience positive valuations upon announcement. Also, the votes from international analysts are associated with stronger market reactions than the votes from local analysts. These results support the first hypothesis that international analyst voting leads to a more positive certification effect on the nominated firms around investor relations award time. Thus, even after controlling for the impacts of the IR awards, the recommendations by

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international analysts yield significant certification effects on nominated firms. These results confirm and extend the findings reported by Jia et al. (2017) by showing that the socially connected investors, dominated by international institutions in the Hong Kong market, react more strongly to the votes by international analysts than local analysts.

4.3 International analysts' voting, stock transparency, and cumulative abnormal returns

Table 6 presents the CARs and SCARs of two subsamples by degree of opacity. Panel A uses levels of closely held shares, and Panel B employs stock price synchronicity as proxies. Logically, a less-transparent firm should gain more in terms of enhancing transparency and reducing information risk by engaging in IR activities due to the greater need for improvement. On the other hand, a transparent firm can receive limited improvement in its transparency from IR recognition, as this firm has already maintained a high level of information disclosure. Therefore, this study explores whether the certification effect by international analysts is stronger for firms with higher opacity. The full sample is divided into two subsamples based on the ratio of closely held shares or the R-square from stock price synchronicity measured by regressions in each year (Lang et al., 2012). The high (low) group contains the stocks with the ratio of closely held shares or R-square larger (smaller) than their median values in each year. The firms in the high R-square group are less transparent than those in the low R-square group, confirming a dark side in the financial services domain.

[Insert Table 6 about here]

Panel A of Table 6 reports the regression results of the international vote ratio on CARs and SCARs in two subsamples by closely held shares. In the low group, the coefficients on international vote ratio are not significant, while the coefficients are significant at least at the 5% level for the high group with different measures of abnormal returns. The result indicates that the certification effect from international analyst votes is much stronger for less-transparent firms. The finding is also consistent with Bushee and Miller (2012), who argue

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that the impacts of IR programs are more significant among less-visible firms. The coefficients on control variables are similar to the results in the full sample.

Panel B of Table 6 presents the results for the subsamples using R-square from stock price synchronicity to measure the level of information transparency. Similarly, the stocks with high stock price synchronicity experience a positive and significant certification effect by the international analyst vote; however, this certification effect from the international votes is not significant for the nominees' stocks with low R-square. This result supports the notion that the differential effect of international analyst vote is more pronounced for less-transparent firms, removing some of the dark side problem in information asymmetry in the financial market. This confirms the second hypothesis that international analyst voting can generate a stronger certification effect in less-transparent firms. These results are interesting and supplement the findings reported by Jia et al. (2017). These findings are also consistent with the literature (Bushee & Miller, 2012; Agarwal et al., 2016) that IR recognition leads to a positive certification effect. This result shows that the IR certification effect is stronger among less-transparent firms, which is a new finding in this literature, supporting the notion that the dark side of information asymmetry in the financial market can be reduced by third-party certification through awards and voting. For brevity, this paper only presents the regression results using the international vote ratio as a key independent variable. The results with the international mark ratio are similar and available upon request.

[Insert Table 7 about here]

One related issue is the corresponding effect on trading volume during the event windows in which awarded firms experience a positive certification effect. Table 7 shows that the trading volume changes before and after the award announcement. Panel A uses a 10-day period, while Panel B uses a 5-day window for the pre-post comparison. The overall findings suggest that awarded firms drive the increase in trading volume for the total sample, and the

volume increase is significant at the 5% level. When the sample is divided into high and low international vote subgroups, the trading volume increase is significant and stronger for the low international vote subsample in both panels. In addition, the frequency counts for nominees with positive and negative abnormal trading volume are examined in Appendix 3. The findings are consistent with those in Panels A and B of Table 7. The significant increases in trading volume found in Table 7 are associated with predominately higher positive counts in abnormal volume, suggesting that the result is not driven by outliers.

[Insert Table 8 about here]

Finally, the possible improvement in transparency through the certification effect of the awards is examined. Table 8 shows the synchronicity (R-square) measures for the nominees and the awardees before, during, and after the IR event. The last two columns reporting the differences in R-square clearly indicate a significant transparency improvement among the nominated but not awarded firms (as synchronicity reduces from 23.9% to 19.9% during event and 18.5% after event). In addition, based on the same calculations of differences in R-square, there is a stronger improvement in transparency for the low-international-vote-ratio firms relative to the high-ratio firms. These findings are interesting because they indicate that, although the certification effect is stronger for firms with higher international votes, the firms with lower international votes benefit more in terms of improvement in their liquidity and transparency, which are also major IR objectives. Additional regression analysis (Appendix 4) shows that the coefficients for international (vote ratio) are significantly negative for the first two columns, implying that a lower international vote ratio leads to a stronger increase in volume. This result supports the two-sample analysis on liquidity improvement.

4.4 Robustness tests

Several robustness tests are conducted. For example, the previous analysis employs CARs estimated from the 7-day event window [-5, 2] around HKIRA events as a primary measure

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of price reaction to analyst votes. The CARs are also calculated in the long event window [-25, 2] and short event window [-1, 1]. The differential effect on price reaction between the international analyst vote and the local analyst vote is still significant when these alternative measures are employed. The authors also follow Jia et al. (2017) and use the deflated CAR as the measure of price reaction. The deflated CAR is the CAR divided by the idiosyncratic volatility from the market model. The results with deflated CAR are similar to the results with SCAR. Finally, the ratios of international analyst vote and mark are replaced with dummy variables as the key independent variables in the regression models.

