BETTER CORPORATE GOVERNANCE THROUGH GREATER "INSIDER" PARTICIPATION? EVIDENCE FROM GERMAN CORPORATE BOARDS

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Executive Summary

The authors analyze the effect on firm value of including employee representatives on corporate boards of directors. Using a sample of all publicly traded German corporations as of 2003, they find employee representation significantly increases the market-to-book value ratio (MV/BV) for firms in industries with complex processes and demanding intense coordination among employees. The improved information flow and the additional insight provided by employee representation to the highest levels of the firm allows for improved corporate decision making. Second, they find that MV/BV for firms in more concentrated industries—that is, industries with fewer competitive forces—is higher when employees are present on the corporate board. The reduced competition and greater free cash flow in concentrated industries indicates that employee representatives in these industries provide information that improves efficiency and acts as a substitute for competitive pressure. Third, they find some evidence of diminishing marginal benefits from employee representation after a threshold of approximately one-third employee representation. However, higher levels of representation still improve firm value in complex industries that demand high levels of coordination.

The analysis suggests that the judicious use of employee representation can increase share price. More generally, however, the authors argue that good corporate governance is an integrated system of multiple *stake*holders (suppliers, customers, bond holders, etc.) whose inclusion in decision making is *not* based on any sense of social responsibility but on the traditional principle of shareholder value maximization. Importantly, the recent movement toward greater board independence as seen in the Sarbanes-Oxley Act in the United States and in other initiatives in other countries should be a matter of concern: the insistence on board member independence sacrifices valuable sources of new information that improves firm governance and increases firm value. These results appear especially timely now when the Securities Exchange Commission is reviewing Sarbanes-Oxley.

THE INSISTENCE OF BOARD MEMBER "INDEPENDENCE" SACRIFICES VALUE-BUILDING SOURCES OF NEW INFORMATION.

Over the several years following the Adelphia, Enron, Tyco, WorldCom, and other scandals, initiatives to improve corporate governance have largely focused on *independence* as a major component of the solution. In a recent McKinsey & Company study of 150 US corporate directors, fully 67% indicate they either very much support or somewhat support appointing outside directors (Felton (2004)). In an emerging market study, McKinsey establishes 15 elements of good corporate governance that include the requirement that at least one half of the non-executive directors should be independent outsiders (Campos, Newell, and Wilson (2002)). The NYSE, Nasdaq, and AMEX have all recently changed their listing requirements and now mandate, in general, a majority of independent directors. In the United States, the Sarbanes-Oxley Act of 2002 (SOX) exemplifies the regulatory response to this movement toward independence. In fact, the recent decision by the Securities Exchange Commission to review SOX makes the discussion of these issues especially timely.

Independence as an objective is not, however, a strictly US phenomenon. In the UK, the *Combined Code on Corporate Governance* released in 2003 requires that (except for small firms) at least one half of the board, excluding its chair, should comprise independent directors. In Belgium, France, Italy, and Spain, various reports and codes of corporate governance advanced since the late 1990s all recommend (but do not require) a substantial number of independent board members.

Very recent academic research calls into question whether independence actually leads to optimal corporate governance. In Fauver and Fuerst (2006) (FF06), we analyze all publicly traded German firms and test the effect on firm value from the inclusion of *employee* representatives on corporate boards. Our results cast doubt on the benefits from the exclusion of insiders on a board of directors. In this article, we draw heavily from that research summarizing its contributions and highlighting its applications to improving the governance of firms.

Our research is related to the stakeholder system of corporate governance. In American and British firms, good corporate governance is a system of incentives and mechanisms to maximize firm equity value by alleviating the costs associated with the separation of ownership (shareholders) and control (management). In stakeholder system countries such as Germany and Japan, good corporate governance recognizes a far broader set of stakeholders—in addition to the shareholders—such as bondholders, suppliers, customers, employees, etc. As Jensen (p. 297, 2001) notes, the challenge with the stakeholder system is the governance objective:

> *Because the advocates of stakeholder theory refuse to specify how to make the necessary tradeoffs among these competing interests they leave managers with a theory that makes it impossible for them to make purposeful decisions.*

We take a far more traditional, Anglo-American view and ask whether the inclusion of other stakeholders in the governance of a firm will increase firm *share price* and, hence, the value of the *shareholders' claim*. We argue that good

SPECIFICALLY, WE ASK WHETHER THE INCLUSION OF EMPLOYEES—SEEKING THEIR OWN OBJECTIVES—ON CORPORATE BOARDS INCREASES *SHARE PRICE*.

corporate governance requires an integrated system of multiple stakeholders whose inclusion is based—not on any sense of social responsibility—but on the traditional principle of shareholder value maximization. Specifically, we ask whether employees on corporate boards—where they may quite possibly promote their own agenda—nevertheless increase *equity value*.

