Internet Appendix to "Are All Inside Directors the Same?"*

This Internet Appendix contains further in-depth analysis related to the analysis of the published text. Sections A and B reports results and discuss additional firm-level descriptive and univariate statistics. Additional robustness results for the main findings of certified inside director (CID) determinants and relation to firm performance and value are in Sections C and D respectively. Sections E and F respectively explore various additional firm-level and board-level measures of the importance of firm-specific information for board decision making, develops hypotheses and reports additional tests of these hypotheses. These results are from earlier versions of this study. Section G further examines the relation between certified inside directors and firm operating performance by decomposing ROA into its various components. Finally, Sections H and I explore certified inside directors prior to acquiring their first outside directorship, at the firm and the director level.

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A. Sample Firm Descriptive Statistics

Table IA.I, Panel A shows descriptive statistics for key characteristics of our sample firms. On average (at the median), firms have total assets of $5.3 ($1.1) billion, two (one) business segments and a nine member board, consisting of six independent outside directors, one affiliated director, one inside director, and the CEO. These board characteristics are similar to other studies such as Coles et al. (2008) and Bhagat and Black (2002).

Average (median) CEO and board ownership levels are 3.6% (1.3%) and 6.4% (1.7%), respectively. This is comparable to Bhagat and Black (2002), who report average ownership by the CEO of 3.8% and by officer/directors of 9%. In addition, 7% of sample firms have at least one non-CEO inside operating officer-director with an unaffiliated outside board seat.

B. Univariate Comparisons of Firms with Certified and Uncertified Inside Directors

Examining Table IA.I, Panel B, we see that firms with CIDs are not significantly different from firms with other inside directors in terms of R&D intensity, capital expenditure intensity, or depreciation to sales ratios. On the other hand, firms with CIDs are significantly larger, older, and financially more stable, and they have more business segments than firms with non-CIDs. They also have higher equity capitalization and better operating performance on average than do firms with non-CIDs, suggesting that firms with CIDs tend to have lower agency costs and are better managed.

Firms with CIDs also tend to have larger boards, which are typically associated with weaker governance (Yermack (1996)). However, Cole, Daniel, and Naveen (2008) finds that larger boards can be optimal for larger firms when they need more specialized advice, which CIDs can help provide. CIDs are associated with lower CEO and board ownership and a higher frequency of CEO-chair duality, which are suggestive of firms with higher agency costs, but, firms with CIDs are also associated with a greater percentage of independent outside directors on their boards, which suggests greater board monitoring, less entrenched CEOs, and thus lower shareholder-manager agency costs. These descriptive statistics suggest that CIDs may help offset some corporate governance weaknesses and complement some governance strengths, but a more powerful multivariate analysis approach, which is reported in the main text, is needed to disentangle these conflicting associations.

C. Determinants of Inside Board Representation

Table IA.II reports results examining determinants of CID and non-CID representation, where the lower bound of the dependent variable is censored at zero since many firms have no inside directors (other than the CEO) on the board. After accounting for the fact that many firms have no inside directors using Tobit regressions, the resulting estimates are similar to the findings in Table II.

D. An Alternative Approach to Endogeneity: Instrumental Variables

An alternative approach to addressing endogeneity is a two-stage least squares (2SLS) instrumental variable (IV) model, where inside director representation, the endogeneous covariate, is regressed on a set of instruments that are correlated with it but uncorrelated with the firm performance regression's error term. We use determinants of inside directors on the board from Table II (specifically, firm leverage, capital expenditures, geographic segments, industry competition, and the Sarbanes-Oxley indicator) to obtain an instrumented variable for CID and non-CID representation. The disadvantage of this approach is that it does not correct for self-selection of all inside directors and it forces the control variables to have the same slope for firms with and without inside directors.

Table IA.III, Panel A presents results for this 2SLS-IV model. The estimates in Panel A are consistent with our previous findings in Table III that CIDs are positively associated with operating performance and market-to-book ratios. F-tests for regressions of the IVs on inside director representation reveal that they have significant explanatory power. Hansen J-statistics reveal that we cannot reject these IVs as valid instruments, orthogonal to the second-stage firm performance measures, in all but the first regression. Table IA.III, Panel B presents results conditioning on high and low firm R&D intensity, as in Table V, using the 2SLS-IV model. F-tests for significant differences between high and low R&D intensity firms are reported at the bottom of the table. Model 1 reveals a stronger relation with CIDs and firm operating performance in more R&D intensive firms, though the association of CIDs with market-to-book ratios is similar for high and low R&D intensity firms in model 2.

E. Certified Inside Directors: CEO Entrenchment, Firm Complexity, and Product Market Competition

Our primary tests for the importance of firm-specific information utilized one measure, R&D intensity, but the importance of timely director access to firm-specific information can be reflected in other firm characteristics in addition to its internal growth opportunities. Here we consider several characteristics that can reflect the importance of firm-specific information to board decision making. These characteristics capture several dimensions of firm complexity, namely, firm size, age, and the number of business and geographic segments. We jointly examine these dimensions of complexity by creating a composite measure of organizational complexity based on the first principle component of these firm characteristics. CIDs are expected to be more important to board oversight functions as this measure of firm-specific information's importance rises.

The importance of timely director access to information also rises as board oversight becomes more critical to a firm's survival. Gillan et al. (2004) observe that product market competition raises the importance of well-informed directors and finds that greater competition increases demand for strong corporate governance and forces managers and directors to work harder and more efficiently to survive. Furthermore, in poorly performing firms, managers risk losing their jobs, while directors risk loss of reputation and reduced demand for their corporate director services (Gilson (1990), Kaplan and Reishus (1990), Fich and Shivdasani (2007), and Yermack (2004)). As a board's role becomes more critical to a firm's financial health, collaboration between inside and outside directors has a greater impact on firm performance (Harris and Raviv (2008)). Therefore, if CIDs enhance board decision making, then we expect a stronger positive association with firm performance and valuation when competitive forces are stronger. The following hypothesis captures these predictions.

> AH1: CIDs are associated with better firm performance and higher firm value when firms have one or more of the following attributes: (1) a large, complex organizational structure, and (2) highly competitive product markets.

As with R&D intensity, organizational complexity and product market competition are associated with a greater need for board access to firm-specific information. Examining the relations of CIDs and firm performance, conditioning on these measures allows us to assess more clearly whether outside directorships increase inside director independence or if they are only a signal of inside director value. More specifically, if the outside directorship is only a signal, then there should be no difference in the strength of the association of CIDs and performance in more versus less complex or competitive firms.

