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The New Product Portfolio Innovativeness–Stock Returns Relationship: The Role of Large Individual Investors' Culture

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Abstract

The marketing–finance interface literature has investigated the direct link between innovativeness and stock returns. The authors extend this research by focusing on two open questions: How and under what conditions is innovativeness associated with stock returns? Answering these questions is important for managers who have to defend innovation investments to board members and time the introductions of new products. The authors investigate large individual investors and their national culture in the food and beverage industry. Combining multiple data sets, they first examine the relationship between innovativeness and large individual investors' stock holding decisions (i.e., to sell, hold onto, or buy a firm's stocks). The results indicate that national culture moderates this relationship. At the firm level, the authors show that large investors' stock holding partially mediates the innovativeness–stock returns relationship and that the culture of a firm's large investors moderates this mediated relationship. Thus, they unveil a special segment of investors, large individual investors, who influence the extent to which firms benefit from innovativeness in the stock market in the food and beverage industry.

Keywords

marketing–finance interface, new product portfolio innovativeness, stock holding, investor heterogeneity, Hofstede

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In the last decade, the marketing–finance interface literature has emerged as a fertile area of research, with the goal of making marketing's contribution to firm value more visible to top managers and investors (Srinivasan and Hanssens 2009). Research in this area has particularly focused on the innovativeness of the new products that a firm introduces each period (e.g., Sorescu and Spanjol 2008; Srinivasan et al. 2009). We define this as "new product portfolio innovativeness" ("innovativeness" hereinafter). Historically, this literature has investigated the direct link between innovativeness (and marketing actions, in general) and stock market performance. While it has convincingly shown this link exists, significant research questions remain unanswered.

First, *how* is innovativeness associated with stock returns? Prior research (Chen, Chow, and Shiu 2015; Ng and Wu 2009) and anecdotal evidence hint to a special group of investors, large individual investors ("large investors" hereinafter), who influence stock returns to firm actions. Many small investors mimic large investors' stock holding decisions through portfolio trackers, and some fund managers use large investors' decisions to inform choices about their own funds (Ghosh 2017). For instance, on October 19, 2015, Oprah Winfrey announced that she had purchased a 10% stake in Weight Watchers. In 2 days, her stock holding decision generated $700 million in stock market value for Weight Watchers (Vardi 2015). In addition, when the famous Indian investor Rakesh Jhunjhunwala bought stocks in Prakash Industries, the price increased by 13%. When he sold his stocks in Design Arena, the stock lost 12.4% of its value the day after the announcement (ETMarkets.com 2017; MoneyControl.com 2017). Given their relevance, we identify large investors' stock holding as one of the possible mechanisms through which the innovativeness–stock returns relationship occurs. To understand this

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mechanism, we start with an investor-level perspective that analyzes each large investor's stock holding decision (i.e., to buy, hold on to, or sell stocks) associated with innovativeness. We then move to a firm-level perspective that investigates whether large investors' stock holding mediates the innovativeness–stock returns relationship.

Second, *under what conditions* is innovativeness associated with stock holding and stock returns? Thus far, the literature has treated these relationships as unconditional. However, investors are heterogeneous in their preferences for firm actions (Manconi and Massa 2013; Schnatterly and Johnson 2014), which suggests that the stock returns associated with innovativeness are conditioned on the characteristics of the firm's large investors. Theoretical and empirical reasons lead us to focus on the national culture of large investors. Prior literature has shown that customers vary in their response to innovativeness depending on their national culture (Chandrasekaran and Tellis 2008; Steenkamp, Ter Hofstede, and Wedel 1999). If national culture ("culture" hereinafter) plays the same role for investors, then large investors from different cultures might react differently to innovativeness. It is particularly important to understand the role of culture in the context of increasing diversity in the nationality of firms' investors. Foreign holdings of U.S. stocks and bonds hit record levels in 2016: foreign investors account for 20% of the U.S. equity market and 50% of publicly traded debt (Bryson and Pershing 2016). In the next 5 to 10 years, foreign investors may own one-third of U.S. stocks (Long 2015). Similarly, the investor profile of foreign stock markets is increasingly diverse (International Monetary Fund 2014). We use a national cultural, work-oriented-values approach (i.e., Hofstede, Hofstede, and Minkov 2010) to study how culture moderates the relationships between innovativeness and (1) stock holding and (2) stock returns.

We contribute to the literature in three ways. First, we identify large investors' stock holding as one of the routes through which the innovativeness–stock returns relationship occurs. In this way, we advance the marketing–finance interface literature, which has previously focused on the direct link, by shedding light on one of the mechanisms through which marketing creates value in the stock market. For managers, who must defend their innovation investments to board members, it is important to understand the process wherein innovativeness creates value.

Second, we identify one key boundary condition of the innovativeness–stock returns relationship: given the same level of innovativeness, stock returns are contingent on large investors' culture. As such, we highlight how the characteristics of a firm's large investors magnify or dilute the contribution of marketing actions to firm value. We also extend the cross-cultural marketing literature, which has examined consumers' financial decisions (Petersen, Kushwaha, and Kumar 2015), to the investor domain. For managers, whose compensation is tied to stock price, it is important to understand not only whether innovativeness is associated with stock returns but also under what conditions it is most lucrative.

Third, Srinivasan and Hanssens (2009) note that firms spend substantial resources in communicating with the market, and they call for research to advise managers on which marketing actions to communicate to specific investors. Despite this call, the marketing literature has been largely silent about which investors matter and what to communicate to them. To researchers and managers, we delineate a relevant segment of investors (i.e., large investors) to target with customized communication. Drawing on our results, we suggest how to best position innovativeness depending on the cultural specificities of each large investor. More generally, we suggest that key marketing concepts such as segmentation, targeting, and positioning that have been traditionally adopted for customers can be applied to investors too.

Collectively, our findings provide a reframing of future research in the marketing–finance interface literature from the question of whether marketing action or assets increase firm value in the stock market to a more complex set of questions: How and under what conditions does marketing create value in the stock market, and for which investors does this occur?

Framework and Predictions

New Product Portfolio Innovativeness and Large Investors' Stock Holding

The marketing–finance interface literature theorizes that marketing actions that enhance and accelerate cash flows, reduce their volatility, and increase residual firm value stimulate investors, including large investors, to increase stock holding (Srivastava, Tasadduq, and Fahey 1998). The introduction of innovative products accomplishes these tasks in the following ways.[1] First, innovative products enable firms to dominate markets while protecting the firm from competitive attacks, as it takes time for competitors to imitate innovative new products (Sorescu and Spanjol 2008). Innovativeness signals investors that the firm will stay ahead of competition, appropriating quasimonopolistic rents that increase the value of the firm for investors (Rubera and Kirca 2012). Second, more innovative products provide benefits not offered by any existing product in the market, allowing a firm to secure a unique positioning in the marketplace and command a higher premium price, thus enhancing cash flows. Third, innovative products enable a firm to address new customer segments or new needs, thereby reducing cash flow volatility (Srinivasan et al. 2009). Finally, investors view innovative products as platforms for future product introductions, increasing investors' view of residual value of the firm (Srinivasan et al. 2009).

[1] Firms can also innovate through process innovation, which can be instrumental to product innovation and can result in cost reductions. Consistent with prior research in marketing, we focus on product innovation. We thank an anonymous reviewer for pointing out the importance of process innovation. Our focus on product innovation alone is a limitation of our research.

Beyond this framework that applies to all investors, we identify two additional characteristics of large investors that further increase their favorable disposition to innovativeness. First, large investors own a significant block of a firm's stocks. They cannot sell their stocks without depressing the stock price and taking a substantial loss on the transaction (Kochhar and Parthiban 1996). Given this high investment level, large investors are likely to respond positively to innovativeness strategies that have the aforementioned positive effects on firm cash flows. Second, large investors tend to have an extensive knowledge of the firm (Kochhar and Parthiban 1996). Research has shown that, for individual investors, deeper knowledge is associated with lower risk perceptions and higher expectations about future returns (Long, Fernbach, and De Langhe 2018). This suggests that risk concerns that might curb positive response to innovativeness (Srinivasan et al. 2009) are less likely to arise in the case of large investors.

In summary, our theory leads to the prediction that individual large investors will buy more of a firm's stocks when innovativeness increases. In addition to this individual investor level, we also theorize and test this effect at the firm level to expand the development and importance of our effect. We denote these as "individual" and "firm" levels, respectively, for the remainder of the article. At the firm level, this translates into an increase of large investors' stock holding (i.e., the total percentage of stocks in the hands of large investors). Formally,

H_1: New product portfolio innovativeness positively influences the stock holding of (a) individual-level large investors and (b) firm-level large investors.

The Moderating Role of Large Investors' National Culture

The finance literature theorizes that decision biases lead investors to respond differently to the same information (in our case, innovativeness) (Shleifer 2000). Representativeness bias—that is, the tendency to attribute one characteristic to imply another—has received significant scholarly attention (Shefrin 2005). This bias leads investors to buy stocks in firms with attributes that they deem desirable, regardless of the objective value of the specific attribute (Shefrin 2005).

We argue that representativeness bias, founded in an investor's personal values, influences a large investor to increase her stock holding in innovative firms more when she considers innovativeness a desirable attribute than when she does not. Consistent with this theorization, prior literature has found that culture influences the extent to which innovativeness is perceived as a desirable attribute (e.g., Steenkamp, Ter Hofstede, and Wedel 1999). We theorize that, given the same level of innovativeness, large investors from cultures that value innovativeness will increase their stock holding more than large investors from cultures that do not value innovativeness to the same degree. We recognize that representativeness bias may lead investors to increase stock holding in firms with attributes other than innovativeness that they may consider desirable as well (e.g., process innovation).

The role of culture (i.e., the collective programming of the mind that separates the members of one group of people from another; Hofstede 2001)—and, in particular, the role of Hofstede's cultural dimensions—in influencing investment decisions is well documented. For instance, Chui, Titman, and Wei (2010) find a positive correlation between individualism and momentum trading strategies; Schmeling (2009) reports that investors from countries low in individualism and high in uncertainty avoidance rely on market sentiment to make stock holding decisions more than other investors. Consistent with this research and the argument that representativeness bias is influenced by an individual's values, we employ the work-oriented value framework of Hofstede (e.g., Hofstede, Hofstede, and Minkov 2010) to study stock holding decisions because these are personal business decisions that affect an investor's personal wealth.

Hofstede's work-oriented value framework consists of six value dimensions (i.e., individualism, uncertainty avoidance, power distance, masculinity, long-term orientation, and indulgence; Hofstede, Hofstede, and Minkov 2010). Hofstede (1983) argues that scholars should employ dimensions that are theoretically relevant to the phenomenon under study. In this work, to gain the broadest theoretical understanding of the phenomenon, we employ all six dimensions. Next, we hypothesize the specific moderating role of each of these six values for both a single large investor as well as for the overall large investors' stock holding.

Individualism. Individualism refers to the strength of relations between members of a society (Hofstede 2001). It is anchored by individualism and collectivism. Members of individualist cultures value independence and aim to separate themselves from others. Members of collectivist cultures value group cohesion and harmonious interdependence. Because investors typically view innovativeness as a means to distinguish a firm from its competitors (Srinivasan et al. 2009), a firm introducing innovative products should be more appealing to large investors from individualist cultures than to those from collectivist cultures. This suggests that, owing to representativeness bias, a large investor from an individualist culture would buy more stock in innovative firms than a large investor from a collectivist culture. At the firm level, given the same level of innovativeness, the percentage of stock in the hands of large investors will increase as the individualism among a firm's large investors increases. Thus, we hypothesize,

H_2: The positive effect of new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding increases as large investor individualism increases.

Uncertainty avoidance. Uncertainty avoidance refers to how a society manages future uncertainty (Hofstede, Hofstede, and Minkov 2010). Low-uncertainty-avoidance cultures accept higher levels of risk; high-uncertainty-avoidance cultures work to minimize future uncertainty. When firms introduce innovative products, investors face uncertainty regarding

when these products will generate cash flows (Srinivasan et al. 2009). Because large investors from higher-uncertainty-avoidance cultures tend to avoid risk, they should view innovativeness as a less desirable attribute than investors from lower-uncertainty-avoidance cultures. Following the same logic adopted for individualism, we hypothesize,

H_3: The positive effect of the new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding decreases as large investor uncertainty avoidance increases.

Power distance. Power distance refers to the way a society addresses differences among its members (Hofstede 2001). Higher-power-distance cultures value greater social stratification and increased social hierarchy, similar to markets characterized by market leaders and market followers. Lower-power-distance cultures work to minimize inequalities. Innovativeness is typically considered a way to create inequities in the marketplace (Tellis 2013). Inequities are favored in larger-power-distance cultures, which view the world as consisting of winners and losers (Hofstede, Hofstede, and Minkov 2010), but are less desirable in lower power distance cultures. Thus, stocks of a firm that introduces more innovative products are more appealing to large investors from high-power-distance cultures than to those from low-power-distance cultures, because of representativeness bias. Thus,

H_4: The positive effect of new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding increases as large investor power distance increases.

