CORPORATE GOVERNANCE IN TRANSITIONAL ECONOMIES: LESSONS FROM THE PREWAR JAPANESE COTTON TEXTILE INDUSTRY

YOSHIRO MIWA and J. MARK RAMSEYER*

ABSTRACT

Observers of the formerly communist economies urge firms there to obtain funds from a relatively few sources. They note the problems the firms face: dysfunctional courts, markets, and statutes. Because these firms cannot rely on the courts to discipline managers, they predict that firms will do best if they raise their capital only from a few sources. Firms in Japan at the close of the nineteenth century similarly faced dysfunctional courts, markets, and statutes. Yet the firms that succeeded in Japan were not the ones that took the tack proposed by modern observers. They were the ones that used little debt and raised their equity from a large number of investors. In this article we outline how concentrated finance can introduce problems potentially as severe as the ones it mitigates and discuss why dispersed equity did not reduce firm efficiency in late-nineteenth-century Japan.

DYSFUNCTIONAL courts, nascent markets, nonexistent statutes, and firms controlled by communist hacks—for many observers, that combination characterizes modern “transitional economies.” For firms in that environment, these observers prescribe concentrated finance: rather than to rely on broadly dispersed shareholdings (with their well-known collective action problems), they suggest entrepreneurs will need to raise capital from a few sources and to rely heavily on bank debt. Because managers often lack the skills they need and the courts provide little protection, firms with broadly dispersed investors will find themselves adrift with incompetent and unconstrained managers. If only to discipline themselves, they will need to restrict themselves to more concentrated sources of funds.

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In this article, we use data from turn-of-the-century (that is, turn of the last century) Japan to test this hypothesis. We do not purport to have data on all firms or industries, nor do we try to estimate comprehensively how well the capital markets worked. Yet disfunctional courts, nascent markets, nonexistent statutes, and firms controlled by people without a clue—overstated to be sure, all this arguably describes late-nineteenth-century Japan about as well as it does present-day Eastern Europe. Within this "transitional" Japan, we pick the largest industrial sector—cotton spinning—and ask what capital and governance structures the more successful firms in the industry adopted.

Consistently, we find that the most successful spinning firms relied on equity and raised it from many shareholders. Although they often did have investors with 5–15 percent interests in the firm, they did not focus on highly concentrated sources of equity capital or bank debt. Instead, they used bank debt only for their short-term needs, raised equity from hundreds of shareholders, and deliberately structured their governance to cripple the ability of unwanted shareholders to intervene in firm management. To induce their managers to maximize firm value, they then tied managerial pay to profits, turned to reputational sanctions in the managerial labor market, committed themselves to high-dividend policies, restricted managerial discretion by char-
from the ways firms structure themselves in the United States. Rather than
to raise funds on the stock or bond markets, they will need to obtain the
bulk of any investment from a relatively few places: through intermediated
(generally, bank) debt or from large-block shareholders. As Erik Bergloef
wrote in a recent World Bank study:¹

- Most of the external funding will have to come from control-oriented fi-
nance. . . .
- Stock and bond markets are not going to play a major role in the provi-
sion of funds during early phases of economic transition. . . .
- Holdings of debt and equity will be concentrated, with little turnover in
  control blocks. . . .
- Both mutual funds and commercial banks will be needed, but banks are
  likely to be more important in corporate governance.

The logic is straightforward. For expositional simplicity, assume that an
‘entrepreneur’ at each firm chooses its investment structure. He chooses
how much debt to issue, and how much stock. He chooses how much stock
to hold himself and how much to issue to others. He chooses how much of
the earnings to reinvest and how much to distribute in dividends. Whether
debt or equity, however, he also chooses whether to try to raise the funds
from a large number of sources or to raise them from only a few investors.
All else equal, investors will prefer honest and effective managers to the foolish and dishonest.

Given this calculus, all entrepreneurs everywhere will not prefer the same capital strategy. As Harold Demsetz and Kenneth Lehn explained many years ago, entrepreneurs will choose the strategy that maximizes firm value—but which strategy does so will vary by firm. All else equal, for example, an entrepreneur who needs more money than even the rich can easily spare will tend to raise capital broadly. An entrepreneur who finds it hard to commit not to cheat investors will tend to turn to fewer investors.

B. Transitional Economies

Within transitional economies, observers point to two factors that they believe will favor entrepreneurs who raise money from a relatively few sources. First, stock and bond markets work best if investors have access to sophisticated courts. Not only can investors use courts to enforce their property rights to these stocks and bonds—given the risk of managerial misconduct, they can also use them to enforce the claims they derivatively hold against incumbent managers. Such claims, however, raise sensitive legal questions not usually amenable to bright line rules—questions that go to the market value of illiquid assets sold by investors to the firm, or to whether managers exercised “reasonable” care in making business decisions that eventually went bad. Unfortunately, most transitional economies have few lawyers and judges, and those they have come with precious little experience.

Second, many firms in these transitional economies are run by men who obtained their jobs at best by luck and sometimes through ties to the old communist bureaucracy or the new mob. Often, they lack much business

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3 Thus, Rafael LaPorta, Florencio Lopez-Silanes, Andrei Shleifer, and Robert W. Vishny argue that firms in legal systems that offer less shareholder protection will tend—all else equal—to have more concentrated ownership structures. Rafael LaPorta et al., Law and Finance, 106 J. Pol. Econ. 1113 (1998).
5 Black and Kraakman, id. at 1915, find this independence of managers in transitional economies one of the pivotal problems facing firms there: “[A]n acute problem in Russia is protecting minority investors against exploitation by managers or controlling shareholders. Protection of minority investors has also emerged as a central political issue in the most successful post-Communist economy, the Czech Republic, and is at the core of recent reforms in Israeli corporate law.” The comparison to Japan is not that Japanese firms consistently recruited better managers. Rather, it is that only Japanese firms that did recruit able managers survived. We discuss below the many difficulties Japanese firms faced in assembling the talent pool they needed.
sense or technical education, let alone reputations for integrity. As a result, they present massive monitoring problems. Only investors with concentrated interests, explain observers, will be able to make investments in these firms profitable. As Masahiko Aoki and Hyung-Ki Kim wrote: "In the transitional economies . . . both competitive capital and labor markets are lacking. Managers have established strong control within their enterprises; there is no external agent with the decisive power to dismiss them for poor management performance or moral hazard behavior. . . . Outsiders would then anticipate substantial agency costs to investing in insider-controlled enterprises. Therefore, the funds necessary for restructuring formerly state-owned enterprises would be difficult to come by from the capital market."6

The conclusion follows straightforwardly—or so it would initially seem. "Taking into account present-day conditions in the East European region," conclude Roman Frydman, Edmund S. Phelps, Andrzej Rapaczynski, and Andrei Shleifer, "one class of mechanisms, namely, outsider control by banks and other financial intermediaries, is well-designed to promote enterprise performance." By contrast, "some of the other mechanisms, such as a stock market or foreign investment, will not be strong enough in the near future, if ever, to be a major source of outside governance."7 On corporate governance, it seems, the transitional economies yield a corner solution: not a Demsetz-Lehn mix of concentrated and dispersed ownership patterns but an overwhelming focus on bank debt and large-block shareholders.

C. The Japanese Analogy

If firms in transitional economies will tend to focus on concentrated capital sources, one need not read far to intuit the next step: learn from Japan. After all, most scholars place large-block shareholders and large bank loans at the center of postwar Japanese finance. For example, another World Bank study cites a prominent economist for the proposition that "the Japanese financial model [may be] a better fit for a capitalist economy at an earlier

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6 Masahiko Aoki & Hyung-Ki Kim, Overview, in Corporate Governance in Transitional Economies: Insider Control and the Role of Banks, at xi, xiii (Masahiko Aoki & Hyung-Ki Kim eds. 1995). For the argument that concentrated debt financing would not be appropriate for the transitional economies, see Peter Dittus & Stephen Prowse, Corporate Control in Central Europe and Russia: Should Banks Own Shares? in 1 Corporate Governance in Central Europe and Russia: Banks, Funds, and Foreign Investors 20 (Roman Frydman, Cheryl W. Gray, & Andrzej Rapaczynski eds. 1996); for a discussion of the problems posed by institutional investors in the Czech Republic, see John C. Coffee, Jr., Institutional Investors in Transitional Economies: Lessons from the Czech Experience, in Frydman, Gray, & Rapaczynski eds., supra, at 111.

stage of development when information problems, including the lack of business reputations and sophisticated market analysis, make stock or bond-based finance exceedingly difficult."

