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ON-LINE APPENDIX FOR

"Corporate Strategy, Conformism, and the Stock Market"

June 2017

This appendix contains the proofs and additional analyses that we mention in paper but that we decided not to report there to preserve space. The appendix is organized as follows.

- Section A proves that the stock market equilibrium is unique in our model.
- Section B considers the case in which information acquisition by speculators is endogenous.
- Section C extends the model when the types of the unique and the common strategies are correlated.
- Section D considers the case in which the manager of firm A's prior belief about the type of a strategy can be different for the common and the unique strategy.
- Section E considers the case in which all firms simultaneously choose their strategies at date 1 ("industry equilibrium").
- Section F derives the cross-sectional predictions mentioned in Section 3.3 and tested in Section 4.5.
- Section G replicates the results in Table 2 of the paper using four alternative measures of product differentiation instead of the text-based measure of product differentiation developed by Hoberg and Phillips (2016).
- Section H replicates the results in Table 2 of the paper for 1,000 placebo samples of IPO firms, and when we replace IPO firms by firms issuing equity (SEOs) and private debt.

- Section I replicates the results in Table 2 using a difference-in-differences methodology as opposed to the baseline specification (17) in the paper.
- Section J replicates the results in Table 3 of the paper using two alternative proxies for the informativeness of peers' stock price ($\overline{\pi}(n, \pi_c)$).
- Section K documents a negative association between a firms' overall degree of product differentiation and the informativeness of their stock price (corollary 1 of the paper).

A Equilibrium Uniqueness

We show that when firm A chooses the common strategy, the stock market equilibrium given in Lemma 1 is the unique equilibrium of our model. We omit the analysis of the case in which firm A chooses the unique strategy (Lemma 2) because the proof that the stock market equilibrium is unique in this case as well follows exactly the same steps.

Step 1. We first show that, in any equilibrium, informed speculators' trading strategy is such that $x_{ij}(G) = +1$, $x_{ij}(B) = -1$, and $x_{ij}(\varnothing) = 0$. Let $\mu_j(\widehat{s}(S_c))$ be a speculator's estimate of firm j's payoff when her signal is $\widehat{s}(S_c) \in \{\varnothing, G, B\}$. To shorten notations, let $\beta(G) = \Pr(I^* = 1 \,|s_m = \varnothing, t_{S_c} = G)$ and $\beta(B) = \Pr(I^* = 1 \,|s_m = \varnothing, t_{S_c} = G)$. For incumbent firms, we have:

$$\mu_j(G) = (\gamma + (1-\gamma)\beta(G))r(S_c, n+1, G) + (1-\gamma)(1-\beta(G))r(S_c, n, G), \tag{1}$$

$$\mu_j(B) = (1-\gamma)\beta(B)r(S_c, n+1, B) + (1-\gamma)(1-\beta(B))r(S_c, n, B). \tag{2}$$

As $r(S_c, n, G) > r(S_c, n+1, G) > r(S_c, n, B) > r(S_c, n+1, B)$ (Assumption A.4), we deduce from eq.(1) and eq.(2) that $\mu_j(G) > \mu_j(B)$. An uninformed speculator has no information about the type of the common strategy. Thus, her valuation for an incumbent firm must be equal to the unconditional expected payoff of this firm, or, by the Law of Iterated Expectations: $\mu_j(\varnothing) = \mathrm{E}(\widetilde{p}_{j2})$ for $j \in \{1, ..., n\}$.

The expected profit of a speculator with signal $\widehat{s}(S_c)$ is:

$$\Pi_j(x_{ij}, \widehat{s}(S_c)) = x_{ij} \times (\mu_j(\widehat{s}(S_c)) - \mathrm{E}(\widetilde{p}_{j2} \,|\widehat{s}(S_c))\,, \text{ for } j \in \{1, ..., n\}.$$

Thus, $\Pi_j(x_{ij}, \varnothing) = 0$. Hence, $x_{ij} = 0$ is optimal if a speculator receives the signal $\widehat{s}(S_c) = \varnothing$. Equilibrium stock prices must be such that $\mu_j(B) \leq \widetilde{p}_{j2} \leq \mu_j(G)$. Otherwise, there would exist cases in which the market maker of firm j is willing to buy (resp., sell) the asset at price strictly larger than the largest (smallest) possible valuation of the asset by an informed speculator. Such transactions would result in an expected loss, violating the condition that market makers expect zero profit on each transaction in equilibrium. We deduce that:

$$\mu(B) \leq \mathrm{E}(\widetilde{p}_{j2}\,|\widehat{s}(S_c)) \leq \mu(G), \tag{3}$$

for $S_c \in \{G, B\}$. Thus, in any equilibria, $x_{ij}(G) = +1$ and $x_{ij}(B) = -1$ are weakly dominant strategies for informed speculators and these strategies are strictly dominant if the inequalities in eq.(3) are strict. This must be the case since $\pi_c < 1$. Indeed, suppose not (to be contradicted) and let $\widehat{\pi}_c < \pi_c$ be the fraction of informed speculators who trade when they receive an informative signal. Then, as explained in the text, realizations of orders flows such $-1 + \widehat{\pi}_c < f_{\min}$ and $f_{\max} < 1 - \widehat{\pi}_c$ are such that trades are completely uninformative. Thus, $p_{j2} = \mathrm{E}(\widetilde{p}_{j2})$ when $-1 + \widehat{\pi}_c < f_{\min}$ and $f_{\max} < 1 - \widehat{\pi}_c$. The probability of this event is not zero since $\widehat{\pi}_c < \pi_c < 1$. This implies that there exist realizations of p_{j2} strictly within $\mu(B)$ and $\mu(G)$. Thus, $\mu(B) < \mathrm{E}(\widetilde{p}_{j2}\,|\widehat{s}(S_c)) < \mu(G)$, is a contradiction. Thus, in any equilibria, $x_{ij}(G) = +1$ and $x_{ij}(B) = -1$ for $j \in \{1, ..., n\}$ are strictly dominant strategies for informed speculators.

For firm A, one can show in the same way that in any equilibria, $x_{iA}(G) = +1$ and $x_{iA}(B) = -1$ is a strictly dominant strategy for informed speculators while $x_{iA}(\varnothing) = 0$ is weakly dominant. The only difference is that the expressions for $\mu_A(G)$ and $\mu_j(B)$ are different from those given in eq.(1) and eq.(2).

Step 2. In step 1, we have shown that, in any equilibria, it must be the case that informed speculators buy all stocks (including A) if they learn that the common strategy is good and sell all stocks if they learn that the common strategy is bad. Moreover, in any equilibria, speculators who receive no signal optimally do not trade.

It follows that in any equilibria, order flows reveal that the common strategy is good if $f_{\max} > 1 - \pi_c$, that it is bad if $f_{\min} < -1 + \pi_c$, and contain no information if $-1 + \pi_c < f_{\min}$ and $f_{\max} < 1 - \pi_c$. All these events have a strictly positive probability when $0 < \pi_c < 1$. This feature has implications for equilibrium stock prices. Consider the determination of the price in stock A. Any equilibrium prices of stock A when $f_{\max} > 1 - \pi_c$ (denoted p_A^H) must satisfy Condition (5), i.e.,

$$
\begin{aligned}
p_A^H &= \mathrm{E}(V_{A3}(I^*(\Omega_3, S_A), S_A) \mid f_{\max} > 1 - \pi_c), \\
&= (\gamma + (1-\gamma)\Pr(I^* = 1 \,|\, s_m = \varnothing, p_A = p_A^H))(r(S_c, n+1, G) - 1),
\end{aligned}
$$

where, for the second line, we have used the facts that (i) $f_{\max} > 1 - \pi_c$ reveals that $t_{S_c} = G$ and (ii) therefore, market makers must anticipate that if he has private information, the manager will implement his strategy. When $-1 + \pi_c < f_{\min}$ and $f_{\max} < 1 - \pi_c$, any equilibrium price of stock A (denoted p_A^M) must satisfy (Condition (5) again):

$$
\begin{aligned}
p_A^M &= \mathrm{E}(V_{A3}(I^*(\Omega_3, S_A), S_A) \mid -1 + \pi_c < f_{\min} \text{ and } f_{\max} < 1 - \pi_c), \\
&= \gamma(r(S_c, n+1, G) - 1)/2 + (1-\gamma)\Pr(I^* = 1 \,|\, s_m = \varnothing, p_A = p_A^M))(\overline{r}(S_c, n+1) - 1),
\end{aligned}
$$

where, for the second line, we have used the facts that if $-1 + \pi_c < f_{\min}$ and $f_{\max} < 1 - \pi_c$ then (i) market makers have no information on the type of the common strategy but (ii) they know that if the manager has no private information, he will base his decision on the observation that the stock price of firm A is p_A^M. When $f_{\min} < -1 + \pi_c$, any equilibrium price of stock A (denoted p_A^L) must satisfy (Condition (5) again):

$$
\begin{aligned}
p_A^L &= \mathrm{E}(V_{A3}(I^*(\Omega_3, S_A), S_A) \mid f_{\min} < -1 + \pi_c), \\
&= (1-\gamma)\Pr(I^* = 1 \,|\, s_m = \varnothing, p_A = p_A^L))(\overline{r}(S_c, n+1) - 1),
\end{aligned}
$$

where, for the second line, we have used the facts that (i) $f_{\min} < -1 + \pi_c$ reveals that $t_{S_c} = B$ and (ii) therefore, market makers must anticipate that if he has private information, the manager will not implement his strategy. As $\overline{r}(S_c, n+1) - 1 < 0$ (Assumption A.3) and $\gamma > 0$, we deduce that, in any equilibria, $p_A^H > p_A^M > p_A^L$.

Thus, in any equilibria, there are at least three different realizations for the equilibrium price, one for each possible range of order flows, i.e., (i) $f_{\max} > 1 - \pi_c$, (ii) $-1 + \pi_c < f_{\min}$ and $f_{\max} < 1 - \pi_c$ and (iii) $f_{\min} < -1 + \pi_c$. There cannot be more realizations. Indeed, suppose that this is not the case (to be contradicted). This implies that there are at least two realizations of order flows in the same range that leads to two different prices (e.g., for $f_{\max} > 1 - \pi_c$, there are two different realizations of $f_{\max}$ that leads to two different equilibrium stock prices). This is not possible since these two prices have exactly the same informational content (they reveal in which range are the realizations of the order flows that lead to these prices) and should therefore lead to exactly the same decisions for the manager of firm A. As a result, the expected value of firm A must be the same for these two prices and therefore market makers' zero profit condition (Condition (5)) imposes that these prices are identical.

In sum, in any equilibria, there are exactly three possible realizations, p_A^H, p_A^M, p_A^L for the equilibrium stock price of firm A when $0 < \pi_c < 1$, such that $p_A^H > p_A^M > p_A^L$. We can proceed in a similar way to show that in any equilibria, there are exactly three possible realizations of equilibrium stock prices for incumbent firms and they must be such that $p_j^H > p_j^M > p_j^L$.

Step 3. Suppose that the manager does not receive private information at date 3. It follows from Step 2 that when he observes $p_A = p_A^H$, the manager of firm A can infer that $t_{S_c} = G$. Thus, $I^* = 1$ if $p_A = p_A^H$. If $p_A = p_A^L$, the manager of firm A can infer that $t_{S_c} = B$. It follows from A.2 that $I^* = 0$. If $p_A = p_A^M$, the beliefs of the manager of firm A are equal to his unconditional beliefs. Hence, A.3 implies that $I^* = 0$.

In sum, in any equilibria, the manager and speculators must behave as described in Parts 1 and 4 of Lemma 1. Moreover, in any equilibria, there are only three possible realizations for stock prices for each firm when $0 < \pi_c < 1$: (i) one when $f_{\max} > 1 - \pi_c$, (ii) one when $-1 + \pi_c < f_{\min}$ and $f_{\max} < 1 - \pi_c$, and (iii) one when $f_{\min} < -1 + \pi_c$. These conditions, combined with Conditions (6) and (5), uniquely pin down equilibrium stock prices for all firms. Thus, the equilibrium in Lemma 1 is unique.

B Endogenous Information Production.