5. Discussion and implications

While the IR award is given to Hong Kong-listed stocks, a significant portion of the analysts (212 out of a total of 552 voting institutions) is employed by international firms with headquarters located overseas. The research finding sheds light on the influence of international versus local analysts on the valuation, liquidity, and transparency of nominated firms. Extending the research by Jia et al. (2017) on the impact of social capital, this paper tests the differences in the relationships among international/local analysts and investors by exploring the voting pattern of international/local analysts on investor relations (IR) awards. This paper uses the proprietary data on analysts voting in publicly listed firms in Hong Kong to study the dark side of the third-party certification effect driven by the differences in the social capital between the international and local networks of analysts and investors.

First, the finding shows that the certification effect of IR events is positively significant. Nominees receiving stronger voting from international analysts experience a more positive certification effect upon announcement. Also, international analyst voting leads to a larger announcement effect for less-transparent firms compared with more-transparent firms. Since the voting behaviors of international and local analysts are not directly observable to the market, the findings support the conjecture that these international voters disseminate their

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positive view of these voted firms in their own social network. Based on the differential certification effect for the two groups, the authors conclude that international analysts have a more powerful connection to their own investor group in generating positive feedback from the IR recognition, leading to a more favorable market reaction compared with the locally supported stocks, representing an interesting dark side phenomenon.

Additional analyses are conducted on trading volume, earning forecasts, and information transparency. First, trading volume has significantly increased for the awarded firms and the low international vote subsample using a pre-post event comparison. Next, the finding on firm-level transparency using the R-square suggests that the non-awarded sub-sample shows significant improvement in transparency during the event and the post-event periods. The findings on certification effect and information transparency are consistent with the literature related to IR recognition and third-party certification.

This paper contributes to the literature in many ways. First, it uses the impact of IR award as a third-party certification on positive stock performance (Bushee & Noe, 2000). Moreover, stock liquidity and transparency improve for nominated but not awarded firms, indicating that the impacts of IR award certification are not limited to awardees, which indicates a dark side to B2B financial services. Second, the proprietary data on analysts' voting behavior provides a unique opportunity to explore the analyst-investor connection at the firm level based on the same market but different types of analysts and thus extend the work by Jia et al. (2017) on the same company listed in different stock markets. Third, this paper explores how firms with lower levels of transparency could reap greater benefits of investor relation certification by second parties or third parties (i.e., related or independent analysts), which extends beyond the research on investor relations (Bushee & Miller, 2012; Agarwal et al., 2016). Finally, this study also extends the current research on the role of social capital in B2B relationships, such as alliance partners (Walter, Lechner, & Kellermanns, 2007), buyer–supplier relationships

(Zeng et al., 2017), and B2B communities (Zhang, Lu, & Zheng, 2020), within the B2B professional services context, using investor relations as its empirical setting.

This study also provides practical implications of the dark side of the B2B relationship in the financial service industry. First, the findings about the stronger certification effect by the international financial services firms suggest that IR professionals from listed firms must expand and improve their connection with and coverage by these international service providers. Chinese founders and majority shareholders of many Hong Kong-listed firms traditionally maintain their corporate financial needs with local and mainland service firms. Such a practice prevents the firm from receiving more coverage and attention from international analysts, leading to the results observed in this paper. Therefore, listed firms should urge their IR team to establish stronger professional relationship with international financial services providers to enhance their certification effect through investor recognition. In addition, being nominated also receives certification effect and financial benefits through the market recognition. Thus, listed firms should not worry too much about failing to receive awards, as even being nominated can be beneficial to them, as indicated by these results.

6. Limitations and future research

Despite its useful contributions, this study has a few limitations that future research could address. First, it uses a proprietary dataset consisting of the confidential voting records of the international and local analysts to nominate publicly listed firms for Investor Relation Awards in Hong Kong. Hence, its findings might not be generalizable to similar awards for publicly listed firms in other stock markets around the world due to a range of cultural, situational, and socio-economic factors. Moreover, due to the confidentiality and personal data privacy reasons, it is not possible to track the identity of the voting analysts for the purpose of examining voting behavior and patterns of the same voters throughout the sample period. Future research could address these limitations by testing and validating these

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findings in other countries within diverse cultural and socio-economic settings.

Second, this study focuses on investor relations as its context, which could limit the generalizability of the results to other professional services contexts. Hence, future research should assess the applicability of the main premise of this paper about the dark side of third-party certification effects in B2B relationships caused by the social capital shared by the key players by investigating this phenomenon in other professional services contexts. For instance, studies related to business services such as auditing can provide useful insights into the various dark side features for professional services in general. Finally, this paper extends past research that uses the social capital and trust between stock analysts and investors to explain the certification effects in the financial service context (e.g., Jie et al., 2017). Unlike previous studies that rely on survey methodology to measure social capital and trust between B2B relationship partners, this paper uses a proprietary database on Investor Relations Awards in Hong Kong and does not explicitly measure social capital or trust. Future research could measure social capital and trust to test their impact on the certification effects.

