

Business Groups and Tunneling: Evidence from Brand Royalty Flows within Chaebol

Abstract

This paper investigates the intragroup flows of brand royalties within large Korean business groups. We find that business group member firms pay a greater amount of brand royalties when the associated business groups adopt a holding company governance structure, consistent with the public allegation that chaebols tunnel wealth from member firms to holding companies that they directly control. However, member firms pay a smaller amount of brand royalties when their related party transactions (RPTs) are monitored, for example, when the firm is on (i) the watch list of an external watchdog agency for controlling shareholders' unfair profit reaping from RPTs or when its board of directors internally operates (ii) a designated committee on RPTs or (iii) an audit committee. The results suggest that the alleged tunneling behavior of large business groups can be mitigated by external or internal monitoring on RPTs.

Keywords: Brand royalty; Business group; Chaebol; Holding company; Related party transactions committee.

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1. Introduction

Chaebol, which is a combination of two Korean words ‘chae’ (wealth) and ‘bol’ (clan or clique), is a form of corporate structure that is common in emerging economies such as Korea (Almeida, Kim, and Kim 2015; Chang and Hong 2002; Khanna and Palepu 1997, 2000; Khanna and Rivkin 2001). Chaebol member firms often pay a substantial amount of brand royalty fees to the group-brand name or trademark holder, who is either the holding company or the core/parent firm of the business group. In 2017, an average chaebol member firm paid 2.5 billion Korean won (KRW) (approximately US \$2.3 million) or 0.35 percent of total sales. This intra-group brand royalty fee payment is a type of related party transactions (RPTs) between brand-name holders and beneficiary firms, but has not been investigated in the literature on RPTs.

Not all RPTs are detrimental to the interest of minority shareholders and firm value. In fact, many RPTs are just fair business exchanges between related parties, and their terms and conditions are often contractually more efficient than those of similar arm’s length transactions because of low transaction costs and solid mutual understanding among related parties. However, after a series of high profile scandals abusing RPTs (e.g., Adelphia, Enron, Tyco, and WorldCom), capital market participants begin apprehensively to perceive RPTs as a potential conduit for controlling shareholders to tunnel corporate resources to themselves, which gives rise to conflicts of interest among shareholders and stakeholders. To address growing concerns over the conflicts of interest in RPTs, regulators and watchdogs around the world come up with a variety of measures and governance mechanisms to enhance investor protections (see Center for Audit Quality 2010; CFA Institute 2009; European Commission 2011a, 2011b; IAASB 2009; IASB 2008; OECD 2009,

2012, 2015; PCAOB 2014 for details).

In this study, we examine the flows of brand royalty fees within chaebol and the effect of the intragroup RPT monitoring on the inequitable brand royalty payment. At first glance, chaebols seem to charge the brand royalty fee equitably to their member firms. The brand royalty formulas tend to reflect the beneficiary firm's capacity to bear the cost because brand royalties are usually determined as a percentage of sales volumes or operating profits, sometimes after adjusting for advertising-related outlays (see Appendix B for some illustrations of brand royalty fee formulas discussed in section 2.1.).

However, the brand royalty formulas do not necessarily represent the benefits obtained by the beneficiary firms from using the group-brand name. Specifically, not all chaebol member firms pay brand royalty fees to the group-brand name holder. Some member firms do not pay brand royalty fees even when other member firms in the same chaebol group pay. Further, some other chaebols charge brand royalty fees to none of their member firms.

Accordingly, regulators and stakeholders have questioned whether brand-name holders have legitimate rights to receive a brand royalty and whether brand royalty fees are fairly determined and imposed on chaebol member firms. For example, Annuncio (1996) reports that minority shareholders are displeased with brand royalty fees charged by Tata Group of India. In Korea, Lee (2008) alleges that chaebol holding companies collect too much brand royalty fees from subsidiaries to boost income. Recently, the Korean National Assembly has discussed the issue of brand royalty fees, and several lawmakers urged the Korea Fair Trade Commission (KFTC) to monitor closely the flows of brand royalties within the chaebol to prevent chaebol owners from taking unfair personal gain (Bae 2017).

Korean chaebols have utilized various types of RPTs including the web of circular

ownership (i.e., cross shareholding) and mutual debt guarantees to entrench management and retain wealth within the founding family. After the 1997 Asian Financial Crisis, the KFTC perceives the intragroup capital transactions (i.e., cross shareholding and mutual debt guarantee) as the root cause of structural inefficiencies in chaebols and thus has attempted to unweave the circular-ownership web; the KFTC urges the chaebol to transform the traditional circular ownership matrix to a one-directional, holding company governance structure. Business press notices an unexpected consequence of the holding company system in which the ownership of group-brand names and logos is often transferred to the holding companies: chaebols tunnel the wealth of brand royalty-paying member firms to the brand-name holder. Since 2018, the KFTC has made it mandatory for chaebols to disclose brand royalty information in response to accumulating woes over chaebol owners collecting excessive brand royalty fees. We utilize this first-ever publicly disclosed information to examine whether chaebols indeed collect the intragroup brand royalty fee inequitably for the benefit of the chaebol owners, as alleged, and whether such an opportunistic intragroup RPT can be mitigated by external or internal monitoring of RPTs.

Our investigation of 396 chaebol member firms belonging to 39 large business groups yields the following results. First, we find that chaebol member firms pay a greater amount of brand royalty fees when the associated business groups have adopted a holding company governance system. We further find that the functional nature of the holding company influences brand royalties: chaebol member firms pay higher brand royalties when the holding company of the associated business group does not operate its own income-generating business units than when it does. The results are consistent with the allegation that some chaebols use intragroup brand royalty fees opportunistically to boost the incomes of group-brand name holders.

Next, we find that chaebol member firms pay a smaller amount of brand royalty fees when their RPTs are monitored: more specifically, when the firm is on the KFTC's watch list for close monitoring of unfair profit reaping by the founding family or when its group operates an RPTs committee or an audit committee on the board of directors. We further find the moderating effect of RPT monitoring, particularly that of internal committees such as an RPTs committee and an audit committee, on the higher brand royalty payment by chaebol member firms to the holding company. To summarize, while RPT monitoring, regardless of external or internal monitoring, helps reduce the amount of brand royalty fee collection, the internal monitoring through an RPTs committee and an audit committee is effective in restraining chaebols under the holding company governance structure from collecting the immoderate amount of brand royalty fees from the member firms.

Our study contributes to the literature as follows. First, we add to the literature on RPTs by shedding a new light on brand royalty, specifically by showing how group-brand royalty fees are determined and charged to member firms of large business groups. Unlike franchise fees charged to franchisees at an arm's length, brand royalty fees charged to business group member firms tend to be arbitrary, often lacking economic rationales and legitimacy. The study enriches our knowledge of a new type of RPTs, namely brand royalty fee payments.

Second, we contribute to the literature on tunneling by providing empirical evidence of possible tunneling behavior through intragroup brand royalty fee allocations. Previous studies document that controlling shareholders of business groups pursue personal interests through various channels such as mergers and acquisitions, private security offering, and intragroup charitable contribution allocations (Bae, Kang, and Kim 2002; Baek, Kang, and Lee 2006; Kim, Pae, and Yoo 2019). We extend the literature by adding another tunneling channel, namely

intragroup brand royalty payments. To date, there exist only plausible allegations without hard evidence or supporting scholarly research on tunneling through brand royalty.

Lastly, we contribute to the literature on effective governance mechanisms for mitigating conflicts of interest and information asymmetry between the controlling shareholders and minority shareholders (e.g., Cheung, Rau, and Stouraitis 2006; Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2008; Huyghebaert and Wang 2012). Recently, the KFTC expanded the disclosure requirements for the RPTs of large business groups by adding brand royalty fee transactions. The new disclosure requirement aims to hinder chaebols from engaging in the allegedly unethical tunneling through brand royalty. Our findings further suggest that explicit monitoring by the regulators and an internal governance mechanism like an RPTs committee and an audit committee would constrain chaebols' opportunistic tunneling behavior through intragroup brand royalty flows. Specifically, we introduce the RPTs committee on boards as a new internal governance mechanism that has never been examined in prior studies and document its effectiveness in discouraging abusive RPTs.

In sum, our study will help researchers as well as various stakeholders including those in other countries better understand how intragroup brand royalties are determined and how the allegedly unethical tunneling behavior through the intragroup royalties can be moderated.

The remainder of this paper is structured as follows. In the next section, we discuss institutional background and develop the hypothesis. We then describe our sample data and develop the research design. We present our results and further analysis. Finally, we summarize our findings and offer concluding remarks.

2. Background and Hypothesis Development

2.1. Brand Royalty Fee Payment as an RPT and Tunneling Channel

International Accounting Standards Board defines an RPT as a transfer of resources, services or obligations between a firm and a related party that is a person or firm, regardless of whether a price is charged (IASB 2008; see FASB 1982 for the similar definition in US GAAP). The related person, including her close family and key management personnel members, have control, joint control, or significant influence of the reporting firm, and the related firm is in the same business group, an associate, or a joint venture. RPTs may fulfil both parties' sound economic needs and be executed at equitable prices with similar arm's length conditions (efficient contracting perspective). However, in the real business world, RPTs are often carried out in favor of one party of the transactions at the expense of the other party (conflicts of interest perspective). Thus, the dominant perspective on RPTs among regulators, watchdogs, minority shareholders, and academics is to guard against abusive RPTs (see OECD 2015 for the perspective of market participants and Cheung, Qi, Lu, Rau, and Stouraitis 2009 for that of academics).