Similarly, in their plea that these countries not ditch their socialist heritage completely, Pranab Bardhan and John E. Roemer urge them to ape their vision of Japan if they must ape capitalism at all:

[W]e are skeptical that the option of the "real thing," Western-style capitalism, is available to some of the East European countries, China, or Vietnam, however much some people in these countries may crave it. The institutions of Western capitalism, including its legal, political, and economic infrastructure, evolved over a long period. Some of them are not easily replicable. In fact, the bank-centric organization . . . is a way of mitigating an historical handicap in capital market institutions . . . . Even in the case of Japan, . . . the main bank system originated in the highly imperfect financial markets and economic uncertainties of the immediate postwar period.

In this essay, we test these predictions against the Japanese experience, but not the postwar experience. Instead, we believe the current transitional economies face predicaments far closer to those Japan faced between the Meiji Restoration and World War II. Many of the problems said to characterize these economies parallel the problems said to have characterized Japan during various parts of this period: insufficient and inadequately trained lawyers, accountants, bankers, and other professionals; novice judges; an absence of economically knowledgeable regulators; (during the early years) a dysfunctional statutory framework; an absence of large and smoothly functioning stock and bond markets; even an absence of a working managerial labor market.

Crucially, by looking at prewar Japan, we can look at a "transitional economy" and ask which firms succeeded in the long run. Because we are only a few years into the current European transition, we cannot yet tell

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8 John M. Litwack, Corporate Governance, Banks, and Fiscal Reform in Russia, in Corporate Governance in Transitional Economies: Insider Control and the Role of Banks 99, 100 (Masahiko Aoki & Hyung-Ki Kim eds. 1995), citing David Scharfstein, Roman Frydman, & Andrzej Rapaczynski, Privatization in Eastern Europe: Is the State Withering Away? 37–38 (1994), argues that "the East European economies need precisely [the German and Japanese] kind of institutions to supervise the restructuring effort," provided agency problems are solved.
which types of firms do best. But in deciding what governance structures to recommend, we do not want to know what structures current Russian firms adopt. We want to know which structures facilitate long-term Russian economic success. Toward that end, we need to know which firms have the highest odds of ultimately succeeding. For that, we need to be able to view the entire period retrospectively. Prewar Japan gives us that retrospective view. And to focus our inquiry, we examine the industry that most radically revolutionized the prewar economy: cotton textiles.

II. THE COTTON TEXTILE INDUSTRY IN PREWAR JAPAN

A. Legal Structure

Although it hardly harbored a brood of recovering Leninists, Japan at the end of the nineteenth century underwent a transition every bit as radical as anything among the formerly communist states at the end of the twentieth. When Commodore Perry sailed into Uraga Bay in 1853, he sailed into a country that had deliberately rejected the west for two centuries. It had not been a splendid isolation.

The national government was badly in disarray and had been for decades. Even in the best of times, it had not maintained a very effective legal system. Although the domain governments had maintained their own courts too, these courts used rules that varied widely, and jurisdiction was haphazard at best. In this vacuum, merchants did create a sophisticated customary commercial law system. Crucially, they never developed firms with transferable equity stakes.

In the name of the young Meiji emperor, a coalition of regional military leaders overthrew this government in 1868. For several years they faced continuing threats to their control, but they quelled the last major rebellion in 1877. Despite their only haphazard control over the country, they organized the first national courts in 1872.\footnote{Shiho shokumiteisei (Rules regarding judicial functions), \textit{Dajokan} unnumbered \textit{tatsu}, August 3, 1872. These institutions did not begin to look recognizably modern until the late 1880s. Saibansho ko-sei ho (Judicial organization act), Law No. 60 of 1890.} Ostensibly on behalf of the emperor, they passed a constitution in 1889. Through the new parliament, they then enacted a Civil Procedure Code in 1890\footnote{Minji soshi ho (Code of civil procedure), Law No. 29 of 1890.} and a Civil Code (essentially contract, tort, property, agency, and family law) in 1896 and 1898.\footnote{Minpo (Civil code), Law No. 89 of 1896 and Law No. 9 of 1898.} They passed one version of the Commercial Code (consider it the Uniform Commercial Code, the Uniform Partnership Act, an insurance act, and a corpora-
tions code rolled into one) in 1890 with the corporate law provisions taking effect in 1893. They then abandoned it and passed an almost entirely new one in 1899.\textsuperscript{14}

B. The Cotton-Spinning Industry

Cotton spinning had not been a significant industry in Japan, but, come the new regime, matters changed. The government of Satsuma province opened the first "modern" cotton-spinning mill in 1867 with several British spinning machines. The national Ministry of Home Affairs imported more machines in 1878 and still more in 1879. None of these government-run operations succeeded, nor did the government offer firms in the industry any other targetted help. Instead, because the "unequal treaties" forced it to keep trade barriers minimal, the government did little more than subject its textile firms to international competition.\textsuperscript{15}

From these inauspicious beginnings, the industry grew rapidly. After some early false starts, Japanese firms soon became major international competitors. When World War I closed the Suez Canal, Japanese textile firms made enormous profit in the Asian market. By the 1920s, they consumed more raw cotton than British firms. Despite a deep recession in the industry after the war, Japanese textile firms in the 1930s still produced a quarter of all domestic manufactured goods and employed 40 percent of all factory workers.\textsuperscript{16} By 1934 the three largest cotton-spinning firms in the world were all Japanese: Toyo boseki (1,372,000 spindles; boseki means "spinning"); Dai-Nippon boseki (1,023,000 spindles); and Kanegafuchi boseki (generally called Kanebo; 823,000 spindles). The fourth largest was the American Amoskeag Manufacturing firm, with 687,000 spindles. The largest British firm was Riverside and Dan River Mills, at 467,000 spindles.\textsuperscript{17}

\textsuperscript{14} Shoho (Commercial code), Law No. 32 of 1890; Shoho (Commercial code), Law No. 48 of 1899.

\textsuperscript{15} Eventually the national government sold off all of its machines to private operators. See, generally, J. Mark Ramseyer & Frances M. Rosenbluth, The Politics of Oligarchy: Institutional Choice in Imperial Japan 137 (1995); Naosuke Takamura, Nihon boseki gyo shi jōsetsu: jo (1 Introduction to the history of the Japanese spinning industry) (1971); Tetsuro Nakaoka, Gijutsushi no shiten kara mita Nihon no keiken (The Japanese experience, seen from the perspective of technological history), in Kindai Nihon no gijutsu to gijutsu seisaku (The technology and technological policy of early modern Japan) 49 (Tetsuro Nakaoka, Tadashi Ishii, & Hoshimi Uchida eds. 1986).


\textsuperscript{17} Toyo boseki, K. K., Toyo boseki kabushiki kaisha yoran (A survey of Toyo boseki, K. K.) 5 (Supp. 1934). This survey excludes the "trusts" in England that were, as combined operations, larger than the Japanese firms.
Other than the Mitsui family’s initial interest in Kanebo (more on this in Section III C2, below) the major zaibatsu—those prewar conglomerate predecessors to the modern keiretsu—invested almost nothing in this industry. As of about 1930, the Mitsui owned only 6.7 percent of Kanebo, 40–50 percent in four much smaller spinning firms, and under 6 percent in a couple of other small firms. The Mitsubishi held equity interests in only two firms—both under 3 percent. The Sumitomo and Yasuda had interests in only one each, both under 1 percent.

C. Capital Structure

Entrepreneurs began forming private cotton-spinning firms in earnest soon after the government mills failed. These firms required massive amounts of capital: Kurashiki boseki, for example, began with paid-in capital of 150,000 yen—this at a time when the incorporators anticipated paying the chief executive officer (CEO) a salary between 15 and 30 yen. About the capital structure of the firms that failed, little information survives. About those that succeeded, several points stand out.