Masculinity. Masculinity refers to the distinction between gender roles in a society (Hofstede, Hofstede, and Minkov 2010). It is anchored by masculinity and femininity. More masculine cultures value autonomy, dominance, success, and wealth (Hofstede 2001). More feminine cultures are concerned with the overall welfare of the entire society. Large investors from more masculine cultures value firm actions that are aggressive and aimed to dominate the market more than large investors from feminine cultures. Because innovativeness is considered a strategy to displace existing market leaders and dominate markets (Tellis 2013), we theorize that, owing to representativeness bias, the stocks of firms that introduce more innovative products are more appealing to large investors from more masculine cultures. Thus,

H_5: The positive effect of new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding increases as large investor masculinity increases.

Long-term orientation. Long-term orientation refers to the life orientation of people in a society, reflected in virtues oriented toward future rewards. Long-term-oriented cultures value perseverance and maintaining the status quo and are suspicious of change. Short-term-oriented cultures value change and quick results (Hofstede, Hofstede, and Minkov 2010). Investors typically view innovativeness as a firm's commitment to establishing a long-term competitive advantage (Srinivasan et al. 2009). Innovativeness should be a more desirable quality for large investors from long-term-oriented cultures, who are more forward-looking and appreciative of a firm's long-term commitment to growth, than for investors from short-term-oriented cultures. This prediction is consistent with Petersen, Kushwaha, and Kumar (2015), who find that people from long-term-oriented cultures have higher saving rates than others. Thus,

H_6: The positive effect of new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding increases as large investor long-term orientation increases.

Indulgence. Indulgence reflects whether a society values gratification of human desires related to enjoying life and having fun (Hofstede, Hofstede, and Minkov 2010). This value is anchored by indulgence and restraint. People from cultures higher in indulgence value the satisfaction of personal desires and increase spending for personal gratification (Kumar and Pansari 2016). Societies that value restraint adhere to strict social norms that curb gratification. We argue that a firm's introduction of innovative new products provides excitement. Investors in more indulgent cultures value this excitement compared with investors from more restrained cultures, because it creates gratification in the acquisition of the firm's stock. Thus, innovativeness should be a more desirable quality for large investors from cultures higher in indulgence. Following this logic, we hypothesize,

H_7: The positive effect of new product portfolio innovativeness on (a) individual-level large investors' stock holding and (b) firm-level large investors' stock holding increases as large investor indulgence increases.

New Product Portfolio Innovativeness and Stock Market Returns

Thus far, we have theorized about how large investors make stock holding decisions in response to innovativeness. Because the compound of each investor's stock holding decisions determines a firm's stock market returns, we next theorize about the innovativeness–stock returns relationship.

The direct effect. A vast body of studies have consistently shown that the introduction of more innovative products is positively linked to stock returns (e.g., Rubera and Kirca 2012; Sood and

Tellis 2009; Sorescu and Spanjol 2008; Srinivasan et al. 2009). To set a baseline hypothesis, we state,

> **H_8**: New product portfolio innovativeness positively influences stock returns.

The mediating role of large investors' stock holding. Higher demand (i.e., investors who buy stocks) and lower supply (i.e., investors who do not sell stocks) increases stock returns (Warren and Sorescu 2017; Xiong and Bharadwaj 2013). We maintain that large investors' stock holding mediates the innovativeness–stock returns relationship by influencing demand and supply of a firm's stocks associated with innovativeness and, ultimately, stock returns. We theorize two reasons why this mediation might occur.

First, an increase in large investors' stock holding subsumes higher demand of stocks by large investors coupled with constrained supply, because large investors who own the firm's stocks are not willing to sell. Second, other investors, especially retail investors, mimic the behavior of correlated trading by large investors (i.e., they buy when large investors buy, and they sell when large investors sell; Chen, Chow, and Shiu 2015; Lee, Lin, and Liu 1999; Ng and Wu 2007). Thus, innovativeness is associated with higher demand by both large investors and, owing to imitation, other investors in the market. It is also associated with constrained supply by large investors and, owing to imitation, other investors. Higher demand and constrained supply creates a shortage that increases stock returns (Xiong and Bharadwaj 2013). We theorize that large investors' stock holding is one of the routes through which the innovativeness–stock returns relationship occurs. Because we do not expect large investors to fully influence other investors, we argue for partial mediation:

> **H_9:** The positive effect of new product portfolio innovativeness on stock returns is partially mediated by large investors' stock holding.

The moderating effect of large investors' national culture. The culture of large investors determines the magnitude of the effect of innovativeness on large investors' stock holding (H_{2b}–H_{7b}). It follows that the innovativeness–stock returns relationship is one of moderated mediation, in which culture moderates the path between innovativeness and large investors' stock holding, the latter being a mediator of the innovativeness–stock returns relationship (H_9).

Given the same level of innovativeness, a firm experiences higher stock returns when large investors from cultures that value innovativeness own more of the firm's stocks. These investors increase their stock holding, thus raising demand, while holding onto the stocks that they already own, thus constraining supply. Stated differently, given the same level of innovativeness, a firm experiences lower stock returns when large investors from cultures that do not value innovativeness own more of the firm's stocks. These investors sell stocks, causing price drops. Price drops are more dramatic when these large investors own more stocks because they supply a larger quantity of stocks to the market. Thus, the route through which innovativeness influences stock returns (i.e., large investors' stock holding) strengthens or weakens depending on the culture of a firm's large investors. Because this route partially determines the innovativeness–stock returns relationship (H_9), we hypothesize,

> **H_{10}:** The positive effect of new product portfolio innovativeness on stock returns increases as the (a) individualism, (b) power distance, (c) masculinity, (d) long-term orientation, and (e) indulgence of the firm's large investors increases, whereas (f) it decreases as the uncertainty avoidance of the firm's large investors increases.

Method

Data Collection

The sample begins with the population of firms tracked by Mintel Global New Products Database (GNPD), which introduced at least one new product in the food and beverage industries worldwide in the 2006–2014 time frame. We select these industries because product innovation is an integral component of their strategy, and they have been the focus of many other innovation studies (e.g., Moorman et al. 2012; Sorescu and Spanjol 2008). We use Thomson One to retain listed firms. To rule out the possibility that stock holding decisions are driven by product introductions that are observable by investors but not by us, we retain listed firms whose North American Industry Classification System codes belong to the food and beverage industries only. We exclude one company listed in two stock exchanges. This results in 56 firms on 27 stock exchanges (Web Appendix A).

For these firms, we collect quarterly data about large investors' stock holding. Thomson One reports information about individual investors who are required by national legislation to notify the stock exchange that their stock holding has reached a minimum threshold. Because different countries have different minimum thresholds (see Web Appendix A), we perform a robustness analysis on just those investors whose stock holding is higher than 10%, the highest disclosure threshold in our sample. The results do not change. We exclude officers who own stock as part of their compensation plans, their relatives, and board members because their stock holding decisions may be influenced by their managerial role or by information not fully available to investors. We also exclude firm founders or relatives because their stock holding is independent of the firm's innovation activity.

To ensure that we track stock holding decisions from the first quarter that a large investor owned a firm's stocks, we restrict our sample to large investors that bought stock in our firms for the first time either in the first quarter of 2006 or later. Our final sample comprises 458 large investors in 36 quarters, for a total of 4,057 observations in the 2006–2014 time frame.

To gain a sense of how frequently managers meet with large investors, we analyze the annual reports of firms in our sample listed in the Shenzhen stock exchange. Since 2009, these firms must disclose investors' site visits in their annual reports, and this is the only publicly available source identifying the investors with whom managers meet privately (for an example, see Web Appendix B). We found that visits by large investors represent 15% of total visits.

Variables in the Investor-Level Analysis: Measures

Independent variable: New product portfolio innovativeness. Consistent with previous literature (e.g., Sorescu and Spanjol 2008; Srinivasan et al. 2009), we define innovativeness from a consumer perspective. We use Mintel GNPD to collect data on new products that firms introduced. The GNPD classifies products as new to the market, line extensions, or new formulations. Products that are introduced for the first time in a country are classified as new to the market. We measure new product portfolio innovativeness, defined as the innovativeness of the new products that a firm introduces each period, as the ratio between the number of new-to-the-market products and the total number of new products that a firm introduces in a quarter. This is consistent with Srinivasan et al. (2009), who consider new-to-the-market products as the most innovative type of products. Web Appendix C provides examples of products from Mintel GNPD. The descriptive statistics for the number of new-to-the-markets products introduced each quarter are as follows: $M = .64$, $SD = 1.63$, Max = 20 (Parmalat in the fourth quarter of 2007). As for number of other products: $M = .89$, $SD = 2.23$, Max = 20 (Ottogi in the third quarter of 2014). We collect data on mergers and acquisitions of the firms in our sample to ensure that we assign products to the correct firm, consistent with Sorescu and Spanjol (2008).

Dependent variable: Stock holding change. Stock holding change is the percentage of firm f's outstanding stocks that investor i holds at the end of quarter t, minus the percentage of f's outstanding stocks that i held at the end of quarter $t - 1$. We collect this data from Thomson One.

Moderating variables: Six dimensions of a large investor's national culture. We measure the six dimensions of a large investor's national culture through index scores from Hofstede, Hofstede, and Minkov (2010).

Control variables at the investor level. We control for the relevance of the firm in the investor's portfolio—that is, the extent to which the performance of an investor's portfolio depends on the performance of the firm (Higgins and Gulati 2006). High firm relevance means that investors are more interested in the firm's long-term growth (Higgins and Gulati 2006). We measure this as the portion of investor's portfolio (in U.S. dollars) invested in the firm. The data are from Thomson One.

Frequency of trading is the average holding period for stocks in the investor's portfolio. Investors who frequently trade their stocks are more sensitive to short-term gains than other investors (Bushee 1998). These data are from Thomson One, which classifies investors as high or low frequency. We use a dummy variable that takes a value of 1 when the average holding period is less than one year, suggesting a short-term investment horizon and frequent trading, and 0 otherwise.

Because innovativeness is risky, investors may limit the purchase of stocks of innovative firms if they hold a risky portfolio. We control for the beta and alpha of investor i's portfolio. We collect information from Thomson One about the percentage of i's portfolio that is invested in each firm. For all the firms in i's portfolio, including those not in our sample, we collect the daily market returns from Compustat Security Daily. We calculate our betas and alphas with a three-factor Fama–French model similar to the one described in Equation 0, daily data, and a 120-day rolling-window approach, weighted by the dollar percentage of i's portfolio invested in a firm. Quarterly betas/alphas are the average of the three-month periods.

The disposition effect in the finance literature indicates that investors may sell stocks whose price has gone up since purchase (Shefrin and Statman 1985). We control for the difference between the closing stock price at the end of quarter q and the purchase price, divided by the purchase price. Stock price data are from Compustat Security Daily.

Tenure is the length of the relationship between the investor and the firm. Consistent with previous research on financial decision making, we control for tenure, measured as the number of quarters the investor has held the firm's stock (Petersen, Kushwaha, and Kumar 2015).

Local investor controls for possible home bias—namely, investors' tendency to tilt their portfolios towards local stocks (Seasholes and Zhu 2010). We use a dummy variable that takes a value of 1 when the investor owns stock in a firm headquartered in his or her same country and 0 otherwise.

Gender is a dummy that takes a value of 1 when the investor is male and 0 otherwise. Research has shown gender differences in investment behavior (e.g., Barber and Odean 2001). We use the Gender API (available at gender-api.com) to derive gender from an investor's name.

We control for the investor's country regulatory profile (i.e., the level of corruption in the investor's country), which influences financial decision making. We measure this variable with the corruption perception index by Transparency International (Petersen, Kushwaha, and Kumar 2015). Finally, we use two dummies for the first or last period in which an investor holds a firm's stocks.

Control variables at the firm-level. We control for the innovativeness of the firm's existing products with two variables: (1) number of new-to-the-market products and (2) number of other products introduced in the previous 3 years. The data are from Mintel GNPD.

The number of investors in the firm (including institutional investors) may influence the extent to which a large investor

can influence the firm's activities. The mean number of investors is 44 (including institutional investors), median is 22, and maximum is 889 (Parmalat in the first quarter of 2011).[2] Our firms have an average of 3.1 large individual investors (SD = 2.42, Mdn = 2, Max = 12). The data are from Thomson One.

Branding strategy reflects the firm's approach to branding its products. Investors prefer firms that adopt corporate branding strategy rather than house-of-brands or mixed branding strategies (Rao, Agarwal, and Dahloff 2004). We use two dummies, with mixed branding strategy serving as the reference category. We collect this information from each firm's website.

Stock price difference refers to a firm's stock price fluctuations between quarters. Large price changes catch investors' attention, influencing their stock holding decisions (Barber and Odean 2008). We compute stock price difference as closing price at the end of quarter t minus the closing price at the end of quarter $t - 1$. The data are from Compustat Security Daily.

