The Review of Financial Studies

Shareholder Perks and Firm Value

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Shareholder perks are in-kind gifts or purchase discounts that disproportionately reward small shareholders. Data from Japanese firms indicate that firms initiating perk programs attract individual retail shareholders and experience increases in share values. We find support for three channels by which perks increase firm value: an increase in share liquidity, a decrease in the equity cost of capital, and signaling to investors. A fourth channel, by which perks help to market the firm's products to consumers, receives mixed support. We do not find evidence that perk programs work to entrench managers. (*JEL* G14, G30, G35, M30)

Received August 13, 2018; editorial decision November 3, 2020 by Editor Wei Jiang. Authors have furnished an Internet Appendix, which is available on the Oxford University Press Web site next to the link to the final published paper online.

This paper investigates the impact on firm value of a common but unexplored payout practice that favors small retail shareholders – shareholder perks. Shareholder perks are in-kind gifts or purchase discounts made available to shareholders that do not scale proportionately with the number of shares held. Shareholders of Ford Motor Company, for example, receive "friends and neighbors" purchase discounts on the purchase of Ford automobiles, and Willamette Valley Vineyards shareholders receive discounts on wine. In our sample of Japanese firms, Sony Corporation sends discount coupons for its products to shareholders with 100 or more shares, Yamaha Corporation offers shareholders a choice of a discount on a purchase or a gift item every year,

We are grateful for comments and suggestions from Yakov Amihud, Jarrad Harford, Miguel Ferreira, Wei Jiang, Greg Kadlec, Matti Keloharju, Samuli Knüpfer, Juhani Linnainmaa, Paul Malatesta, Grant McQueen, John Nofsinger, Ghon Rhee, Taylor Nadauld, two anonymous referees, and participants and discussants at presentations at Brigham Young University, the Asian Finance Association Annual conference (2016), and Financial Management Association International conference (2016). Send correspondence to Jonathan M. Karpoff, karpoff@uw.edu.

The Review of Financial Studies 34 (2021) 5676–5722

doi:10.1093/rfs/hhaa141 Advance Access publication December 29, 2020

and Suzuki Motor Corporation annually sends shareholders with 100 or more shares an assortment of premium honey and rock salt.

Theoretical arguments can be made that shareholder perks increase firm value, decrease firm value, or are inconsequential. Firms spend much less on shareholder perks than they do on cash dividends or advertising, suggesting a null hypothesis that perks are low-cost innovations with negligible consequences. Alternatively, prior theory and evidence suggest channels by which perks could serve shareholders' interests and increase firm value by increasing share liquidity, decreasing the cost of capital, marketing the firm's products to consumers, or signaling positive information to investors. Yet other research suggests that, by making share ownership more diffuse, perk programs could decrease firm values by entrenching managers, decreasing share liquidity, or decreasing the quality of firm governance. These competing views are developed as hypotheses in Section 1 and summarized in Table 1, which also summarizes our empirical results.

Shareholder perks are offered by firms in many countries, but we focus on publicly traded firms in Japan.[1] The Japanese data are well suited for an investigation of shareholder perks because detailed information is publicly available on companies with perk programs, the types of perks offered, the perk values, and the announcement dates of new perk offerings. In addition, a large number of Japanese firms offer perks, including many that have initiated perk programs recently. This allows us to examine the effects of new perk initiations (in event study and difference-in-difference tests) and the characteristics of firms that pay perks year after year (in panel data tests).

We begin by documenting that the initiation of a perk program is associated with an increase in firm value. The announcement that a firm will initiate a perk program is associated with a 3-day average abnormal stock return of 2.06%. In longer-horizon difference-in-difference (DiD) tests, perk-initiating firms experience positive and significant increases in their market value of equity after the perk program begins. These results support the shareholders' interest hypothesis and are inconsistent with the hypotheses that perks are inconsequential or serve mainly to entrench managers.

Next, we examine four channels by which perks can increase firm value. Consistent with a share liquidity channel, we find that perk initiations are associated with an increase in retail share ownership and a decrease in share illiquidity. Consistent with a cost of equity channel, perk-initiating firms experience decreases in Merton's (1987) shadow cost of equity and the cost of equity capital. And consistent with a signaling channel, the announcement of a perk program is associated with a positive stock price reaction that is correlated

[1] Internet Appendix Table B20 provides information on shareholder perks at 92 U.S. firms, and Internet Appendix Table B21 provides additional examples of shareholder perks at firms listed on the London Stock Exchange and Australian Securities Exchange. Perks also are publicized via online platforms that link investors to shareholder perks, for example, Tiicker.com.

Table 1
Channels, empirical predictions, and summary of results for the shareholders interest and managerial entrenchment hypotheses

Main hypotheses			Channel-related test		
Hypothesis	Empirical predictions	Empirical support?	Channel	Empirical predictions	Empirical support?
Perk irrelevance	No effect on firm value	No			No
Shareholders' interest	Starting CAR >0	Yes	a. Share liquidity	ΔRetail shareholders >0	Yes
	Stopping CAR <0	Yes		ΔShare liquidity >0	Yes
	Δ MVE >0	Yes			
			b. Cost of equity capital	ΔRetail shareholders >0	Yes
				ΔCost of capital >0	Yes
				Δ in cost of capital is related to Δ in shadow cost	Yes
			c. Marketing to consumers	Δ Sales >0	Mixed
				Δ Sales >0 effect largest for B2C and Own perk groups	No
				CAR >0 effect largest for B2C and Own perk groups	No
				ΔMVE >0 effect largest for B2C and Own perk groups	No
			d. Signaling to investors	Starting CAR >0	Yes
				Stopping CAR <0	Yes
				Persistence in perk programs	Yes
				Starting CAR increasing in cost of perk	Yes
Managerial entrenchment	Starting CAR <0	No	a. Decrease in share liquidity	ΔShare liquidity <0	No
	Stopping CAR >0	No		Δ Cost of capital >0	No
	ΔMVE <0	No			
			b. Poor acquisitions	ΔMerger CARs for firms with perks <0	No
			c. Lower CEO incentives	ΔCEO-turnover performance sensitivity for firms with perks <0	No

This table summarizes the three hypotheses discussed in Section 1 and the various channels by which each might work. *Starting CAR* and *Stopping CAR* refer to the 3-day cumulative abnormal stock returns around the announcement of the beginning and ending of perk programs. Δ*MVE*, Δ*Sales*, Δ*Share liquidity*, and Δ*Retail shareholders* refer to changes in the market value of equity, sales, share liquidity, and number of retail investors from the year before the perk initiation to the year after perk initiation, measured relative to the contemporaneous changes in observationally similar firms in difference-in-difference tests. Δ*Merger CARs and* Δ*CEO-turnover performance sensitivities* refer to the effect of a perk program on merger announcement returns and CEO-turnover performance sensitivities. *B2C* and *Own perk* groups refer to companies that sell their products directly to consumers and offer their own products as the perks to investors. A summary of the empirical results is shown to the right of the predictions.

with the cost of the perk program. Similar to signaling with cash dividends (e.g., Michaely, Rossi, and Weber, forthcoming), perk initiation is associated with decreases in the volatilities of stock returns and operating cash flow. Also like cash dividends, perk programs tend to be persistent once initiated and are accompanied by negative announcement returns when they are suspended.

We find only mixed support for a fourth possible channel, that perks increase firm value by advertising the firm's products to consumers. Consistent with this channel, perk initiations are associated with an increase in firm sales. This result, however, is not robust in all multivariate specifications. We also do not observe an increase in sales among firms that use their own products as perks, which are the most likely candidates for an advertising-to-consumers channel.

Firms that suspend a preexisting perk program have outcomes that are the opposite of perk initiation. The announcement that a firm will suspend a perk program is associated with a significantly negative abnormal stock return of –5.89%. These firms also experience a decrease in longer-term measures of the market value of equity, a decrease in the number of retail investors, an increase in share illiquidity, an increase in the shadow cost of equity capital, and a decrease in sales. The finding that perk suspensions generate the opposite outcomes as perk initiations provides further support for the inference that perks affect firm value via increased share liquidity, a lower cost of capital, signaling, and (possibly) advertising to consumers.

We employ several strategies to isolate treatment from selection effects, including event study tests, long-horizon DiD tests, panel data analyses, and a series of robustness tests. Because perk programs are an endogenous corporate policy choice, however, we cannot rule out all possible selection effects. For example, we find that perk adopters have low retail share ownership, suggesting that managers adopt perk programs when they think the firm's retail share ownership is too low. We therefore do not infer that perk programs would create value for all firms. Rather, perks appear to be optimal for some firms, for which the benefits of perk initiation – which can include increased share liquidity, a lower cost of capital, signaling to investors, and (possibly) increased sales – exceed the costs.

This paper makes three contributions to the literature. First, we call attention to a popular distribution policy – the payment of shareholder perks – that, to our knowledge, has not previously been examined empirically. We report new descriptive information about perk characteristics, frequencies, and values in the Japanese market. Second, we document that perks are associated with increases in firm value, implying that they are a value-enhancing distribution policy and not primarily driven by managerial rent-seeking. Third, we identify and test plausible channels by which perk programs increase firm value.

We are aware of only one other paper that investigates shareholder perks (Huang et al. 2016). Huang et al. (2016) measure returns and trading volume around the ex-perk day, whereas we focus on perks' effects on firm value, sales, and costs, and provide an explanation for why perks are popular with

many firms. Our paper also relates to three other themes in the finance literature. First, our results support previous arguments that an increase in shareholder base can improve stock liquidity and value.[2] But, whereas most prior research in this area focuses on events that increase large institutional share ownership (such as IPOs and index additions), we focus on a payout policy that attracts small retail investors. Second, our results are consistent with predictions from the Merton (1987) model in which limited investor awareness and incomplete diversification imposes an additional shadow cost of capital. Previous research examines Merton's (1987) predictions using ownership filings, media attention, product advertising, and exchange or index listings as indicators of increased investor attention.[3] Our evidence, in contrast, comes from a corporate distribution policy that attracts investment from retail investors. Third, our investigation broadens the literature on firms' payout policies. We show that shareholder perks share some similarities to cash dividends, as both are associated with increases in share price and decreases in cash flow volatility. Unlike cash dividends, however, shareholder perks change the firm's ownership structure toward more retail shareholders and directly affect share liquidity, the cost of equity capital, and (possibly) firm sales.

These findings also imply that the valuation effects of corporate ownership are more complex than implied by models that emphasize only the informational and monitoring advantages of large shareholders.[4] Large investors no doubt generate informational and monitoring benefits, but among some firms, perk programs that increase retail shareholdings also create value. These results highlight how the relation between ownership structure and firm value does not conform to a one-size-fits-all model and can be idiosyncratic to individual firms.

1. Hypotheses about Shareholder Perks

Shareholder perks are a component of many firms' distribution policies. Unlike cash dividends, however, shareholder perks explicitly violate the equal treatment of shares principle because they disproportionately reward small shareholders. This is because the perks' values tend not to scale up with higher numbers of shares. For example, Ford Motor Company's "friends and neighbors" purchase discount does not increase with share ownership, and

[2] For related findings regarding share liquidity, shareholder base, and firm value, see Amihud, Mendelson, and Uno (1999), Lehavy and Sloan (2008), Mehran and Peristiani (2010), Bharath and Dittmar (2010), Edmans, Fang, and Zur (2013), and Cao, Gustafson, and Velthuis (2019).

[3] See Kadlec and McConnell (1994), Chen, Noronha, and Singal (2004), Grullon, Kanatas, and Weston (2004), Lehavy and Sloan (2008), Bodnaruk and Ostberg (2009), Fang and Peress (2009), Green and Jame (2013), Autore and Kovacs (2014), Liu, Sherman, and Zhang (2014), and Bajo et al. (2016).

[4] For arguments that emphasize the benefits of large shareholders or the limitations of retail investors, see DeLong et al. (1990), Shleifer and Summers (1990), Grossman and Hart (1980), Shleifer and Vishny (1986), Admati, Pfleiderer, and Zechner (1994), Bolton and Von Thadden (1998), Christoffersen, Evans, and Musto (2013), Mullainathan, Noeth, and Schoar (2012), and Chalmers and Reuter (2014).

Japan Pulp and Paper Company Ltd. sends the same quantity of toilet paper (24 rolls) to an owner of 10,000 shares as to an owner of 1,000 shares. Also, unlike dividends, perks typically do not create tax events for shareholders. Thus, whereas cash dividends historically have been associated with institutional investor clientele effects (e.g., Allen, Bernardo, and Welch 2000), perks' incentives go the other way and create incentives for small individual investors. Investment publications frequently highlight shareholder perks as important considerations for retail investors (e.g., Moyer 2013; Brumley 2014; see also Tiicker.com).

To structure our analysis of shareholder perks, we consider whether, and by what channels, they affect firm value. Table 1 summarizes three distinct views about shareholder perks.

1.1 The perk irrelevance hypothesis

A null hypothesis is that perks are low cost but neutral developments that have negligible effects on the firms that pay them. This hypothesis is suggested by the lack of previous research on shareholder perks and the observation that firms spend much less on perks than on cash dividends or advertising. Using the estimates of the perks' cost to the issuing firms from the *Japan Company Handbook*, the median perk-paying firm in our sample incurs a direct perk cost of 10 million yen per year, compared to a median cash dividend of 256 million yen and a median annual advertising expense of 282 million yen.