1. Early Formation

Entrepreneurs formed these firms quickly. Indeed, they had already formed most of the firms that would eventually dominate the industry (or their principal predecessors) by 1890. They had formed them, in other words, before any corporate law had taken effect.\(^\text{18}\)

The Amagasaki boseki and Settsu boseki firms, for instance, began in 1889. They would eventually comprise the core of the giant Dai-Nippon boseki, in 1925 the largest Japanese spinning firm (at 672,000 spindles; the merger was in 1918). Mie boseki and Osaka boseki began in 1886 and 1882, respectively. Together, they would become Toyo boseki, in 1925 the second largest firm (660,000 spindles; the merger was in 1914). The third largest (498,000 spindles) Japanese spinning firm in 1925 was Kanebo, incorporated in 1887. Fuji boseki and Tokyo gasu boseki (to become Fuji gasu boseki in 1906; at 416,000 spindles the fourth largest in the industry

\(^{18}\) The information on firm foundings in this paragraph and the next is taken from Choki keizai tokei: Sen’i kogyo (Long-term economic statistics: the textile industry) 39–42 (Shozaburo Fujino, Shiro Fujino, & Akira Ono eds. 1979). The 1925 size information is taken from the Dai-Nippon boseki rengo kai geppo (Great Japan spinning federation monthly newsletter) (Dai-Nippon boseki rengo kai ed. July 1925), hereafter cited as Geppo. Total spindles are calculated by discounting mule spindles by 1.3. Entrepreneurs who met specified conditions could obtain limited liability by application to the local prefectural governor, albeit with some uncertainty. Junzo Yoshida, Nihon no kaisha seido hattatsu shi no kenkyu (A study of the developmental history of the Japanese company system) 11 et seq. (1998).
in 1925) both began in 1896. Kurashiki boseki (216,000 spindles by 1925; seventh largest firm) started in 1887. And Fukushima boseki (184,000 spindles by 1925; eighth largest firm) was incorporated in 1892.

Spinning firms were not unusual in incorporating early. As of 1890, government statistics recorded over 5,000 firms. The 4,000-plus nonbank firms had 224,000 investors and paid-in capital of 90 million yen. Slightly over half the firms were corporations, and the rest were partnerships.¹⁹

2. Broad Ownership

Entrepreneurs sold the stock in these spinning firms to a broad array of investors. In most cases no single shareholder or group of shareholders held a very large interest, though the lion's share of the investors in any one firm often came from a few towns and cities—a point that obviously facilitated trust. Take Kazuo Yamaguchi's study of the 60-odd spinning firms in 1898.²⁰ On average the firms had 331 shareholders. The largest investor held about 8 percent of the stock, the five largest together held 24 percent, and the 10 largest held 33 percent. Only 11 percent of the firms (seven firms) had fewer than 100 shareholders, while 52 percent (32 firms) had 300 shareholders or more. In no firm did the largest shareholder hold 50 percent or more of the stock, and in only three firms did a shareholder hold 20 percent of the stock or more. In 76 percent of the firms (47 firms), the largest shareholder held less than 10 percent of the stock. In no firm did the 10 largest shareholders hold 70 percent or more of the stock, and in only six firms did they hold 50 percent or more. By contrast, in 66 percent of the firms (39 firms), the 10 largest shareholders together held less than 35 percent of the stock.

The average number of shareholders varied by industry during this period. While spinning firms had more shareholders than most, some firms—most particularly the railroads—had even more. Panel A of Table 1 gives the mean number of shareholders per corporation in different sectors.

Within a few years most of the spinning firms that would become the eventual industry leaders had listed their stock on a national exchange. Indeed, as panel B of Table 1 shows, they typically listed their stock with the Tokyo or Osaka Stock Exchanges (both founded in 1878) by the early 1890s, still before Japan had settled on its eventual corporate law. More generally, on the eve of Japan's first (1893) corporate law, the Tokyo Stock


²⁰ Kazuo Yamaguchi, Meiji 31 nen zengo boseki gaisha no kabunushi ni tsuite (Regarding spinning firm shareholders at around 1898), 15 (2) [Meiji daigaku] Keiei ronshu 1 (1968).
TABLE 1

SHAREHOLDING PATTERNS

A. MEAN NUMBER OF SHAREHOLDERS PER CORPORATION, BY INDUSTRY

<table>
<thead>
<tr>
<th></th>
<th>MANUFACTURING</th>
<th></th>
<th>TRANSPORTATION</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AGRICULTURE</td>
<td></td>
<td>AGRICULTURE</td>
<td></td>
</tr>
<tr>
<td>YEAR</td>
<td>All</td>
<td>Spinning</td>
<td>All</td>
<td>Railroads</td>
<td>COMMERCIAL</td>
</tr>
<tr>
<td>1886</td>
<td>35.1</td>
<td>N.A.</td>
<td>188.2</td>
<td>110.5</td>
<td>1,598</td>
</tr>
<tr>
<td>1887</td>
<td>33.8</td>
<td>115.5</td>
<td>190.2</td>
<td>98.5</td>
<td>1,550</td>
</tr>
<tr>
<td>1888</td>
<td>40.5</td>
<td>94.8</td>
<td>148.8</td>
<td>75.7</td>
<td>863</td>
</tr>
<tr>
<td>1889</td>
<td>27.0</td>
<td>148.9</td>
<td>167.7</td>
<td>92.9</td>
<td>904</td>
</tr>
<tr>
<td>1890</td>
<td>29.0</td>
<td>120.7</td>
<td>663.2</td>
<td>96.1</td>
<td>939</td>
</tr>
<tr>
<td>1891</td>
<td>22.0</td>
<td>139.5</td>
<td>200.3</td>
<td>96.1</td>
<td>832</td>
</tr>
<tr>
<td>1892</td>
<td>22.1</td>
<td>171.5</td>
<td>188.8</td>
<td>103.6</td>
<td>769</td>
</tr>
<tr>
<td>1893</td>
<td>16.8</td>
<td>136.4</td>
<td>184.0</td>
<td>181.1</td>
<td>714</td>
</tr>
<tr>
<td>1894</td>
<td>59.0</td>
<td>222.1</td>
<td>144.9</td>
<td>188.9</td>
<td>669</td>
</tr>
<tr>
<td>1895</td>
<td>63.3</td>
<td>255.4</td>
<td>90.2</td>
<td>163.4</td>
<td>719</td>
</tr>
</tbody>
</table>

B. STOCK-EXCHANGE-LISTED COTTON-SPINNING FIRMS

<table>
<thead>
<tr>
<th>Firm</th>
<th>Incorporated</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settsu</td>
<td>1889</td>
<td>1891 (OSE)</td>
</tr>
<tr>
<td>Amagasaki</td>
<td>1889</td>
<td>1892 (OSE)</td>
</tr>
<tr>
<td>Mie</td>
<td>1886</td>
<td>1888 (OSE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1889 (TSE)</td>
</tr>
<tr>
<td>Osaka</td>
<td>1882</td>
<td>1887 (OSE)</td>
</tr>
<tr>
<td>Kanebo</td>
<td>1887</td>
<td>1889 (TSE)</td>
</tr>
<tr>
<td>Tokyo gas</td>
<td>1896</td>
<td>1897 (TSE)</td>
</tr>
<tr>
<td>Fukushima</td>
<td>1892</td>
<td>1895 (OSE)</td>
</tr>
</tbody>
</table>


NOTE.—N.A. = Not available. OSE = Osaka Stock Exchange; TSE = Tokyo Stock Exchange.

Exchange already listed the stock of 62 firms and the Osaka Stock Exchange 35 firms.21

3. Heavy Equity

The spinning firms rarely relied on debt, much less bank debt. This lack of bank debt should not surprise, for Japanese banks in the late nineteenth century seldom lent to firms of any sort. Instead, they lent to individuals and took security interests directly. In 1896, for instance, nationally chartered private banks in Osaka22 made 72 percent of their loans to merchants,

21 Toshimitsu Imuta, Meiji ki kabushiki kaisha bunseki josetsu (Introduction to the analysis of Meiji-era corporations) (17)–(18) (1976).

22 That is, the kokuritsu ginko, the first category of private banks.
generally wholesalers. In Tokyo they made 80 percent of their loans to borrowers whom the records catalog as "miscellaneous," much of it apparently to individual aristocrats. In both cities the banks secured over 70 percent of the loans with stocks or bonds.\textsuperscript{23} This does not mean borrowers did not invest in firms—they probably often did. It means banks did not lend directly to firms and, therefore, seldom had the means to monitor corporate governance.

This near absence of bank debt appears directly in the balance sheets of the firms themselves. The classic study of Japanese long-term economic statistics divides the principal spinning firms of the period into four groups, roughly on the basis of descending size (or the size of their successor firms). Table 2 gives their debt-to-total-assets ratio for three selected years. Although the firms did borrow some funds, in all size categories they relied primarily on equity finance.

### D. Success

Firms like Toyo boseki and Kanebo did not come to dominate the industry just by steady growth, though they did steadily grow.\textsuperscript{24} They also came to dominate it by relentlessly acquiring their more inefficiently managed competitors. So much for the notion that Japanese business executives have a cultural aversion to mergers and acquisitions. Even as they built and ex-

\textsuperscript{23} Toshimitsu Imuta, Sangyo shihon kakuritsu katei ni okeru kokuritsu ginko kashitsuke kin no kosei (The structure of nationally chartered bank loans during the establishment of industrial capital), 27 Kenkyu to shiryō 31, 39, 66–67 (1967). Note that the need to pay interest on these loans may have contributed to shareholder pressure on the firms to pay high dividends, as discussed below.