The economic role of employees on firm boards

We propose that employee board participation increases firm value in at least three ways: First, board representation provides the highest levels of the firm with first-hand and practical operational information with which the board can make better decisions. Second, the value of this additional information should increase in industries with complex processes that involve greater information sharing and coordination among employees. Third, this flow of information should be bidirectional with employee board members providing other workers and union officials with credible information about firm performance.

Improved information

By providing a conduit for detailed operational information flow from the production line, employee representatives provide the board with superior information. Superior information, in turn, should lead to superior decision making by the board. Moreover, firms in industries that demand intense coordination, integrated activities, and information sharing among employees or industries that involve specially skilled and knowledgeable workers should benefit most from employee representation: for these industries, the higher degree of information flow that board representation provides should be more valuable.

Improved firm-union relationship

As Freeman and Lazear (1995) discuss, codetermination provides for the credible exchange of information between the firm's board and workers. During times of poor firm performance, the employees will be well aware of the firm's problems and will be forthcoming with concessions. Conversely, during times of strong firm performance, labor will expect to benefit. At the very least, codetermination should decrease the probability of a costly strike when the firm truly cannot afford a wage increase. Moreover, the free and credible exchange of information that follows from codetermination should improve cooperation and lead to a team approach to management. Indeed, because codetermination provides workers with operational expertise a forum for sharing operational insights with the highest levels of management, this increased flow of information should result in efficiency gains. Therefore, employee representation creates an "information intermediary" between management and labor.

A parallel to bankers on corporate boards

Many researchers propose that banks with board seats provide an additional source of outside monitoring in Japan and Germany (e.g., Kester, 1993). The conventional wisdom is that bank representation on German boards is widespread, and through regular meetings of the board, bank representatives monitor and influence corporate strategy. Cable (1985) and Gorton and Schmid

WITH EMPLOYEE REPRESENTATION, INFORMATION MAY BE CREDIBLY CONVEYED TO UNIONS. THIS GREATER TRANSPARENCY REDUCES LABOR-FIRM ANTAGONISM, ENGENDERS A TEAM APPROACH TO PROBLEM SOLVING, AND ALLOWS NATURAL SYNERGIES TO EMERGE THAT INCREASE SHAREHOLDER VALUE.

(2000) offer evidence that the value and performance of German firms improve as bank board representation and equity ownership rise. Hence, bank representation may reduce the agency costs that stem from the separation of ownership and control.

We draw a parallel between the role of employee representatives and bankers on the board. Like the banker who protects creditor interests, employees who protect labor interests indirectly protect the claims of shareholders and increase firm value. Unlike the banker, however, labor representatives have potentially detailed knowledge of operations, new project feasibility, and the relative benefits of competing new technologies. Consequently, we propose that firms in industries that require coordination and special skills or knowledge, such as trade, transportation, computers, pharmaceuticals, other manufacturing, and construction, especially benefit from employee representation. Moreover, due to their human capital investment in the firm, labor representatives, unlike bankers, are in a sense residual claimants like the shareholders.

Some details of German firm and board structure

In Germany, the policy of codetermination (*Mitbestimmungsrecht*) requires firms to provide employees board seats in proportion to firm size. In general, public corporations with fewer than 500 employees are not required to have employee representation; those with 500−2,000 employees must assign one third of the board seats to employees; and those with more than 2,000 employees must allocate one half of the board seats to employees. Many exceptions to these rules apply based on business activities and ownership. In addition, codetermination laws specify that board size increase with statutory capital and the number of employees.