1.2 The shareholders' interest hypothesis

The shareholders' interest hypothesis holds that shareholder perks increase firm value. We examine four nonexclusive but distinct channels by which perks can increase value.

1.2.1 Share liquidity. Previous research shows that an increase in the number of retail shareholders or retail share ownership can increase share liquidity. Retail investors tend to invest in the firms they know, either because of incomplete information (e.g., Merton 1987; Fang and Peress 2009), familiarity effects (e.g., Coval and Moskowitz 1999; Grinblatt and Keloharju 2001a, 2001b; Huberman 2001; Grullon, Kanatas, and Weston 2004; Frieder and Subrahmanyam 2005), or attention constraints (e.g., Barber and Odean 2008). These papers imply that practices that attract investor attention – as shareholder perk programs do – increase at least some investors' awareness of the firm and increase the likelihood they will invest in the firm. Merton (1987) argues that an increase in investor awareness does not necessarily require that an investor previously was completely unaware of the firm. Rather, it is sufficient merely that the additional attention increases the stock's salience for some small investors. Consistent with such claims, Huang et al. (2016) show that

price movements and trading volume around the ex-perk day indicate that perks attract a clientele of retail investors.[5]

Regardless of the specific mechanisms by which perks increase a firm's retail investor base, prior research identifies two pathways by which an increase in the shareholder base increases share liquidity and firm value. First, increases in the shareholder base decrease the trading costs that arise from segmented markets, thus increasing liquidity and share value.[6] Second, Holmström and Tirole (1993) argue that an increase in liquidity facilitates the market's monitoring of managers, also leading to an increase in firm value.

1.2.2 Cost of equity capital. Prior research shows that share liquidity is negatively related to the cost of equity capital, so an increase in liquidity should correspond to a decrease in the cost of capital (e.g., Amihud and Mendelson 1986). In addition, Merton (1987) proposes another pathway by which a perk program can decrease the cost of capital. In Merton's model, investors' limited information and lack of diversification across the full universe of firms causes an increase in firms' required rates of return compared to the full information equilibrium – a "shadow" cost of capital. A corporate policy that attracts attention to the firm's stock can increase the shareholder base and decrease this shadow cost, thus decreasing the firm's cost of equity capital. This prediction implies that a shareholder perk program that increases the firm's retail share ownership will decrease the firm's equity cost of capital. A related prediction is that the decrease in the cost of capital is related to the decrease in Merton's shadow cost of capital. We test this second prediction using the measure of shadow cost used by Kadlec and McConnell (1994) and Foerster and Karolyi (1999).

1.2.3 Marketing to consumers. Even if shareholder perks do not have a large effect on a firm's shareholder base, they can generate publicity and advertise the firm and its products to new consumers, thereby increasing sales (e.g., Simester et al. 2009). Keloharju, Knüpfer, and Linnainmaa (2012) show that advertising to shareholders who are also customers can increase their loyalty to the firm, implying that perks can increase demand for the firm's products. This outcome is suggested also by marketing research showing that investors in a firm's stock tend to be particularly loyal customers of the firm's products (Schoenbachler, Gordon, and Aurand 2004; Aspara 2009; Aspara, Nyman, and Tikkanen 2009).

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[5] A related conjecture is that perks attract retail investors because most investors do not pay tax on the perk distribution. Kato and Loewenstein (1995) and Huang et al. (2016) show, however, that cash dividends and perks both are associated with approximately zero abnormal ex-day returns in Japanese markets, implying that, at the margin, investors value both perks and cash dividends at approximately their face values. Hence, there appears to be no tax advantage to perks over cash dividends.

[6] For example, see Amihud, Mendelson, and Uno (1999), Foerster and Karolyi (1999), Baker, Nofsinger, and Weaver (2002), Chen, Noronha, and Singal (2004), Kaniel, Saar, and Titman (2012), and Kelley and Tetlock (2013).

This marketing to consumers channel is an apparent motive for some perk programs. When asked about the perks offered by Quaker Oats Corp., a spokesperson said, "We want people not only to own our stock, but also to be loyal consumers of our products – and to tell their friends and family about them… We view this as a form of niche marketing" (Kristof 1995). Similarly, an executive at American Greetings Corp. said of shareholder perks, "We value our shareholders and their loyalty to the company and its products. We hope that they not only buy our stock but that they also purchase our products as consumers" (Gleisser 1993).

If perks increase sales by advertising to consumers or customer-shareholders, we expect this relation to be strongest when the perk-paying firm produces retail products and when its perks consist of its own products. Thus, shareholder perks should be associated with an increase in firm value via an increase in the firm's future sales, and the effects on value and sales should be strongest at firms that sell primarily to consumers (as opposed to business-to-business firms) and at firms that use their own products as shareholder perks (as opposed to using other firms' products as perks).

1.2.4 Signaling to investors. Shareholder perks are distributions to shareholders, implying that dividend signaling theories could apply to shareholder perks as well (e.g., Miller and Rock 1985). A first-order condition for a separating signaling equilibrium is that the marginal cost of the signal must be decreasing in the attribute being signaled, that is, firm value. Stated differently, the marginal cost of paying perks (e.g., decreased investment) is lower for firms that use perks to signal firm quality than for other firms. Furthermore, higher quality firms will deploy more costly signals, implying that the change in firm value when investors receive the signal is positively related to the cost of the perk program. Hence, if perks serve as costly signals, we expect that the change in firm value is positively related to the cost of the signal. In addition, firms that suspend perk programs – like firms that suspend dividend payments – convey negative signals about firm quality or cash flows, and should experience decreases in firm value.

The predictions from these four channels of the shareholders' interest hypothesis are summarized in Table 1. The shareholders' interest hypothesis predicts that perks will be associated with an increase in firm value and that this change in value will be associated with one or more of the channels related to share liquidity, the equity cost of capital, marketing to consumers, or signaling to investors.

1.3 The managerial entrenchment hypothesis

The contrasting view is that shareholder perks decrease firm value because they help to entrench managers, or convey private benefits to managers, at shareholders' expense. The entrenchment hypothesis is implied by prior research that demonstrates the monitoring benefits of large shareholders,

(e.g., Grossman and Hart 1980; Shleifer and Vishny 1986).[7] If shareholder perks attract small retail shareholders, they plausibly also work to decrease large shareholders' ownership stakes, thus decreasing large shareholders' incentives and abilities to monitor managers, exacerbating free-riding problems among owners, and decreasing firm value.

Previous research shows that an increase in entrenchment can decrease price informativeness and firm disclosure, thus increasing information asymmetry (e.g., Eng and Mak 2003; Ferreira and Laux 2007). Information asymmetry, in turn, is positively related to measures of illiquidity and the cost of capital, implying that, if perks work to increase managerial entrenchment, they also will tend to decrease share liquidity and increase the cost of capital.[8] Consistent with this argument, Brockman and Chung (2003) and Diamond and Verrecchia (1991) find that decreases in investor protection and firm-level corporate disclosures increase information asymmetries and decrease share liquidity.

The managerial entrenchment hypothesis therefore predicts that shareholder perks will be associated with lower firm value via a decrease in monitoring, a decrease in share liquidity, an increase in the cost of capital, or some combination of all of these effects. To test the decreased monitoring channel, we also draw from previous research that shows that entrenched managers tend to have poor acquirer announcement returns and weak CEO-turnover sensitivity to firm performance (e.g., Masulis, Wang, and Xie 2007; Faleye 2007). This channel predicts that perk-paying firms should show evidence of value-destroying acquisitions or lower CEO-turnover-performance sensitivities. These predictions are summarized in Table 1.

2. Data and Characteristics of Firms that Pay Shareholder Perks

2.1 Description of the data

We collect perk data from the *Japan Company Handbook* (in Japanese, *Kaisha Shiki Hou*) for all publicly traded firms in Japan from January 2001 through December 2011. These data are gathered by the Toyo Keizai company using annual surveys, and are used widely by practitioners and researchers.[9] The data identify the companies that pay perks, and for each company, the minimum number of shares required to receive shareholder perks, the types of perks offered, the timing of perk payments, and, frequently, the value of the perk. Using manual news searches, we also collect information on the dates on which

[7] Other examples in which large shareholders provide oversight include Chen, Harford, and Li (2007), Ferreira and Matos (2008), Edmans (2009), and McCahery, Sautner, and Starks (2016).

[8] Glosten and Milgrom (1985) and Glosten and Harris (1988) show that information asymmetry is related to share illiquidity. Kelly and Ljungqvist (2012), Choi, Jin, and Yan (2016) and Berkman, Koch, and Westerholm (2014) find that an increase in information asymmetry is associated with an increase in the cost of capital.

[9] Previous papers that use this data source include Prowse (1992), Claessens, Djankov, and Lang (2000), and Amiti and Weinstein (2011).

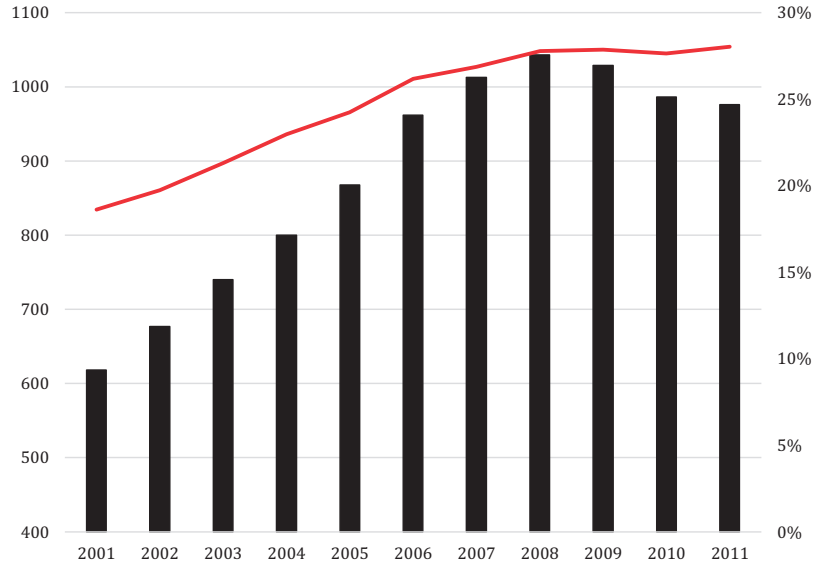

Figure 1
Number and percent of Japanese firms paying shareholder perks, 2001–2011
This figure shows the number (left axis, solid vertical bars) and percent (right axis, line) of publicly traded Japanese firms offering shareholder perks from 2001–2011. The shareholder perk data is from the Japan Company Handbook (Kaisha Shiki Hou).

new perk programs were first announced from the *eol ESPer* database, which reports such information starting in 2001.

Figure 1 reports the number and percentage of Japanese companies with known shareholder perks. The percentage of public companies with shareholder perks averages 24.75% during the sample period, increasing to 28% in 2011. The *Japan Company Handbook* reports estimated values for 47% of the perks in 2011, which in aggregate total 17.2 billion yen.

Table 2 reports on the distribution of perks across 32 industries based on 2-digit Nikkei industry codes.[10] Perks are most common in railroad transportation (97.9% of firms), the food industry (69.5%), and retail trade (67%), although they appear with some frequency in most industries. Most perks (73.5%) involve the firm's own products. For example, ANA, a Japanese airline, provides a 50% discount coupon for its own airline tickets to shareholders who hold more than 1,000 shares (the minimum trade unit). But in many cases the perk involves an unrelated firm's products. For example, Takamatsu Construction Group

[10] In previous years, some Japanese firms belonged to keiretsu business groups that could have affected payout and other decisions (e.g., see Kim and Nofsinger 2005). Miwa and Ramseyer (2002) argue that the existence and influence of keiretsu business groups has been greatly exaggerated. Regardless, such prior influence, if any, has been small since at least 2000 (e.g., see Bremner and Thornton 1999).

Table 2
Distribution of the sample across Nikkei industry classifications

Industry name	# of firms in the industry	% of firms in industry with shareholder perk programs
Air Transportation	58	32.8
Chemicals	2,191	15.4
Communication Services	336	30.7
Construction	2,217	10.1
Drugs	538	16.7
Electric & Electronic Equipment	3,166	5.3
Fish & Marine Products	107	38.3
Foods	1,515	69.5
Iron & Steel	610	4.4
Machinery	2,631	6.2
Mining	94	8.5
Motor Vehicles & Auto Parts	901	13.9
Nonferrous Metal & Metal Products	1,466	10.6
Other Manufacturing	1,241	29.2
Petroleum	114	1.8
Precision Equipment	546	7.3
Pulp & Paper	272	15.8
Railroad Transportation	334	97.9
Real Estate	1,098	23.0
Retail Trade	2,728	67.0
Rubber Products	244	14.3
Sea Transportation	197	25.4
Services	6,806	30.8
Shipbuilding & Repairing	69	0.0
Stone, Clay & Glass Products	754	10.7
Textile Products	669	14.6
Transportation Equipment	149	20.8
Trucking	395	29.4
Utilities – Electric	117	0.0
Utilities – Gas	131	0.0
Warehousing & Harbor Transportation	453	11.9
Wholesale Trade	3,979	25.2

This table reports on the number of firms and the percentage of perk-paying firms in each of 32 industries as identified in the Nikkei NEEDs Financial Quest database during the 2001–2011 sample period. Financial industries are not included in the sample. The perk data are collected from the Japan Company Handbook (Kaisha Shiki Hou).