According to Asia-Pacific Office of the CFA Institute (CFA Institute 2009), in Asia, RPTs between a company and other corporate entities (mostly within the same business group) is the most common tool for wealth transfers out of the company for the benefit of controlling shareholders (a.k.a., tunneling). This is different from the United State (specifically, before the Sarbanes-Oxley Act of 2002) where a majority of RPTs occur between a company and its officers and major shareholders in the form of loans, guarantees, and collateral.

The extant literature on tunneling documents several channels by which controlling shareholders of chaebols take private profit from minority shareholders. For instances, mergers

and acquisitions between chaebol member firms (Bae et al. 2002); private security offerings to other chaebol member firms (Baek et al. 2006); and strategic allocation of charitable contributions within the business group (Kim et al. 2019). But, no scholarly research has ever examined as a tunneling mechanism the brand royalty fee transactions within the business group.

Contracts for intragroup brand royalty fee flows within the business group are at the discretion of the brand-name holders and beneficiary firms and do not require formal approval from the board of directors.¹ The business press has been consistently questioning the possibility of chaebol owners taking private profits from the brand royalty fee allocation (e.g., Annuncio 1996, Lee 2008, KFTC 2018b). To make it worse, intragroup RPTs and outstanding balances are not reported in the consolidated financial statements of the group because they are eliminated in the consolidation process (IFRS 24, para. 4). In response, the KFTC announced a mandatory disclosure code of brand royalty fees in March 2018 (KFTC 2018a). Accordingly, large chaebols with total assets of five trillion Korean won and above are required to file the details of their brand royalty fees, including the brand in contract, the payers and payees, contract period, the annual amount paid, and brand royalty fee formula.

Appendix B presents examples of brand royalty fee formulas reported in the mandatory disclosures of RPTs. Six member firms of Halla Group disclose the formulas of their brand royalty fees paid to Halla Holdings Corp., the brand-name holder. Halla Group uses consolidated sales after deducting advertising expense as the imputation base of its formula. In FY 2017, Halla Mits (Halla Encom) paid 0.60 (0.10) percent of the imputation base to Halla Holdings Corp. In FY 2018, the two firms are no longer the member of the business group. Also, note that Mokpo Newport and

¹ According to the KFTC (2018b), none of the brand royalty fee payments were approved or even discussed at general shareholders' meetings, not to mention approval from the board of directors.

Halla OMS (Halla) raise the charging rate from 0.20 (0.10) percent in FY 2017 to 0.40 (0.20) percent in FY 2018 when the business group lost the two brand royalty payers (Halla Mits and Halla Encom). Halla Group has not disclosed why the group doubled the charging rate.

Next, in the case of Amore Pacific Group, Amore Pacific (Osulloc) paid 0.18 (0.015) percent of the imputation base to Amore Pacific Group Corp. and there was no change in the charging rate between FY 2017 and 2018. And, HHIC Group member firms do not disclose brand royalty information in FY 2018 as the group is no longer on the list of top 60 largest business groups subject to the mandatory disclosures of RPTs in the year.

Last, the KFTC mandated the board of directors' formal approval of brand royalty fee when the fee amount exceeds five percent of shareholders' equity or five billion Korean won. The KFTC claims that the improved transparency resulting from the mandatory disclosure requirement will facilitate intragroup and intergroup comparisons and enable stakeholders to better monitor controlling shareholders' private profit-taking through brand royalty.

2.2. Holding Companies in Korea

Holding companies are a kind of special purpose entities that hold controlling-levels of equity of a group of subsidiary firms and whose principal activity is owning the business group (European Commission 2008). According to Statistical Classification of Economic Activities in the European Community (European Commission 2008), the primary roles of holding companies exclude the active management or strategic planning and decision making of subsidiaries. That is, a strictly defined holding company is not expected to provide other services to its subsidiaries.

In Korea, politicians, tax authorities, and corporate watchdogs have taken a rather fickle stance on the holding company governance structure of chaebols. In the 1960s and 1970s when

the government made the nation's economic growth a top policy priority, it formed friendly partnerships with chaebols. As a result, the number and size of chaebols increased dramatically during the era of development. Later in the 1980s, the criticism on chaebol-centric development and their disproportional growth sharply arose. Accordingly, in December 1980, the government promulgated the *Monopoly Regulation and Fair Trade Act* (MRFTA) to attenuate excessive concentration of economic power of chaebol (see Kim 2013 for a detailed discussion of Chaebol policy). Further, in December 1986, the government amended the MRFTA to ban the establishment of holding companies. However, the KFTC's prohibition of holding companies was not an effective measure in restraining chaebols' empire building, as they in fact relied on inter-firm, reciprocal circular cross-shareholding instead of the one-directional holding company ownership structure.

After the 1997 Asian Financial Crisis, the government began to deliberate on the holding company governance structure as a potential solution to improve the transparency of chaebol business groups' tangled ownership structure and the accountability of controlling shareholders (Kim 2013). In particular, the government valued the relative simplicity of a one-directional holding company ownership structure vis-a-vis the web of inter-firm, circular cross shareholding. Accordingly, the government lifted a ban on holding companies in the early 2000s and even offered temporal special tax benefits to promote the holding company governance structure. Chaebols responded enthusiastically to the policy change in corporate governance regulation. In 2018, as many of 22 out of top 60 largest business groups adopt the holding company governance structure (see Panel B, Table 1).

After a series of amendments of the MRFTA and related Presidential Decrees and Guidelines on holding companies, the KFTC designates and oversees holding companies with total

assets of 500 billion Korean Won or larger, in which the aggregate value of subsidiaries' shares comprises more than 50 percent of total assets. Note that our definition of holding companies (as defined in the MRFTA) is less strict than that of the European Union (EU). Our definition encompasses what the EU classifies as head offices, that is, the majority of Korean holding companies supervise and provide strategic or organizational planning services to their subsidiary firms.²

2.3. Hypothesis Development

While holding companies are not expected to operate their own business (hereafter referred to as pure holding companies), some holding companies in Korea have their own operating business units (hereafter referred to as operating holding companies). The KFTC does not differentiate the two types (i.e., pure vs. operating) of holding companies when it enforces the MRFTA. Recently, the KFTC surveyed the income sources of holding companies and reported the following (KFTC 2018b): For a total of 18 holding companies, dividend income from subsidiaries comprises only 40.8 percent of total income. Interestingly, 43.4% of the total income of the holding companies comes from non-dividend income sources such as brand royalty fees, real estate rental fees, and management consulting fees charged to subsidiaries within their own business groups.

Under the holding company governance structure, the controlling owner of the chaebol would be more concerned about the value of the holding company rather than the value of subsidiary firms due to the relatively low direct ownership of chaebol member firms by the

² Chaebol member firms in Korea are under the strong group-wide control for their administrative and investment decisions (Chambell and Keys 2002, Chang and Hong 2000).

controlling owner.³ Thus, we conjecture that the alleged conflicts of interest problem associated with group brand royalties would be greater for chaebols with the holding company governance structure. In particular, we expect that holding companies that do not have a variety of income sources, except dividend income from subsidiaries, have incentives to boost their earnings by charging more brand royalty fees to subsidiaries.

In summary, while the holding company governance structure promoted by the KFTC helps unweave the tangled circular-ownership web of chaebols, it may also engender and exacerbate an unexpected conflicts of interest problem: that is, excessive brand royalty charging to chaebol member firms by the holding company controlled by the founding family of the chaebol. Our first hypothesis concerns whether a business group is more likely to use brand royalties as a tunneling channel for the benefit of controlling shareholders when the group-brand name holder is a holding company.⁴

H1. A chaebol member firm pays a larger brand royalty fee when it belongs to a business group with a holding company governance structure.

Next, we examine the effect of RPT monitoring on brand royalty payments. To protect minority shareholders from the controlling shareholders' tunneling through unethical RPTs, regulators and watchdogs have come up with a variety of measures and governance mechanisms. First, accounting standards setters have been stepping up the extent and information requirements

³ In our sample, the controlling owner of chaebols on average owns 25.7% of his holding company (the brand-name holder) vis-à-vis only 1.9% of its member firms paying brand royalties. In contrast, for chaebols without holding companies, the controlling owner on average owns 10.2% of the brand holder and 14.7% of brand royalty paying member firms (see Panel E, Table 1 for details).

⁴ While we focus on a chaebol member firm's brand royalty payment in the first hypothesis, we also examine whether a holding company collects a greater amount of brand royalty fees than other types of brand royalty fee recipients (see Table 6 and related discussions).

of RPTs disclosures (FASB 1982; IASB 2008). However, the RPTs information available in financial reports is still deemed insufficient for outside shareholders to make an informed judgment because the materiality threshold of RPTs disclosure is at the discretion of managers.⁵ In line with the CFA Institute's recommendation of regulatory bodies playing a more active role in enhancing and complementing RPT information in financial reports (CFA Institute 2009), U.S. Securities and Exchange Commission (SEC) requires more extensive disclosure in annual proxy statements and the KFTC mandates chaebols to provide additional and separate disclosure.