Abnormal trading volume refers to variations in a firm's trading volume. Investors pay more attention to stocks that experience abnormally heavy trading volume (Barber and Odean 2008). For each stock in each quarter, we calculate the ratio of the stock's trading volume to its average trading volume in the previous three quarters. The data are from Compustat Security Daily.

The number of countries variable is the number of countries in which a firm has introduced products in the current quarter. We control for this variable because the introduction of new products in more countries may be more visible than the introduction of new products in fewer countries.

Stock index growth may influence investors' stock holding decisions: investors may prefer to invest in firms listed in indices that perform well. We measure it as the index closing price at the end of quarter t minus closing price at the end of quarter $t - 1$. The data are from Yahoo! Finance.

We control for the institutional context (i.e., economic, regulatory and cultural system) of the countries in which a firm introduces new products. Prior research has shown that some countries are more conducive to the success of innovative products than others, causing innovativeness to generate higher cash flow and firm residual value (Steenkamp and Geyskens 2014).

The economic system of the countries in which a firm introduced innovations refers to how a country's economic institutions fulfill the material needs of its people. We consider three components of the economic system. First, we consider market size, which ensures that innovations have a potential large pool of consumers who can buy them. We measure market size as the log-transformed yearly gross domestic product (GDP; in US$ billions) at purchasing power parity (Steenkamp and Geyskens 2014), which we obtain from the Global Competitiveness Report (GCR), and the total expenditures (in US$) in the food and beverage industries, which we obtain from Passport. Because a firm may introduce products in more than one country each quarter, we measure market size as the average of country k's GDP/expenditures weighted by the percentage of all firm f's products introduced in country k at time t (i.e., countries are weighted in proportion to the number of products introduced therein):

$$\mathrm{GDP}_{\mathrm{ft}} = \sum_{\mathrm{k}=1}^{\mathrm{N}} \left(\mathrm{GDP}_{\mathrm{kt}} \times \%\mathrm{New\ products}_{\mathrm{fkt}}\right)$$

We use the same approach for all the institutional context variables. Our data for economic and regulative system are yearly but tend to be stable over time. Thus, we measure the institutional context of each quarter with the corresponding yearly data (e.g., we measure the market size of France in the first quarter of 2011 with the French GDP in 2011).

Second, we consider market efficiency using a yearly indicator provided by the GCR, which measures the extent to which a country is characterized by healthy market competition (67%) and by quality of demand conditions (33%). Third, market infrastructure allows for faster dissemination of information about the distribution of new products, increasing the diffusion of new products (Chandrasekaran and Tellis 2008). We measured this component with a yearly indicator from the GCR, assessing the quality of the transportation (50%) and of the electricity and telephone infrastructure (50%).

Rule of law is a key element of a country's regulatory system (Steenkamp and Geyskens 2014). It refers to the degree to which the behavior of individuals and organizations is guided by formal and transparent rules. A strong rule of law guarantees protection from imitation and counterfeit products, which limit the cash flow that a firm can generate from its innovations. Thus, investors may see more favorable innovations introduced in countries with stronger rule of law. We control for the rule of law with a composite indicator provided by the World Bank.

The cultural system of the countries in which a firm introduced innovations represents the customs, traditions, norms, values, and habits of a society (Steenkamp and Geyskens 2014; Steenkamp, Ter Hofstede, and Wedel 1999). In countries where consumers are more open to innovation, new products may take off faster, accelerating cash flows. Marketing scholars have relied on the work of Schwartz and colleagues (e.g., Schwartz 1992) to understand consumer attitudes toward new products (e.g., Rubera, Ordanini, and Griffith 2011; Steenkamp, Ter Hofstede, and Wedel 1999). Thus, we use Schwartz's seven values (Schwartz 2008) to measure the cultural system.

[2] Unlike individual investors, who must disclose their holdings only when they pass a certain minimum threshold, in the countries in our sample, institutional investors that invest more than a certain amount in equities must disclose all their holdings in every firm, even if the holding in a single firm is below the minimum threshold. For instance, in the United States, all institutional investors with at least $100 million in U.S.-listed equities must disclose all their holdings.

Variables in the Firm-Level Analysis: Measures

Dependent variable: Stock returns. We use a Fama–French (1993) three-factor model:

$$R_{ft} = \alpha_f + \beta_{fMKTRF} MKTRF_{ft} + \beta_{fSMB} SMB_{ft} + \beta_{fHML} HML_{ft} + \varepsilon_{ft}, \quad (0)$$

where R_{ft} is the raw return of firm f in excess of the quarterly risk-free rate in quarter t; MKTRF is the difference between the quarterly return of the stock market portfolio and risk-free rate in quarter t; and SMB and HML are returns of factor-mimicking portfolios for size and book-to-market, respectively. The raw quarterly data for stock market portfolios, risk-free rates, SMB, and HML are from Kenneth French's data library, which provides data for five areas: the United States, Europe, Japan, Asia Pacific, and global (which includes the data from the previous four areas and areas they did not cover). Ideally, we would have information for each country in our sample; however, these data are not available, and Kenneth French's data library is the best available source.

Mediator: Change in large investors' stock holding. The mean large investors' stock holding is 13.37%, standard deviation is 15.88%, and maximum is 75.18%. We measure the change as the percentage of firm f's outstanding stocks that large investors collectively hold at the end of quarter t minus the percentage of f's outstanding stocks that they held at the end of quarter $t - 1$.

Moderating variables: Six dimensions of the national culture of firm's large investor base. For each dimension, we calculate the sum of the scores of each dimension of all N large investors i weighted by i's stock holding. For instance, the individualism of the firm's large investor base is as follows:

$$(\text{FirmCULT})\ \text{Firm Ind}_{ft} = \sum_{i=1}^{N} \text{IND}_i \times \text{Stock holding}_{ift}.$$

Control variables. We control for the innovativeness of the firm's existing products, the institutional context of the countries in which new products are introduced, and branding strategies as described previously. We control for number of outstanding stocks. These data are from Compustat.

Investor Level: Model and Results

Model

Unexpected new product portfolio innovativeness. Investors react only to new, unanticipated information (Sorescu and Spanjol 2008). This means that investors respond if innovativeness is higher or lower than expected. Thus, we estimate the unanticipated components of innovativeness as follows (see Sorescu and Spanjol 2008):

$$\widehat{\text{INNOVATIVENESS}}_{ft} = \theta_{0f} + \theta_1 \widehat{\text{INNOVATIVENESS}}_{ft-1} + \varepsilon_{UNEXPft}, \quad (1)$$

where θ_{0f} is the firm-specific intercept that measures time-invariant firm heterogeneity, θ_1 is the first-order autoregressive coefficient depicting the persistence of the time series, and $\varepsilon_{UNEXPft}$ is the unexpected innovativeness of firm f at time t, which we then use in our analysis.

Unconditional random-intercept cross-classified hierarchical linear model (HLM). We have a repeated cross-sectional design in which firms are monitored repeatedly every quarter for 9 years, and we observe the stock holding of each large investor within these firms. Thus, our data have a hierarchical structure: at the lowest level, our data consist of observations about large investors' stock holding change (Level 1), nested within investors' countries as well as within time (i.e., each quarter; Level 2). Unlike a traditional HLM, our observations are nested within two membership structures: investors' countries c and time t. Furthermore, because we have a cross-sectional design, time periods are nested within firms f (Level 3), which in turn are nested in their own countries k (Level 4). We depict our structure in Web Appendix D.[3]

To estimate the most appropriate model for our data, we start testing a random-intercept cross-classified model as follows:

$$\Delta\,\text{Stock holding}_{i,\,ct,\,fk} = Y_{i,\,ct,\,fk} = \theta_{00000} + u_c + u_{tfk} + r_{fk} + v_k + \varepsilon_{i,\,ct,\,fk} \quad (2)$$

$$\varepsilon_{i,\,ct,\,fk} \sim N(0,\,\sigma^2_\varepsilon);\ u_c \sim N(0,\,\sigma^2_c);\ u_{tfk} \sim N(0,\,\sigma^2_t);\ r_{fk} \sim N(0,\,\sigma^2_f);\ v_k \sim N(0,\,\sigma^2_k),$$

where

- $Y_{i,ct,fk}$ is the observed stock holding change of investor i in investor's country c at the end of quarter t in firm f and firm's country k;
- θ_{00000} is the grand mean of an investor's stock holding change across investors, investor's country, time, firms, and firm's country;
- $\varepsilon_{i,ct,fk}$ is the random investor coefficient, or the deviation in stock holding change from the mean of investor i in investors' country c at time t, in firm f and firm's country k;
- u_c is the random intercept of investor's country c;
- u_{tfk} is the random intercept of time t;

[3] We empirically check for multiple membership of investors within firms but find that 98% of investors own stock in just one of the firms in our sample. In addition, because we consider a firm's country k to be the country where the firm's headquarters is located, each firm belongs to just one country, eliminating concerns about membership of firms within multiple countries.

- r_{fk} is the random intercept of firm f; and
- v_k is the random intercept of firm's country k.

Because a Woolridge test reveals no auto-correlation in our data, we use a regular variance-covariance structure. This model partitions the total variance of $Y_{i,\,ct,\,fk}$ ($\sigma^2 = \sigma^2_\varepsilon + \sigma^2_c + \sigma^2_t + \sigma^2_f + \sigma^2_k$) into five components: Level 1 among investors, Level 2a among the investor's country, Level 2b among time within firms, Level 3 among firms within the firm's country, and Level 4 among the firm's country. The proportion of total variance (PV) attributable to each level is calculated as follows: $\sigma^2_\varepsilon/\sigma^2$ is the PV among investors, σ^2_c/σ^2 is the PV between large investors' countries, σ^2_t/σ^2 is the PV across time, σ^2_f/σ^2 is the PV between firms, and σ^2_k/σ^2 is the PV between firm's countries. This partitioning enables us to understand whether we can estimate a simpler model with fewer levels—an important step, because unnecessary levels inflate standard errors (Raykov 2010).

To understand the best nested structure to represent our data, we perform a model selection analysis, which we detail in Web Appendix E. We estimate the model with a Bayesian estimation approach, which provides more precise estimates than traditional approaches by producing the best linear, unbiased predictor. We use MLwiN 3.01 software and the Markov chain Monte Carlo procedure with a Bayesian estimation (Browne 2009). We estimate the initial values of the parameters necessary to run this procedure using iterative generalized least squares, which are equivalent to the maximum likelihood estimators. We run MLwiN in Stata with the "runmlwin" command. The best model is a cross-classified one in which observations are nested in both the investor's country c and the firm f, and the two random coefficients are additive. We use this structure for our analysis.

Conditional cross-classified HLM. We develop our model, in which stock holding change varies according to the unanticipated component of innovativeness at the firm level (i.e., INNOV_{ft}) and cultural variables at the investor's country level (CULT_c). Our model is as follows:

$$L_1: \; Y_{icft} = \beta_{0cft} + \sum_{i=1}^{6} \beta_{icf}\, \mathrm{TV-INV}_{icft} + \sum_{i=7}^{10} \beta_{icf}\, \mathrm{NTV-INV}_{icf} + \varepsilon_{icft}, \tag{3a}$$

where

- TV − INV are the following time-varying variables at the investor level: relevance of the firm in the investor's portfolio, alpha and beta of the investor's portfolio, stock purchase price difference, and dummies for the first and last periods that an investor holds stocks in the firm;
- NTV − INV are the following time-invariant variables at the investor level: frequency of trading, tenure, local, and gender; and
- ε_{icft} is the random investor intercept.

At Level 2, we include variables at the investor's country level and at the firm level:

$$\begin{aligned} L_2: \beta_{ocft} = {} & \gamma_{0000} + \gamma_{01c}\,\mathrm{INNOV}_{ft} + \sum_{s=2}^{7} \gamma_{0s}\,\mathrm{CULT}^{l}_{c} \\ & + \sum_{s=8}^{13} \gamma_{0s}(\mathrm{INNOV}_{ft} \times \mathrm{CULT}^{l}_{c}) + \gamma_{014}\,\mathrm{REG}_{ct} \\ & + \sum_{s=15}^{33} \gamma_{os}\,\mathrm{TV-FIRM}_{ft} + \sum_{s=34}^{35} \gamma_{os}\,\mathrm{BRANDING}_{f} \\ & + \sum_{s=36}^{62} \gamma_{os}\,\mathrm{INDEX}_{f} + \sum_{s=63}^{73} \gamma_{0s}\,\mathrm{TIME}_{ft} + u_c + r_f, \end{aligned} \tag{3b}$$

where

- INNOV is the residual term $\varepsilon_{\mathrm{UNEXPft}}$ from Equation 1 and represents unexpected innovativeness;
- l represents the following time-invariant variables at the investor's country level: individualism, uncertainty avoidance, power distance, masculinity, long-term orientation, and indulgence;
- REG is the regulatory profile of the investor's country, which is time-varying;
- TV − FIRM are the following time-varying variables at the firm level: number of previous new-to-the-market and incremental products, number of investors, stock price difference, abnormal trading volume, number of countries where the firm introduced new products, stock index growth, and variables about the institutional context of the countries in which a firm has introduced products (market size [GDP and consumer expenditures], market efficiency, market infrastructure, rule of law, and the seven Schwartz's values);
- BRANDING represents time-invariant dummies that refer to the branding strategy of the firm;
- INDEX represents dummy variables for the stock exchange in which a firm is listed to control for unobserved stock index effects;
- TIME represents dummies for years and quarters to control for unobserved time effects; and
- u_c and r_f are as defined previously.