In this section, we consider the case in which each speculator optimally chooses to acquire information or not about the type of each strategy. We assume that after observing the strategy chosen by firm A (between dates 1 and 2), each speculator can choose to acquire or not a perfect signal about each strategy at cost C. The equilibrium mass of speculators informed about a given strategy is such that the expected trading profit from private information about this strategy, net of the information acquisition cost, is zero. We denote by π_u^*

the fraction of speculators acquiring information about the unique strategy if firm A follows this strategy (obviously, no speculator buys information about the unique strategy if firm A chooses the common strategy since there is then no possibility to speculate on the type of the unique strategy). Similarly, we denote by $\pi_c^*(n)$ the fraction of speculators who acquire information about the common strategy. As claimed in the main text, the next corollary shows that, in equilibrium, there always exists a value of n large enough such that the stock price of firm A is more informative (about the type of its strategy) if firm A follows the common strategy instead of the unique strategy (i.e., $\overline{\pi}(n, \pi_c^*(n)) > \pi_u^*$).

Corollary 3 *: Suppose* $0 < C < \frac{n}{2}(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1))$*. In equilibrium, when* $n \geq n^*$*, the stock price of firm A is more informative (about the type of its strategy) if firm A follows the common strategy instead of the unique strategy (i.e.,* $\overline{\pi}(n, \pi_c^*(n)) > \pi_u^*$*), where* n^* *is a threshold defined in the proof of the corollary.*

As explained in the proof of this corollary (see below), the condition on C just guarantees that, in equilibrium, some investors find optimal to buy information about the common strategy, i.e., $\pi_c^*(n) > 0$.

Proof.

Case 1. First consider the case in which firm A chooses the common strategy. Consider a speculator who buys information about this strategy. The expected profit of the speculator in firm $j \in \{1, ..., n\}$ if she learns that the common strategy is good is $\Pi_j(+1, G)$ given in eq.(20). By symmetry, the expected profit of the speculator in firm $j \in \{1, ..., n\}$ if she learns that the common strategy is bad is $\Pi_j(-1, B) = \Pi_j(+1, G)$. Thus, the ex-ante expected gross profit of receiving information about the common strategy and trading on this information in incumbent firm j is:

$$\overline{\Pi}(\pi_c) = \frac{1}{2}\Pi_j(+1, G) + \frac{1}{2}\Pi_j(-1, B) = \Pi_j(+1, G) \quad (4)$$

$$= \frac{(1 - \overline{\pi}(n, \pi_c))}{2}(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1)), \quad (5)$$

where the last equality follows from eq.(20).

A speculator who is informed about the type of the common strategy can also use her information to speculate in the stock market of firm A. If she learns that the common strategy is good the speculator buys one share of stock A in equilibrium. In this case, the speculator can make a profit only if the order flow of all firms (including A) does not reveal that the common strategy is good, that is, if the stock price of firm A is $p^M_{A2}(S_c) = \gamma r(S_c, n+1, G)/2$. This happens with probability $(1-\overline{\pi}(n, \pi_c))$. In this case, if the manager privately learns the type of the strategy then he will implement the strategy because it is good. Otherwise the manager abandons the strategy. Thus, in this case, the speculator's expected return on her position is $\gamma r(S_c, n+1, G) - p^M_A(S_c) = \gamma r(S_c, n+1, G)/2$. Hence, the speculator's expected profit on buying one share of firm A when (i) firm A chooses the common strategy and (ii) this strategy is good is

$$\Pi_A(+1, G) = (1 - \overline{\pi}(n, \pi_c))\gamma r(S_c, n+1, G)/2. \tag{6}$$

A similar reasoning yields $\Pi_A(-1, B) = \Pi_A(+1, G)$. Thus, the ex-ante expected gross profit of receiving information about the common strategy and trading on this information in the stock market of firm A is:

$$\overline{\Pi}_A(\pi_c) = \frac{(1 - \overline{\pi}(n, \pi_c))\gamma}{2}(\overline{r}(S_c, n+1) + \sigma_c - 1).$$

A speculator who receives information about the common strategy can profitably trade in all stocks of firms following this strategy. Thus, her total expected profit is:

$$\overline{\Pi}(n, \pi_c) = n \times \overline{\Pi}(\pi_c) + \overline{\Pi}_A(\pi_c). \tag{7}$$

It is immediate that $\overline{\Pi}(n, \pi_c)$ decreases with π_c and is equal to zero when $\pi_c = 1$. Thus, there is no equilibrium in which $\pi^*_c = 1$ if $C > 0$. Moreover, if $\overline{\Pi}(n, 0) > C$ then $\pi^*_c = 0$ cannot be an equilibrium since it would then be optimal for at least one speculator to buy information on the type of the common strategy. When $0 < C < \overline{\Pi}(n, 0)$, the equilibrium mass of speculators informed about the common strategy, $\pi^*_c(n)$, is such that $\overline{\Pi}(n, \pi^*_c(n)) = C$ so that a speculator is just indifferent between getting information or not. Moreover, this equation has a unique solution in $(0, 1)$ because $\overline{\Pi}(n, \pi_c)$ decreases with π_c. In this case, using eq.(5), (6), and (7), we deduce that $\pi_c^*(n)$, must be such that:

$$(1 - \overline{\pi}(n, \pi_c^*(n))) = \frac{2C}{n(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1))) + \gamma(\overline{r}(S_c, n+1) + \sigma_c - 1)}, \tag{8}$$

when firm A chooses the common strategy at date 1 and $0 < C < \overline{\Pi}(n, 0)$.

Case 2. Now suppose that firm A chooses the unique strategy and consider a speculator who buys information on the type of this strategy. The ex-ante expected profit of this speculator can be computed as for a speculator who buys information on the common strategy. The only difference is that the speculator can only use her information to speculate in the stock market of firm A (the firm choosing the unique strategy). Following the same steps as when firm A follows the common strategy, we deduce that the speculator's expected profit if she buys information on the unique strategy is:

$$\overline{\Pi}_A(\pi_u) = \frac{(1 - \pi_u)\gamma}{2}(\overline{r}(S_u, 1) + \sigma_u - 1). \tag{9}$$

Following the same step as in Case 1, we deduce that if $C \geq \overline{\Pi}_A(0)$, we have $\pi_u^* = 0$ and if $0 < C < \overline{\Pi}_A(0)$ then π_u^* solves $\overline{\Pi}_A(\pi_u^*) = C$, i.e. (using eq.(9)):

$$(1 - \pi_u^*) = \frac{2C}{\gamma(r(S_u, 1) + \sigma_u - 1)}. \tag{10}$$

Now, suppose that $C < \frac{(1-\overline{\pi}(n,\pi_c))}{2}(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1))$ so that $C < \overline{\Pi}(n, 0)$. This condition implies that $\pi_c^* > 0$ and therefore $\overline{\pi}(n, \pi_c^*) > 0$. If $C \geq \overline{\Pi}_A(0)$, we have $\pi_u^* = 0$ and then $\overline{\pi}(n, \pi_c^*) > \pi_u^*$ for any n. If $C < \overline{\Pi}_A(0)$, then π_c^* and π_u^* solve eq.(8) and eq.(10), respectively. We have $\pi_u^* \leq \overline{\pi}(n, \pi_c^*)$ iff $(1 - \pi_u^*) \geq (1 - \overline{\pi}(n, \pi_c^*))$. Using eq.(8) and (10), we deduce that this is the case if and only if:

$$\gamma(r(S_u, 1) + \sigma_u - 1) \leq n(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1))) + \gamma(\overline{r}(S_c, n+1) + \sigma_c - 1), \tag{11}$$

i.e., if and only if $n > n^*$ where:

$$n^* = \frac{\gamma(\overline{r}(S_u, 1) - \overline{r}(S_c, n+1) + \sigma_u - \sigma_c)}{(2\sigma_c - \gamma(\overline{r}(S_c, n) - \overline{r}(S_c, n+1))}.$$

C Correlated Strategies

In this section, we consider the case in which the types of the unique and the common strategies are correlated. Specifically, we assume that:

$$\Pr(t_{S_u} = t_{S_c} \,|t_{S_c} = x) = \frac{(1+\rho)}{2}, \text{ for } x \in \{B, G\} \text{ and } \rho \in [0,1). \qquad (12)$$

Thus, as ρ increases, the types (and therefore payoffs) of both strategies are increasingly positively correlated. In the baseline version of the model, we have assumed $\rho = 0$ for simplicity. We now show that the conclusions from out theoretical analysis hold more broadly when $\rho > 0$. In this case, a speculator with a perfect signal on one strategy is also imperfectly informed about the type of the other strategy. Thus, she might want to trade both assets. To simplify the analysis, as in Foucault and Fresard (2014), we assume that a speculator only trades a stock for which she receives perfect information.

When firm A chooses the common strategy, the equilibrium of the stock market is unchanged and given by Lemma 1. When firm A chooses the unique strategy, the equilibrium of the stock market is potentially different from the case in which $\rho = 0$ because the stock price of incumbent firms is informative about the type of the common strategy and therefore the unique strategy as well. Reciprocally, the stock price of firm A is informative about the type of the unique strategy and therefore the common strategy as well. The next lemma presents the stock market equilibrium when firm A chooses the unique strategy. It is a more general version of Lemma 2 in the baseline model which accounts for the fact that when $\rho > 0$, the stock price of incumbent firms (resp., firm A) is informative about the type of the common (resp., unique) strategy and therefore the unique (resp., common) strategy. As in the baseline model, we use the following notations: $f_{\max,-A} = Max\{f_1, f_2, ..., f_n\}$ and $f_{\min,-A} = Min\{f_1, f_2, ..., f_n\}$. Moreover, let $p_{c2}^{H}(n) = r(S_c, n, G)$, $p_{c2}^{MH}(n) = \overline{r}(S_c, n) + \rho\sigma_c$, $p_{c2}^{MM}(n) = \overline{r}(S_c, n)$, $p_{c2}^{ML}(n) = \overline{r}(S_c, n) - \rho\sigma_c$ and $p_{c2}^{L}(n) = r(S_c, n, B)$. Last, we let $p_{A2}^{H}(S_u) = r(S_u, 1, G) - 1$, $p_{A2}^{MH}(S_u) = \frac{\gamma(1+\rho)}{2}(r(S_u, 1, G) - 1) + \frac{(1-\gamma)}{2} Max\{(\overline{r}(S_u, 1) + \rho\sigma_A - 1), 0\}$, $p_{A2}^{MM}(S_u) = \frac{\gamma}{2}(r(S_u, 1, G) - 1)$, $p_{A2}^{ML}(S_u) = \frac{\gamma(1-\rho)}{2}(r(S_u, 1, G) - 1)$, and $p_{A2}^{L}(S_u) = 0$. As shown below, these describe possible realizations of stock prices at date 2.

