

CORPORATE GOVERNANCE AND MANAGEMENT PRACTICES IN JAPAN: CURRENT ISSUES*

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Abstract

Facing the prolonged recession since the burst of a financial bubble in 1990 Japan has been experimenting with various new policy initiatives both in the public and private sectors, corporate governance reform being one of such policy initiatives. Japanese corporate governance practices in particular have been severely blamed as one of the primary reasons for Japan's poor economic performance in the last decade. In this paper we discuss the relationship between corporate governance and various aspects of management practices in Japan. (Corporate governance in Japan emphasizes not only the shareholders and managers, as in the West, but also the workers as important corporate stakeholders.) We point out also that Japan's relatively loosely practiced anti-monopoly (anti-trust) laws continue shaping Japanese corporate governance behavior. We then evaluate Japan's corporate governance reform movement which emphasizes the transformation of the current corporate governance system, which pays little attention to individual shareholders, into one similar to the Anglo-American system which focuses more on shareholders' value. We tentatively conclude that Japan has not yet found a new corporate governance system that can serve as an equilibrium business system in that it is compatible with Japan's management, legal and other practices and the incentives of the constituents of Japanese firms. This paper also presents various incentive and institutional issues which would have to be considered by those who consider potential applicability of the Japanese-like corporate governance practices to transitional economies.

Keywords: Japanese corporate governance practice, transitional economies.

1. Introduction

There are certain types of management practices (business practices) which distinguish Japanese firms from North American and European firms. These practices of Japanese firms sometimes lead to predictable differences in outcome for Japanese firms compared to North American firms¹.

For example, long-term risk sharing among corporations and incentive mechanisms for personnel management which favour long-term employment, combined with long-term stable shareholding, may allow Japanese firms to undertake projects they consider essential for their survival in the long run without worries about quarter-to-quarter changes in earnings or stock prices. Long-term business relationships among firms in Japan also imply sharing between a supplier and an assembler of the cost of unexpected price increases in the raw material for the supplier from whom the assembler firm purchases intermediate goods, even though the presence of a price contract between them means that, in a strictly legal sense, the supplier must absorb all the cost of the price increases. Similarly, the supplier is expected to absorb some of the cost reduction the manufacturer deems necessary to regain the competitiveness of the final product in the global market that it has lost for unforeseen reasons (e.g. a significant

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¹ See, for example, Nakamura and Vertinsky (1994, Ch.3) for further discussions on this point.

appreciation of the Japanese currency). This is in contrast to the standard Western notion that "a contract is a contract."

Another example is the practice of long-term employment which is particularly prevalent among large firms. It would be difficult, if not impossible, to implement layoffs in Japan as extensively as is done in the U.S. even in Year 2003 when Japan is suffering from the long recession and over supply of production capacity.

In this paper we discuss how these Japanese management practices affect the way corporate governance is handled in Japan.

The organization of the rest of the paper is as follows. Japan's relatively low unemployment rates throughout the stages of the business cycle² are the direct consequence of long-term employment practices in both the private and public sectors. Such employment practices and associated industrial relations issues are discussed in the next section, Section 2. Section 2 also discusses different types of corporate groups (keiretsu) and inter-firm relationships, and the associated legal environment in Japan. Section 3 then assesses the implications of Japanese industrial relations and inter-firm structures from the perspective of corporate governance. The implications of these management practices for corporate governance and economic performance are discussed in Section 4. Section 5 concludes.

2. Japanese management practices

2.1. Industrial relations³

In post-World War II Japan, firm managers have been constrained by so-called "three sacred treasures" of industrial relations: lifetime (or long-term) employment, the *nenko* (length-of-service reward) wage system, and enterprise unionism. These contemporary industrial relations practices developed over time as a result of the conscious effort by both firm management and workers to avoid the types of serious labour disputes which took place between the early 1900s and the 1950s (Fruin (1983)).⁴ The severe decade-long recession in the 1990s and early 2000s prompted many Japanese firms to either modify or give up some aspects of these practices, as will be discussed below.

