



Which Local Stocks are Preferred by Foreign Investors? Evidence from an Emerging Market

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ABSTRACT

Using the panel probit and logit approaches, this study reveals new evidence related to the stock preferences of foreign investors in an emerging stock market based on their complete transaction history during 2012–2015. Specifically, the results of this study suggest that when building their portfolio, foreign investors are segmenting their investment activities in the Indonesia Stock Exchange by having a high chance of not choosing local stocks with low price-level, small market capitalization, and poor fundamental value (indicated by stocks classified into the development board by the regulator). Furthermore, it is also suggested that although there is a weak evidence of foreign investors prioritize local stocks operating in the financial industry also trade, services, and investment, generally, both the stock industrial classification and trading volume are not influencing their stock picking decision. Finally, this study confirms that the above findings remain the same after several robustness checks.

JEL Classification: G14, G15

Keywords: Foreign Investors; Stock Preferences; Local Stock Characteristics; Emerging Market; Indonesia Stock Exchange

Article history:

Received: 12 April 2019

Accepted: 21 November 2019

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INTRODUCTION

Given the phenomenon of globalization and financial market liberalization in the emerging stock markets that started to boom two and three decades ago, it is not a strange thing to see the increasing participation level of foreign investors in several countries nowadays (Bekaert and Harvey, 2000; Bekaert et al., 2003). As for instances, after the removal of foreign investors participation restriction by the regulator of the Korean Stock Exchange (KSE) in January 1992, it was known that about one-third of the total stock market value in the KSE in 2007 was held by foreigners (Kim and Yi, 2015). Similarly, it was also reported in Table 1 that more than one-third of the total stock market value in the Indonesian Stock Exchange (IDX) was held by foreigners in 2014, or 25 years later after the deregulation that permitted foreign investors to buy all listed stocks except financial companies up to 49% in September 1989 (Aaron et al., 2018).

Table 1 Participation level of foreign investors in the IDX

Yr.	Type of investor	Based on trading frequency			Based on trading value (in million IDR)		
		Buy	Sell	Average	Buy	Sell	Average
'12	Domestic	24,390,537	24,733,121	24,561,829	634,039,503	649,968,708	642,004,105
	Foreign	6,202,344	5,859,760	6,031,052	481,527,245	465,598,040	473,562,642
	Total			30,592,881			1,115,566,748
	Foreign Proportion			19.71%			42.45%
'13	Domestic	26,539,175	25,984,209	26,261,692	827,630,680	814,140,552	820,885,616
	Foreign	8,480,263	9,035,229	8,757,746	581,154,623	594,644,752	587,899,688
	Total			35,019,438			1,408,785,303
	Foreign Proportion			25.01%			41.73%
'14	Domestic	36,059,286	36,432,830	36,246,058	842,903,371	885,448,348	864,175,859
	Foreign	15,769,377	15,395,833	15,582,605	610,519,878	567,974,900	589,247,389
	Total			51,828,663			1,453,423,248
	Foreign Proportion			30.07%			40.54%
'15	Domestic	36,027,707	34,219,665	35,123,686	799,096,790	777,609,800	788,353,295
	Foreign	17,443,770	19,251,812	18,347,791	588,607,812	610,094,802	599,351,307
	Total			53,471,477			1,387,704,602
	Foreign Proportion			34.31%			43.19%

Notes: This study calculates the participation level of foreign investors in the IDX during 2012-2015 by dividing their average trading frequency and average trading value with total average trading frequency and total average trading value on each year. The average value is calculated by averaging the buy and sell activities for each party and for each measurement.

Accordingly, the issue of invasion of foreign investors becomes more crucial to be discussed than ever before. Several studies both in developed and emerging stock markets have addressed this issue by investigating the impact of the presence of foreign investors on a local stock market. For examples, Bekaert et al. (2005) utilized the data from 95 countries in order to know the relationship between equity market liberalization and economic growth, their results suggested that on average, the presence of foreign investors on a local stock market could enhance the annual real economic growth of a country for around 1%. This suggestion was then confirmed by Bumann et al. (2013) who performed a meta-analysis of 60 empirical studies that investigated similar issue. However, regardless of its merits, it is critical for one to bear in mind that the involvement of foreign investors could also destabilize the local exchange due to their very sensitive behavior as documented by Bae et al. (2004), Grabel (1995), also Stiglitz (2004).

It is noteworthy that the very sensitive behavior of foreign investors is highly reasonable due to the huge probability of severe information asymmetry problem that they faced when investing in the local stock market. Moreover, this study also acknowledges that according to the literature, there were two types of information that might affect the sensitivity of foreign investors, namely country-related information, like political (Chiu et al., 2005 and Santa-Clara and Valkanov, 2003), economic (Baier et al., 2004 and Kim and Wei, 2002), and changes in regulatory events (Aggarwal et al., 2005; Bekaert and Harvey, 2000 and Bekaert et al., 2003) as well stock-related information, like firm fundamental information (Bae et al., 2011 and Zou et al., 2016) and firm market or public information (Covrig et al., 2006 and Falkenstein, 1996).

Based on the above, this study begins the brief literature review about what kind of information can trigger their sensitive behavior from two closely-related studies that suggested, in order to reduce the degree of their information asymmetry when investing in emerging stock markets, U. S. mutual funds is found to invest in developing markets that had strong legal frameworks, shareholder rights, and accounting standards (Aggarwal et al., 2005) as well stocks that were highly visible, had high unsystematic risk, and low transaction costs (Falkenstein, 1996). Then, a decade later, Covrig et al. (2006) confirmed Falkenstein (1996)'s findings by

extending their sample to mutual funds from 11 developed countries and documented that globally visible stock was one of the most important criteria for foreign mutual fund managers to pick it, especially when there was a mandate for the managers to diversify across regions or internationally – which theoretically and empirically benefited them as showed by Coeurdacier and Guibaud (2011).

Likewise, Bae et al. (2011) as well Zou et al. (2016) discovered similar evidence five and ten years later after the discovery of Covrig et al. (2006) in the Korean and Chinese stock markets, respectively. Particularly, Bae et al. (2011) reported that foreign investors in the Korean stock market were also prefer ‘blue-chip’ stocks but with high dividends while Zou et al. (2016) documented that foreign investors in the Chinese stock market were prefer stocks that were highly capitalized and under-valued, also had high turnovers, better accounting earnings, and low risks. Note that highly capitalized stocks are often associated with ‘blue-chip’ stocks or globally visible stocks due to their high correlation value.

Furthermore, another interesting conclusion derived by Zou et al. (2016) was that they documented the indifferent stock preferences of foreign and domestic institutional investors in the Chinese stock market, meaning that both investor types preferred stocks with high market capitalization. This is truly in contrast with the findings of Bae et al. (2011) who concluded that domestic institutional investors were prefer small-cap and low leveraged stocks. On this score, Zou et al. (2016) further argued that albeit the stock preferences of foreign and domestic institutional investors in the Chinese stock market were quite indifferent, their investment horizon was not similar, where the holding period of foreigners were longer than domestic investors.

Based on the literature review explained above, it could be inferred that a further clarification about how foreign investors decide on which local stocks to be picked and included in their global portfolio – or their stock preferences in more simply – in an emerging stock market is urgently required to shed some light on the current confusion. Accordingly, this study then attempts to answer these two following research questions: (1) what kind of local stock characteristics preferred by foreign investors? and (2) do foreign and domestic investors in an emerging stock market share the similar stock preferences?

