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## Market reaction to director independence at Borsa İstanbul <sup>☆</sup>

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### Abstract

This study investigates the market reaction to appointments and departures of independent directors to boards and various board committees, as well as the magnitude of the market reaction based to the expertise and busyness of these directors. The findings suggest that investors in Turkish capital markets do not value the existence of independent directors on boards or committees of boards. In addition, the findings suggest that investors do not value the expertise of independent directors. However, investors appear to value the busyness of independent directors. The findings are robust to various model specifications.

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### 1. Introduction

The trend in developed markets in the last decade has been towards boards with a majority of independent directors. In the US stock markets, the legal reforms and laws, such as Sarbanes-Oxley Bill, and the regulations imposed by the stock exchanges require the majority of board members to be independent for public firms. In addition, these firms are required to have their audit committees comprised of all independent directors. Even though scholars still argue whether or not these requirements are necessary (Black & Kim, 2012; Boone, Field, Karpoff, & Raheja, 2007; Coles, Daniel, & Naveen, 2008; Karmel, 2014; Le Mire & Gilligan, 2013), boards in the US today are “more independent” compared to the pre-Bill period (Linck, Netter, & Yang, 2008). On the other hand, director independence at public

firms in Turkey has mainly received attention in the most recent years. As suggested by Ararat and Cetin (2008) and Ararat, Black, and Yurtoglu (2014), prior to the corporate governance reform of Turkey, a majority of firms did not have any independent directors on their boards. However, as the Principles of Corporate Governance (PCG) of Turkey became effective, requirements such as those in developed countries regarding director independence are imposed on Turkish public companies.

Boards of directors generally consist of both inside and independent directors. Inside directors, who are executives of firms, have valuable firm specific knowledge and they can deliver this information to outside board members. Still, these insiders are relatively more influenced by CEOs and their careers are more sensitively tied to CEOs, compared to independent directors. Thus, these individuals might not be able to evaluate and monitor CEOs effectively (Jensen, 1993).

This argument highlights the importance of independent directors. The proponents of independent directors argue that they could be considered as “more effective” monitors, compared to insiders since their careers are not tied to CEOs. Thus, they would be expected to be less influenced by CEOs, and be better monitors. Also, for these independent directors,

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reputational concerns would be very important, in terms of future opportunities to obtain additional board appointments in other firms (Hermalin & Weisbach, 1991; Masulis & Mobbs, 2014). Thus, independent directors could potentially be expected to have the incentives to be better monitors (Wang & Le, 2012). In addition, independent directors could be valuable sources for advising (Huang, Hsu, Khan, & Yu, 2008), which, alongside monitoring, is considered as one of the main responsibilities of board members (Arioglu & Kaya, 2015; Coles, Daniel, & Naveen, 2014). These directors could provide boards with valuable connections to external resources.

On the other hand, the biggest potential disadvantage of independent directors is that they could be expected to lack valuable firm specific information, at least when their tenure is not too long at the firm. However, this does not necessarily imply that independent board members would be totally uninformed (Ravina & Sapienza, 2010).

In light of these arguments, researchers have widely investigated the effects of the existence of independent directors on a variety of corporate issues. Gilson (1990) and Fich and Shivdasani (2007) provide evidence supportive of reputational concern arguments. Thus, one could expect independent directors to perform their monitoring functions effectively, leading to improved firm performance and value. However, the majority of empirical findings are not consistent with this expectation. Hermalin and Weisbach (1991), Mehran (1995), and Wintoki, Linck, and Netter (2012) find no relationship between the composition of the board and firm performance. Agrawal and Knoeber's (1996) evidence even suggests that more outsiders present on the board of the firm are negatively related to firm performance. However, Knyazeva, Knyazeva, and Masulis (2013) provide evidence suggesting that board independence has a positive impact on firm value.

Compared to the evidence provided in these studies, evidence suggestive of positive effects of independent directors on other corporate issues is more significant. Byrd and Hickman (1992) provide supportive evidence in acquisition process. Mehran (1995), Core, Holthausen, and Larcker (1999), and Harvey and Shrieves (2001) provide evidence supportive of positive effects in terms of compensation, whereas Weisbach (1988) provides supportive evidence in CEO removal process. Uzun, Szewczyk, and Varma (2004) find evidence supportive of positive effects on financial statement fraud likelihood. However, in contradiction with these findings, Guthrie, Sokolowsky, and Wan (2012) are not able to find a significant effect of board composition on CEO pay.

In other studies, Bradley and Chen (2015) find that the composition of boards has an effect on the risk taking by board members. Brochet and Srinivasan (2014) show that shareholders are likely to hold some independent directors more accountable, compared to other directors, when firms experience financial fraud. Armstrong, Core, and Guay (2014) argue that there might be a simultaneous relationship between board independence and transparency of the company. Ferreira, Ferreira, and Raposo (2011) find a negative relationship between board independence and price informativeness for stocks. Also, there are studies that link the

existence of independent directors on boards with CEO power (Boone et al., 2007; Linck et al., 2008).

Yet, the number of studies investigating director independence for Turkish capital markets is very limited. Ararat and Cetin (2008), Kaymak and Bektas (2008), and Caliskan and Icke (2009) investigate director independence at banks. Ararat, Aksu, and Cetin (2010) and Ararat, Orbay, and Yurtoglu (2010) investigate the relationship between independence and firm performance. Ararat et al. (2014) investigate the issue in a governance index context. Different from these studies, in this study I investigate the market reaction to the appointments (departures) of independent directors to (from) boards as well as their appointments to (departures from) various board committees. In addition, I investigate how the magnitude of the market reaction changes based on the expertise and busyness of these directors, which could potentially affect the monitoring capacities of independent directors. To achieve this goal, I use a hand-collected dataset that contains various characteristics of board members. In addition, I utilize from a dataset, which contains the announcements dates of director appointments and departures, that I created by reading each announcement submitted to the Public Disclosure Platform (PDP) by public firms. To cope with any potential concerns regarding econometric issues, I employ various (i) event window lengths, (ii) expected return estimation models, and (iii) market return variables, and conduct various significance tests based on the arguments in Basdas and Oran (2014). I believe that the findings of this study would provide valuable insights for scholars investigating corporate governance in emerging markets, as well as the policymakers in Turkish capital markets.