The other slope coefficients from Level 1 are treated as fixed.

Consistent with Steenkamp and Geyskens (2014), we mean-center the continuous Level 1 predictors within investors' countries and firms and center at the grand-mean the continuous investors' country- and firm-level predictors. This centering helps us obtain results purified of possible sources of endogeneity across firms and investors' countries. We control for stationarity because nonstationarity may produce spurious results, and inferences based on t-values can be misleading (Steenkamp and Geyskens 2014). The Fisher-augmented Dickey–Fuller panel unit root test on stock holding change reports no evidence of unit roots (P = 615.57,

Table 1. Correlation Matrices.

A: Investor-Level Analysis

	Mean	SD	1	2	3	4	5	6	7
1. Stock holding change	2.77	7.04	1						
2. Innovativeness	.16	.30	.04*	1					
3. Individualism	63.43	32.43	.10*	−.05*	1				
4. Uncertainty avoidance	50.54	22.58	.07*	.05*	−.04*	1			
5. Power distance	64.79	15.84	−.04	.04*	−.56*	−.47*	1		
6. Masculinity	53.96	15.2	−.01	−.11*	.14*	−.13*	.23*	1	
7. Long-term orientation	74.45	31.29	−.08*	.04*	−.66*	−.12*	.48*	.31*	1
8. Indulgence	40.19	15.28	.01	−.10*	.44*	.22*	−.74*	−.26*	−.64*

B: Firm-Level Analysis

	Mean	SD	1	2	3	4	5	6	7	8
1. Stock returns	.02	.36	1							
2. DLISH[a]	.17	3.95	.10*	1						
3. Innovativeness	.15	.31	.10*	.04	1					
4. LI individualism	4.49	7.36	.01	.19*	.01	1				
5. LI uncertainty avoidance	6.14	8.64	.05*	.22*	−.01	.56*	1			
6. LI power distance	7.28	10.53	.05*	.19*	−.01	.45*	.62*	1		
7. LI masculinity	6.24	9.41	.01	−.18*	−.01	.64*	.74*	.78*	1	
8. LI long-term orientation	7.85	11.75	.03	.17*	.01	.32*	.66*	.78*	.72*	1
9. LI indulgence	4.66	7.40	.04	.22*	-.01	.72*	.67*	.62*	.71*	.46*

*$p < .05$.
[a]Change in large investors' stock holding.
Notes: LI = large investors. The Web Appendix reports the full correlation matrix.

$p < .05$). We use an iterative maximum likelihood estimation, which enables us to simultaneously estimate relationships at multiple levels. We use the procedure XTMIXED in Stata 14 for estimation.

Accounting for endogeneity of innovativeness. The decision related to innovativeness may be endogenous, which might cause us to underestimate standard errors and thus overestimate the significance of the results. We identify three possible sources of endogeneity in our study. First, at the firm level, there may be some unobserved variables that drive both innovativeness and a large investor's stock holding decision. For instance, the possession of more resources may help a firm introduce products that are more innovative than those of its competitors. At the same time, high resources may make a firm more visible to a large investor: for instance, the firm may invest more in advertising, which has an impact on investors' willingness to buy stock (Srinivasan and Hanssens 2009). Thus, firm resources may also influence stock holding decisions, as large investors may prefer to increase their stock holding in firms with many resources than in firms with few resources. We alleviate this concern by taking advantage of our model specification: in HLM, centering at the firm mean yields coefficients purified from all between-firm variation (Enders and Tofighi 2007). Therefore, the results reported in Table 2 are purified of possible variations across firms.

Second, time effects may drive both innovativeness and stock holding change. For instance, research has shown that some firms strategically pace their new product introductions across quarters (Moorman et al. 2012). In addition, the finance literature has shown that investors tend to sell stocks in the last quarter for tax reasons (Shefrin and Statman 1985). We account for unobserved time effects by including year and quarter dummies in our main analysis.

Third, stock exchange effects may drive both innovativeness and stock holding changes. Firms may pursue a certain innovativeness to gain legitimacy in the stock market. For the same reason, large investors may prefer more innovative firms listed in countries that traditionally value innovativeness. We control for this issue with stock exchange dummies.

The only remaining source of endogeneity is both firm and time specific. The traditional instrument approach is good, as the instruments are uncorrelated with errors, but there is no way to empirically determine whether the exclusion restriction is satisfied. Thus, we use instrument-free methods: the Blundell–Blond estimator and Lewbel's instrument method. Collectively, eliminating the effect of unobserved variables at the firm level, controlling for unobserved time and stock exchange effects, and finding that our results are robust to different instrument-free methods minimize endogeneity concerns.

Results

In the raw data, we find a positive correlation between innovativeness and stock holding change ($\rho = .04, p < .05$; see Table 1). Table 2 reports the results of the cross-classified HLMs and

Table 2. Investor-Level Analysis: Results of the HLM Analysis.

DV: Stock Holding Change	Model 1	Model 2
Intercept	.142 (2.183)	.418 (2.178)
Unexpected innovativeness (INN)	.169 (.084)**	.843 (.306)***
INN × Individualism (IND)		.027 (.008)***
INN × Uncertainty avoidance (UA)		.017 (.006)***
INN × Power distance (PD)		.045 (.011)***
INN × Masculinity (MASC)		−.027 (.006)***
INN × Long-term orientation (LTO)		.013 (.005)**
INN × Indulgence (INDULG)		.027 (.009)***
IND	−.014 (.015)	−.014 (.015)
UA	.001 (.012)	.001 (.012)
PD	−.002 (.013)	−.001 (.013)
MASC	.008 (.013)	.007 (.013)
LTO	−.002 (.012)	−.001 (.012)
INDULG	.003 (.026)	.005 (.026)
Market GDP	−.004 (.045)	−.007 (.045)
Market consumer expenditures	.002 (.002)	.003 (.002)
Market efficiency	−.093 (.182)	−.036 (.188)
Market infrastructure	−.113 (.125)	−.144 (.126)
Rule of law	.062 (.167)	.059 (.168)
Consumer conservatism	9.926 (5.117)*	10.230 (5.158)**
Consumer affective autonomy	−.341 (.245)	−.266 (.255)
Consumer intellectual autonomy	.571 (.394)	.651 (.401)
Consumer hierarchy	.605 (.295)**	.551 (.298)*
Consumer mastery	−1.367 (.464)***	−1.217 (.473)**
Consumer harmony	.252 (.301)	.275 (.306)
Consumer egalitarian commitment	−9.322 (5.069)*	−9.920 (5.105)*
Firm's relevance	.001 (.001)	.001 (.001)
Frequency trading	−.063 (.116)	−.067 (.115)
Investor's portfolio beta	.072 (.146)	.046 (.146)
Investor's portfolio alpha	−.001 (.001)	−.001 (.001)
Δ Stock purchase price	−.013 (.034)	−.011 (.034)
Investor tenure	−.001 (.003)	−.001 (.003)
Local Investor	−.006 (.133)	.024 (.133)
Gender	.001 (.041)	.002 (.041)
First period	1.055 (.510)**	1.054 (.508)**
Last period	−.717 (.092)***	−.713 (.092)***
# new-to-the-market products in prior 3 years	.001 (.008)	.002 (.008)
# incremental products in prior 3 years	.001 (.004)	−.001 (.004)
# investors	−.001 (.001)	−.001 (.001)
Corporate branding	.006 (.080)	−.004 (.080)
House of brands	−.006 (.082)	−.001 (.081)
Stock price difference	.099 (.087)	.093 (.087)
Abnormal trading volume	.004 (.009)	.004 (.009)
# countries	−.048 (.042)	−.041 (.042)
Stock index growth	−.170 (.191)	−.164 (.191)
Investor country's regulatory profile	−.534 (.285)*	−.466 (.287)
Random Effects		
Country (σ_c^2)	.0000006	.00000005
Firm (σ_f^2)	.0000004	.000000003
Errors (σ_ϵ^2)	1.27***	1.26**
−Log likelihood	5,865.97	5,852.37
Akaike information criterion	11,879.93	11,870.74

*$p < .10$. **$p < .05$. ***$p < .01$.
Notes: DV = dependent variable. Quarter, year, and stock index dummies included.

Model 1 reports the results of the direct-effects model. We find a positive relationship between innovativeness and stock holding change ($b = .169$, $p < .05$), which indicates that large investors increase their stock holding in companies that introduce more innovative products, in support of H_{1a}. As for the other control variables, consumer hierarchy ($b = .605$, $p < .05$) and the first period in which large investors buy a firm's stocks ($b = 1.055$, $p < .05$) increase stock holding. In contrast, consumer mastery ($b = -1.367$, $p < .01$) and the last period in which a large investor holds a firm's stock ($b = -.717$, $p < .01$) decrease stock holding.

Model 2 adds the moderation effects. We find that individualism positively moderates the innovativeness–stock holding change relationship ($b = .027$, $p < .01$), in support of H_{2a}. To further understand how this relationship varies at different levels of individualism, we perform a floodlight analysis (Spiller et al. 2013). We use the Johnson–Neyman technique (Johnson and Neyman 1936) to identify the region in the range of individualism for which this relationship is significant. We plot the relationship and the confidence interval in Figure 1, Panel A. Because we mean-center the moderators in our analysis, to obtain more meaningful results in the figure, we rescale the x-axis by adding the mean back (Hayes 2013). The analysis reveals that the relationship is significant when the individualism score is higher than 36 ($B_{JN} = .18$, $SE = .09$, $p = .05$).

Uncertainty avoidance positively moderates the innovativeness–stock holding relationship ($b = .017$, $p < .01$), contradicting H_{3a}. We find that this relationship is negative for values of uncertainty avoidance below 30 ($B_{JN} = -.30$, $SE = .15$, $p = .05$), not significant for values between 31 and 54, and positive for values above 55 ($B_{JN} = .19$, $SE = .09$, $p = .05$). Figures for uncertainty avoidance and all other cultural variables appear in Web Appendix F.

Power distance positively moderates the innovativeness–stock holding change relationship ($b = .045$, $p < .01$), in support of H_{4a}. This relationship is negative for values of power distance less than or equal to 52 ($B_{JN} = -.26$, $SE = .13$, $p = .043$), not significant for values between 53 and 61, and positive for values of 62 or higher ($B_{JN} = .19$, $SE = .09$, $p = .032$).

Masculinity negatively moderates the innovativeness–stock holding change relationship ($b = -.027$, $p < .01$), rejecting H_{5a}. The floodlight analysis (Figure 1, Panel B) shows that this relationship is positive for values of masculinity below 50 ($B_{JN} = .17$, $SE = .085$, $p = .05$), not significant between 51 and 66, and negative for values above 67 ($B_{JN} = -.28$, $SE = .14$, $p = .05$).

Long-term orientation positively moderates the innovativeness–stock holding change relationship ($b = .013$, $p < .05$), in support of H_{6a}. This relationship is negative for values of long term orientation below 32 ($B_{JN} = -.44$, $SE = .22$, $p = .05$), not significant for values between 33 and 76 ($B_{JN} = .18$, $SE = .09$, $p = .05$), and positive at higher values.

Indulgence positively moderates the innovativeness–stock holding change relationship ($b = .027$, $p < .01$), in support of H_{7a}. This relationship is negative when indulgence is 30 or below ($B_{JN} = -.29$, $SE = .14$, $p = .043$), not significant between 31 and 45, and positive at values above 46 ($B_{JN} = .20$, $SE = .10$, $p = .043$).