In Table IA.IV, we jointly consider alternative measures of the importance of directors having timely access to firm-specific information and CEO entrenchment. We use our composite measure from principle component analysis as our measure of firm complexity. We also use principle component analysis and several measures of CEO power and influence (CEO tenure, CEO ownership, and CEO-board chair) to

construct a single measure of entrenchment.[1] Models 1 and 5 jointly consider firm complexity and CEO entrenchment. The significant positive coefficient on the interaction of CID representation and high firm complexity (having an above-median factor score) indicates that CIDs add significant value in complex firms, perhaps by limiting agency costs. The generally insignificant coefficient on the interaction of CID representation and a highly entrenched CEO indicator (having an above-median factor score) suggests that CIDs may offset the negative impact of an entrenched CEO, possibly because of their improved incentives.

In models 2 and 6, we measure the importance of well-informed directors in high growth firms by an indicator for firms having above-median R&D intensity.[2] The operating performance results are weaker than when we use firms in the top quartile of R&D intensity as a high growth indicator, but the market-to-book results are consistent with the earlier findings in Table V. In models 3 and 7 of Table IA.IV, we also find evidence that the net effect of CIDs is stronger in highly competitive industries, where timely director access to firm-specific information is more important. Finally, in models 4 and 8 of Table IA.IV, we jointly consider all the interactions. We find that CIDs have stronger relations with operating performance and firm value in complex firms. In all the models, a highly entrenched CEO weakens the positive associations of CIDs with firm operating performance and firm value. Tables IA.V and IA.VI respectively show results for firm complexity and product market competition in isolation. We again find that the interactions of high firm complexity and high levels of competition with CID representation are positive and significant. The interaction of less competitive industries with CID representation is also significantly positive, but it is of a smaller magnitude than the interaction with highly competitive industries in most of the regressions.

Complementing the prior findings, we also find that when firm-specific information is highly important to board monitoring and decision making, CIDs have stronger positive relations with firm operating performance and market-to-book ratios. Thus, when directors' timely access to proprietary information is particularly important, CIDs appear to be more valuable. Conversely, we find no relation between non-CIDs and measures of firm performance. Instead, we find evidence to the contrary, that non-CIDs are associated with lower operating performance when firms face a more competitive environment.

F. Board Characteristics: CIDs and Measures of Board Outside Independence

The prior hypotheses focus on firm and CEO characteristics. However, board characteristics can also dictate a varying need for firm-specific information. For example, boards with a non-CEO chairperson or a large majority of independent outside directors are more independent of a CEO, increasing their monitoring incentives, but they suffer from having less direct knowledge of firm operations, which makes board monitoring less effective. Thus, board decision making in such firms can benefit from timely access to firm-specific information. It follows that if more independent inside directors lead to better-informed boards, then when boards have enough independence to act on this information, firms with CIDs should exhibit better operating performance and stock valuation.

> AH2: CIDs are associated with stronger firm performance when (1) the chairman of the board is not the CEO and (2) the board includes a large majority of independent outside directors.

In Table IA.VII, we examine the association of CIDs with firm performance and value when their boards have a large majority of independent outsiders, a non-CEO chairperson, or an influential outside

[1] Our primary measures are based on CEO tenure as in Hermalin and Weisbach (1998). However, for robustness we also experimented with another proxy for CEO entrenchment, the number of key antitakeover provisions, which isolates a CEO from the external market for corporate control, measured by the E-index of Bebchuck, Cohen, and Ferrel (2009). We find significant, though weaker results using the E-index, including it in principle component analysis or as a separate variable.

[2] To be consistent with the other information measures, we define high R&D firms as those with above-median R&D intensity.

director (defined below) by interacting CID representation with indicators for these three board characteristics. The first proxy for board independence is a binary variable that equals one if independent outside directors represent 60% or more of the board, and zero otherwise. The second proxy for board independence is a binary variable that equals one if the CEO does not chair the board of directors. Reformers have long thought that separating these two positions is beneficial to shareholder interests. Nevertheless, a large majority of publicly listed U.S. companies continue to have a dual CEO-board chairperson. Brickley, Coles, and Jarrell (1997) argue that in large firms the cost of separating these two positions could outweigh their benefits. One potentially important cost they emphasize is transferring critical firm-specific information to a chairperson, which is likely to be a greater task in larger firms where information complexity is substantial. If CIDs help transfer firm-specific information within a board at low cost, then when there is a separate board chairperson, we should expect CIDs to be associated with enhanced firm performance.

Finally, we consider whether the presence of an influential outsider may better motivate inside directors to improve their performance and reveal more internal firm information to the board. Because inside director certification is based on external labor market forces, we focus on board members who can offer greater outside career opportunities to inside directors. If inside directors perceive that an outside director has a strong reputation as a director, then they should have greater incentive to impress this director so as to further their own careers. Brickley, Linck, and Coles (1999) show that former CEOs with strong labor market reputations are more likely to stay on their board as chairperson and to have more directorships after retirement. Thus, outside directors who are chairs of other corporate boards represent directors with strong reputations, who can provide greater incentives for inside directors to share their inside knowledge. Given their stronger reputations, they have greater incentives to carefully monitor the performance of firms and CEOs where they sit on the board and to seek better access to firm-specific information that a CID could supply. We examine this possibility by using an indicator variable that equals one if at least one independent outside director on the board holds a title of chairperson in another firm.[3]

Model 1 of Table IA.VII shows that after controlling for CID representation, neither a board with a substantial majority of independent outside directors nor a board with a non-CEO chairperson is associated with a significant improvement in firm performance. In model 2, we examine the CID-performance relation when boards have a non-CEO chairperson. While the interaction term is not significant, an F-test reveals that operating performance is statistically greater in firms with CIDs *and* a non-CEO chairperson. In model 3 of Table IA.VII, we test the CID-performance relation when boards have a majority of independent outside directors. Contrary to our expectations, we find no evidence that CIDs enhance a board with a majority of independent outside directors. This could reflect the fact that the CID variables enter too many times in this regression, diluting their individual marginal influences. Interestingly, firm performance is not positively associated with the existence of a non-CEO chairperson *and* a majority of independent outside directors. In model 4 of Table IA.VII, we consider firms where CID incentives are greater due to the presence of an influential outside director. We find the strongest relation with operating performance when the board has a CID *and* an influential outside director. This finding underscores the importance of the incentives for inside directors arising from the external labor market for directors.