Another interesting element of the German publicly traded firm is its two-tiered board structure. The supervisory board (*Aufsichtsrat*) is very similar to an American board of directors; its responsibilities include setting the long-term strategic direction of the firm, choosing a chief executive, setting his compensation, and reviewing his performance. In addition, the supervisory board appoints and removes members of the management board (*Vorstand*) and sets their compensation. The management board manages the firm's operations day to day and reports to the supervisory board.[1]

Intense debate and a rapid pace of change make these issues timely

We believe this research is especially timely. First, what constitutes good and effective corporate governance has recently become a major concern in free enterprise economies around the world. In the US, the impact of the Sarbanes-Oxley Act on firm value is a hotly debated issue among practitioners and academics alike. In the UK, Cadbury Committee developed the *Code of Best Practices* for British firms. Dahya, McConnell, and Travlos (2002) examine the potential importance of this code of corporate governance among UK firms and find a significant increase in management sensitivity to firm performance following the code's adoption. Similarly, the *German Corporate Governance Code (Deutscher Corporate Governance Kodex)* was promulgated in February 2002. This *Code* sets new standards for responsible corporate governance and

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specifies the tasks and responsibilities of both the supervisory and management boards. Although the adoption of the German *Code* is voluntary, our survey of websites and annual reports from 2002, which include reports of the supervisory board, indicates the widespread intention to comply—often with detailed statements of compliance with the *Corporate Governance Code*. In addition, the debate in Germany with respect to codetermination itself has been very lively recently. For example, between April 2, 2004, and April 1, 2005, one of Germany's most respected newspapers, *Frankfurter Allgemeine Zeitung*, published 255 articles that dealt with codetermination. This debate has strong advocates on all sides of the issue, including the abolition, weakening, strengthening (e.g., lowering the firm size threshold for representation from 500 to 20 employees[2]), and export (to the rest of the EU) of codetermination. In addition, cross-border mergers of German firms with firms of other EU countries have caused great political controversy with respect to which country's laws should prevail on the subject of codetermination. Finally, our research is timely given corporate governance shows signs of convergence in the face of both mounting global competition in financial and product markets and the international standardization of accounting and legal systems.[3] Because corporate governance is in a state of global flux, alternative corporate governance practices such as codetermination are presently very much the subject of debate.[4]

Governance by employees alone is not a solution

While the prudent use of labor in corporate governance can be value enhancing, the excessive influence of labor can create a firm that is a "country club" for workers. This view is consistent with the work by Gorton and Schmid (2004), who show that moving from one-third to one-half labor representation destroys firm value. Consequently, we postulate an inverted U-shaped relation between firm value and labor representation. When on the left-hand side of the inverted U-curve, labor representation increases firm value by acting as a conduit for the flow of new information.

In the other direction, labor representation creates a credible vehicle through which information may be conveyed to the unions. While the Anglo-American model often leads to adversarial labor-firm relations, the basis for this tension is likely the asymmetry of information. We hypothesize that the greater degree of transparency that is achieved through direct board representation reduces labor-firm antagonism, engenders a team approach to problem solving, and allows natural synergies to emerge that ultimately benefit shareholder value.

Turning to the right-hand side of our proposed inverted U-shaped function, excessive labor representation can reintroduce some of the agency problems that labor representation is meant to cure: The improved assessment of project feasibility may give way to the selection of technologies that maximize payroll rather than minimize the cost of production. That is, given excessive labor representation, project choice may be based in part on labor, rather than management, perquisites. In light of both the costs and benefits associated with codetermination, the relation between firm value and employee representation is an empirical question.

CODETERMINATION INSTITUTIONALIZES WHAT MANAGEMENT CONSULTANTS RECOGNIZE AS A KEY COMPONENT OF MOST ANY PROJECT: ORGANIZATIONAL INTERVIEWS TO ELICIT INFORMATION UNKNOWN TO MANAGEMENT.

German executives support employee participation

Labor representatives on the board provide unique insight into project feasibility and therefore improve corporate decision-making. Anecdotal evidence supports this positive role for codetermination. For example, Jürgen Schrempp, chairman of the management board of Daimler-Chrysler, contends that cooperation with unions and workers is central to the efficient solution of problems, citing the cost- and job-savings package negotiated between Mercedes-Benz and the union in July 2004 as an example.[5] Hartmut Mehdorn, chairman of the management board of the German railway transportation system, shares Schrempp's view, claiming that the recent restructuring and cost reductions in the German railroads would not have been possible without labor fully on board, and asserting that codetermination proved itself valuable during critical periods in which employees formed solutions to the problems at hand.[6]

We share the view of Johannes Huth, chief of the leveraged buy-out firm Kohlberg, Kravis, and Roberts's (KKR's) German operations. He supports codetermination, stating that during difficult phases of a business restructuring, codetermination avoids the confrontation common in other countries: "we have been able to put decisions through more quickly with employees on board."[7] Moreover, Huth claims that employee codetermination brings energy into the enterprise as employees feel they are insiders and therefore are responsible for the success of the firm.