## 2. Regulatory background

In this Section, I summarize the regulations that are related to director independence in public firms quoted at the Borsa İstanbul.<sup>1</sup> In this study, the sample covers independent director appointments and departures that were announced between January 1, 2012 and June 30, 2014. Until January 3rd, 2014, the Communique Serial IV No 56 of Capital Markets Board of Turkey (CMB), which regulates the Principles of Corporate Governance of Turkey, was effective. Before I proceed, it should be noted that as opposed to some of the Articles of the PCG that are in the form of suggestions, the Articles regarding independent directors are mandatory for public firms.

The Article 4.3.3 of the PCG states that among the board members, who are not employed in the company as executives, there are independent board members. These

<sup>1</sup> Legal regulations are vital for the practices of companies and could directly or indirectly affect firm performance. Therefore, they could possibly affect investor behavior. In addition, regulations that concern the practices of companies would naturally have an effect on financial development and economic growth of a country (Akisik, 2013; Law, Azman-Saini, & Tan, 2014; Neyapti & Dincer, 2014).

independent board members perform their duties without being under any influence. The Article 4.3.4 states that the number of independent board members could not be less than one third of the total number of board members. When the company calculates this number, the remainder in the calculation would be considered as the following whole number. In addition, the number of independent board members would not be less than two, in any case. The Article 4.3.5 states that the term of office for these directors can be up to three years and these directors can be nominated as candidates for re-election.

While the Article 4.3.6 states that an individual, who has been a board member for six year in the previous ten years, could not be appointed to the board as an independent member, the Article 4.3.7 states, in detail, the necessary qualifications in order to be considered as an independent director. According to this Article, the independent member of the board should match the requirement that *“any direct or indirect employment capital or any important commercial relationship between the company, one of the related party of the company, the legal entities that are correlated with the shareholders having 5% or more of company capitals directly or indirectly in terms of administration and capital, and himself, his spouse, his relatives related by blood or affinity up to the third degree have not been established within five years”* (TKYD). The independent board member should also match the following requirement, as well; *“he has not worked and not been assigned as a board member in other companies who have conducted the whole or part of the company’s activity and organization within the framework of the agreements made with these companies, especially the companies providing audit, grading and consultancy services to the company, within the last five years”* (TKYD).

In addition, the same Article requires the individual to have not been a partner, employee or board member in any company, which has provided significant service or products to the company, in the last five years. Also, the individual, in the case that she is a shareholder of the company as a result of her position in the company’s board of directors, should not own more than 1% of the shares, which should not be privileged shares, of the company.

The same Article sets the requirement that the independent director has information, education and experience, related to her occupation that is sufficient to perform her duties as part of her board assignment. The independent member should not be employed full time in a public body or organization, once she is proposed as a candidate to become a board member. Faculty members are an exception to this requirement with the condition that she complies with the law and regulations that she is subject to. The independent board member is required to be deemed to reside in Turkey according to Turkish Income Tax Law, as well. This Article also states that the independent board member should have such ethical standards, occupational respect and experience that she can be able to make decisions freely in such a manner that she can contribute to the company activities, while conserving her impartiality with the conflicts of interests between company partners, and taking into account

the rights of stakeholders. Lastly, this Article highlights the importance of the independent board member having sufficient time to follow the company’s activities and perform director duties, as well.

An individual, who satisfies these criteria can be nominated as a candidate to become an independent member of the board. The Article 4.3.8 outlines the details of the procedure of nomination and election. A candidate to be nominated to be elected as an independent director is assessed by the Nomination Committee and the committee submits a report of this assessment to the board of directors for approval. The independent director candidate prepares and submits a statement, which is written, to the Nomination Committee stating that she satisfies the independence requirements according to the laws, the articles of association of the firm and the criteria stated in the PCG. Following the assessment report of the Nomination Committee, the board of directors prepares a candidate list and submits it to the CMB 60 days prior to the general assembly of the firm. If the CMB submits a negative opinion regarding the independence of director candidates on the candidate list, the candidate is not submitted to the general assembly of the firm as an independent director candidate. On the other hand, the Article 4.3.9 defines the procedure for instances which require the elimination of independence of the board member. The Article states that an independent director, who has lost her independence, resigns from the board after informing the board about the change in her state of independence and the change is announced to the public. In this case, the Nomination Committee assesses the candidates for the emptied seat and submits the assessment to the board of directors by the first general assembly of the firm so that the requirements regarding the minimum number of independent directors on the board is re-ensured. Unless the CMB has a negative opinion, the director that is appointed as an independent director serves on the board of directors until the first general assembly of the firm (TKYD).

In addition to these Articles, another point is important. The Communique defines firms in three groups according to their market values and the market values of active shares that are in circulation. Based on these groups, some requirements such as those regarding director independence are not applied to firms in certain groups. Therefore, I also summarize the Articles of the Communique that state the group definitions and the application of certain Articles of the PCG that are related to director independence.