Lemma 3 *: When firm A chooses the unique strategy and $\pi_u \in (0,1)$, the stock market equilibrium is:*

1. *Speculator i buys one share of firm $j \in \{1, .., n, A\}$ if $\widehat{s}_i(S_j) = G$, sells one share of firm j if $\widehat{s}_i(S_j) = B$, and does not trade otherwise.*

2. *The stock price of an incumbent firm is (i) $p_{j2} = p^H_{c2}(n)$ if $f_{\max,-A} > (1 - \pi_c)$; (ii) $p_{j2} = p^{MH}_{c2}(n)$ if $f_{\max,-A} \leq (1 - \pi_c)$, and $f_{\min,-A} \geq -(1 - \pi_c)$, and $f_A \geq (1 - \pi_u)$; (iii) $p_{j2} = p^{MM}_{c2}(n)$ if $f_{\max,-A} \leq (1 - \pi_c)$, and $f_{\min,-A} \geq -(1 - \pi_c)$, and $f_A \in (-(1 - \pi_u), (1 - \pi_u))$; (iv) $p_{j2} = p^{ML}_{c2}(n)$ if $f_{\max,-A} \leq (1 - \pi_c)$, and $f_{\min,-A} \geq -(1 - \pi_c)$, and $f_A \leq (1 - \pi_u)$; (v) $p_{j2} = p^L_{c2}(n)$ if $f_{\min,-A} \leq -(1 - \pi_c)$.*

3. *The stock price of firm A is (i) $p^H_{A2}(S_u)$ if $f_A \geq (1 - \pi_u)$, (ii) $p^{MH}_{A2}(S_u)$ if $f_A \in (-(1 - \pi_u), (1 - \pi_u))$ and $f_{\max,-A} > (1 - \pi_c)$, (iii) $p^{MM}_{A2}(S_u)$ if $f_A \in (-(1 - \pi_u), (1 - \pi_u))$ and $f_{\max,-A} \leq (1 - \pi_c)$ and $f_{\min,-A} \geq -(1 - \pi_c)$, (iv) $p^{ML}_{A2}(S_u)$ if $f_A \in (-(1 - \pi_u), (1 - \pi_u))$ and $f_{\min,-A} \leq -(1 - \pi_c)$, and (v) $p^L_{A2}(S_u)$ if $f_A \leq -(1 - \pi_u)$.*

4. *If the manager of firm A receives a private signal then he follows his signal: he implements his strategy at date 3 if his signal indicates that this strategy is good and abandons it if his signal indicates that the strategy is bad. Else, the manager follows his stock price. When $\rho \geq \rho^*$, the manager implements his strategy at date $t = 2$ if his stock price is larger than or equal to $p^{MH}_A(S_u)$ and abandons it otherwise. When $\rho < \rho^*$, the manager implements his strategy at date $t = 2$ if his stock price is equal to $p^H_A(S_u)$ and abandons it otherwise, where $\rho^* = \frac{1 - \overline{r}(S_u, 1)}{\sigma_A}$.*

All proofs are provided, at the end of this section. It is easily checked that when $\rho = 0$, the stock market equilibrium when firm A chooses the unique strategy is identical to that obtained in Lemma 2. When $\rho > 0$, the stock market equilibrium in this case differs from that obtained when $\rho = 0$ in two ways.

First, there are more possible realizations for stock prices. The reason is that dealers in incumbent firms can still learn from the order flow in stock A and vice versa even if the manager of firm A follows the unique strategy. For instance, consider the dealer in stock A and suppose that $f_A \in (-(1 - \pi_u), (1 - \pi_u))$. In this case, the order flow in stock A is uninformative. When $\rho = 0$, the equilibrium price of stock A in this case is p^{MM}_A. When $\rho > 0$, additional realizations are possible because the stock price of incumbent firms convey information about the type of the unique strategy, unless $f_{\max,-A} \leq (1 - \pi_c)$ and $f_{\min,-A} \geq -(1 - \pi_c)$. For instance, if $f_{\max,-A} > (1 - \pi_c)$, the dealer in stock A learns that the common strategy is good. Thus, he assigns a probability $\frac{(1+\rho)}{2}$ to the possibility that the unique strategy is good. In this case, $\Omega_2 = \{f_{\max,-A} > (1-\pi_c),\ f_A \in (-(1-\pi_u),(1-\pi_u))\} = \{p_A^{MH}(S_u)\}$ in equilibrium and one can indeed check that the zero profit condition (5) for the dealer in stock A is satisfied, that is,

$$p_A^{MH}(S_u) = \mathrm{E}(V_{A3}(I^*(\Omega_3, S_A), S_A) \mid \Omega_2) = \mathrm{E}(V_{A3}(I^*(\Omega_3, S_A), S_A) \mid p_A^{MH}(S_u)). \tag{13}$$

Symmetrically, if $f_{\min,-A} < -(1-\pi_c)$, the dealer in stock A learns that the common strategy is bad. Thus, he assigns a probability $\frac{(1-\rho)}{2}$ to the possibility that the unique strategy is good and the equilibrium stock price in this case is $p_A^{ML}(S_u)$. As ρ goes to zero, $p_A^{MH}(S_u)$ and $p_A^{ML}(S_u)$ converge to p_A^{MM} and stock market prices for firm A (and incumbent firms) become identical to that obtained in the baseline model.

The second difference regards the manager of firm A's behavior when he receives no private signal and $\rho \geq \rho^*$.[1] In this case, the manager implements the unique strategy for a broader set of realizations for the stock price of firm A, namely $p_A^H(S_u)$ (as when $\rho = 0$) and $p_A^{MH}(S_u)$. Indeed, in the former case, the manager infers from the stock price of firm A that $\Omega_2 = \{f_{\max,-A} > (1-\pi_c),\ f_A \in (-(1-\pi_u),(1-\pi_u))\}$. Thus, as the dealer of firm A in this case, he assigns a probability $\frac{(1+\rho)}{2}$ to the possibility that the unique strategy is good. Hence, his expectation of the net present value of firm A if he implements the unique strategy is:

$$\begin{aligned}\mathrm{E}(\mathrm{NPV}(S_u,1) \,|\Omega_3) &= \mathrm{E}(\mathrm{NPV}(S_u,1) \,|\{f_{\max,-A} > (1-\pi_c), f_A \in (-(1-\pi_u),(1-\pi_u)), s_m = \varnothing\}) & (14)\\ &= \overline{r}(S_u,1) + \rho\sigma_A - 1 > 0, & (15)\end{aligned}$$

where the last equality obtains because $\rho \geq \rho^*$. This means that it is optimal for the manager to invest when he observes a moderately high realization of his stock price, i.e., $p_A^{MH}(S_u)$. In contrast, when $\rho < \rho^*$,

$$E(\mathrm{NPV}(S_u,1) \,|\{f_{\max,-A} > (1-\pi_c), f_A \in (-(1-\pi_u),(1-\pi_u)), s_m = \varnothing\}) < 0,$$

which means that the manager optimally does not implement the unique strategy at date 3

[1] Observe that $\rho^* > 0$ since $\overline{r}(S_u,1) < 1$ (Assumption A.4) and that $\rho^* < 1$ since $\overline{r}(S_u,1) + \sigma_A > 1$ (Assumption A.3).

when he observes that firm A's stock price is $p_A^{MH}(S_u)$.

In sum, when the manager chooses the unique strategy, there are two cases. When $\rho < \rho^*$, the manager's behavior is identical to that when $\rho = 0$. In contrast, when $\rho \geq \rho^*$, the manager invests for a broader set of realizations for his stock price. Intuitively, this reflects the fact that his stock price is more informative than when ρ is small because the dealer of stock A can learn, albeit imperfectly, about the type of the unique strategy from observing the stock prices of firms following the common strategy.

We can then proceed as in the baseline case to compute the value of firm A at date 1 given its strategic choice at this date. If the manager of firm A chooses the common strategy, we obtain that:

$$V_{A1}(S_c) = \frac{(\gamma + (1-\gamma)\overline{\pi}(n, \pi_c))}{2}(r(S_c, n+1, G) - 1), \tag{16}$$

as in the baseline case. If instead the manager of firm A chooses the unique strategy, using Lemma 3, we deduce that:

$$V_{A1}(S_u) = \begin{cases} \frac{(\gamma+(1-\gamma)\pi_u)}{2}(r(S_u, 1, G) - 1) + \frac{(1-\gamma)(1-\pi_u)\overline{\pi}(n-1,\pi_c)}{2}(\overline{r}(S_u, 1) + \rho\sigma_A - 1) & \text{if } \rho \geq \rho^*, \\ \frac{(\gamma+(1-\gamma)\pi_u)}{2}(r(S_u, 1, G) - 1) & \text{if } \rho < \rho^*. \end{cases} \tag{17}$$

Thus, for $\rho < \rho^*$, we obtain that firm A is better off choosing the common strategy if and only if $\pi_u < \overline{\pi}(n, \pi_c)$ and $\lambda(n) < \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$, exactly as when $\rho = 0$ (See Proposition 2). Moreover, when $\rho \geq \rho^*$, we obtain the following result.

Proposition 3 *(Conformity effect): Suppose $\rho \geq \rho^*$. If $\pi_u < \overline{\pi}(n, \pi_c)$ and $\lambda(n) < \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ then, at date 1, firm A optimally chooses the common strategy if $\rho < \rho^{**}$ and it chooses the unique strategy if $\rho \geq \rho^{**}$, where $\rho^{**} = Min\{\left[\frac{\widehat{\lambda}(\gamma,\pi_u,\pi_c,n)-\lambda(n)}{\sigma_A}\right]\left(\frac{(\gamma+(1-\gamma)\pi_u)}{(1-\gamma)(1-\pi_u)\overline{\pi}(n-1,\pi_c)}\right)(r(S_c, n+1, G) - 1) + \rho^*, 1\}$. If $\pi_u > \overline{\pi}(n, \pi_c)$ or $\lambda(n) > \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ then firm A chooses the unique strategy.*

In sum the conformity effect is present even when the types of the common and the unique strategy are correlated, as long as $\rho < \rho^{**}$. If $\pi_u > \pi_c$, one can show that $\rho^{**} < 1$. Thus, in line with intuition, the conformity effect is weaker when the strategies have correlated types.

However, if $\pi_u < \pi_c$, there always exists values of $\lambda(n)$ small enough such that $\rho^{**} = 1$. This means that one does not even need to assume that ρ is small to obtain the conformity effect.

Proofs.

Proof of Lemma 3. One can follow the same steps as in the proof of Lemma 1 to prove this lemma. For brevity, we just discuss cases in which the analysis sligthly differs from that used to derive lemma 1. In particular, we skip the proof that speculators' trading strategy (given in the first part of Lemma 3) is optimal given that the derivations are identical to those in Lemma 1.

Now, consider the manager's optimal investment policy, I^*, at date 3. If the manager receives private information, he just follows his signal because this signal is perfect. Hence, in this case, he pursues the common strategy if $s_m = G$ and he does not if $s_m = B$. If he receives no managerial information ($s_m = \varnothing$), the manager relies on stock prices. If he observes that $p_{A2} = p^H_{A2}$, the manager deduces that $f_A > 1 - \pi_u$. In this case, as $f_A > 1 - \pi_u$ can occur if and only if speculators buy stock A, i.e., if $t_{S_u} = G$, the manager infers that $t_{S_u} = G$ and optimally implements the unique strategy. If instead the manager observes that $p_{A2} = p^L_{A2}(S_c)$ then he deduces that $f_A < -1 + \pi_u$ and that, consequently, $t_{S_u} = B$. In this case, the manager optimally abandons his strategy.

Now consider the intermediate case in which $f_A \in (-(1 - \pi_u), (1 - \pi_u))$. If the manager observes that $p^{MH}_A(S_u)$, he infers that $f_{\max,-A} > (1 - \pi_c)$ and $f_A \in (-(1 - \pi_u), (1 - \pi_u))$. Thus, he infers that the common strategy is good because the event $f_{\max,-A} > (1 - \pi_c)$ can occur only if speculators buy incumbent stocks, i.e., if they learn that the common strategy is good. Thus, conditional on observing price $p^{MH}_A(S_u)$ for the stock price of firm A, the manager assigns a probability $\frac{(1+\rho)}{2}$ to the possibility that the unique strategy is good. Hence, his expectation of the net present value of firm A if he implements the unique strategy is:

$$\mathrm{E}(\mathrm{NPV}(S_u, 1) \left| p_{A2} = p^{MH}_A(S_u) \right.) = \overline{r}(S_u, 1) + \rho\sigma_A - 1, \tag{18}$$

which is positive if and only if $\rho \geq \rho^*$. Thus the manager optimally implements the unique strategy at date 3 when he observes price $p^{MH}_A(S_u)$ if and only if $\rho \geq \rho^*$. A similar reasoning yields:

$$\mathrm{E}(\mathrm{NPV}(S_u, 1) \left| p_{A2} = p^{MM}_A(S_u) \right.) = \overline{r}(S_u, 1) - 1,$$

and

$$\mathrm{E}(\mathrm{NPV}(S_u,1)\,\big|p_{A2}=p_A^{ML}(S_u))=\overline{r}(S_u,1)-\rho\sigma_A-1.$$

Hence, we have $\mathrm{E}(\mathrm{NPV}(S_u,1)\,\big|p_{A2}=p_A^{ML}(S_u)) <\mathrm{E}(\mathrm{NPV}(S_u,1)\,\big|p_{A2}=p_A^{MM}(S_u)) < 0$, where the last inequality follows from Assumption A.4. Thus, if the stock price of firm A is $p_A^{MM}(S_u)$ or $p_A^{ML}(S_u)$ and the manager receives no private signal, he does implement the unique strategy at date 3.