Benefits associated with post-WWII Japanese industrial relations practices

Certain benefits were commonly attributed to each of the three distinguishing features of Japanese industrial relations practices. These can be summarized as follows:

Lifetime (long-term) employment

- (i) Because firms and employees can count on long-term employment relationships, both are willing to invest in employees' human capital. On-the-job training and formal job-related educational training are much more common in Japan than in North America.
- (ii) Long-term employment allows firms to use job rotations to develop workers' multi-task skills and to expose workers to different aspects of business and production operations. There are few job classifications. As a consequence, firms can deploy personnel flexibly and effectively.
- (iii) New productivity-enhancing technologies can be introduced with minimal worker opposition or concern about job losses.

Nenko (length-of-service) reward wage system

- (i) Workers are assessed based on their career advancements. Hence workers have more incentive to perform in the long-run.
- (ii) Workers are assessed by many supervisors over a long period of time throughout their careers. Hence there is less room for incorrect judgments in personnel decisions (e.g. promotions).

² Japan's unemployment rate in 2003 is still below 6% which is relatively low compared to other countries with advanced economies.

³ For a more detailed analysis of this topic see Nakamura (1993).

⁴ It should be pointed out that these three pertinent features of industrial relations practices were observed primarily for the sorts of jobs that have traditionally been filled by prime-aged men. Many women, older workers, and foreign workers are in jobs where this is not the case.

Enterprise unionism

(i) Because of the long-term commitments to a firm by workers, enterprise unions can demand a fair share of firm profits more effectively than otherwise. (ii) Full-time positions at enterprise unions are often part of career tracks for potential managers of firms. Firms are able to share information on firm performance, problems and opportunities with enterprise unions. (iii) Because of the information sharing and feelings of trust and shared objectives fostered by enterprise unionism, workers and managers alike accept rollbacks of bonus payments in tough times without threats to leave or morale deterioration of the sort that endangers production efficiency and product quality.

Success Stories

Evidence of the benefits of the Japanese industrial relations system is largely anecdotal. The nature of this evidence is most easily conveyed by examining some of these success stories (e.g. Krafcik (1988)). In the automobile industry, for example, Toyota perfected its production system (sometimes called the just-in-time (JIT), or Kanban, production system) by the early 1970s and then disseminated it to other Japanese competitors by the late 1970s. Two important aspects of the Toyota production system are that (1) in-process inventories are minimized by the use of JIT inventory management, which requires that all needed parts and/or semi-products are delivered to where they are needed as they are needed in the quantities needed; and (2) production flow is set up so that cars of various specifications are produced in sequence according to demand fluctuations. It is often the case that two successive cars produced on a production line are of different types. (See, for example, Lieberman and Asako (1997) and Nakamura and Nakamura (1989)).

JIT inventory management, as implemented by Toyota and its parts suppliers, requires close-to-zero defect rates in all stages of the production process in order for the system to run smoothly. To this end, production line workers actively participate, often in teams, in solving local production problems. Separate repair and maintenance positions are eliminated. This cooperation is possible because the workers are familiar with many aspects of the production process and view co-operation in production management as essential for their own long-term goals. The multi-task capabilities of workers are also relied on in combining production of cars of different types. Producing a passenger car of type A followed by, say, a station wagon of type B on the same production line requires retooling press machines in a very short time. Workers skilled in a variety of tasks make it possible to design a production line where cars of different types are produced in accord with the time-varying demand distributions for these types of cars. Flexible manufacturing of this sort contributes to high capacity utilization rates which, in turn, lead to high productivity gains compared to North American companies (e.g. Fuss and Waverman (1990)).⁵

Job rotations and on-the-job training combined with long-term employment security allow firms and workers to make long run investments in workers' human capital; it can take as long as ten years of experience to master some skills. Fewer job classifications are conducive to the multi-skill development of workers. It is generally the case that the number of job classifications for Japanese auto plants are smaller compared to the number in the traditional Big Three plants. For example, in the mid 1980s a Honda U.S.A. plant had three different job types -- team leader, production, and maintenance, while a typical GM plant had 95 job types (U.S. General Accounting Office (1988)). A substantial amount of research and development takes place in Japanese auto plants to design production facilities that fully utilize multi-task production workers. Japanese firms do not lay off workers except under extreme circumstances.⁶ U.S. employment indexes, for example, follow production indexes much more closely than is the case in Japan. Job security, which prevailed in Japan until the late 1990s, helped workers to accept new production technologies.⁷

⁵ On the other hand, some U.S. firms implemented JIT on a selective basis in their own ways and improved their productivity performance successfully (Nakamura, Sakakibara and Schroeder (1998)).