Employee participation builds in-house what management consultants have long known to be of great value

Codetermination institutionalizes what management consultants recognize as a key component of most any project: organizational interviews to elicit information unknown to management. This effect of codetermination becomes clear when another component of employee representation in business decision making in Germany is recognized, *work councils codetermination*. Under these laws, plants must have councils that are elected by workers; firms with multiple plants must have aggregate councils, and holding companies (*Konzerne)* with multiple firms must have group councils. A clear benefit from this structure is the communication of acquired expertise throughout a plant and across plants within firms. Furthermore, in firms with over 100 permanent employees, employees must also establish a business and finance committee (*Wirtschaftsausschuss*). This committee is yet another mechanism through which information may be aggregated and analyzed. The firm must report in a timely fashion changes to the firm's financial position and any effect on the workforce. Vogel (1980) and Gerum, Steinmann, and Fees (1988) report that 74% (53%) of the employee representatives on supervisory boards of firms with a one-third (one-half) employee vote are chairmen, deputy chairmen, or ordinary members of the firms' various work councils. Prigge (p. 1012, 1998) surmises:

> *Conditions seem to be such that a works councilor sitting on the supervisory board has a solid information base at his disposal and, equally important, his information base most likely is highly complementary to the information the shareholder representatives have …This may be one main reason why internal employee representatives*

DURING RESTRUCTURING, CODETERMINATION AVOIDS THE CONFRONTATION COMMON IN OTHER COUNTRIES: "WE HAVE BEEN ABLE TO PUT DECISIONS THROUGH MORE QUICKLY WITH EMPLOYEES ON BOARD." −JOHANNES HUTH, CHIEF KOHLBERG, KRAVIS, AND ROBERTS'S GERMAN OPERATIONS

are generally highly appreciated supervisory board members of the capital side.

Approach

Our data consist of all publicly traded firms (*Aktiengesellschaften*) incorporated in Germany that traded on a German stock exchange in 2003. Sample firms must be jointly available on Bloomberg and Thomson Financial's Worldscope database as of August 2003. From Bloomberg we obtain the supervisory board composition and from Worldscope we obtain measures of accounting performance, market capitalization, and business and geographic segment data as of fiscal year-end 2002. In total, this sample consists of 786 firms. Our sample includes firms with varying degrees of labor representation (from zero to more than one-half). In addition, we calculate measures of industry concentration using the sales-based Herfindhal index and the business segment data for all German firms included in the Worldscope database. This larger sample consists of 991 firms.

We present three multivariate regression models using MV/BV as the dependent variable.[8] The independent variables vary by model and include indicators for employee representation, industry, business segment diversification,[9] product market concentration, along with interactions of these variables. Control variables (whose coefficients are not reported) include measures of geographic diversification,[10] firm size,[11] a bank representation indicator, operating income to sales, capital expenditures to sales, a dividend indicator,[12] and firm leverage. We select these independent and control variables—other than employee representation, industry, and product market concentration—because of their importance in previous studies.

New corporate governance factors

To test our hypothesis that the inclusion of employee seats on the board provides for better information and, hence, better board decision making, we include an indicator. *Employees on Board* assumes a value of one when there is at least one employee on the board and zero otherwise.

In addition, we propose that firms in industries that demand intense coordination and information sharing or involve specially skilled and knowledgeable workers should benefit most from employee representation: for these industries, the higher degree of information flow that board representation provides should be more valuable. The literature has yet to establish which industries correspond to "high-coordination" industries. A search of the strategic management, operations management, and management science literature indicates that coordination and complex information flow are critical issues in industries that require supply chain management: "Supply chain management requires heavy emphasis on integration of activities, cooperation, coordination and information sharing throughout the entire supply chain, from suppliers to customers" (Lourenco, p. 1, 2004). Moreover, a major component of supply chain management is transportation and logistics management (Thomas and Griffin, 1996) and bidirectional flow of information (Cooper, Lambert, and Pagh, 1997). Consequently, we include SIC groupings for which, a priori, supply chains or,

more generally, complex serial processing, are a central component of the industry's operations.[13]