\textsuperscript{24} Merger information is from Fujino, Fujino, & Ono, supra note 18, at 39; Kanebo, K. K., Kanebo hyakunenshi (A 100-year history of Kanebo) (1988); Toyo boseki, supra note 17.
panded their own factories, aggressive spinning firm managers strategically bought their rivals.

Take Toyo boseki, formed in 1914 from the merger of Mie boseki and Osaka boseki.\textsuperscript{25} Osaka had been formed in 1882. In 1906 it acquired Kanakin, which had in 1905 acquired Heian, which had in 1900 acquired Fushimi. In 1907, Osaka also acquired Hakuseki, which had in 1902 acquired Uwa. Mie began in 1886. It then bought Owari (1905), Nishinari (1906), Tsushima (1906), Kuwana (1907), Chita (1907), and Shimotsuke (1911). Toyo also acquired Tokai penii in 1919, Hamamatsu in 1920, Ise boshoku in 1923, Nogoya kenbo in 1926, and Osaka godo in 1931—which had acquired, in turn, Tenma in 1900, Chugoku and Meiji in 1902, and Imabari in 1923.

Formed in 1887, Kanebo pursued a similarly aggressive strategy. In 1899, it acquired Kashu, Shibajima, and Jokai. The next year, it acquired Awaji. In 1902, it acquired Hakata kenmen, Nakatsu and Kyushu—which, in turn, had acquired Kurume, Miike, and Kumamoto in 1899. In 1907, Kanebo acquired Nippon kenmen, and in 1911 acquired Nankai and Kenshi. Kenshi had acquired Okayama and Bizen in 1907. Okayama had acquired Saidaiji in 1898. In 1913, Kanebo acquired Asahi boshoku; in 1921, Kokka seishi; in 1922, Nippon kenshi; in 1923, Nansei—and so it went, year after year, even through the war.

These firms could generally profitably acquire their competitors because they were better—because the managers of the acquiring firms could more efficiently use the target’s capital stock than the target’s own managers. To illustrate this point, in Table 3 we compare the profitability of the targets and the acquiring firms. More specifically, we take all acquisitions in the industry between 1903 and 1911 involving firms for which profitability data remain, and calculate the mean semiannual profits per spindle for acquiring firms and targets during the 3 years before the acquisition.\textsuperscript{26} Of the 14 acquisitions, according to public records, in only one case did the target have a higher premerger profitability than the acquiring firm. Using a simple probit model to predict the likelihood that a firm will be acquired (Target = 1) as a function of total spindles (per 1,000) and profits per spindle, we obtain

\[
\text{Target} = -0.0480 - 0.0175 \times \text{Total Spind} - 0.0192 \times \text{Prof/Spin} + \epsilon, \\
(0.49) (2.32) (6.10)
\]

\textsuperscript{25} Under the 1899 Commercial Code, mergers took effect, inter alia, only upon a favorable vote among a majority of shareholders and among those shareholders holding a majority of the shares. Commercial Code, §§ 222, 209, or after amendment by Law No. 72 of 1938, §§ 408, 343.

\textsuperscript{26} We do not carry the data farther forward because shortly after 1911 (the end of the Meiji period), Japanese firms expanded aggressively into weaving operations. This, of course, makes it hard to construct a simple metric of operating efficiency like profits/spindle.
**TABLE 3**

**Acquisitions in the Cotton-Spinning Industry, Profits per Spindle, 1903–1911**

<table>
<thead>
<tr>
<th>Acquiror</th>
<th>Profits per Spindle</th>
<th>Target</th>
<th>Profits per Spindle</th>
<th>Date</th>
<th>Acquiror – Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osaka boseki</td>
<td>4.812</td>
<td>Kanakin</td>
<td>2.532</td>
<td>September 1906</td>
<td>2.280</td>
</tr>
<tr>
<td>Kanakin</td>
<td>2.361</td>
<td>Heian</td>
<td>2.144</td>
<td>November 1911</td>
<td>.041</td>
</tr>
<tr>
<td>Mie</td>
<td>2.185</td>
<td>Shimotsuke</td>
<td>1.239</td>
<td>October 1905</td>
<td>.871</td>
</tr>
<tr>
<td>Mie</td>
<td>2.765</td>
<td>Owari</td>
<td>4.506</td>
<td>August 1907</td>
<td>2.326</td>
</tr>
<tr>
<td>Mie</td>
<td>3.828</td>
<td>Kuwana</td>
<td>1.592</td>
<td>1906</td>
<td>1.236</td>
</tr>
<tr>
<td>Mie</td>
<td>4.877</td>
<td>Tsushima</td>
<td>1.592</td>
<td>1906</td>
<td>1.236</td>
</tr>
<tr>
<td>Nihon boseki</td>
<td>3.383</td>
<td>Chita</td>
<td>2.724</td>
<td>August 1907</td>
<td>2.153</td>
</tr>
<tr>
<td>Settsu</td>
<td>4.834</td>
<td>Ichinomiya</td>
<td>2.775</td>
<td>July 1907</td>
<td>.608</td>
</tr>
<tr>
<td>Settsu</td>
<td>3.383</td>
<td>Ichinomiya</td>
<td>4.745</td>
<td>June 1907</td>
<td>.089</td>
</tr>
<tr>
<td>Kamebo</td>
<td>2.525</td>
<td>Kenshi</td>
<td>2.161</td>
<td>March 1911</td>
<td>.268</td>
</tr>
<tr>
<td>Sakai</td>
<td>4.174</td>
<td>Awa</td>
<td>3.906</td>
<td>February 1907</td>
<td>1.409</td>
</tr>
<tr>
<td>Fukushima</td>
<td>2.957</td>
<td>Kasaoka</td>
<td>1.548</td>
<td>November 1909</td>
<td>–.364</td>
</tr>
<tr>
<td>Fukushima</td>
<td>1.811</td>
<td>Harima</td>
<td>2.195</td>
<td>May 1912</td>
<td>4.047</td>
</tr>
</tbody>
</table>

**Sources.**—Calculated from data found in Menshi boseki jijo sanko sho (Reference materials on cotton spinning) (Dai-Nippon boseki rengo kai ed., appropriate years); Choki keizai tokei: Sen'i kogyo (Long-term economic statistics: the textile industry) (Shozaburo Fujino, Shiro Fujino, & Akira Ono eds. 1979).

**Note.**—In each case, we give the semiannual stated profits (yen) per spindle (mule spindles are converted to ring equivalents at 1.3 mules per ring). Profits are for the six semiannual accounting periods ending immediately prior to the acquisition. For Heian, we have data only for calendar year 1903. For the Owari-Mie merger, we have data only on the five preceding accounting periods; for the Fukushima-Kasaoka and Fukushima-Harima mergers, we lack the data on the last two accounting periods.

where the absolute value of the z-values are in parentheses, the pseudo $R^2 = .13$ and $N = 531$. The targets were disproportionately the smaller and less
To explore these questions, we first briefly identify the source of the efficiency gains (Section IIIB). We then turn to the ways the firms mitigated the incentive misalignments between managers and shareholders (Section
cartel among less than all upstream sellers (a cartel only of Japanese spinners) will not likely raise prices.

2. Scale Economies?

Neither were their gains scale economies of factory size. In cotton spinning, the scale economies to factory size disappeared at scales far smaller than the largest Japanese firms. With several hundred thousand (and in some cases over a million) spindles, the Japanese firms were much bigger than necessary to capture the scale economies to factory size. According to one 1957 British study, the "technical limit" to spinning mills rose "as we go to finer counts from 9000 to 10,000 m.e. [mule equivalent] spindles for a mill balanced at 10's counts to 25,000–30,000 spindles for a mill balanced at 30's counts, and so on." Even in the 1940s, few British mills had more than 150,000 spindles. Concluded the same author, "[T]he main economies arising from increasing size are reached at about 30,000 spindles and . . . above 60,000 spindles, if they exist, they are more than offset presumably by increasing managerial difficulties."\(^{31}\)

The onetime president of Toyo similarly calculated the minimum efficient scale at 20,000 spindles for 20's count thread, 40,000 spindles for 40's count, and 60,000 spindles for 60's count.\(^{32}\) Panel A of Table 4 gives his estimates. For 20's count yarn (and in the 1920s, Japanese yarn averaged 20–21 count),\(^{33}\) as factory size rose from 10,000 spindles to 30,000, production costs fell 21 percent; as it rose from 30,000 spindles to 60,000, it fell only another 6 percent.