⁶ This still seems true for the core workforce (regular employees) of many Japanese firms but the number of those covered by this non-layoff practice has been declining. The current recession in the 1990s and early 2000s has provided Japan with such extreme adverse circumstances and many firms, some more successfully than others, have implemented layoffs.

⁷ This may partially explain why Japanese factories are now equipped with large numbers of industrial robots relative to their Western counterparts. In 1989 the estimated numbers of operating industrial robots (excluding fixed

Mechanisms for adjusting the wage bill

Of course, Japanese firms, like the firms of other nations, must deal with business cycle fluctuations. In downturns, Japanese firms try hard to find ways of adjusting the total wage bill without layoffs. These methods include wage adjustments, adjustments of hours through overtime work and non-regular worker employment, and the flexible deployment of the workforce. Of particular interest from the corporate governance perspective is Japanese bonus payments.

Japanese bonus payments

Japanese workers are paid regular monthly (fixed contract) earnings as well as bonus payments. The amounts of the bonuses are not prespecified but generally range between four to six months worth of regular contract earnings. The amounts of regular wages and bonus payments are both decided annually in negotiations between firms and labour unions: regular wages are settled in the spring offensive, and bonus payments are negotiated somewhat later but before summer. Both regular wage and bonus pay settlements at the firm level reflect, among other things, the general economic conditions and specific firm performance for the previous 12 months. By this means, a firm's total wage bill adjusts reasonably frequently to the firm's changing economic fortunes.

It is of interest to note that the Japanese labour code prohibits a labour contract to extend beyond one year. The annual wage adjustments in Japan conform to this labour law. In contrast, the lengths of union wage contracts, for example, in Canada and the U.S. are as long as five years, with the average being around two and a half years. With standard Cost-of-Living-Adjustment (COLA) clauses, these long-term contracts act to secure the purchasing power of workers' wages, but at the potential cost of employment security.

Unlike bonuses in North America which are mostly paid to managers and executives, bonuses in Japan are used as part of the compensation package for most workers regardless of their rank, age or sex. The ratio of bonuses to total annual pay increases as worker qualifications rise, suggesting that the bonus fractions are correlated with the amounts of managerial and difficult-to-observe tasks involved in workers' jobs. (See Nakamura and Hübler (1993) for empirical evidence on this.) Year-to-year changes are much greater for bonuses than for regular wages. In this way, business fluctuation risk is shared without resorting to employment layoffs. (See Nakamura and Nakamura (1991), for a discussion of risk sharing aspects of bonus payments.) Firms also use bonuses as short run incentive schemes for individual workers and groups of workers, through the allocation mechanisms for individual workers.⁸

The problems associated with Japanese industrial relations practices

Because of their industrial relations policies, personnel development in Japanese firms is carried out primarily through internal labour market policies. Managers and workers cooperate to develop employee skills through job rotations, on-the-job training, and formal employer-supplied training. This is the case not only for production (blue-collar) workers but also for office (white-collar) workers. This system is believed to have helped Japan achieve the national goal of macro economic growth, with the rewards of this growth being shared by workers, shareholders, and other stakeholders of firms. This macro goal, however, is thought to have been largely achieved by the late 1980. The Japanese industrial relations practices which were designed and implemented successfully in Japan's high growth era are no longer suitable for the present age when Japanese society demands more varieties: for example, more job opportunities for women, disabled workers, old workers, minority and other types of workers who are not prime-aged men (Japan's traditional regular workers)⁹; labor markets for the growing number of

sequence robots) were: 219,700 for Japan, 37,000 for the U.S., 22,395 for (West) Germany, 7,063 for France, 7,463 for Sweden, and 5,908 for the United Kingdom.

⁸ Bonuses are by no means the only incentive scheme used by firms. In fact, promotions, strategic job assignments and regular pay increases are among Japanese firms' standard tools to maintain their workers' long-term incentives.

⁹ High-paying jobs are generally available only to those workers with long seniority who have been given increasingly challenging assignments. It is expected that women will have intermittent career patterns, to allow for child bearing and rearing. As a consequence, female workers interested in pursuing demanding careers are likely to be

workers who want to change jobs; and accommodation of issues engendered by internationalisation of Japanese firms as well as Japanese society as a whole (e.g. foreign workers, immigrants).