In sum, given his information at date 3, the manager's optimal investment policy is:

$$I^*(\Omega_3,S_u)=\begin{cases}1 \text{ if } s_m=G,\\ 1 \text{ if } s_m=\varnothing \text{ and } p_{A2}=p_{A2}^H,\\ 1 \text{ if } s_m=\varnothing \text{ and } p_{A2}=p_{A2}^{MH} \text{ if } \rho\geq\rho^*,\\ 0 \text{ otherwise,}\end{cases}, \tag{19}$$

as claimed in the last part of Lemma 1.

Equilibrium prices. We must check that the equilibrium prices given in the second and third parts of Lemma 3 satisfy Conditions (5) and (6) in the text, that is:

$$p_{A2}=\mathrm{E}(V_{A3}(I^*(\Omega_3,S_A),S_A)\mid\Omega_2), \tag{20}$$

and

$$p_{j2}=\mathrm{E}(r(S_c,m_{S_c.I^*},t_{S_c})\mid\Omega_2) \text{ for } j\in\{1,..,n\}, \tag{21}$$

where $I^*(\Omega_3,S_c)$ is given by (19) and $m_{S_c.I^*}=n+1$ if $I^*=1$ and $m_{S_c.I^*}=n$ if $I^*=0$.

We now show that this is the case. Consider first incumbent firms. Suppose that $f_{\max,-A}>(1-\pi_c)$. In this case, the order flow in the market for at least one incumbent stock reveals that the common strategy is good, i.e., $t_{S_c}=G$. We deduce that:

$$\mathrm{E}(r(S_c,m_{S_c.I^*},t_{S_c})\mid\Omega_2)=r(S_c,n,G) \text{ if } f_{\max,-A}>(1-\pi_c),$$

which is equal to $p_{c2}^H(n)$, the stock price of firm $j\neq A$ when $f_{\max,-A}>(1-\pi_c)$. Thus, in this case, Condition (21) is satisfied. Now consider the case in which $f_{\max,-A}\leq(1-\pi_c)$ and $f_{\min,-A}\geq-(1-\pi_c)$ and $f_A\geq(1-\pi_u)$. In this case, trades in incumbent stocks are uninformative about the type of the common strategy. However, the order flow in the entrant firm reveals that the unique strategy is good. Thus, dealers' belief about the type of the common strategy becomes:

$$\Pr(S_c = G \,|S_u = G) = \frac{(1+\rho)}{2}.$$

We deduce that:

$$\mathrm{E}(r(S_c, m_{S_c.I^*}, t_{S_c}) \mid \Omega_2) = \overline{r}(S_c, n) + \rho\sigma_c \text{ if } f_{\max,-A} \leq (1-\pi_c),\ f_{\min,-A} \geq -(1-\pi_c) \text{ and } f_A \geq (1-\pi_u),$$

which is equal to $p_{c2}^{MH}(n)$, the stock price of firm $j \neq A$ when $f_{\min,-A} \geq -(1-\pi_c)$ and $f_A \geq (1-\pi_u)$. Thus, in this case, Condition (21) is satisfied as well. Other possible realizations for the equilibrium stock price of incumbent firms can be derived using a similar reasoning. Hence, we skip the remaining cases for brevity.

Now, consider the incumbent firm A. Suppose that $f_A > (1-\pi_u)$. Thus, speculators are buying stock A, which means that this case arises if and only if the common strategy is good. According to the conjectured equilibrium, the stock price of firm A is p_{A2}^{H}. Hence, $I^* = 1$ whether or not the manager receives a private signal. We deduce that:

$$\mathrm{E}(V_{A3}(I^*(\Omega_3, S_c), S_c) \mid \Omega_2) = r(S_u, 1, G) - 1 \text{ if } f_A > (1-\pi_u),$$

which is equal to p_{A2}^{H}. Hence, if $f_{\max} \geq (1-\pi_c)$, Condition (23) is satisfied.

Now suppose that $f_A \in (-(1-\pi_u), (1-\pi_u))$ and $f_{\max,-A} > (1-\pi_c)$. In this case, the order flow in stock A is uninformative but the order flows in incumbent stocks reveal that the speculators buy these stocks and that therefore the common strategy is good. Thus, the belief of the dealer specialized in stock A about the ype of the unique strategy becomes:

$$\Pr(S_u = G \,|S_c = G) = \frac{(1+\rho)}{2}.$$

Hence, if the manager receives a private signal, the dealer expects this signal to be good with probability $\frac{(1+\rho)}{2}$, in which case the manager will implement the unique strategy. Moreover, according to the conjectured equilibrium, the stock price of firm A is p_{A2}^{HM}. Hence, if the manager does not receive a private signal, he implements his strategy if $\rho \geq \rho^*$ and does not if $\rho < \rho^*$ ccording to the conjectured equilibrium. Thus, the expected value of firm A if the manager does not receive information is $Max\{(\overline{r}(S_u,1)+\rho\sigma_A-1),0\}$. We deduce from these observations that when $f_A \in (-(1-\pi_u),(1-\pi_u))$ and $f_{\max,-A} > (1-\pi_c)$

$$\mathrm{E}(V_{A3}(I^*(\Omega_3,S_c),S_c)\mid\Omega_2) = \frac{\gamma(1+\rho)}{2}(r(S_u,1,G)-1)+\frac{(1-\gamma)}{2}Max\{(\overline{r}(S_u,1)+\rho\sigma_A-1),0\},$$

which is equal to p^{HM}_{A2}, the stock price of firm A when $f_A \in (-(1-\pi_u),(1-\pi_u))$ and $f_{\max,-A} > (1-\pi_c)$. Thus, in this case, Condition (23) is satisfied. Other possible realizations for the equilibrium stock price of incumbent firms can be derived using a similar reasoning. Hence, we skip the remaining cases for brevity.

Proof of Proposition 3. When $\rho \geq \rho^*$, the value of firm A at date 1 when it chooses the unique strategy is:

$$V_{A1}(S_u,\rho) = \frac{(\gamma+(1-\gamma)\pi_u)}{2}(r(S_u,1,G)-1)+\frac{(1-\gamma)(1-\pi_u)\overline{\pi}(n-1,\pi_c)}{2}(\overline{r}(S_u,1)+\rho\sigma_A-1), \tag{22}$$

where we emphasize the effect of ρ on the value of firm A by adding it as a determinant of $V_{A1}(S_u,\rho)$. $V_{A1}(S_u,\rho)$ clearly increases in ρ. Let ρ^{**} be the largest value of ρ such that

$$V_{A1}(S_u,\rho) \leq V_{A1}(S_c), \tag{23}$$

for $\rho \leq 1$. Substituting $V_{A1}(S_u,\rho)$ by its expression in eq.(22) and $V_{A1}(S_c)$ by its expression in eq.(16) in eq.(23), we deduce that:

$$\rho^{**} = Min\{\left[\frac{\widehat{\lambda}(\gamma,\pi_u,\pi_c,n)-\lambda(n)}{\sigma_A}\right]\left(\frac{(\gamma+(1-\gamma)\pi_u)}{(1-\gamma)(1-\pi_u)\overline{\pi}(n-1,\pi_c)}\right)(r(S_c,n{+}1,G)-1)+\rho^*,1\}.$$

Clearly, for $\lambda(n) < \widehat{\lambda}(\gamma,\pi_u,\pi_c,n)$ (which requires $\pi_u < \overline{\pi}(n,\pi_c)$ as otherwise $\widehat{\lambda}(\gamma,\pi_u,\pi_c,n) < 1$), $\rho^{**} > \rho^*$. As $V_{A1}(S_u,\rho)$ increases with ρ, the proposition is proved.

D Prior Information on the Type of the Common Strategy

In the baseline model, we assume that the ex-ante probability that a strategy is good is identical for the common and the unique strategy. That is, we assume:

$$\Pr(S_u = G) = \Pr(S_c = G) = \frac{1}{2}. \tag{24}$$

In this section, we consider the more general case in which $\Pr(S_u = G) \neq \Pr(S_c = G)$. To simplify notations, we define $\beta_c = \Pr(S_c = G)$ and $\beta_u = \Pr(S_u = G)$.

First, consider the benchmark case in which the manager of firm A ignores the information available in stock prices at date 3. In this case, following the same reasoning as in the text, we obtain that:

$$V_{A1}^{benchmark}(S_u) = \gamma\beta_u(r(S_u, 1, G) - 1), \tag{25}$$

$$V_{A1}^{benchmark}(S_c) = \gamma\beta_c(r(S_u, 1, G) - 1). \tag{26}$$

We deduce that $V_{A1}^{benchmark}(S_u) < V_{A1}^{benchmark}(S_c)$ if and only if:

$$\lambda(n) < \frac{\beta_c}{\beta_u}. \tag{27}$$

Thus, when the manager of firm A ignores information in stock prices, he chooses the common strategy if and only if $\lambda(n) < \frac{\beta_c}{\beta_u}$, as claimed in the text.

Now consider the case in which the manager of firm A uses information in stock prices. If the manager chooses the common strategy, the equilibrium of the stock market is similar to that obtained in Lemma 1 in the text. The only difference is the expression for incumbent firms' stock price and firm A's stock price when the order flows in all stocks are uninformative, i.e., when $f_{\max} \leq (1 - \pi_c)$ and $f_{\min} \geq -(1 - \pi_c)$. Namely, in this case, the stock price of incumbent firms is:

$$p_{j2} = \gamma(\beta_c p_{c2}^H(n+1) + (1-\beta_c)p_{c2}^L(n)) + (1-\gamma)\overline{r}(S_c, n),$$

and the stock price of firm A is:

$$p_{A2} = V_{A1}^{benchmark}(S_c),$$

where $V_{A1}^{benchmark}(S_u)$ is given by eq.(26). The proof of these claims is identical to that for Lemma 1 and is therefore omitted.

More important for our purpose, the investment policy of the manager in equilibrium is identical to that described in Lemma 1. Thus, we deduce that the value of firm A at date 1 if it follows the common strategy is:

$$V_{A1}(S_c) = (\gamma\beta_c + (1-\gamma)\Pr(f_{\max} > (1-\pi_c))(r(S_u, 1, G) - 1). \tag{28}$$

Indeed, the manager optimally implements his strategy at date 3 if and only if (i) he receives a positive private signal ($s_m = G$) or (ii) he does not receive a private signal ($s_m = \varnothing$) but his stock price is high ($p_{A2} = p_{A2}^H$) so that he infers that speculators have received a positive signal about the strategy of firm A. The first event occurs with probability $\gamma\beta_c$ while the second occurs with probability $(1-\gamma)\Pr(f_{\max} > (1-\pi_c))$. Calculations yield:

$$\Pr(f_{\max} > (1-\pi_c)) = \beta_c(1-(1-\pi_c)^{n+1}) = \beta_c\overline{\pi}(n, \pi_c).$$

Hence, using eq.(28), we finally obtain:

$$V_{A1}(S_c) = \beta_c(\gamma + (1-\gamma)\overline{\pi}(n, \pi_c))(r(S_u, 1, G) - 1). \tag{29}$$

If firm A chooses the unique strategy, the equilibrium of the stock market is similar to that obtained in Lemma 2 in the text. The only difference is that when $f_A \in (-(1-\pi_u), (1-\pi_u))$, the stock price of firm A is:

$$p_{A2} = V_{A1}^{benchmark}(S_u),$$

where $V_{A1}^{benchmark}(S_u)$ is given by eq.(25). Thus, following a similar reasoning to that when firm A chooses the common strategy, we deduce that:

$$V_{A1}(S_u) = \beta_u(\gamma + (1-\gamma)\pi_u)(r(S_u, 1, G) - 1). \tag{30}$$

Comparing $V_{A1}(S_u)$ and $V_{A1}(S_c)$, we obtain the following result.