The Article 5 of the Communique defines the firms in the “First Group” as those whose average share values are over 3 billion TL and the average market value of shares in circulation are over 750 million TL. On the other hand, the firms in the “Second Group” are those whose average share values are over 1 billion TL and the average market value of shares in circulation are over 250 million TL, excluding the firms in the First Group. Lastly, the firms in the “Third Group” are defined as those that are quoted at the BIST and are not quoted in the Growing Business Market and the Watchlist Companies Market of the BIST. The firms in the First Group and Second Group are excluded from the Third Group (TKYD).

For instance, the Article 5 of the Communique states that the sub-section 3 of the Article 4.3.8 and the sub-section 2 of the Article 4.3.9 will not be applied to the public firms that are in the Second Group and the Third Group. These sub-sections concern the opinion about director independence by the CMB. In addition, the Article 5 of the Communique also states that criteria about the minimum number of independent directors as stated in the Article 4.3.4 of the PCG does not apply to firms in the Third Group in the case that the CMB find it suitable. In such public firms, two independent directors will be sufficient (TKYD). These Articles point out to the importance of director independence in the three Groups. Therefore, in the following sections, I perform tests on independent director appointments and departures based which group the public firms in the sample are in.

In addition, some other Articles in the Communique and the PCG should be stated since they also concern director independence. Sub-section (7) of the Article 5 of the Communique state that for the purpose of shareholder rights protection, in the existence of reasonable circumstances, independent director candidates that do not comply with one or more of the independence criteria could be chosen at the general assembly as independent directors if the CMB approves it. This appointment would be temporary limited to a maximum of one year. In addition, sub-section (8) of the Article 5 of the Communique states that fulfilling at least half of the independent directors is sufficient in order to comply with the independence criterion regarding independent directors being deemed to reside in Turkey according to Turkish Income Tax Law in the Article 4.3.7 of the PCG (TKYD).

Lastly, the Article 4.5.1 of the PCG states that all members of audit committees are required to be independent directors, whereas the chairmen of other committees in boards are required to be independent directors. This Article points out to the importance of director independence in providing additional oversight over the board by committees, members of which would be expected to have professional expertise so that they can perform their duties more effectively. Motivated by this argument, I investigate the importance of the professional expertise of independent directors in the following sections.

Before proceeding, it should be noted that on January 3rd, 2014, the new Corporate Governance Communique II-17.1 regarding the PCG was announced on the Official Gazette, which revoked the Communique Serial IV No 56 of Capital Markets Board of Turkey (CMB). However, the new Communique did not change the criteria for classifying firms into three groups based on market values. In addition, the new Communique does not impose requirements regarding director independence that is substantially different from the previous one in a manner that it would affect the motivation and findings of this study. An Article that is important for this study is the Article 4.3.10 of the new PCG based on the new Communique. This Article suggests that at least one of the members of the audit committee has experience of five years in the fields of auditing/accounting and finance. This is a relevant topic I investigate in the following sections of the study.

### 3. Data and methodology

In its most basic form, PCG defines board members, who are not employed in the company as executives, as independent directors. In order to investigate market reaction to independent director changes, I analyzed announcements submitted to the Public Disclosure Platform by firms quoted at the Borsa Istanbul (BIST) between January 1, 2012 and June 30, 2014. I only included announcements submitted to the PDP since firms quoted at the BIST are required to notify the PDP regarding important corporate events. To identify all the news and events to be included in my sample, I read each announcement submitted to the PDP by public firms during the sample period. Due to the models I employ to estimate expected returns, I excluded announcements submitted by **any** type of financial firm, such as banks, factoring firms, insurance firms, and REITs. This resulted in a sample of announcements submitted to the PDP by 368 firms. However, it should be noted that some of these firms did not submit any announcements regarding independent directors.

Since event studies aim to investigate the unexpected impact of certain events on security prices, I included only unexpected announcements in my sample (Basdas & Oran, 2014). For example, if director X's term as a board member is known to end on a certain date and she leaves the board on that date, the announcement of her departure was not included in the sample. However, if director Y resigns from the board unexpectedly, then her departure was included in the sample. In addition, only isolated events were included in the sample. For example, if director Z will leave the board at a future date and the firm announces her departure at an annual meeting, this announcement was not included in the sample since numerous other announcements regarding corporate issues are made at the annual meeting as well. In this case, it would not be possible to separately measure the effect of each announcement on stock prices. Also, to prevent potential effects of survivorship bias, I included announcements made by firms that are delisted in subsequent periods. My final sample included announcements regarding 233 independent director appointments, 92 independent director departures. In addition, to provide insight to the readers regarding how investors react to the appointments and departures of directors that are not independent, I also analyzed the market reaction to 189 inside director appointments and 238 inside director departures.

Other data employed through the analyses in the paper were gathered from various official data sources. Monthly return data required for creating momentum portfolios employed in 4 factor model (4FM) and daily stock returns were gathered from Finnet, which is a data provider for firms quoted at the BIST. Data regarding stock market indices, market values, and book-to-market values for firms were obtained from the Borsa Istanbul. Financial statements were gathered from İş Yatırım, which is also a data provider for firms quoted at the BIST. Lastly, data about director and firm characteristics were collected manually from the annual reports and official webpages of firms. Following the concerns discussed in Basdas and Oran (2014), returns calculated by

employing adjusted price series, rather than raw price series, were employed in the calculation of daily and monthly returns. These series consider events such as stock splits, dividend payments and increases in capital (Berument, Ceylan, & Onar, 2013; Canbas & Kandir, 2009).