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Figure 1: Cumulative abnormal return from panel meeting date to announcement date

Panel A: Nominated firms vs. awarded firms
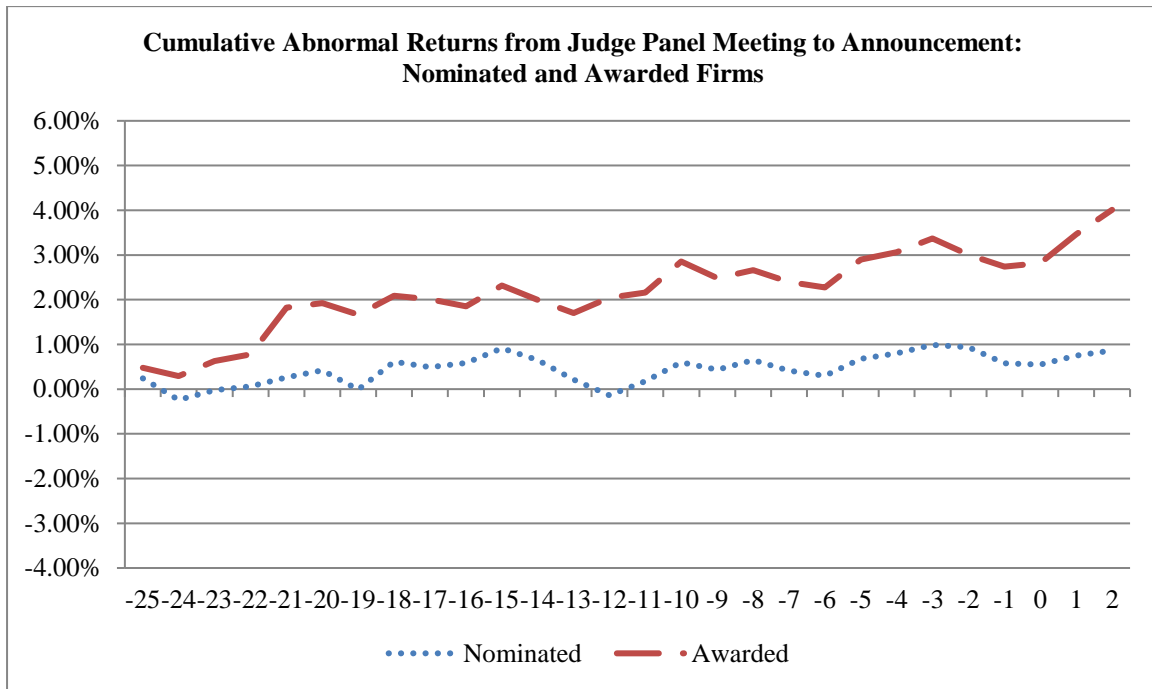
Panel B: All awarded firms vs. IR awarded firms
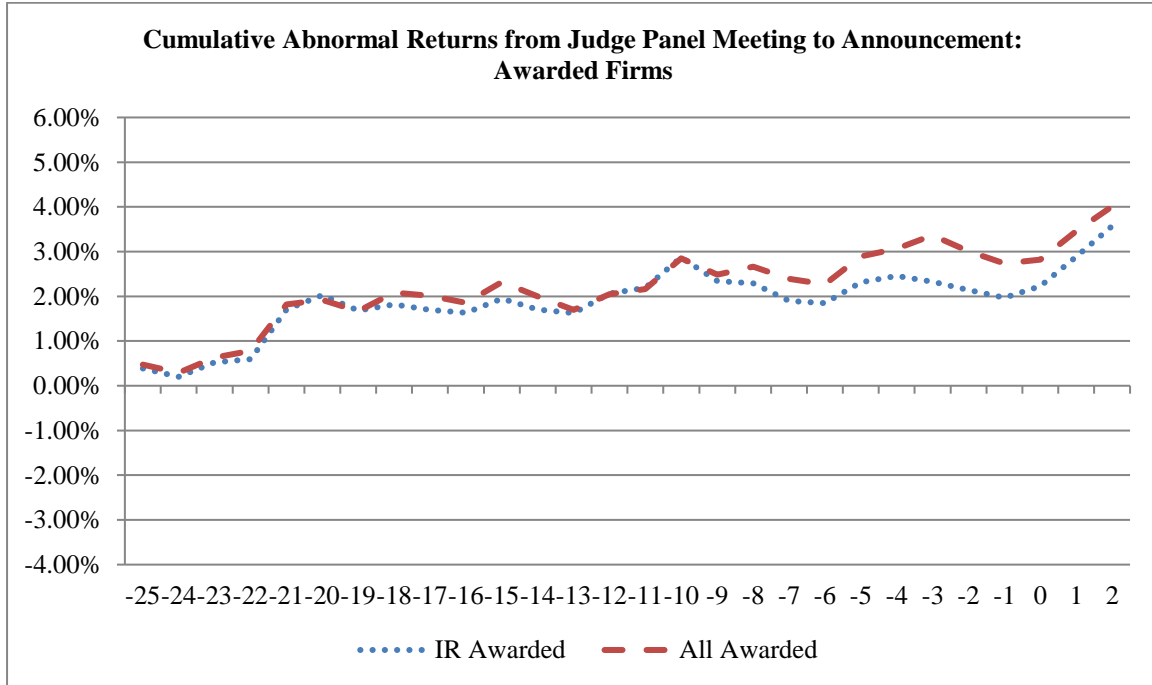
Panel C: Nominated firms grouped by international analyst vote ratio

Cumulative Abnormal Returns from Judge Panel Meeting to Announcement:
Nominated Firms