While the aforementioned RPT disclosures can level the playing field in which information asymmetry exists, the public disclosures regardless of financial reporting or regulatory requirements may not suffice. The public disclosures inform minority shareholders only about historical events which have already happened. That means, investors who cannot predict tunneling need to wait until a tunneling occurs and then revalue the firm in accordance with the event (Cheung, Rau, and Stouraitis 2006).

Ex-ante monitoring of RPTs would be effective in preempting potentially abusive RPTs. Of course, if brand royalties are charged equitably to reflect the benefits and values of using group-brand name or logo, the monitoring of RPTs (which include intragroup flows of brand royalties) would have no effect. Yet, the KFTC and the business press have questioned if some business groups use intragroup brand royalties as a tunneling channel to transfer wealth to controlling shareholders. We posit that, even if controlling shareholders are tempted to transfer wealth from other member firms to the core company in which they hold significant ownership, an explicit

⁵ Public Company Accounting Oversight Board's (PCAOB) Interim Auditing Standards state that "an audit performed in accordance with generally accepted auditing standards cannot be expected to provide assurance that all related-party transactions will be discovered (PCAOB 2004).

monitoring of RPTs will subdue their urge to take private profits through intragroup brand royalty flows. That is, an explicit monitoring on RPTs will decrease the amount of brand royalty fees that a member firm pays to the brand-name holder company within the business group. Thus, we predict that a member firm pays a smaller amount of brand royalty fees when monitored for its RPTs.

Specifically, we consider both external and internal monitoring. Since February 2014, the KFTC has announced an annual list of chaebol member firms subject to close monitoring of RPTs. For those chaebol member firms on the watch list, the KFTC scrutinizes the following four abusive RPTs: i) transaction terms which are far better than ordinary transactions with outsiders, ii) offering lucrative business opportunities to the business group member firms, iii) favorable monetary transactions with the business group member firms, and iv) conducting a significant size of RPTs without considering alternative transaction parties. In 2018, the KFTC posted a watch list of 203 chaebol member firms.

Meanwhile, some chaebols internally operate a so called related-party transactions committee, a subcommittee, on their board of directors. While the installment of an RPTs committee is not required by laws and regulations, chaebols have started using it to gird themselves for the increased risk of the government sanctions or corporate scandals against intragroup tunneling. In 2014, only 23.1 percent of chaebol member firms have the RPTs committee, but the number rose to 35.6 percent in 2018 (KFTC 2018c). For example, the RPTs committee of Samsung Electronics, established in 2004, consists of three non-executive, independent directors, and its primary responsibility is the monitoring of RPTs (see Figure 1 for details of the RPTs committee of Samsung Electronics).

Research suggest that the audit committees on the board of directors helps protect the

interests of minority shareholders from abusive RPTs (e.g., Cheung, Qi, Lu, Rau, and Stouraitis 2009). The audit committee, a subcommittee of the board of directors, is responsible for establishing policies for and overseeing the financial reporting, internal control systems, the audit process, and compliance with related laws and regulations. Thus, the audit committee will review the legitimacy of ‘material’ RPTs (including brand royalty fee contract that pass the materiality threshold) and restrain the chaebol member firm from paying excessive, material brand royalty fees.

The existence of such internal monitoring mechanisms would discourage firms from engaging in improper profit taking from intragroup related-party brand royalty flows. Taken together, we predict that the presence of RPT monitoring, regardless of external or internal, decreases the amount of brand royalty fees paid by chaebol member firms.⁶ Thus, our second hypothesis concerning the monitoring effect on brand royalty fees is as follows:

H2. A chaebol member firm pays a smaller amount of brand royalty fees when its related party transactions are subject to explicit monitoring.

As predicted in the first hypothesis, the controlling owner of the chaebol would have stronger incentives to abuse brand royalty fees as a tunneling channel when the brand-name holder is a holding company than a non-holding company. And, to the extent that RPT monitoring helps discourage unfair tunneling, the restraining effect of RPT monitoring on brand royalty fees would be more pronounced when chaebol member firms are under the holding company governance structure. Accordingly, we hypothesize the moderating effect of RPT monitoring on abuse of brand

⁶ We later examine the effect of external monitoring by the KFTC and internal monitoring by RPTs committee and audit committee separately (see Table 5).

royalties as follows:

H2a. The moderating effect of related party transaction monitoring on brand royalty fees is more pronounced for chaebol member firms under the holding company governance structure.

3. Research Design

3.1. Sample and Data

We start our sample construction with chaebol member firms that are mandated by the KFTC to disclose their brand royalty fee information in 2018. Member firms of large business groups with total assets of KRW five trillion and above file the details of their brand royalty fee information (available at *Data Analysis, Retrieval and Transfer System*, simply DART) by the end of May each year.

Panel A of Table 1 describes our sample selection procedure. The initial sample consists of 1,098 member firms from 60 largest business groups with brand royalty information. We exclude 645 firms whose associated business groups do not have signed contracts for intragroup brand royalties.⁷ We then exclude firms that are members of financial business groups or that operate a financial and insurance business. Finally, we drop 13 observations with insufficient financial data. The final sample includes 396 firm observations.

Panel B of Table 1 reports the company distribution conditional on the holding company governance structure. The final sample consists of 39 business groups, of which 17 groups have a holding company structure.

⁷ Business groups disclosing the absence of intragroup brand royalty contracts include Hyundai Heavy Industries, Daerim, Hyosung, Celltrion, Hyundai Department Store, Young Poong, KT&G, KCC, Kyobo, Daewoo E&C, Hoban, Naver, Dongkuk Steel, Samchully, GM Korea, Kumho Petrochemical, and Netmarble.

Next, we read the KFTC annual report to identify business groups that adopted the holding company governance structure and determine whether chaebol member firms are subject to the KFTC external monitoring of RPTs by checking the ownership percentage of the founding family.⁸ Further, the KFTC annually announces business groups with RPTs committees and audit committees. Finally, we collect related-party sales and financial data from *Korea Investors Services (KIS) Value* and *Total Solution 2000 (TS2000)*.

3.2. Measures

The dependent variable is the amount of brand royalty fees paid by a chaebol member firm to a group brand-name holder company within the same business group. Given that the distribution of brand royalty fee amounts are skewed and has a high standard deviation, we measure *Brand Royalty* as the natural logarithm of a member firm's brand royalty fee scaled by the natural logarithm of its sales.

Our independent variables of interest include *Holding* (H1), *RPTs Monitoring* (H2), and the interaction term, *Holding × RPTs Monitoring* (H2a). *Holding*, an indicator variable for a member firm, is set to one if the firm belongs to a business group with the holding company governance structure (Panel B, Table 1). Further, we partition the holding companies into pure holding companies and operating holding companies. If a holding company operates its own business units, *Holding_Operating* is set to one. Otherwise, *Holding_Pure* is set to one. That is, a holding company classified as *Holding_Pure* does not operate its own business.

⁸ According to the MRFTA, the KFTC monitors RPTs of chaebol member firms when the founding family's ownership exceeds 20% (30%) for private (public) member firms. In the analysis, we use the 20% threshold. But, use of the 30% threshold for public member firms does not affect the tenor of the results.

Next, we consider three types of RPT monitoring: *KFTC Monitoring*, *RPTs Committee*, and *Audit Committee*. First, we set an indicator variable of *KFTC Monitoring* to one if a firm is on the list where the KFTC closely monitors unfair RPTs practices. This firm-level information on external monitoring allows us to examine the effect of the watchdog’s external monitoring on brand royalty payments. Second, we define *RPTs Committee* as an indicator variable that equals one if the business group operates an RPTs committee on its board of directors. Finally, we define *Audit Committee* as an indicator variable that equals one if the business group operates an audit committee on its board of directors.

To examine the effectiveness of the monitoring, regardless of external or internal, we set *RPTs Monitoring* to one if RPTs are externally monitored (*KFTC Monitoring*=1) or internally monitored (*RPTs Committee* =1 or *Audit Committee* =1).

3.3. Regression Model

Our first hypothesis concerns the effect of holding company governance structure (*Holding*) on the amount of brand royalty fees (*Brand Royalty*) that a member firm pays to the group brand-name holder. We test our empirical hypotheses by estimating the following regression model:

$$\begin{aligned}
 \textit{Brand Royalty} = & \alpha_0 + \alpha_1 \textit{ Holding} \\
 & + \alpha_2 \textit{ RPTs Monitoring} \\
 & + \alpha_3 \textit{ Holding} \times \textit{ RPTs Monitoring} \\
 & + \alpha_4 \textit{ Advertising} + \alpha_5 \textit{ Big4Audit} + \alpha_6 \textit{ External Sales} \\
 & + \alpha_7 \textit{ Firm Age} + \alpha_8 \textit{ Firm Size} + \alpha_9 \textit{ Giving} \\
 & + \alpha_{10} \textit{ Leverage} + \alpha_{11} \textit{ Operating Cash Flow}
 \end{aligned}$$

$$\begin{aligned}
& + \alpha_{12} \text{ Ownership Percentage of Controlling Shareholder} \\
& + \alpha_{13} \text{ ROA} + \alpha_{14} \text{ Group ROA} + \alpha_{15} \text{ Group Size} \\
& + \alpha_{16} \text{ Number of Member Firms} \\
& + \text{Industry Fixed Effects} + \varepsilon,
\end{aligned} \tag{1}$$

where *Brand Royalty* is the natural log of brand royalty fees scaled by the natural log of sales; *Holding* is an indicator variable that equals one if the firm belongs to a business group with the holding company structure. We predict a positive coefficient estimate on *Holding* in Equation (1) (i.e., H1: $\alpha_1 > 0$).