For the former question, by using a unique and very granular dataset that consists of not only 341,824,918-individual transactions in the IDX during 2012–2015 (see Table 1) but also several stock-related public information, such as stock price-level, trading volume, market capitalization, board and industry classifications, this study successfully discovers that the probability of a local stock to be picked by foreign investors and included in their portfolio will be increased (decrease) when that stock is classified into the main (development) board by the exchange regulator, also its price-level and market capitalization are on the top 30th (below 30th) percentile. Additionally, this study also finds that even if there is a weak evidence of foreign investors prioritize local stocks operating in the financial industry also trade, services, and investment, generally, both the stock industrial classification and trading volume do not affect the probability of a particular stock to be chosen by foreign investors.

Meanwhile, for the latter question, this study successfully provides a very strong evidence of the different behavior between foreign and domestic investors in deciding on which local stocks to be included in their portfolio. This is proven by the significance mean difference for all tested variables at 1% level. Particularly, the results of this study suggest that while the average price-level of stocks favored by domestic investors is about IDR 850 (\pm USD 0.060), the average price-level of stocks favored by foreign investors is about IDR 2,500 (\pm USD 0.178), or around three times than its counterpart.¹ Moreover, this study also highlights that while the average annual trading volume and average market capitalization of stocks favored by domestic investors is about 9,000,000 million shares and IDR 2,000,000 million (\pm USD 142 million), respectively, the respective value for stocks favored foreign investors is around 12,000,000 million shares and IDR 8,000,000 million (\pm USD 571 million). Finally, according to the board classification, this study discovers that while domestic investors slightly prefer stocks classified into development board (45:55), foreign investors heavily prefer stocks classified into main board (75:25). Note that the classification of stock to be categorized into main or development board is following the IDX Board of Directors Resolution No. “Kep-0001/BEJ/0-2014” and is explained in the next section.

The remaining contents of this article are organized as follows. Next section explains the data used in this study and the institutional background. After that, we elaborate the methodology used in this study as well

¹ USD 1 is approximately equal to 9,000 IDR and 14,000 IDR in the beginning of 2012 and in the end of 2015, respectively. Accordingly, this study assumes that USD 1 is equal to 14,000 IDR for simplicity.

present the main empirical results and robustness tests of this study. Lastly, we conclude and provide some policy implications and direction for further research.

INSTITUTIONAL BACKGROUND AND DATA

As described earlier in the previous section, two types of data are utilized in this study, namely the intraday transactions and public information of all listed stocks in the IDX during 2012–2015. The underlying reason for choosing the IDX as the sample of this study is because many of its features resemble the characteristics of emerging stock markets. Specifically, Aaron et al. (2018) and Koesrindartoto et al. (2020) reported that like other developing stock exchanges, such as the Karachi (Khwaja and Mian, 2005) and Istanbul stock exchanges (Imisiker et al., 2015), the market distribution of the IDX was also left-skewed either measured by total frequency, total trading value, or trading volume, meaning that many of matched orders in the exchange occurred on a few stocks only.

Then, the IDX was also in the similar situation with the Korean stock market (Kim and Yi, 2015) in terms of foreign investors participation level as mentioned earlier in the previous section. It is also noteworthy that prior to becoming the sole stock market in Indonesia in 2007, the IDX was operated separately as the Jakarta and Surabaya stock exchanges. The Surabaya stock exchange itself was established in 1989 or 77 years later after the establishment of the Jakarta stock exchange in order to support the development in East Indonesia (Aaron et al., 2018).

Particularly for the former type of data – the intraday transactions, Table 1 recorded that in sum there were 341,824,918 buy and sell transactions during the sample period of this study that were directly extracted and recorded by a system called Jakarta Automatic Traded System.² One great benefit of using this system is that this study is able to capture the following information for each record, namely the stock code, transaction time and date, unique identification number for each order and transaction, stockbroker code, trader domicile status (either foreign or local investor), trading direction (either buy or sell), as well the matched stock price and volume.

Meanwhile for the latter type of data – stock-related public information, the following information is used in this study, namely stock price-level, trading volume, market capitalization, board and industry classifications of a particular stock. For the stock price-level and trading volume, this study gathers the adjusted closing price and daily aggregated trading volume of each particular stock on each trading day from both the former type of data used by this study also Yahoo! Finance.³ Meanwhile, for the stock market capitalization, board and industry classifications of a particular stock, this study gathers the data from the IDX Fact Book for each year.

Accordingly, since this study believes that the definition, meaning, and interpretation of all public information described above, except for the board and industry classifications (due to the contextual matter) have been widely known, hence the explanation of those two classifications as follow. First, related to the industry classification, this study follows the standard classification used by the market regulator or the Jakarta Stock Industrial Classification (JASICA). Particularly there are nine major class in the classification, namely (1) agriculture, (2) mining, (3) basic industry and chemical, (4) miscellaneous industry, (5) consumer goods, (6) property, real estate and building construction, (7) infrastructure, utilities and transportation, (8) finance, and (9) trade, services and investment.

Second is related to the board classification, or the proxy used by this study to measure the fundamental value of a firm. Particularly, as depicted by the IDX Board of Directors Resolution No. “Kep-0001/BEJ/0-2014” that dated in 2014, which is a renewal of IDX Board of Directors Resolution No. “Kep-305/BEJ/07-2004” that dated 10 years earlier related to the rule of No. I-A concerning ‘The Listing of Shares and Non-Share Equity Securities Issued by Listed Companies’, it is known that there are some changes in the criteria for categorizing a listed stock either into the development or main board by the regulator of this exchange.

² Following was the number of total individual transactions started from 2012 to 2015: 61,185,762, 70,038,876, 103,657,326, and 106,942,954.

³ The results of this study suggest that the findings remain similar either by using the former type of data used by this study or the data collected from Yahoo! Finance. Therefore, this study sticks to the Yahoo! Finance data due to the accessibility reason.

In short, by this amendment rule, the primary aim of the development board is to accommodate new firms that have not yet fulfilled the main board's listing requirements, such as start-up companies and companies that have not yet finished their reorganization, whereas the main purpose of the main board remains the same, that is aimed for large companies with good track records and prospective issuers. Specifically, the differences for stocks that are classified into development and main boards by the exchange regulators are as follows:

- *First, firms that are categorized into the main board should be operated in its core business for at least 3 full-years as of their listing application date, whereas firms that are categorized into the development board are only required to running their business for 1 full-year;*
- *Second, companies that belong to the main board are required to have at least 1,000 registered stockholders, whereas only 500 registered stockholders are needed for companies that belong to the development board;*
- *Third, the minimum net tangible assets for companies that classified into the main and development boards is IDR 100 billion (±USD 7.14 million) and IDR 5 billion (±USD 357 thousand), respectively;*
- *Fourth, corporations that belong to the main and developments boards should be able to provide audited financial statements for at least three and one fiscal years, respectively;*
- *Fifth, while companies that are categorized into the main board should report a positive net income, companies that are categorized into the development board do not have that obligation; and*
- *Finally, the minimum number of shares held by non-principal and non-controlling stockholders after the initial public offering process but before the listing for firms that classified into main and development boards is 300 million and 150 million shares, respectively.*

Based on the above criteria, it could be inferred that companies that are categorized into the main board by the exchange regulator is more likely to be larger, more mature, visible, and profitable, also have a better accounting standards as well corporate governance than companies that are categorized into the development board. Nonetheless, one should always note that either a particular stock is categorized into development or main board, the following requirements are still needed to be complied with, like the corporation must have a corporate secretary, audit committee, internal audit unit, at least one independent director and 30% independent members in the supervisory board, then it also should be in the form of limited liability with the minimum par value of its shares is IDR 100 (±USD 0.007) per share, and lastly, which is the most important thing is that its registration statement should be effective declared by the Indonesian Financial Services Authority.