All firms — High international vote · · · · · Low international vote
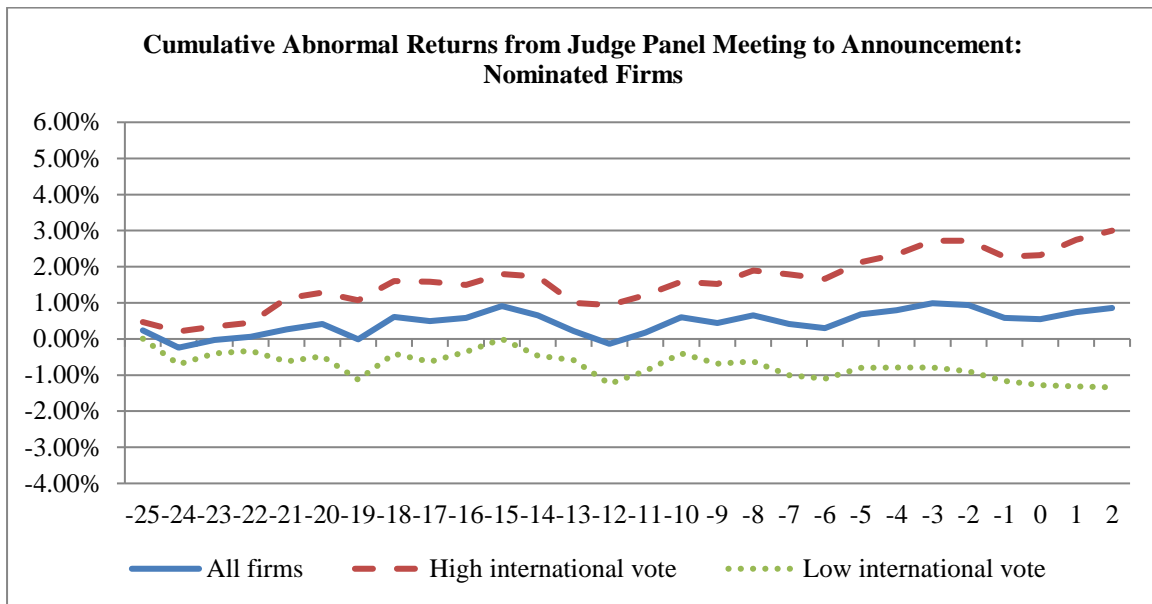
Panel D: Nominated firms grouped by international analyst mark ratio

Cumulative Abnormal Returns from Judge Panel Meeting to Announcement:
Nominated Firms

All firms — High international mark · · · · · Low international mark
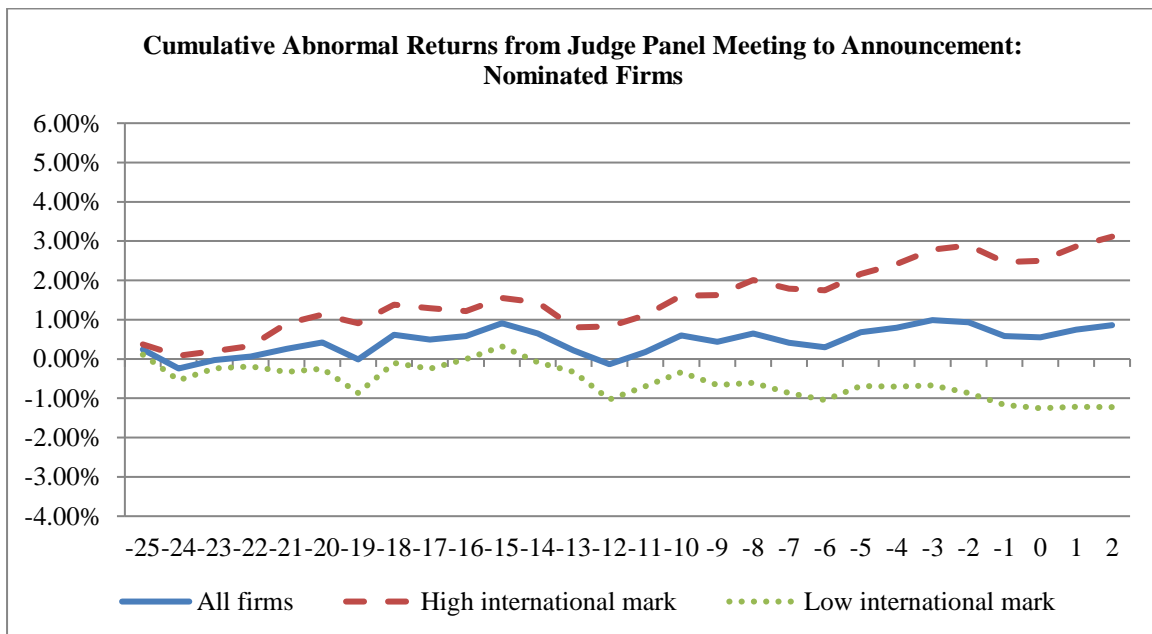
Table 1: Summary statistics

Panel A: Nominated and awarded firms

Variable	Obs.	% Nominated/awarded
Nominated/awarded firms:		
Nominated IR	418	92%
Awarded IR	418	21%
Awarded CEO	418	11%
Awarded CFO	418	10%
Awarded IRO	418	10%
Awarded COL	418	11%
Awarded	418	27%