Secondary labour markets

It is customary for most Japanese firms to hire workers at the time they graduate from school. While Japanese firms do hire workers in various stages of their careers, the fraction of workers hired in mid-career is quite small compared, for example, with North American practices. Furthermore, the probability of a male worker changing his job voluntarily is considerably smaller for Japan than for Canada or the U. S. This also implies that secondary labour markets in Japan are relatively thin compared with the primary labour market for new graduates. These patterns are consistent with the longer lengths of service with single employers observed for Japanese workers compared with U.S. and Canadian workers. An obvious implication of the thin secondary labour market in Japan is that it is difficult, if not impossible, for workers to adjust their employment to changes in their own tastes, preferences, qualifications, and personal life cycle planning without substantial wage loss. Also, training not provided or encouraged by the employer may not be rewarded within a firm's internal labour market. Yet workers who have obtained additional education or training on their own may not be able to find other positions where their efforts would be rewarded. The lack of an adequate secondary labour market is a particularly serious problem for Japanese women who often have to drop out of regular career positions to have children. These women have great difficulty locating new jobs with pay commensurate with their qualifications.

2.2. Corporate groups (keiretsu)

There are two main types of corporate groups in Japan. They are production-based corporate groups (sometimes called capital or vertical keiretsu) and bank-based corporate groups (sometimes called financial or horizontal keiretsu). The membership of these corporate groups usually includes a number of foreign-affiliated firms. A production-based corporate group often consists of a major manufacturer and its much smaller supplier subcontractors. The relationships between the manufacturer and suppliers are based on economic transactions (e.g. supplying parts) and are often quasi-permanent; the terms of transacting conditions (including prices) are often influenced by the relative bargaining power that the selling and buying firms have in bilateral negotiations (Aoki (1988)). (Firm groups of this type exist in the U.S. auto industry but at a much smaller scale than in the Japanese auto industry.)

For example, it was estimated that Toyota had direct relations with 122 first-tier suppliers and indirect relations with 5,437 second-tier suppliers and 41,703 third-tier suppliers in the late 1970s. The quasi-permanent nature of the Toyota group is illustrated by the fact that, between 1973 and 1984, only three firms ceased to be members of the association of Toyota's first-tier suppliers while 21 firms joined the association (Aoki (1988)). In 1999 Toyota had 343 firms as the firms under its control influence and additional 60 firms in which it had partial control influence. The largest company in Toyota group is Denso which began as Toyota's electrical equipment division. Toyota owns 24% of Denso.¹⁰ Comparing the auto industry in Japan and the U.S., it is often said that Toyota buys 80% of its parts from outside while GM makes 80% inside.

Capital keiretsu (production-based vertical corporate groups)

The production-based corporate group is often characterized by the following factors: (1) ownership by the prime manufacturer (or the dominant company in the centre of a group) of small fractions of its subsidiaries or suppliers (typically 10-20% of the total outstanding shares of first-tier suppliers); (2) little or no ownership by the suppliers of their prime manufacturer's shares; (3) long-run business associations based on vertical technological relations; (4) sub-contractors who often do business with other

(and often are) subject to statistical discrimination by employers. Unfortunately Japan's Equal Employment Opportunity Law of 1986 (revised in 1999) has no enforcement provisions.

¹⁰ Other Japanese firms with large vertical keiretsu groups include Hitachi, Matsushita, Sony, Honda, Toshiba, Fujitsu, Bridgestone and NEC. After Renault took over control of Nissan Motor, Nissan drastically reduced the size of its production keiretsu.

production-based corporate group companies (in fact, the prime manufacturer sometimes encourages its group suppliers to retain orders from firms outside the group for the purpose of attaining scale economies in production); (5) supplier firms that are usually smaller than the prime manufacturer, but remain as independent companies; (6) some group firms that are spin-off subsidiaries of the prime manufacturer (Hitachi Ltd., for example, has spun off many divisions which are now separately listed firms); and (7) the prime manufacturer has significant influence in its group firms' corporate governance (e.g. retain the due shares of board directorship). Provided that common long-term business goals and risk sharing arrangements are agreed upon between a prime manufacturer and its supplier firms, a production-based corporate group can be an efficient producer of complex, assembly-based products such as cars and electric equipment.