Next, we examine the RPT monitoring effect with *RPTs Monitoring* in Equation (1). We predict a negative coefficient estimate on *RPTs Monitoring* if excessive brand royalties are bridled by monitoring mechanisms in place (i.e., H2: $\alpha_2 < 0$).

We further investigate the moderating effect of *RPTs monitoring* on *Holdings* with the interaction term of *Holding* and *RPTs Holdings*. We predict a negative coefficient estimate on *Holding* \times *RPTs Monitoring* if the tunneling effect of holding company is moderated by RPT monitoring (i.e., H2a: $\alpha_3 < 0$).

We control for several firm-level characteristics that affect the brand royalty payments of chaebol member firms. We include *Advertising*, measured as the natural logarithm of advertising expenses divided by the natural logarithm of sales, because some business groups charge brand royalty fees based on sales after subtracting advertising expense. We include *Big4Audit* to control for the reputation of external auditors. Cheung, Rau, and Stouraitis (2006) find that auditors with higher reputations decrease the likelihood of unlawful RPTs.

We include *External Sales*, measured as the natural logarithm of the ratio of the firm's external sales to total sales. External clients may receive a sense of security, integrity and

technology in transactions with well-established group-brand name carrying firms. Thus, the benefits that chaebol members gain from using the group brand or logo would be greater when doing business with clients outside the business group. Accordingly, we expect a chaebol member firm to pay a greater amount of brand royalty fee when it relies less on intragroup related party sales and more on external sales from non-related parties.

We include *Firm Age*, measured as the natural logarithm of the number of years since incorporation, and *Firm Size*, measured as the natural logarithm of total assets. We control for the level of charitable contributions, *Giving*, measured as the natural logarithm of charitable contributions divided by the natural logarithm of sales. Prior research suggests that business groups use *Giving* as a tunneling channel by strategically allocating corporate charitable contributions among group-affiliated firms in Korea (Kim et al. 2019).

Next, we include *Leverage* and *Operating Cash Flow*, measured by the ratio of operating cash flows to sales, to control for the member firm's reliance on debt financing and cash generating capability. In addition, to control for the voting power of controlling shareholders of the business group, we include *Ownership Percentage of Controlling Shareholder*, measured as the proportion of total shares owned by the controlling shareholder of the associated business group. Last, we include *ROA* to control for the member firm's profitability.

Following prior studies (e.g., Chang and Hong 2002; Ou et al. 2018), we also include several group-level control variables: *Group ROA*, *Group Size*, and *Number of Member Firms*. Chang and Hong (2000) suggest that the fundamental characteristics of the business group influence member firm's financial and operating decisions. We measure *Group ROA* by the weighted average of ROAs of the business group's all member firms and *Group Size* by the natural logarithm of the sum of total assets of the business group's all member firms. *Number of Member*

Firms is measured by the number of affiliates in the group. Finally, we include industry dummy variables to control for the industry effect. All variables are winsorized at the 1% and 99% levels to alleviate the effect of outliers.

4. Empirical Results

4.1. Descriptive Statistics

Panel B of Table 1 reports the distribution of the sample. The sample contains a total of 396 member firms in 39 large business groups that disclose brand royalty fee information. 51 percent of the sample (203 firms) belongs to business groups with a holding company governance structure and 49 percent (193 firms) belong to business groups with no such structure. Of the 203 firms in the business groups with holding company governance structure, 183 member firms of 14 business groups are governed by pure holding companies and 20 member firms of three business groups are governed by operating holding companies (untabulated).

Panel C of Table 1 reports descriptive statistics. As presented in Panel B, 203 firms (51.3% of the sample) belongs to business groups with holding company governance structure (*Holding*). 46.2 percent of the sample (183 firms) are governed by pure holding companies (*Holding_Pure*) and 5.1 percent of the sample (20 firms) are governed by holding companies with operating units (*Holding_Operating*). The mean value of *RPTs Monitoring* indicates that 71.7 percent of the sample firms are monitored for their RPTs. In particular, the mean value of *KFTC monitoring* suggests that 15.2 percent of the sample firms are externally monitored by the KFTC for their RPTs. The mean value of *RPTs Committee (Audit Committee)* indicates that 54 (67.9) percent of the sample firms are in the business groups with the RPTs committee (the audit committee). The

mean value of *Number of Member Firms* indicates that an average business group in the sample has approximately 22 affiliated member firms.

In Panel D, we compare firms belonging to business groups with the holding company governance structure (“Firms governed by holding companies”) to other firms that are not under the holding company governance structure. The difference in the mean values of *Brand Royalty* (0.608 vs. 0.482) is statistically significant at the one percent level, supporting our first hypothesis (H1) that a chaebol member firm pays greater brand royalties when it is under the holding company governance structure. In the untabulated analysis, we find that the mean proportion of brand royalty income to the total revenue of the brand-name owner is 23 % when the brand-name holder is a holding company whereas the mean proportion is only 1.3% when the brand-name holder is not a holding company. The finding is consistent with the claim (Lee 2008) that chaebol holding companies boost income by collecting excessive brand royalties from subsidiaries.

The difference in the mean values of *RPTs Monitoring* (0.635 vs 0.803) is statistically significant at the one percent level, indicating that chaebol member firms are less likely to be monitored for their RPTs when they are under the holding company governance structure than not. In particular, the mean value of *KFTC Monitoring* is only 0.054 for firms under the holding company governance structure whereas the number is 0.245 for firms not under holding company governance structure, indicating that firms under the holding company governance structure are about 20 percent less likely to be on the watch list of the KFTC’s explicit monitoring on RPTs. Similarly, the mean values of *RPTs Committee (Audit Committee)* are 0.399 (0.616) for the firms governed by holding companies group and 0.689 (0.746) for other firms, indicating that chaebol member firms are less likely to operate an RPTs committee (an audit committee) when they are

under the holding company governance structure than when they are not. The more lenient monitoring on the former group of firms is in line with the government's promotion (e.g., favorable tax treatment) toward the holding company governance structure as a policy attempt to unweave the existing circular-ownership web of chaebols thereby improving the transparency and accountability of chaebols' management.

In Panel E, we compare *Ownership Percentage of Controlling Shareholder* between brand royalty paying firms and recipient firms. First, the difference in the mean values of *Ownership Percentage of Controlling Shareholder* ($-7.541=8.179-15.72$) is statistically significant at the five percent level, indicating that the controlling owner on average has a stronger interest on the value of brand-royalty recipient firms than that of brand royalty paying firms.

Next, the difference ($-23.768=1.972-25.74$) in chaebols with the holding company governance structure is even more severe than that of the full sample (-7.541) and statistically significant at the one percent level. On average, the voting power of a chaebol controlling is 13 times ($=25.740/1.972$) greater in his holding company than in his member firms.

Finally, the difference in chaebols without the holding company governance structure is statistically insignificant, indicating that the controlling ownership between brand royalty paying firms and recipient firms is not meaningfully different when chaebols do not have a holding company.

In summary, the results in Panel E suggest that the controlling owner of the chaebol would be more concerned about the value of the holding company than the value of other member firms due to the relatively low direct ownership of chaebol member firms by the controlling owner, and the unbalance in the controlling shareholder's interest becomes more severe when the chaebol adopts the holding company governance structure.

Table 2 reports the Pearson correlations. Consistent with our first hypothesis, *Brand Royalty* is significantly positively correlated with *Holding*. However, inconsistent with the second hypothesis, the correlation between *Brand Royalty* and *RPTs Monitoring* is insignificant.

4.2. Main Results

Table 3 presents the regression results of the hypothesized factors that affect brand royalty payments by chaebol member firms: the associated business group's governance structure (*Holding*), presence of monitoring mechanisms for RPTs (*RPTs Monitoring*), and the moderating effect of RPT monitoring ($Holding \times RPTs Monitoring$).

First, in model (1), the coefficient on *Holding* (0.118) is significantly positive at the one percent level. It supports the first hypothesis (H1) that business groups tend to charge to their member firms a larger amount of brand royalties when they control their member firms with the holding company governance structure.

Among the control variables, the coefficient on *External Sales* (0.176) is significantly positive at the one percent level, suggesting that a brand-name holder charges to its member firms a greater amount of brand royalty fees when the member firms rely more on external sales from non-related parties outside of the business group. The positive coefficients on *Firm Size* (0.028), *Giving* (0.112), *Operating Cash Flow* (0.066), and *ROA* (0.451) indicate that a member firm pays a greater amount of brand royalty fees when the firm is large, pays a greater amount of charitable contributions, generates more cash flows from operation, and is more profitable. We also find that the coefficient on *Group Size* (0.031) is positive, indicating that the larger the business group, the higher the brand royalty fee that member firms pay. Last, the coefficient on *Number of Member*

Firms (-0.002) is negative, indicating that a member firm pays a smaller amount of brand royalty fee when there are many other member firms within the business group.