A majority of the previous studies investigating abnormal returns around various events for Turkish capital markets employ the following models to estimate unexpected returns: (i) returns on index (Mandaci, 2003), (ii) the simple market model (Aygoren & Uyar, 2007; Binici & Koksall, 2013; Demir & Danis, 2011), (iii) market adjusted returns (Uludag & Gulbudak, 2010; Yilmaz & Gulay, 2006), (iv) the capital asset pricing model (Batchelor & Orgakcioglu, 2003), and (v) the mean adjusted volatility (Onder & Simga-Mugan, 2006). However, Ahern (2009) argues that these models could potentially generate biased results. On the other hand, Tahaoglu and Guner (2011) employ the 3 factor model (3FM). In this study, I applied both the 3FM and the 4FM to estimate expected returns for stocks, which is a common practice in studies investigating reactions to corporate events in developed markets. Numerous studies regarding developed markets argue that these models outperform standard capital asset pricing models in explaining the variation in stock returns (Fama & French, 1993, 2012) and that they generate less skewed abnormal returns (Ahern, 2009). For Turkish capital markets, Unlu (2012) provide evidence that these models capture the variation in stock returns of firms quoted at Borsa Istanbul. Readers interested in the details of these models can consult Fama and French (1993), Carhart (1997), and Fama and French (2012).

Via these models, I estimated the coefficients based on various estimation windows for each firm's stock  $i$ . Then, I utilized these coefficients to calculate the expected returns for stock  $i$ . The difference between the realized return and the expected return is the abnormal return. I repeated this procedure for each firm in the sample. As is customary (MacKinley, 1997), I calculated cumulative abnormal returns (CARs) over various event windows. Then I calculated CAARs as cumulative abnormal average returns.

Based on earlier studies (Ahern, 2009; Falato, Kadyrzhanova, & Lel, 2014; Giroud & Mueller, 2010; Masulis, Wang, & Xie, 2007), I employed 240 previous trading days as the estimation window. As is standard in the literature, the estimation window did not include the days immediately prior to the event (Ahern, 2009). In addition, I employed  $(-10,+10)$ ,  $(-5,+5)$ ,  $(-1,+1)$  and  $(0)$  as alternative event windows consistent with the methodologies of previous studies (Dittmar & Field, 2015; Hsu, Reed, & Rocholl, 2010; Kruger, 2015).

The significance of these CARs is investigated using various tests commonly employed in the literature, which consider the distribution of CARs. I employed the following parametric tests based on previous literature: (i) BMP test, and (ii) cross-sectional t-test. In addition, I use a sign test as an alternative non-parametric test. A non-parametric could be econometrically considered as better specified and more powerful compared to parametric tests due to the underlying normality

assumptions of parametric tests. I employed both parametric and non-parametric tests for robustness, as it is standard in finance literature.

## 4. Results

### 4.1. Board appointments and departures

In this section, I present findings regarding the appointments and departures of independent directors, as well as the appointments and departures of inside directors. Based on more effective monitoring arguments, one could expect the markets to respond positively (negatively) to the appointments (departures) of independent directors to (from) boards.

There are various studies investigating the market reaction to independent director changes. Rosenstein and Wyatt (1990), Mak, Sequeira, and Yeo (2003) and Masulis, Ruzzier, Xiao, and Zhao (2012) find significant positive market reaction around independent director appointments. However, Lin, Pope, and Young (2003) and Gunasekarage and Reed (2008) find no significant market reaction to the appointment of independent directors to boards. On the other hand, Nguyen and Nielsen (2010) find significantly negative returns following the unexpected deaths of independent directors. Bhagat and Bolton (2013) find evidence of positive market reaction when companies comply with legal director independence requirements as a result of adding independent directors to boards.

The findings of this study are presented in Table 1. What is observed is that the markets react positively to the appointment of independent directors to boards on the event days and the most immediate days surrounding them. However, the CAARs are not statistically significant at 95% level. What is also observed in the Table is that the markets react negatively to the departures of independent directors from boards. However the negative reaction is not significant when one considers the CAARs on the event day and the most immediate days surrounding it. When CAARs  $(-5,+5)$  and  $(-10,+10)$  are considered, the negative CAARs are statistically significant. In the case of inside director departures from boards, negative CAARs are observed for 3 day and 10 day event windows surrounding the departures, whereas positive CAARs are observed on the event day and the 20 day event window around the event. Yet, none of these CAARs are statistically significant.

Overall, based on the evidence regarding the most immediate market reaction surrounding independent director changes in Table 1, one cannot suggest that investors in Turkish capital markets value the existence of independent directors on boards.

### 4.2. Committee appointments and departures

Even though the board of directors exists in order to ensure that the interests of minority shareholders are protected, one could argue that some members of the board could avoid their responsibilities. Committees of boards are one of the potential

Table 1  
Market reaction to director changes: Independents versus insiders.

	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.287%	233	1.83	1.84	0.85
Independent Director Departure	-0.208%	92	-0.63	-0.94	0.00
Inside Director Appointment	0.280%	189	1.25	0.56	0.65
Inside Director Departure	0.277%	238	1.76	1.15	-0.25
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.300%	233	1.46	0.51	1.50
Independent Director Departure	-0.276%	92	-0.68	-0.95	-0.62
Inside Director Appointment	-0.073%	189	-0.28	-1.39	-0.65
Inside Director Departure	-0.046%	238	-0.21	-1.46	-0.51
	CAAR (-5,+5)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	-0.081%	233	-0.11	-0.82	-1.24
Independent Director Departure	-3.807%	92	-2.48	-2.33	-1.65
Inside Director Appointment	0.399%	189	0.50	-0.24	1.09
Inside Director Departure	-0.144%	238	-0.22	-1.38	-0.90
	CAAR (-10,+10)	Number of events	Cross-Sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.036%	233	0.04	-0.58	-1.71
Independent Director Departure	-4.595%	92	-2.68	-2.42	-2.29
Inside Director Appointment	0.565%	189	0.61	-0.15	-1.52
Inside Director Departure	0.300%	238	0.39	-0.55	-2.00

4 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

mechanisms to prevent such problems. It is possible that the characteristics of these directors such as their independence could have an impact on the effectiveness of their monitoring (Dionne, Chun, & Triki, 2013). Based on the argument that independence directors could provide more effective monitoring, one could expect the markets to react positively (negatively) to the appointments (departures) of independent directors to (from) board committees. Thus, the next set of findings concern the appointments of (departures)

independent directors to (from) the governance and the risk committees of the boards. It should be noted that I do not investigate the market reaction concerning the changes of independent auditing committee members since every member of these committees must be independent according to legal regulations.