Panel B: Voting behaviors

Variable	Obs.	Mean	Std. Dev.	Min	Max
The number of votes for each firm:					
Votes	418	40.96	48.62	0	396
International votes	418	19.80	23.61	0	137
International vote ratio	418	0.43	0.26	0	1
International vote dummy	418	N=51%			
The total marks receiving for each firm:					
Marks	418	97.50	129.69	0	1128
International marks	418	47.34	61.42	0	404
International mark ratio	418	0.44	0.27	0	1
International mark dummy	418	N=48%			

Panel C: The frequency and fraction of international vote ratio in the sample

Range	Frequency	Fraction
0% - 10%	70	0.17
10% - 20%	16	0.04
20% - 30%	34	0.08
30% - 40%	51	0.12
40% - 50%	35	0.08
50% - 60%	80	0.19
60% - 70%	75	0.18
70% - 80%	29	0.07
80% - 90%	18	0.04
90% - 100%	10	0.02

Panel D: Firm characteristics

Variable	Obs.	Mean	Std. Dev.	Min	Max
BM	418	0.89	0.68	-1.14	4.17
LNTA	418	17.33	2.09	11.92	23.65
ROA	418	0.04	0.07	-0.42	0.29
MOM	418	0.03	0.17	-0.50	0.78
CLOSE	418	0.52	0.22	0	0.94
R2	418	0.23	0.17	0.00	0.76

Panel E: Voting behaviors and firm characteristics for international vs. local analysts

	Total	International	Local
Voting data			
N of institutions	552	212	340
N of votes	17,123	8,277	8,846
Average number of votes by each voting institution	31.02	39.04	26.02
Characteristics of firms voted by the voting institution			
Average Book-to-market ratio of voted firms	0.80	0.85	0.77
Average Log Total Asset of voted firms	16.78	16.95	16.68
Average Return on Asset of voted firms	6.35%	6.27%	6.40%
Average Momentum Return of voted firms	2.91%	2.36%	3.25%
Average Insiders Ownership % of voted firms	50.72%	49.81%	51.29%
Average Transparency (R2) of voted firms	20.08%	19.47%	20.47%
Average international vote ratio of voted firms	44.06%	52.35%	38.89%
Average international mark ratio of voted firms	44.04%	52.89%	38.52%

Panel F: Stock abnormal returns

Variable	Obs.	Mean	Std. Dev.	Min	Max
Cumulative abnormal return (CAR):					
CAR1	418	0.0083	0.0548	-0.3582	0.2336
CAR2	418	0.0056	0.0547	-0.3482	0.2264
Standardized CAR:					
SCAR1	418	0.1947	1.0660	-8.3975	4.0015
SCAR2	418	0.1618	1.0789	-8.2725	3.9037

Table 2: Stock abnormal return to nominated and awarded firms

	Nominated	Nominated - IR	Nominated but not awarded	Awarded - Total	Awarded - IR only
	N=418	N=383	N=304	N=114	N=86
CAR1	0.0083	0.0097	0.0035	0.0211	0.0208
t-statistic	(3.09)***	(3.60)***	(1.10)	(4.28)***	(4.15)***
CAR2	0.0056	0.0070	0.0012	0.0174	0.0173
t-statistic	(2.10)**	(2.58)**	(0.39)	(3.45)***	(3.28)***
SCAR1	0.1947	0.2320	0.0877	0.4800	0.4902
t-statistic	(3.73)***	(4.25)***	(1.46)	(4.81)***	(4.54)***
SCAR2	0.1618	0.1968	0.0635	0.4239	0.4374
t-statistic	(3.07)***	(3.55)***	(1.06)	(4.04)***	(3.76)***

Note: *t-statistics* are presented in parentheses. * p < .10, ** p < .05, *** p < .01

Table 3: IR certification effect

Panel A: Stock abnormal return to IR certificated firms and non-certificated firms

	IR certificated	Non-IR firms
PSM matched sample	N=364	N=364
CAR1	0.0098	0.0015
t-statistic	(3.34)***	(0.60)
CAR2	0.0070	-0.0004
t-statistic	(2.39)**	(-0.15)
SCAR1	0.2274	0.0534
t-statistic	(4.03)***	(1.22)
SCAR2	0.1947	0.0413
t-statistic	(3.41)***	(0.93)

Note: *t-statistics* are presented in parentheses. * p < .10, ** p < .05, *** p < .01

Panel B: IR certification effect and CAR

	CAR1	CAR2	SCAR1	SCAR2
IR certificated	0.0090	0.0089	0.1951	0.1811
	(2.44)**	(2.31)**	(2.89)***	(2.58)**
BM	0.0033	0.0042	0.0827	0.0829
	(1.42)	(1.69)*	(1.78)*	(1.65)*
LNTA	0.0035	0.0038	0.0888	0.0889
	(3.01)***	(3.31)***	(4.43)***	(4.32)***
ROA	0.0054	0.0019	0.1807	-0.0916
	(0.20)	(0.07)	(0.46)	(-0.23)
MOM	0.0432	0.0074	0.6302	0.1123
	(3.63)***	(0.57)	(3.57)***	(0.63)
Constant	-0.0359	-0.0486	-1.0713	-1.1775
	(-1.71)*	(-2.37)**	(-3.10)***	(-3.36)***
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N of observations	728	728	728	728
R-squared	0.1392	0.0849	0.1510	0.0920