Market-to-book regression estimates shown in models 6 to 9 are also consistent with the earlier operating performance results. Non-CEO chairs provide valuable independent oversight, but when their timely access to firm-specific information is poor, measured by the lack of a CID, board oversight can be less effective. Moreover, greater exposure to labor market forces (given the presence of an influential outside director) strengthens the association of CIDs and firm value. Finally, models 5 and 10 estimate the

[3] Our definition of influential directors is different from prior literature that uses block holdings to indicate influential outside directors.

relation between CIDs and firms with non-CEO chairpersons using a 2SLS–IV model. When using a sample of all firms, including those without inside directors in a 2SLS-IV framework, the incremental effect of having CIDs and a non-CEO chair is insignificant.

In the above models, the association of firm performance with a majority of independent outside directors and a separate non-CEO chairperson is statistically insignificant, which is consistent with Adams and Ferreira's (2007) conjecture that better monitoring incentives may be insufficient for effective board oversight if the board lacks critical firm-specific information. One interpretation of the results in Table IA.VII is that CIDs enhance information transfers to a non-CEO chair, facilitating improved oversight of management, which reduces agency costs associated with manager-shareholder conflicts of interest.

In summary, we find evidence that suggests CIDs are more beneficial when other board monitoring mechanisms are strong. Specifically, we find the interaction of CIDs with an indicator for a separate non-CEO Chair or an independent director with a strong reputation in the labor market is associated with improved firm operating performance and market-to-book ratios. These results suggest CIDs are more valuable when a board's chairperson is less familiar with firm operations and investment opportunities, but is independent of the CEO or when the forces of the external directorship market are particularly strong.

G. ROA Decomposition

To further explore the reasons for the observed association of CIDs with better firm operating performance, we analyze the components of operating performance to see whether CIDs enhance board monitoring of operational efficiency, asset growth, or overhead costs. For this purpose, we decompose ROA into three components following Chhaochharia et al. (2009) and Ang, Cole, and Lin (2000) to better understand the causes for the CID and ROA relation. Defining ROA as EBITDA/Assets,[4] we decompose it as follows:

$$\frac{\text{EBITDA}}{\text{Assets}} = \frac{\text{EBITDA}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} = \frac{(\text{Sales} - \text{COGS} - \text{SGA})}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \qquad \text{(IA.1)}$$

where EBITDA/Sales represents a firm's profit margin and Sales/Assets represents asset turnover. EBITDA can be decomposed further into cost of goods sold (COGS) and sales and general administrative expenses (SGA). These components reveal how effective the board is at controlling operating and overhead costs and measure the effects of agency conflicts. Asset turnover measures the effectiveness of a firm in managing assets to generate sales and has an inverse relation with agency problems manifested in poor investment decisions or managerial shirking. COGS captures the efficiency of production and SGA captures overhead costs associated with running the firm apart from production. COGS and SGA together determine a firm's profit margin. If managers are performing their operating duties effectively, then we expect to find high asset turnover and low COGS and SGA relative to sales (implying a high profit margin).

In Table IA.VIII, we estimate the association between CID representation and ROA. In model 1, we find that greater CID representation in high R&D intensity firms is associated with significantly better operating performance, consistent with our earlier findings in Table V using cash flow from operations. In the next four models we examine various components of ROA. In model 2, we examine asset turnover and find that CID representation in high R&D firms is associated with significantly higher asset turnover. This suggests that CIDs improve board monitoring of management, leading to increased revenue from a firm's existing assets. In model 3, we examine operational efficiency (COGS/Sales) and find that greater CID

[4] We previously used cash flow from operations, rather than EBITDA, in the numerator in our definition of ROA for reasons discussed earlier. Here we use EBITDA for two reasons. First, it serves as a further robustness test of our earlier results. Second, this is the definition used by others when decomposing ROA into various components.

representation is associated with significantly lower COGS in information sensitive firms, suggesting that CIDs also improve operating efficiency in such firms. In model 4, we analyze overhead expenses (SGA/Sales) and surprisingly find a positive relation between CIDs and greater overhead costs, regardless of the level of firm R&D intensity. Greater overhead cost serves to reduce ROA. However, the associated benefits of greater operating efficiency and better use of firm assets more than offset the higher overhead expense for high R&D firms, based on model 1. Finally, in model 5 we combine the effects of COGS/Sales and SGA/Sales into profit margin. By focusing on profit margin, we can examine whether the positive effect of greater operational efficiency or the negative effect of greater overhead expense is dominant. We find that CIDs are associated with significantly greater profit margins in firms with high R&D intensity, where timely firm-specific information is most critical to boards. In summary, CIDs appear to help boards more efficiently manage firm assets. Though CIDs are associated with greater overhead costs, this is more than offset by the association with greater operating efficiency and better use of assets.[5]

H. Further Analysis of Discovering CIDs

If CIDs are a firm's most valued executives, their board presence should be associated with better firm performance, even prior to an outside directorship. If outside directorships are also a source of improved inside director incentives, we should see higher firm valuation in the year an undiscovered inside director acquires an outside directorship. In Table IA.IX, we find that undiscovered CIDs are positively related to firm operating performance and market-to-book, consistent with the results of Table III. In models 2 and 4, we evaluate the impact of an inside director acquiring an outside directorship on firm performance and valuation by regressing firm operating performance and market-to-book on an indicator for the year an undiscovered CID first acquires an outside directorship and other control variables, including firm fixed effects. For operating performance, the inside director discovery year indicator is insignificant, which is not surprising since a firm's current-year operating performance is unlikely to change immediately after a mid-year improvement in governance. It is more likely that these improvements would show up in the following year, which is what we find in our DID analysis. However, in the market valuation regressions, the inside director discovery year indicator takes a significant positive coefficient, which is to be expected if the market immediately capitalizes expected future improvements in firm governance and performance. This is consistent with the earlier findings in Table IV using a DID analysis; so we again conclude that recognition by the external market for directorships improves an inside director's incentives to be a more active and independent director, which enhances board effectiveness and puts greater pressure on a CEO to perform.