Next, in model (2), the coefficient on *RPTs Monitoring* (-0.128) is significantly negative at the one percent level, in support of the second hypothesis (H2) that a chaebol member firm pays a smaller amount of brand royalty fees when its RPTs are subject to explicit monitoring.

In model (3) where we include both *Holding* and *RPTs Monitoring*, we find the results of models (1) and (2) still hold: the coefficient on *Holding* (0.100) is significantly positive at the one percent level and the coefficient on *RPTs Monitoring* (-0.076) remains significantly negative at the five percent level.

Finally, model (4) further includes the interaction term between *Holding* and *RPTs Monitoring*. In line with the result of model (1), the coefficient on *Holding* (0.190) is significantly positive at the one percent level (H1). However, inconsistent with the result of model (2), the coefficient on the standalone *RPT Monitoring* is statistically insignificant (H2). That is, monitoring RPTs has no effect on brand royalties for those member firms not under holding company governance structure. But, more importantly, we find the coefficient on *Holding × RPTs Monitoring* (-0.119) is significantly negative at the five percent level, suggesting that RPT monitoring moderates the inflating effect of holding company governance structure on brand royalty fees (H2a). Specifically, the sum of the coefficients on *RPTs Monitoring* and *Holding × RPTs Monitoring* (-0.116 = 0.003 – 0.119) indicates that monitoring RPTs significantly reduces brand royalties of those member firms under holding company governance structure. Taken together, the coefficient estimates on the standalone *RPT Monitoring* and the interaction term (*Holding × RPTs Monitoring*) in model (4) suggest that RPT monitoring does not monotonously suppress the intragroup flow of brand royalty fees. Rather, RPT monitoring helps reduce brand

royalty fees of chaebol member firms conditionally when tunneling through the intragroup brand royalty flow likely occurs.

In summary, we find the allegation that large business groups opportunistically use brand royalties to tunnel business resources to the founding family is more pronounced when business groups control their member firms with a holding company. The holding company governance structure may have enhanced the transparency of business groups by unweaving the circular ownership of chaebols, but at the same time it gives rise to or exacerbate the problem of unethical excessive brand royalty reaping by the chaebol owners. More importantly, such abuse of intragroup brand royalty flow can be moderated by explicit monitoring of RPTs.

5. Further Analysis

In this section, we examine whether the amount of brand royalty fees paid by chaebol member firms differs (i) conditional on the presence of income-generating operating units within the holding company and (ii) across different components of *RPT monitoring* (i.e., the KFTC monitoring, an RPTs committee, and an audit committee). And, we also examine the intragroup flows of brand royalties (iii) from the perspective of royalty recipient firms that hold the group brand-name.

5.1. Pure versus Operating Holding Companies

It has been alleged that business groups use brand royalties to boost or supplement their revenue incomes particularly when they control member firms using a holding company. We examine whether such an incentive to inflate intragroup brand royalty fee collections differs between holding companies without their own income-generating operating units (*Holding_Pure*)

and those with their own income-generating operating units (*Holding_Operating*).

Table 4 presents the regression results conditional on the presence of own operating units in the holding company. Model (1) is the same as that in Table 3. In model (2), the coefficient on *Holding_Pure* (0.136) is significantly positive at the one percent level while that on *Holding_Operating* is insignificant, indicating that the inflating effect of the holding company governance structure on brand royalties in model (1) is mainly due to the holding companies that do not have their own operating units.⁹ The alleged abuse of brand royalties seems to be more pronounced for large business groups that govern member firms with a pure holding company that does not have its own income-generating business units (*Holding_Pure=1*).

In model (3) where we regress *Brand Royalty* on *Holding_Pure*, *Holding_Operating*, and their interaction terms with *RPTs Monitoring*, we find that the coefficient on *Holding_Pure* (0.200) is significantly positive at the one percent level and the coefficient on *Holding_Pure × RPTs Monitoring* (-0.106) remains significantly negative at the five percent level. However, the coefficients on *Holding_Operating* and *Holding_Operating × RPTs Monitoring* are statistically insignificant. The results of model (3) indicate that abuse in intragroup brand royalty flows is more likely to occur when chaebol holding companies do not have their own income-generating operating units, and such tunneling behavior can be moderated by monitoring RPTs.

5.2. Internal versus External Monitoring on RPTs

In the preceding analysis in Tables 3 and 4, we have used a composite measure of RPTs

⁹ Note that a majority of business groups classified as *Holding_Pure* in the paper are also playing a role of head offices in which, besides owning the shares of subsidiaries, strategic planning, coordination of group activities, operational and consulting services are also provided to group member firms.

monitoring. In this subsection, we separately examine the three components of *RPTs Monitoring*: the KFTC monitoring, an RPTs committee, and an audit committee on the board of directors.

Table 5 presents the regression results when we examine the components of RPT monitoring separately. In model (1), the coefficient on *KFTC Monitoring* (-0.121) is significantly negative at the five percent level, in support of the second hypothesis (H2) that a chaebol member firm pays a smaller amount of brand royalty fees when it is on the KFTC's watch list for abusive RPTs. We also find that the coefficients on *RPTs Committee* (-0.112) in model (2) and *Audit Committee* (-0.093) in model (3) are significantly negative at the one percent level, in support of the second hypothesis (H2).

Next, in model (4) where we include *KFTC Monitoring*, *RPTs Committee* and *Audit Committee* all together, we find that the coefficient on *KFTC Monitoring* (-0.104) is significantly negative but only at the ten percent level, the coefficient on *RPTs Committee* (-0.089) is significantly negative at the one percent level, and, finally, the coefficient on *Audit Committee* is statistically insignificant.

In models (5), (6) and (7), we find that the coefficient on *Holding* is significantly positive (0.107, 0.173, and 0.227) at the one percent level, supporting the first hypothesis (H1). For the standalone effect of each component of *RPTs Monitoring* (H2), we find that only the *KFTC Monitoring* (-0.139) in model (5) is significantly positive at the five percent level whereas the coefficients on *RPTs Committee* in model (6) and *Audit Committee* in model (7) are statistically insignificant.

More importantly, for the moderating effect of RPT monitoring (H2a), we find that the coefficient on *Holding* × *KFTC Monitoring* in model (5) is statistically insignificant whereas the coefficients on *Holding* × *RPTs Committee* (-0.112) and *Holding* × *Audit Committee* (-0.158)

remain significantly negative, in support of the moderating effect hypothesis (H2a).

In summary, the results in models (5), (6), and (7) suggest that while internal monitoring through an RPTs committee or an audit committee helps curb excessive brand royalty flows within the chaebol under the holding company governance structure, external monitoring by the government agencies such as the KFTC unilaterally discourages brand royalty fee payments by chaebol member firms regardless of the corporate governance structure of the associated business group.

5.3. Brand Royalty Collection by Brand-name Holder

So far, we have focused on the amount of brand royalty fees paid by chaebol member firms to the brand-name holder (either the holding company or the core firm of the business group). In this subsection, we examine intragroup brand royalties from the perspective of royalty recipient firms that hold the group brand-name. We measure *Brand Royalty* as the ratio of brand royalty receipts to total revenues.

In the sample, there are a total of 51 brand-name holders collecting brand royalty fees from 396 member firms. In Table 6, we re-estimate Equation (1) using the 51 brand royalty recipient firms and find the following. First, in model (1), the coefficient on *Holding* (0.205) is significantly positive at the one percent level, indicating that a brand-name holder collects a greater amount of brand royalty fee when it is a holding company that governs the business group than when it is an ordinary company which happens to own the title of the brand name or logo. The result is in line with the first hypothesis (H1) that business groups tend to charge to their member firms a greater amount of brand royalties when they control their member firms with the holding company governance structure.

Next, in support of the second hypothesis (H2), the coefficient on *RPTs Monitoring* (-0.119) in model (2) is negative, but marginally significant at the ten percent level. When we include both *Holding* and *RPTs Monitoring* in model (3), the coefficient on *RPTs Monitoring* is no longer significant while the coefficient on *Holding* (0.184) remains significantly positive at the one percent level.

Further, in model (4) where we includes the interaction term between *Holding* and *RPTs Monitoring*, we find that only the coefficient on the standalone *Holding* is statistically significant (H1), whereas the coefficients on *RPTs Monitoring* (H2) and *Holding* \times *RPTs Monitoring* (H2a) are statistically insignificant. It appears that the holding company governance structure increases royalty receipts of group brand-name holders, but the effect of RPT monitoring on brand royalty receipts is non-existent or weak if any.

Finally, in model (5), we find that the coefficients on both *Holding_Pure* (0.200) and *Holding_Operating* (0.231) are significantly positive at the one percent level. While the coefficient on *Holding_Pure* is smaller than that on *Holding_Operating*, they are not significantly different. We also estimate the regression of *Brand Royalty* on *Holding_Pure*, *Holding_Operating*, and their interaction terms with *RPTs Monitoring* (the same as model 3 in Table 4), but we find that the coefficients on *Holding_Pure* \times *RPTs Monitoring* and *Holding_Operating* \times *RPTs Monitoring* are insignificant (untabulated).