Co., Ltd. gives five kilograms of an expensive brand of rice to shareholders with 100 or more shares. For illustration, Appendix Table A1 lists perks from 20 arbitrarily chosen firms in our sample.

For comparison purposes, Internet Appendix Table B20 reports on perks paid by 92 U.S. firms. Information on U.S. perks is limited, and our compilation is based on investor blogs, firms' web sites, two books that highlight U.S. firms that pay shareholder perks, and ad hoc media coverage of some firms' perks. Perk-paying firms in the U.S. include many well-known firms – including 3M, AT&T, Bristol-Myers Squibb, General Foods, Proctor and Gamble, and Starbucks – and have characteristics that are similar to perk-paying firms in Japan. Like many Japanese perk-paying firms, many but not all U.S. firms use coupons or discounts related to their own products. Like their Japanese counterparts, U.S. perk-paying firms tend to be larger and spend more on advertising than firms that do not pay perks. They also have relatively high operating

performance, although this characteristic is not statistically significant. As in our Japanese sample, some U.S. firms ended their perk programs during the 2007-09 recession (e.g., Citigroup, 3M, and Walt Disney all cut back on perks in 2009). Unlike in Japan, however, U.S. firms that pay perks have relatively high excess cash. Also unlike in Japan, many of the U.S. perks are paid only at shareholder meetings or are distributed as a holiday gift box. So, despite many similarities between Japanese and U.S. perk adopters, there remain some differences that limit our ability to generalize our findings to U.S. firms.

Approximately 60% of Japanese perk-paying firms have more than one perk level, with the value of the perk increasing slightly with the number of shares up to some maximum. The rate of increase, however, tends to be so low that in almost all cases the highest perk value per dollar invested is achieved at the minimum stockholding required to receive any perk award. For example, Toyo Suisan, a major food company, provides two levels of shareholder perks. The first is a gift of ¥3,000 of its food for shareholders who own between 1,000 (the minimum trade unit during our study period) and 5,000 shares. The second is a gift of ¥5,000 of its food for shareholders who own more than 5,000 shares. The maximum perk yield therefore accrues to shareholders who own exactly 1,000 shares and is near valueless on a per-share basis for the largest shareholders.[11]

Shareholders commonly receive their perks at the close of the company's fiscal year. For firms that pay perks twice per year, shareholders typically receive the perk at the close of the second and fourth quarters. For firms that also pay cash dividends, the ex-perk day is often the same as the ex-dividend day. However, perks and new perk programs typically are announced on different days than cash dividends, allowing us to examine perk announcement day returns without confounding dividend announcements.

Data on firms' financial statements, the number of shareholders, number of individual shareholders, ownership of different types of shareholders, dividends, and industry classifications are obtained from the Nikkei NEEDs Financial Quest database. We collect data related to stock prices, stock returns, and the Japanese value weighted index returns from the NPM portfolio master database. Mergers and acquisitions (M&A) data, including the acquisition dates and prices, are collected from the RECOF MARR database. After imposing the data requirements reflected in the control variables in Tables 4–10, our sample consists of 368 firms that initiate perks during the 2001 - 2011 sample period, a total of 1,311 unique firms that offer shareholder perks (including firms that initiated perks before 2001), and 3,018 unique firms that did not offer perks at any time during the sample period.

[11] This example is typical. Of the 1,023 firms offering perks in 2011, 634 offer some sort of tiered perk benefit. In 99.2% of these cases the lowest number of shareholdings offers the highest yield. Even in the few cases where a higher perk yield is achieved with a slightly higher number of shares, the perk still offers disproportionate benefits to small shareholders, as the perk value does not continue to scale with the number of shares held.

2.2 Characteristics of firms offering and initiating shareholder perks

Table 3 reports on characteristics of firms that pay shareholder perks compared to those that do not, and of firms that initiate new perk programs. These characteristics are suggested by previous research and by the hypotheses discussed in Section 1, and are used in our matching model (in Table 4) to identify control firms:

#Individual retail shareholders/#total shareholders and *%Retail ownership* – A majority (73%) of surveyed Japanese executives claim that perks are intended to attract small shareholders (see Hanaeda, Serita, and Suzuki 2017). Similarly, both the shareholders' interest and managerial entrenchment hypotheses imply that perks are initiated to attract more retail investors. These considerations suggest that firms with relatively low numbers of retail investors (*#Individual retail shareholders/#total shareholders)*, or small retail share ownership (*%Retail ownership)*, are the most likely to initiate perks.

%Board and executive ownership and *%Nonretail ownership* – To the extent that shareholder perks attract more investment from retail shareholders, the shares must come from board members and executives or other nonretail investors. This implies that firms that initiate perk programs are likely to have high *%Board and executive ownership* or high *%Nonretail ownership*, or both. In our data, *%Nonretail ownership* refers primarily to ownership by financial institutions. Although we report on changes in *%Nonretail ownership*, we exclude it from the matching model in Table 4 to avoid multicollinearity.[12]

Ln(Advertising expense) – As discussed in Section 1, perks can be a form of advertising to consumers and investors. We infer that firms' motives to pay shareholder perks therefore can be related to their decisions to advertise.

Dividend dummy – Perks are distributions to shareholders, like dividends. We infer that firms' motives to pay shareholder perks can be related to their decisions to pay a cash dividend. Ex ante, however, we cannot say whether perks should be substitutes or complements to cash dividends. For example, firms that want to increase their payouts to shareholders could pay both a cash dividend and a shareholder perk, implying that dividends and perks are complements. Alternatively, cash dividends could be used as a substitute for perks, implying that firms that pay dividends are less likely to initiate perks.

Excess cash – Excess cash is calculated as the residual from a regression of the firm's cash holdings on several firm characteristics.[13] If firms pay perks as

[12] This is because *%Retail ownership, %Board and executive ownershi*p, and *%Nonretail ownershi* sum to 100%. The Japanese ownership data report the shares owned by board members and executives, institutions, nonfinancial firms, and individuals but not the individual holdings within these groups. Top Japanese executives are almost always also part of the board. We consider all holdings outside of the retail and board members and executives groups as being part of the "Nonretail" group.

[13] Using all firm-years from our sample of all public Japanese firms, the fitted values of the excess cash regression are $Cash/Book\ Assets = 0.55 + 0.1*Cash\ flow + 0.65*Volatility - 0.22*Leverage + 1.64*Dividend - 0.06*CapEx + 0.03*Market\text{-}to\text{-}book\ ratio - 0.01*ln(Market\ Asset) + ß_t\ Year\ dummy + ß_j\ Industry\ dummy$. The adjusted R-squared from this regression is 40.5%.

Table 3
Univariate descriptive statistics

		Perk vs. nonperk firm-years				Initiator vs. noninitiator firm-years:			
	All firm-years (1)	All perk-paying firm-years (2)	All nonperk firm-years (3)	Difference (2) - (3) (4)	t-statistic (5)	Future initiators in prior year (6)	Noninitiators (7)	Difference (6) - (7) (8)	t-statistic (9)
A. Ownership information									
ln(#Individual retail shareholders)	8.236	8.399	8.182	0.217	12.89***	7.988	8.185	−0.197	−2.95***
#Individual/#total shareholders	0.946	0.950	0.945	0.005	8.50***	0.933	0.945	−0.012	−5.52***
%Retail ownership	0.355	0.346	0.359	−0.013	−5.76***	0.324	0.359	−0.035	−4.00***
%Board and executive ownership	0.080	0.107	0.072	0.035	21.68***	0.110	0.071	0.039	6.38***
%Non-retail ownership	0.564	0.547	0.570	−0.023	−8.12***	0.566	0.570	−0.004	−0.38
B. Matching model variables									
ln(Advertise expense)	3.632	4.754	3.260	1.494	38.45***	4.432	3.241	1.192	8.06***
Dividend	0.825	0.881	0.807	0.074	14.55***	0.894	0.806	0.088	4.27***
Excess cash	−0.002	−0.011	0.001	−0.012	−8.78***	−0.004	0.001	−0.005	−1.02
Retail-friendly MTU	0.426	0.574	0.377	0.196	29.98***	0.516	0.375	0.141	5.55***
ln(Illiquidity)	−1.884	−1.966	−1.856	−0.110	−3.14***	−1.992	−1.854	−0.137	−0.98
Stock return volatility	2.849	2.373	3.007	−0.634	−37.35***	2.657	3.013	−0.355	−5.20***
CEO age	58.971	57.959	59.306	−1.347	−11.75***	57.736	59.332	−1.596	−3.58***
C. Additional firm controls									
ln(Sales)	10.533	10.639	10.498	0.141	6.68***	10.732	10.494	0.238	2.79**
Marketto-book ratio	1.103	1.135	1.092	0.043	5.28***	1.194	1.090	0.104	3.18***
ROA	0.044	0.051	0.041	0.010	12.03***	0.056	0.041	0.015	4.46***

This table reports summary information on the sample of perk-paying, perk-initiating, and nonperk firms listed on the Nikkei exchange from 2001 to 2011. Column 1 reports on all 29,599 firm-years in the sample, column 2 reports on all 7,362 firm-years in which firms paid perks, and column 3 reports on all 22,237 nonperk firm-years. Column 6 reports values for year $t-1$ for the 368 nonperk paying firms that initiate perks in the following year t, and column 7 reports on all other nonperk paying firm-years. The ownership variables in panel A are defined using data from the Nikkei NEEDs Financial Quest database. *#Individual retail shareholders* is the total number of unique individual shareholders. *#Individual/#total shareholders* is the proportion of distinct shareholders that are retail investors. *%Retail*, *%Board and executive*, and *%Nonretail ownership* values are the percent of shares owned by each group. *%Nonretail ownership* includes all holdings not included in the retail or board and executive categories, and consists mostly of large shareholders and institutions. The variables in panels B and C are defined in Section 2. $^{*}p<.1$; $^{**}p<.05$; $^{***}p<.01$.

Table 4
Propensity score matching model

	Dependent variable = Perk initiation	
	Model 1: Prematch	Model 2: Postmatch
#Individual/#total shareholders	−2.548**	−1.030
	(−2.38)	(−0.88)
%Retail ownership	0.191	0.547
	(0.43)	(1.12)
%Board and executive ownership	1.469***	−0.204
	(3.13)	(−0.41)
ln(Advertising expenses)	0.098***	−0.017
	(4.03)	(−0.65)
Dividend dummy	0.139	−0.006
	(0.66)	(−0.03)
Excess cash	−1.105**	0.305
	(−1.96)	(0.48)
Retail friendly MTU	0.463***	0.058
	(3.27)	(0.38)
ln(Illiquidity)	0.110**	−0.023
	(2.53)	(−0.50)
Stock return volatility	−0.177**	−0.006
	(−2.52)	(−0.08)
CEO age	−0.011*	0.001
	(−1.80)	(0.15)
ln(Sales)	0.168**	−0.012
	(2.39)	(−0.16)
Market to book ratio	0.013	0.028
	(0.12)	(0.23)
ROA	0.203	−0.057
	(0.16)	(−0.04)
Constant	−1.460	−0.757
	(−1.00)	(−0.48)
Year indicator variables	Yes	Yes
Industry indicator variables	Yes	Yes
Pretreatment trend variables	Yes	Yes
Control firm-years	21,869	1840
Treatment firm-years	368	368
Number of observations	22,237	2,208
Pseudo R-square	0.108	0.007

Model 1 reports parameter estimates from a logit model using the full sample of nonperk paying firm-years in which the dependent variable is set to 1 if the firm initiates a perk program in the following year. The propensity scores from the prematch model are used to identify the 5 nearest neighbor matches for each treatment firm (i.e., for each firm that initiates a perk program in the following year) with replacement. Model 2 reports estimates from the same model using data from only the 368 treatment firms and their 1,840 matched control firms. The variables are described in Section 2. *$p < .1$; **$p < .05$; ***$p < .01$.

a substitute for cash dividends when they are cash constrained, then controlling for excess cash helps to identify firms that are likely to use perks.

Retail Friendly MTU – This is a dummy variable that equals one if the firm has lowered the minimum number of shares required for trading (i.e, the "minimum trade unit" or MTU) to 100 or fewer shares. As reported in Table 3, this variable equals one for 42.6% of our firm-years. Amihud, Mendelson, and Uno (1999) show that the number of small shareholders and liquidity both increase when Japanese managers lower the MTU size, and argue that a low MTU indicates that managers are catering to small retail investors. Having a low MTU therefore can indicate that managers seek more retail investors,

increasing the likelihood of adopting a perk program. Alternatively, firms with a low MTU can indicate that the firm has already taken a step to attract retail investors, thus decreasing the incentive to adopt a perk program. Either way, *Retail Friendly MTU* can be related to perk adoption.[14]

Ln(illiquidity) – We measure share liquidity using Amihud's (2002) illiquidity measure of relative price impact. If a motive to have a perk program is to increase share liquidity, as implied by the shareholders' interest hypothesis, firms with low share liquidity are more likely to adopt a perk program.