As this discussion should make clear, the successful Japanese firms were already far larger than factory scale economies warranted. And true to these considerations, they did not use new machines to expand their factories. Instead, they kept any firms they acquired as separate factories. Throughout this period, the mean number of ring spindles per factory at the largest firms remained above the minimum efficient scale but well within range of the

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31 R. Robson, The Cotton Industry in Britain 134, 135, 137 n.1 (1957). The same source calculates a ring spindle as equivalent to 1.5 mule spindles at 20's count yarn (id. at 49 n.*). Lars G. Sandberg, however, describes the 1 ring = 1-1/3 mule conversion ratio as "the accepted practice" of the period in Lancashire in Decline: A Study in Entrepreneurship, Technology, and International Trade 122, 27 (1974). Ring spindles were the newer technology and required less expertise but were less suited for the finer (higher count) yarn.

32 Purged by the U.S.-run occupation, Keizo Seki was invited to lecture at the University of Tokyo Economics Department, where he wrote what became one of the classic histories of the Japanese textile industry.

33 Menshi boseki jiio sanko sho (Reference materials on cotton spinning) 21–22 (Dai-Nippon boseki rengo kai ed. 1925).
TABLE 4  
SCALE ECONOMIES IN COTTON SPINNING  
A. INDEXED COST OF PRODUCTION BY FACTORY SIZE

<table>
<thead>
<tr>
<th>Spindles</th>
<th>Materials</th>
<th>Wages (Labor)</th>
<th>Amenities (Labor)</th>
<th>Operating Costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,000</td>
<td>21.77</td>
<td>104.14</td>
<td>16.92</td>
<td>22.37</td>
<td>165.20</td>
</tr>
<tr>
<td>10,000</td>
<td>21.77</td>
<td>73.59</td>
<td>11.95</td>
<td>19.34</td>
<td>126.65</td>
</tr>
<tr>
<td>20,000</td>
<td>21.77</td>
<td>57.66</td>
<td>9.35</td>
<td>18.84</td>
<td>107.64</td>
</tr>
<tr>
<td>30,000</td>
<td>21.77</td>
<td>51.53</td>
<td>8.37</td>
<td>18.33</td>
<td>100.00</td>
</tr>
<tr>
<td>40,000</td>
<td>21.77</td>
<td>49.25</td>
<td>8.00</td>
<td>18.09</td>
<td>97.11</td>
</tr>
<tr>
<td>50,000</td>
<td>21.77</td>
<td>47.97</td>
<td>7.79</td>
<td>17.93</td>
<td>95.46</td>
</tr>
<tr>
<td>60,000</td>
<td>21.77</td>
<td>47.14</td>
<td>7.66</td>
<td>17.83</td>
<td>94.40</td>
</tr>
</tbody>
</table>

B. MEAN RING SPINDLES PER FACTORY, SELECTED FIRMS

<table>
<thead>
<tr>
<th></th>
<th>1919</th>
<th>1927</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyo boseki</td>
<td>34,595</td>
<td>41,948</td>
<td>52,366</td>
</tr>
<tr>
<td>Kanebo</td>
<td>30,740</td>
<td>37,269</td>
<td>66,795</td>
</tr>
<tr>
<td>Dai-Nippon</td>
<td>43,910</td>
<td>54,259</td>
<td>82,185</td>
</tr>
</tbody>
</table>

SOURCES.—Panel A, Keizo Seki, Nihon mengyo ron (A theory of the Japanese cotton industry) 103, 204, table 10 (1954); panel B, Takeshi Abe, Mengyo—senkanki ni okeru boseki kigyo no doko wo chushin ni (The cotton industry: principally concerning the changes in the spinning firms during the interwar years), in Nihon sangyo hatten no dainamizumu (The dynamism of Japanese industrial development) (Haruhi Kikai ed. 1995).

NOTE.—The calculations in panel A are for 20's count yarn.

smaller firms as well (see panel B of Table 4). In short, the acquisitions did not change factory size. They changed factory management.

3. Managerial Efficiencies?

a) Technical Expertise. The reason behind the acquisitions and behind the success of the largest firms apparently lay in their managerial talent: the way the largest firms (i) mastered both spinning technology and management practices, (ii) learned how to govern a multi-unit firm, and (iii) now leveraged technological and organizational sophistication over a bigger capital base. Begin with the technological expertise. So crucial was this expertise that top engineers could sometimes command higher pay than even the company president. When Kurashiki began operations, for example, it paid its CEO 15 yen per month but its two top engineers 18 and 30 yen.34

Cotton textile production involved almost completely foreign technol-

34 Kurashiki boseki, K. K., Kaiko 65 nen (Sixty-five-year recollections) 36–37 (1953); similarly (for Settsu), see Nichibo, K. K., Nichibo 75 nenshi (The 75-year history of Nichibo) 128, 130 (1966).
ogy. Rightly or wrongly, the British firms had believed that they could rely on on-the-job training. Even in 1950, the 51 textile firms in Manchester employed a total of only 74 university graduates. Japanese firms had no such luxury. They needed expertise they did not have. Toward that end, the most successful firms were the firms that aggressively hired university graduates.

Like much in the industry, the practice may have begun at Kanebo. For Kanebo, its first years were bad years. As the firm’s largest shareholder (this being virtually the only time a zaibatsu had invested heavily in a spinning firm), the Mitsui family stepped in. From the Mitsui Bank it brought Keio University graduate Sanji Muto in 1893. Muto quickly began hiring other university graduates into managerial slots. He initially hired them away from his competitors. Soon, he went directly to the schools. By 1914, he was hiring a dozen graduates a year and had filled virtually all branch manager posts with university graduates.

At the firms these graduates noticeably raised profitability. Table 5 gives the textile firms with at least 20 university graduates as of 1914. Recall the firm profitability data used to calculate Table 3. If we regress firm profits on total spindles (per 1,000) and the number of university graduates, we obtain

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35 For an insightful discussion of the various factors that facilitated the adoption of this technology, see Gary R. Saxonhouse, A Tale of Japanese Technological Diffusion in the Meiji Period, 34 J. Econ. Hist. 149 (1974).


38 Yonekawa, University Graduates in Japanese Enterprises before the Second World War, supra note 36, at 211–12.

39 Note, however, that in a careful early econometric study Saxonhouse did not find that an increase in the number of university-trained graduates in cotton-spinning firms led to higher profits. Gary R. Saxonhouse, Productivity Change and Labor Absorption in Japanese Cotton Spinning 1891–1935, 91 Q. J. Econ. 195 (1977).

40 Much the same results obtain by using the percentage of university graduates on the payroll. For these estimations we set the number of university graduates at firms not on Yonekawa’s list at zero, where in fact they may have ranged from zero to 20. If we simply exclude all firms not on Yonekawa’s list, we obtain (N = 124)

\[
\text{Profits} = 75,839 + 1,120 \times \text{Total Spind} + 2,088 \times \text{Grads} + e.
\]

(1.64) \hspace{1cm} (2.06) \hspace{1cm} (3.81)

Because Toyo resulted from the merger of Mie (a highly successful firm) and Osaka boeiki (a failing firm) in 1914, we attribute the Toyo graduates to Mie. For a discussion of the lack
### TABLE 5

**Cotton-Spinning Firms with Largest Number of University Graduates, 1914**

<table>
<thead>
<tr>
<th>Firm</th>
<th>A. University Graduates</th>
<th>B. Factory Workers</th>
<th>A/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanebo</td>
<td>269</td>
<td>24,323</td>
<td>.0111</td>
</tr>
<tr>
<td>Toyo</td>
<td>136</td>
<td>32,441</td>
<td>.0042</td>
</tr>
<tr>
<td>Fuji gas</td>
<td>87</td>
<td>10,172</td>
<td>.0042</td>
</tr>
<tr>
<td>Osaka godo</td>
<td>61</td>
<td>9,400</td>
<td>.0065</td>
</tr>
<tr>
<td>Amagasaki</td>
<td>48</td>
<td>9,525</td>
<td>.0050</td>
</tr>
<tr>
<td>Kurashiki</td>
<td>45</td>
<td>3,135</td>
<td>.0143</td>
</tr>
<tr>
<td>Settsu</td>
<td>33</td>
<td>10,176</td>
<td>.0032</td>
</tr>
<tr>
<td>Naigai</td>
<td>32</td>
<td>2,220</td>
<td>.0144</td>
</tr>
</tbody>
</table>


Profits = \[19,373 + 1,781 \times \text{Total Spind} + 1,732 \times \text{Grads} + e,\]

\[(1.64) \quad (6.93)\quad (6.23)\]

where the absolute value of the \(t\)-statistics are in parentheses, the adjusted \(R^2 = .48\), and \(N = 531\). Holding firm size constant, the firms with the most university graduates were more profitable than their competitors.