Proposition 4 *(Conformity effect): If $\pi_u < \overline{\pi}(n, \pi_c)$ then, at date 1, firm A optimally chooses the common strategy if $\lambda(n) < \left(\frac{\beta_c}{\beta_u}\right)\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ and it chooses the unique strategy if $\lambda(n) > \left(\frac{\beta_c}{\beta_u}\right)\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$, where $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) = \left(\frac{\gamma+(1-\gamma)\overline{\pi}(n,\pi_c)}{\gamma+(1-\gamma)\pi_u}\right) > 1$. If $\pi_u > \overline{\pi}(n, \pi_c)$ then firm A always chooses the unique strategy.*

This proposition generalizes Proposition 2 in the baseline model (when $\beta_c = \beta_u$, it is identical to Proposition 2). That is, it shows that, for $\pi_u < \overline{\pi}(n, \pi_c)$, the set of parameters such that the manager of firm A optimally chooses the common strategy is broader when he relies on information conveyed by stock prices than when he does not since $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) > 1$ for $\pi_u < \overline{\pi}(n, \pi_c)$. Moreover, $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ decreases with π_u and is therefore maximal when $\pi_u = 0$. Thus, as in the baseline model, firm A has more incentive to differentiate when it is public ($\pi_u > 0$) than when it is private ($\pi_u = 0$).

E Industry Equilibrium

In this section, we endogenize the product choices of all firms at date 1. That is, we suppose that at date 1, there are $n + 1 \geq 2$ firms indexed by $i \in \{1, 2, ..., n + 1\}$. Firm 1 is private while the other n firms ($i \in \{2, ..., n + 1\}$) are public. At date 1, each firm must choose between one of two strategies denoted S_c and S_u: (i) S_c is a standard strategy and (ii) S_u is a unique strategy specific to the firm choosing it. Thus, if firm i chooses strategy S_u, its product is de facto differentiated from other firms' products (whether they themselves choose the common or a unique strategy) and it cannot learn information from other firms' stock prices, as in the baseline model.[2] As in the baseline model, we refer to S_c and S_u as being the common and the unique strategy, respectively.

We denote by n_c the number of firms following the common strategy and by $V_i(S_i, n_c)$ the value of firm i at date 1. We use the same notations and assumptions for the cash flows of the common and the unique strategy as in the baseline model (Assuptions A.1 to A.4 in the baseline model are maintained). However, for more generality, we allow firms' cash flows to depend on the firm choosing a given strategy (in addition to the strategy itself), i.e., to

[2] This means that S_u refers to the act of differentiation rather than to a product itself. To make this even more explicit, we could index each unique strategy by i, at the cost of increasing the notational burden.

depend on index i. As in the baseline model, for each firm $i \in \{1, 2, ..., n+1\}$, there is a cash flow gain from differentiation. That is:

$$\lambda_i(n_c) = \frac{r_i(S_u, 1, t_{Su})}{r_i(S_c, n_c, t_{S_c})} > 1, \text{ for } t_{S_c} = t_{Su}, \forall n_c. \tag{31}$$

In particular, the cash flow of a good common strategy is always *smaller* than the cash flow of a good unique strategy, even if $n_c = 1$ (e.g., consumers value novelty). We also assume that $\lambda_i(n_c)$ is weakly increasing in n_c: the gain from differentiation is higher when more firms choose the common strategy (i.e., the cash flow of the common strategy is weakly decreasing with the number of firms choosing this strategy). This is consistent with the idea that differentiation is more attractive when competition within an industry is more intense.

We define the following variables:

$$\begin{aligned}
&\overline{\pi}(k, \pi_c) \overset{def}{=} 1 - (1-\pi_c)^{k+1}, \\
&\widehat{\lambda}(\gamma, \pi_u, \pi_c, k) \overset{def}{=} \frac{\gamma + (1-\gamma)\overline{\pi}(k, \pi_c)}{\gamma + (1-\gamma)\pi_u}, \\
&\widehat{\lambda}^{private}(\gamma, \pi_c, k) \overset{def}{=} \frac{\gamma + (1-\gamma)\overline{\pi}(k, \pi_c)}{\gamma},
\end{aligned}$$

where k is an integer. As shown below, these variables play the same role as similarly defined variables in the baseline model (for which we have $k = n$, the number of incumbent firms).

We focus on Nash equilibria of the game at date 1 in which all firms choose their strategy simultaneously. An equilibrium of this game is defined as follows. At date 1, let $\mathcal{C}$ be the set of firms choosing the common strategy and let $\mathcal{U}$ be the set of firms choosing the unique strategy. For instance, if $n = 3$, a possible outcome is $\mathcal{C} = \{1, 2\}$ and $\mathcal{U} = \{1, 2\}$ in which case $n_c = 2$. The outcome in which $n_c^* \leq n+1$ firms choose the common strategy is a Nash equilibrium ("an industry equilibrium") iff:

$$V_i(S_c, n_c^*) \geq V_i(S_u, n_c^* - 1) \text{ for } i \in \mathcal{C}, \tag{32}$$

$$V_i(S_u, n_c^*) \geq V_i(S_c, n_c^* + 1) \text{ for } i \in \mathcal{U}. \tag{33}$$

These two conditions state that, individually, no firm has an incentive to deviate from its equilibrium strategic choice at date 1, accounting for its effect on the number of firms choosing the common strategy. For instance, the second condition says that if firm i chooses the unique strategy in equilibrium then its value at date 1 with this strategy is higher than its value with the common strategy (accounting for the fact that if it chooses the common strategy then it increases the number of firms choosing this strategy by one). Of course, Condition (32) (resp., (33)) becomes irrelevant in the corner case in which all firms choose the unique (resp., common) strategy, i.e., if $\mathcal{C} = \varnothing$ (resp., $\mathcal{U} = \varnothing$). The equilibrium of the stock market (i.e., of the subgame that starts at date 2) is as in the baseline version of the model.

In the rest of this section, we show the following results.

1. First, in Proposition 5, we show that when firms do not rely on stock prices as a source of information, the unique industry equilibrium is such that all firms differentiate. This result generalizes Proposition 1 in the baseline model in which we take incumbents' strategic choices as given.

2. Second, in Proposition 6, we show that when $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ for $i \in \{2, ..., n+1\}$ and $\lambda_1(n) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$, then there is an equilibrium in which all firms choose the common strategy (i.e., $n_c^* = n+1$). This result generalizes Proposition 2 in the baseline model. It shows that the conformity effect arises even when all firms' choices at date 1 are endogenous.

3. Third, in Proposition 8, we show that when firm 1 becomes public, the previous equilibrium is either unchanged or changed in such a way that existing public firms choose the common strategy while firm 1 differentiates. This result shows that our prediction regarding the effect of an IPO on differentiation (Corollary 2) still holds when all firms make endogenous choices. In particular, the level of differentiation of the firm that goes public increases or remains unchanged relative to its pre-IPO level of differentiation while the level of differentiation of existing public firms remains (optimally) unchanged.

As in the baseline model, we start with the analysis of the benchmark case in which firms ignore information in stock prices. Suppose that $n_c \leq n+1$ firms choose the common strategy at date 1. Following the same reasoning as in Section 3.1, we obtain that:

$$V_i^{benchmark}(S_c, n_c) = \gamma(r_i(S_c, n_c, G) - 1), \text{for } i \in C, \quad (34)$$

$$V_i^{benchmark}(S_u, n_c) = \gamma(r_i(S_u, 1, G) - 1), \text{for } i \in U. \quad (35)$$

Condition (31) implies that $V_{i1}^{benchmark}(S_c, n_c) < V_{i1}^{benchmark}(S_u, n_c - 1)$ for all i. Thus, there is no value of n_c for which Condition (32) can hold and therefore no equilibrium in which firms choose the common strategy. In contrast, Condition (31) implies that $V_i^{benchmark}(S_u, 0) > V_i^{benchmark}(S_c, 1)$ for all firms i. Thus, Condition (33) always holds. Thus, as in the baseline model, the unique possible equilibrium is such that all firms choose the unique strategy when they ignore information in stock prices, as claimed in the next proposition.

Proposition 5 *: When firms only rely on their private signal, the unique industry equilibrium is such that all firms optimally differentiate ($S_i^* = S_u$) and therefore $n_c^* = 0$.*

Now we consider the case in which firms rely on information in stock prices. We derive conditions under which the industry equilibrium is such that all firms choose the common strategy (i.e., $n_c^* = n + 1$ or, equivalently, $S_i^* = S_c$, $\forall i$). In this case, the equilibrium of the stock market is as in the baseline model when (i) firm A is private and chooses the common strategy and (ii) n firms are publicly listed and choose the common strategy. Thus, using eq.(12) in the baseline model, we deduce that the value of firm i at date 1 is:

$$V_i(S_c, n+1) = \frac{(\gamma + (1-\gamma)\overline{\pi}_c((n-1), \pi_c))}{2}(r_i(S_c, n+1, G) - 1), \ \forall i \quad (36)$$

In contrast, if public firm $i \in \{2, ..., n+1\}$ deviates and chooses the unique strategy at date 1, its value is:

$$V_i(S_u, n+1) = \frac{(\gamma + (1-\gamma)\pi_u)}{2}(r_i(S_u, 1, G) - 1), \text{for } i \in \{2, ..., n+1\}, \quad (37)$$

while if private firm 1 deviates its value at date 1 is:

$$V_1(S_u, n_c + 1) = \frac{\gamma}{2}(r_1(S_u, 1, G) - 1). \quad (38)$$

The difference in the value of the unique strategy for public and private firms reflect the fact that the private firm cannot learn from its own stock price since it is private (i.e., $\pi_u = 0$ for $i = 1$). For $n_c^* = n + 1$ to be a Nash equilibrium, Condition (32) must be satisfied for all firms (Condition (33) is irrelevant since no firm chooses the unique strategy in equilibrium when $n_c^* = n + 1$). Using eq.(37) and eq.(38), we deduce that when $n_c^* = n + 1$, Condition (32) is equivalent to:

$$\frac{(\gamma + (1 - \gamma)\overline{\pi}_c((n-1), \pi_c))}{2}(r_i(S_c, n+1, G) - 1) \geq \frac{(\gamma + (1 - \gamma)\pi_u)}{2}(r_i(S_u, 1, G) - 1), \text{ for } i \in \{2, .., n+1\} \tag{39}$$

and

$$\frac{(\gamma + (1 - \gamma)\overline{\pi}_c((n-1), \pi_c))}{2}(r_1(S_c, n+1, G) - 1) \geq \frac{\gamma}{2}(r_1(S_u, 1, G) - 1). \tag{40}$$

Condition (39) is equivalent to

$$\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1), \tag{41}$$

where $\lambda_{-1}^{\max}(n+1) = Max\{\lambda_2(n+1), ..., \lambda_{n+1}(n+1)\}$. Condition (40) is equivalent to:

$$\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1), \tag{42}$$

We deduce the following result.

Proposition 6 *: Suppose* $\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ *and* $\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$*. Then the case in which all firms choose the common strategy (*$n_c^* = n+1$*) is an industry equilibrium.*

Thus, as in the baseline model, one obtains that all firms optimally choose the common strategy when they rely on information in stock prices if the gains from differentiation are not too large ($\lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ for $i \in \{2, .., n+1\}$ and $\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$). Thus, the conformity effect is robust to the case in which all firms are endowed with a real option at date 1. Note that the condition $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ requires $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1) > 1$. This is the case iff $\overline{\pi}_c((n-1), \pi_c) > \pi_u$, that is, if and only if each firm's stock price is more informative about the type of the common strategy than about the type of the unique strategy (if it were to choose it), as in the baseline model. This requires: $1 - (1 - \pi_c)^n > \pi_u$. That is, for $n = 1$, the condition $\overline{\pi}_c((n-1), \pi_c) > \pi_u$ requires $\pi_c > \pi_u$.

For larger values of n, the condition $\overline{\pi}_c((n-1),\pi_c) > \pi_u$ can be satisfied even if $\pi_c < \pi_u$.

Of course, depending on the values of the cash flow gain from differentiation, other possible equilibrium configurations are possible. For instance, if $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma,\pi_u,\pi_c,n-1)$ and $\lambda_1(n) \geq \widehat{\lambda}^{private}(\gamma,\pi_c,n-1)$ then an industry equilibrium in which firm 1 chooses the unique strategy while other firms choose the common strategy can be obtained (see the third part of Proposition 8 below).