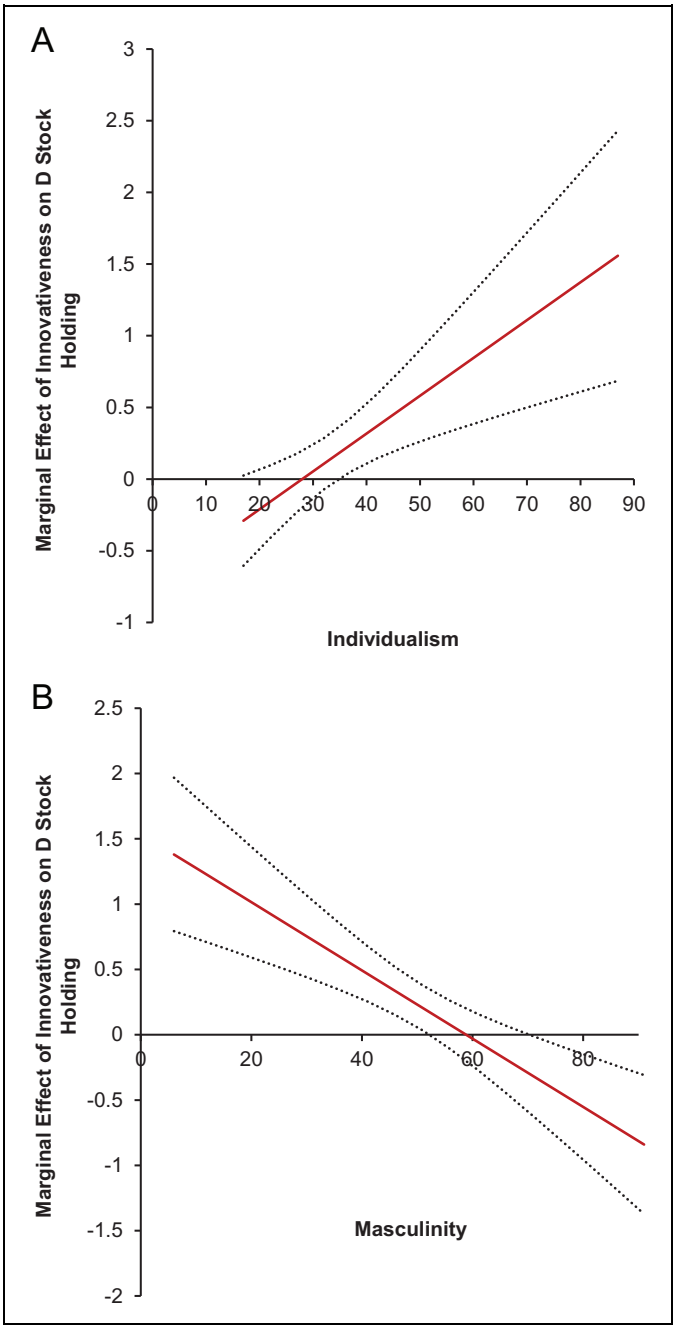

Figure 1. The Effect of Innovativeness on Stock Holding Change at Different Values of Individualism and Masculinity.
Notes: The solid line represents the point estimate; the dotted lines represent the upper and lower limits of the 95% bias-corrected confidence intervals.

Robustness analyses. Our results are robust to different measures of innovativeness, methods to deal with endogeneity, moderation effect of the institutional context, nonlinear effect of innovativeness, foreign bias, and the exclusion of firms listed in Taiwanese stock exchanges, which have the highest minimum disclosure threshold (10%). For detailed robustness analyses, see Web Appendix G.

Firm-Level Analysis: Model and Results

Model

Unconditional means HLM. Our firm-level data are nested within the firm's stock exchange k. To control what percentage of the total variance of change in large investor's stock holding ($\Delta LISH_{fkt}$) occurs at the stock exchange level, we estimate an unconditional means model with no predictor. At Level 1, we express the observed $\Delta LISH$ in firm f in stock exchange k at time t as the sum of a fixed intercept (β_{SH0kt}) plus a random component (r_{SHfkt}) that defines the deviation in $\Delta LISH$ from the mean of firm f in stock exchange k at time t:

$$\text{Level 1}: \Delta LISH_{fkt} = \beta_{SH0kt} + r_{SHfkt}, \text{ where } r_{SHfkt} \sim N(0, \sigma^2). \quad (4a)$$

At Level 2 (the stock exchange level), we express the stock exchange intercept as the sum of the grand mean of $\Delta LISH$ (γ_{SH00}) and a series of random deviations from that mean (uSH_k) that represent the random-intercept at the stock exchange-level:

$$\text{Level2}: \beta_{SH0kt} = \gamma_{SH000} + u_{SHk}, \text{ where } \upsilon_{SHk} \sim N(0, \tau_{00}). \quad (4b)$$

The portion of variance that occurs at the stock exchange level is 24%, which supports the appropriateness of using HLM.

We estimate a similar unconditional means model for abnormal stock returns:

$$R_{fkt} = \gamma_{RET000} + r_{RETfkt} + u_{RETk}, \text{ where } r_{RETfkt} \sim N(0, \sigma^2) \text{ and } \upsilon_{RETk} \sim N(0, \tau_{00}). \quad (4c)$$

The portion of variance that occurs at the stock exchange level is 16%, indicating that using HLM is appropriate in this case as well.

Conditional HLM. To estimate the relationship between innovativeness and stock returns, the mediating role of change in large investor's stock holding ($\Delta LISH$), and the moderating role of the culture of a firm's large investors, we estimate the following simultaneous system of equations (in the interest of space, we report our HLM in compact form):

$$\begin{aligned}\Delta LISH_{fkt} = {} & \gamma_{SH000} + \gamma_{SH10} INNOV_V + \sum_{s=2}^{7} \gamma_{SHs0} FIRM\ CULT^1_{fkt} \\ & + \sum_{s=8}^{13} \gamma_{SHs0} (INNOV_{fkt} \times FIRM\ CULT^1_{fkt}) \\ & + \sum_{s=14}^{29} \gamma_{SHs0} C_{fkt} + \sum_{s=30}^{31} \gamma_{SHs0} BRANDING_{fk} \\ & + \sum_{s=32}^{42} \gamma_{SHs0} TIME_{fkt} + r_{SHfkt} + u_{SHk,}\end{aligned} \quad (5)$$

where

- INNOV is the residual term $\varepsilon_{UNEXPft}$ from Equation 1 and represents unexpected innovativeness;
- I represents the six variables that define the national culture of the firm f's large investor base. Each of them is computed as described in the equation (FirmCULT);
- C represents the following time-varying variables: number of previous new-to-the-market and incremental products, number of countries where the firm introduced new products, variables about the institutional context of these countries, and number of outstanding stocks;
- BRANDING and TIME are as described in Equation 3b; and
- r_{SHfkt} and u_{SHk} are as defined in Equations 4a and 4b.

We then employ the stock return response modeling approach, an analytical tool to evaluate whether information contained in a metric is associated with changes in stock returns (Srinivasan and Hanssens 2019). We model abnormal returns as a function of innovativeness, predicted change in large investors' stock holding from Equation 5 ($\Delta \widehat{LISH}_{it}$), and a set of control variables:

$$\begin{aligned} R_{fkt} = {} & \gamma_{RET000} + \gamma_{RET10} MKTRF_{fkt} + \gamma_{RET20} SMB_{fkt} \\ & + \gamma_{RET30} HML_{fkt} + \gamma_{RET40} INNOV_{fkt} \\ & + \gamma_{RET50} \Delta \widehat{LISH}_{fkt} + \sum_{s=6}^{21} \gamma_{RETs0} C_{fkt} \\ & + \sum_{s=22}^{23} \gamma_{RETs0} BRANDING_{fk} + \sum_{s=24}^{34} \gamma_{RETs0} TIME_{fkt} \\ & + r_{RETfkt} + u_{RETk}., \end{aligned} \quad (6)$$

where R_{ft}, MKTRF, SMB, and HML are defined in Equation 0, the other variables are as defined in Equation 5; r_{RETfkt} and u_{RETk} are as defined in Equation 4c.

Results

We present the results in Table 3. In Model 1, we begin estimating the relationship between innovativeness and large investors' stock holding change. In support of H_{1b}, we find a positive association ($b = .875$, $p < .05$). This finding indicates that increases in innovativeness are positively associated with large investors buying more of a firm's stocks.

In Model 2, we test for the moderation role of the culture of the firm's large investors on the innovativeness– large investors' stock holding path. We find that this relationship becomes stronger as the individualism ($b = .610$, $p < .05$), power distance ($b = .478$, $p < .05$), long-term orientation ($b = .435$, $p < .05$), and indulgence ($b = .880$, $p < .05$) of the firm's large investors increases, in support of H_{2b}, H_{4b}, H_{6b}, and H_{7b}, respectively. This relationship becomes weaker as the masculinity of the firm's large investors increases ($b = -1.879$, $p < .01$), contradicting H_{5b}. We find no significant moderation effect for uncertainty avoidance ($b = -.357$, $p > .05$; H_{3b}).

In Model 3, we estimate the direct innovativeness–stock returns relationship. In support of the existing literature and H_8, the relationship is positive ($b = .169$, $p < .01$). In Model 4, we add our mediator. We find that it is positively associated with stock returns ($b = .046$, $p < .01$): the more stocks large investors buy, the higher the stock returns. In addition, the relationship between innovativeness and stock returns remains significant ($b = .125$, $p < .01$), indicating that large investors' stock holding only partially mediates the innovativeness–stock returns relationship (Baron and Kenny 1986). To test for H_9, which advocates an unconditional mediating role for large investors' stock holding, we run a bootstrap analysis with 1,000 resamples (Preacher and Hayes 2008). We explain this analysis in detail in Web Appendix H. The mediated effect of innovativeness on stock returns is equal to .028 (i.e., .88 × .032). The bias-corrected confidence interval does not contain zero, suggesting that large investors' stock holding mediates the innovativeness–stock returns relationship, in support of H_9.

Moderated mediation analysis. H_{10} maintains that the innovativeness–stock returns relationship is contingent on the cultural characteristics of the firm's large investors. To test for this, we run a moderated mediation analyses, which we explain in detail in Web Appendix H. We find that this relationship increases as individualism, power distance, long-term orientation, and indulgence of the firm's large investors increases, in support of $H_{10a–b}$ and $H_{10d–e}$. This relationship becomes weaker as the masculinity of the firm's large investors increases, contradicting H_{10c}. We find no significant moderation effect for uncertainty avoidance (H_{10f}).

Robustness Analyses

We control for possible endogeneity with Lewbel's method. We also control for change in number of outstanding stocks rather than just the number. The results, reported in Web Appendix I, are stable to the use of these alternate estimation approaches.

Portfolio analyses: The moderating role of large investors' cultural variables in the direct innovativeness–stock returns relationship. We check the robustness of the results using a portfolio approach similar to Liu, Shankar, and Yun (2017) and Xiong and Bharadwaji (2013). First, we divide the sample into two subsamples according to the unexpected innovativeness. Each quarter, we insert firms whose unexpected innovativeness is below (above) the average unexpected innovativeness of the quarter in the low (high) portfolio. We update the portfolio each quarter. We calculate the average monthly abnormal stock returns (AVMSR) in month t over N_p firms in portfolio p as in Liu, Shankar, and Yun (2017):

$$AVMSR_t = \left(\sum_{1}^{Np} AbnR_{it} \right) \Big/ N_p.$$

Table 3. Firm-Level Analysis: Results of the HLM Analysis.

	Model 1 DV: ΔLISH[a]	Model 2 DV: ΔLISH[a]	Model 3 DV: Stock Returns	Model 4 DV: Stock Returns
Intercept	.480 (.395)	.460 (.392)	−.001 (.039)	−.024 (.039)
ΔLISH[a]				.046 (.008)***
Unexpected innovativeness (INN)	.875 (.394)**	.788 (.392)**	.169 (.036)***	.125 (.037)***
Large investors' (LI) individualism	.307 (.096)***	.232 (.098)**		
LI uncertainty avoidance	−.105 (.081)	.006 (.084)		
LI power distance	.274 (.090)***	.155 (.093)*		
LI masculinity	−.726 (.139)***	−.439 (.150)***		
LI long-term orientation	.087 (.065)	.057 (.066)		
LI indulgence	.533 (.126)***	.327 (.134)**		
INN × LI individualism		.610 (.281)**		
INN × LI uncertainty avoidance		−.357 (.252)		
INN × LI power distance		.478 (.243)**		
INN X LI masculinity		−1.879 (.352)***		
INN × LI long-term orientation		.435 (.215)**		
INN × LI indulgence		.880 (.369)**		
# new-to-the-market products in prior 3 years	−.029 (.021)	−.018 (.021)	.002 (.002)	.002 (.002)
# incremental products in prior 3 years	.015 (.013)	.013 (.013)	.001 (.001)	.001 (.001)
# countries	−.065 (.169)	−.045 (.169)	.013 (.015)	.022 (.015)
Market GDP	.267 (.157)*	.268 (.156)*	−.017 (.014)	−.027 (.013)**
Market consumer expenditures	−.011 (.013)	−.011 (.013)	.001 (.001)	.001 (.001)
Market efficiency	−.320 (.487)	−.394 (.485)	.037 (.043)	.057 (.043)
Market infrastructure	.128 (.474)	.155 (.471)	.022 (.042)	−.006 (.042)
Rule of law	.836 (.483)*	.971 (.481)**	−.015 (.043)	−.033 (.043)
Consumer conservatism	−3.983 (1.590)**	−4.028 (1.582)**	.009 (.141)	.202 (.144)
Consumer affective autonomy	−.922 (.976)	−.910 (.969)	−.244 (.088)***	−.220 (.087)**
Consumer intellectual autonomy	−1.191 (1.783)	−1.642 (1.783)	−.053 (.158)	.054 (.157)
Consumer hierarchy	−3.768 (1.06)***	−3.829 (1.062)***	−.118 (.096)	.064 (.101)
Consumer mastery	6.528 (1.846)***	7.107 (1.852)***	.239 (.166)	−.110 (.176)
Consumer harmony	2.669 (1.696)	2.641 (1.705)	.002 (.151)	−.108 (.151)
Consumer egalitarian commitment	−.513 (.277)*	−.510 (.275)*	.049 (.024)**	.066 (.024)***
Corporate branding	.107 (.267)	.119 (.265)	−.039 (.028)	−.045 (.027)*
House of brands	.279 (.208)	.306 (.206)	−.025 (.023)	−.039 (.023)*
# outstanding shares	−.004 (.003)	−.003 (.003)	−.001 (.001)	−.001 (.001)
Market returns			.434 (.067)***	.435 (.067)***
SMB			.182 (.154)	.167 (.153)
HML			.260 (.156)*	.248 (.154)
Firm's country random effects	1.61e-11	4.31e-12	.072	.071
Errors	3.75	3.72	.343	.330
−Log likelihood	4,427.567	4,412.834	53.120	515.080
Akaike information criterion	8,931.133	8,913.669	113.242	1,102.179

*$p < .10$. **$p < .05$. ***$p < .01$.
[a]Change in large investors' stock holding.
Notes: DV = dependent variable. Quarter, year, and stock index dummies included.