I. Inside Directors with Independent Outside Directorships Prior to Joining Their Own Board

We next examine CIDs who hold outside directorships prior to joining their own board. Specifically, we try to distinguish whether these prior outside board seats arise due to strategic initiatives by the firm or are the result of broader labor market forces. The evidence reported in Table IA.X suggests the latter and that these prior directorships are reflective of these insiders having stronger management and decision control skills. Specifically, these insiders are more likely to have seats on boards of more visible S&P500 firms and NYSE listed firms relative to CIDs who receive their inside board seats first. Firms with CIDs holding prior outside directorships are also more likely to have a common outside director who serves on both boards the CID sits on than is true for other firms with CIDs. CIDs with prior outside board seats also on average have shorter subsequent tenure, which is consistent with their leaving more frequently for other outside positions. In sum, the evidence is consistent with CIDs with prior outside board seats exhibiting

[5] Examining the correlations of the logs of one plus COGS/Sales and SGA/Sales for high and low R&D firms separately, we find that they are negatively correlated in both high and low R&D firms.

greater labor market sensitivity, rather than being motivated by strategic considerations of the firm. It is interesting to note that there are no significant differences in growth rate of assets, firm performance, or firm value between the two sets of firms, so both sets of firms with CIDs exhibit similar performance levels.

INTERNET APPENDIX REFERENCES

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Table IA.I
Descriptive Statistics of Sample Firms

The sample consists of 10,767 firm-year observations for 2,137 firms from fiscal years 1997 to 2006, excluding finance and utility firms and firms with CEOs 64 years old or older. All variable definitions are in the Appendix of the published text. The ownership variables are winsorized at the 1% and 99% levels. Certified inside directors (CIDs) are operating officers on the board who hold at least one outside directorship in an unaffiliated firm. Non-certified inside directors do not sit on the board of an unaffiliated firm. Certified Inside Director Present equals one if the firm has at least one CID on the board. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively, based on a two-tailed t-test of the difference in means.

Panel A: Firm Level					
	N	Mean	Median	P25	P75
Firm Characteristics					
Assets ($1,000,000)	10686	5,260	1,118	470	3,252
Number of Business Segments	10767	2	1	1	3
Firm Age	10624	21	14	7	30
Leverage	10655	0.2	0.2	0.1	0.3
Capital Expense / Sales	10570	0.12	0.04	0.03	0
Depreciation Expense / Sales	10641	0.08	0.04	0.03	0
R&D / Assets	10686	0.03	0.00	0.00	0.0
Stock Volatility	10592	0.13	0.12	0.09	0.16
Equity Capitalization ($1,000,000)	10658	7,089	1,350	557	4,105
Tangible Assets as % of Total Assets	9532	83	89	74	98
EBITDA ($1,000,000)	10644	721	154	59	454
Growth Rate of Assets (%)	10674	24	9	-0.04	22
Operating CF/Assets	10666	0.12	0.11	0.06	0.17
Market-to-book	10655	2.35	1.71	1.27	2.56
Ownership and Board Characteristics					
CEO Ownership (%)	10352	3.63	1.27	0.50	3.10
Board Ownership (excluding CEO) (%)	10369	6.43	1.70	0.48	6.11
Founder Director Present	10767	0.17	0	0	0
Founding Family Director Present	10767	0.09	0	0	0
Board Size	10767	8.9	9.0	7.0	10.0
Percent Independent Outside Directors (%)	10767	66%	66.7%	55.6	80%
Percent Affiliated Directors (%)	10767	13.5%	11.1%	0	22.2%
Separate CEO and Chair	10767	0.40	0	0	1
Certified Inside Director Present	10767	0.07	0	0	0

Table IA.I (continued)

Panel B: Sub-Sample Univariate Analysis: Firms with Non-CEO Inside Directors			
	Means		
	Firms with Non-Certified Inside Directors	Firms with Certified Inside Directors	Difference
Firm Characteristics			
Assets ($1,000,000)	4,903	11,831	-6928***
Number of Business Segments	2.11	2.59	-0.48***
Firm Age	18.30	28.42	-10.13***
Leverage	0.22	0.24	-0.02**
Capital Expense / Sales	0.12	0.10	0.01
Depreciation Expense / Sales	0.08	0.07	0.02
R&D / Assets	0.03	0.03	0
Stock Volatility	0.14	0.11	0.03***
Equity Capitalization ($1,000,000)	6869	18994	-12125***
Tangible Assets as % of Total Assets	84.0	83.0	0.93
EBITDA ($1,000,000)	661	1756	-1095***
Growth Rate of Assets (%)	27.59	21.68	5.91
Operating CF/Assets	0.12	0.13	-0.01**
Market-to-book	2.38	2.68	-0.30***
Ownership and Board Characteristics			
CEO Ownership (%)	4.93	2.96	1.97***
Board Ownership (excluding CEO) (%)	8.92	6.11	2.82***
Founder Director Present	0.24	0.17	0.07***
Founding Family Director Present	0.13	0.14	-0.01
Board Size	9.09	10.96	-1.87***
Percent Independent Outside Directors (%)	56.94	61.81	-4.87***
Percent Affiliated Directors (%)	14.00	11.98	2.02***
Separate CEO and Chair	0.47	0.27	0.20***

Table IA.II
Determinants of Inside Director Board Representation – Tobit Regressions

This table presents Tobit regression estimates of the determinants of inside operating officer representation on corporate boards for firms in the 1997 to 2006 sample period. The dependent variable in model 1 (2) is the percentage of all non-certified inside directors (certified inside directors) on the board. Certified (non-certified) inside directors are defined as non-CEO inside directors who hold at least one (no) outside directorship in an unaffiliated firm. All other variable definitions are in the Appendix of the published text. All models include year and industry fixed effects. The associated *p*-values are reported beneath each coefficient estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	% Non-Certified Inside Directors	% Certified Inside Directors
	Model 1	Model 2
Information Importance		
R&D/Assets	-21.05***	10.28
	(0)	(0.193)
Capital Expenditure/Sales	-0.15	0.21
	(0.256)	(0.148)
Ln(Sales)	-0.77***	4.92***
	(0)	(0)
Leverage	-3.49***	-2.40
	(0.003)	(0.292)
Ln(# Business Segments)	-1.42***	-0.40
	(0)	(0.481)
Ln(# Geographic Segments)	-2.55***	1.45**
	(0)	(0.024)
Industry Competition	0.002***	-0.005***
	(0)	(0)
CEO/Board Characteristics		
Ln(CEO Tenure)	3.38***	3.08***
	(0)	(0)
CEO Percent Ownership	0.27***	-0.07
	(0)	(0.246)
Board Ownership%	0.27***	0.07**
	(0)	(0.04)
Founder Director Present	6.46***	1.46
	(0)	(0.166)
Founder Family Director Present	2.05***	0.40
	(0.003)	(0.735)
Firm Performance & Activity		
Stock Volatility	3.46	-13.14
	(0.327)	(0.111)
Operating $CF_{(t-1)}$	0.08	-0.01
	(0.53)	(0.889)
Recent M&A	0.81*	1.29
	(0.077)	(0.105)
Post-SOX	-8.28***	-2.35
	(0)	(0.382)
Number of Observations	9523	9523
Psuedo-R^2	4.04%	5.96%