Moreover, the equilibrium described in Proposition 6 is typically not unique. The reason is that the informational benefit associated with choosing the common strategy increases with the number of firms choosing this strategy. This creates a complementarity in firms' strategic choices that leads to multiple equilibria for given values of the parameters (including the cash flow gain from differentiation). In particular, the equilibrium in which all firms choose the unique strategy at date 1 is always an equilibrium. Indeed, if firm i expects other firms to follow the unique strategy then choosing alone the common strategy has no informational benefit since other firms' stock prices contain no information. Given Condition (31), firm i is then better off choosing the unique strategy. However, when $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma,\pi_u,\pi_c,n-1)$ for $i \in \{2,..,n+1\}$ and $\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma,\pi_c,n-1)$, this equilibrium is Pareto dominated by the equilibrium in which all firms choose the common strategy in the sense that all firms' valuations are larger in the latter equilibrium. Thus, conformity is more likely to emerge in equilibrium. We state this result in the next proposition and proves it at the end of this section.

Proposition 7 *Suppose* $\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma,\pi_u,\pi_c,n-1)$ *and* $\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma,\pi_c,n-1)$. *Then the inudstry equilibrium in which all firms choose the common strategy (*$n_c^* = n+1$*) Pareto dominates the industry equilibrium in which all firms choose the unique strategy.*

In the next proposition, we analyze how the industry equilibrium described in Proposition 6 depends on whether private firm 1 is public or not.

Proposition 8 *: Suppose that* $\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma,\pi_u,\pi_c,n-1)$ *and that* $\widehat{\lambda}(\gamma,\pi_u,\pi_c,n) < \widehat{\lambda}^{private}(\gamma,\pi_c,n-1)$ *and that the industry equilibrium is as described in Proposition 6. When firm* 1 *goes public then:*

1. *If* $\lambda_1(n+1) \leq \widehat{\lambda}(\gamma,\pi_u,\pi_c,n)$ *then there is an industry equilibrium in which all firms choose the common strategy whether firm* 1 *is private or not.*

2. *If* $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$ *then there is an industry equilibrium in which all existing public firms choose the common strategy whether firm* 1 *is private or not while firm 1 chooses the common strategy only it is private.*

3. *If* $\lambda_1(n+1) > \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$ *then there is an industry equilibrium in which all existing public firms choose the common strategy and firm* 1 *the unique strategy whether firm* 1 *is private or not.*

This proposition (proved below) shows that our main prediction (derived in Corollary 2, in the baseline model) is still valid when all firms can choose their strategy at date 1. That is, private firm 1 is more likely to differentiate (i.e., it chooses the unique strategy for abroader set of parameters) when it is publicly listed than when it is private if $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$.[3] The reason is exactly the same as in the baseline model: when firm 1 is public it can learn from its own stock price even if it chooses the unique strategy. Thus, its incentive to follow the common strategy is weakened relative to the case in which it is private. Interestingly, the effect is opposite for existing public firms. That is, the public listing of firm 1 either reinforces their incentive to choose the common strategy or leaves it unchanged. Indeed, if firm 1 chooses the common strategy when it is publicly listed then the informativeness of the stock price of firms following the common strategy becomes higher, other things equal (since $\overline{\pi}_c(n_c^p, \pi_c)$ increases with n_c^p the number of publicly listed firms following the common strategy). This reinforces existing public firms' incentive to choose the common strategy. If instead, firm 1 chooses the unique strategy when it is publicly listed then the informativeness of the stock price of firms following the common strategy remains identical to what it was when firm 1 is private (since in either case, they cannot lear information from the stock price of firm 1).

Proofs

Proof of Proposition 7. In the industry equilibrium in which all firms choose the unique strategy, the value of public firm i at date 1 is:

$$V_i(S_u, 0) = \frac{(\gamma + (1-\gamma)\pi_u)}{2}(r_i(S_u, 1, G) - 1), \text{for } i \in \{2, ..., n+1\}. \tag{43}$$

[3] As in the baseline model and for the same reason, this condition requires that $\pi_u > \frac{\gamma(\overline{\pi}(n,\pi_c) - \overline{\pi}(n-1,\pi_c))}{\gamma + (1-\gamma)\overline{\pi}(n-1,\pi_c)}$ and $\gamma < 1$.

and the value of private firm 1 is:

$$V_1(S_u, 0) = \frac{\gamma}{2}(r_i(S_u, 1, G) - 1). \tag{44}$$

In the industry equilibrium in which all firms choose the common strategy, the value of firm i is:

$$V_i(S_c, n+1) = \frac{(\gamma + (1-\gamma)\overline{\pi}_c((n-1), \pi_c))}{2}(r_i(S_c, n+1, G) - 1), \forall i$$

It follows that firm i has a larger value in the industry equilibrium in which all firms choose the common strategy than in the equilibrium in which all firms choose the unique strategy if $\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ and $\lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$.

Proof of Proposition 8.

Case 1. $\lambda_1(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$. As $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$, we have $\lambda_1(n+1) < \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$. Moreover, as $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ for $i \in \{2, .., n+1\}$, we deduce from Proposition 6 that the situation in which all firms choose the common strategy is an equilibrium when firm 1 is private. Now, suppose that firm 1 is public. Following the same steps as for proving Proposition 6, we conclude that there is an equilibrium in which all firms (including firm 1) choose the common strategy if:

$$\lambda^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n),$$

where $\lambda^{\max}(n+1) = Max\{\lambda_1(n+1), \lambda_2(n+1), ..., \lambda_{n+1}(n+1)\}$. This condition is satisfied because (i) $\lambda_{-1}^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1) < \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ (since $\overline{\pi}(n, \pi_c) > \overline{\pi}(n-1, \pi_c)$) and (ii) $\lambda_1(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$.

Case 2. $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \lambda_1(n+1) \leq \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$. As $\lambda_1(n+1) < \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$ and $\lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$, we deduce from Proposition 6 that the situation in which all firms choose the common strategy is an equilibrium when firm 1 is private. Now, suppose that firm 1 is public. The case in which all firms choose the common strategy cannot be an equilibrium. Indeed, as explained in case 1, this requires $\lambda^{\max}(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$. However, this necessary condition cannot be satisfied since $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \lambda_1(n+1)$. Thus, the industry equilibrium necessarily involves more differentiation than when firm 1 is private. In particular, there is an industry equilibrium in which firm 1 chooses the unique strategy while other firms choose the common strategy if

$$V_i(S_c, n) \geq V_i(S_u, n-1) \text{ for } i \neq 1, \tag{45}$$

$$V_i(S_u, n) \geq V_i(S_c, n+1) \text{ for } i = 1. \tag{46}$$

Condition (45 requires $\lambda_i(n) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$ for $i \neq 1$. This is the case since $\lambda_i(n) \leq \lambda_i(n+1) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n-1)$. Condition (46) requires $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \lambda_1(n+1)$, which is the case as well. This establishes the second part of the proposition.

Case 3. $\lambda_1(n+1) > \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$. By proceeding exactly as in Case 2, we can show that whether firm 1 is private or not: (i) the case in which all firms choose the common strategy cannot be an equilibrium since $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n) < \widehat{\lambda}^{private}(\gamma, \pi_c, n-1)$ while (ii) there is an industry equilibrium in which firm 1 chooses the unique strategy while other firms choose the common strategy. This establishes the third part of the proposition.

F Cross-sectional predictions

Let $d^k(\lambda(n), \pi_u, \pi_c, \gamma)$ be a dummy variable equal to 0 if firm A chooses the common strategy and 1 if firm A chooses the unique strategy, where k indicates whether firm A is private (in this case $k = priv$) or public (in this case $k = pub$). We refer to $d^k(\lambda(n), \pi_u, \pi_c, \gamma)$ as the *level* of differentiation for firm A.[4] Let

$$\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n) = d^{pub}(\lambda(n), \pi_u, \pi_c, \gamma, n) - d^{priv}(\lambda(n), \pi_u, \pi_c, \gamma, n),$$

be the change in the level of differentiation of firm A when it switches from being private to being public, other things equal. Below, we analyze the effect of γ and π_c on $\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n)$, conditional on the firm differentiation being low when it is private (i.e., $d^{priv}(\lambda(n), \pi_u, \pi_c, \gamma, n) = 0$). We focus only on the case in which $\pi_u > \frac{\gamma(\overline{\pi}(n,\pi_c) - \overline{\pi}(n-1,\pi_c))}{\gamma + (1-\gamma)\overline{\pi}(n-1,\pi_c)}$. Indeed, as explained in the text, when $\pi_u < \frac{\gamma(\overline{\pi}(n,\pi_c) - \overline{\pi}(n-1,\pi_c))}{\gamma + (1-\gamma)\overline{\pi}(n-1,\pi_c)}$, there is no conformity effect and therefore $\Delta = 0$ for all parameters.

The effect of managerial information (γ). Suppose that $\gamma < 1$ so that $\widehat{\lambda}^{private}(\gamma, \pi_c, n) >$

[4] In our model, the level of differentiation is a binary variable since firm A chooses either to differentiate or not.

$\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$. Moreover, let $\widehat{\lambda}^{inv}(\lambda(n), \pi_u, \pi_c, n)$ and $\widehat{\lambda}^{private,inv}(\lambda(n), \pi_c, n)$ be the inverse functions of $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ and $\widehat{\lambda}^{private}(\gamma, \pi_c, n)$ with respect to γ, respectively. Proposition 2 in the model (see also Figure 3) implies that:

$$\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n) = \begin{cases} 0 & if\ \gamma < \widehat{\lambda}^{inv}(\lambda(n), \pi_u, \pi_c, n), \\ 1 & if\ \widehat{\lambda}^{inv}(\lambda(n), \pi_u, \pi_c, n) < \gamma < \widehat{\lambda}^{private,inv}(\lambda(n), \pi_c, n), \\ 0 & \gamma > \widehat{\lambda}^{privateinv}(\lambda(n), \pi_c, n). \end{cases}$$

Thus, for $\gamma < \widehat{\lambda}^{private,inv}(\lambda(n), \pi_c, n)$, the firm is not differentiated before its IPO ($d^{priv}(\lambda(n), \pi_u, \pi_c, \gamma, n) = 0$; see Proposition 2) and the effect of γ on $\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n)$ is (weakly) positive. We deduce that the change in the level of differentiation of a firm after its IPO (relative to its level before the IPO) should increase with γ, conditional on the firm being not too differentiated before its IPO, as claimed in Section 4.4.

The effect of peers' stock price informativeness ($\overline{\pi}$). When firm A is public, it chooses the common strategy if and only if $\lambda(n) \leq \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$, i.e., if and only if $\pi_c > \widehat{\pi}_c^{pub}(n, \lambda(n), \gamma, \pi_u)$ since $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ increases π_c. Using the definition of $\widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$, we get:

$$\widehat{\pi}_c^{pub}(\gamma, \pi_u, n) = 1 - (1 - (\frac{\gamma(\lambda(n) - 1)}{(1 - \gamma)} + \lambda(n)\pi_u))^{1/n+1}.$$

Similarly, when firm A is private, it chooses the common strategy if and only if $\lambda \leq \widehat{\lambda}^{private}(\gamma, \pi_u, \pi_c, n)$, i.e., if and only if $\pi_c > \widehat{\pi}_c^{priv}(\gamma, n)$ since $\widehat{\lambda}^{private}(\gamma, \pi_c, n)$ increases π_c. Using the definition of $\widehat{\lambda}^{private}(\gamma, \pi_c, n)$, we get:

$$\widehat{\pi}_c^{priv}(\gamma, n) = 1 - (1 - (\frac{\gamma(\lambda(n) - 1)}{(1 - \gamma)}))^{1/n}.$$

As $\pi_u > \frac{\gamma(\overline{\pi}(n, \pi_c) - \overline{\pi}(n-1, \pi_c))}{\gamma + (1-\gamma)\overline{\pi}(n-1, \pi_c)}$, $\widehat{\lambda}^{private}(\gamma, \pi_c, n) > \widehat{\lambda}(\gamma, \pi_u, \pi_c, n)$ (see Proposition 2). Thus, in this case $\widehat{\pi}_c^{pub}(\gamma, \pi_u, n) > \widehat{\pi}_c^{priv}(\gamma, n)$. We deduce from Proposition 2 that:

$$\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n) = \begin{cases} 0 & \text{if } \pi_c < \widehat{\pi}_c^{priv}(\gamma, n), \\ 1 & \text{if } \widehat{\pi}_c^{priv}(\gamma, n) < \pi_c < \widehat{\pi}_c^{pub}(\gamma, \pi_u, n), \\ 0 & \pi_c > \widehat{\pi}_c^{pub}(\gamma, \pi_u, n). \end{cases}$$

Thus, when $\widehat{\pi}_c^{priv}(\gamma, n) < \pi_c$, the firm is not differentiated before its IPO ($d^{priv}(\lambda(n), \pi_u, \pi_c, \gamma, n) =$

0; see Proposition 2) and the effect of π_c on $\Delta(\lambda(n), \pi_u, \pi_c, \gamma, n)$ is (weakly) positive. That is, the change in the level of differentiation of a firm after its IPO (relative to its level before the IPO) should decrease with π_c (and therefore peers' stock price informativeness), conditional on the firm being not too differentiated before its IPO, as claimed in Section 4.4.