We find that the average monthly abnormal stock returns for the high-innovativeness portfolio is .09, whereas it is −.01 for the low-innovativeness portfolio. A t-test reveals that this difference is significant (t-test = −5.37, $p < .001$).

Next, to test for the moderating effects of cultural variables, we construct two portfolios within each innovativeness subsample. For instance, for individualism, we divided firms in each sample according to the median value of individualism of the large investors' base in each quarter. We thus create four portfolios: low/high innovativeness and low/high individualism. We then compare the stock returns of low- versus high-individualism portfolios when innovativeness is low and when innovativeness is high. We adopt the same logic for the other cultural dimensions.

We report the results of the one-tailed t-test comparisons in Web Appendix J. In the low- and high-innovativeness subsamples, stock returns are always significantly higher in portfolios of firms with high individualism, uncertainty avoidance, power distance, long-term orientation, and indulgence than in the portfolios in which the cultural dimensions are low. Low-masculinity portfolios have higher returns than high-masculinity portfolios in the high-innovativeness subsample, in support of the finding that masculinity negatively moderates the innovativeness–stock returns

relationship. In the low innovativeness portfolio, the opposite effect occurs.

Portfolio analyses: The large investors' stock holding–stock returns relationship. Adopting a similar logic, we split the sample into three subsamples: (1) sell portfolio, which includes all firms that experienced a negative change in the large investors' stock holding in the quarter; (2) no change; and (3) buy portfolio, which includes all firms that experienced a positive change in the large investors' stock holding in the quarter. We find that abnormal returns are lower for the sell portfolio (.002) than for the no-change portfolio (.007), but the difference is not significant ($t = .22$, $p > .10$). The stock returns of the buy portfolio (.07) are higher than both the no-change ($t = -2.40$, $p < .01$) and sell ($t = -1.69$, $p < .05$) portfolios. Thus, we find support that the changes in large investors' stock holdings are related to stock returns.

Discussion

Theoretical Implications

This work contributes to the marketing–finance interface literature by clarifying for which investors, how, and under what conditions innovativeness is associated with stock holding and stock returns. Historically, this literature was created to show the existence of a direct link between marketing and firm value. Having convincingly done that, the literature has advanced toward a more granular understanding of how this link operates. For instance, Warren and Sorescu (2017) denote the role of new investors, who increase demand for a firm's stock. We expand the literature by highlighting the critical role of large investors and their culture.

How does the innovativeness–stock returns relationship occur? The role of large investors. Prior marketing literature has identified increased demand for a firm's stock (Warren and Sorescu 2017) and constrained supply of stock by current investors (Xiong and Bharadwaj 2013) as the drivers of stock market response to marketing actions. However, no study has investigated how each investor makes stock holding decisions in response to marketing actions. This is probably because the marketing literature has considered all investors to be homogenous and equally important. By adopting an investor-level perspective, we identify a segment of investors (i.e., large investors) influential enough to convey the effect of marketing to the stock market. Furthermore, we begin to shed light on differences across large investors in their stock holding decisions related to innovativeness. We intend this as an initial theoretical step to get at the root causes of how marketing actions create value in the stock market. Future research should identify other factors.

Under what conditions does the innovativeness–stock returns relationship occur? The role of culture. We extend the marketing–finance interface literature by advancing a cultural perspective. We develop a theoretical framework consistent with the reality of many firms, whose investor base is heterogeneous in terms of national culture. Our results caution against the traditional wisdom that all investors positively evaluate innovativeness and that higher innovativeness is always associated with increased firm value in the stock market. Reality is more nuanced, in the sense that some large investors sell stocks when firms increase their innovativeness. At the firm level, this means that the stock market response may be negative if the firm has many large investors from cultures that do not value innovativeness. For instance, when masculinity among large investors is too high, the innovativeness–stock returns relationship is negative. Thus, we identify the national culture of a firm's large investors as a key boundary condition in the innovativeness–stock returns relationship. Notably, we find that these moderation effects occur in North American, European, and Asian stock exchanges, even after we control for possible heterogeneity across exchanges. To the best of our knowledge, this is the first study to show how the cultural composition of a firm's large investor base magnifies or dilutes the value that marketing creates in the stock market. Because the investor base is becoming increasingly heterogeneous, in terms of nationalities, future research should account for this heterogeneity.

Collectively, our findings provide a reframing of future research in the marketing–finance interface literature from the question of whether a marketing action or asset increase firm value in the stock market to a more complex set of questions: How and under what conditions does marketing create value in the stock market, and for which investors does this occur?

Managerial Implications

Which investors matter? The relevance of large investors. Managers spend a considerable amount of time meeting with general investors (Srinivasan and Hanssens 2009) and selectively providing information to some of them in private meetings at public conferences, investors' offices, and firms' headquarters or manufacturing facilities (Bushee, Gerakos, and Lee 2018; Solomon and Soltes 2015). The commitment to meeting with investors is observed in the United States (Bushee, Gerakos, and Lee 2018), Europe (Barker et al. 2012), and China (Cheng et al. 2018). Our findings indicate to marketing managers that large investors are a key segment to nurture and communicate with, in relation to the innovativeness of a firm's offerings.

Our analysis reveals that communication to large investors is critical when it comes to the innovativeness of the firm's portfolio of new products. When new products are launched, there is high uncertainty about their performance, especially if they are innovative (Srinivasan et al. 2009). Initially, investors react without a full understanding or knowledge of consumer response. To increase the returns from innovativeness, it is very important for firms to manage this uncertainty phase by crafting proper communications to large investors. Our findings identify the need to (1) segment large investors and (2) position innovativeness differently in each segment. Traditionally, marketing strategy has been about segmenting, targeting, and

positioning products to customers. The marketing–finance interface literature has added investors to the picture. We contribute to this literature by bringing to light an important strategic role for marketing in helping firms navigate the stock market: managers should apply to investors the segmentation, targeting, and positioning concepts traditionally adopted for customers.

Segmenting large investors. We find that large investors are heterogeneous in their preferences toward innovativeness. Because we find that culture is one possible explanation for these differences, we propose culture as a key criterion with which to segment large investors. This is an important implication for managers because stock markets are becoming more global, and a firm's large investor base is increasingly heterogeneous in terms of culture. Heterogeneity in large investors' culture, and thus in preferences for innovativeness, makes it difficult for firms to cater to the conflicting demands of its large investors through a one-size-fits-all communication strategy about innovativeness. Instead, managers must target large investors from different countries with ad hoc positioning of innovativeness, consistent with the cultural specificities of each investor.

Positioning innovativeness to large investors. We suggest that managers adopt a three-step procedure. First, they should investigate how each Hofstede dimension influences the innovativeness–stock holding relationship. To facilitate this effort, Table 4 reports the relationship by each cultural dimension for each country. The first row of the table shows when the innovation–stock holding relationship is positive and the second row shows when it is negative. Numbers in between these scores do not influence the relationship. The block following these two rows shows each country's scores. For example, firms interacting with large investors in Brazil can expect the innovativeness–stock holding relationship to be positive given the scores of individualism (38), uncertainty avoidance (76), power distance (69), masculinity (49), and indulgence (59). In all, five of the six cultural dimensions indicate that innovativeness should produce a strong stock holding response (see Table 4). In this way, managers can easily identify, for each investor, which cultural dimensions depress the positive role of innovativeness.

Second, managers should position innovativeness to large investors in each country to reflect the impact of cultural values. In making our predictions about large investors' response to innovativeness, we relied on investors' typical perception of innovativeness as a means to stand out, create inequities in the market, and signal commitment to long-term competitive advantage. We find that this typical perception of innovativeness conflicts with some cultural values, leading some large investors to sell stocks of innovative firms. To soften the negative effects of the cultural values that work against innovativeness, we suggest that managers adapt the positioning of innovativeness according to the scores of each cultural dimension. Table 5 reflects our recommendation to managers based on our empirical analysis, which we summarize next.

Individualism. For large investors who score higher than 36, managers should position innovativeness as a way to stand out in the market. Large investors who score below 36 should not receive any special positioning strategies.

Uncertainty avoidance. Large investors who score below 30 tend to look for novel and less predictable situations (Steenkamp, Ter Hofstede, and Wedel 1999). For these investors, managers should present innovativeness as a way to create instability in the market. For large investors who score above 55, managers should position innovativeness as a way to secure the prosperity of the firm. Large investors who score between 30 and 55 should not receive any special positioning strategies.

Power distance. Large investors who score 52 or below prefer an equal distribution of power. For these investors, managers should position innovativeness as a way for the firm to level the field by reducing the gap with competitors. For large investors who 62 or above, managers should emphasize that innovativeness would help the firm stand out in the market and create inequity among firms and consumers. Large investors who score between 53 and 61 should not receive any special positioning strategies.

Masculinity. For large investors who score below 50, managers should explain how new products contribute to the overall welfare of society, which is what concerns these investors. Large investors who score above 67 value prestige and control, so managers should position innovativeness as a means for the firm to reach worldwide recognition as a leader. Large investors who score between 50 and 67 should receive no special positioning.

Long-term orientation. Large investors who score below 32 prefer the status quo and are suspicious toward societal changes. For these investors, managers should position innovativeness as a necessary means for the firm to keep the status quo in the market. For large investors who score above 76, innovativeness should instead be positioned as an agent of change. Large investors who score between 32 and 76 should not receive any special positioning strategies.

Indulgence. Large investors who score 30 or below believe that people should focus on maintaining social norms more than pursuing their own desires. For these investors, managers should position innovativeness as a market law that the firm is forced to comply with to survive in the market. For large investors who score above 45, managers should position innovativeness as an arbitrary choice to satisfy personal enjoyment. Large investors who score between 31 and 45 should not receive any special positioning strategies.

The third and final step is to position innovativeness to each large investor in a manner that is consistent with his or her scores across all six dimensions. Take the case of a Chinese

Table 4. Hofstede Dimensions and the Innovativeness– Stock Holding Change Relationship.