Table IA.III

Inside Directors and Firm Performance Estimated by a 2SLS Instrumental Variables Model

This table presents a multivariate regression analysis using a two-stage least squares instrumental variable framework to examine the effect of inside directors with unaffiliated outside directorships (certified inside directors (CID)) on firm performance for firms in the 1997 to 2006 period. We use a Sarbanes-Oxley indicator, firm leverage, capital expenditure intensity, geographic segments, and industry competition to instrument for the portion of CIDs and non-CIDs on the board. The instrumented variable is then used in the second-stage performance regressions reported here. The dependent variables are industry adjusted (Fama-French) annual operating performance in models 1 and 2 and the natural logarithm of year-end market-to-book in models 3 and 4. All variable definitions are in the Appendix of the published text. Standard errors are robust to heteroskedasticity (White (1980)) and are adjusted for firm clustering. The *p*-values are reported beneath each coefficient estimate. All models include year and industry fixed effects. Beneath the table we report the *p*-value for the F-test of the significance of the first-stage endogenous variable regression and we report the Hansen J-statistic to test for the exogeneity of the instruments. Panel B reports results conditioning on firm R&D intensity as in Table V of the main text. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A:

	CF		ln(M/B)	
	Model 1	Model 2	Model 3	Model 4
Certified Inside Directors (%)	0.121***	0.108**	0.228**	0.220*
	(0.001)	(0.014)	(0.035)	(0.066)
Non-Certified Inside Directors (%)		0.023**		0.0422
		(0.036)		(0.141)
CEO Percent Ownership	-0.003	-0.017**	-0.010	-0.035*
	(0.367)	(0.03)	(0.125)	(0.057)
CEO Percent Ownership^2	0.0001	0.0003*	0.0003*	0.0008**
	(0.49)	(0.057)	(0.057)	(0.032)
Board Ownership	-0.0004	-0.0036**	0.0008	-0.0050
	(0.376)	(0.028)	(0.489)	(0.228)
Founder Director Present	-0.003	-0.084**	0.021	-0.125
	(0.846)	(0.046)	(0.593)	(0.233)
Founder Family Director Present	0.001	-0.022	-0.057	-0.097
	(0.972)	(0.433)	(0.227)	(0.113)
CF			1.506***	1.525***
			(0)	(0)
$CF_{(t-1)}$			0.353***	0.317***
			(0)	(0.001)
$CF_{(t-2)}$			-0.047*	-0.059**
			(0.067)	(0.037)
Ln(Assets)	-0.051***	-0.038**	-0.080*	-0.064
	(0.001)	(0.043)	(0.077)	(0.22)
Number of Business Segments	-0.004	-0.003	-0.019**	-0.017*
	(0.297)	(0.567)	(0.017)	(0.074)
R&D / Assets	-0.568***	-0.421**	2.000***	2.249***
	(0)	(0.01)	(0)	(0)
Depreciation Expense/Sales	-0.016***	-0.013**		
	(0.007)	(0.022)		
Capital Expense/Sales			0.005***	0.007***
			(0)	(0)
Ln(Firm Age)	-0.016**	-0.002	-0.050***	-0.026
	(0.034)	(0.818)	(0.004)	(0.319)
Stock Volitility	-0.184*	-0.177		
	(0.073)	(0.168)		
Number of Observations	9285	9285	9186	9186
F-test of first stage (*p*-value)	0.03	0.03	0.00	0.00
F-test of first stage (*p*-value) (for Non-CID)		0.00		0.00
Hansen J-statistic (exogeneity of IVs)	8.53**	1.33	2.79	0.84

Table AI.III (continued)

Panel B:

	CF	ln(M/B)
	Model 1	Model 2
Certified Inside Directors (%) x High R&D	0.107***	0.117***
	(0)	(0.003)
Certified Inside Directors (%) x Low R&D	0.051***	0.111***
	(0)	(0)
R&D / Assets	-0.61***	2.23***
	(0)	(0)
CEO Percent Ownership	-0.002**	-0.009**
	(0.022)	(0.014)
CEO Percent Ownership^2	0.00004*	0.0003***
	(0.058)	(0.003)
Board Ownership	-0.0003**	0.0003
	(0.014)	(0.647)
Founder Director Present	0.001	0.041*
	(0.861)	(0.072)
Founding Family Director Present	-0.002	-0.053**
	(0.636)	(0.035)
CF		1.466***
		(0)
$CF_{(t-1)}$		0.429***
		(0)
$CF_{(t-2)}$		-0.016
		(0.387)
Ln(Assets)	-0.027***	-0.040***
	(0)	(0.001)
Number of Business Segments	-0.005***	-0.016***
	(0)	(0)
Depreciation Expense/Sales	-0.011**	
	(0.034)	
Capital Expense/Sales		0.004***
		(0.006)
Ln(Firm Age)	-0.009***	-0.029***
	(0)	(0.001)
Stock Volitility	-0.195***	
	(0)	
F-test : CID x High R&D = CID x Low R&D		
	0.056***	0.006
	(0.001)	(0.82)
Number of Observations	9285	10809
Adjusted R^2	15%	27%

Table IA.IV
Certified Inside Directors and Firm Performance Classified by Information Importance and CEO Entrenchment