The findings are presented in Table 2. What is observed in the Table is that the CAARs surrounding the appointment of independent directors to risk committees are negative, except

Table 2  
Committee appointments and departures of independent directors.

	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Risk Comm. Appointment	-0.006%	162	-0.02	1.00	-0.15
Risk Comm. Departure	-0.302%	17	-0.47	0.13	1.69
Governance Comm. Appointment	0.272%	101	1.13	1.31	-0.09
Governance Comm. Departure	-1.469%	24	-2.28	-2.13	-0.81
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Risk Comm. Appointment	-0.063%	162	-0.17	0.80	0.00
Risk Comm. Departure	0.910%	17	1.48	2.11	1.69
Governance Comm. Appointment	0.228%	101	0.72	0.67	0.89
Governance Comm. Departure	-1.524%	24	-1.74	-1.28	-0.81
	CAAR (-5,+5)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Risk Comm. Appointment	0.202%	162	0.26	0.98	0.31
Risk Comm. Departure	-0.783%	17	-0.42	-0.28	0.24
Governance Comm. Appointment	-0.520%	101	-0.60	-0.69	-1.09
Governance Comm. Departure	-3.424%	24	-1.30	-1.23	-0.40
	CAAR (-10,+10)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Risk Comm. Appointment	-1.188%	162	-1.00	-0.60	-1.72
Risk Comm. Departure	-2.446%	17	-0.71	-0.58	-0.72
Governance Comm. Appointment	-0.200%	101	-0.18	0.01	-0.29
Governance Comm. Departure	-5.236%	24	-1.53	-1.41	-1.22

4 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

the CAAR in the event window of ten days around the appointments. Yet, none of these CAARs are significantly distinguishable from zero. In terms of departures of independent directors from risk committees, the CAARs surrounding these departures are negative, except the CAAR in the event window of three days surrounding the appointments. However, once again these CAARs are not statistically significant.

The Table also presents CAARs surrounding the appointments (departures) of independent directors to (from) governance committees. The CAARs on the appointment days and the most immediate three days surrounding them are positive, whereas they are positive for longer event windows. However, none of these CAARs are significantly different than zero. On the other hand, substantial negative CAARs are observed around the departures of independent directors from governance committees. On the event day, the CAAR is  $-1.46\%$  and statistically significant. Higher negative CAARs are observed as the event window extends. However, they are not statistically significant.

Based on the overall evidence presented in Table 2, one could suggest that even though the markets react negatively to the departures of independent directors from governance committees, investors do not seem to value the appointments (departures) of independence directors to (from) the committees of boards. In addition, in untabulated results, it is also observed that the market does not react significantly to the appointments and departures of directors to committees of boards, regardless of their independence.

### 4.3. Director expertise

The expertise of directors is a phenomenon extensively investigated in the literature. Researches argue that expert

directors such as financial and accounting experts, lawyers and academicians could provide boards various benefits (Anderson, Reeb, Upadhyay, & Zhao, 2011; Defond, Hann, & Hu, 2005; Francis, Hasan, & Wu, 2014; Guner, Malmendier, & Tate, 2008), even though their existence in the boardroom could also bring some costs (Agrawal & Chadha, 2005; Jiang & Murphy, 2007). In a recent study, Masulis et al. (2012) provide evidence of significant positive returns around the appointments of independent expert directors. Motivated by their finding and the arguments in the studies mentioned and the fact that a nontrivial number of independent directors appointed to boards by firms are financial experts, lawyers and academicians, in this subsection, I investigate whether the market reacts differently to independent director appointments and departures based on their expertise. If the markets value the expertise of independent directors, one could expect the markets to react positively (negatively) to the appointments (departures) of expert independent directors to (from) boards.

I define a financial expert as a director who was/is on the board, or has been or currently is the CEO of a financial institution. I define a director that is certified as a CPA or equivalent as an accounting expert. Due to the low number of observations, I define a director as an expert director if she is a financial expert, or an accounting expert, or a lawyer or a professor.

The findings are presented in Table 3. The Table shows that the market reacts positively to the appointments of expert independent directors to boards. Yet, the market reaction is statistically significant only on the event day. However, the market reacts positively to the departure of expert independent directors on the event day and the three days surrounding the departures as well. On the other hand, the CAARs for the ten days and 20 days surrounding the departure of expert independent

Table 3  
Expertise of independent directors.