The strengths of a production-based corporate group, compared to a vertically-integrated company, include: (1) the size of each firm in the group, including supplier firms and the prime manufacturer firm, is kept small and hence easier to manage; (2) incentives for corporate performance are less likely to be lost in small separate firms; and (3) small firms pay lower wages. Long-term business relationships also allow the supplier and the prime manufacturer to cooperate on activities such as developing parts for new products. On the other hand, it is not difficult to imagine that if the long-run goals of a prime manufacturer and supplier firms are not well aligned in terms of incentive and risk sharing schemes, then the corporate group may not function as well as a vertically integrated firm would.¹¹ Japanese firms have accumulated substantial knowhow in dealing with inter-firm business relationships (see Fruin (1992)). Aoki (1988) discusses some types of inter-firm contracts used in production-based groups. So far these production-based corporate groups in Japan have been quite successful in the global market in the auto and electronics industries and other manufacturing industries.

Financial keiretsu (bank-based or horizontal corporate groups)

Until the recent major restructuring of the banking industry, which began in 1998 as a result of the massive non-performing loans carried by Japanese banks, there were six major city bank-based corporate groups in Japan. They were the Mitsubishi, Mitsui, Sumitomo, Fuji, Dai-Ichi Kangyo and Sanwa groups. Each of these banks created a financial keiretsu which still exists. Each group typically consists of (at least) one city bank, one trust bank, one general trading firm (Sogo Syosha) and firms in non-competing lines of business. There are, however, exceptions to this rule of the general group membership. A number of companies belong to several groups. (For example, Hitachi Ltd. belongs to three groups.) Both the Mitsubishi and Mitsui groups have several group firms competing in chemical and petrochemical industries. In 2002 the Mitsui and Sumitomo Banks merged to form the Mitsui Sumitomo Financial Group and in 2003 the Fuji Bank, DKB and the Industrial Bank of Japan merged to form the Mizuho Financial Group. As a result some reorganisations of firms belonging to the former Mitsui and Sumitomo groupings discussed above took place (e.g. formations of the Mitsui Sumitomo Life Insurance and the Mitsui Sumitomo Fire and Casualty Insurance) but so far no industrial firms in the former Mitsui, Sumitomo, Fuji and DKB bank groups merged together. On the contrary, the merger talk between the Sumitomo Chemicals and the Mitsui Chemicals, two of Japan's largest chemical companies, from the Mitsui and Sumitomo groups collapsed in March 2003. It appears that, for the moment, most of the member companies of the Mitsui and Sumitomo horizontal groups will continue their groupings with their respective general trading firms (Mitsui & Co. and Sumitomo Corp.) as the cores of their groups. So far little change has taken place in the Fuji and DKB groups either.

Main bank

Most listed Japanese firms, both independent (non-group) and group firms, have a main bank. (The main bank is not a legal term.) The main bank of a (client) firm is usually the largest bank shareholder of the client firm as well as its largest bank lender. It is profitable for a bank to be the main bank of an

¹¹ It is well known that Toyota has been trying, unsuccessfully, to take away some of Denso's highly profitable auto electrical components business (e.g. GPS navigators). Electrical components have become the most important part (in terms of value added) of automobile output in recent years. In response Toyota has been trying to strengthen its control over Denso and also set up a joint venture with Toshiba to produce automotive electrical components. (Toshiba and Toyota both belong to the Mitsui group (a horizontal keiretsu group).

industrial firm, since the main bank can charge interest on loans to firms in its group at interest rates which are above the market rate and it also retains the business accounts of these firms which often carry no interest (Caves and Uekusa (1976), Aoki (1988)).

When a client firm faces financial distress, however, its main bank is expected to take part in the management of the troubled firm on behalf of the syndicate of financial institutions involved with the firm, including other banks, and it is expected to absorb more than its proportional share of losses if necessary. For example, the Sumitomo Bank wrote off 113.2 billion yen in 1977 when Ataka Industries failed because of, among other things, a major investment loss in a Newfoundland oil refinery. Nippon Light Metal, Alcan's listed subsidiary in Japan, also received substantial subsidies from its main and sub-main banks (the Daiichi Kangyo Bank and the Industrial Bank of Japan) during the 1970s and 1980s when the Japanese aluminum industry went through restructuring (Sheard (1991)).