METHODOLOGY

Given the research questions that described in the first section and the enormous dataset that elaborated in the previous section, this study then elucidates the research methodology in this section. Particularly, the methodology for answering the first research question – what kind of local stock characteristics preferred by foreign investors – is as follows.

Firstly, this study follows the processes of Aaron et al. (2019) in developing the dependent variable, that is a robust binary categorical variable that could indicate whether a particular stock is favored by foreign or domestic investors. Accordingly, the description of that algorithm is as follows:

- *Calculate the foreign investors participation level on each local stock for every quarter q by dividing the total frequency or total trading value performed solely by foreign investors on stock i (a particular local stock) with the total frequency or total trading value performed by foreign and domestic investors on stock i using the formula stated in Equation 1 as follows.*

$$\text{Foreign Participation}_{i,q} (\%) = \frac{\text{Proportion of foreigners trading on stock } i \text{ for time } q}{\text{Total trading by foreign and domestic investors on stock } i \text{ for time } q} \times 100 \quad (1)$$

In this manner, it could be implied that the value range of this variable will be between 0% and 100%, in which when the value is 0%, it means that no foreign investors are trading on that particular local stock.

Meanwhile, when the value is 100%, it means that no domestic investors are trading on that particular local stock. Furthermore, it is also noteworthy that since foreign investors in the IDX are frequently found to trade less but with bigger volumes than domestic investors (see Table 1), then the measurement based on the trading frequency might be biased and thus sometimes it is more appropriate to use the measurement based on the trading value. Nonetheless, this study uses both measurements of trading frequency and trading value. In addition to the above, this study also uses the median value of each case in order to avoid the bias caused by some extreme values.

- Calculate the means and standard deviation of previous computed variable.
- Perform a fuzzy clustering method with four group of clusters using both the variable means and its standard deviation for each year by following the step-by-step procedure as written in Bezdek et al. (1984). Note that the virtues of using contemporary technique, or technique based on artificial intelligence in the field of finance have been proven by many studies. Particularly, in the context of Indonesia, the examples of these works are Rainarli and Aaron (2015) and Aaron et al. (2017).
- Based on the cluster center of each cluster, do a merge for clusters that have the highest and second highest value of variable calculated in step 1 as stocks favored by foreign investors (labelled with '1') then combine the other two clusters as stocks favored by domestic investors (labelled with '0').

The next thing to do after deriving the dependent variable is to derive the independent variables using stock-related public information that mentioned earlier, namely stock price-level, trading volume, market capitalization, board and industry classifications of a particular stock. To do so, this study transforms all those variables into a binary categorical form. This is primarily because this study wants to investigate whether foreign investors are attracted to invest in stocks that have a good fundamental value, high turnover, large market capitalization, high price-level, and belong to a specific industry.

On this score, this study then transforms all variables except the board and industry classifications from continuous into binary categorical variables using the percentile method. More specifically, this study divides each continuous variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30th, between bottom 30th and top 30th, and top 30th percentile, respectively. Meanwhile for the board classification, this study simply puts a label of '1' if a stock is classified into the development board and '0' if a stock is classified into the main board by the exchange regulator. Kindly note that this binary transformation is also done to the industry classification.

After deriving the dependent and independent variables using the above methodology, this study then formally provides the general function of this analysis in Equation 2 as follows.

$$\begin{aligned} \text{Local stock which preferred by foreign investors} &= f(\text{firm fundamental information, firm public information}) \\ &= f(\text{board classification, industry classification, stock price-level, stock trading volume, stock market capitalization}) \end{aligned} \quad (2)$$

Accordingly, this study argues that both the firm fundamental and public information are expected to have a significant effect on the stock preferences of foreign and domestic investors in an emerging stock market. In more particular, this study associates firm fundamental information with the board and industry classifications of a particular stock as well firm public information with the stock price-level, trading volume and market capitalization. On this score, the formulation of the regression analysis that will be performed using panel probit and panel logit methods is then stated in Equation 3 as follows:

$$\begin{aligned} \text{Local_stock_category}_{(t)} &= \alpha + \beta_0.\text{Board_Type}_{(t-1)} + \beta_1.\text{Price_Level_L}_{(t-1)} + \beta_2.\text{Trade_Vol_L}_{(t-1)} \\ &+ \beta_3.\text{Market_Cap_L}_{(t-1)} + \beta_4.\text{Price_Level_H}_{(t-1)} + \beta_5.\text{Trade_Vol_H}_{(t-1)} + \beta_6.\text{Market_Cap_H}_{(t-1)} + \gamma.S + \theta.T \end{aligned} \quad (3)$$

According to Equation 3, it is known that while the dependent variable of this study is the binary dummy variable which indicates whether a particular stock is favored by foreign or domestic investors at time t , the independent variables of this study are all firm fundamental and public variables that have been transformed at time $t-1$ or the previous year. It is crucial for one to notice that the differentiation on the time period between the dependent and independent variables is utilized in order to ensure the predictive capability of the models as well as to avoid the endogeneity problem. Furthermore, it is also noteworthy that the industry classification is labelled as 'S' and all regression analysis are controlled using the time-fixed effects (T).

In addition to the above, the main reason of why this study excludes the $Price_Level_M_{(t-1)}$, $Trade_Vol_M_{(t-1)}$, and $Market_Cap_M_{(t-1)}$ in the regression formulation is because this study wants to avoid the multicollinearity problem. Lastly, to answer the second research question – do foreign and domestic investors in an emerging stock market share the similar stock preferences, this study simply employs the summary statistics of the continuous independent variables and the mean difference tests as the alternatives of the panel probit and panel logit approaches.

EMPIRICAL RESULTS

What kind of local stock characteristics preferred by foreign investors?

This study starts the empirical findings by providing the descriptive statistics and correlation matrix in Tables 2 and 3, respectively. Based on Table 2, it is known that the mean of all dependent variables used in this study is around 0.3. Note that this value is in a similar level either using the trading frequency (FQ) or trading value (TV) and either using the average (Avg) or median value (Med) in measuring the foreign participation level in a particular local stock. Accordingly, it could be inferred that around 30% of listed stocks in the IDX are favored by foreign investors, whereas the remaining 70% are favored by domestic investors.