Note: *t-statistics* adjusted by robust standard error are presented in parentheses. * p < .10, ** p < .05, ***

p < .01

Table 4: International analysts' voting and stock abnormal return to nominated firms

Panel A: International analysts' voting ratio by the number of votes

	CAR1	CAR2	SCAR1	SCAR2
High international vote ratio (N = 212)	0.0153	0.0134	0.3763	0.3531
	(4.71)***	(4.13)***	(5.64)***	(5.20)***
Low international vote ratio (N = 206)	0.0011	-0.0023	0.0078	-0.0350
	(0.25)	(-0.56)	(0.10)	(-0.44)
High - Low	0.0142	0.0157	0.3684	0.3881
	(2.67)**	(2.96)***	(3.58)***	(3.73)***

Panel B: International analysts' voting ratio by the number of marks

	CAR1	CAR2	SCAR1	SCAR2
High international mark ratio (N = 201)	0.0155	0.0136	0.3807	0.3596
	(4.49)***	(4.02)***	(5.24)***	(4.95)***
Low international mark ratio (N = 217)	0.0015	-0.0018	0.0225	-0.0214
	(0.39)	(-0.45)	(0.31)	(-0.29)
High - Low	0.0140	0.0154	0.3582	0.3810
	(2.63)**	(2.91)***	(3.48)***	(3.66)***

Note: *t-statistics* are presented in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Table 5: International analysts' voting and CAR: Regression

Panel A: International analysts' voting ratio by the number of IR votes

	CAR1	CAR2	SCAR1	SCAR2
International (vote ratio)	0.0121	0.0160	0.3817	0.4363
	(1.22)	(1.63)	(2.19)**	(2.44)**
Awarded	0.0122	0.0119	0.2755	0.2708
	(2.12)**	(2.06)**	(2.52)**	(2.37)**
BM	0.0150	0.0177	0.3255	0.3526
	(3.30)***	(3.79)***	(3.75)***	(3.92)***
LNTA	0.0002	0.0005	0.0277	0.0340
	(0.12)	(0.40)	(1.06)	(1.29)
ROA	0.0502	0.0506	0.7609	0.6338
	(1.07)	(1.13)	(1.15)	(0.95)
MOM	0.0343	-0.0063	0.5750	-0.0651
	(1.83)*	(-0.34)	(1.79)*	(-0.20)
Constant	-0.0002	-0.0168	-0.4673	-0.7349
	(-0.01)	(-0.64)	(-1.02)	(-1.59)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N of observations	418	418	418	418
R-square	0.1278	0.1142	0.1630	0.1351

Panel B: International analysts' voting ratio by the number of IR marks

	CAR1	CAR2	SCAR1	SCAR2
International (mark ratio)	0.0097	0.0138	0.3087	0.3693
	(1.03)	(1.47)	(1.91)*	(2.22)**
Awarded	0.0124	0.0122	0.2834	0.2784
	(2.16)**	(2.10)**	(2.58)**	(2.43)**
BM	0.0151	0.0178	0.3284	0.3554
	(3.31)***	(3.80)***	(3.77)***	(3.93)***
LNTA	0.0002	0.0006	0.0297	0.0361
	(0.17)	(0.45)	(1.14)	(1.37)
ROA	0.0508	0.0511	0.7781	0.6490
	(1.09)	(1.14)	(1.19)	(0.98)
MOM	0.0341	-0.0067	0.5677	-0.0752
	(1.83)*	(-0.37)	(1.77)*	(-0.24)
Constant	-0.0004	-0.0172	-0.4721	-0.7434
	(-0.01)	(-0.66)	(-1.03)	(-1.61)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N of observations	418	418	418	418
R-square	0.1269	0.1131	0.1607	0.1329

Note: *t-statistics* adjusted by robust standard error are presented in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Table 6: International analysts' voting, stock transparency, and CAR

Panel A: Firms classified by closely held shares

	Closely held shares: low				Closely held shares: high			
	CAR1	CAR2	SCAR1	SCAR2	CAR1	CAR2	SCAR1	SCAR2
International (vote ratio)	-0.0061	-0.0021	0.2010	0.2442	0.0292	0.0328	0.5535	0.6171
	(-0.37)	(-0.13)	(0.76)	(0.88)	(2.46)**	(2.78)***	(2.36)**	(2.59)**
Awarded	0.0116	0.0114	0.2545	0.2558	0.0196	0.0181	0.3892	0.3747
	(1.47)	(1.46)	(1.69)*	(1.64)	(2.20)**	(1.99)**	(2.22)**	(2.06)**
BM	0.0169	0.0202	0.3628	0.4119	0.0119	0.0143	0.2854	0.2852
	(2.68)***	(3.12)***	(2.98)***	(3.24)***	(1.76)*	(2.06)**	(2.21)**	(2.20)**
LNTA	0.0002	0.0007	0.0278	0.0392	-0.0007	-0.0001	0.0174	0.0218
	(0.11)	(0.45)	(0.82)	(1.07)	(-0.26)	(-0.06)	(0.42)	(0.56)
ROA	0.1379	0.1212	1.6985	1.4169	-0.0500	-0.0312	-0.0271	-0.1286
	(2.86)***	(2.28)**	(2.08)**	(1.63)	(-0.51)	(-0.36)	(-0.02)	(-0.11)
MOM	-0.0246	-0.0487	-0.3007	-0.7569	0.0834	0.0305	1.3756	0.6123
	(-0.96)	(-1.85)*	(-0.67)	(-1.62)	(3.07)***	(1.10)	(2.84)***	(1.26)
Constant	0.0075	-0.0114	-0.4049	-0.7749	0.0080	-0.0124	-0.3645	-0.5701
	(0.24)	(-0.37)	(-0.71)	(-1.27)	(0.17)	(-0.28)	(-0.50)	(-0.80)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	210	210	210	210	208	208	208	208
R-square	0.1741	0.1734	0.1933	0.1735	0.1725	0.1230	0.1812	0.1376