Stock return volatility – We use the firm's stock return volatility to reflect uncertainty in the firm's information environment. To the extent that a perk program commits the firm to pay perks indefinitely, it can be costly for firms with substantial uncertainty to initiate a perk program. We therefore expect firms with low stock return volatility to be more likely to initiate perk programs.

CEO age – Prior research suggests that a CEO's age affects their willingness to accept risk and adopt new ideas (e.g., Vroom and Pahl 1971; MacCrimmon and Wehrung 1990; Sundaram and Yermack 2007). Related research has shown that older CEOs tend to employ more conservative corporate strategies (Bertrand and Schoar 2003), and, in contrast, younger CEOs are more likely to use innovative marketing techniques (Thomas, Litschert, and Ramaswamy 1991). Shareholder perks are used by a minority of firms, and by even fewer firms at the beginning of our sample period. Hence, to the extent that perks are viewed as a new or innovative distribution or marketing practice, the likelihood of a firm initiating a new perk program will be negatively related to the CEO's age.

ln(Sales) – We use ln(Sales) to reflect the firm's size, although alternate measures such as the market value of equity and the book value of assets yield similar empirical results. It is standard to include firm size as a potential determinant of the firm's distribution policies (e.g., Li and Lie 2006). Firm size can also correlate with investor and consumer awareness of the firm. If, as indicated by the shareholders' interest hypothesis, firms use perks to raise awareness of the firm and its products among investors and consumers, the likelihood of adopting a perk program will be negatively related to firm size.

M/B – It is common also to include the firm's market-to-book ratio in models of the determinants of a firm's distribution policy (e.g., Li and Lie 2006). In general, firms with high market-to-book ratios are less likely to make distributions such as cash dividends. We conjecture they also will be less likely to initiate perk programs.

ROA – The payment of cash dividends is positively related to firm profitability (e.g., see Michaely, Rossi, and Weber 2020). This suggests that the likelihood of initiating a perk program also is positively related to return on assets (ROA).

[14] In 2018, the Tokyo Stock Exchange standardized trading units for all shares, so that all companies' shares are now traded in units of 100 shares.

Industry indicators – As Table 2 shows, there is a strong industry component to firms' use of shareholder perks. We include industry fixed effects to account for unobserved industry (time-invariant) effects that affect the use of shareholder perks (see Gormley and Matsa 2014).

Many additional firm characteristics could be included in our matching model. However, this group of firm characteristics yields a reasonably parsimonious empirical model with which to identify matched control firms. Importantly, our empirical results are similar across a wide range of choices to include or exclude additional characteristics in the matching model. For example, the inferences from Tables 6 – 10 are similar if we exclude *CEO age* or *%Board and executive ownership* from the model used to identify matched control firms.

The univariate comparisons reported in Table 3 indicate that firms that pay perks differ from firms that do not pay perks in a number of ways. As reported in columns 2 – 5, perk-paying firms have more retail investors than nonperk firms, both in raw numbers and as a fraction of the number of all shareholders, but a lower percentage of retail share ownership. Perk-paying firm-years also are characterized by relatively high advertising expenses, the payment of cash dividends, low excess cash, low minimum trading unit (MTU) sizes, low stock return volatility, and younger CEOs.

Columns 6 – 9 report on the characteristics of firms that initiate perk programs in the following year. Compared to firms that do not initiate perks, new initiators have fewer retail shareholders (both in raw numbers and as a fraction of all shareholders), less retail share ownership, and more share ownership by board members and executives. New initiators also have high advertising expenses, low stock return volatility, and younger CEOs, and are more likely to pay cash dividends and have small minimum trading unit sizes.

These univariate comparisons provide insight into firms' motives to adopt perk programs. Firms initiate perk programs when they want to increase their retail share ownership and have already taken other steps (e.g., low MTU sizes) to appeal to small investors. These firms also tend to already pay cash dividends and have large advertising budgets, suggesting that perks provide an additional vehicle for distributing earnings and advertising its products. The comparisons in panel C of Table 3 also indicate that perk-initiating firms are large and financially healthy firms, as they have relatively high sales, market-to-book ratios, and operating income as measured by ROA.

2.3 Multivariate tests for the characteristics of perk-initiating firms

Table 4 reports on multivariate logit tests of the characteristics of firms that initiate new shareholder perk programs. Data requirements reduce the sample size relative to the univariate comparisons in Table 3. Model 1 of Table 4 uses data from 22,237 firm-years in which firms do not have a perk program, including 368 of the new perk initiators with sufficient data to be included. The

dependent variable is set equal to one for the 368 firms in this group that adopt new perk programs in the following year, and is zero for all other firm-years.

Model 1 extends the univariate comparisons in Table 3 to a multivariate setting. In addition to the firm characteristics from Table 3, we include controls for pretreatment trends from $t-3$ to $t-1$ for each of the five main outcome variables that we examine in our DiD tests, which measure retail ownership, the market value of equity, illiquidity, 1987'(1987) shadow cost of capital, and sales. These trend variables are included to help satisfy the parallel trends assumption in the years before treatment and not tabulated individually, but rather, are indicated in the tables as the "Pretreatment trend variables."[15] The multivariate model also includes industry and year fixed effects. The marketing to consumers channel implies that the firm's product characteristics (e.g., whether the firm sells directly to consumers or is in a durable goods industry) could affect the benefits of paying perks and the motive to initiate perks. Consistent with such a view, in untabulated tests we find that firms in industries that sell their products directly to consumers are more likely to initiate new perk programs. However, all such tendencies are subsumed in the industry fixed effects. The specific model reported in Table 4 also excludes *ln(#Individual retail shareholders)* to avoid multicollinearity with *%Retail ownership*, although results are similar if we exclude *%Retail ownership* instead.

The results reinforce much of the intuition from the univariate comparisons, although not all of the differences observed in Table 3 are statistically significant in the multivariate test. In particular, firms that initiate perk programs tend to have relatively high board and executive share ownership, high advertising expenses and low excess cash, low MTU thresholds, low share liquidity, low stock return volatility, young CEOs, and high sales. These characteristics suggest that firms adopting perks seek to attract more retail shareholders and to improve share liquidity, and that perks work as complements to advertising expenditures and sales.

We use the information from Model 1 in Table 4 to construct a propensity score matched sample of firms that are observationally similar to the perk-initiating firms. Using a nearest neighbor matching approach with replacement based on the propensity scores from the first column, we identify the five nonperk firms with the closest propensity scores in year $t-1$ (i.e., the control firms) for each firm that initiates a new shareholder perk in year t (the treatment firms).[16] To ensure that the covariates used in matching are not affected by the treatment, we assign matches using information from the year before the

[15] Our main inferences in Tables 6–10 are not sensitive to including or excluding the pretreatment trends in the outcome variables in the matching model. Other papers that also include changes in pretreatment outcome variables in matching models with DiD estimators include Lemmon and Roberts (2010) and Fang, Tian, and Tice (2014).

[16] For a discussion of the matching procedure, see Rosenbaum and Rubin (1983) and Smith and Todd (2005). The results are qualitatively the same as those reported throughout the paper if we match without replacement or

treatment firms initiate perks and which is therefore predetermined at the time of the treatment (see, e.g., Roberts and Whited 2013, and Caliendo and Kopeinig 2008).

Model 2 in Table 4 provides information on the quality of the matching procedure by re-estimating the logit model on the cross-section of 368 treatment and 1,840 control firms, with each variable measured as of the year before the treatment firms initiated perk programs. In Model 2, none of the coefficients are statistically significant and the pseudo R-squared value is near zero. As discussed by Rosenbaum and Rubin (1983) and Caliendo and Kopeinig (2008), these are characteristics of a good matching model, as the control firms are not significantly different than the treatment firms along the dimensions included in the model. That is, based on their observable characteristics in year $t-1$, both the control and treatment firms appear equally likely to initiate new shareholder perks in year t.

In Section 6, we report additional corroborating support for the quality of the matching procedure and a discussion of identifying assumptions for DiD models. Section 6 also reports that the parallel trends assumption is satisfied in the years leading up to the perks, as changes in the key variables (i.e., retail share ownership, market value of equity, liquidity, the shadow cost of capital, and sales) are not statistically different between treatment and control firms in the years leading up to the treatment year. This finding is consistent with the proposition that the trends in our key outcome variables are not materially affected by unobservable factors. Following the guidelines in Caliendo and Kopeinig (2008) and as tabulated in Internet Appendix Tables B1 and B2, we perform additional robustness tests to ensure (1) common support between the treatment and control groups by comparing the distribution of the propensity scores for both groups, and (2) covariate balance is preserved after the match by testing whether the means of the matching variables differ statistically between the treatment and control groups in year $t-1$. Throughout, we find that our matching procedure works well according to the guidelines in the literature.

3. Effects of shareholder perks on firm value

First, we test the perk irrelevance, shareholders' interest, and managerial entrenchment hypotheses by examining the effects of shareholder perks on firm value. In subsequent sections, we examine the channels implied by the hypotheses.

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use radius matching (setting the caliper to 0.01, e.g., see Dehejia and Wahba 2002). Using kernel matching (see Smith and Todd 2005), all of the results are similar except that the key coefficient for *ln(MVE)* is statistically insignificant. In addition, the parallel trends assumption is violated for some of the DiD tests using kernel matching.

3.1 Changes in firm value:Event study evidence

To measure the effect of shareholder perks on firm value, we examine 3-day returns associated with the announcement that a nonperk firm is initiating a shareholder perk program. We are able to identify such announcements for 429 of the 544 new perk initiators from 2001–2011. Of these, 122 co-occur with announcements of stock splits, dividends, earnings, changes in the trade unit size, or are announced within 150 days of the firm's IPO. In our main tests we focus on the 307 remaining announcements that are free of such contemporaneous announcements.

To measure abnormal stock returns we use a one-factor market model. Abnormal returns for firm i on day t, $AR_{i,t}$, are computed as follows:

$$AR_{i,t} = Return_{i,t} - \widehat{\alpha_i} - \widehat{\beta_i} RM_t \ , \tag{1}$$

$$CAR_i(-1,1) = \sum_{t=-1}^{1} AR_{i,t}, \tag{2}$$

where $Return_{i,t}$ is the stock return on day t for firm i, RM is the value-weighted return for all listed Japanese firms, and $CAR_i(-1,1)$ is the cumulative abnormal return for firm i from day -1 through day 1 relative to the announcement. Coefficient estimates are obtained using ordinary least squares regressions using returns from days -150 through -11 relative to the announcement day. As reported in Table 5, average abnormal returns are positive and statistically significant on days -1, 0, and +1 relative to the announcement day, and the 3-day cumulative average abnormal return around the announcement is 2.06% with a t-statistic of 5.02.

Once perk programs are initiated, firms tend to maintain them. Nonetheless, the Japan Company Handbook annual data identifies 275 firms that discontinued perk programs during our sample period. We are able to identify news announcements for the suspension for 120 of these cases, of which 81 are not confounded by other important contemporaneous announcements. As reported in panel B of Table 5, the average 3-day cumulative abnormal return centered on the announcement that a perk program will be discontinued for these 81 events is -5.89% with a t-statistic of -4.29.

These results indicate that news of a new shareholder perk program is associated with an increase in share value and news that a perk program will be suspended is associated with a decrease in share value. These results are consistent with the shareholders' interest hypothesis and inconsistent with the perk irrelevance and managerial entrenchment hypotheses. In unreported tests, we find that the size of the abnormal stock return is not significantly related to the pre-perk retail share ownership or other firm characteristics used in the matching model in Table 4. The abnormal stock return is positively related, however, to the cost of the perk paid. As discussed below in Section 4.5, this finding is consistent with the signaling channel of the shareholders' interest hypothesis.

Table 5
Perk announcement returns

	A. Perk initiations (N = 307)		*B. Perk suspensions* (N = 81)	
	Mean	t-statistic	Mean	t-statistic
Day $t-5$	0.004	0.025	0.421	0.694
Day $t-4$	−0.378	−2.443**	−0.514	−1.236
Day $t-3$	0.012	0.081	0.141	0.299
Day $t-2$	0.228	1.444	0.054	0.154
Day $t-1$	0.491	2.363**	0.315	0.636
Day t	1.205	4.693***	−3.863	−4.289***
Day $t+1$	0.365	1.862*	−2.337	−3.394***
Day $t+2$	0.212	1.167	−1.307	−2.315**
Day $t+3$	0.502	2.619***	−0.203	−0.350
Day $t+4$	−0.011	−0.066	0.008	0.013
Day $t+5$	0.212	1.054	−0.357	−0.826
CAR$[t-1,t+1]$	2.061	5.019***	−5.885	−4.291***

This table reports daily abnormal stock returns and cumulative abnormal stock returns around the day (t) in which a new shareholder perk program is announced or an existing perk program is suspended. Our main sample consists of 368 perk-initiating firms during the 2001–2011 sample period. The tests in panel A use data from 307 of these firms for which announcement day returns data are available and for which the announcement dates are not confounded by other news events such as stock splits, dividends, earnings, and changes in trading unit size. Panel B reports the abnormal stock returns for 81 announcements of firms stopping their perk programs. *$p<.1$; **$p<.05$; ***$p<.01$.