When the innovativeness–stock holding change relationship is negative…	IND	UA	PD	MASC	LTO	INDULG	Number of cultural dimensions strengthening vs. weakening the relationship
		$<30^{b}$	$\leq 52^{b}$	$>67^{b}$	$<32^{b}$	$\leq 30^{b}$	
When the innovativeness–stock holding change relationship is positive…	$>36^{a}$	$>55^{a}$	$\geq 62^{a}$	$<50^{a}$	$>76^{a}$	$>45^{a}$	
Country							
Angola	18	60^{a}	83^{a}	20^{a}	15^{b}	83^{a}	4 vs. 1
Argentina	46^{a}	86^{a}	49^{b}	56	20^{b}	62^{a}	3 vs. 2
Australia	90^{a}	51	38^{b}	61	21^{b}	71^{a}	2 vs. 2
Austria	55^{a}	70^{a}	11^{b}	79^{b}	60	63^{a}	3 vs. 2
Bangladesh	20	60^{a}	80^{a}	55	47	20^{b}	2 vs. 1
Belgium	75	94^{a}	65^{a}	54	82^{a}	57^{a}	5 vs. 0
Belgium (Flemish)	78^{a}	97^{a}	61	43^{a}			3 vs. 0
Belgium (Walloons)	72^{a}	93^{a}	67^{a}	60			3 vs. 0
Brazil	38^{a}	76^{a}	69^{a}	49^{a}	44	59^{a}	5 vs. 0
Bulgaria	30	85^{a}	70^{a}	40^{a}	69	16^{b}	3 vs. 1
Canada	80^{a}	48	39^{b}	52	36	68^{a}	2 vs. 1
Canada (Quebec)	73^{a}	60^{a}	54	45^{a}			3 vs. 0
Cape Verde	20	40	75^{a}	15^{a}	12^{b}	83^{a}	3 vs. 1
Chile	23	86^{a}	63^{a}	28^{a}	31^{b}	68^{a}	4 vs. 1
China	20	30	80^{a}	66	87^{a}	24^{b}	2 vs. 1
Colombia	13	80^{a}	67^{a}	64	13^{b}	83^{a}	3 vs. 1
Costa Rica	15	86^{a}	35^{b}	21^{a}			2 vs. 1
Croatia	33	80^{a}	73^{a}	40^{a}	58	33	3 vs. 0
Czech Republic	58^{a}	74^{a}	57	57	70	29^{b}	2 vs. 1
Denmark	74^{a}	23^{b}	18^{b}	16^{a}	35	70^{a}	3 vs. 2
Dominican Republic	30	45	65^{a}	65	13^{b}	54	2 vs. 1
Ecuador	8	67^{a}	78^{a}	63			2 vs. 0
Egypt	25	80^{a}	70^{a}	45^{a}	7^{b}	4^{b}	3 vs. 2
El Salvador	19	94^{a}	66^{a}	40^{a}	20^{b}	89^{a}	4 vs. 1
Estonia	60^{a}	60^{a}	40^{b}	30^{a}	82^{a}	16^{b}	4 vs. 2
Ethiopia	20	55	70^{a}	65			1 vs. 0
Finland	63^{a}	59^{a}	33^{b}	26^{a}	38	57^{a}	4 vs. 1
France	71^{a}	86^{a}	68^{a}	43^{a}	63	48^{a}	5 vs. 0
Germany	67^{a}	65^{a}	35^{b}	66	83^{a}	40	3 vs. 1
Ghana	15	65^{a}	80^{a}	40^{a}	4^{b}	72^{a}	4 vs. 1
Greece	35	112^{a}	60	57	45	50^{a}	2 vs. 0
Guatemala	6	99^{a}	95^{a}	37^{a}			3 vs. 0
Honduras	20	50	80^{a}	40^{a}			3 vs. 0
Hong Kong	25	29^{b}	68^{a}	57	61	17^{b}	1 vs. 2
Hungary	80^{a}	82^{a}	46^{b}	88^{b}	58	31	2 vs. 2
India	48^{a}	40	77^{a}	56	51	26^{b}	2 vs. 1
Indonesia	14	48	78^{a}	46^{a}	62	38	2 vs. 0
Iran	41^{a}	59^{a}	58	43^{a}	14^{b}	40	3 vs. 1
Iraq	30	85^{a}	95^{a}	70^{b}	25^{b}	17^{b}	2 vs. 3
Ireland	70^{a}	35	28^{b}	68^{b}	24^{b}	65^{a}	2 vs. 3
Israel	54^{a}	81^{a}	13^{b}	47^{a}	38		3 vs. 1
Italy	76^{a}	75^{a}	50^{b}	70^{b}	61	30^{b}	2 vs. 3
Japan	46^{a}	92^{a}	54	95^{b}	88^{a}	42	3 vs. 1
Jordan	30	65^{a}	70^{a}	45^{a}	16^{b}	43	3 vs. 1
Kenya	25	50	70^{a}	60			1 vs. 0
Kuwait	25	80^{a}	90^{a}	40^{a}			3 vs. 0
Latvia	70^{a}	63^{a}	44^{b}	9^{a}	69	13^{b}	3 vs. 2
Lebanon	40^{a}	50	75^{a}	65	14^{b}	25^{b}	2 vs. 2
Libya	38^{a}	68^{a}	80^{a}	52	23^{b}	34	3 vs. 1
Lithuania	60^{a}	65^{a}	42^{b}	19^{a}	82^{a}	16^{b}	4 vs. 2
Luxembourg	60^{a}	70^{a}	40^{b}	50	64	56^{a}	3 vs. 1
Malawi	30	50	70^{a}	40^{a}			2 vs. 0
Malaysia	26	36	104^{a}	50	41	57^{a}	2 vs. 0

(continued)

Table 4. (continued)

When the innovativeness–stock holding change relationship is negative…	IND	UA	PD	MASC	LTO	INDULG	
		<30[b]	≤52[b]	>67[b]	<32[b]	≤30[b]	
When the innovativeness–stock holding change relationship is positive…	>36[a]	>55[a]	≥62[a]	<50[a]	>76[a]	>45[a]	Number of cultural dimensions strengthening vs. weakening the relationship
Malta	59[a]	96[a]	56	47[a]	47	66[a]	4 vs. 0
Mexico	30	82[a]	81[a]	69[b]	24[b]	97[a]	3 vs. 2
Morocco	46[a]	68[a]	70[a]	53	14[b]	25[b]	3 vs. 2
Mozambique	15	44	85[a]	38[a]	11[b]	80[a]	3 vs. 1
Namibia	30	45	65[a]	40[a]	35		2 vs. 0
Netherlands	80[a]	53	38[b]	14[a]	67	68[a]	3 vs. 1
New Zealand	79[a]	49	22[b]	58	33	75[a]	2 vs. 1
Nigeria	30	55	80[a]	60	13[b]	84[a]	2 vs. 1
Norway	69[a]	50	31	8[a]	35	55[a]	3 vs. 0
Pakistan	14	70[a]	55	50	50		1 vs. 0
Peru	16	87[a]	64[a]	42[a]	25[b]	46[a]	4 vs. 1
Philippines	32	44	94[a]	64	27[b]	42	2 vs. 1
Poland	60[a]	93[a]	68[a]	64	38	29[b]	3 vs. 1
Portugal	27	104[a]	63[a]	31[a]	28[b]	33	4 vs. 1
Puerto Rico	27	38	68[a]	56	19[b]	99[a]	2 vs. 1
Romania	30	90[a]	90[a]	42[a]	52	20[b]	3 vs. 1
Russia	39[a]	95[a]	93[a]	36[a]	81[a]	20[b]	4 vs. 1
Saudi Arabia	25	80[a]	95[a]	60	36	52[a]	3 vs. 0
Senegal	25	55	70[a]	45[a]	25[b]		2 vs. 1
Serbia	25	92[a]	86[a]	43[a]	52	28[b]	3 vs. 1
Singapore	20	8[b]	74[a]	48[a]	72	46[a]	3 vs. 1
Slovak Republic	52[a]	51	104[a]	110[b]	77[a]	28[b]	3 vs. 2
Slovenia	27	88[a]	71[a]	19[a]	49	48[a]	4 vs. 0
South Africa	65[a]	49	49[b]	63	34	63[a]	2 vs. 1
South Korea	18	85[a]	60	39[a]	100[a]	29[b]	3 vs. 1
Spain	51[a]	86[a]	57	42[a]	48	44	3 vs. 0
Sweden	71[a]	29[b]	31	5[a]	53	78[a]	3 vs. 1
Switzerland	68[a]	58[a]	34[b]	70[b]	74	66[a]	3 vs. 2
Switzerland (French cantons)	64[a]	70[a]	70[a]	58			3 vs. 0
Switzerland (German cantons)	69[a]	56[a]	26[b]	72[b]			2 vs. 2
Syria	35	60[a]	80[a]	52	30[b]		2 vs. 1
Taiwan	17	69[a]	58	45[a]	93[a]	49[a]	4 vs. 0
Tanzania	25	50	70[a]	40	34	38	2 vs. 0
Thailand	20	64[a]	64[a]	34[a]	32	45	3 vs. 0
Trinidad and Tobago	16	55	47[b]	58	13[b]	80[a]	1 vs. 2
Turkey	37[a]	85[a]	66[a]	45[a]	46	49[a]	5 vs. 0
Ukraine	25	95[a]	92[a]	27[a]	55	18[b]	3 vs. 1
United Arab Emirates	25	80[a]	90[a]	50			2 vs. 0
United Kingdom	89[a]	35	35[b]	66	51	69[a]	2 vs. 1
United States	91[a]	46	40[b]	62	26[b]	68[a]	2 vs. 2
Uruguay	36[a]	100[a]	61	38[a]	26[b]	53[a]	4 vs. 1
Venezuela	12	76[a]	81[a]	73[b]	16[b]	100[a]	3 vs. 2
Vietnam	20	30[b]	70[a]	40[a]	57	35	2 vs. 1
Zambia	35	50	60	40[a]	30[b]	42	1 vs. 1

[a]Indicates that the cultural dimension strengthens the innovativeness–stock holding change relationship. [b]Indicates that the cultural dimension weakens it.

investor. Her scores on individualism (20), uncertainty avoidance (30), and masculinity (66) require no special positioning; her scores on long-term orientation (87), indulgence (24), and power distance (80) indicate that innovativeness should be positioned as an agent of change and a market law that a firm is forced to comply with to create inequity among consumers. Managers can adopt a similar approach to position innovativeness to each large investor from any culture.

A rationale behind diverse returns to innovativeness. Our findings provide managers with a better understanding of how innovativeness plays out in the stock market, which can help managers defend the value of their innovation investments in front of

Table 5. Managerial Recommendations for Positioning Innovativeness to Large Investors.

	Recommended Culture Value Position to Large Investors	
	Score Is Below Noted Level	Score Is Above Noted Level
Individualism[a]		Stand out in the market. Value scores >36.
Uncertainty avoidance	Create instability in the market. Value scores <30.	Secure the prosperity of the firm. Value scores >55.
Power distance	Level the field by reducing the gap with competitors. Value scores ≤52.	Create inequity among firms and consumers. Value scores ≥62.
Masculinity	Contribute to the overall welfare of society. Value scores <50.	Reach worldwide recognition as a leader and dominant force in the market. Value scores >67.
Long-term orientation	Keep the status quo. Value scores <32.	Be an agent of change. Value scores >76.
Indulgence	Comply with a market law that the firm is forced to abide to in order to survive. Value scores ≤30.	Satisfy personal enjoyment through an arbitrary choice. Value scores >45.

[a]Individualism is the only dimension of Hofstede's framework that never weakens the innovativeness–stock holding change relationship.

board members, especially when stock performance is subpar. Previous marketing studies have shown that firms act in response to stock market reactions (Chakravarty and Grewal 2011; Mizik 2010; Wies and Moorman 2015). This responsiveness to stock market feedback is one of the major concerns about public companies, which are frequently blamed for cutting innovation investments to meet investors' short-term demands. Managers who experience lower-than-expected returns from innovativeness may be tempted to reduce future investments in innovation. We warn managers that stock market performance below expectations might be due to a nonfavorable composition of the large investor base. Differences in the cultures of large investors may explain, over time, the variation in stock returns as well as cross-sectional differences with competitors that have a new product portfolio with similar innovativeness yet reap greater benefits simply because they have a more favorable large investor base.

Timing innovativeness. Moorman et al. (2012) report that some firms artificially delay the introductions of innovations to satisfy stock markets, even at the expense of sales in product markets. We suggest that managers carefully assess the percentage of stocks held by large investors and the culture of these investors to identify the most appropriate moment that maximizes stock returns from innovativeness. A firm could time the innovativeness of its new product portfolio depending on the composition of its large investor base. Echoing Moorman et al., we warn managers that it is not possible to delay new product introductions for too long, as this hurts customer perceptions of firm innovativeness. In this regard, marketing plays a fundamental role to help firms find the optimal balance between the desire of maximizing stock price and the necessity of preserving customer assets, which are fundamental to long-term performance.

Limitations and Further Research

Although this study presents new insights, it is not without limitations. First, we examine product innovations only. Process innovations are also important. Although in the food and beverage industry some of the process innovations result in new product innovations (and thus, we indirectly account for them), we have no data about "internal" process innovations that result in cost efficiency. Future research could complement our study by analyzing process innovation.

Second, innovativeness is not the only marketing action that influences stock market performance. Future research could investigate how other marketing actions influence stock holding decisions of large investors. Third, consistent with many marketing studies (e.g., Petersen, Kushwaha, and Kumar 2015), we restrict our examination of investor culture to Hofstede's framework. Future research could use alternative approaches to national culture, such as Inglehart's (Steenkamp and Geyskens 2014). In addition, we focus on the culture of large investors. Future research could investigate the interaction between large investors' and small investors' culture. In particular, it could investigate how small investors from various cultures mimic the stock holding decisions of large investors.

Fourth, future research could identify other mediators of the innovativeness–stock holding relationship, such as higher price/earnings ratio. Fifth, we study just one industry. Prior research has highlighted two industry factors that may influence our findings. Consumers are more prone to accept innovation in industries with intense competition on innovation (Gielens and Steenkamp 2007). Thus, innovativeness may play a larger role in these contexts than in ours. In addition, Rubera and Kirca (2012) argue that investors are less sensitive to innovativeness in contexts in which innovations are frequently introduced (e.g., high-tech industries). Future research is needed to investigate the generalizability of our findings to

other contexts. Finally, our research is limited to large individual investors. However, many large investors are institutional funds, whose culture may be more difficult to measure. Future research could investigate whether the national culture of a fund's managers influences institutional investors' response to innovativeness similarly to what we report for large individual investors.

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References

Barber, Brad M., and Terrance Odean (2001), "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *Quarterly Journal of Economics*, 116 (1), 261–92.