We argue that there may also be an interaction between product market competition and the effect of employee representation on firm value. We identify two opposing effects: First, competition should enhance the benefits of cooperation between employees and owners. On this account, board membership should provide a credible means to convey information such as the vulnerability of the firm's competitive position and profits. Consequently, labor-induced costs should fall. Second, and in the opposite direction, greater industrial concentration should lead to higher profits and less incentive to perform, thereby creating an environment rife with cash flow agency costs and inefficient investment (see Dyck and Zingales, 2004). Consequently, employee representatives equipped with detailed operations-level information should be vehicles for the communication of such inefficiency to the board, and employee representation should improve the monitoring effectiveness of the supervisory board and add value to firms in concentrated industries. Whether employee representation benefits firms in competitive or concentrated industries is an empirical question. *Product Market Concentration* captures this effect through a sales-weighted average of the Herfindhal index values of the firm's business segments.

Results

Univariate results

Table 1 shows that firms with employee representation are significantly larger with respect to sales and assets and are relatively more profitable. Consistent with our supposition that employee representatives intervene against poor investment choices, we see that both capital expenditures and R&D as a ratio to sales are lower among firms with employee representatives.[14] Further, Table 1 provides evidence that dividend yields and payout ratios are significantly greater (more than double) for firms with employee representation. Lastly and perhaps most interestingly, firms with employee representation have a significantly higher median MV/BV than do firms without employee representation (1.126 vs. 1.038) This result implies firm value is 8.8 percent higher (relative to book value) when employee representatives have board seats.

Multivariate regression results

Model 1 of Table 2 includes the employee representation indicator along with several interaction terms between employee representation and industry. The analysis illustrates that employee representation alone neither significantly increases nor decreases firm value as measured by MV/BV. However, when we test whether firms benefit more from employee representation in industries that demand greater coordination, labor involvement, and more specialized employee skill sets, the results change. The industry indicator variables for trade, transportation, and manufacturing consistently and significantly negatively affect firm value.[15] Notwithstanding, the presence of employee representatives on the board alleviates these negative effects. When the employee representation indicator is interacted with each of these industry indicators, we observe a

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positive and significant effect on firm value. Moreover, the magnitudes of the interaction coefficients show that the benefits from employee representation substantially offset the ill effects of process complexity. For example, we see that the coefficient on the trade indicator is −0.457, but if employees are represented on the board, the industry effect is mitigated such that the net effect falls to −0.004 (=−0.457+0.453). We infer that employee board representation in complex, coordination-intensive industries increases firm value.

In Model 2, we see business segment diversification clearly decreases firm value. Our results are consistent with the reasoning of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000a) and the results of Lins and Servaes (1999) for the UK and Japan: diversification reflects an agency cost between blockholder(s) and minority shareholders and leads to a discount of approximately 16% to 33%. The size of the negative coefficient on our *Business Segment Diversification* indicator implies a discount of 36%.

The interaction term between the business diversification indicator and employee representation provides additional insight. The coefficient is significant and positive and shows employee representation can significantly reduce the expropriation effects of a diversification strategy. We interpret these results as evidence of labor's greater understanding of operational detail and additional insight into the possible synergies associated with a diversification strategy. That is, with employee involvement in supervisory board decisions, the likelihood that corporate diversification creates economic value increases, and the likelihood that the diversification strategy reflects an agency cost decreases.

Model 3 addresses the impact of industrial concentration (that is, industries with fewer competing firms and hence a greater sales-based Herfindhal index). We see that concentration alone has a negative (but insignificant) effect on firm value. Yet, when interacted with employee representation, we see a positive (and significant effect in the more complex models of FF06). As industrial concentration increases, the discipline of the product market competition lessens, free cash flow increases, and manager-owner agency conflicts arise. We suggest that the benefit of employee representation stems from the increased quality of the information available to the board: employee representatives reduce the costs of incomplete information by providing credible input as to the feasibility of proposed projects and expenditures. In this way, the board as a whole may more easily identify potential agency costs.