Note: *t-statistics* adjusted by robust standard error are presented in parentheses. * p < .10, ** p < .05, *** p < .01

Panel B: Firms classified by R2 in stock price synchronicity

	R2: low				R2: high			
	CAR1	CAR2	SCAR1	SCAR2	CAR1	CAR2	SCAR1	SCAR2
International (vote ratio)	-0.0105	-0.0030	-0.0194	0.1001	0.0276	0.0270	0.7596	0.7567
	(-0.74)	(-0.21)	(-0.10)	(0.48)	(1.72)*	(1.68)*	(2.05)**	(2.00)**
Awarded	0.0142	0.0152	0.2431	0.2464	0.0132	0.0123	0.3453	0.3334
	(1.73)*	(1.83)*	(1.80)*	(1.75)*	(1.70)*	(1.54)	(2.03)**	(1.87)*
BM	0.0102	0.0150	0.1694	0.2136	0.0190	0.0206	0.4508	0.4754
	(1.58)	(2.26)**	(1.70)*	(2.13)**	(2.76)***	(2.94)***	(3.23)***	(3.32)***
LNTA	0.0010	0.0011	0.0359	0.0378	0.0005	0.0012	0.0462	0.0633
	(0.41)	(0.50)	(0.93)	(0.96)	(0.20)	(0.51)	(0.89)	(1.17)
ROA	0.0535	0.0475	0.8361	0.5616	0.0373	0.0730	0.2936	0.8647
	(1.00)	(0.96)	(1.36)	(0.92)	(0.40)	(0.79)	(0.16)	(0.47)
MOM	0.0068	-0.0365	0.1168	-0.4686	0.0707	0.0349	1.1563	0.4537
	(0.36)	(-1.87)*	(0.45)	(-1.68)*	(2.05)**	(1.02)	(1.70)*	(0.66)
Constant	0.0028	-0.0184	-0.2947	-0.6169	-0.0239	-0.0394	-1.2072	-1.5689
	(0.07)	(-0.49)	(-0.48)	(-1.00)	(-0.48)	(-0.79)	(-1.11)	(-1.40)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N of observations	210	210	210	210	208	208	208	208
R-square	0.1463	0.1281	0.1725	0.1234	0.1817	0.1617	0.2042	0.1834

Note: *t-statistics* adjusted by robust standard error are presented in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Table 7: Stock volume before and after IR award events

Panel A: Long event window

Average daily volume	Pre IR award [-10, -1]	Post IR award [0, 10]	Post - Pre
All nominated firms (N = 418)	0.27%	0.30%	0.03%
			(2.23)**
Awarded firms (N = 114)	0.29%	0.35%	0.06%
			(2.20)**
Nominated but not awarded (N = 304)	0.26%	0.28%	0.02%
			(1.28)
Awarded - Non-awarded	0.03%	0.07%	0.04%
	(0.75)	(1.56)	(1.16)
High international vote ratio (N = 212)	0.29%	0.29%	0.00%
			(0.20)
Low international vote ratio (N = 206)	0.24%	0.31%	0.07%
			(3.09)***
High - Low	0.06%	-0.02%	-0.07%
	(1.60)	(-0.41)	(-2.52)**

Panel B: Short event window

Average daily volume	Pre IR award [-5, -1]	Post IR award [0, 5]	Post - Pre
All nominated firms (N = 418)	0.23%	0.31%	0.08%
			(4.09)***
Awarded firms (N = 114)	0.24%	0.33%	0.10%
			(3.04)***
Nominated but not awarded (N = 304)	0.23%	0.30%	0.07%
			(3.06)***
Awarded - Non-awarded	0.01%	0.03%	0.02%
	(0.26)	(0.61)	(0.53)
High international vote ratio (N = 212)	0.25%	0.29%	0.04%
			(2.20)**
Low international vote ratio (N = 206)	0.21%	0.33%	0.12%
			(3.47)***
High - Low	0.04%	-0.04%	-0.08%
	(1.11)	(-0.82)	(-1.93)*

Note: *t-statistics* are presented in parentheses. * p < .10, ** p < .05, *** p < .01