Generally the main bank for bank-based corporate group firms is the bank in the centre of the group. The group bank and other financial institutions act as major, but not exclusive, financial intermediaries for group firms. Banks are allowed to hold up to 5% of equity in industrial firms and they often hold this upper limit in each group firm, while group firms hold equity in the bank as well. (It should be noted, however, that non-group firms and other banks also act as stable shareholders of group banks and firms.)

Because of their horizontal nature covering many industries, bank-based corporate groups are often suspected of having (and exercising) considerable market power. However, others feel that the presence of independent competitors, as well as competitors in other bank-based groups, provides sufficient competition to keep bank-based group firms' profitability low relative to independent firms (Caves and Uekusa (1976), Nakatani (1984)). Caves and Uekusa (1976) failed to find any monopsonic or monopoly power exercised by firms in bank-based corporate groups. While some preferential intra-group transactions seem to take place, for example, between general trading firms and steel producers, it is also the case that some of the strong product producers in the automotive, electronics and other industries have chosen not to rely on general trading firms in distributing their products in domestic or overseas markets. Group firms' continuous profit maximization processes may not always lead to the preferential use of existing group firms. This seems consistent with the findings by Caves and Uekusa.

This is not to say, however, that bank-based group firms are never involved in activities which violate Japanese anti-monopoly (anti-trust) laws. It is sometimes suspected, for example, that bank-based group firms in certain established industries (e.g. chemicals, metals and construction), as well as non-group firms, do violate the anti-monopoly laws. There is also some anecdotal evidence suggesting that, in addition to exchanging information, member firms of the Presidents' Clubs for bank-based corporate groups cooperate in setting up joint ventures in emerging, but potentially risky, lines of business. Although bank-based group firms' profitability may be somewhat lower, risk-sharing activities and a secure demand for their products from other group firms probably make profits more stable over time than is the case for independent companies. We should note that this sort of risk sharing or insurance aspect of a corporate group does not necessarily, in itself, make group firms more competitive.

Another function that both production-based and bank-based groups perform is to facilitate the movement of excess labour when, for instance, some group firms in declining industries must downsize their operations. (Government policies encourage such intra-group transfers of the redundant personnel but this type of placement does not help develop a transparent secondary labor market for such redundant personnel.)

Other inter-firm relationships

We have discussed two main types of corporate groups found in Japan. It is important to note, however, that there are many other types of inter-firm relationships in Japan, and Japanese firms, regardless of their more formal keiretsu affiliations, participate in these inter-firm activities. Morgan and Morgan (1991, p. 171) note: "The Japanese are the masters of partnering, and any large company has many investors and partners, relationships and contracts, consortium activities and joint projects. Never discount Japanese flexibility and interest in new opportunities."

We have argued that the corporate groups and partnerships prevalent in Japan implement risk sharing and incentive mechanisms which have a positive impact on long-run economic growth. Another, perhaps more important, contribution of the presence of corporate groups and possibilities for corporate

alliances of different kinds in Japan is that this brings competition to markets where high monopoly rents are being earned. This type of competition among corporate groups was counted on in Japanese industrial policies in the 1960s (see Nakamura and Vertinsky (Chs. 4 and 5).

Keiretsu and market access for foreign firms

It is not difficult to imagine that many foreign firms trying to enter the Japanese market feel the potential difficulty posed by Japanese corporate groupings and alliance practices for access to the Japanese market. The U.S. government has been arguing this point particularly with respect to auto supplies in its trade negotiations with Japan. No clear-cut strategy for affected foreign firms to deal with this type of non-visible trade barrier has been found yet.¹²

Legal environment in corporate governance: anti-trust and other issues in Japan

Japan's antitrust environment is characterized by its anti-monopoly laws which were originally introduced by the Allied Forces during their occupation of Japan after World War II. In addition the commercial code and other laws stipulate the legal environment relevant for corporate governance in Japan. Holding companies were also prohibited then and became legal only recently in 1997.¹³

Vertical keiretsu

Japanese manufacturers in particular have taken full advantage of their vertical corporate groups to achieve high levels of production efficiency. In this system of production suppliers need to accept many of the demands (e.g. scheduling, new products development) made by their core manufacturers who are typically much bigger than the suppliers and hence have much larger bargaining power. This may become in some cases almost like the master-slave relationship, which is viewed largely as acceptable by the Japanese anti-monopoly law. Yet, suppliers need to be part of such a vertical keiretsu group since most core manufacturers require their suppliers to be in their keiretsu groups. Such a vertical keiretsu system is prohibited on anti-trust grounds in the U.S. or most other Western countries. In addition the owners of smaller suppliers in the west typically demand freedom in making their own production and other business decisions even though they have large assemblers as their customers. For these reasons, in western countries Japanese-type vertical keiretsu are not likely to form and hence manufacturers need to rely on independent suppliers or vertically integrate themselves.