3.2 Changes in firm value:Difference-in-difference tests

The event studies provide short-horizon evidence of an increase in firm value around shareholder perk announcements. In this section we report on long-term changes in firm value using annual data on the natural log of firms' market values of equity, *ln(MVE)*, in a DiD framework. The DiD estimates are calculated in event time, but the treatment and control firms are matched in calendar time and hence are drawn from various underlying years across our 11-year sample period. This mitigates concerns that macro-level unobservable factors might explain our measured changes in *ln(MVE)*, because such unobservables would have to systematically affect treatment firms over narrow ranges of event time differently than for control firms, despite the fact that (1) treatment and control firms are matched on observables in calendar time at the beginning of the event time range and (2) the macro and industry environments vary widely across the years in the sample. The identifying assumptions for the DiD tests are discussed further in Section 6.

Table 6, panel A reports the univariate DiD estimates spanning the years around perk initiation. In all three tests, the DiD point estimates for MVE are positive and significant. These results indicate that firm value increases, on average, more at the treatment firms than at the control firms over the 1 –3-year periods surrounding perk initiations. These long-term results corroborate the short-horizon event study results and are consistent with the shareholders' interest hypothesis.

Table 6, panel B reports on multivariate DiD tests from a panel regression that uses annual data from the treatment and control firms from years $t-3$ through $t-1$ and from years $t+1$ through $t+3$ relative to the year of perk adoption. We

Table 6
Firm value and shareholder perk programs

A. Difference-in-difference tests for changes in ln(MVE) around new perk program initiations

	Difference period	Difference at treatment firms	Difference at control firms	DiD	z-stat	N
ln(MVE)	$(t+1)-(t-1)$	0.060	−0.018	0.078	3.11***	365
	$(t+2)-(t-1)$	0.090	−0.057	0.147	5.96***	355
	$(t+3)-(t-1)$	0.059	−0.080	0.138	4.95***	347

B. Multivariate difference-in-difference tests of changes in the market value of equity

	Dependent variable = *ln(MVE)*	
	Model 1	Model 2
Perk dummy	0.046	−0.003
	(0.58)	(−0.11)
Post dummy	0.145***	0.008
	(3.03)	(0.48)
Perk dummy x Post dummy	0.071	0.104***
	(1.46)	(3.79)
ln(Firm age)	0.651***	−0.294
	(5.46)	(−0.99)
ROA	9.713***	4.905***
	(14.46)	(13.65)
Leverage	−0.297	−0.662***
	(−1.15)	(−3.91)
Pretreatment firm size	0.170***	
	(8.50)	
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	No
Firm fixed effects	No	Yes
Observations	12,254	12,254
Adjusted R-squared	0.286	0.956

Panel A reports difference-in-difference (DiD) estimates for the change in the natural log of the market value of equity (*MVE*) at firms initiating shareholder perk programs in year t (treatment firms) compared to contemporaneous changes in propensity-score matched control firms. The treatment sample consists of 368 firms that initiated perk programs during the 2001–2011 sample period for which data are available. The control firms are selected using Model 1 in Table 4. The z-statistics are computed using standard errors based on Abadie and Imbens (2016). Panel B reports OLS coefficients from panel regressions estimated using 3 years of data before treatment and 3 years of data after treatment for both treatment and control firms.. *Perk dummy* is set to 1 for perk-paying firms, *Post dummy* is set to 1 for years after the perk is initiated, *Perk dummy x Post dummy* is the DiD estimate. In panel B, the dependent variable is *ln(MVE)*. The control variables are measured as of the end of the prior fiscal year. The control variables are described in Section 3.2. Model 2 includes both firm and year fixed effects. t-statistics are reported in parenthesis below the coefficients, using standard errors clustering by firm and year. $^{*}p<.1$; $^{**}p<.05$; $^{***}p<.01$.

omit observations from year t, the year the perk was initiated, from the DiD analysis because year t includes changes for the outcome variables over both pretreatment and posttreatment periods. In the regression *Perk dummy* is set to 1 for firms that initiate perks and *Post dummy* is set to 1 in the years following perk initiation (for both the perk-adopting firms and their matched control firms). The main coefficient of interest is the *Perk dummy x Post dummy* interaction term. To the extent that treatment – perk initiation in our tests – is selected by the observable characteristics in our matching model, this coefficient captures the effect of the treatment.

Our control firms are selected to closely mimic the characteristics of the perk-adopting firms. Nonetheless, we include several control variables that

frequently are used in tests of firm value, including firm age, ROA, and leverage.[17] The results of the multivariate DiD tests, however, are similar if we drop these control variables. Model 1 includes industry and year fixed effects and controls for firm size with a pretreatment (year $t-4$) measure of the market value of equity. Using a pretreatment value of *ln(MVE)* allows us to control for unobservable characteristics related to firm size but without violating the DiD test assumptions. Model 2 controls for time-invariant characteristics, whether observable or not, by including firm fixed effects. We follow guidelines from Roberts and Whited (2013) and do not include any covariates in the regressions that may themselves be plausibly affected by treatment, including contemporaneous measures of firm value, liquidity, and sales. Following Bertrand, Duflo, and Mullainathan (2004), we include both firm and year effects and cluster the standard errors by both year and firm.[18]

The coefficient on *Perk dummy x Post dummy* is positive in both models and significant in the second model. This result indicates that the short-window increase in share values, as reported in Table 5, persists over a longer event window. The point estimates of the increase in share values in Table 6 are higher than the event study estimates in Table 5 of around 2%. We infer that either the long-term estimates in Table 6 reflect other contemporaneous news that is correlated with perk initiation, or that share values incorporate the full effect of perk programs only with a time lag.

The results in Table 6 are based on a comparison of how firm value changes differently around the time of treatment for the perk (treatment) firms than for their matched controls. This type of analysis has the advantage of accounting for time invariant factors that might explain these outcomes, as well as observable or unobservable trends that might be common to both treatment and control firms. One limitation of this analysis is that it necessarily focuses on the subset of firms that initiate perks for the first time during our sample years and the set of matched control firms for these firms. As an additional robustness check, Internet Appendix Table B3 reports on panel regressions using the full sample of Japanese public firms – not just the new initiators and their matched controls. This type of panel regression is not a DiD test and hence does not control for unobserved trends and does not account for selection effects, but it has the advantage of including all public firms in Japan, rather than just recent perk-initiating firms and their matched controls. Using this larger sample, firms that pay perks are associated with a higher market value of equity, consistent with the inference from the announcement returns and DiD tests reported in Tables 5 and 6.

[17] For example, see Coles, Daniel, and Naveen (2008), Cremers and Ferrell (2014), and Bebchuk, Cohen, and Ferrell (2009).

[18] One-way clustering by firm yields similar results as those reported in the tables, except for *ln(Sales)*, in which one-way clustering increases the statistical significance of the *Perk dummy x Post dummy* DiD interaction term.

4. Channels Implied by the Shareholders' Interest Hypothesis

The results in Tables 5 and 6 are consistent with the shareholders' interest hypothesis and inconsistent with the irrelevance and managerial entrenchment hypotheses. In this section we examine the four channels proposed in Section 1 by which shareholder perks could increase firm value.

4.1 Changes in ownership structure

The share liquidity and cost of capital channels of the shareholders' interest hypothesis predict that the payment of shareholder perks will increase retail ownership. Table 7 reports on tests of this prediction. Panel A reports on DiD measures for perk-initiating firms relative to the matched control group for each of the five measures of the firm's ownership structure. Perk initiators experience a significant increase in the number of individual retail shareholders both in absolute terms and relative to the total number of firm shareholders, and an increase in retail share ownership as a percent of shares outstanding by 0.8 – 1.3 percentage points. The increase in retail shareholders' holdings come most significantly at the expense of nonretail shareholders, whose share ownership decreases by 0.9 – 1.5 percentage points.

Panel B reports the results from multivariate DiD panel data tests of the relation between shareholder perks and ownership structure using data from years $t-3$ through $t-1$ and from $t+1$ through $t+3$ relative to perk initiation for each treatment firm and its matched control firms. The main coefficient of interest is the *Perk dummy x Post dummy* interaction term.

As in Table 6, we include controls for firm age, ROA, and leverage, which Edmans and Holderness (2017) suggest are related to ownership concentration. The results are similar if we do not include these variables. As discussed by Roberts and Whited (2013), we purposefully avoid including measures of firm value, sales, advertising etc. or other variables that plausibly could be affected by the perk treatment in the postperk years. However, we do include firm and year fixed effects to control for all time-invariant factors, whether observable or not, that might occur at the firm or year level. The results are similar if we include industry and year fixed effects and control for firm size with a pretreatment (year $t-4$) measure of the market value of equity.

As with the univariate DiD estimates in panel A, the DiD estimates in panel B also indicate that perk initiation is associated with an increase in the number of retail shareholders and the fraction of retail ownership. The average increase in retail share ownership equals 1.2 percentage points, and there is a corresponding decrease in nonretail ownership of 1.9 percentage points. These findings are consistent with both the share liquidity and cost of capital channels of the shareholders' interest hypothesis. In unreported tests, we find that the increase in retail share ownership occurs broadly across firms and is not related to the specific characteristics of the perk program, such as whether there is more than one tier of perk payments that depend on the number of shares owned.

Table 7
Changes in ownership structure around new perk initiations

A. Difference-in-difference tests for ownership changes around new perk program initiations

	Difference period	Treatment	Control	DiD	z-stat	N
(1) ln(#Individual retail shareholders)	$(t+1)$ - $(t-1)$	0.455	0.071	0.384	16.230***	364
	$(t+2)$ - $(t-1)$	0.563	0.080	0.484	18.254***	357
	$(t+3)$ - $(t-1)$	0.667	0.114	0.553	17.717***	349
(2) #Individual/#total shareholders	$(t+1)$ - $(t-1)$	0.018	0.003	0.015	29.756***	364
	$(t+2)$ - $(t-1)$	0.021	0.004	0.017	11.137***	357
	$(t+3)$ - $(t-1)$	0.024	0.004	0.019	15.505***	349
(3) %Retail ownership	$(t+1)$ - $(t-1)$	0.015	0.007	0.008	2.292**	364
	$(t+2)$ - $(t-1)$	0.023	0.011	0.013	3.000***	356
	$(t+3)$ - $(t-1)$	0.026	0.016	0.010	2.201**	349
(4) %Board and executive ownership	$(t+1)$ - $(t-1)$	−0.011	−0.014	0.003	1.061	365
	$(t+2)$ - $(t-1)$	−0.018	−0.018	−0.001	−0.174	357
	$(t+3)$ - $(t-1)$	−0.024	−0.027	0.003	0.952	349
(5) %NonRetail ownership	$(t+1)$ - $(t-1)$	−0.004	0.006	−0.010	−2.865***	364
	$(t+2)$ - $(t-1)$	−0.004	0.012	−0.015	−3.196***	356
	$(t+3)$ - $(t-1)$	−0.001	0.008	−0.009	−2.138**	349

(*Continued*)

Table 7
Continued

B. Multivariate difference-in-difference tests for ownership changes

	ln(#Individuals)	#Individual/#total shareholders	%Retail ownership	%Board ownership	%NonRetail ownership
Perk dummy	−0.128***	−0.004***	−0.001	−0.003	0.003
	(−4.44)	(−2.92)	(−0.16)	(−1.03)	(0.78)
Post dummy	−0.023*	−0.001	0.001	−0.004*	0.004
	(−1.65)	(−0.69)	(0.26)	(−1.91)	(1.11)
Perk dummy x Post dummy	0.442***	0.016***	0.012**	0.007*	−0.019***
	(10.41)	(7.41)	(2.26)	(1.79)	(−3.01)
ln(Firm age)	1.119***	0.010	0.063**	−0.189***	0.128***
	(3.79)	(1.09)	(2.07)	(−6.37)	(3.34)
ROA	−0.753***	−0.053***	−0.348***	0.099**	0.253***
	(−3.39)	(−4.43)	(−6.51)	(2.19)	(6.14)
Leverage	0.138	0.004	0.108***	−0.045	−0.063
	(0.84)	(0.64)	(3.42)	(−1.35)	(−1.62)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	12,284	12,284	12,277	12,291	12,277
Adjusted R-squared	0.918	0.840	0.832	0.878	0.903

This table reports the difference-in-difference (panel A) changes in five measures of the firm's ownership around the year in which firms initiated new shareholder perk programs. Year $t-1$ is the fiscal period immediately before the year in which the perk program is initiated (year t). The treatment sample consists of 368 firms that initiated perk programs during the 2001–2011 sample period for which data are available. The control firms are selected using Model 1 in Table 4. *#Individual retail shareholders* is the total number of unique retail shareholders. *#Individual/#total shareholders* is the proportion of distinct retail shareholders among all shareholders. *%Retail*, *%Board and executive*, *%Nonretail* values are the percent of shares owned by each group. *%Nonretail* ownership includes all holdings not included in the retail or board and executive categories and consists mostly of large shareholders and institutions. z-statistics are computed using standard errors based on Abadie and Imbens (2016). Panel B reports OLS regression coefficients using 3 years of data before treatment and 3 years of data after treatment for both treatment and control firms. *Perk dummy* is set to 1 for the firms that initiate perks and zero for control firms. *Post dummy* is set to 1 for the years after treatment. The other control variables are described in Section 4. Standard errors are clustered by firm and year, and $*p<.1$; $**p<.05$; $***p<.01$.