Table 2 Descriptive statistics

Category	Variables	N	Mean	Std. Dev.	Min	Max
Dependent Variables	FAvg_FQ	1,633	0.24	0.43	0	1
	FAvg_TV	1,633	0.29	0.45	0	1
	FMed_FQ	1,633	0.24	0.42	0	1
	FMed_TV	1,633	0.34	0.47	0	1
Independent Variables	Board_Type	1,633	0.47	0.50	0	1
	Price_Level_L	1,633	0.27	0.44	0	1
	Trade_Vol_L	1,609	0.25	0.43	0	1
	Market_Cap_L	1,633	0.27	0.44	0	1
	Price_Level_M	1,633	0.52	0.50	0	1
	Trade_Vol_M	1,609	0.51	0.50	0	1
	Market_Cap_M	1,633	0.53	0.50	0	1
	Price_Level_H	1,633	0.21	0.41	0	1
	Trade_Vol_H	1,609	0.24	0.43	0	1
Market_Cap_H	1,633	0.20	0.40	0	1	
Industry Classification	Agriculture Industry	1,633	0.04	0.19	0	1
	Mining Industry	1,633	0.09	0.27	0	1
	Basic Industry and Chemicals	1,633	0.13	0.32	0	1
	Miscellaneous Industry	1,633	0.09	0.26	0	1
	Consumer Goods Industry	1,633	0.06	0.25	0	1
	Property, Real Estate, and Building Construction	1,633	0.13	0.31	0	1
	Infrastructure, Utilities, and Transportation	1,633	0.09	0.29	0	1
	Financial Industry	1,633	0.14	0.36	0	1
Trade, Services, and Investment	1,633	0.23	0.40	0	1	

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this study, four different kinds of dependent variable are utilized which are determined based on the average (Avg) or median (Med) proportion of foreign investors trading frequency (FQ) or trading value (TV). Then, all the dependent variables are set using its next year or future (F) value in order to ensure the predictive capability of our model. Meanwhile for the independent variables, all variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30%, between bottom 30% and top 30%, and top 30% percentile, respectively.

Table 3 Correlation matrix

Correlation Matrix		FAvg_ FQ	FAvg_ TV	FMed_ FQ	FMed_ TV	Board_ Type
Dependent Variables	FAvg_FQ	1				
	FAvg_TV	0.50	1			
	FMed_FQ	0.85	0.51	1		
	FMed_TV	0.66	0.58	0.69	1	
Independent Variables	Board_Type	-0.29	-0.22	-0.33	-0.35	1
	Price_Level_L	-0.31	-0.25	-0.29	-0.30	0.14
	Trade_Vol_L	-0.11	-0.04	-0.15	-0.17	0.21
	Market_Cap_L	-0.30	-0.27	-0.30	-0.36	0.35
	Price_Level_M	-0.05	0.02	0.02	0.05	0.00
	Trade_Vol_M	0.03	-0.03	-0.02	-0.02	-0.02
	Market_Cap_M	-0.04	-0.12	-0.14	-0.06	-0.08
	Price_Level_H	0.31	0.33	0.29	0.26	-0.15
	Trade_Vol_H	0.15	0.00	0.17	0.19	-0.18
	Market_Cap_H	0.48	0.34	0.49	0.47	-0.29

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this study, four different kinds of dependent variable are utilized which are determined based on the average (Avg) or median (Med) proportion of foreign investors trading frequency (FQ) or trading value (TV). Then, all the dependent variables are set using its next year or future (F) value in order to ensure the predictive capability of our model. Meanwhile for the independent variables, all variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30%, between bottom 30% and top 30%, and top 30% percentile, respectively. + indicates a possibility of multicollinearity problem between two variables at 5% significance level.

Table 3 Cont.

Correlation Matrix		Closing Price_L	Trade Vol_L	Market Cap_L	Closing Price_M	Trade Vol_M	Market Cap_M	Price_ Level_H	Trade Vol_H	Market Cap_H
Dependent Variables	FAvg_FQ									
	FAvg_TV									
	FMed_FQ									
	FMed_TV									
Independent Variables	Board_Type									
	Price_Level_L	1								
	Trade_Vol_L	-0.07	1							
	Market_Cap_L	0.35	0.22	1						
	Price_Level_M	-0.63 ⁺	-0.08	-0.11	1					
	Trade_Vol_M	0.06	-0.59 ⁺	0.04	-0.02	1				
	Market_Cap_M	-0.08	-0.06	-0.63 ⁺	0.14	0.03	1			
	Price_Level_H	-0.31	0.17	-0.25	-0.54 ⁺	-0.04	-0.09	1		
	Trade_Vol_H	0.00	-0.32	-0.28	0.10	-0.57 ⁺	0.03	-0.12	1	
	Market_Cap_H	-0.28	-0.17	-0.30	-0.05	-0.08	-0.54 ⁺	0.37	0.27	1

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this study, four different kinds of dependent variable are utilized which are determined based on the average (Avg) or median (Med) proportion of foreign investors trading frequency (FQ) or trading value (TV). Then, all the dependent variables are set using its next year or future (F) value in order to ensure the predictive capability of our model. Meanwhile for the independent variables, all variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30%, between bottom 30% and top 30%, and top 30% percentile, respectively. + indicates a possibility of multicollinearity problem between two variables at 5% significance level.

Then, based on the Board_Type variable, it is also known that the distribution of local stocks classified into the development and main boards is almost equal. Meanwhile, the distribution of the stock price level, trading volume and market capitalization at the bottom 30th (L), between bottom 30th and top 30th (M), and top 30th (H) percentile is around 25%, 50%, and 25%, respectively. Finally, according to the industry classification, it is known that while approximately 10% (on average) of local stocks in the IDX belong to a particular sector, it is noticeable that the sector of trade, services, and investment has the most members (around 20%) and the sector of agriculture has the least member (around 5%).

Moreover, based on Table 3, it could also be implied that no correlation between the dependent and independent variables are higher than 0.5 when the Price_Level_M, Trade_Vol_M, and Market_Cap_M are removed from the model. This evidence supports the argument of why this study excludes them in the regression formulation as mentioned in the previous section. Nevertheless, this study also performs regression analysis for each L, M, and H category to formally test that the findings of this study are free from this bias. This study reports the results of these robustness tests in Appendices.

Accordingly, the primary regression results based on the panel probit and panel logit methods are presented in Tables 4 and 5, respectively, where the first and second columns of each dependent variable represent the ordinary results of regression analysis and the marginal effects (to show the economic significance) derived from the first column, respectively. Based on those two tables, it is surprising that no significant difference is found in both models so that only single interpretation is needed. On this score, the main findings of this study are then described as follows.