**b) Firm Size.** For recent graduates the bigger firms offered the jobs of choice. New graduates faced a nontrivial risk that the firm to which they went would fail. By joining a bigger and more profitable firm, they could minimize that risk. They overwhelmingly chose the bigger firms.\(^{41}\)

Technological expertise eventually cascaded into the smaller firms, but only as the graduates moved on the interfirm managerial market. Toyo adopted modern management practices, for example, only after it hired away a team of managers from Kanebo. When it laid off its own managers, they moved to smaller firms and took those practices with them.\(^{42}\)

All told, about half of the 1900–1915 graduates who joined Kanebo soon after school left the firm within 20 years. They generally left for higher ranking positions at lesser firms. After improving management there, they often moved to yet other firms, some ex-Kanebo managers working at two, three, or even four other firms during their careers.\(^{43}\) In effect, the larger

\(^{41}\) Yonekawa, University Graduates in Japanese Enterprises before the Second World War, supra note 36, at 212.

\(^{42}\) Shin’ichi Yonekawa, Senkanki sandai boseki kigyo no gakusotsu shokuin so (The university graduate class at the three largest spinning firms in the interwar years), 108 Hitotsubashi Ronso 673, 617, 683 (1992).

\(^{43}\) Yonekawa, University Graduates in Japanese Enterprises before the Second World War, supra note 36, at 212; Yonekawa, supra note 42, at 692–93.
firms adopted much the same strategy high-prestige law firms use today: hire a large corps of graduates, train them, pick the most promising, and induce the rest to leave.

Kanebo was not the only firm with sophisticated managerial talent. Mie had Kozo Saito, a university engineering graduate who worked at the Osaka mint before moving to textiles and becoming a director-equivalent by age 33. Amagasaki had Kyozo Kikuchi, likewise a university engineering graduate with experience at the Osaka mint. He became a director by age 35. Indeed, he was in such demand that he served simultaneously as chief engineer at Amagasaki, Settsu, and Hirano. Toyoharu Wada graduated from Keio University and through the course of his career worked at NYK (the Mitsubishi shipping firm), Kanebo, Fuji (as director), and its successor Fuji gasu—where he became president. Throughout, the firms that came to dominate the industry were generally ones where the early entrepreneurs were lucky or shrewd enough to recruit technologically and organizationally sophisticated men to prominent positions.44

c) Managerial Expertise. The big-firm advantage was not just in engineering—it was also in management. Not only did Kanebo (most prominently of the large firms) hire university graduates for technological positions, it hired them for management, too. As of 1914, most firms used universities only as a source for engineers: of the seven firms other than Kanebo with at least 20 university graduates, 72 percent had science backgrounds. At Kanebo only 48 percent did.45

Under Muto, Kanebo self-consciously imported modern management theory. Frederick W. Taylor published his Principles of Scientific Management in 1911.46 By 1912 Muto had announced his own "Principles of Scientific Operations," and the Taylorite motion studies soon followed.47 But Muto went further. Developing his own "psychological" theories of management, he reasoned that workers worked best if they liked their jobs and had few personal distractions.48 Just as Henry Ford cut absenteeism by doubling wages and hiring social workers, Muto hiked wages and built dormitories, schools, and health clinics.49 Compare, for example, wages—the mean Kanebo daily wages (in current yen) with the average wage among

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44 Morikawa, supra note 37, at 41, 43, 141.
45 Yonekawa, University Graduates in Japanese Enterprises before the Second World War, supra note 36.
46 Frederick W. Taylor, Principles of Scientific Management (1911).
47 Kanebo, supra note 24, at 130–33; Yonekawa, supra note 42, at 677.
48 Kanebo, supra note 24, at 134–36.
TABLE 6
MEAN KANEBO AND BOREN WAGES

<table>
<thead>
<tr>
<th>Year</th>
<th>Boren (Mean)</th>
<th>Kanebo (Mean)</th>
<th>Kanebo (Premium; %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1898</td>
<td>14.99</td>
<td>19.60</td>
<td>30.8</td>
</tr>
<tr>
<td>1908</td>
<td>24.89</td>
<td>29.00</td>
<td>16.5</td>
</tr>
<tr>
<td>1919</td>
<td>80.51</td>
<td>84.10</td>
<td>4.5</td>
</tr>
</tbody>
</table>

NOTE.—Wages are in current sen; 1918 data are not available.

spinning firms in the trade association (the Dai-Nippon boseki Rengo-kai, generally called the Boren; see Table 6). Historians sometimes belittle Muto’s efforts, just as they sneer at Ford. But in belittling either, they miss the essence of efficiency wages: workers work hardest and most carefully if they earn more than the market-clearing wage, and sometimes that additional productivity more than offsets the wage premium.

Indeed, Kanebo’s wage premium relative to other spinning firms eventually faded (as Table 6 shows) but only because other firms raised their wages, too. In 1898 female workers in the spinning firms (most spinning workers were young women recruited from peasant families) earned annual wages that were 1.17 the annual wages female workers earned in the agricultural sector. By 1908 that ratio had risen to 1.90. In 1918 the spinning/agricultural annual wage ratio fell to 1.57 from the 2.21 it had been in 1914, but by 1920 it was back up to 2.74.50

To preserve the incentive effects of these efficiency wages, the firms worked hard to commit themselves to a policy of not hiring away blue-collar workers from rival firms. During the earliest years of the industry, the firms used the trade association Boren for just that purpose. Indeed, for precisely that reason Kurashiki waited to join the Boren until after it had hired away the workers it wanted from its rival firms. And lest nonmember firms hire away their employees, they worked hard to induce the newer and smaller spinning firms to join the Boren, too.51

4) Multiunit Leverage. To exploit the efficiency gains to modern engineering and management, the larger firms learned to master the multidivisional firm. Even in the West, managers did not tackle multi-unit firms until the railroads arrived with their distinctive challenges.52 Yet it was primarily

50 Ramseyer, supra note 28, at 152 table 7.8.
51 Toyo boseki, K. K., Toyo boseki 70 nenshi (A 70-year history of Toyo boseki, K. K.) 234–35 (1953); Kurashiki, supra note 34, at 58.
by learning to leverage their technological sophistication over multiple factories that the larger Japanese spinning firms could exploit their technological and managerial lead.

This leverage took many forms. At Kanebo, the trained, educated managers centralized such tasks as buying raw materials, allocating cotton among factories, making managerial personnel decisions, and selling finished thread. At Toyo, central managers used the data they collected on intrafirm performance to induce factories to compete among themselves. The larger firms also circulated their managers among the factories. Having aggressively acquired less efficiently run factories, they now had to integrate them into the firm and improve both their efficiency and their quality. Toward that end, they regularly moved managers from factory to factory. Even central office managers could spend time supervising work on the shop floor, and firms often rotated factory heads every 2–3 years.53

C. Misaligned Incentives

1. Constraining Managers

   a) Introduction. In arguing that firms in transitional economies should rely on concentrated sources of capital, corporate-governance theorists focus on the potential for managerial and shareholder incentives to diverge. Managers can steal or shirk, they note, and only if investors hold large interests in the firm will they have the power or incentives to constrain them. Accordingly (they continue), closely held firms will more tightly monitor their managers; closely held firms will suffer fewer losses from managerial fraud and indolence; and necessarily in competitive markets, closely held firms will out-compete their more widely held competitors.
b) Profit Sharing. Cotton-spinning firms often tied managerial compensation to firm profits. They did this in a variety of ways, but perhaps the most direct was that used by Mie boseki. Mie explicitly provided in its corporate charter that 13 percent of its net profits would go to its officers as compensation and another 7 percent to its blue-collar workers. Other companies included similar provisions in their charter—Kanebo, for example, and Kurashiki, Amagasaki, and Osaka. Indeed, the Boren (the trade association) even included such a provision in its model charter.54

c) Managerial Labor Market. Managers worked within a fluid labor market. We noted earlier the way they regularly moved among the larger firms and moved from larger firms to smaller. They did this, moreover, within an industry with a limited number of firms. Given the constrained number of cotton-spinning firms (generally 50 to 70), they necessarily worked within a world where reputations traveled quickly. Should they shirk or steal, they necessarily jeopardized their prospects on the lateral market.

d) Restrictive Charters. By corporate charter the early entrepreneurs sometimes limited managerial discretion severely. The Kurashiki (1888) charter, for example, specified over the number of spindles the company
accounting profits) in its charter, and so did the Boren in its model charter. Osaka maintained high dividend payout rates almost from the year of its founding: formed in 1892, in the second half of 1883 it paid dividends of 7,950 yen on profits of 11,191 yen (8.4 percent of paid-in capital); by the second half of 1886 it was paying 48,000 yen on 88,641 yen profits (29.5 percent); and by the second half of 1889 it was paying 120,000 yen on 177,030 yen (29.5 percent).  