This table presents the second-stage of the Heckman (1979) MLE regression analysis to examine the different interactive effects of certified inside directors (CID) and indicators of firm-specific information importance and CEO entrenchment on firm performance for firms in the 1997 to 2006 period. The first-stage is the probit model in Table II model 3. The dependent variables are industry adjusted annual operating performance and ln(market-to-book). Certified Inside Director representation (CID %) is defined as the percentage of board members who are non-CEO inside directors and hold at least one unaffiliated outside directorship. High R&D is an indicator if R&D expenditures are above the median. All other variable definitions are in the Appendix of the published text. All models include year and industry fixed effects. The standard errors are robust and clustered by firm, with *p*-values reported beneath each coefficient estimate. Additional controls are the same as in Table III of the main text and are suppressed for brevity. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CF				ln(M/B)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
CID (%) x High CEO Entrenchment	-0.001	-0.001	-0.001	-0.001	-0.003	-0.004	-0.003	-0.0045
	(0.146)	(0.162)	(0.179)	(0.14)	(0.475)	(0.324)	(0.473)	(0.325)
CID (%) x High Complexity	0.0019**			0.0019*	0.0112**			0.0099*
	(0.029)			(0.053)	(0.033)			(0.053)
CID (%) x High R&D		0.001		-0.00003		0.008*		0.007
		(0.486)		(0.978)		(0.087)		(0.176)
CID (%) x High Competition			0.001	0.001			0.006	0.004
			(0.417)	(0.377)			(0.315)	(0.515)
CID (%)	0.001	0.001	0.002*	0.0004	0.004	0.006	0.010**	-0.0001
	(0.596)	(0.171)	(0.091)	(0.724)	(0.494)	(0.174)	(0.016)	(0.98)
High CEO Entrenchment	-0.004	-0.005	-0.005	-0.004	-0.020	-0.018	-0.020	-0.018
	(0.366)	(0.338)	(0.34)	(0.36)	(0.38)	(0.407)	(0.379)	(0.41)
High Complexity	0.014***			0.014***	-0.021			-0.033
	(0.009)			(0.009)	(0.386)			(0.174)
High R&D		0.001		-0.001		0.216***		0.218***
		(0.834)		(0.939)		(0)		(0)
High Competition			0.011	0.011			0.059	0.051
			(0.404)	(0.397)			(0.175)	(0.22)
F-test								
CID x High CEO Entrench + CID =0	-0.0008	0.0001	0.0003	-0.0010	0.0007	0.0012	0.0065*	-0.0046
	(0.26)	(0.92)	(0.56)	(0.2)	(0.876)	(0.73)	(0.033)	(0.29)
CID x High Complex + CID =0	0.002**			0.002*	0.015***			0.010**
	(0.011)			(0.06)	(0)			(0.025)
CID x High R&D + CID =0		0.002**		0.0003		0.014***		0.006
		(0.04)		(0.79)		(0.006)		(0.37)
CID x High Competition + CID =0			0.003**	0.001			0.016**	0.004
			(0.039)	(0.27)			(0.021)	(0.61)
Number of Observations	9506	9510	9510	9506	9450	9450	9450	9450
Censored	4732	4732	4732	4732	4732	4732	4732	4732
Firms with Inside Directors	4774	4778	4778	4774	4718	4718	4718	4718
Prob > $\chi 2$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table IA.V
Certified Inside Directors and Firm Performance Classified by Organizational Complexity

This table presents the second-stage of the Heckman (1979) MLE regression analysis to examine the different interactive effects of certified inside directors (CID) and firm complexity for firms in the 1997 to 2006 period. Principle component analysis is used to extract a complexity factor from firm size (market capitalization for operating performance regressions and sales for market-to-book regressions), geographic and business segments, and firm age. A factor score is estimated for each observation using the outcomes of this analysis. High (Low) Complexity is a binary variable that equals one if the factor score for the observation is above (below) the median. Certified Inside Director representation (CID %) is defined as the percentage of board members who are non-CEO inside directors and hold at least one unaffiliated outside directorship. The first-stage equation is the probit model in Table II model 3. Estimates of the second equation are reported below and explore subsequent performance of high and low complexity firms selecting inside directors. All models include year and industry fixed effects. The standard errors are robust and clustered by firm, with *p*-values reported beneath each coefficient estimate. Models 5 and 6 report estimates for second-stage 2SLS IV regression model. The control variables are suppressed for brevity and are the same as used in Table III. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CF	ln(M/B)	CF	ln(M/B)	CF	ln(M/B)
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CID (%) x High Complexity	0.0017***	0.0119***	0.0017**	0.0114***	0.0727***	0.1236***
	(0.007)	(0)	(0.013)	(0)	(0)	(0)
CID (%) x Low Complexity	-0.0003	0.0011	-0.0004	0.0032	0.0594***	0.0087
	(0.651)	(0.813)	(0.566)	(0.507)	(0)	(0.775)
Non-CID (%) x High Complexity			-0.00001	-0.00055		
			(0.987)	(0.726)		
Non-CID (%) x Low Complexity			-0.0001	0.0026		
			(0.623)	(0.107)		
High Complexity	0.013**	-0.019	0.011	0.030	-0.007	-0.139***
	(0.013)	(0.42)	(0.154)	(0.419)	(0.261)	(0)
Number of Observations	9506	9450	9506	9450	9482	9373
Censored	4732	4732	4732	4732	-	-
Firms with Inside Directors	4774	4718	4774	4718	-	-
Prob > χ2 / Adjusted R^2	0.00	0.00	0.00	0.00	10%	25%
F-test : CID x High Complexity = CID x Low Complexity						
	0.002**	0.011**	0.002**	0.008	0.013**	0.115***
	(0.017)	(0.042)	(0.018)	(0.135)	(0.02)	(0)

Table IA.VI
Certified Inside Directors and Firm Performance Classified by Product Market Competition

This table presents estimates from the second-stage of the Heckman (1979) MLE regression analysis to examine the different interactive effects of certified inside directors (CID) and product market competition on firm performance for firms in the 1997 to 2006 period. High (Low) competition equals one if the Herfindahl Index is below (above) the 25th percentile. Certified Inside Director representation (CID %) is defined as the percentage of board members who are non-CEO inside directors and hold at least one unaffiliated outside directorship. The first-stage equation is the probit model in Table II model 3. Estimates of the second equation are reported below for the relations between firms selecting inside directors in more and less competitive environments and their subsequent performance. All models include year and industry fixed effects. The standard errors are robust and clustered by firm, with *p*-values reported beneath each coefficient estimate. Models 5 and 6 report estimates for the second-stage of the 2SLS IV regression model. The control variables, which are the same as those used in Table III, are suppressed for brevity. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CF	ln(M/B)	CF	ln(M/B)	CF	ln(M/B)
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
CID (%) x High Competition	0.002**	0.019***	0.001	0.019***	0.109***	0.067*
	(0.049)	(0.002)	(0.341)	(0.003)	(0)	(0.075)
CID (%) x Low Competition	0.001*	0.007**	0.001*	0.008***	0.062***	0.076***
	(0.062)	(0.011)	(0.099)	(0.005)	(0)	(0.007)
Non-CID (%) x High Competition			-0.0015**	0.0007		
			(0.04)	(0.82)		
Non-CID (%) x Low Competition			-0.0001	0.0014		
			(0.813)	(0.285)		
High Competition	0.005	0.044	0.026*	0.055	-0.052***	0.066
	(0.627)	(0.316)	(0.092)	(0.415)	(0)	(0.144)
Number of Observations	9385	9347	9385	9347	9285	9215
Censored	4732	4732	4732	4732	-	-
Firms with Inside Directors	4653	4615	4653	4615	-	-
Prob > $\chi 2$ / Adjusted R^2	0.00	0.00	0.00	0.00	13%	27%
F-test : CID x High Competition = CID x Low Competition						
	0.001	0.012*	0.000	0.011*	0.047***	-0.01
	(0.284)	(0.068)	(0.877)	(0.094)	(0)	(0.761)