Optimal employee representation

We recognize the prudent use of labor may be crucial to the successful implementation of employee representation and now ask whether excessive labor representation has a negative effect on firm value. To test this conjecture in FF06, we replace the *Employees on the Board* indicator with three new indicator variables: the first assumes a value of one if employee representation strictly exceeds zero but is less than one-third, and zero otherwise; the second assumes a value of one if employee representation equals or exceeds one-third but is less than one-half; and, the third assumes a value of one if employee representation equals or exceeds one-half, and zero otherwise. As in Model 1 of Table 2, these new indicators are interacted with the industry indicators.

The results show that only employee representation between 33 and 50%, when interacted with the trade, transportation, and manufacturing indicators, has a coefficient that is positive and significant. We therefore infer that *it is not the mere presence of labor on the board that builds shareholder wealth, but rather a presence of between approximately one-third and one-half of the board seats.* These results provide statistical support for our earlier conjecture that the judicious use of labor representation is crucial. In general, representation of less than one-third or in excess of one-half has little effect on firm value; the effect is generally positive but statistically insignificant.

Conclusions and implications

Effect of employee participation on firm value

We analyze all publicly traded (*Aktiengesellschaften*) German corporations as of 2003, including firms with varying degrees of labor representation (from zero to more than one-half).[16] Using this sample, we find that the information and insight that employee representatives bring to the board significantly improves firm value. Specifically, we find the market-to-book-value ratio (MV/BV)[17] for firms in industries that demand high levels of coordination with workers significantly improves with employee representation. These results do not hold if the employee is a union representative (and if the employee does not work directly for the firm). Second, we find that MV/BV for firms in more concentrated industries—i.e., industries with fewer competing firms and hence a greater sales-based Herfindhal index—is higher when employees are present on the corporate board; the reduced competition and greater free cash flow of concentrated industries indicates that employee representatives in these industries provide information that improves efficiency and acts as a substitute for competitive pressure. Third, we some find evidence in support of Gorton and Schmid's (2004) result that labor representation demonstrates diminishing marginal returns after some threshold level (approximately, one third). However, higher levels (above one third) still improve firm value in complex industries that demand high levels of coordination. To summarize, our analysis suggests that the judicious use of labor representation can increase firm value.

Policy implications

Our research raises flags in the current movement toward independence in corporate governance. Moreover, the SEC's recent decision to review Sarbanes-Oxley makes the question of board independence all the more pressing. Broadly interpreted, our results show that governance improves with the inclusion of a broader range of stakeholders—each with their own agenda, but who, nevertheless, collectively balance and offset self interests and reach more informed decisions. We find that good corporate governance is an integrated system of multiple stakeholders whose inclusion in decision making is *not* based on any sense of social responsibility but on the traditional principle of shareholder value maximization. Sarbanes-Oxley is not the comprehensive solution, but an ingredient.

Moreover, optimal governance cannot be achieved through out-to-in regulation and top-down control. A bottom-up organization design that allows discussion

and consensus—that is, the aggregation of information—and then the communication and representation of this information to the highest level of corporate decision makers is a critical component of an optimal corporate governance system.

Economic role of employee representation

Employee representatives bring to the table a knowledgebase that complements that of the shareholder representatives. The presence of employee representatives on the board provides both a conduit for the flow of information and a second set of eyes that provide a different perspective for proposed projects or shifts in corporate strategy. By providing information that is crucial to the assessment of the economic feasibility of projects, investments are more thoroughly screened when employees sit on the board, and approved projects are more likely to add value to the firm's shareholders.

For employee representation to achieve its full impact on firm value, however, a perquisite change in corporate organization is necessary. A work-councils structure provides the means necessary to aggregate the information already embodied in the organization and create valuable, highly informed employee board members.

Lastly, we propose that this communication channel may be bidirectional. Employee representation on the board provides workers and unions credible information about firm strategy and profits that should reduce work halts and strikes.

However, prudent levels of employee representation on corporate boards is required to increase firm efficiency and market value. As with banker representation on boards, however, the judicious use of the monitor is important. Excessive bank power on the board leads the firm to operate in the creditors interests and pass up risky though profitable investments (Macey and Miller, 1995, 1996). In a similar fashion, when employee representation reaches an excessive level, it may be the case that labor itself becomes the source of an agency cost as employees seek their own perks, exert their influence to maximize payroll rather than stock price, and create a situation in which the monitors themselves need to be monitored.