Table 8: Stock price synchronicity before, during, and after IR events

R2 in stock synchronicity regression	Before IR event	IR event	After IR event	Dif.	
	(1)	(2)	(3)	(2) - (1)	(3) - (1)
	Last Year	Jan - May	Jun - Dec		
All nominees (N = 418)	22.98%	19.92%	19.42%	-3.05%	-3.55%
				(-4.58)***	(-3.99)***
Awarded (N = 114)	20.50%	19.99%	21.88%	-0.51%	1.38%
				(-0.43)	(0.81)
Nominated but not awarded (N = 304)	23.90%	19.90%	18.50%	-4.01%	-5.40%
				(-5.02)***	(-5.26)***
Awarded - Non-awarded	-3.40%	0.10%	3.37%	3.50%	6.78%
	(-1.88)*	(0.05)	(1.74)*	(2.35)**	(3.43)***
High international vote ratio (N = 212)	22.91%	19.86%	22.39%	-3.05%	-0.52%
				(-3.15)***	(0.38)
Low international vote ratio (N = 206)	23.04%	19.99%	16.37%	-3.05%	-6.67%
				(-3.32)***	(-6.10)***
High - Low	-0.13%	-0.13%	6.02%	0.00%	3.55%
	(-0.08)	(-0.08)	(3.53)***	(0.00)	(3.50)***

Note: *t-statistics* are presented in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Appendix 1: Variable definitions

Variable	Definition
Vote	The number of votes a nominee receives in the HKIRA award nomination
Mark	The mark from votes a nominee receives in the HKIRA award nomination
International vote	The number of votes on a nominee by international analysts
International mark	The mark from votes on a nominee by international analysts
International vote ratio	The number of international analyst votes on a stock divided by the total number of votes
International mark ratio	The number of international analyst marks on a stock divided by the total number of votes
International vote dummy	The international vote dummy equals to 1 if the international vote ratio is equal to or higher than 50%, and 0 otherwise
International mark dummy	The international mark dummy equals 1 if the international mark ratio is equal to or higher than 50%, and 0 otherwise
CAR1	The cumulative abnormal returns in seven-day window [-5, 2] around the IR awards by market-adjusted model
CAR2	The cumulative abnormal returns in a seven-day window [-5, 2] around the IR awards by market model
SCAR1	CAR1 divided by the product of the square root of estimation window length and the residual from market model
SCAR2	CAR2 divided by the product of the square root of estimation window length and the residual from market model
IR certificated	Dummy variable equal to 1 if a firm receives a HKIRA nomination in the year and 0 otherwise
International	The international vote (or mark) ratio on a stock in each nomination year
Awarded	Dummy variable equal to 1 if a firm receives a HKIRA award in the year and 0 otherwise
BM	The book-to-market ratio at the end of the previous year
LNTA	The natural logarithm of the total assets in the previous year
ROA	Return on assets in the previous year
MOM	The momentum return from January to March in each year for each firm
CLOSE	The ratio of closely held shares; the fraction of the numbers of shares held by managers or major shareholders in the total number of shares outstanding
R2	The stock price synchronicity; the R-square from the market model using daily stock return and market return in the calendar year before the HKIRA nomination year
Year	A series of year dummies
Industry	A series of industry dummies

Appendix 2: Positive and negative cumulative abnormal return around IR award events

	CAR1			CAR2		
Positive and negative CARs	Positive	Negative	Mean	Positive	Negative	Mean
All nominated firms (N = 418)	246	172	0.0083	234	184	0.0056
Awarded firms (N = 114)	77	37	0.0211	73	41	0.0174
Nominated but not awarded (N = 304)	169	135	0.0035	161	143	0.0012
High international vote ratio (N = 212)	144	68	0.0153	134	78	0.0134
Low international vote ratio (N = 206)	102	104	0.0011	100	106	-0.0023

Note: This table reports the number of positive and negative abnormal returns around the IR award events in the nominated and awarded firms.

Appendix 3: Positive and negative abnormal volume changes around IR award events

	[0, 5] - [-5, -1]			[0, 10] - [-10, -1]		
Volume change: Post – Pre	Positive	Negative	Mean	Positive	Negative	Mean
All nominated firms (N = 418)	296	117	0.08%***	259	154	0.03%**
Awarded firms (N = 114)	78	36	0.10%***	68	46	0.06%**
Nominated but not awarded (N = 304)	218	81	0.07%***	191	108	0.02%
High international vote ratio (N = 212)	142	67	0.04%**	119	90	0.00%
Low international vote ratio (N = 206)	154	50	0.12%***	140	64	0.07%***

Appendix 4: International analysts' voting, changes in stock volume and synchronicity before and after IR award events

	Volume change		Stock synchronicity change	
	[-10,-1]-[0, 10]	[-5, -1]-[1,5]	Last year - [Jan - May]	Last year - [Jun - Dec]
International (vote ratio)	-0.0011	-0.0013	-0.0373	-0.0115
	(-2.20)**	(-1.90)*	(-1.86)*	(-0.46)
Awarded	0.0006	0.0004	0.0250	0.0309
	(1.85)*	(1.22)	(2.06)**	(2.27)**
BM	0.0001	-0.0005	-0.0123	-0.0167
	(0.25)	(-1.54)	(-1.34)	(-1.80)*
LNTA	0.0001	0.0002	0.0007	-0.0043
	(2.17)**	(3.19)***	(0.20)	(-1.05)
ROA	0.0042	0.0016	0.0028	0.0377
	(1.96)*	(0.85)	(0.03)	(0.47)
MOM	-0.0011	0.0000	-0.0719	0.0475
	(-1.25)	(0.03)	(-2.23)**	(1.26)
Constant	-0.0029	-0.0031	0.0407	0.2752
	(-2.50)**	(-2.22)**	(0.71)	(4.24)***
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
N of observations	418	418	418	418
R-squared	0.0897	0.0488	0.3782	0.5665

Note: *t-statistics* are presented in parentheses. * p < .10, ** p < .05, *** p < .01