	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Expert Director Appointment	0.417%	123	2.06	1.99	1.97
Expert Director Departure	0.183%	47	0.36	-0.11	0.72
Non-Expert Director Appointment	0.247%	94	0.98	1.14	-0.82
Non-Expert Director Departure	-0.916%	32	-1.82	-1.75	-0.70
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Expert Director Appointment	0.504%	123	1.65	1.21	2.61
Expert Director Departure	0.630%	47	1.05	0.68	1.60
Non-Expert Director Appointment	0.280%	94	0.95	0.01	0.00
Non-Expert Director Departure	-1.655%	32	-2.50	-2.32	-2.82
	CAAR (-5,+5)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Expert Director Appointment	0.861%	123	0.82	0.24	-0.09
Expert Director Departure	-4.039%	47	-1.52	-1.33	-0.43
Non-Expert Director Appointment	-1.284%	94	-1.33	-1.78	-1.85
Non-Expert Director Departure	-3.995%	32	-1.94	-1.90	-1.06
	CAAR (-10,+10)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Expert Director Appointment	0.397%	123	0.33	-0.12	-1.35
Expert Director Departure	-4.480%	47	-1.66	-1.45	-0.79
Non-Expert Director Appointment	-0.765%	94	-0.58	-1.07	-1.44
Non-Expert Director Departure	-3.689%	32	-1.47	-1.37	-1.76

4 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

directors are around  $-4\%$  even though they are not statistically significant.

In terms of the appointments of non-expert independent directors to boards, the market reaction is positive on the event day and the three days surrounding it, whereas it is negative in the ten and twenty days surrounding the appointments. Still, none of these CAARs are statistically significant. Surprisingly, the markets react negatively to the departures of non-expert independent directors from boards and the CAARs are significant at 90% level on the event day and the ten days surrounding the departures, and at 95% for the three days surrounding the departures.

Overall, based on the evidence in the Table, one could argue that the markets do not value the expertise of independent directors highly.

#### 4.4. Director busyness

As mentioned earlier, independent directors could be expected to be more effective monitors than inside directors. However, it could be argued that these directors might not necessarily be more effective, especially if they hold directorships in other firms' boards of directors. They might not be able to put enough effort and time into their monitoring duties as a result of being busy (Ferris, Jagannathan, & Pritchard, 2003; Field, Lowry, & Mkrtychyan, 2013). Still, since they would be expected to gain additional skills and expertise through additional directorships, they could potentially provide boards and CEOs with improved advising (Coles et al., 2014; Faleye, Hoitash, & Hoitash, 2013; Kim, Mauldin, & Patro, 2014).

Ferris et al. (2003), Fich and Shivdasani (2006), and Masulis and Mobbs (2011) provide evidence suggesting that the markets

do not favor directors becoming busy. In addition, Mak et al. (2003) provide evidence of positive market reaction to the appointments of independent directors to boards for Singaporean firms. They show that among independent directors, directors with multiple board memberships are especially favored by the markets. Motivated by these findings and the arguments just mentioned, I investigate whether the market reaction to independent director changes differs for busy directors compared to non-busy directors.

Thus, in this section, I present findings regarding whether or not investors value the busyness of independent directors. If the market values the additional advisory skills of these directors higher than any potential costs of decreased monitoring capabilities, one could expect to observe positive (negative) market reaction to the appointments (departures) of busy independent directors to (from) boards. A director is considered busy if she is on the boards of at least three companies that are not non-profits.

The results are presented in Table 4. The findings in the Table suggest that the markets react positively to the appointments of busy independent directors to boards. However, only the CAAR for the three days surrounding the appointments is statistically significant.

On the other hand, the market reacts negatively to the departure of busy independent directors. The CAARs are significant on the event day and for the 20 days surrounding the departures at 95% level, whereas the CAARs for the three days and ten days surrounding the departures are significant at 90% level.

In terms of non-busy independent director changes in boards, the Table shows that investors react positive to the appointments of non-busy independent directors on the event days and the three days surrounding them. However, the CAARs are not statistically significant at 95% level. As the

Table 4  
Busyness of independent directors.

	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Busy Director Appointment	0.286%	70	1.20	1.70	1.91
Busy Director Departure	-1.131%	34	-2.96	-2.52	-2.40
Non-Busy Director Appointment	0.354%	129	1.69	1.51	0.26
Non-Busy Director Departure	0.344%	50	0.65	0.15	1.41
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Busy Director Appointment	1.162%	70	3.06	2.40	1.91
Busy Director Departure	-0.993%	34	-1.74	-1.46	-0.68
Non-Busy Director Appointment	0.152%	129	0.55	0.02	2.02
Non-Busy Director Departure	0.154%	50	0.25	-0.27	-0.28
	CAAR (-5,+5)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Busy Director Appointment	1.476%	70	1.26	0.68	-0.23
Busy Director Departure	-5.662%	34	-1.74	-1.57	-0.68
Non-Busy Director Appointment	-0.661%	129	-0.65	-0.87	-0.26
Non-Busy Director Departure	-3.464%	50	-1.99	-2.12	-1.41
	CAAR (-10,+10)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Busy Director Appointment	0.665%	70	0.51	-0.05	-2.39
Busy Director Departure	-7.470%	34	-2.49	-2.01	-1.71
Non-Busy Director Appointment	-0.292%	129	-0.23	-0.46	-0.26
Non-Busy Director Departure	-3.660%	50	-1.56	-1.60	-1.69

4 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.



event window extends, the signs of the CAARs become negative. Still, they are not statistically significant either. Similar patterns are observed for non-busy independent director departures.

Based on these findings, one could argue that the markets value whether the independent directors that are appointed to (depart from) boards are busy or not. It appears that the investors value the benefits of buys directors in the form of increased advising capabilities higher than the potential costs of decreased monitoring capabilities.

## 5. Additional tests

### 5.1. Differences across firm groups based on Communiques

Both the old Communique and the new Communique group public firms into 3 groups based on the same criteria as mentioned in the previous sections. Based on these groupings, firms in the third group are exempt from various regulations stated in some of the Articles of the PCG. For example, a

relevant Article of the Communique states that for firms in the third group, two independent directors would be enough and the criteria stated in the relevant Article of the PCG regarding the minimum number of independent directors on boards is revoked for these firms. Therefore, it would be interesting to investigate whether the market reaction changes based on which group the firm is in. Thus, in this sub-section, I investigate the market reaction to director changes in each group separately. The findings are presented in Table 5.