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Table 1 Accounting performance by employee representation

Firm Characteristics	Employees Not on the Board mean (median)	Employees on the Board mean (median)	Difference *p*-value mean (median)
Sales (€ MM)	129.3 (37.4)	393.6 (357.4)	0.000 (0.000)
Assets (€ MM)	222.6 (49.2)	1,320.0 (370.5)	0.000 (0.000)
Operating Income/Sales	−0.352 (−0.068)	−0.053 (0.009)	0.000 (0.000)
Capital Expend/Sales	0.208 (0.030)	0.067 (0.034)	0.160 (0.572)
R&D/Sales	0.033 (0.000)	0.011 (0.000)	0.007 (0.126)
Leverage	0.199 (0.119)	0.232 (0.199)	0.037 (0.013)
Dividend Yield	0.012 (0.000)	0.025 (0.018)	0.000 (0.000)
Dividend Payout Ratio	0.089 (0.000)	0.229 (0.000)	0.000 (0.000)
Product Market Concentration	0.219 (0.139)	0.232 (0.191)	0.304 (0.035)
Industrially Diversified	0.236	0.358	0.000
Geographically Diversified	0.223	0.363	0.000
Market-to-Book Value Ratio	1.419 (1.038)	1.349 (1.126)	0.344 (0.000)
Number of Observations	386	400	

Table 2 Change in Firm Market Value as a Percentage of Book Value

							----------Employees on Board Indicator x ----------				
Model	**Employees on Board Indicator**	**Trade Industry Indicator**	**Transportation Industry Indicator**	**Manufacturing Industry Indicator**	**Business Segment Diversification Indicator**	**Product Market Concentration**	**Trade Industry Indicator**	**Transportation Industry Indicator**	**Manufacturing Industry Indicator**	**Business Segment Diversification Indicator**	**Product Market Concentration Indicator**
1	–0.072 (–0.67)	–0.457 (–3.58)***	–0.372 (–2.32)**	–0.218 (–1.89)*			0.453 (3.00)***	0.491 (2.56)**	0.303 (2.16)**		
2	–0.023 (–0.23)				–0.360 (–3.91)***					0.320 (2.82)***	
3	–0.055 (–0.47)					–0.401 (–1.26)					0.556 (1.55)†

Note: t-statistics are in parentheses; *, **, *** indicates significance at the 10-, 5-, and 1-percent level, respectively. †This interaction becomes significant at the 10-percent level in more complex models. (See FF06, Table 6 for details).

Appendix: Author Biographies

Larry Fauver, PhD

Larry Fauver holds a PhD in finance and an MA in economics from the University of Florida and an MBA from Youngstown State University. Dr. Fauver has taught international finance and international financial management to undergraduates, MBAs, and executives at the University of Miami and currently teaches international finance at the University of Tennessee. He publishes his research in top-tier finance journals such as the *Journal of Financial Economics*, the *Journal of Financial and Quantitative Analysis*, *Financial Management,* and the *Journal of Corporate Finance*. His current research focuses on corporate governance, corruption, and corporate finance.

Michael Fuerst, PhD

Michael Fuerst holds a PhD in finance and an MA in applied economics from the University of Michigan and an MBA from Cornell University. Dr. Fuerst has years of experience teaching corporate and international finance to MBA students and executives at the University of Miami and publishes his research in top-tier academic journals such as the *Journal of Financial Economics*, the *Journal of Macroeconomics* and *The Financial Review*. His recent research focus includes corporate governance, detecting fraud and data manipulation in accounting statements, banking, financial system architecture, and the relationship between investment risk and the macroeconomy. Dr. Fuerst is a partner with Biscayne Consulting Associates LLC. His consulting experience includes organization design, economic valuation, litigation support, and investment fund performance benchmarking.

Notes

[1] For example, Section 3.4 of the *German Corporate Governance Code (Deutscher Corporate Governance Kodex)* states: "…The Management Board informs the Supervisory Board regularly, without delay and comprehensively, of all issues important to the enterprise with regard to planning, business development, risk situation and risk management. The Management Board points out deviations of the actual business development from previously formulated plans and targets, indicating the reasons therefor[e]." Section 5.1.1 continues: "…The task of the Supervisory Board is to advise regularly and supervise the Management Board in the management of the enterprise. It must be involved in decisions of fundamental importance to the enterprise."

[2] "Mitbestimmung bei mehr als 20 beschäftigten," *Frankfurter Allgemeine Zeitung*, July 25, 2002, p.42.