Table 4 Primary regression analysis using panel probit approach

	Panel Probit							
	FAvg_FQ		FAvg_TV		FMed_FQ		FMed_TV	
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	Regression Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects
Constant	-0.558 (0.392)		-1.353*** (0.335)		-1.047** (0.447)		0.275 (0.434)	
Board_Type	-0.881*** (0.199)	-0.146*** (0.0313)	-0.514*** (0.145)	-0.119*** (0.0327)	-1.303*** (0.239)	-0.189*** (0.0328)	-1.239*** (0.219)	-0.231*** (0.0356)
Price_Level_L	-1.441*** (0.258)	-0.239*** (0.0444)	-0.412*** (0.153)	-0.0958*** (0.0355)	-1.198*** (0.252)	-0.174*** (0.0379)	-0.793*** (0.197)	-0.148*** (0.0364)
Trade_Vol_L	-0.137 (0.186)	-0.0227 (0.0308)	-0.0957 (0.140)	-0.0222 (0.0326)	-0.274 (0.212)	-0.0399 (0.0308)	-0.162 (0.180)	-0.0302 (0.0336)
Market_Cap_L	-0.759*** (0.259)	-0.126*** (0.0444)	-0.670*** (0.174)	-0.156*** (0.0406)	-0.669** (0.283)	-0.0972** (0.0425)	-0.937*** (0.239)	-0.175*** (0.0467)
Price_Level_H	0.647*** (0.180)	0.107*** (0.0286)	0.743*** (0.149)	0.173*** (0.0324)	0.697*** (0.200)	0.101*** (0.0281)	0.484** (0.190)	0.0902*** (0.0347)
Trade_Vol_H	-0.00846 (0.173)	-0.00140 (0.0286)	-0.226 (0.141)	-0.0525 (0.0327)	0.195 (0.188)	0.0283 (0.0273)	0.0535 (0.172)	0.00998 (0.0321)
Market_Cap_H	0.975*** (0.172)	0.162*** (0.0253)	0.662*** (0.151)	0.154*** (0.0337)	1.048*** (0.190)	0.152*** (0.0244)	1.178*** (0.191)	0.220*** (0.0305)
Mining Industry	-0.208 (0.449)	-0.0344 (0.0743)	0.506 (0.374)	0.117 (0.0864)	-0.206 (0.515)	-0.0299 (0.0750)	-0.325 (0.496)	-0.0606 (0.0925)
Basic Industry and Chemicals	-0.552 (0.447)	-0.0915 (0.0736)	0.661* (0.359)	0.154* (0.0832)	-0.300 (0.505)	-0.0437 (0.0733)	-0.853* (0.492)	-0.159* (0.0907)
Miscellaneous Industry	-0.805* (0.489)	-0.133* (0.0803)	0.489 (0.385)	0.114 (0.0893)	-0.644 (0.552)	-0.0936 (0.0799)	-1.025* (0.541)	-0.191* (0.0993)
Consumer Goods Industry	-0.394 (0.491)	-0.0652 (0.0810)	0.597 (0.405)	0.139 (0.0938)	-0.200 (0.556)	-0.0291 (0.0807)	-0.321 (0.543)	-0.0598 (0.101)
Property, Real Estate, and Building Construction	-0.0934 (0.424)	-0.0155 (0.0702)	0.474 (0.355)	0.110 (0.0825)	-0.129 (0.484)	-0.0188 (0.0704)	-0.297 (0.478)	-0.0554 (0.0891)
Infrastructure, Utilities, and Transportation	-0.533 (0.455)	-0.0883 (0.0750)	0.511 (0.376)	0.119 (0.0872)	-0.383 (0.517)	-0.0557 (0.0750)	-0.560 (0.504)	-0.104 (0.0936)
Financial Industry	-0.315 (0.426)	-0.0523 (0.0704)	1.045*** (0.351)	0.243*** (0.0803)	-0.0574 (0.482)	-0.00834 (0.0701)	-0.111 (0.473)	-0.0207 (0.0882)
Trade, Services, and Investment	-0.186 (0.406)	-0.0309 (0.0672)	0.919*** (0.339)	0.214*** (0.0778)	0.0844 (0.461)	0.0123 (0.0670)	-0.319 (0.453)	-0.0594 (0.0843)
Time-Fixed Effects	Included		Included		Included		Included	
Log Likelihood	-559.1		-732.8		-511.3		-621.6	
Chi-Squared	178.9		169.8		176.8		186.7	
Number of Obs.	1,609		1,609		1,609		1,609	

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this study, four different kinds of dependent variable are utilized which are determined based on the average (Avg) or median (Med) proportion of foreign investors trading frequency (FQ) or trading value (TV). Then, all the dependent variables are set using its next year or future (F) value in order to ensure the predictive capability of the model. Meanwhile for the independent variables, all variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30%, between bottom 30% and top 30%, and top 30% percentile, respectively. All regressions are performed with a panel probit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, this study also documents their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

First, regardless of any measurements of the dependent variable, this study discovers that foreign investors are not only attracted to local stocks classified into the main board by the exchange regulator but also to local stocks with high price-level and large market capitalization. Meanwhile, they are not attracted to the opposite stock characteristics, or local stocks with low price-level, small market capitalization, and stocks classified into the development board by the exchange regulator. Note that since the dependent variable of this study is binary dummy variable, hence it could be also inferred that the stock preferences of domestic investors

are completely in contrast with the stock preferences of foreign investors. Accordingly, this study then further provides the explanation of this inference in the next section.

Second, even though this study highlights a significant influence of some sectors, like basic industry and chemicals, miscellaneous industry, financial industry, as well trade, services, and investment industry on foreign stock preferences, no fixed pattern is found, and thus further clarification is needed on this issue. However, it is clearly noticeable that there is a very strong evidence of foreign investors prioritize local stocks operating in the financial industry also trade, services, and investment when the dependent variable is measured by the average trading value. This provides a further indication that foreign investors in the IDX are segmenting their investment activities.

Third, this study notices that stock trading volume, either measured by low, medium or high value, is not affecting the stock preferences of foreign investors. Note that the results of the medium value are provided in the Appendices. Finally, based on the marginal effects, the probability of a local stock to be chosen by foreign investors will increase or decrease for around 10-25% when one of the independent variables as given in the first point is true or labelled as '1'.

Table 5 Primary regression analysis using panel logit approach

	Panel Logit							
	FAvg_FQ (5)		FAvg_TV (6)		FMed_FQ (7)		FMed_TV (8)	
	Regression Result	Regression Result	Regression Result	Regression Result	Regression Result	Regression Result	Regression Result	Regression Result
Constant	-1.014 (0.697)		-2.320*** (0.590)		-1.853** (0.797)		0.495 (0.765)	
Board_Type	-1.573*** (0.355)	-0.148*** (0.0319)	-0.905*** (0.254)	-0.119*** (0.0326)	-2.339*** (0.429)	-0.191*** (0.0331)	-2.176*** (0.388)	-0.227*** (0.0361)
Price_Level_L	-2.662*** (0.489)	-0.250*** (0.0483)	-0.750*** (0.274)	-0.0990*** (0.0364)	-2.179*** (0.474)	-0.178*** (0.0402)	-1.492*** (0.361)	-0.156*** (0.0370)
Trade_Vol_L	-0.286 (0.336)	-0.0268 (0.0315)	-0.183 (0.248)	-0.0242 (0.0327)	-0.529 (0.385)	-0.0432 (0.0314)	-0.268 (0.324)	-0.0280 (0.0339)
Market_Cap_L	-1.533*** (0.498)	-0.144*** (0.0487)	-1.200*** (0.314)	-0.158*** (0.0423)	-1.352** (0.543)	-0.110** (0.0458)	-1.825*** (0.453)	-0.191*** (0.0496)
Price_Level_H	1.134*** (0.320)	0.106*** (0.0288)	1.289*** (0.260)	0.170*** (0.0316)	1.215*** (0.358)	0.0990*** (0.0282)	0.830** (0.337)	0.0868** (0.0346)
Trade_Vol_H	-0.0232 (0.305)	-0.00218 (0.0286)	-0.391 (0.246)	-0.0516 (0.0323)	0.312 (0.334)	0.0254 (0.0272)	0.119 (0.306)	0.0124 (0.0320)
Market_Cap_H	1.698*** (0.307)	0.159*** (0.0243)	1.130*** (0.263)	0.149*** (0.0329)	1.890*** (0.343)	0.154*** (0.0234)	2.123*** (0.349)	0.222*** (0.0303)
Mining Industry	-0.399 (0.797)	-0.0375 (0.0748)	0.847 (0.657)	0.112 (0.0863)	-0.405 (0.917)	-0.0330 (0.0749)	-0.643 (0.878)	-0.0672 (0.0917)
Basic Industry and Chemicals	-0.920 (0.794)	-0.0863 (0.0741)	1.142* (0.632)	0.151* (0.0830)	-0.496 (0.899)	-0.0404 (0.0732)	-1.494* (0.870)	-0.156* (0.0898)
Miscellaneous Industry	-1.356 (0.870)	-0.127 (0.0810)	0.868 (0.676)	0.115 (0.0890)	-1.112 (0.986)	-0.0906 (0.0801)	-1.777* (0.958)	-0.186* (0.0982)
Consumer Goods Industry	-0.651 (0.871)	-0.0611 (0.0814)	1.022 (0.709)	0.135 (0.0934)	-0.387 (0.992)	-0.0316 (0.0808)	-0.586 (0.959)	-0.0612 (0.100)
Property, Real Estate, and Building Construction	-0.173 (0.752)	-0.0162 (0.0706)	0.840 (0.623)	0.111 (0.0822)	-0.210 (0.859)	-0.0171 (0.0700)	-0.569 (0.843)	-0.0594 (0.0880)
Infrastructure, Utilities, and Transportation	-0.919 (0.806)	-0.0863 (0.0753)	0.895 (0.659)	0.118 (0.0868)	-0.661 (0.920)	-0.0539 (0.0748)	-1.010 (0.889)	-0.106 (0.0923)
Financial Industry	-0.538 (0.756)	-0.0505 (0.0708)	1.824*** (0.616)	0.241*** (0.0800)	-0.109 (0.858)	-0.00888 (0.0700)	-0.196 (0.834)	-0.0205 (0.0871)
Trade, Services, and Investment	-0.326 (0.720)	-0.0306 (0.0675)	1.591*** (0.595)	0.210*** (0.0776)	0.127 (0.820)	0.0104 (0.0668)	-0.603 (0.799)	-0.0631 (0.0833)
Time-Fixed Effects	Included		Included		Included		Included	
Log Likelihood	-558.2		-732.2		-510.4		-619.8	
Chi-Squared	162.1		158.1		160.4		167.4	
Number of Obs.	1,609	1,609	1,609	1,609	1,609	1,609	1,609	1,609