Table 5 shows that sign and magnitude of CAARs change based on firm groupings. When the CAARs on the announcement days of independent director appointments are considered, it is observed that the CAAR for the first group is 0.668%, which is statistically significant. For the firms in the second and third groups, the CAARs are 0.077% and 0.265%, respectively. However, these CAARs are not statistically significant. On the other hand, the CAARs in the three days surrounding the announcements of independent director appointments are 0.032%, -0.796% and 0.614% for the first, second and third

Table 5  
Market reaction to director changes based on Communique groupings.

Panel A: Group 1 Firms – Market Value of Shares over 750.00 Million TL					
	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.668%	31	2.69	2.46	0.89
Independent Director Departure	0.445%	17	0.85	0.93	1.21
Inside Director Appointment	-0.335%	66	-1.74	-1.61	-0.73
Inside Director Departure	-0.106%	85	-0.57	-0.79	-1.19
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.032%	31	0.11	0.01	0.53
Independent Director Departure	-0.113%	17	-0.22	-0.18	-0.24
Inside Director Appointment	-0.487%	66	-1.45	-1.50	-1.47
Inside Director Departure	-0.425%	85	-1.58	-1.66	-1.41
Panel B: Group 2 Firms – Market Value of Shares between 250.00 Million TL and 749.99 Million TL					
	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.077%	39	0.22	0.40	0.80
Independent Director Departure	-0.499%	11	-0.48	-0.29	-0.90
Inside Director Appointment	0.904%	34	2.62	2.59	2.05
Inside Director Departure	0.703%	36	2.64	2.65	2.33
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	-0.796%	39	-1.57	-1.57	-0.80
Independent Director Departure	-0.919%	11	-1.07	-0.90	-0.30
Inside Director Appointment	-0.121%	34	-0.31	-0.68	1.02
Inside Director Departure	-0.233%	36	-0.69	-1.33	0.33
Panel C: Group 3 Firms – Market Value of Shares under 249.99 Million TL					
	CAAR (0)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.265%	163	1.39	1.17	0.23
Independent Director Departure	-0.332%	64	-0.79	-1.43	-0.25
Inside Director Appointment	0.499%	89	1.15	0.72	0.31
Inside Director Departure	0.425%	117	1.54	1.25	-0.64
	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.614%	163	2.37	1.47	1.95
Independent Director Departure	-0.209%	64	-0.38	-0.68	-0.50
Inside Director Appointment	0.250%	89	0.54	-0.24	-0.31
Inside Director Departure	0.288%	117	0.80	0.02	0.27

4 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

group, respectively. Among these, only the CAAR for the third group is statistically significant.

Table 5 also shows the CAARs surrounding the announcements of independent director departures for the three groups separately. The CAARs on the days of these announcements are 0.445%, –0.499% and –0.332% for the first, second and third group, respectively. None of these CAARs are statistically significant. The CAARs for the three days surrounding these announcements are –0.113%, –0.919% and –0.209% for the first, second and third group, respectively. Once again, none of the CAARs are statistically significant.

The CAARs on the days of the announcements and the three days surrounding the announcements do not present a pattern that would suggest that market reaction to independent director appointments and departures changes monotonically based on market value of firms. However, it would be possible that the market reaction to director changes among independent and inside directors could change with various firm characteristics such as market value. That is what is investigated next.

### 5.2. Independent directors versus inside directors

In section 4, I present CAARs surrounding appointments and departures of directors that are independent and that are insiders. However, I do not compare the CAARs in-between these groups. For instance, one could argue that an approach that compares the CAARs between independent director appointments (departures) and inside director appointments (departures) for different firms could not constitute a realistic counterfactual. To cope with such a concern, I intend to utilize propensity score matching methods. Via these methods, one could reduce potential biases in non-randomized experiments by creating populations that are systematically similar as a result of matching samples and control groups based on various covariates (Ho, Imai, King, & Stuart, 2007; Rosenbaum & Rubin, 1985).

The first step of such an analysis is to test whether there exists a relationship between director independence and the estimated CARs. In other words, one needs to test whether director independence affects CARs surrounding director appointments and departures. Only then, one can proceed with estimating propensity scores to analyze whether investors react differently to the appointments (departures) of independent and inside directors differently based on various firm characteristics. Unfortunately, this is not the case as can be observed in Table 6.

Table 6 presents the results of the tests that investigate a potential relationship between director independence and CARs on the event days for two sub-samples: (i) a sub-sample that includes the appointments of both inside and independent directors, and (ii) a sub-sample that includes the departures of both inside and independent directors. Based on these figures, one cannot argue that director independence is associated with the CARs surrounding director appointments and departures. Therefore, I do not proceed with propensity score matching based comparison for the CAARs surrounding the appointments and departures of independent and inside directors.

Table 6

Test of a potential relationship between director independence and CARs.

	Estimate	Standard error	t value	Pr >  t
<b>Director appointments</b>				
Intercept	0.002807	0.001936	1.45	0.14
Independent	0.000068	0.002605	0.03	0.97
<b>Director departures</b>				
Intercept	0.002775	0.001715	1.62	0.11
Independent	–0.004864	0.003249	–1.50	0.13

## 6. Conclusions

In this study I investigate the market reaction to the appointments (departures) of independent directors to (from) boards as well as their appointments to (departures from) various board committees. Motivated by the findings of previous studies, I also investigate how the magnitude of the market reaction changes based on the expertise and busyness of these directors.