These results for firms that newly initiate perk programs also generalize to all perk-paying firms, as panel data tests reveal that perk-paying firms in general have relatively more retail investors, higher retail share ownership, and lower nonretail share ownership compared to nonperk firms (see Internet Appendix Table B4).

4.2 Changes in share liquidity

To investigate the share liquidity channel further, we examine changes in liquidity around the initiation of a perk program in a DiD framework. We measure liquidity (inversely) using Amihud's (2002) illiquidity measure of relative price impact, which is calculated as follows: [19]

$$Illiquidity_{i,y} = \frac{1}{D_{i,y} \sum_{t=1}^{Diy} \frac{|R_{iyd}|}{VOLD_{iyd}}} * 1,000,000. \quad (3)$$

R_{iyd} is the return on stock i on day d of year y and $VOLD_{iyd}$ is the value of daily volume in yen. D is the number of days for which data are available for stock i in year y. This ratio gives the absolute (percentage) price change per yen of daily trading volume, or the daily price impact of the order flow. We limit the sample to those firm-year observations with at least 100 days of data in a given year.

Table 8 reports the results from our univariate DiD liquidity tests. In panel A, the illiquidity measure decreases (i.e., liquidity increases) from before the perk is initiated to after the perk is initiated among firms that initiate perk programs. Furthermore, the decrease is significantly more than at the control firms, and the differences are significant at the 1% level. These results indicate that firms initiating perk programs experience a significant increase in share liquidity, both in an absolute sense and relative to the contemporaneous changes in the control firms.

Panel B reports the results from a multivariate DiD panel data test of the relation between shareholder perks and share illiquidity using data from years $t-3$ through $t-1$ and from $t+1$ through $t+3$ relative to perk initiation for each treatment firm and its matched control firms. Again, the main coefficient of interest is the *Perk dummy x Post dummy* interaction term. As in Tables 6 and 7, we include controls for firm age, ROA, and leverage. In addition, following Grullon, Kanatas, and Weston (2004), we include a control for share turnover, although the results are similar if we drop these control variables. As with the previous multivariate DiD tests, we purposefully avoid including measures of firm value, sales, advertising etc. or other variables that plausibly could be affected by the perk treatment in the postperk years. Model 1 includes industry and year fixed effects, and controls for firm size with a pretreatment (year $t-4$)

[19] We do not have access to historical Japanese bid-ask spread data or quoted depth, two alternative measures of liquidity.

Table 8
Liquidity and shareholder perk programs

A. Difference-in-difference tests for changes in Illiquidity around new perk program initiations

	Difference period	Difference at treatment firms	Difference at control firms	DiD	z-stat	N
ln(Illiquidity)	$(t+1)-(t-1)$	−0.478	−0.145	−0.333	−5.51***	366
	$(t+2)-(t-1)$	−0.517	−0.229	−0.288	−5.25***	357
	$(t+3)-(t-1)$	−0.526	−0.133	−0.393	−5.78***	351

B. Multivariate difference-in-difference tests of changes in share illiquidity

	Dependent variable = *ln(Illiquidity)*	
	Model 1	Model 2
Perk dummy	−0.085	0.020
	(−0.94)	(0.52)
Post dummy	−0.197***	−0.017
	(−3.62)	(−0.57)
Perk dummy x Post dummy	−0.150**	−0.242***
	(−2.09)	(−4.85)
ln(Firm age)	−1.014***	−0.148
	(−7.96)	(−0.37)
ROA	−9.045***	−4.551***
	(−11.23)	(−11.97)
Leverage	1.375***	0.695***
	(4.71)	(2.88)
ln(turnover)	−1.341***	−0.695***
	(−28.91)	(−23.72)
Pretreatment firm size	−0.153***	
	(−7.27)	
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	No
Firm fixed effects	No	Yes
Observations	12,228	12,228
Adjusted R-squared	0.607	0.955

Panel A reports the difference-in-difference (DiD) estimates for the change in the natural log of Amihud's (2002) measure of illiquidity (*Illiquidity*) for firms initiating shareholder perk programs in year t (treatment firms) compared to propensity-score matched control firms. The treatment sample consists of 368 firms that initiated perk programs during the 2001–2011 sample period for which data are available. The control firms are selected using Model 1 in Table 4. The z-statistics are computed using standard errors based on Abadie and Imbens (2016). Panel B reports regression coefficients from panel regressions in which *ln(Illiquidity)* is regressed on control variables described in Section 4.2. The regressions are estimated using 3 years of data before treatment and 3 years of data after to treatment for both treatment and control firms. *Perk dummy* is set to 1 (0) for the firms that initiate perks (control firms). *Post dummy* is set to 1 for the years after treatment. *Turnover* is measured as the annual average of total monthly volume divided by shares outstanding for years $t-2$to $t-1$. *Pretreatment firm size* is fixed at pretreatment levels to avoid including a regressor that might be affected by treatment. t-statistics are reported in parenthesis below the coefficients. Standard errors are clustered by firm and year, and $*p<.1$; $**p<.05$; $***p<.01$.

measure of the market value of equity. Model 2 controls for all time-invariant factors, whether observable or not, by including firm fixed effects. As with the univariate DiD estimates in panel A, the DiD estimates in panel B also indicate that perk initiation is associated with an increase in share liquidity. These results indicate that one channel through which shareholder perks affect firm value is through an increase in share liquidity.

The results in Table 8 are based on a comparison of how liquidity changes around the time a perk program is initiated at the treatment and control firms. As an additional robustness check, Internet Appendix Table B5 reports the results

of a panel data test using the full sample of Japanese public firms and not just firms associated with recent perk initiations and their control firms. These tests are not DiD tests, but instead simply examine the correlation between liquidity and the presence of a perk program without distinguishing between treatment and selection effects. In these tests, we also find a positive relation between liquidity and the presence of a shareholder perk program.

4.3 Changes in the cost of capital

If shareholder perks increase investors' awareness of the firm's stock, they can also increase value via a reduction in Merton's (1987) shadow cost of undiversified idiosyncratic risk. In Merton's model, investors invest in stocks of which they are sufficiently aware and hence hold portfolios that are incompletely diversified. The equilibrium rate of return demanded by these less-than-fully-diversified investors is higher than required in a full-information capital asset pricing model. The difference between the two returns is a shadow cost of undiversified idiosyncratic risk. If shareholder perks increase some previously underdiversified investors' awareness of the firm's stock, we should observe a decrease in the shadow cost and a decrease in the firm's required rate of return. Furthermore, the change in required return should be related to the change in the firm's shadow cost of undiversified idiosyncratic risk.

To examine whether shareholder perks affect firm value via a change in Merton's (1987) shadow cost, we estimate the following one-factor return model for each firm that adopts a perk program:

$$r_{i,t} - r_{f,t} = \alpha_{i,0} + \alpha_{i,1} D_t + \left(\beta_{i,0} + \beta_{i,1} D_t\right)\left(r_{m,t} - r_{f,t}\right) + \varepsilon_{i,t} \ . \tag{4}$$

Here, $r_{i,t}$ is the weekly return for firm i at time t, and $r_{f,t}$ is the risk-free rate at time t. $D_t = 1$ if t is in the post-perk-adoption period and $D_t = 0$ otherwise. $\beta_{i,0}$ and $\beta_{i,i}$ are the pre-and postadoption market risk premium factor betas. $\alpha_{i,0}$ is the preadoption abnormal return, and the sum of $\alpha_{i,0}$ and $\alpha_{i,1}$ is the postadoption abnormal return. Following Baker, Nofsinger, and Weaver (2002) and Chen, Noronha, and Singal (2004), our main parameter of interest is $\alpha_{i,1}$, which is the difference between the post- and preadoption abnormal returns. If new shareholder perk programs cause a decrease in the firm's shadow cost of undiversified idiosyncratic risk, we expect a decrease in firms' realized returns, implying $\alpha_{i,1}$ should be negative.

To avoid contamination from a perk announcement effect, we estimate the return model described in Equation (3) using weekly data from 105 to 2 weeks before the shareholder perk announcement as well as data from 2 to 105 weeks following the announcement, and winsorize each variable at the 1st and 99th percentiles. The results are qualitatively similar using monthly data. As reported in Table 9, for the overall sample of perk-initiating firms, the mean estimate of α_1 is -0.157% per week and is statistically significant at the 1% level. This result is consistent with the prediction that perk-initiating firms experience a decrease in the cost of equity capital.

To probe further whether the Merton (1987) channel is at work, we examine whether the change in $\alpha_{i,1}$ is related to an estimate of the shadow cost of equity. Following Kadlec and McConnell (1994), we measure the change in shadow cost, $\Delta\lambda$, as:

$$\lambda_i = \left[\left(\frac{RVAR_i * RELCAP_i}{NIND_{i,post}}\right) - \left(\frac{RVAR_i * RELCAP_i}{NIND_{i,pre}}\right)\right] * 10{,}000\,. \qquad (5)$$

Here, $NIND_{i,pre}$ and $NIND_{i,post}$ are the number of individual retail shareholders at the end of the most recent fiscal year before the perk initiation announcement date and at the fiscal year end in the year after the announcement date for firm i.[20] *RVAR* is the stock's residual variance calculated from daily returns over the 104-week postadoption period. *RELCAP* is the firm's market capitalization of its common stock at the end of the month before the adoption announcement date divided by the contemporaneous level of the TOPIX Index. In effect, this measure reflects the change in the firm's value-weighted idiosyncratic risk per individual shareholder.

For the overall sample, the mean change in the shadow cost for perk-initiating firms is −2.193 and is statistically significant at the 1% level. This result is consistent with our finding of a decrease in the cost of capital for these firms.

Panel A of Table 9 also reports the mean change in cost of capital for each of four quartiles based on the change in shadow cost. The decrease in perk-initiating firms' estimated cost of equity is monotonically related to a corresponding decrease in the shadow cost of undiversified idiosyncratic risk. For example, the mean change in α_1 is −0.601% for the quartile of firms with the largest decrease in shadow cost, and is 0.150% for the quartile of firms with the smallest decrease in shadow cost. The difference in α_1 between the high and low quartiles is −0.751% and is statistically significant at the 1% level. This evidence indicates that the size of the change in the cost of equity capital corresponds to the size of the change in the shadow cost of equity.

The panel A results are based on a regression where each firm effectively serves as its own control from the pre- to posttreatment periods. In panel B, we report the DiD estimates for the shadow costs using the matched sample of control firms. Consistent with the inference from the panel A results, perk-initiating firms exhibit changes in their shadow costs that are significantly larger in magnitude than the changes in the shadow costs of the control firms over the same years.

Panel C of Table 9 reports on multivariate DiD tests for the change in the shadow cost of capital. We are unaware of prior tests that might provide guidance about possible additional covariates in a multivariate DiD test for the

[20] See also Foerster and Karolyi (1999), Baker, Nofsinger, and Weaver (2002), and Chen, Noronha, and Singal (2004). Kadlec and McConnell (1994) use the total number of shareholders to compute the cost of capital instead of the number of individual shareholders. We use the number of individual shareholders because shareholder perks are likely to have their primary effect on the number of individual shareholders. We obtain similar results, however, using the total number of shareholders to measure the change in the shadow cost of capital.

Table 9
Changes in required returns and the shadow cost of equity capital

A. Changes in the cost of capital and the shadow cost of capital

		Cost of capital before and after perk adoption				λ_i = Mean
	N	α_0	*t*-stat	α_1	t-stat	*change in shadow cost*
Full sample	307	0.281	(6.05)***	−0.157	−2.70***	−2.193***
Δ Shadow cost quartile						
Quartile 1 (Largest decrease in λ)	77	0.647	(6.08)***	−0.601	−4.90***	−7.659***
Quartile 2	77	0.361	(4.23)***	−0.217	−1.79*	−1.192***
Quartile 3	77	0.097	(1.29)	0.045	0.45	−0.242***
Quartile 4 (Smallest decrease in λ)	76	0.014	(0.17)	0.150	1.48	0.355***
Quartile 1 - Quartile 4		0.633	(4.63)***	−0.751	−4.71***	

B. Difference-in-difference tests

	Difference period	Treatment	Control	DiD	z-stat	N
ln(Shadow costs)	$(t+1)-(t-1)$	−0.493	−0.092	−0.401	−9.64***	364
	$(t+2)-(t-1)$	−0.579	−0.171	−0.409	−9.69***	357
	$(t+3)-(t-1)$	−0.654	−0.156	−0.498	−11.85***	349

C. Multivariate difference-in-difference test of changes in the shadow cost of capital

	Dependent variable = *ln(Shadow cost of capital)*	
	Model 1	Model 2
Perk dummy	0.066	0.120***
	(1.55)	(3.56)
Post dummy	−0.007	0.029
	(−0.20)	(1.41)
Perk dummy x Post dummy	−0.387***	−0.391***
	(−12.31)	(−7.88)
ln(Firm age)	0.170*	−1.366***
	(1.83)	(−4.24)
ROA	6.889***	5.093***
	(15.70)	(11.52)
Leverage	−0.391***	−0.566***
	(−2.64)	(−2.62)

(*Continued*)

Table 9
Continued

C. Multivariate difference-in-difference test of changes in the shadow cost of capital

	Dependent variable = *ln(Shadow cost of capital)*	
	Model 1	Model 2
ln(turnover)	−0.024	0.177***
	(−1.02)	(6.13)
Pretreatment firm size	0.045***	
	(4.04)	
Year fixed effects	Yes	Yes
Industry fixed effects	Yes	No
Firm fixed effects	No	Yes
Observations	12,249	12,249
Adjusted R-squared	0.274	0.755

Panel A reports the α_0 and α_1 estimates from the return model:

$$r_{i,t} - r_{f,t} = \alpha_{i,0} + \alpha_{i,1} D_t + (\beta_{i,0} + \beta_{i,1} D_t)(r_{m,t} - r_{f,t}) + \varepsilon_{i,t},$$

where $r_{i,t}$ is the weekly return for firm i at time t, and $r_{f,t}$ is the risk-free rate at time t. $D_t = 1$ if t is in the post-perk-adoption period and $D_t = 0$ otherwise. $\beta_{i,0}$ and $\beta_{i,i}$ are the pre-and postadoption market risk premium factor betas. $\alpha_{i,1}$ is the difference between the post- and preadoption abnormal returns. The model is estimated using weekly return data from 105 to 2 weeks before the perk announcement and 2 to 105 weeks following the perk announcement.