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as a stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this study, four different kinds of dependent variable are utilized which are determined based on the average (Avg) or median (Med) proportion of foreign investors trading frequency (FQ) or trading value (TV). Then, all the dependent variables are set using its next year or future (F) value in order to ensure the predictive capability of our model. Meanwhile for the independent variables, all variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, we divide each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30%, between bottom 30% and top 30%, and top 30% percentile, respectively. All regressions are performed with a panel

logit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, we also document their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

Do foreign and domestic investors in an emerging stock market share the similar stock preferences?

Previously, this study has discovered that foreign investors are attracted to local listed firms that are highly visible (indicated by high stock price-level also large market capitalization) and have a good fundamental value (indicated by stocks classified into the development board by the regulator). Hence, in this section this study wants to know whether these stock preferences are similar to domestic investors as reported by Zou et al. (2016) or different as reported by Bae et al. (2011). Accordingly, this study reports the findings in Tables 6 and 7 as follows.

Table 6 Summary statistics of continuous variables

Category	Variables	Type	Avg_FQ	Med_FQ	Avg_TV	Med_TV
Local Stocks Favored by Domestic Investors (0)	Board Type	Min	0	0	0	0
		Median	1	1	1	1
		Max	1	1	1	1
	Price Level (IDR)	Min	49.81	49.81	49.81	49.81
		Median	350.91	344.76	356.00	326.87
		Max	17,498.20	17,498.20	17,498.20	17,498.20
	Trading Volume (in million)	Min	0.12	0.12	0.12	0.12
		Median	1,100,000	1,000,000	1,300,000	818,554
		Max	430,000,000	430,000,000	430,000,000	430,000,000
	Market Capitalization (in million IDR)	Min	5,033	5,033	5,033	5,033
		Median	613,266	599,190	642,447	516,028
		Max	29,000,000	29,000,000	31,000,000	29,000,000
Local Stocks Favored by Foreign Investors (1)	Board Type	Min	0	0	0	0
		Median	0	0	0	0
		Max	1	1	1	1
	Price level (IDR)	Min	50.85	62.99	49.81	49.81
		Median	1,245.38	1,240.90	1,233.12	1,000.00
		Max	28,392.50	28,392.50	28,392.50	28,392.50
	Trading Volume (in million)	Min	3.97	5.16	5.16	5.16
		Median	2,900,000	3,600,000	1,600,000	3,800,000
		Max	150,000,000	150,000,000	150,000,000	350,000,000
	Market Capitalization (in million IDR)	Min	24,840	46,788	19,325	35,650
		Median	6,900,000	7,400,000	4,800,000	5,100,000
		Max	38,000,000	38,000,000	38,000,000	38,000,000

Notes: This study classifies two kinds of stock category based on the average (Avg) and the median (Med) of the proportion of foreign investors trading frequency (FQ) and trading value (TV) on each stock.

Based on Table 6, it could be implied that the median of all tested variables between stocks favored domestic and foreign investors are very different. More specifically, stocks that are majorly traded by foreign investors are more likely to be classified into the main board, more expensive, have higher turnover and much bigger than stocks that are majorly traded by domestic investors. These differences are all significant at 1% level as reported in Table 7.

Table 7 Mean difference tests

Variables	Category	Avg_FQ	Med_FQ	Avg_TV	Med_TV
Board Type	Local stocks favored by domestic investors	0.54	0.55	0.53	0.59
	Local stocks favored by foreign investors	0.23	0.18	0.28	0.21
	t-stat	11.73***	15.01***	9.71***	16.32***
Price Level (IDR)	Local stocks favored by domestic investors	878.59	892.82	835.21	864.43
	Local stocks favored by foreign investors	2,628.49	2,594.53	2,491.60	2,147.09
	t-stat	8.86***	8.65***	9.40***	8.44***
Trading Volume (in million)	Local stocks favored by domestic investors	9,700,000	9,600,000	8,300,000	8,600,000
	Local stocks favored by foreign investors	12,000,000	12,000,000	11,000,000	13,000,000
	t-stat	1.38	1.72	2.09**	3.22***
Market Capitalization (in million IDR)	Local stocks favored by domestic investors	2,000,000	1,800,000	2,100,000	1,600,000
	Local stocks favored by foreign investors	9,400,000	9,900,000	7,900,000	7,900,000
	t-stat	17.22***	18.41***	14.19***	18.17***

Notes: This study classifies two kinds of stock category based on the average (Avg) and the median (Med) of the proportion of foreign investors trading frequency (FQ) and trading value (TV) on each stock. Two-sample t test with unequal variances is chosen for calculating t-stat. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

Additionally, Table 7 also documents that stocks favored by foreign investors have about a half chance to be categorized in development board by the regulator if compared to stocks that are dominantly traded by

local or domestic investors. Then the stock price-level, trading volume, and market capitalization of stocks favored by foreign investors are about three, one and a half, and four times more than stocks favored by local or domestic investors, respectively. Therefore, it could be inferred that the above findings are in line with the findings of Bae et al. (2011). Further note that these results are robust after this study performs several robustness tests for each dependent variable which are reported in the Appendices.

CONCLUSION AND POLICY IMPLICATIONS

Using a unique and very granular dataset, this study attempts to answer the following research questions: (1) what kind of local stock characteristics preferred by foreign investors? and (2) do foreign and domestic investors in an emerging stock market share the similar stock preferences? Accordingly, this study concludes that the chance of a local stock to be chosen by foreign investors will be decreased (increased) when that stock is classified into the development board (main board) by the exchange regulator, also its price-level and market capitalization are below the top 30% percentile (on the top 30% percentile). Moreover, this study also highlights that these stock preferences of foreign investors are indeed in contrary with the stock preferences of their counterpart or domestic investors. In addition to the above, the findings of this study also suggest that albeit there is a weak evidence of foreign investors prioritize local stocks operating in the financial industry also trade, services, and investment, generally, both the stock industrial classification and trading volume do not affect their stock preferences.