All in all, the results in Table 6 strongly support the first hypothesis, but not the second hypothesis (except in model 2) and the moderating effect hypothesis. It may be influenced in part by the different sample size between the brand royalty paying firm analysis (396 observations in Tables 3, 4, and 5) and the brand-name holder analysis (51 observations in Table 6).

6. Conclusions

In this study, we examine intragroup brand royalty fees paid by member firms of large business groups and collected by group brand-name holders. Regulatory bodies and stakeholders have questioned if the amount of brand royalty fees are equitably determined and charged to member firms of large business groups. However, there has been a paucity of hard evidence or supporting scholarly research on the allegation because the contracts for intragroup brand royalty fee flows in the business group have remained at the discretion between brand-name holders and beneficiary firms and have not been publicly disclosed. The KFTC, Korea's corporate watchdog, has mandated large business groups to disclose brand royalty fee information starting in 2018. We utilize this first-ever publicly disclosed brand royalty information to examine how brand royalty fees are determined and charged to member firms of business groups.

We document that, consistent with the allegations of the business press and a growing concern of the general public, some business groups use brand royalty fees opportunistically for controlling shareholders' unfair profit reaping from RPTs (i.e., tunnel group resources to the controlling shareholders). More importantly, we also show that such an opportunistic tunneling practice of large business groups via intragroup brand royalty flows can be moderated by an external or internal monitoring on RPTs.

As in all empirical investigations, ours is subject to some limitations. Our study focuses on a sample of large business group member firms that are required by a corporate watchdog to disclose their brand royalty fee information in 2018. As we examine a single year period when the brand royalty fee information is disclosed first ever, our analysis is limited to the cross-sectional variation in brand royalty fees and thus we are not able to examine changes over time. Also, among the 1,098 sample firms subject to mandatory disclosure of the brand royalty fee information, 645

firms disclosed the absence of signed contracts for intragroup brand royalties. The result may be attributable to the fact that we only examine the first year of such a mandatory disclosure code. Accordingly, future research may extend the sample period and examine the time series in the amount of brand royalty fees and also the likelihood of disclosing brand royalty information.

Last, our empirical findings in Korea may not be generalizable in other countries where they have different business models and governance mechanisms. Thus, a cross-country analysis of brand royalty fees will come if and when the brand royalty information is widely publicized in other countries like India where intragroup brand royalty flows are pervasive (Annuncio 1996).

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Appendix A

Variable definitions

Variables	Definition
Dependent Variable:	
<i>Brand Royalty</i>	$\ln(\text{brand royalty fee})$ divided by $\ln(\text{Sales})$
Independent Variables:	
<i>Holding</i>	An indicator variable that equals one if the firm belongs to a business group with the holding company governance structure
<i>Holding_Pure</i>	An indicator variable that equals one if the holding company of the associated business group does not have its own operating business units
<i>Holding_Operating</i>	An indicator variable that equals one if the holding company of the associated business group has its own operating business units
<i>RPTs Monitoring</i>	An indicator variable that equals one if <i>KFTC Monitoring</i> =1 or <i>RPTs Committee</i> =1 or <i>Audit Committee</i> =1
<i>KFTC Monitoring</i>	An indicator variable that equals one if the firm is on the KFTC's close monitoring list for unfair intragroup trade practices
<i>RPTs Committee</i>	An indicator variable that equals one if the business group has the related party transaction committee
<i>Audit Committee</i>	An indicator variable that equals one if the business group has the audit committee
Controls and Others:	
<i>Advertising</i>	$\ln(\text{advertising expense})$ divided by $\ln(\text{Sales})$
<i>Big4audit</i>	An indicator variable that equals one if the firm hires Big 4 auditors
<i>External Sales</i>	$\ln(1 + \text{the ratio of the firm's intragroup sales to total sales})$
<i>Firm Age</i>	$\ln(\text{the number of years since incorporation})$
<i>Firm Size</i>	$\ln(\text{total assets})$
<i>Giving</i>	$\ln(\text{charitable contributions})$ divided by $\ln(\text{Sales})$
<i>Group ROA</i>	ROA of the associated business group measured by the weighted average of ROAs of all member firms of the business group (weighting by total assets)
<i>Group Size</i>	$\ln(\text{sum of total assets of all member firms in the associated business group})$
<i>Leverage</i>	The book value of short- and long-term debt divided by the book value of equity
<i>Number of Member Firms</i>	The number of all member firms of the associated business group
<i>Operating Cash Flow</i>	Cash flows from operations divided by total sales

*Ownership Percentage of
Controlling Shareholder*

The proportion of total shares owned by the controlling shareholder of
the associated business group

ROA

Net income divided by total assets

Appendix B

Examples of brand royalty fee formulas of selected large business groups

Case 1. Halla Group					
Holding company	Brand royalty (BR) paying firms	Imputation base	BR fee formulas		Range of BR charging rates
			Charging rate		
			FY 2017 disclosed in May 2018	FY 2018 disclosed in May 2019	
Halla Holdings Corp.	Halla Mits	Consolidated sales – Advertising expenditure	0.60%	Sold	
	Mando	Consolidated sales – Advertising expenditure	0.40%	0.40%	
	Mokpo Newport	Consolidated sales – Advertising expenditure	0.20%	0.40%	0.50 in FY 2017
	Halla OMS	Consolidated sales – Advertising expenditure	0.20%	0.40%	0.20 in FY 2018
	Halla	Consolidated sales – Advertising expenditure	0.10%	0.20%	
	Halla Encom	Consolidated sales – Advertising expenditure	0.10%	Sold	
Case 2. Amore Pacific Group					
Amore Pacific Group Corp.	Amore Pacific	Sales	0.18%		
	Pacific GLAS	Sales	0.03%	The same as FY 2017	0.165 in FY 2017 and FY 2018
	Pacific Package	Sales	0.03%		
	Osulloc	Sales	0.015%		
Case 3. Hanjin Heavy Industries & Construction (HHIC) Group					
HHIC Holdings Corp.	HHIC	Consolidated sales	0.07%	Not disclosed as the group is out of 60 largest group list.	0.04 in FY 2017, but no information in FY 2018
	KECC	Consolidated sales	0.05%		
	Daeryun E&S	Consolidated sales	0.03%		
	Daeryun Power	Consolidated sales	0.03%		
	Hanil Leisure	Consolidated sales	0.03%		
	Byeollae Energy	Consolidated sales	0.03%		
Case 4. CJ Group					
CJ Corp.	CJ CheilJedang			The same as FY 2017	0.00 in FY 2017 and FY 2018
	CJ Logistics				
	CJ OliveNetworks	Sales – Advertising expenditure	0.40%		
	CJ Freshway				
	CJ E&M				
	...				

Figure 1. Related Party Transactions Committee Information of Samsung Electronics

Overview

General description

The Related Party Transactions Committee was established in April 2004 to enhance corporate transparency and promote fair transactions. The Committee is responsible for reviewing related party transactions.

Composition

In accordance with relevant laws and regulations, the Related Party Transactions Committee shall consist of three Independent Directors who are appointed by resolution at a meeting of the Board of Directors. The Committee currently consists of three Independent Directors.

Operation

Convention & resolution

The Related Party Transactions Committee shall meet at least once every quarter. The Head of the Committee shall call meetings and notify the members and other participants of the meeting time and place at least 24 hours in advance.

The presence of a majority of all Committee members shall constitute a quorum and resolutions shall be adopted by a majority of the votes of members attending the meeting; provided that the Committee meeting may take place via electronic means, such as by conference call, within the scope provided by relevant laws.

Authority

The Related Party Transactions Committee shall have the authority to:

- receive reports on transactions between the Company and its affiliates
- order an investigation on documents of related party transactions
- recommend the Board of Directors take corrective measures for related party transactions that violate laws or Company regulations

Source: <https://www.samsung.com/global/ir/governance-csr/board-committee/related-party-transaction/>
Accessed May 10, 2019.

Table 1
Sample selection, company distribution, and descriptive statistics

Panel A. Sample selection

	Sample size
Initial sample of firms from the large business groups that are mandated to disclose brand royalty transactions (60 largest business groups in 2017)	1,098
Less:	
Firms in the business groups that do not have formal BR fee contracts with member firms	645
Firms in financial business groups and financial and insurance firms in other groups	44
Firms with missing financial data	13
Final sample (39 business groups in 2017)	396

This panel presents the sample selection procedures of the final sample of 396 observations in 39 business groups.