Following Kadlec and McConnell (1994), the change in shadow cost of equity capital is measured as:

$$\Delta\lambda_i = \left[\left(\frac{RVAR_i * RELCAP_i}{NIND_{i,post}} \right) - \left(\frac{RVAR_i * RELCAP_i}{NIND_{i,pre}} \right) \right] * 10{,}000,$$

where $NIND_{i,pre}$ and $NIND_{i,post}$ are the number of individual shareholders at the end of the most recent fiscal year before the perk initiation announcement date and at the fiscal year end in the year after the announcement date for firm i. *RVAR* is the stock's residual variance calculated from daily returns over the 104 week postadoption period. *RELCAP* is the firm's market capitalization of its common stock at the end of the month before the adoption announcement date divided by the contemporaneous level of the TOPIX Index. Panel B reports the difference-in-difference (DiD) estimates for the change in the *ln(shadow cost)* for firms initiating shareholder perk programs in year t (treatment firms) compared to propensity-score matched control firms. The treatment sample consists of 368 firms that initiated perk programs during the 2001–2011 sample period for which data are available. The control firms are selected using Model 1 in Table 4. The z-statistics are computed using standard errors based on Abadie and Imbens (2016). Panel C reports regression coefficients from panel regressions in which *ln(shadow cost)* is regressed on control variables described in Section 4.3. The regressions are estimated using 3 years of data before treatment and 3 years of data after treatment for both treatment and control firms. *Perk dummy* is set to 1 (0) for the firms that initiate perks (control firms). *Post dummy* is set to 1 for the years after treatment. *Pretreatment firm size* is fixed at pretreatment levels to avoid including a regressor that might be affected by treatment. t-statistics are reported in parenthesis below the coefficients. Standard errors are clustered by firm and year, and $*p < .1$; $**p < .05$; $***p < .01$.

shadow cost, so we use the same controls as in Table 8, panel B: (*ln(firm age), ROA, Leverage*, and *ln(turnover))*. Model 1 includes industry and year fixed effects, along with the pretreatment (year $t-4$) value of *ln(MVE)*, and Model 2 includes firm and year fixed effects. In both models, the *Perk dummy x Post dummy* interaction term is negative and statistically significant. Overall, the results in Table 9 are strongly consistent with the inference that one channel through which shareholder perks affect firm value is via a reduction in the shadow cost of equity capital.

4.4 Changes in sales

If firm value increases due to an increase in consumer interest, then shareholder perk programs should be associated with an increase in firm sales, particularly among firms that sell in the retail market and that use their own products as perks. Table 10 reports on DiD tests of this channel using firms that initiated perk programs and their matched control firms.

In general, the sales-related results are sensitive to the specific model tested. The univariate DiD tests, which are reported in panel A, indicate that perk initiators increase sales more than the control firms from the years before to the years after the perks are initiated. In the multivariate DiD test, however, the coefficient on the *Perk dummy x Post dummy* interaction is statistically insignificant in Model 1 of panel B. (The regression tests include the same controls as in previous tables for firm age, ROA, and leverage, as well as firm and year fixed effects.)

The coefficient on *Perk dummy x Post dummy* is positive and statistically significant in some alternate specifications, for example, when the standard errors are clustered by firm only and not by firm and year. (Using one-way clustering does not materially affect results for any of the other outcome variables in the paper.) However, as Roberts and Whited (2013) discuss, if the DiD estimator is sensitive to the inclusion of additional controls, the assignment of the treatment can be driven partly by the covariates. We infer that sales do increase for perk-initiating firms – as indicated by the univariate results in panel A – but this result may be influenced by selection effects. This inference is further supported by Internet Appendix Table B6, which reports the results of a panel data test using the full sample of Japanese public firms and not just those firms associated with recent perk initiations and their controls. These tests, which do not control for selection, show a positive general relation between sales and the presence of a shareholder perk program. We infer that sales do increase following perk adoption, on average, but the relation may not be causal.

Models 2 and 3 of panel B examine whether the change in sales is higher for firms in industries that sell primarily to retail consumers or for firms that use their own products as perks. (Internet Appendix Table B7 lists the industries that are classified as B2C versus B2B.) In Model 2, the main coefficient of interest, for the triple interaction, *B2C* $\times$ *Perk* $\times$ *Post dummy*, is statistically insignificant. In Model 3, the key coefficient is for the *Own perk dummy x Post*

dummy interaction. (We cannot include a triple interaction term (*Own perk dummy x Perk x Post dummy*) without inducing perfect collinearity because *Perk dummy* = 1 for all firms for which *Own perk dummy* = 1.) This coefficient also is statistically insignificant. These results do not support the intuition of the marketing to consumers channel.

4.5 Signaling to investors channel-related tests

Shareholder perks are distributions to shareholders, so theories of dividend signaling could apply to perks as well (e.g., Miller and Rock 1985). The event study results reported in Table 5 are consistent with signaling, as the announcement of a new perk program is associated with an average 2.06% abnormal stock return. The negative (−5.89%) abnormal return when firms announce the suspension of a perk program suggests that initiating a perk program is an absorbing state from which deviation is costly. Also consistent with this interpretation is the observation that perk programs are persistent, as only 3% of perk-paying firms suspend their perk programs each year, on average, during our sample period.

To examine the signaling channel further, we test whether the increases in firm value around perk initiations are increasing in the cost of the signal, as measured by the perk yield (i.e., the value of the perk divided by the market value of equity). Regressing the 3-day announcement cumulative abnormal return (CAR) on the perk yield, the coefficient is positive and significant at the 10% level (t-statistic = 1.69). This result provides additional evidence that is consistent with the notion that the initiation of a perk program signals favorable information to investors.

4.6 Effects on firms that suspend perk programs

Although most firms that initiate perk programs maintain them over time, a total of 275 firms (about 3% of perk-paying firms per year) suspended perk programs during our sample period of 2001–2011. As noted in Table 5, the announcement of the suspension of a perk program is associated with a significant decrease in these firms' share values. We examine the effect of perk programs further by replicating the DiD tests in Tables 6–10, but using the sample of firms that suspend perks. To conduct these tests, we identify a new set of control firms for the perk suspending firms using the same control variables as in the matching model in Table 4.

The results of these tests are reported in the Internet Appendix (Tables B8–B12). Perk suspensions are associated with outcomes that are the opposite of the changes experienced by perk-initiating firms. Firms that suspend their perk programs experience a decrease in the market value of equity, a decrease in the number of retail investors, an increase in share illiquidity, an increase in the shadow cost of equity capital, and a decrease in sales. All of these results are statistically significant except for one multivariate test for the shadow cost of

Table 10
Changes in sales around shareholder perk initiations

Panel A: Difference-in-difference tests

	Difference period	Treatment	Control	DiD	z-stat	N
ln(Sales)	$(t+1)-(t-1)$	0.084	0.048	0.036	3.45***	365
	$(t+2)-(t-1)$	0.101	0.064	0.037	2.32**	356
	$(t+3)-(t-1)$	0.119	0.052	0.067	3.52***	349

Panel B – Multivariate difference-in-difference test of changes in sales

	Dependent variable = *ln(Sales)*		
	Model 1	Model 2	Model 3
Perk dummy	−0.001	0.000	0.020
	(−0.05)	(0.02)	(1.08)
Post dummy	−0.000	−0.019	0.000
	(−0.02)	(−1.33)	(0.01)
Perk dummy x Post dummy	0.025	0.015	0.047**
	(1.24)	(0.77)	(1.99)
B2C x Perk dummy		−0.003	
		(−0.07)	
B2C x Post dummy		0.045*	
		(1.88)	
B2C x Perk x Post dummy		0.022	
		(0.56)	
Own perk dummy			−0.048
			(−1.47)
Own perk dummy x Post dummy			−0.044
			(−1.34)
ln(Firm age)	1.018***	0.959***	1.022***
	(5.68)	(5.17)	(6.58)
ROA	2.041***	2.051***	2.041***
	(8.29)	(8.36)	(9.11)
Leverage	0.451***	0.447***	0.451***
	(2.66)	(2.65)	(2.84)
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
Observations	12,281	12,281	12,281
Adjusted R-squared	0.979	0.979	0.979

Panel A reports difference-in-difference (DiD) estimates for the change in the natural log of sales at firms initiating shareholder perk programs in year t (treatment firms) compared to contemporaneous changes in sales at propensity-score matched control firms. The treatment sample consists of 368 firms that initiated perk programs during the 2001–2011 sample period for which data are available. The control firms are selected using Model 1 in Table 4. The z-statistics are computed using standard errors based on Abadie and Imbens (2016). Panel B reports regression coefficients from panel regressions using 3 years of data before treatment and 3 years of data after treatment for both treatment and control firms. *Perk dummy* is set to 1 (0) for the firms that initiate perks (control firms). *Post dummy* is set to 1 for the years after treatment. *B2C dummy* is set to 1 if the firm operates in an industry that primarily sells to retail consumers. *Own perk dummy* is set to 1 if the firm uses its own product as the perk. Model 3 does not include a triple interaction term (*Own perk dummy* × *Perk* × *Post dummy*) because it would induce perfect collinearity (because *Perk* = 1 for all firms for which *Own perk* = 1). Standard errors are clustered by firm and year, and * $p < .1$; ** $p < .05$; *** $p < .01$.

equity capital. These results provide further evidence that is consistent with all four channels of the shareholder interest hypothesis.

4.7 Shareholder perks versus cash dividends

Perks, like cash dividends, are a way to distribute earnings to shareholders. Our results imply that perks and cash dividends share some features. Both perks and dividends are associated with share price increases when they are initiated

and share price decreases when they are suspended. As with cash dividends, the suspension of a perk program is associated with financial trouble; in untabulated results, we find that perk-suspending firms experience decreases in sales and ROA, and 50.2% of firms that suspend perks are delisted within 2 years. As reported in Internet Appendix Table B13, perk initiations are associated with a decrease in cash flow volatility, similar to Michaely, Rossi, and Weber's (Michaely, Rossi, and Weber 2020) finding for cash dividends. Together, these results suggest that perks, like cash dividends, signal information about the firm's future earnings.

It would be incorrect, however, to view perks as close substitutes for cash dividends, because perks have several unique effects. Unlike dividends, perks affect firm value via the share liquidity, cost of capital, and marketing to consumers channels that are the focus of Sections 4.2–4.4.[21] Also, firms that initiate perks experience an increase in retail share ownership and firms that suspend perks have a decrease in retail share ownership (see Table 7 and Internet Appendix Table B9). We find that, in our sample, the initiation of cash dividends has the opposite effect, as it decreases the number of retail investors (see Internet Appendix Tables B14 and B15). We infer that perks cater to retail investors while cash dividends cater more to nonretail investors (e.g., see Allen, Bernardo, and Welch 2000). Another difference is that, while Grullon, Michaely, and Swaminathan (2002) find that cash dividends are associated with a decrease in the firm's stock beta, Internet Appendix Table B13 shows that perk initiation is associated with a decrease in idiosyncratic stock volatility – a result that is consistent with our finding of a decrease in the shadow cost of capital.

Thus, perks have a signaling effect that is similar in some ways to cash dividends, but several other additional effects too. To explore possible interactions between perks and cash dividends, we examined whether the effect of a perk program depends on whether the firm also pays a cash dividend. Internet Appendix Table B16 reports results for share ownership, which show that the effects of perk initiation on share ownership are similar at firms that already pay a cash dividend and at firms that do not pay a cash dividend. Overall, the effect of shareholder perks does not depend on whether the firm also pays a cash dividend.

4.8 Economic magnitudes of the effects

Our hypotheses' tests focus on the signs and statistical significance of the key coefficients in our DiD tests. In this section we also consider the magnitudes of the coefficients. The results in Table 5 indicate that the announcement of a new

[21] All of these effects appear to be unique to perks. Banerjee, Gatchev, and Spindt (2007) and Jiang, Ma, and Shi (2017) examine the relation between cash dividends and share liquidity, but their focus is on how liquidity affects firms' propensity to pay dividends. A parallel to our tests would examine whether and how the payment of cash dividends affects share liquidity.

perk program is associated with a mean increase in share values of 2.06%. The results in panel B of Table 7 indicate that perk initiators experience an increase in retail share ownership of 1.2 percentage points and a corresponding decrease in nonretail share ownership of 1.9 percentage points. Relatedly, the coefficient of -0.15 for the *Perk dummy* × *Post dummy* in Model 1 of panel B of Table 8 indicates that the share illiquidity measure declines by 7.5% for perk-initiating firms compared to the preperk mean level of the illiquidity measure (−1.992 as reported in Table 3), and the results in panel A of Table 9 indicate that perk initiators' weekly cost of equity capital decreases by an average 0.157%. These results are consistent with the shareholders' interest hypothesis, but the magnitude of the changes in value, liquidity, and cost of capital seem large for what appears to be a small change in the firm's ownership structure.