On this score and based on the conclusion above, some noteworthy policy recommendations are as follows. First, since foreign investors in the IDX are proven for segmenting their investment activities in the IDX, the market regulator is thus expected to monitor the impact of their participation in those stocks more carefully and effectively. Second, since the players in the stocks favored by foreign investors are more diverse than in the stocks favored by domestic investors also given the fact that foreign investors are frequently associated with informed and sophisticated investors due to their great resources, hence it could be expected that the competition in the stocks favored by foreign investors is more intense than in the stocks favored by domestic investors, which is indeed proven by Koesrindartoto et al. (2020). Accordingly, it will be meaningful for investors to perform value investing and follow the indexing strategy as suggested by the efficient market hypothesis. Finally, this study also confirms that one could easily use the IDX Board of Directors Resolution No. "Kep-0001/BEJ/0-2014" to roughly identify the fundamental value of a listed firm in the IDX by simply looking either a particular stock is classified into the development or main board.

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APPENDIX

Appendix A Robustness checks for FAvg_FQ

Panel Probit	FAvg_FQ					
	(9)		(10)		(11)	
	Regression Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects
Constant	0.0666 (0.424)		-0.0417 (0.497)		-0.999** (0.403)	
Board_Type	-1.236*** (0.224)	-0.227*** (0.0373)	-1.815*** (0.249)	-0.310*** (0.0499)	-1.143*** (0.206)	-0.179*** (0.0329)
Price_Level_L	-1.915*** (0.279)	-0.351*** (0.0524)				
Trade_Vol_L	-0.0590 (0.193)	-0.0108 (0.0355)				
Market_Cap_L	-1.104*** (0.281)	-0.202*** (0.0538)				
Price_Level_M			0.141 (0.154)	0.0241 (0.0264)		
Trade_Vol_M			-0.00567 (0.146)	-0.000969 (0.0250)		
Market_Cap_M			-0.563*** (0.158)	-0.0963*** (0.0272)		
Price_Level_H					0.911*** (0.186)	0.143*** (0.0278)
Trade_Vol_H					0.0555 (0.174)	0.00868 (0.0273)
Market_Cap_H					1.226*** (0.175)	0.192*** (0.0249)
Mining Industry	-0.0574 (0.507)	-0.0105 (0.0930)	-0.00479 (0.584)	-0.000819 (0.0998)	-0.196 (0.472)	-0.0306 (0.0739)
Basic Industry and Chemicals	-0.763 (0.506)	-0.140 (0.0918)	-1.001* (0.571)	-0.171* (0.0963)	-0.638 (0.463)	-0.0999 (0.0720)
Miscellaneous Industry	-1.106** (0.555)	-0.203** (0.0997)	-1.341** (0.620)	-0.229** (0.105)	-0.914* (0.504)	-0.143* (0.0784)
Consumer Goods Industry	-0.555 (0.554)	-0.102 (0.101)	-0.508 (0.631)	-0.0868 (0.107)	-0.358 (0.512)	-0.0560 (0.0800)
Property, Real Estate, and Building Construction	-0.173 (0.482)	-0.0317 (0.0884)	-0.234 (0.555)	-0.0400 (0.0947)	-0.121 (0.444)	-0.0189 (0.0694)
Infrastructure, Utilities, and Transportation	-0.649 (0.514)	-0.119 (0.0935)	-0.676 (0.584)	-0.116 (0.0990)	-0.539 (0.473)	-0.0844 (0.0738)
Financial Industry	-0.416 (0.483)	-0.0763 (0.0882)	-0.577 (0.552)	-0.0986 (0.0935)	-0.400 (0.444)	-0.0625 (0.0693)
Trade, Services, and Investment	-0.258 (0.461)	-0.0474 (0.0843)	-0.290 (0.526)	-0.0496 (0.0896)	-0.145 (0.423)	-0.0227 (0.0662)
Time-Fixed Effects	Included		Included		Included	
Log Likelihood	-590.4		-633.3		-589.8	
Chi-Squared	122.3		81.18		160.6	
Number of Obs.	1,609		1,609		1,609	

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this table, this study reports the first robustness checks using the first dependent variable, FAvg_FQ. All independent variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30th, between bottom 30th and top 30th, and top 30th percentile, respectively. All regressions are performed with a panel probit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, this study also documents their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

Appendix B Robustness checks for FAVg_TV

Panel Probit	FAvg_TV					
	(12)		(13)		(14)	
	Regression Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects
Constant	-0.952*** (0.353)		-1.018** (0.404)		-1.607*** (0.344)	
Board_Type	-0.735*** (0.159)	-0.185*** (0.0375)	-1.112*** (0.173)	-0.277*** (0.0404)	-0.712*** (0.148)	-0.165*** (0.0331)
Price_Level_L	-0.682*** (0.159)	-0.172*** (0.0399)				
Trade_Vol_L	0.0332 (0.143)	0.00836 (0.0360)				
Market_Cap_L	-0.889*** (0.185)	-0.224*** (0.0469)				
Price_Level_M			-0.208* (0.123)	-0.0519* (0.0306)		
Trade_Vol_M			0.0874 (0.114)	0.0218 (0.0285)		
Market_Cap_M			-0.111 (0.129)	-0.0277 (0.0323)		
Price_Level_H					0.914*** (0.148)	0.212*** (0.0321)
Trade_Vol_H					-0.133 (0.143)	-0.0310 (0.0331)
Market_Cap_H					0.791*** (0.154)	0.184*** (0.0344)
Mining Industry	0.638 (0.414)	0.160 (0.103)	0.673 (0.465)	0.168 (0.115)	0.511 (0.391)	0.119 (0.0904)
Basic Industry and Chemicals	0.586 (0.398)	0.147 (0.0997)	0.461 (0.442)	0.115 (0.110)	0.582 (0.373)	0.135 (0.0864)
Miscellaneous Industry	0.391 (0.427)	0.0985 (0.107)	0.219 (0.472)	0.0545 (0.118)	0.380 (0.397)	0.0883 (0.0923)
Consumer Goods Industry	0.555 (0.446)	0.140 (0.112)	0.641 (0.495)	0.160 (0.123)	0.616 (0.419)	0.143 (0.0971)
Property, Real Estate, and Building Construction	0.365 (0.395)	0.0919 (0.0993)	0.407 (0.443)	0.101 (0.110)	0.477 (0.371)	0.111 (0.0861)
Infrastructure, Utilities, and Transportation	0.442 (0.416)	0.111 (0.104)	0.413 (0.464)	0.103 (0.116)	0.507 (0.391)	0.118 (0.0909)
Financial Industry	1.026*** (0.388)	0.258*** (0.0959)	1.014** (0.433)	0.253** (0.107)	1.042*** (0.364)	0.242*** (0.0839)
Trade, Services, and Investment	0.908** (0.376)	0.228** (0.0933)	0.899** (0.420)	0.224** (0.104)	0.900** (0.352)	0.209** (0.0814)
Time-Fixed Effects	Included		Included		Included	
Log Likelihood	-764.5		-790.0		-748.1	
Chi-Squared	106.8		60.21		145.4	
Number of Obs.	1,609		1,609		1,609	

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this table, this study reports the second robustness checks using the second dependent variable, FAVg_TV. All independent variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30th, between bottom 30th and top 30th, and top 30th percentile, respectively. All regressions are performed with a panel probit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, this study also documents their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