Panel B. Sample distribution

Business groups (BG) with the holding company governance structure	Initial number of BG	Number of BG in the final sample	Number of firms in the final sample
SK, LG, GS, NongHyup , Hyundai Heavy Industries , Hanjin, CJ, Booyoung, LS, Korea Investment , KOLON, Harim, Hankook Tire, Celltrion , SeAH, Halla, Dongwon, Amore Pacific, Meritz , Hanjin Heavy Industries, HiteJinro, Hansol	22	17	203
BG without the holding company governance structure			
Samsung, Hyundai, LOTTE, POSCO, Hanwha, Shinsegae, KT, Doosan, Daerim , S-Oil, Mirae Asset , Hyundai Department Store , Young Poong , DSME, Kumho Asiana, Hyosung , OCI, KT&G , KCC , Kyobo , Daewoo E&C , JungHeung Construction, Taekwang, SM, Kakao, E-land, DB, Hoban , HDC, Taeyoung, Naver , Dongkuk Steel , Nexon, Samchully , GM Korea , Kumho Petrochemical , Netmarble , Eugene	38	22	193
	60	39	396

Financial business groups (in strikethrough text): NongHyup, Korea Investment, Mirae Asset, Meritz

Business groups without BR fee contracts with member firms (in strikethrough text): Hyundai Heavy Industries, Daerim, Hyosung, Celltrion, Hyundai Department Store, Young Poong, KT&G, KCC, Kyobo, Daewoo E&C, Hoban, Naver, Dongkuk Steel, Samchully, GM Korea, Kumho Petrochemical, Netmarble

Panel C. Descriptive Statistics

Variables	Mean	Std dev	Q1	Median	Q3
<i>Brand Royalty</i>	0.547	0.240	0.547	0.638	0.689
<i>Holding</i>	0.513	0.500	0.000	1.000	1.000
<i>Holding_Pure</i>	0.462	0.499	0.000	0.000	1.000
<i>Holding_Operating</i>	0.051	0.219	0.000	0.000	0.000
<i>RPTs Monitoring</i>	0.717	0.451	0.000	1.000	1.000
<i>KFTC Monitoring</i>	0.152	0.359	0.000	0.000	0.000
<i>RPTs Committee</i>	0.540	0.499	0.000	1.000	1.000
<i>Audit Committee</i>	0.679	0.467	0.000	1.000	1.000
<i>Advertising</i>	0.507	0.307	0.343	0.626	0.727
<i>Big4Audit</i>	0.859	0.349	1.000	1.000	1.000
<i>External Sales</i>	0.484	0.245	0.333	0.596	0.678
<i>Firm Age</i>	2.692	0.919	2.197	2.833	3.401
<i>Firm Size</i>	19.579	1.877	18.230	19.325	20.838
<i>Giving</i>	0.426	0.286	0.000	0.543	0.653
<i>Leverage</i>	1.774	4.524	0.432	1.003	1.867
<i>Operating Cash Flow</i>	0.043	0.579	0.011	0.053	0.141
<i>Ownership Percentage of Controlling Shareholder</i>	8.179	22.924	0.000	0.000	0.000
<i>ROA</i>	0.042	0.081	0.007	0.038	0.073
<i>Group ROA</i>	0.038	0.081	0.001	0.009	0.041
<i>Group Size</i>	23.647	1.623	22.402	23.858	25.249
<i>Number of Member Firms</i>	22.247	17.131	10.000	16.500	23.000

Panel D. Comparison of Firms under the Holding Company Governance Structure and others

Variables	Firms governed by holding companies (N=203)		Other firms (N=193)		<i>p-value</i>	
	Mean	Median	Mean	Median	<i>t-test</i>	<i>z-test</i>
<i>Brand Royalty</i>	0.608	0.667	0.482	0.599	<0.01	<0.01
<i>Holding</i>	1.000	1.000	0.000	0.000	<0.01	<0.01
<i>Holding_Pure</i>	0.901	1.000	0.000	0.000	<0.01	<0.01
<i>Holding_Operating</i>	0.099	0.000	0.000	0.000	<0.01	<0.01
<i>RPTs Monitoring</i>	0.635	1.000	0.803	1.000	<0.01	<0.01
<i>KFTC Monitoring</i>	0.054	0.000	0.254	0.000	<0.01	<0.01
<i>RPTs Committee</i>	0.399	0.000	0.689	1.000	<0.01	<0.01
<i>Audit Committee</i>	0.616	1.000	0.746	1.000	<0.01	<0.01
<i>Advertising</i>	0.489	0.605	0.526	0.658	0.23	0.22
<i>Big4Audit</i>	0.921	1.000	0.793	1.000	<0.01	<0.01

<i>External Sales</i>	0.500	0.604	0.467	0.588	0.18	0.88
<i>Firm Age</i>	2.672	2.833	2.712	2.833	0.67	0.64
<i>Firm Size</i>	19.670	19.475	19.484	19.282	0.33	0.46
<i>Giving</i>	0.421	0.535	0.432	0.544	0.71	0.73
<i>Leverage</i>	1.698	1.036	1.855	0.915	0.73	0.50
<i>Operating Cash Flow</i>	0.019	0.054	0.069	0.051	0.38	0.98
<i>Ownership Percentage of Controlling Shareholder</i>	1.972	0.000	14.708	0.000	<0.01	<0.01
<i>ROA</i>	0.039	0.039	0.044	0.035	0.49	0.93
<i>Group ROA</i>	0.032	0.006	0.045	0.013	0.13	<0.01
<i>Group Size</i>	23.982	23.736	23.295	23.858	<0.01	<0.01
<i>Number of Member Firms</i>	25.778	14.000	18.534	20.000	<0.01	0.36

Panel E. Comparison of Ownership Percentage of Controlling Shareholders

Variables	Sample	BR paying firms (N=396)		BR recipient firms (N=51)		<i>p-value</i>	
		Mean	Median	Mean	Median	<i>t-test</i>	<i>z-test</i>
	Full sample	8.179	0.000	15.720	8.570	0.02	<0.01
<i>Ownership Percentage of Controlling Shareholder</i>	Chaebols with holding companies	Member firms governed by holding companies (N=203)		Holding company brand holders (N=18)		<i>p-value</i>	
		Mean	Median	Mean	Median	<i>t-test</i>	<i>z-test</i>
		1.972	0.000	25.740	23.295	<0.01	<0.01
	Chaebols without holding companies	Member firms (N=193)		Non-holding company brand holders (N=33)		<i>p-value</i>	
		Mean	Median	Mean	Median	<i>t-test</i>	<i>z-test</i>
		14.708	0.000	10.254	1.230	0.26	0.04

Variable definitions are in Appendix A.

Table 2
Pearson correlation matrix

		[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]		
<i>Brand Royalty</i>	[1]	0.264***	0.007	0.257***	0.153***	0.343***	0.149***	0.415***	0.331***	0.008	0.249***	-0.154***	0.212***	0.145***	0.195***	0.117**		
<i>Holding</i>	[2]		-0.186***	-0.061	0.184***	0.068	-0.022	0.050	-0.019	-0.017	-0.044	-0.278***	-0.035	-0.077	0.212***	0.212***		
<i>RPTs Monitoring</i>	[3]			-0.019	0.131***	-0.175***	0.080	0.163***	0.120***	-0.034	0.042	0.206***	0.040	0.018	0.639***	0.464***		
<i>Advertising</i>	[4]				0.061	0.254***	0.063	0.340***	0.331***	-0.029	0.140***	-0.074	0.028	0.195***	0.015	0.020		
<i>Big4Audit</i>	[5]					0.019	0.096**	0.250***	0.148***	0.045	0.100***	-0.073	-0.101**	-0.057	0.218***	0.105**		
<i>External Sales</i>	[6]						0.115**	0.215***	0.167***	0.019	0.176***	-0.116**	-0.009	0.102**	-0.131***	-0.103**		
<i>Firm Age</i>	[7]							0.254***	0.197***	-0.053	0.061	0.040	0.063	0.154***	0.015	-0.081*		
<i>Firm Size</i>	[8]								0.461***	-0.063	0.104**	-0.083*	0.112**	0.503***	0.244***	0.083*		
<i>Giving</i>	[9]									-0.087*	0.090*	0.003	0.127**	0.109**	0.105**	0.068		
<i>Leverage</i>	[10]										-0.047	-0.070	-0.173***	-0.018	0.013	0.029		
<i>Operating Cash Flow</i>	[11]											-0.017	0.235***	0.051	-0.030	0.026		
<i>Ownership Percentage of Controlling Shareholder</i>	[12]												-0.072	0.028	-0.186***	-0.100**		
<i>ROA</i>	[13]													0.225**	0.040	0.059		
<i>Group ROA</i>	[14]														-0.018	-0.022		
<i>Group Size</i>	[15]																0.775***	
<i>Number of Member Firms</i>	[16]																	

This table reports the Pearson correlation matrix of the variables used in our analysis. All variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.