I am unable to provide evidence to suggest that investors in Turkish capital markets value the existence of independent directors on boards of public firms. The market reactions surrounding independent director appointments are positive, yet they are not statistically significant at 95% level. On the other hand, market reactions to independent director departures are negative. However, the reactions are not statistically significant on the days of departures and the three days surrounding the departures. Similarly, I am unable to provide evidence to suggest that investors value the existence of independent directors on the committees of boards, even though the market reaction on the days of independent director departures from governance committees are statistically significant. In addition, investors do not appear to value whether the independent directors are experts in specific areas or not. It is only the market reaction on the day of independent expert director appointments that is statistically significant. Lastly, the evidence suggests that the markets value whether the independent directors that are appointed to (depart from) boards are busy or not, especially on the most immediate days surrounding the appointments and departures of independent directors that are also busy. In addition, additional analysis provides evidence suggesting that market reaction to independent director appointments and departures does not change monotonically based on market value of firms. Overall, I am unable to provide evidence suggesting that investors in Turkish capital markets value director independence. The findings are robust to various model specifications as can be observed in the Appendix.

As Claessens and Yurtoglu (2013) argue emerging markets could be characterized as having weaker corporate governance mechanisms, compared to developed markets. The main agency problems in emerging markets exist between minority shareholders and controlling shareholder, rather than between managers and outside shareholders, as it is the case of developed markets (Claessens & Yurtoglu, 2013). The mechanisms that are being imposed by regulators and policymakers in order to protect the benefits of minority shareholders might not be as effective as they are in developed countries if the institutional

structure is not fully developed and small shareholders do not believe that their rights are protected to the full extent by legal authorities. If investors believe that firms appoint independent directors just to comply with regulations, rather than to ensure that small shareholders' best interests are considered, they might not value the existence of independence directors on boards or committees of boards. Thus, the reaction of investors to director independence in developed markets might not be observed in emerging markets.

Policymakers should be aware of the fact that corporate governance mechanisms and applications in a country could have direct or indirect effects on the economic growth, employment and poverty of the country, as well as improved performance and efficiency at the firm level, and more developed financial markets (Claessens & Yurtoglu, 2013). Thus, a sound corporate governance environment in a country could be

considered an important factor in a country's ability to attract more cross-border investments and portfolio investments (Bhagat, Malhotra, & Zhu, 2011; Rossi & Volpin, 2004).

If the authorities that are in charge of Turkish economy aim the Turkish capital markets to be able to compete against not only other emerging markets, but also developed countries for economic resources that are scarce in their nature, they should focus on the differences between the behaviors of investors in capital markets of developed countries and Turkish capital markets. Therefore, I believe that the evidence I provide in this study could be a valuable resource for policymakers and regulators in Turkish capital markets in understanding how the behavior of participants of financial markets in Turkey differ from those in developed economies.

## Appendix.

Table 7  
Robustness Tests – 3 Factor Model with XTUM as Market Return.

	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.342%	233	1.65	0.68	1.37
Independent Director Departure	-0.349%	92	-0.83	-1.13	-1.25
Insider Director Appointment	-0.083%	189	-0.32	-1.41	-0.50
Insider Director Departure	-0.075%	238	-0.36	-1.58	0.12
Risk Comm. Appointment	-0.140%	162	-0.38	0.56	-0.15
Risk Comm. Departure	0.761%	17	1.27	1.89	1.21
Governance Comm. Appointment	0.124%	101	0.38	0.45	0.29
Governance Comm. Departure	-1.699%	24	-1.88	-1.45	-0.81
Expert Director Appointment	0.566%	123	1.88	1.37	2.43
Expert Director Departure	0.521%	47	0.81	0.47	0.72
Non-Expert Director Appointment	0.266%	94	0.87	0.01	0.00
Non-Expert Director Departure	-1.762%	32	-2.61	-2.50	-2.82
Busy Director Appointment	1.196%	70	3.15	2.48	1.91
Busy Director Departure	-1.212%	34	-1.91	-1.65	-1.02
Non-Busy Director Appointment	0.219%	129	0.78	0.19	1.84
Non-Busy Director Departure	0.061%	50	0.09	-0.43	-0.84

3 Factor Model is employed to estimate expected returns for stocks. The return for the XTUM (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

Table 8  
Robustness tests – 4 factor model with X100 as market return.

	CAAR (-1,+1)	Number of events	Cross-sect. t-test	BMP t-test	Sign Test
Independent Director Appointment	0.299%	233	1.45	0.50	0.98
Independent Director Departure	-0.281%	92	-0.69	-0.95	-0.62
Insider Director Appointment	-0.064%	189	-0.25	-1.34	-0.80
Insider Director Departure	-0.036%	238	-0.17	-1.42	-0.64
Risk Comm. Appointment	-0.050%	162	-0.14	0.85	0.00
Risk Comm. Departure	0.884%	17	1.43	2.06	1.69
Governance Comm. Appointment	0.234%	101	0.73	0.69	0.89
Governance Comm. Departure	-1.538%	24	-1.74	-1.27	-0.81
Expert Director Appointment	0.504%	123	1.65	1.21	2.25
Expert Director Departure	0.616%	47	1.03	0.67	1.60
Non-Expert Director Appointment	0.277%	94	0.94	-0.01	-0.20
Non-Expert Director Departure	-1.656%	32	-2.49	-2.31	-2.82
Busy Director Appointment	1.165%	70	3.06	2.39	1.91
Busy Director Departure	-0.997%	34	-1.76	-1.48	-0.68
Non-Busy Director Appointment	0.150%	129	0.54	0.02	1.49
Non-Busy Director Departure	0.148%	50	0.24	-0.28	-0.28

4 Factor Model is employed to estimate expected returns for stocks. The return for the X100 (the index that includes all the stocks traded at the BIST) is employed as the market return. The sample includes all the firms traded at the BIST.

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