Barber, Brad M., and Terrance Odean (2008), "All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors," *Review of Financial Studies*, 21 (2), 785–818.

Barker, Richard, John Hendry, John Roberts, and Paul Sanderson (2012), "Can Company-Fund Manager Meetings Convey Informational Benefits? Exploring the Rationalisation of Equity Investment Decision Making by UK Fund Managers," *Accounting, Organizations and Society*, 37 (4), 207–22.

Baron, Reuben M., and David A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173–82.

Browne, William J. (2009), *MCMC Estimation in MLwiN v2.1*. Bristol, UK: Centre for Multilevel Modelling, University of Bristol.

Bryson, Jay H., and E. Harry Pershing (2016), "How Much of America Do Foreigners Own?" Wells Fargo Securities, Special Commentary (September 27), https://www.wellsfargoresearch.com/Reports/GetPublicationView/3f87068d-06de-49a6-ba32-c82bd786e7ce?source=WFR.COM.

Bushee, Brian J. (1998), "The Influence of Institutional Investors on Myopic R&D Investment Behavior," *Accounting Review*, 73 (3), 305–33.

Bushee, Brian J., Joseph Gerakos, and Lian Fen Lee (2018), "Corporate Jets and Private Meetings with Investors," *Journal of Accounting and Economics*, 65 (2/3), 358–79.

Chakravarty, Anindita, and Rajdeep Grewal (2011), "The Stock Market in the Driver's Seat! Implications for R&D and Marketing," *Management Science*, 57 (9), 1594–609.

Chandrasekaran, Deepa, and Gerard J. Tellis (2008), "Global Takeoff of New Products: Culture, Wealth, or Vanishing Differences?" *Marketing Science*, 27 (5), 844–60.

Chen, Hung-Ling, Edward H. Chow, and Cheng-Yi Shiu (2015), "The Informational Role of Individual Investors in Stock Pricing: Evidence from Large Individual and Small Retail Investors," *Pacific-Basin Finance Journal*, 31 (1), 35–56.

Cheng, Qiang, Fei Du, Xi Wang, and Yutao Wang (2018), "Do Corporate Site Visits Impact Stock Prices?" *Contemporary Accounting Research*, published online June 25, doi: 10.1111/1911-3846.12417.

Chui, Andy C. W., Sheridan Titman, and K. C. John Wei (2010), "Individualism and Momentum Around the World," *Journal of Finance*, 65 (1), 361–92.

Enders, C. K., and D. Tofighi (2007), "Centering Predictor Variables in Cross-Sectional Multilevel Models: A New Look at an Old Issue," *Psychological Methods*, 12 (2), 121–38.

ETMarkets.com (2017), "Rakesh Jhunjhunwala Sells Stake in Intellect Design Arena, Stock Cracks," (February 15), https://economictimes.indiatimes.com/markets/stocks/news/rakesh-jhunjhunwala-sells-stake-in-intellect-design-arena-stock-cracks/articleshow/57160055.cms.

Fama, Eugene, and Kenneth French (1993), "Common Risk Factors in the Returns on Stocks and Bonds," *Journal of Financial Economics*, 33 (1), 3–56.

Ghosh, Joydeep (2017), "The Silent Giant of the Stock Market," Rediff.com (April 5), http://www.rediff.com/business/special/how-well-do-you-know-d-marts-damani/20170405.htm.

Gielens, Katrijn, and Jan-Benedict E. M. Steenkamp (2007), "Drivers of Consumer Acceptance of New Packaged Goods: An Investigation Across Products and Countries," *International Journal of Research in Marketing*, 24 (2), 97–111.

Hayes, Andrew F. (2013). Methodology in the Social Sciences. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY, US: Guilford Press.

Higgins, Monica A., and Ranjay Gulati (2006), "Stacking the Deck: The Effects of Top Management Backgrounds on Investor Decisions," *Strategic Management Journal*, 27 (1), 1–25.

Hofstede, Geert (1983), "The Cultural Relativity of Organizational Practices and Theories," *Journal of International Business Studies*, 14 (2), 75–90.

Hofstede, Geert (2001), *Culture's Consequences*, 2nd ed. Beverly Hills, CA: Sage Publications.

Hofstede, Geert, Geert J. Hofstede, and Michael Minkov (2010), *Cultures and Organizations: Software of the Mind*. New York: McGraw-Hill.

International Monetary Fund (2014), "Global Financial Stability Report: Moving from Liquid-to Growth-Driven Markets," research report, https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Moving-from-Liquidity-to-Growth-Driven-Markets.

Kochhar, Rahul, and Parthiban David (1996), "Institutional Investors and Firm Innovation: A Test of Competing Hypotheses," *Strategic Management Journal*, 17 (1), 73–84.

Kumar, V., and Anita Pansari (2016), "National Culture, Economy, and Customer Lifetime Value: Assessing the Relative Impact of the Drivers of Customer Lifetime Value for a Global Retailer," *Journal of International Marketing*, 24 (1), 1–21.

Johnson, Palmer O., and J. Neyman (1936), "Tests of Certain Linear Hypotheses and Their Application to Some Educational Problems," *Statistical Research Memoirs*, 1, 57–93.

Lee, Yi-Tsung, Ji-Chai Lin, and Yu-Jane Liu (1999), "Trading Patterns of Big versus Small Players in an Emerging Market: An Empirical Analysis," *Journal of Banking and Finance* 23 (5), 701–25.

Long, Andrew R., Philip M. Fernbach, and Bart de Langhe (2018), "Circle of Incompetence: Sense of Understanding as an Improper Guide to Investment Risk," *Journal of Marketing Research*, 55 (4), 474–88.

Long, Heather (2015), "Foreign Investors Can't Get Enough of the U. S.," *CNN Money* (October 1), http://money.cnn.com/2015/10/01/investing/foreign-investors-buy-us-stocks-bonds/.

Liu, Yan, Venkatesh Shankar, and Wonjoo Yun (2017), "Crisis Management Strategies and the Long-Term Effects of Product Recalls on Firm Value," *Journal of Marketing*, 81 (5), 30–48.

Manconi, Alberto, and Massimo Massa (2013), "A Servant to Many Masters: Competing Shareholder Preferences and Limits to Catering," *Journal of Financial and Quantitative Analysis*, 48 (6), 1693–716.

Mizik, Natalie (2010), "The Theory and Practice of Myopic Management," *Journal of Marketing Research*, 47 (4), 594–611.

MoneyControl.com (2017), "Prakash Industries up 13% After Rakesh Jhunjhunwala Buys 10 Lakh Shares via Block Deals," (August 24), https://www.moneycontrol.com/news/business/stocks/prakash-industries-up-13-after-rakesh-jhunjhunwala-buys-10-lakh-shares-via-block-deals-2369143.html.

Moorman, Christine, Simone Weis, Natalie Mizik, and Fredrika J. Spencer (2012), "Firm Innovation and the Ratchet Effect Among Consumer Packaged Goods Firms," *Marketing Science*, 31 (6), 934–51.

Ng, Lilian, and Fei Wu (2007), "The Trading Behavior of Institutions and Individuals in Chinese Equity Markets," *Journal of Banking & Finance*, 31 (9), 2695–710.

Petersen, J. Andrew, Taurun Kushwaha, and V. Kumar (2015), "Marketing Communication Strategies and Consumer Financial Decision Making: The Role of National Culture," *Journal of Marketing*, 79 (1), 44–63.

Preacher, Kristopher J., and Andrew F. Hayes (2008), "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models," *Behavior Research Methods*, 40 (3), 879–91.

Rao, Vithala R., Manoj K. Agarwal, and Denise Dahlhoff (2004), "How Is Manifest Branding Strategy Related to the Intangible Value of a Corporation?" *Journal of Marketing*, 68 (4), 126–41.

Raykov, Tenko (2010), "Proportion of Third-Level Variation in Multi-Level Studies: A Note on an Interval Estimation Procedure," *British Journal of Mathematical and Statistical Psychology*, 63 (2), 417–26.

Rubera, Gaia, and Ahmet Kirca (2012), "Firm Innovativeness and Its Performance Outcomes: A Meta-Analytic Review and Theoretical Integration," *Journal of Marketing*, 76 (3), 130–47.

Rubera, Gaia, Andrea Ordanini, and David A. Griffith (2011), "Incorporating Cultural Values for Understanding the Influence of Perceived Product Creativity on Intention to Buy: An Examination in Italy and the U.S." *Journal of International Business Studies*, 42 (4), 459–76.

Schnatterly, Karen, and Scott G. Johnson (2014), "Independent Boards and the Institutional Investors That Prefer Them: Drivers of Institutional Investor Heterogeneity in Governance Preferences," *Strategic Management Journal*, 35 (10), 1552–63.

Schmeling, Maik (2009), "Investor Sentiment and Stock Returns: Some International Evidence," *Journal of Empirical Finance*, 16 (3), 394–408.

Schwartz, Shalom H. (1992), "Universals in the Content and Structure of Values: Theoretical Advances and Empirical Tests in 20 Countries," in *Advances in Experimental Social Psychology*, Vol. 25, Mark P. Zanna, ed. Orlando, FL: Academic Press, pp. 1–65.

Schwartz, Shalom H. (2008), "The 7 Schwartz Cultural Value Orientation Scores for 80 Countries," (January), https://www.researchgate.net/publication/304715744_The_7_Schwartz_cultural_value_orientation_scores_for_80_countries.

Seasholes, Mark S., and Ning Zhu (2010), "Individual Investors and Local Bias," *Journal of Finance*, 55 (5), 1987–2010.

Shefrin, Hersh (2005), *A Behavioral Approach to Asset Pricing*. Burlington, MA: Elsevier Academic.

Shefrin, Hersh, and Meir Statman (1985), "The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence," *Journal of Finance*, 40 (3), 777–91.

Shleifer, Andrei (2000), *Inefficient Markets, An Introduction to Behavioral Finance*. Oxford, UK: Oxford University Press.

Solomon, David, and Eugene Soltes (2015), "What Are We Meeting For? The Consequences of Private Meetings with Investors," *Journal of Law and Economics*, 58 (2), 325–55.

Sood, Ashish, and Gerard J. Tellis (2009), "Do Innovations Really Pay Off? Total Stock Market Returns to Innovation," *Marketing Science*, 28 (3), 442–56.

Sorescu, Alina, and Jelena Spanjol (2008), "Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods," *Journal of Marketing*, 72 (2), 114–32.

Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr., and Gary H. Mcclelland (2013), "Spotlights, Floodlights, and the Magic Number Zero: Simple Effects Tests in Moderated Regression," *Journal of Marketing Research*, 50 (April), 277–88.

Srinivasan, Shuba, and Dominique M. Hanssens (2009), "Marketing and Firm Value: Metrics, Methods, Findings, and Future Directions," *Journal of Marketing Research*, 46 (3), 293–312.

Srinivasan, Shuba, Koen Pauwels, Jorge Silva-Risso, and Dominique M. Hanssens (2009), "Product Innovations, Advertising, and Stock Returns," *Journal of Marketing*, 73 (1), 24–43.

Srivastava, Rajendra K., Tasadduq A. Shervani, and Liam Fahey (1998), "Market-Based Assets and Shareholder Value: A Framework for Analysis," *Journal of Marketing*, 62 (1), 2–18.

Steenkamp, Jan-Benedict E. M., and Inge Geyskens (2014), "Manufacturer and Retailer Strategies to Impact Store Brand Share: Global Integration, Local Adaptation, and Worldwide Learning," *Marketing Science*, 33 (1), 6–26.

Steenkamp, Jan-Benedict E.M., Frenkel ter Hofstede, and Michel Wedel (1999), "A Cross-National Investigation into the Individual and National Cultural Antecedents of Consumer Innovativeness," *Journal of Marketing*, 63 (2), 55–69.

Tellis, Gerard J. (2013), *Unrelenting Innovation: How to Build a Culture for Market Dominance*. San Francisco, CA: John Wiley & Sons.

Vardi, Nathan (2015), "Oprah Winfrey Creates $700 Million from Thin Air in Two Days of Stock Market Trading," *Forbes* (October 20), https://www.forbes.com/sites/nathanvardi/2015/10/20/oprah-winfrey-creates-700-million-from-thin-air-in-two-days-of-stock-market-trading/#4b0c68613fd4.

Warren, Nooshin L., and Sorescu Alina (2017), "When 1 + 1 > 2: How Investors React to New Product Releases Announced Concurrently with Other Corporate News," *Journal of Marketing*, 81 (1), 64–82.

Wies, Simone, and Christine Moorman (2015), "Going Public: How Stock Market Listing Changes Firm Innovation Behavior," *Journal of Marketing Research*, 52 (5), 694–709.

Xiong, Guiyang, and Bharadwaj Sundar (2013), "Asymmetric Roles of Advertising and Marketing Capability in Financial Returns to News: Turning Bad into Good and Good into Great," *Journal of Marketing Research*, 50 (6), 706–24.