Table 3
Determinants of brand royalty fees

Dependent variable = <i>Brand Royalty</i>				
	Model (1)	Model (2)	Model (3)	Model (4)
<i>Intercept</i>	-0.816*** (-3.29)	-1.313*** (-4.11)	-1.127*** (-3.55)	-1.066*** (-3.39)
<i> Holding</i>	0.118*** (5.66)		0.100*** (4.39)	0.190*** (3.83)
<i>RPTs Monitoring</i>		-0.128*** (-3.51)	-0.076** (-1.92)	0.003 (0.05)
<i> Holding×RPTs Monitoring</i>				-0.119** (-2.21)
<i> Advertising</i>	0.044 (1.08)	0.034 (0.81)	0.042 (1.03)	0.046 (1.14)
<i> Big4Audit</i>	-0.002 (-0.05)	0.014 (0.37)	-0.002 (-0.05)	-0.008 (-0.20)
<i> External Sales</i>	0.176*** (3.39)	0.169*** (3.13)	0.166*** (3.17)	0.155*** (2.94)
<i> Firm Age</i>	0.005 (0.47)	0.008 (0.71)	0.007 (0.63)	0.008 (0.75)
<i> Firm Size</i>	0.028*** (3.38)	0.028*** (3.38)	0.027*** (3.33)	0.029*** (3.45)
<i> Giving</i>	0.112*** (2.47)	0.102** (2.21)	0.113*** (2.47)	0.099** (2.18)
<i> Leverage</i>	0.003 (1.41)	0.003 (1.20)	0.003 (1.37)	0.003 (1.34)
<i> Operating Cash Flow</i>	0.066*** (2.93)	0.068*** (3.29)	0.069*** (3.22)	0.068*** (3.17)
<i> Ownership Percentage of Controlling Shareholder</i>	0.000 (-0.14)	0.000 (0.23)	0.000 (0.53)	0.000 (0.08)
<i> ROA</i>	0.451*** (3.38)	0.449*** (3.21)	0.458*** (3.37)	0.509*** (3.77)
<i> Group ROA</i>	-0.147 (-0.93)	-0.166 (-0.97)	-0.138 (-0.84)	-0.098 (-0.61)
<i> Group Size</i>	0.031*** (2.51)	0.057*** (3.64)	0.047*** (3.01)	0.040*** (2.60)
<i> Number of Member Firms</i>	-0.002* (-1.75)	-0.001 (-1.45)	-0.002* (-1.89)	-0.001 (-1.33)
<i> Industry Fixed Effects</i>	Yes	Yes	Yes	Yes
<i> Adjusted R²</i>	39.15%	36.85%	39.80%	40.54%
<i> N</i>	396	396	396	396

This table shows the OLS regression results of brand royalty fee payments by large business group member firms. *t*-statistics based on standard errors clustered by firm are reported in parentheses. All variables are winsorized at the 1st and 99th percentiles. Refer to Appendix A for variable definitions. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.

Table 4

The effect of the holding company on brand royalty fees: pure vs. operating holding companies

Dependent variable = <i>Brand Royalty</i>			
	Model (1)	Model (2)	Model (3)
<i>Intercept</i>	-0.816*** (-3.29)	-0.893*** (-3.59)	-1.035*** (-3.25)
<i>Holding</i>	0.118*** (5.66)		
<i>Holding_Pure</i>		0.136*** (6.66)	0.200*** (4.01)
<i>Holding_Operating</i>		0.005 (0.10)	0.120 (1.07)
<i>Holding_Pure</i> × <i>RPTs Monitoring</i>			-0.106** (-2.01)
<i>Holding_Operating</i> × <i>RPTs Monitoring</i>			-0.133 (-1.01)
<i>RPTs Monitoring</i>			0.018 (0.31)
<i>Advertising</i>	0.044 (1.08)	0.049 (1.21)	0.050 (1.24)
<i>Big4Audit</i>	-0.002 (-0.05)	-0.001 (-0.03)	-0.006 (-0.16)
<i>External Sales</i>	0.176*** (3.39)	0.177*** (3.42)	0.159*** (3.02)
<i>Firm Age</i>	0.005 (0.47)	0.004 (0.36)	0.007 (0.62)
<i>Firm Size</i>	0.028*** (3.38)	0.029*** (3.50)	0.029*** (3.55)
<i>Giving</i>	0.112*** (2.47)	0.105** (2.35)	0.093** (2.05)
<i>Leverage</i>	0.003 (1.41)	0.003 (1.42)	0.003 (1.36)
<i>Operating Cash Flow</i>	0.066*** (2.93)	0.064*** (2.84)	0.067*** (3.04)
<i>Ownership Percentage of Controlling Shareholder</i>	0.000 (-0.14)	0.000 (0.01)	0.000 (0.04)
<i>ROA</i>	0.451*** (3.38)	0.456*** (3.44)	0.507*** (3.77)
<i>Group ROA</i>	-0.147 (-0.93)	-0.155 (-0.98)	-0.106 (-0.66)
<i>Group Size</i>	0.031*** (2.51)	0.034*** (2.79)	0.038*** (2.46)
<i>Number of Member Firms</i>	-0.002* (-1.75)	-0.002** (-2.33)	-0.002* (-1.84)
<i>Industry Fixed Effects</i>	Yes	Yes	Yes
<i>Adjusted R²</i>	39.15%	40.29%	40.93%
<i>N</i>	396	396	396

t-statistics based on standard errors clustered by firm are reported in parentheses. All variables are winsorized at the 1st and 99th percentiles. Refer to Appendix A for variable definitions. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.

Table 5

The effect of related-party transaction monitoring on brand royalty payments by components of RPT monitoring

Dependent variable = <i>Brand Royalty</i>							
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)
<i>Intercept</i>	-0.774*** (-2.95)	-1.074*** (-4.13)	-1.239*** (-3.93)	-1.187*** (-3.86)	-0.766*** (-2.99)	-0.645*** (-2.59)	-0.689** (-2.01)
<i> Holding</i>					0.107*** (4.81)	0.173*** (3.84)	0.227*** (4.65)
<i>KFTC Monitoring</i>	-0.121** (-1.95)			-0.104* (-1.72)	-0.139** (-1.93)		
<i>RPTs Committee</i>		-0.112*** (-3.78)		-0.089*** (-2.46)		0.049 (0.95)	
<i>Audit Committee</i>			-0.093*** (-2.58)	-0.036 (-0.81)			0.090 (1.42)
<i> Holding×KFTC Monitoring</i>					0.081 (1.04)		
<i> Holding×RPTs Committee</i>						-0.112** (-2.07)	
<i> Holding×Audit Committee</i>							-0.158*** (-3.01)
Controls and Fixed Effects	Identical to Tables 3 and 4						
<i> Adjusted R²</i>	35.44%	36.60%	35.43%	37.30%	40.07%	39.50%	40.54%
<i> N</i>	396	396	396	396	396	396	396

t-statistics based on standard errors clustered by firm are reported in parentheses. All variables are winsorized at the 1st and 99th percentiles. Refer to Appendix A for variable definitions. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.

Table 6
Brand royalty fees received by group brand-name holders

Dependent variable = <i>Brand Royalties Received by Brand-name Holders</i>					
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
<i>Intercept</i>	-0.040 (-0.12)	-0.226 (-0.56)	-0.168 (-0.46)	-0.170 (-0.46)	-0.033 (-0.10)
<i> Holding</i>	0.205*** (2.78)		0.184*** (2.66)	0.166** (1.97)	
<i> Holding_Pure</i>					0.200*** (2.59)
<i> Holding_Operating</i>					0.231*** (2.66)
<i> RPTs Monitoring</i>		-0.119* (-1.69)	-0.072 (-1.12)	-0.083 (-1.03)	
<i> Holding×RPTs Monitoring</i>				0.025 (0.35)	
<i> Advertising</i>	0.160** (2.25)	0.125 (1.55)	0.153** (2.17)	0.152** (2.14)	0.156** (2.10)
<i> Big4Audit</i>	-0.134* (-1.80)	-0.094 (-1.22)	-0.121* (-1.66)	-0.124* (-1.73)	-0.142* (-1.66)
<i> External Sales</i>	-0.069 (-0.80)	-0.122 (-1.15)	-0.087 (-0.94)	-0.082 (-0.87)	-0.066 (-0.78)
<i> Firm Age</i>	-0.019 (-0.70)	-0.006 (-0.18)	-0.011 (-0.47)	-0.012 (-0.49)	-0.021 (-0.70)
<i> Firm Size</i>	0.024 (0.83)	0.038 (1.12)	0.035 (1.08)	0.035 (1.09)	0.025 (0.82)
<i> Giving</i>	-0.042 (-0.55)	-0.034 (-0.40)	-0.037 (-0.46)	-0.038 (-0.46)	-0.053 (-0.61)
<i> Leverage</i>	0.031 (1.17)	0.029 (0.86)	0.036 (1.29)	0.036 (1.25)	0.032 (1.12)
<i> Operating Cash Flow</i>	-0.029* (-1.86)	-0.003 (-0.22)	-0.028* (-1.85)	-0.029* (-1.84)	-0.031* (-1.89)
<i> Ownership Percentage of Controlling Shareholder</i>	0.001 (0.76)	0.003** (2.21)	0.002 (1.18)	0.002 (1.15)	0.001 (0.74)
<i> ROA</i>	0.058 (0.22)	0.088 (0.31)	0.100 (0.38)	0.110 (0.42)	0.061 (0.22)
<i> Industry Fixed Effects</i>	Yes	Yes	Yes	Yes	Yes
<i> Adjusted R²</i>	58.62%	52.28%	58.70%	57.47%	57.45%
<i> N</i>	51	51	51	51	51

t-statistics based on standard errors clustered by firm are reported in parentheses. All variables are winsorized at the 1st and 99th percentiles. Refer to Appendix A for variable definitions. ***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.