Table IA.VII
Certified Inside Directors, Firm Performance, and Other Board Monitoring Mechanisms

This table presents a multivariate regression analysis within the Heckman (1979) two-stage framework to examine the interactive effect of certified inside directors (CID) and other board monitoring mechanisms on firm performance for firms in the 1997 to 2006 period. The first-stage equation is the probit model in Table II model 3. Estimates of the second-stage model of the performance of firms selecting inside directors are reported below. The dependent variables are the industry adjusted (Fama-French) annual operating performance in models 1 to 5 and the ln(market-to-book) in models 6 to 10. 60% Independent Outsiders is a binary variable equal to one if the board has at least 60% independent outside directors. Separate CEO and Chair is a binary variable that equals one if the CEO is not also the Chairman. Influential Outside Director equals one if the board has at least one independent outside director who holds the title of Chairman on another board. Certified Inside Director representation (CID %) is defined as the percentage of board members who are non-CEO inside directors and hold at least one unaffiliated outside directorship. All other variable definitions are in the Appendix of the published text. All models include year and industry fixed effects. The standard errors are robust and clustered by firm, with *p*-values reported beneath each coefficient estimate. Models 5 and 10 report the results from the second-stage of the 2SLS IV model. Controls are the same as in Table III and are suppressed for brevity. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CF					ln(M/B)				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Certified Inside Directors (%)	0.0012**	0.0010*	0.0011	-0.0003	0.0712***	0.0081***	0.0064**	0.0050	0.0012	0.0700**
	(0.021)	(0.077)	(0.172)	(0.66)	(0)	(0.001)	(0.018)	(0.181)	(0.746)	(0.017)
60% Independent Outsiders	0.006	0.006	0.004			0.004	0.003	-0.012		
	(0.192)	(0.194)	(0.422)			(0.846)	(0.863)	(0.618)		
Separate CEO and Chair	-0.007	-0.007	-0.008	-0.008	0.005	-0.026	-0.035	-0.044*	-0.036	-0.028
	(0.194)	(0.158)	(0.134)	(0.126)	(0.403)	(0.233)	(0.122)	(0.08)	(0.111)	(0.193)
Influential Outside Director				-0.0016					0.0004	
				(0.706)					(0.983)	
CID(%) x Separate CEO and Chair		0.0007	0.0006	0.0010	0.0012		0.0081*	0.0080*	0.0093*	-0.0008
		(0.534)	(0.554)	(0.373)	(0.825)		(0.089)	(0.096)	(0.055)	(0.97)
CID(%) x 60% Independent Outsiders			0.00003					0.003		
			(0.976)					(0.434)		
60% Independent Outsiders			0.003					0.026		
x Separate CEO and Chair			(0.694)					(0.362)		
CID(%) x Influential Outside Director				0.0022***					0.0082**	
				(0.003)					(0.041)	
F-test										
CID x Separate CEO and Chair + CID = 0		0.0017*	0.0017*	0.0006	0.0724***		0.0145***	0.0129***	0.0105**	0.0692**
		(0.06)	(0.06)	(0.49)	(0)		(0.005)	(0.004)	(0.02)	(0.02)
CID x Influential Outside Director + CID = 0				0.0018***					0.0094***	
				(0)					(0)	
Number of Observations	9385	9385	9385	9385	9285	9347	9347	9347	9347	9215
Censored	4732	4732	4732	4732	-	4732	4732	4732	4732	-
Firms with Inside Directors	4653	4653	4653	4653	-	4615	4615	4615	4615	-
Prob > χ2 / Adjusted R^2	0.00	0.00	0.00	0.00	12%	0.00	0.00	0.00	0.00	27%

Table IA.VIII
Certified Inside Directors and ROA Performance Decomposed

This table reports the OLS regression analysis of the components of ROA. We decompose ROA into selling, general, and administrative costs (SGA), cost of goods sold (COGS), asset turnover (sales/assets), and profit margin. We employ the same control variables as in Table V. Certified Inside Director representation (CID %) is defined as the percentage of board members who are non-CEO inside directors and hold at least one unaffiliated outside directorship. Definitions of the control variables are found in the Appendix of the published text. All regressions include year and industry fixed effects. The associated *p*-values are beneath each coefficient estimate and are for robust standard errors clustered by firm. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Ln(1+ROA)	Ln(1+Sales/Assets)	Ln(1+COGS/Sales)	Ln(1+SGA/Sales)	Ln(1+Profit Margin)
	Model 1	Model 2	Model 3	Model 4	Model 5
CID (%) x High R&D	0.005***	0.003**	-0.007***	0.002*	0.005***
	(0)	(0.04)	(0)	(0.05)	(0.01)
CID (%) x Low R&D	0.0002	-0.0005	0.0001	0.0018***	0.00004
	(0.7)	(0.69)	(0.84)	(0)	(0.96)
CEO Percent Ownership	0.0010	-0.0030	0.0013	0.0001	0.0024**
	(0.18)	(0.19)	(0.22)	(0.88)	(0.03)
CEO Percent Ownership^2	-0.00003	0.0001	-0.00003	0.000001	-0.0001**
	(0.23)	(0.17)	(0.24)	(0.98)	(0.04)
Board Ownership	-0.0004**	0.0001	0.00002	0.0006***	-0.0007***
	(0.01)	(0.83)	(0.94)	(0)	(0.01)
Founder Director Present	0.0186***	-0.0172	-0.0081	-0.0093	0.0233***
	(0)	(0.19)	(0.32)	(0.1)	(0.01)
Founder Family Director Present	-0.0051	0.0181	0.0019	0.0014	-0.0018
	(0.31)	(0.34)	(0.81)	(0.82)	(0.78)
Ln(Assets)	-0.0030	-0.0465***	-0.0022	-0.0113***	0.0131***
	(0.12)	(0)	(0.42)	(0)	(0)
Number of Business Segments	-0.0041***	0.0066*	0.0097***	-0.0041***	-0.0065***
	(0)	(0.05)	(0)	(0)	(0)
R&D / Assets	-0.5366***	-0.2609***	0.1717	1.0071***	-0.5436***
	(0)	(0.01)	(0.34)	(0)	(0)
Depreciation Expense/Sales	-0.0331***	-0.0361*	0.1439***	0.1788***	0.0975
	(0)	(0.05)	(0)	(0)	(0.35)
Ln(Firm Age)	-0.0065**	0.0209***	0.0069**	0.0036	-0.0172***
	(0.01)	(0)	(0.02)	(0.17)	(0)
Stock Volitility	-0.5048***	-0.6304***	0.1891**	0.186***	-0.503***
	(0)	(0)	(0.01)	(0.01)	(0)
Number of Observations	9695	9707	9620	8955	9601
Year/Industry fixed effects	yes/yes	yes/yes	yes/yes	yes/yes	yes/yes
Adjusted R^2	19.52%	44.51%	38.82%	57.16%	14.58%