G Alternative measures of product differentiation

In this section, we analyze the robustness of our main empirical findings to the measurement of product differentiation. Specifically, we estimate our baseline specification (eq.(17) in the paper) using four alternative measures of product differentiation, namely stock return co-movement, cash-flow co-movement, differences in markups, and similarity of new product announcements.

First, we compute stock return co-movement between every two firms i and j in the TNIC network by estimating annual market models (with weekly returns from CRSP) augmented with the return of firm j. The estimated coefficients on firm j's return, denoted $\beta_{ret,i,j}$, measures the return co-movement between firms i and j in year t, after controlling for the market return. We posit that $\beta_{ret,i,j}$ is higher if firms i and j follow more similar strategies.

Second, mirroring the computation of stock return co-movement, we estimate regressions of firm i's quarterly cash flow over assets (from COMPUSTAT) on the (value-weighted) average cash flow over assets of the market and the cash flow over assets of firm j. For each pair, we use rolling windows of three years for this estimation. The estimated coefficient on firm j's cash-flow, denoted $\beta_{cf,i,j}$, measures the cash-flow co-movement between firms i and j in year t. Again, we posit that $\beta_{cf,i,j}$ is higher if firms i and j follow more similar strategies.

Third, we use the annual difference in markups between firms i and j, denoted $\Delta Markup_{i,j}$, measured as the difference between firms' net profits scaled by cost of goods sold (from COMPUSTAT). Indeed, a large literature in industrial organization suggests that more differentiated firms should enjoy higher markups (e.g., Sutton (1991)). We thus posit that $\Delta Markup_{i,j}$ is lower if firms i and j follow more similar strategies.

Finally, we compute the similarity of products between firms' pairs using firms' products announcements. We gather all new product announcements recorded by Capital IQ for firms in our sample. Capital IQ collects voluntary announcements by firms (e.g., via news wires or press releases) starting from 2002. Each announcement consists of a short description (maximum of 40 words for our sample firms) and a long description (maximum of 442 words for our sample firms) detailing the new product. For every firm-year, we parse the text of all announcements and retain non-common nouns and proper nouns. We then compute two measures of cosine similarity between firms, one using short descriptions and one using long descriptions. To do so, we strictly follow the methodology of Hoberg and Phillips (2016). Because not all firms in our sample are covered by Capital IQ or issue public statements about new products, the set of firm-pairs with available measures of product similarity is smaller than that using Hoberg and Phillips' measure.[5] However, we can retain similarity scores for every pair, as we do not impose any minimum similarity threshold.

[Insert Table A about Here]

Table A presents the results, and confirm that our main finding (the positive association between the going-public decision and subsequent differentiation) obtains with all alternative measures. Column (1) of Table A shows that $\beta_{ret,i,j}$ is smaller for treated pairs in our sample (the coefficient on $\tau \times Treated$ is negative). This means that pairs of firms involving one IPO firm becomes significantly more differentiated after the IPO year than control pairs, as found in our baseline tests (see Section 4.3 in the paper). To account for the fact that $\beta_{ret,i,j}$ could be affected by differences in leverage (total debt over total assets), column (2) presents results obtained when we further control for differences in leverage between firms in a given pair. Estimates with this specification are very similar to those in column (1). Column (3) shows that $\beta_{cf,i,j}$ is smaller for treated pairs (the coefficient on $\tau \times Treated$ is negative). This again means that pairs of firms involving one IPO firm becomes significantly more differentiated subsequent to an IPO than control pairs. Column (4) indicates that differences in markups are higher for treated pairs (the coefficient on $\tau \times Treated$ is positive). Finally, columns (5) (short descriptions) and (6) (long descriptions) indicate that our results with the alternative text-based measures of product similarity based on Capital IQ product announcements are qualitatively similar to those obtained with the Hoberg and Phillips' measure. These patterns are consistent with increased product differentiation post-IPO.

[5] The correlation between Hoberg and Phillips' similarity scores and those obtained using product announcements is quite high (0.24 for short descriptions and 0.27 for long descriptions).

H Falsification tests: Placebos, SEOs, and Debt Issues

To further assess the robustness of our interpretation, we repeat our baseline analysis using alternative situations for which we should not observe an increase in differentiation according to our model. First, we design placebo tests in which we simply replace the actual sample of IPO firms that we use in the paper by samples made of randomly selected (non-IPO) firms. Specifically, we generate 1,000 such samples composed of 1,000 "fake" treated firms. For each of these samples, we replicate exactly the procedure we follow to construct treated and control pairs and estimate our baseline specification (17). Column (1) of Table B reports the average coefficients obtained across 1,000 estimations. On average, we find no difference between treated and control pairs, indicating that our baseline results are truly specific to IPOs.

[Insert Table B about Here]

Second, we replace IPOs with SEOs. We define firm-year "events" based on stock issuance data from SDC, retaining only stock issues larger than 5% of firms' assets. We identify 638 distinct SEOs with data available in our sample (i.e., for which we can measure product differentiation). We again replicate our baseline procedure to construct treated and control pairs and estimate specification (17) of the paper. Column (2) of Table B reveals that the change in product differentiation post-SEO of treated pairs (i.e., pairs in which one firm is a SEO firm) is not different from that of control pairs (i.e. pairs constructed from peers of peers of SEO firms). This indicates that our findings are unlikely to be driven by the relaxation of financial constraints, as otherwise we should see an effect for SEOs as well as for IPOs. Interestingly, our model would predict that no effect should be observed around SEOs. Indeed, in contrast to an IPO, an SEO should not change managers' expectations regarding the informativeness of their own stock price if they chose to differentiate more. In this context, our model would predict no effect of an SEO on its decision to differentiate.

Third, in a similar spirit than the SEO test, we consider debt issues. We define firm-year "events" based on private debt issuance data from Dealscan, also requiring that the amount issued exceeds 5% of firms' assets. We identify 1,170 private debt issues satisfying this condition over the 1996-2011 period. Mirroring the SEO results, column (3) of Table B indicates no change in differentiation post-issuance for treated pairs (i.e., pairs in which one firm is an debt-issuing firm) compared to control pairs.

I Difference-in-Differences specification

In this section, we modify the structure of our baseline specification (17), and consider a difference-in-differences approach to measure the change in firms' product differentiation post-IPO. On the sample of treated and control pairs defined in Section 4.2 of the paper, we estimate the following specification:

$$d_{i,j,\tau,t} = \alpha_{i,j} + \delta_t + \mu_\tau + \pi(Post_k \times Treated_{i,j}) + \boldsymbol{\beta}\mathbf{X}_{i,j,\tau,t} + \varepsilon_{i,j,\tau,t}, \tag{47}$$

where t is calendar time, and the unit of observation is at the firm-pair-time level. The variable $Treated_{i,j}$ is an indicator variable that equals one if pair (i, j) includes an IPO firm, and zero otherwise. $Post_k$ is an indicator variable that equals one if $\tau > k$ (for $k = 0, 1, 2, 3$), and zero otherwise. The vector $\mathbf{X}$ controls for time-varying differences in the characteristics of firm i and j that could be related to differentiation choices, namely the (log of) total assets and market-to-book ratios, and $\alpha_{i,j}$, δ_t, μ_τ are pair, calendar, and event-time fixed effects, respectively. We allow the error term ($\varepsilon_{i,j,\tau,t}$) to be correlated within pairs.

Compared to our baseline specification (17), the difference-in-differences specification (47) replaces τ by $Post_k$ and $\tau \times Treated$ by $Post_k \times Treated$. While our baseline specification (17) tracks the evolution of the difference between $d_{i,j,\tau,t}$ and $d_{i,j,\tau=0,t}$ for all pairs *year by year*, the coefficient π on the interaction $Post_k \times Treated$ in specification (47) measures the average *difference* between $d_{i,j,\tau=5,t}$ and $d_{i,j,\tau=0,t}$ that is specific to the fact that the pair (i, j) is treated, *averaged* across all years post-IPO.

[Insert Table C about Here]

Table C presents the results for $k = 0, 1, 2, 3$. Across all specifications, we observe positive and significant estimates for π, confirming that the product differentiation of IPO firms increase significantly after they go public. Depending on how we define the *Post* variable, the magnitude of the increase in product differentiation varies between 0.49% and

0.62%, which is close to what we obtain in our baseline estimation (an increase of 0.73% over five years).

J Alternative proxies for peers' stock price informativeness ($\overline{\pi}(n, \pi_c)$)

In section 4.5.2 of the paper, we use two measures of stock price informativeness as proxies for a firm's peer stock price informativeness ($\overline{\pi}(n, \pi_c)$ in the model). In this section, we show that we obtain similar results if we consider alternative proxies that have been used in the literature.

First, we rely on the sensitivity of stock prices to earnings news using the "earnings response coefficients" (ERC). Following Ball and Brown (1968), we conjecture that informative stock prices should better and more quickly incorporate relevant information about future earnings. Hence, earnings news of firms with informative prices should trigger a lower price response. Thus, a larger value of $1/ERC_j$ indicates that the stock price of peer j of firm i is *more* informative. We compute $1/ERC_{i,j}$ for each firm-year as the average of the three-day window absolute market-adjusted stock returns over the four quarterly announcement periods.

Second, we use coverage from professional financial analysts received by peer firms ($Coverage$). More coverage is typically associated with improved informational environment. Indeed, analysts gather information about the value of business strategies, and provide value-adding information (e.g. Healy and Palepu (2001)) that has a significant effect on stock prices (e.g., Womack (1996) and Barber, Lehavy, McNichols, and Trueman (2006)). Also, analysts receive direct information from managers and render this information public. Hence, peers' stock prices should be more informative when peers are covered by more analysts.

[Insert Table D about Here]

Table D presents results of estimating the cross-sectional specification (19 in the paper) with each of these proxies. As predicted by our model, we find that the positive association between the going-public decision and post-IPO differentiation is weaker for IPOs with more informative peers' stock prices, conditional on firms having a relatively low level of differentiation before their IPO. Indeed, the coefficients on $\tau \times Treated_{i,j,\tau,t} \times \Upsilon_{low,i} \times \phi_i$ are significantly negative for both proxies for peers' price informativeness.

K Differentiation and prices informativeness

The "conformity effect" highlighted by our model partly relies on the conjecture that the informativeness of the stock market about the common strategy is higher than the informativeness of the stock market about the unique strategy (Corollary 1). We provide empirical evidence that supports this claim by looking at the correlation between the uniqueness of a firm's product (i.e. its overall differentiation) and the informativeness of its stock price.

We measure the overall differentiation of a given firm i in a given year t (present in the TNIC network) as the sum of $d_{i,j,t}$ across all peers j, which we label as $\overline{d_{i,t}}$. To measure the relationship between differentiation and price informativeness we estimate the following specifications. For the three proxies of price informativeness for which we have firm-year observations (PIN, $1/ERC$, and $Coverage$), we estimate the following model:

$$Info_{i,t} = \delta_0 + \delta_1 \overline{d_{i,t}} + \delta_2 \log(A_{i,t}) + \delta_3 MB_{i,t} + \delta_3 Age_{i,t} + \eta_t + \varepsilon_{i,t} \tag{48}$$

where $Info_{i,t}$ is one of the proxy for the stock price informativeness of firm i, A is firm i's total assets, MB its market-to-book ratio, Age its public age (i.e., time since its IPO), and η_t represent year-fixed effects.