Appendix C Robustness checks for FMed_FQ

Panel Probit	FMed_FQ					
	(15)		(16)		(17)	
	Regression Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects
Constant	-0.290 (0.495)		-0.311 (0.609)		-1.487*** (0.484)	
Board_Type	-1.766*** (0.280)	-0.281*** (0.0430)	-2.509*** (0.309)	-0.368*** (0.0629)	-1.656*** (0.263)	-0.227*** (0.0380)
Price_Level_L	-1.600*** (0.271)	-0.255*** (0.0445)				
Trade_Vol_L	-0.211 (0.221)	-0.0336 (0.0352)				
Market_Cap_L	-1.048*** (0.309)	-0.167*** (0.0513)				
Price_Level_M			0.0134 (0.177)	0.00196 (0.0260)		
Trade_Vol_M			-0.0564 (0.168)	-0.00828 (0.0247)		
Market_Cap_M			-0.671*** (0.185)	-0.0985*** (0.0273)		
Price_Level_H					0.911*** (0.211)	0.125*** (0.0279)
Trade_Vol_H					0.254 (0.195)	0.0348 (0.0268)
Market_Cap_H					1.290*** (0.200)	0.176*** (0.0248)
Mining Industry	-0.0877 (0.599)	-0.0140 (0.0955)	-0.000163 (0.720)	-0.0000239 (0.106)	-0.155 (0.570)	-0.0213 (0.0781)
Basic Industry and Chemicals	-0.607 (0.589)	-0.0966 (0.0931)	-0.962 (0.701)	-0.141 (0.102)	-0.468 (0.553)	-0.0640 (0.0754)
Miscellaneous Industry	-1.052 (0.644)	-0.167* (0.101)	-1.383* (0.755)	-0.203* (0.111)	-0.834 (0.600)	-0.114 (0.0819)
Consumer Goods Industry	-0.433 (0.645)	-0.0690 (0.102)	-0.371 (0.768)	-0.0544 (0.112)	-0.189 (0.609)	-0.0259 (0.0832)
Property, Real Estate, and Building Construction	-0.206 (0.566)	-0.0328 (0.0900)	-0.216 (0.682)	-0.0316 (0.0999)	-0.136 (0.533)	-0.0187 (0.0730)
Infrastructure, Utilities, and Transportation	-0.559 (0.603)	-0.0890 (0.0955)	-0.620 (0.719)	-0.0909 (0.105)	-0.410 (0.568)	-0.0561 (0.0775)
Financial Industry	-0.204 (0.562)	-0.0325 (0.0895)	-0.349 (0.674)	-0.0513 (0.0987)	-0.163 (0.530)	-0.0224 (0.0725)
Trade, Services, and Investment	-0.0159 (0.538)	-0.00254 (0.0857)	-0.0460 (0.645)	-0.00675 (0.0946)	0.117 (0.507)	0.0159 (0.0693)
Time-Fixed Effects		Included		Included		Included
Log Likelihood	-540.8		-562.9		-530.0	
Chi-Squared	126.2		102.9		152.7	
Number of Obs.	1,609	1,609	1,609	1,609	1,609	1,609

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this table, this study reports the third robustness checks using the third dependent variable, FMed_FQ. All independent variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30th, between bottom 30th and top 30th, and top 30th percentile, respectively. All regressions are performed with a panel probit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, this study also documents their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.

Appendix D Robustness checks for FMed_TV

Panel Probit	FMed_TV					
	(18)		(19)		(20)	
	Regression n Result	Marginal Effects	Regression Result	Marginal Effects	Regression Result	Marginal Effects
Constant	0.973** (0.455)	-	0.923* (0.555)	-	-0.135 (0.463)	-
Board_Type	-1.583*** (0.239)	0.336*** (0.0362)	-2.305*** (0.277)	-0.468*** (0.0402)	-1.587*** (0.236)	0.287*** (0.0397)
Price_Level_L	-1.143*** (0.202)	0.243*** (0.0411)	-	-	-	-
Trade_Vol_L	-0.138 (0.181)	-0.0292 (0.0384)	-	-	-	-
Market_Cap_L	-1.203*** (0.250)	0.255*** (0.0554)	-	-	-	-
Price_Level_M	-	-	0.158 (0.150)	0.0321 (0.0304)	-	-
Trade_Vol_M	-	-	-0.0537 (0.140)	-0.0109 (0.0285)	-	-
Market_Cap_M	-	-	-0.491*** (0.161)	-0.0998*** (0.0320)	-	-
Price_Level_H	-	-	-	-	0.713*** (0.197)	0.129*** (0.0349)
Trade_Vol_H	-	-	-	-	0.162 (0.177)	0.0293 (0.0320)
Market_Cap_H	-	-	-	-	1.437*** (0.199)	0.260*** (0.0302)
Mining Industry	-0.205 (0.538)	-0.0434 (0.114)	-0.0805 (0.649)	-0.0164 (0.132)	-0.271 (0.543)	-0.0490 (0.0982)
Basic Industry and Chemicals	-1.104** (0.535)	-0.234** (0.111)	-1.441** (0.636)	-0.293** (0.124)	-0.997* (0.534)	-0.180* (0.0951)
Miscellaneous Industry	-1.369** (0.589)	-0.290** (0.121)	-1.732** (0.692)	-0.352*** (0.132)	-1.191** (0.583)	-0.216** (0.103)
Consumer Goods Industry	-0.549 (0.588)	-0.117 (0.124)	-0.480 (0.700)	-0.0975 (0.142)	-0.249 (0.587)	-0.0450 (0.106)
Property, Real Estate, and Building	-0.335 (0.520)	-0.0712 (0.110)	-0.285 (0.627)	-0.0579 (0.127)	-0.261 (0.522)	-0.0473 (0.0945)
Infrastructure, Utilities, and	-0.683 (0.547)	-0.145 (0.115)	-0.703 (0.654)	-0.143 (0.131)	-0.554 (0.549)	-0.100 (0.0986)
Transportation	-0.209 (0.513)	-0.0443 (0.109)	-0.237 (0.616)	-0.0481 (0.125)	-0.127 (0.515)	-0.0231 (0.0932)
Financial Industry	-0.381 (0.492)	-0.0809 (0.104)	-0.471 (0.590)	-0.0957 (0.119)	-0.319 (0.493)	-0.0577 (0.0889)
Trade, Services, and Investment	-	-	-	-	-	-
Time-Fixed Effects	Included		Included		Included	
Log Likelihood	-651.7		-682.7		-642.7	
Chi-Squared	140.6		93.09		157.4	
Number of Obs.	1,609		1,609		1,609	

Notes: The dependent variables of this study are set in the form of binary variable that representing whether a stock is classified as stock that are dominantly traded by local or domestic investors (0) or stock that are dominantly traded by foreign investors (1). In this table, this study reports the fourth robustness checks using the fourth dependent variable, FMed_TV. All independent variables except the Board_Type are transformed from continuous into binary categorical variables using the percentile method. In particular, this study divides each variable into three forms and label them with low (L), medium (M), and high (H) if the observation value of that variable is in the range of the bottom 30th, between bottom 30th and top 30th, and top 30th percentile, respectively. All regressions are performed with a panel probit approach and included with the sector- and time-fixed effects. Other than the regression results which are showed in the first column of every dependent variables, this study also documents their marginal effects in the second column of every dependent variables in order to show the economic significance. The log likelihood and chi-squared are reported for every case in order to show the appropriateness of each model. *, **, *** indicates a significance level at 10%, 5%, and 1%, respectively.