We offer two observations that partly reconcile the magnitudes implied by our results. First, the mean number of retail shareholders for perk-initiating firms increases from 9,487 to 12,805 individuals, or 35% from year $t-1$ to year $t+2$. This increase is similar to those observed by Amihud, Mendelson, and Uno (1999) and Chen, Noronha, and Singal (2004) in related tests. Amihud, Mendelson, and Uno (1999) report an average increase of 3,307 individual shareholders and a significant increase in share liquidity in their sample of Japanese firms that reduced their minimum trade unit sizes. Chen, Noronha, and Singal (2004) report an average increase of 2,936 individual shareholders to firms that were added to the S&P 500 index in the 1990s, which corresponds to a significant decrease in these firms' Merton's (1987) shadow cost of capital and an increase in their share liquidity. These prior results represent a larger percentage change in the numbers of retail investors than in our tests, but suggest that even modest changes in the shareholder base can have significant effects on share liquidity and the cost of capital, similar to the effects implied by our measures.

Second, changes in share liquidity and the cost of capital are only two of the channels by which shareholder perks can increase share values. Our results indicate support for the signaling to investors channel, and mixed support for the marketing to consumers channel – neither of which requires a change in retail share ownership. We infer that the shareholders' interest hypothesis works via multiple channels, and that the observed increase in share values reflects the combined effects of all of the channels.

5. Channels Implied by the Managerial Entrenchment Hypothesis

Our findings indicate that shareholder perks are associated with an increase in firm value, an increase in share liquidity, and a decrease in the cost of capital. As summarized in Table 1, all of these results are inconsistent with the managerial entrenchment hypothesis. We nonetheless examined two channels suggested by previous research by which perks might entrench managers. Masulis, Wang, and Xie (2007) and Faleye (2007) find that acquisition announcement returns

and CEO-turnover sensitivity are lower in firms with entrenched managers. If shareholder perks work to entrench managers, we would expect to observe lower acquisition announcement returns and CEO-turnover sensitivity for firms with perk programs. As reported in Internet Appendix Table B17, however, acquisition announcement returns are not significantly related to the payment of shareholder perks, and as reported in Internet Appendix Table B18, the sensitivity of CEO turnover to firm performance is not weaker at firms that pay perks. These results provide further evidence that is inconsistent with the entrenchment hypothesis of shareholder perks.

6. Parallel Trends and Robustness

Our empirical results provide strong support for the shareholders' interest hypothesis and are consistent with the share liquidity, equity cost of capital, and signaling channels, with mixed evidence regarding the marketing to consumers channel. The results do not support the perk irrelevance or managerial entrenchment hypotheses. The results are consistent across different samples (i.e., using the subset of firms newly initiating perk programs alone, or in comparison with matched control firms, or using the full sample of public firms), across tests focusing on different time horizons (i.e., 3-day CARs and DiD tests spanning different periods), and are supported using different empirical approaches (announcement returns, matched sample DiD tests, and multivariate DiD regressions). The results are further supported in tests of the changes in outcomes experienced by firms that suspend perk programs.

Firms choose whether to pay perks, indicating that some of the changes we document could reflect selection as well as treatment effects. We are careful to interpret our evidence as applying to Japanese firms that choose perk programs, as they do not necessarily imply that all firms would increase their shareholder bases, increase value, increase share liquidity, and decrease the cost of capital if they adopt perk programs. In this section, we examine further the potential importance of selection and check the internal validity of our DiD models by examining whether the parallel trends assumption is satisfied in our DiD empirical setting.

As discussed in Section 2.3, we match the treatment and control firms using observables in year $t-1$ relative to perk initiation. For the DiD tests to be identified, we must assume that but for the initiation of the perk programs in the treatment firms, the response variables (*%Retail ownership*, *ln(MVE)*, *ln(Illiquidity)*, *ln(Shadow cost)*, and *ln(Sales)*) would have followed similar trends from year $t-1$ to year $t+1$ at the treatment and control firms. This assumption is not testable. As a substitute test, however, we examine how these response variables moved in the years leading up to the perk adoption.

Table B19 in the Internet Appendix compares changes in retail shareholders, share ownership, MVE, illiquidity, the shadow cost of capital, and sales for the treatment and control firms from years $t-2$ to $t-1$ relative to the year in which perk programs were adopted. In all cases, the changes are not significantly

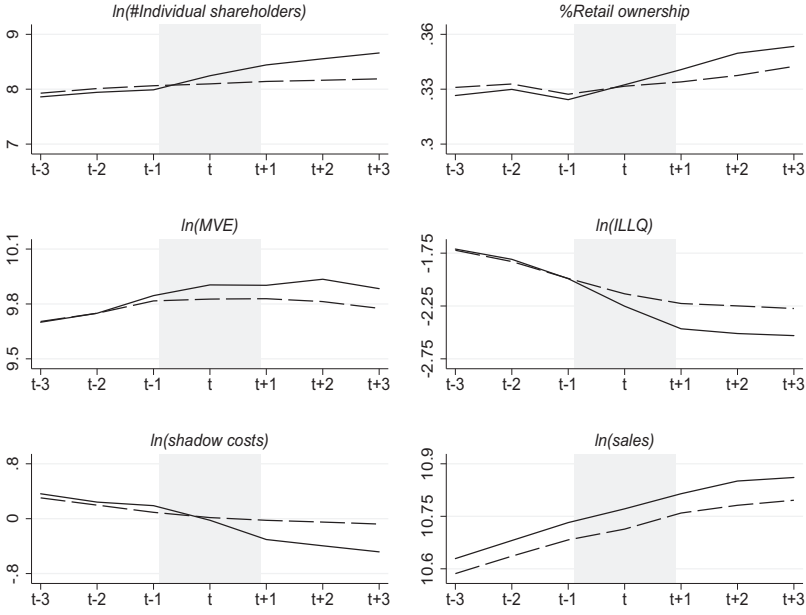

Figure 2
Parallel trends figures for the outcome variables
The figures show the mean values for firms initiating shareholder perk programs and their matched control firms in event time for 3 years before and after perk initiation. The horizontal axis in each plot tracks the years relative to when the perk program was initiated (i.e., year $t+1$ is the first full year during which the firm has a perk program in place). The vertical axis is measured in the units corresponding to each plot title. Control firms (hashed line) are identified using the matching model reported in Model 1 of Table 4. The treated firms (solid line) are the firms that initiate a perk program sometime during year t.

different between the treatment and control firms. That is, these outcome variables followed parallel trends in the year leading up to treatment and these results are consistent with the assumption of parallel trends across the event year if not for treatment.

Figure 2 illustrates the movement in event time of each of the key outcome variables for the treatment and control firms. As noted earlier, the DiD regressions do not include year t data because year t includes effects from both pre- and posttreatment periods. In Figure 2, we include year t but shade this period to emphasize that the change in trends could start early or late during year t.

The results in Internet Appendix Table B19 and the plots in Figure 2 imply that the DiD results reported in the other tables are not driven by unobserved factors. To see this, consider that if some omitted variable were to account for the results, it would have to be the case that: (1) the omitted variable was not a significant determinant of changes in retail share ownership, MVE, liquidity, and the shadow cost of equity in the years before the perk program (to explain the Internet Appendix Table B19 results); (2) despite this, the information content of the omitted variable would have to become obvious to investors just when

the perk was announced (to explain the positive announcement returns); and (3) the omitted variable would then have to be a driving force for changes in retail share ownership, MVE, liquidity, and shadow costs in the years after the perk announcement – but only among the perk-initiating firms and not among the control firms (to explain the results in Tables 6 – 9). Such a confluence of coincidences seems unlikely. A more likely explanation is that the changes around perk initiations stem from the perk programs themselves and not from some unobservable influence. This conclusion is further supported by the results from the tests focused on the firms that suspend their shareholder perk programs.

7. Conclusion

Shareholder perks, which cater to retail investors, are popular and widespread. We find that firms initiating perks experience an increase in retail shareholdings and an increase in firm value, on average, as measured by short-term returns, longer-window DiD tests, and panel regressions. These results imply that shareholder perks tend to serve shareholders' interests. We find support for at least three channels by which perks affect value, via an increase in share liquidity, a decrease in the cost of capital and Merton's (1987) shadow cost of capital, and by signaling positive information to investors. Evidence for a fourth channel – via marketing to consumers and an increase in sales – is mixed.

Together, these findings indicate that shareholder perks increase firm values from a combination of effects across multiple channels. We do not infer that shareholder perk programs would increase values at all firms or that all firms should adopt them, as our results reflect data just from Japanese firms, and only those Japanese firms that choose to adopt perk programs. Initiating a perk program can be costly, as firms that suspend such a program experience large losses in share values. Our results imply that firms adopt perks when the benefits are sufficiently high, for example, when the firm has relatively few retail investors and low share liquidity, and when managers have sufficient confidence that, once initiated, the perks can be maintained.

These results indicate that optimal ownership structure does not follow a one-size-fits-all model. Large shareholders undoubtedly offer monitoring and informational benefits, as emphasized in much of the finance literature. But for many firms, perk programs that cater to retail investors increase firm value by attracting more retail investors and increasing share liquidity, decreasing the cost of equity capital, signaling an increase in firm value, or (perhaps) marketing the firm's products to consumers, or a combination of all of these channels.

Appendix

Table A.1 lists examples of shareholder perks at 20 arbitrarily chosen Japanese firms that are in the sample used in the paper.

Table A.1
Summary of shareholder perks at 20 arbitrarily chosen firms in sample

Firm name	Industry	Perks	Number of Shares Required for Perk	Stock price (yen)	Perk yield for minimum shareholder[1]
Aeon CO., LTD.	Supermarket chains	3% cash back card	100 to 499 shares	1518.5	–
		4% cash back card	500 to 999 shares	1518.5	–
		5% cash back card	1,000 to 2,999 shares	1518.5	–
		7% cash back card	3,000 or more shares	1518.5	–
AGS Corp.	Miscellaneous services	2,000 yen gift card	100 or more shares	990	2.02%
Asics Corp.	Manufacturing, NEC	15% discount coupons at Asics online store	100 to 999 shares	1,900	–
Edion Corp.	Wholesale - electric goods	3,000 yen discount coupon	100 or more shares	863	3.48%
Japan Pulp and Paper Company Ltd.	Miscellaneous wholesale	24 rolls of toilet paper	1,000 or more shares	359	–
Japan Exchange Group, Inc.	Other financing business	3,000 yen gift card	100 or more shares	1,392	2.16%
J. Front Retailing Co. Ltd.	Department stores	10% discount card	100 or more shares	1,140	–
Kikkoman Corp.	Flavoring extracts	2,500 yen of own products	1,000 or more shares	3,895	0.06%

(*Continued*)

Table A.1
Continued

Firm name	Industry	Perks	Number of Shares Required for Perk	Stock price (yen)	Perk yield for minimum shareholder[1]
Kyokuyo CO., LTD.	Foods	5,000 yen of assorted canned goods	1,000 or more shares	264	1.89%
Leopalace21 Corp.	Real estate - sales	2 nights free hotel voucher	100 or more shares	757	-
Maezawa Kasei Industries CO., LTD.	Plastics	3 kilograms of high quality rice	100 or more shares	1,026	-
Masuda Flour Milling Co., Ltd.	Grain mill products	3,000 yen of Ibonoito noodle	1,000 or more shares	310	-
Maruzen CO., LTD.	Metal products, NEC	3,000 yen meal coupon	1,000 to 9,999 shares	969	0.31%
		5,000 yen meal coupon	10,000 or more shares	969	0.05%
Morinaga Milk Industry Co., Ltd.	Dairy products	12 brands of tofu	1,000 or more shares	739	-
Nippon Pillar Packing CO., LTD.	Machinery, NEC	1,000 yen gift card	100 or more shares	1,039	0.96%
Nippon Yusen Kabushiki Kaisha	Shipping	Discount cruise coupon	1,000 or more shares	195	-
Suzuki Motor Corp.	Motor vehicles	Assortment of honey and rock salt	100 or more shares	3,134	-
Takamatsu Construction Group Co., Ltd.	Home & Pre-fabs	5 kilograms of an expensive brand rice	100 or more shares	2,419	-
The Yamanashi Chuo Bank, Ltd.	Regional banks	Personal loan interest rates - 0.2%	1,000 or more shares	406	-
Yamaha Corp.	Musical instruments	1,500 yen of original gift item, 1,500 yen of discount coupon, or 1,500 yen of donation	100 to 999 shares	3,015	0.50%
		3,000 yen of original gift item, 3,000 yen of discount coupon, or 3,000 yen of donation	1,000 or more shares	3,015	0.10%

[1]The perk yield is shown for the subset of perks that have estimated values reported in the Japan Company Handbook.

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