[3] See, e.g., Schmidt and Tyrell (1997) for a discussion of the convergence of corporate governance systems globally, and Clark and Wójcik (2005) and Wójcik (2003) for recent changes in the corporate governance structure of German firms in particular.

[4] For example, see *Börsen-Zeitung*, January 2, 2002, p. B22, (translated) "Financial Market Reform of Corporate Governance, the Supervisory Board System, and the [Anglo-American Single] Board Model Converge."

[5] "Schrempp lobt die Mitbestimmung," *Frankfurter Allgemeine Zeitung*, March 21, 2005, p. 14.

[6] "Bahnchef lobt Mitbestimmung und fordert Gewerkschaften heraus/Mehdorn plädiert für längere Arbeitszeit und weniger Zulagen/Transnet droht mit Protesten,"*Frankfurter Allgemeine Zeitung*, November 8, 2004, p.13.

[7] "KKR plant 2005 weitere Börsengänge in Deutschland Johannes Huth, Deutschland-Chef von Kohlberg Kravis Roberts, über Private Equity, Mitbestimmung und das Duale System," *Frankfurter Allgemeine Zeitung*, November 16, 2004, p.15.

[8] As a robustness check, following LaPorta, Lopez-De-Silanes, Shleifer, and Vishny (2002) and Lins (2003), we replace MV/BV and repeat our analyses using market value of equity to book value of equity and gross operating income (sales less cost of goods sold less depreciation) to book value of assets as two alternative dependent variables. Generally, our results hold for the alternative value ratios.

[9] A firm is business-segment diversified when no more than 90% of a firm's sales can be attributed to one four-digit SIC segment. When a firm meets this requirement, *Business Segment Diversification Indicator* assumes a value of one and zero otherwise. Lang and Stulz (1994) and Berger and Ofek (1995) document that US firms diversified by business segment trade at a discount, as measured by MV/BV and excess value, respectively.

[10] A firm is geographically diversified when no more than 90% of its sales can be attributed to one geographic segment as defined by Worldscope. When a firm meets this requirement, an unreported control variable indicator assumes a value of one and zero otherwise.

[11] Size is a critical control variable in our analyses as German codetermination statutes set the proportion of employee representation based, in part, on firm size. Size is defined as the natural logarithm of total assets.

[12] We include an indicator that assumes a value of one if a dividend is paid and zero otherwise to capture a possible reduction in the expropriation of small, outside shareholders by controlling shareholders as suggested by Faccio, Lang, and Young (2001).

[13] *Trade Industry Indicator* takes on a value of one if any two-digit segment SIC is equal to 50-59, and zero otherwise. *Transportation Industry Indicator* takes on a value of one if any two-digit segment SIC is equal to 40-49. *Manufacturing Industry Indicator* takes on a value of one if the segment SIC is equal to 28-29, or 33-39.

[14] This result is consistent with the signaling model of Bebchuk and Stole (1993) and our conjecture that without the additional information available through employee representation, firms inefficiently overinvest in long-term projects, such as equipment installation, plant construction, and R&D that have uncertain productivity.

[15] We also analyze other industries that, a priori, involve complex tasks, such as the pharmaceutical industry (SIC=28) and the computer industry (SIC=35), interacting each with employee representation. We obtain similar results: both have a positive effect on firm value. While construction also appears, a priori, to be an industry characterized by complex serial processing, the coefficient on the interaction

between employee representation and the construction indicator is positive but not statistically significant. We note that the computer and pharmaceutical industries also fall within our manufacturing industry SICs, and the SICs included in our trade dummy are a subset of those used by Bodnar and Gentry (1993).

[16] Our data consist of all publicly held firms incorporated in Germany that traded on a German stock exchange in 2003. Sample firms must be jointly available on Bloomberg and Thomson Financial's Worldscope database as of August 2003. From Bloomberg we obtain the supervisory board composition and from Worldscope we obtain measures of accounting performance, market capitalization, and business and geographic segment data as of fiscal year-end 2002. In total, this sample consists of 786 firms. In addition, we calculate measures of industry concentration using the sales-based Herfindhal index and the business segment data for all German firms included in the Worldscope database. This larger sample consists of 991 firms.

[17] The ratio of the market value of equity plus the book value of assets minus the book value of equity all over the book value of assets.