Several years ago, Frank H. Easterbrook explained how dividends subject managers to the discipline of the capital market, but his logic applies most strongly to firms with dispersed shareholdings. If a firm is closely held, a team with a majority of stock can intervene directly in management anyway. Such controlling shareholders need not bleed the firm of its extra cash. Because smaller firms are more likely to be closely held, we posit that dividends will be a smaller fraction of income among smaller firms; because listed firms are more likely to have dispersed shareholdings, we posit that dividends will be a larger percentage of profit where the firm is listed on a national stock exchange.

To test these hypotheses, return to the data set we used to create Table 3: measures of profit for the spinning firms, 1903–11. To this, we add data on dividends paid and regress firm dividends on firm profits, on a dummy equal to one if the firm is listed on either the Tokyo or the Osaka Stock Exchange, and on total spindles. The results confirm both hypotheses (see Table 7): (a) profits held constant, larger firms paid higher dividends than smaller firms, and (b) profits held constant, firms listed on the Tokyo Stock Exchange (TSE) and Osaka Stock Exchange (OSE) paid higher dividends than unlisted firms.

6) Prominent Industrialists. Entrepreneurs actively recruited well-known industrialists or technologically sophisticated professionals as shareholders and board members. Eiichi Shibusawa, for example, not only founded Osaka bōeki in 1882 but helped raise capital for Mie bōeki as well. A national figure, he had earlier founded the Dai-ichi Bank (predecessor to the Dai-ichi Kangyo Bank) and built around himself a financial empire that historians sometimes call the Shibusawa zaibatsu.

Other textile investors were less in the public eye but no less prominent within the industry. They were experienced businessmen, and if anyone

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57 Okamoto, supra note 54, at 357, 365; Kurashiki, supra note 34, app. 11; Takamura, supra note 15, at 107–9.
58 Frank H. Easterbrook, Two Agency-Cost Explanations of Dividends, 74 Am. Econ. Rev. 650 (1984). The application to our article here depends, of course, on the existence of other constraints against self-dealing by controlling shareholders.
59 Takamura, supra note 15, ch. 1.
TABLE 7
DIVIDEND PAYOUTS IN THE COTTON-SPINNING INDUSTRY, 1903–1911

A. SUMMARY STATISTICS

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividends</td>
<td>0</td>
<td>99,471.26</td>
<td>876,580</td>
</tr>
<tr>
<td>Profits</td>
<td>−2,486,857</td>
<td>142,564.80</td>
<td>1,559,085</td>
</tr>
<tr>
<td>Listed</td>
<td>0</td>
<td>.43</td>
<td>1</td>
</tr>
<tr>
<td>Total spindles</td>
<td>0</td>
<td>48,333.80</td>
<td>377,920</td>
</tr>
</tbody>
</table>

B. REGRESSION RESULTS

<table>
<thead>
<tr>
<th>LEFT-HAND-SIDE VARIABLE</th>
<th>Dividends</th>
<th>Profits</th>
<th>Listed</th>
<th>Total spindles</th>
<th>Constant</th>
<th>SE</th>
<th>Censoring (x &lt; 0, uncensored)</th>
<th>Pseudo R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.520 (37.43)</td>
<td>.390 (24.20)</td>
<td>...</td>
<td>13,563.21 (2.06)</td>
<td>−7,333.98 (1.68)</td>
<td>−11,475.18 (3.21)</td>
<td>−14,391.9 (3.73)</td>
<td>(87,444)</td>
</tr>
</tbody>
</table>

Sources.—Calculated from data found in Menshi bōséki sankō jijō (Reference materials on cotton spinning) (Dai-Nippon bōséki renge kai ed., various years); Tokyo kabushiki torihiki sho 50 nen shi (A
other investors and corporate officers. When in 1886 entrepreneurs tried to organize Mie boseki, for example, potential investors still remembered the debacle that befell the early government-run mills. Faced with potential investors who would not invest, Shibusawa placed his family’s money (it bought 200 of the 2,200 shares) and national reputation (as head of the Dai-ichi Bank) behind the project—and the other money then followed.61

The logic loosely resembles the logic J. Bradford de Long used to explain the role the House of Morgan played in the United States.62 By诱导ing Morgan to place one of its partners on its board, a firm could significantly raise its value. In effect, in placing a partner on the board, the House agreed to monitor managerial performance and posted its own reputation behind it—and earned a return for the service by handling the firm’s investment banking needs. We suspect prominent industrialists played a similar (subject to important qualifications) role in Japan.

Particularly during the troublesome early years at the firms, prominent shareholders and board members also provided crucial expertise or access to expertise. Involving as it did radically new production technology, cotton spinning often proved far harder than the firms’ first entrepreneurs anticipated. At this point, men like Shibusawa could use their ties to industrialists elsewhere to recruit the talent a firm desperately needed.63 In Kurashiki, for example, it was a prominent shareholder who located the engineers the company needed when it found (soon after starting operations) that its initial engineers were not up to the job. When early in the history of Fuji boseki it found itself similarly adrift, it was prominent shareholder Ichizaemon Morimura (of Noritake China) who convinced Tokyo gasu boseki founder Heizaemon Hibiya to restructure the firm.64

Other prominent investors were simply corporate officers who had done well for the firm. Spinning firms paid successful officers and engineers


63 Nor was this peculiar to Japan, of course. Others have documented the importance of connections and kin ties in a wide variety of economies. See, for example, Naomi R. Lamoreaux, Insider Lending (1994); Jack Carr & Janet Landa, The Economics of Symbols, Clan Names, and Religion, 12 J. Legal Stud. 135 (1983).

64 Fuji boseki 50-nen shi (A 50-year history of Fuji boseki) 37–88 (Fuji boseki, K. K. ed. 1947).
well, and those men often then invested in their firm. Muto, again, bought
sought board positions or tried to intervene in governance, they fought them off.

b) Kanebo. Again, the best-known example was Kanebo. In the early 1920s, at Muto’s urging, the firm amended its charter to require that the company president and representative director have at least 5 years’ experience at Kanebo. By charter, in others words, it expressly banned outside directors from the top two posts.

Behind Muto’s move lay the attempt by a team of outside shareholders to intervene. Early in its history the Mitsui family had controlled Kanebo. In 1905 it decided to sell its Kanebo stock. Soon, a 30-year-old named Kyu-goro Suzuki bought much of what the Mitsui had sold. Once he acquired a quarter and his allies another quarter or so, he turned to corporate policy.

Suzuki wanted to merge several spinning firms into one large firm and export aggressively to China. When Muto opposed the stock issue necessary to pay for the expansion (he was not particularly opposed either to acquiring other firms or to exporting), Suzuki called a special shareholders’ meeting and pushed through his policy. Anticipating this, Muto and all directors and officers peremptorily threatened to resign. As Suzuki could not run Kanebo without experienced personnel, he pleaded with them not to leave. In the end only Muto left. For unrelated reasons Suzuki soon lost his fortune, however, and his Kanebo stock passed to the Yasuda Bank. By 1908 Muto was back as representative director. In 1921 he became president and promptly initiated the charter amendment to ban outside presidents and representative directors.

Lest readers think the Kanebo charter illustrates how persistently Japanese firms favor employees over shareholders, note that Kanebo returned regularly—and successfully—to the capital market for new funds. Apparently, to Kanebo investors the risk of intervention by unsophisticated or devious shareholders exceeded the risk of unmonitored officers.

c) Deviations from One-Share-One-Vote. If Kanebo’s ban on outside corporate leaders was unusual (recall that many firms sought out prominent industrialists for top positions), other firms, too, adopted strategies designed to limit the power of large-stake investors. They most commonly installed charter voting rules that slashed the power of lead shareholders. Although the Commercial Code (both the 1893 code, Section 204, and the 1899 code, Section 162) provided a one-share-one-vote default rule, firms could legally reduce the voting power of the largest shareholders. Many—particularly during the earliest years—did just that.