Table IA.IX
Firm Performance Regressions with Undiscovered Certified Inside Directors

This table presents multivariate regression estimates based on a Heckman (1979) two-stage framework to examine the effects of CIDs on firm performance prior to their receiving their first outside directorship (models 1 and 3) and a firm fixed effects regression analysis examining the impact of the year the inside director acquires their first outside directorship (models 2 and 4). Undiscovered Certified Inside Director representation is defined as the percentage of board members who are non-CEO inside directors and will obtain at least one unaffiliated outside directorship, but currently have none. Inside Director Becomes a CID is a binary variable that equals one if the board has an inside director who acquired their first outside directorship in the current year. All other variable definitions are in the Appendix of the published text. The *p*-values are reported beneath each coefficient and are based on robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	CF		ln(M/B)	
	Model 1	Model 2	Model 3	Model 4
Undiscovered Certified Inside Directors (%)	0.0027***		0.0084**	
	(0)		(0.034)	
Inside Director Becomes a CID		-0.0020		0.0645**
		(0.815)		(0.026)
CEO Percent Ownership	-0.002**	0.001	-0.012***	0.001
	(0.039)	(0.361)	(0.005)	(0.649)
CEO Percent Ownership^2	0.00003	-0.00002	0.0004***	-0.0001
	(0.264)	(0.29)	(0.001)	(0.325)
Board Ownership	-0.001***	-0.001***	-0.001	-0.001**
	(0)	(0)	(0.582)	(0.018)
Founder Director Present	-0.012*	-0.003	0.024	-0.05***
	(0.072)	(0.475)	(0.46)	(0.002)
Founder Family Director Present	-0.015**	0.007	-0.087***	0.038*
	(0.03)	(0.281)	(0.009)	(0.072)
CF			1.742***	0.944***
			(0)	(0)
$CF_{(t-1)}$			0.550***	0.231***
			(0)	(0)
$CF_{(t-2)}$			-0.034***	-0.03
			(0.003)	(0.303)
Ln(Assets)	-0.008***	-0.010***	0.012	-0.243***
	(0.001)	(0.002)	(0.212)	(0)
Number of Business Segments	-0.003*	0.0004	-0.009	-0.001
	(0.067)	(0.686)	(0.104)	(0.784)
R&D / Assets	-0.317***	-0.321***	2.109***	-0.014
	(0)	(0)	(0)	(0.909)
Depreciation Expense/Sales	-0.013***	0.006***		
	(0)	(0.003)		
Capital Expense/Sales			0.036***	0.001
			(0)	(0.251)
Ln(Firm Age)	-0.008***	-0.010**	-0.032**	-0.126***
	(0.004)	(0.036)	(0.02)	(0)
Stock Volitility	-0.263***	-0.142***		
	(0)	(0)		
Inverse Mills Ratio	-.132***		-0.108*	
	(0)		(0.086)	
Number of Observations	9385	9697	9347	9509
Censored	4732		4732	
Firms with Inside Directors	4653		4615	
Prob > χ2 / F.E. Within R^2	0.00	2.6%	0.00	3.3%

Table IA.X
Certified Inside Directors with and without Prior Outside Directorships

This table reports the analysis of the inside directors with unaffiliated outside directorships (CIDs) prior to joining their own board. Priors are inside directors with outside directorship who had at least one outside directorship prior to joining their own company's board. The *p*-values are based on a two-tailed t-test of the difference in means.

	Priors - CIDs	No Priors-CIDs	Difference	*p* -value of Difference
Firm Characteristics				
Firm Size	19594	9076	10518	0.00
Firm Complexity	0.96	0.66	0.30	0.00
S&P 500 Firm	0.73	0.62	0.11	0.02
Traded on NYSE	0.89	0.78	0.10	0.08
CEO Entrenchment	0.04	0.32	-0.28	0.00
Technical Industry	0.24	0.39	-0.15	0.00
Influential Outside Director (CEO)	0.75	0.67	0.08	0.04
Influential Outside Director (Chair)	0.77	0.64	0.13	0.00
Other non-CEO executives on the board	1.70	1.92	-0.22	0.02
CEO Age	54.91	55.23	-0.32	0.50
Common Independent Director	0.098	0.052	0.045	0.03
Growth Rate of Assets	22.601	20.175	2.426	0.57
Market-to-book	0.137	0.147	-0.010	0.80
Operating CF/Assets	0.011	0.015	-0.004	0.57
Inside Executive Positions				
President	0.30	0.37	-0.07	0.08
Vice President	0.07	0.01	0.05	0.00
Executive Vice President	0.28	0.19	0.09	0.01
Chief Operating Officer	0.31	0.29	0.02	0.59
Chief Financial Officer	0.19	0.16	0.03	0.42
Treasury	0.01	0.03	-0.01	0.27
Secretary	0.04	0.03	0.01	0.27
Director Characteristics				
Director Ownership	0.48	0.82	-0.34	0.08
Director Age	56.78	55.51	1.28	0.03
Board Tenure	3.27	7.84	-4.57	0.00