For the proxy taken from Bai, Philipon, and Savov (2016) – where we do not have a firm-year level measure – we instead estimate the following interacted specification:

$$\frac{E_{i,t+k}}{A_{i,t}} = \theta_0 + \theta_1 MB_{i,t} + \theta_2 (MB_{i,t} \times \overline{d_{i,t}}) + \theta_3 \frac{E_{i,t}}{A_{i,t}} + \eta_t + \varepsilon_{i,t} \tag{49}$$

where $E_{i,t+k}$ is firm i's earnings in year $t+k$. We focus on three horizons k: one-, two-, and year-year ahead earnings ($k = 1, 2, 3$).

[Insert Table E about Here]

Table E reports the results of these estimations. Panel A confirms that overall differentiation is negatively related to price informativeness. This relationship holds and is statistically significant across all specifications. Firms that have more differentiated products appear to have notably *less* informative stock prices. This result also appears in Panel B. We observe negative and significant coefficients on the interaction term $MB_{i,t} \times \overline{d_{i,t}}$ across all specifications, indicating that the current stock prices of more differentiated firms have a *lower* ability to forecast future earnings – they are less informative.

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Table A: Alternative Measures of Differentiation

This table presents estimates of specification (17) in the paper using alternative measures of product differentiation. The unit of observation is a firm-pair-year. The sample includes pairs where one firm (firm i) is an IPO firm and the other firm (firm *j*) is an established peer, and pairs where one firm (firm i) is a peer of an IPO firm and the other firm (firm *j*) is a peer of firm *i* than is not a peer of the IPO firm. We identify peers using the TNIC network developed by Hoberg and Phillips (2016) and define established peers as public firms that have been listed for more than 5 years. We select peers of peers using a matching procedure as defined in Section 4.2 of the paper. Pairs that include an IPO firm are treated pairs (Treated=1) and pairs without an IPO firm are control pairs (Treated=0). We track pairs over five years following each IPO, so that the event time variable τ = 0, 1, 2, 3, 4, or 5. In columns (1) and (2), the dependent variable is stock return co-movement between two firms i and j in the TNIC network estimated using annual market models (with weekly returns) augmented with the return of firm j. In column (3), the dependent variables is cash-flow co-movement between two firms i and j in the TNIC network estimated using 3-years rolling windows regressions of firm i's quarterly cash flows over assets on the (value-weighted) average cash-flow over assets of the market and the cash flow of firm j. In column (4), the dependent variable is the difference in markups between two firms i and j in the TNIC network, where markups are measured as net profits scaled by cost of goods sold. In columns (5) and (6) the dependent variables are product similarity measured using cosine similarities across firms' short and long descriptions associated with product announcements from Capital IQ. The control variables include the differences in size and market-to-book ratio between firms in each pair. The sample period is from 1996 to 2011. All specifications include firm-pair and calendar year fixed effects. The standard errors used to compute the *t*-statistics (in squared brackets) are adjusted for heteroskedasticity and within-firm-pair clustering. Symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dep. Variable:	Product Differentiation					
Measure:	Ret. Co-mov.		CF Co-mov	markups	CIQ similarity	
	(1)	(2)	(3)	(4)	(5)	(6)
τ	-0.002***	-0.002***	-0.001***	0.001	-0.001***	-0.000
	[-5.81]	[-5.20]	[-2.92]	[1.59]	[-3.84]	[-0.03]
τ x Treated	-0.001*	-0.001**	-0.001**	0.010***	-0.001*	-0.001**
	[-1.66]	[2.08]	[-2.67]	[12.84]	[-1.76]	[-2.02]
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Pair and Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	618,861	608,674	390,222	629,690	39,451	74,127
Adj. R^2	0.261	0.263	0.457	0.574	0.775	0.721

Table B: SEOs, Debt Issues, and Placebo IPOs

This table presents estimates for various modifications of specification (17) in the paper. The dependent variable is the degree of product differentiation between firm i and j ($d_{i,j}$). The unit of observation is a firm-pair-year. In column (1), the sample includes pairs where one firm (firm i) is an SEO firm (if the proceed of the SEO is larger than 5% of its assets) and the other firm (firm *j*) is an established peer, and pairs where one firm (firm i) is a peer of an SEO firm and the other firm (firm *j*) is a peer of firm *i* than is not a peer of the SEO firm. We select peers of peers using a matching procedure as defined in Section 4.2 in the paper. Pairs that include an SEO firm are treated pairs (Treated=1) and pairs without an SEO firm are control pairs (Treated=0). We track pairs over five years following each SEO, so that the event time variable τ = 0, 1, 2, 3, 4, or 5. In column (2), we follow a similar procedure but replace SEO firms with firms issuing private debt (if the issue is larger than 5% of assets). In column (3) we replace SEO firms by a set of randomly selected firms, and report average estimates performed across 1,000 distinct placebo tests. We identify peers using the TNIC network developed by Hoberg and Phillips (2016) and define established peers as public firms that have been listed for more than 5 years. The control variables include the difference in size and market-to-book ratio between firms in each pair. The sample period is from 1996 to 2011. All specifications include firm-pair and calendar year fixed effects. The standard errors used to compute the *t*-statistics (in squared brackets) are adjusted for heteroskedasticity and within-firm-pair clustering. Symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dep. Variable:	Product Differentiation ($d_{i,j}$)		
Event:	SEO	Debt Issue	1,000 placebo
	(1)	(2)	(3)
τ	0.152***	0.192***	0.251***
	[39.84]	[52.35]	[87.98]
τ x Treated	0.004	0.034	0.009
	[0.52]	[1.35]	[1.36]
Controls	Yes	Yes	Yes
Pair Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Obs.	339,762	382,269	1,000
Adj. R^2	0.766	0.753	N/A

Table C: Alternative Specification: Difference-in-Differences

This table presents estimates for various modifications of specification (XX) in the paper. The dependent variable is the degree of product differentiation between firm i and j ($d_{i,j}$). The unit of observation is a firm-pair-year. The sample includes pairs where one firm (firm i) is an IPO firm and the other firm (firm *j*) is an established peer, and pairs where one firm (firm i) is a peer of an IPO firm and the other firm (firm *j*) is a peer of firm *i* than is not a peer of the IPO firm. We identify peers using the TNIC network developed by Hoberg and Phillips (2016) and define established peers as public firms that have been listed for more than 5 years. We select peers of peers using a matching procedure as defined in Section 4.2 in the paper. Pairs that include an IPO firm are treated pairs (Treated=1) and pairs without an IPO firm are control pairs (Treated=0). We track pairs over five years following each IPO, so that the event time variable τ = 0, 1, 2, 3, 4, or 5. The binary variable Post equals one if τ>0, τ>1, τ>2, or τ>3. The control variables include the differences in size and market-to-book ratio between firms in each pair. The sample period is from 1996 to 2011. All specifications include firm-pair, calendar and event year fixed effects. The standard errors used to compute the *t*-statistics (in squared brackets) are adjusted for heteroskedasticity and within-firm-pair clustering. Symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dep. Variable:	Product Differentiation ($d_{i,j}$)			
Post defined as:	τ >0	τ >1	τ >2	τ >3
	(1)	(2)	(3)	(4)
Post x Treated	0.062***	0.051***	0.052***	0.049***
	[4.28]	[3.42]	[3.30]	[2.95]
Controls	Yes	Yes	Yes	Yes
Pair Fixed Effects	Yes	Yes	Yes	Yes
Calendar Year Fixed Effects	Yes	Yes	Yes	Yes
Event Year Fixed Effects	Yes	Yes	Yes	Yes
Obs.	633,805	633,805	633,805	633,805
Adj. R^2	0.729	0.729	0.729	0.729

Table D: Differentiation post-IPO: The Role of Information - Robustness

This table presents estimates of equation (19) with various proxies for managerial information and stock price informativeness (ϕ). The dependent variable is the degree of product differentiation between firm *i* and *j* ($d_{i,j}$). The unit of observation is a firm-pair-year. The sample includes pairs where one firm (firm *i*) is an IPO firm and the other firm (firm *j*) is an established peer, and pairs where one firm (firm *i*) is a peer of an IPO firm and the other firm (firm *j*) is a peer of firm i than is not a peer of the IPO firm. We identify peers using the TNIC network developed by Hoberg and Phillips (2016) and define established peers as public firms that have been listed for more than 5 years. We select peers of peers using a matching procedure defined in Section 4.2. Pairs that include an IPO firm are treated pairs (Treated=1) and pairs without an IPO firm are control pairs (Treated=0). We track pairs over five years following each IPO, so that the event time variable τ = 0, 1, 2, 3, 4, or 5. The variables ϕ represent proxies peers' stock prices informativeness (1/ERC and Coverage). The proxies ϕ are divided by their sample standard deviation to facilitate economic interpretation. The variable Υ_{low} is a binary variable that is equal to one if the level of differentiation for the IPO firm *i* in its IPO year (τ = 0) averaged over all its initial peers is below the median value (across all IPO firms), and zero otherwise. The control variables (unreported) include the difference in size and market-to-book ratio between firms in each pair. The sample period is from 1996 to 2011. The standard errors used to compute the *t*-statistics (in squared brackets) are adjusted for heteroskedasticity and within-firm-pair clustering. Symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dep. Variable:	Produt Differentation ($d_{i,j}$)	
ϕ:	1/ERC_j	$Coverage_j$
	(3)	(4)
τ	0.135***	0.137***
	[50.63]	[55.38]
τ x Treated	-0.156***	-0.160***
	[-28.30]	[-30.97]
τ x Treated x Υ_{low}	0.768***	0.588***
	[19.99]	[15.50]
τ x Treated x Υ_{low} x ϕ	-0.143***	-0.109***
	[-10.20]	[-5.39]
Control Variables	Yes	Yes
Pair Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Obs.	569,251	633,805
Adj. R^2	0.736	0.731

Table E: Product Differentiation and Stock Price Informativeness

This table displays the association between overall firm-level differentiation and stock price informativeness. We measure the overall differentiation of a given firm *i* in a given year *t* (present in the TNIC network) as the sum of $d_{i,j,t}$ across all peers *j*. In Panel A, we regress three firm-level proxies for stock price informativness on this measure of overall differentiation. We consider PIN, 1/ERC, and Coverage as defined in the text. In Panel B, we follow Bai, Philippon, and Savov (2016) and regress future earnings, on current prices (MB), and interact prices with current differentiation. The sample period is from 1996 to 2011. All explanatory variables are divided by their sample standard deviation to facilitate economic interpretation. The standard errors used to compute the *t*-statistics (in squared brackets) are adjusted for heteroskedasticity and within-firm-pair clustering. Symbols ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A: Firm-year measure of price informativeness			
Dep. Variable:	PIN	1/ERC	Coverage
d	-0.001*	-0.001***	-0.136**
	[-1.90]	[-7.27]	[2.43]
log(A)	-0.068***	0.007***	4.189***
	[-78.39]	[35.23]	[42.70]
MB	-0.034***	-0.001***	1.534***
	[-56.13]	[-3.40]	[24.19]
Age	0.008***	0.003***	-1.121*
	[8.80]	[19.13]	[1.64]
Year Fixed Effects	Yes	Yes	Yes
Obs.	46,234	44,997	50,116
R^2	0.43	0.18	0.42

Panel B: Bai, Philipon, and Savov Measure			
Dep. Variable:	E_{t+1}	E_{t+2}	E_{t+3}
MB	0.051***	0.121***	0.233***
	[3.09]	[3.67]	[4.24]
MB x d	-0.035**	-0.099***	-0.204***
	[-2.13]	[-2.99]	[-3.68]
E/A	0.114***	0.102***	0.100***
	[129.70]	[65.53]	[44.14]
Year Fixed Effects	Yes	Yes	Yes
Obs.	45,400	40,563	35,138
R^2	0.58	0.35	0.26