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66 Accounts of this battle appear in, for example, Hidemasa Morikawa, Nihon keiei shi (Japanese management history) 100–101 (1981); Kanebo, supra note 24, at 103–5.

67 Note that company records show increases in stated capital (generally, but not necessarily, a sign of additional stock issues) for 1922, 1923, 1924, 1934, and 1937 (twice). See Kanebo, supra note 24, at 995.
Take the 1887 Hirano bōseki charter, typical for its time: for any shareholder, the first 10 shares had one vote each, the next 40 shares had one-fifth of a vote, and any additional shares had one-tenth of a vote. If a shareholder consequently had 10 shares, he had 10 votes, if he had 50 shares he had 18 votes, if he had 100 shares he had 23 votes, and if he had 1,000 shares he had 113 votes. The 1883 Enshū bōseki charter gave all shareholders with more than five shares one-fifth of a vote for the additional shares; the 1888 Kurashiki charter specified a graduated scale falling to one-tenth of a vote for all shares beyond 100.68

One might have thought prominent shareholders would try to avoid these rules by placing shares in trust with others. They apparently seldom did, for only a very few accounts of such tactics survive. The Jogo Bank distributed
hypothesis implied by modern observers of transitional economies. To test this first hypothesis, we examine the effect that the number of shareholders had on firm profitability.

Second, were firms able to attract the prominent shareholders that they wanted? Recall that the firms typically adopted two cross-cutting strategies: at the same time that they tried to attract prominent industrialists and professionals to the firm (Section IIIC1f), they adopted charter rules that limited the power that large-block shareholders could wield (Section IIIC2). The point, of course, is that they wanted—and wanted to empower—only the "right" kind of large-block shareholder.

More specifically, firms wanted shareholders who would monitor the firm, help in crisis, and work hard at building it. Those shareholders they would name to the board. At the same time, they emphatically did not want investors with little value added (and who might try to use the firm for private gain) to intervene in firm management. To test whether the firms with large-block shareholders had the right kind of investor, we regress firm profits on measures of shareholder concentration.

2. The Variables

We define the following variables:

Profits = semiannual accounting profits in 1,000 yen. We start our data in the second half of 1903, when the data became public;

Total Spindles = the total number of spindles. We convert mule spindles


<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profits</td>
<td>−126,054</td>
<td>154,083</td>
<td>1,559,085</td>
</tr>
<tr>
<td>Total Spin</td>
<td>1,539</td>
<td>51,546</td>
<td>377,920</td>
</tr>
<tr>
<td>Total S/h</td>
<td>29</td>
<td>407</td>
<td>907</td>
</tr>
<tr>
<td>Largest S/h</td>
<td>.020</td>
<td>.087</td>
<td>.486</td>
</tr>
<tr>
<td>Larg5 S/h</td>
<td>.077</td>
<td>.223</td>
<td>.560</td>
</tr>
<tr>
<td>Larg10 S/h</td>
<td>.113</td>
<td>.316</td>
<td>.608</td>
</tr>
</tbody>
</table>

B. Regression Results

<table>
<thead>
<tr>
<th>Left-Hand-Side Variable</th>
<th>Profits (Mean)</th>
<th>Profits (S/h)</th>
<th>Profits (S/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Spin</td>
<td>2,609 (16.2)</td>
<td>2,883 (20.0)</td>
<td>2,973 (21.7)</td>
</tr>
<tr>
<td>Total S/h</td>
<td>85.4 (2.01)</td>
<td>75.5 (1.71)</td>
<td>63.2 (1.43)</td>
</tr>
<tr>
<td>Largest S/h</td>
<td>482,728 (4.67)</td>
<td>239,984 (2.98)</td>
<td></td>
</tr>
<tr>
<td>Larg5 S/h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larg10 S/h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>−57,143 (2.83)</td>
<td>−78,700 (2.82)</td>
<td>−77,118 (2.40)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.63</td>
<td>.62</td>
<td>.61</td>
</tr>
</tbody>
</table>

Sources.—Menshi boseki jijo sanko sho (Reference materials on cotton spinning) (Dai-Nippon boseki rengo kai ed., appropriate years); Kazuo Yamaguchi, Meiji 31 nen zengo boseki gaisha no kabunushi ni tsuite (Regarding spinning-firm shareholders at around 1898) 15 [Meiji daigaku] keiei ronshu 1 (1968).

Note.—The regression uses ordinary least squares. $N = 380$. For variables, see text.

S/h is consistently positive, and significant in two of the three specifications: firm size (Total Spin) held constant, the firms with more shareholders were more profitable than those with fewer. Second, the coefficients on Large S/h, Larg5 S/h, and Larg10 S/h are positive and significant in all specifications: firm size held constant, the firms with large-block shareholders were more profitable than those without.

Hence, the conclusion: firms with more shareholders were more successful, but firms where the largest shareholders owned more stock were also more successful. Recall, however, that the firms with prominent lead shareholders did not concentrate large percentage interests with these shareholders. As of about 1898, the average spinning firm had 330 shareholders, and the largest shareholder held 8 percent of the stock. Some firms dispersed their stock among perhaps 500–800 shareholders; some firms had a lead shareholder with perhaps 10–20 percent of the stock. In only three firms did the lead shareholder have more than 20 percent of the stock, and in only one did he have more than 30 percent.

Within this world, the firms with more shareholders and with the more
heavily invested lead shareholder did better than the rest. As obviously ambiguous as the implications are, when viewed together with the other strategies the firms adopted we suspect they point to the importance of attracting the "right" investors. After all, these firms (a) self-consciously tried to attract investors who would provide monitoring, technical expertise, or access to help, but simultaneously (b) fought to keep unsolicited large-block shareholders at bay. The combination of a and b suggests that they believed some, but only some, large-block investors added value. Table 8, in turn, suggests (obviously does not prove) that the firms with the large-block shareholders had largely found the investors they wanted.

IV. CONCLUSIONS

Observers of modern transitional economies argue that the firms there should raise their capital from a few concentrated sources and rely heavily on intermediated debt finance. And yet, faced with a similar institutional environment (dysfunctional courts, nascent markets, nonexistent statutes), the successful cotton-spinning firms in late-nineteenth-century Japan were the firms that in some important ways did the opposite. The successful firms did have prominent investors, but they also relied heavily on equity raised from hundreds of shareholders.

These modern observers reason that in weak legal environments only large-block shareholders and banks will effectively constrain managers. Faced with such an environment, however, the successful cotton-spinning firms used banks only for short-term funds and manipulated corporate charters to keep large-block shareholders at bay. They did this for a simple reason: they had other ways to control managers and needed to protect their firms against intervention by shareholders who either had foolish ideas or (more likely) would manipulate the firms for private gain. They did not keep all major investors powerless. After all, they actively recruited some investors to the firm—but the investors they wanted, they could, and did, empower by naming to the board. Other major investors they kept at arms' length.

Maybe we should not be surprised by all this. Although diversified shareholders need ways to induce managers to keep their bargains, so do creditors and majority shareholders. Creditors, too, need to be able to demand repayment, to force auctions, to enforce security interests, to acquire title to collateral, to sell their collateral on the open market. And so, too, do controlling shareholders. An investor may own two-thirds of a firm's stock, but if incumbent officers and directors will not call a shareholders' meeting, he cannot vote. If the officers and directors rig the vote, his shares will not matter. If officers and directors will not leave, a successful vote is so much
hot air. And if the officers and directors rob the till on the way out, their eviction is simply hollow. Absent promissory credibility, investors become even controlling shareholders at their peril.

The point, rephrased, is that entrepreneurs need some way of enabling managers credibly to commit to their promises—but they can choose from a broad portfolio of means. A sophisticated legal system is one such mechanism, but in worlds with only nascent courts entrepreneurs have access to other mechanisms besides. To align managerial incentives—to make managerial commitments credible—Japanese entrepreneurs used profit-sharing compensation schemes, relied on the incentives created by the lateral job market, restricted managerial discretion by charter and statute, committed to high dividend rates that forced managers to subject their plans to the discipline of the capital market, and recruited well-known industrialists to the board.

Entrepreneurs can do all of this to align managerial and shareholder incentives, but simultaneously they must do what recent observers ignore: protect the firm from incompetent or corrupt controlling shareholders. In a world with sophisticated courts staffed by judges accustomed to making judgment calls in corporate cases—in such a world perhaps entrepreneurs can rely on courts to police the duties of care and loyalty. In late-nineteenth-century Japan, the successful cotton-spinning firms chose to structure their firms in ways that stymied unwanted shareholder intervention instead.