Ownership of their client firms' equity by banks

The anti-monopoly law by the Allied Forces also allowed banks to hold up to 5% of equity in other firms but provided no provision regarding their behavior. Thus Japanese banks act as aggressive investors of their client firms from time to time. The 5% limit was subsequently raised to 10% and then brought back to 5% in 1987. But this limit on bank ownership of other industrial firms was never effective because banks, if so desired, could count on the shares held by other firms in their corporate groups for control purposes. As a result main banks typically control the largest blocks of their client firms' outstanding shares. The exceptions to this include the cases where the banks' client firms are members of vertical keiretsu groups. In such cases the core manufacturers of those firms usually own the largest blocks of

¹² Many foreign firms of different sizes which have established successful operations in Japan have managed to develop long-term relationships with Japanese firms, distributors and/or customers. Some of these relationships take the form of corporate groups. The lesson of these successful operations may be "if we can't beat them, let's join them". It should also be pointed out that the successful operations of foreign firms in Japan can take different forms of ownership structure: fully owned, or jointly owned subsidiaries. There are several corporate groups (vertical keiretsu) involving foreign firms' subsidiaries which are either fully owned by foreign parent firms or jointly owned by both foreign and Japanese parent firms. (See Nakamura and Vertinsky (1994, Ch.6), and also Lawrence (1993)).

¹³ Subject to certain conditions. For example, financial institutions as holding companies are not allowed to own companies from other industries, as was done by pre-World War II zaibatsu groups. Another recently implemented provision is that Japanese firms are now allowed to buy back their own shares.

their outstanding shares. This legally allowed bank ownership of equity in other firms, including the banks' client firms, has allowed Japanese banks to form their own horizontal financial keiretsu and also play the most important role as main banks in corporate governance in Japan. See Morck and Nakamura (1995, 2001) for further discussions of the historical developments of Japanese and other banks as universal banks.

In the U.S., bank holding firms are also allowed to hold up to a 5% of the equity in any industrial firm, but by law, bank holding firms in the U.S. are not permitted to be active shareholders involved in board decision making for the firms of which they own portions. Because of this legal constraint, very few U.S. banks have an interest in holding equity in industrial firms.

3. Corporate governance

One aspect of Japanese firm behaviour which is quite controversial is who really controls a Japanese firm. In the North American literature the standard model of control is that a firm's shareholders delegate the responsibility to run a firm to hired managers and executives who in turn work as the agents of the shareholders. The shareholders have the ultimate power for corporate control. When company management is not performing adequately, share prices become too low and the management could be replaced, possibly after a hostile takeover, with a resulting increase in share prices. Corporate control mechanisms in Japan seem much more complex than this. The influences on the control mechanisms of a Japanese firm include workers on (implicit) long-term employment contracts, enterprise unions, other companies, banks and other financial institutions as stable (long-term) shareholders, the main bank, the core manufacturer in case of a vertical keiretsu group firm, and the management. Workers on long-term employment contracts accumulate substantial firm-specific skills over time which are indispensable to the firm. They also have a serious stake in the firm's long-run performance. These concerns are often effectively represented by their enterprise unions. This implies, for example, that, under some circumstances, long-term employees can impede a proposed merger of their firm with another firm.

Since large fractions (often up to 70%) of most listed Japanese firms' outstanding shares are held by stable shareholders such as other companies, banks and other financial institutions that are expected not to behave in an opportunistic manner, individual and other investors who are hostile to the present management can be mostly ignored. A typical situation where a coalition of shareholders can effectively replace the present firm management is when the firm's main bank and other banks and institutional shareholders decide that the present management is not in the large shareholders' interests. This may occur, for example, when a firm is in financial distress. The role of the main bank is particularly important in replacing the (incompetent) management, since the main bank, being a large shareholder of the firm and also the largest bank lender, is expected to take a leading role in the management of their troubled client firm on behalf of the consortium of banks and other financial institutions which have outstanding loans to the firm. Morck and Nakamura (1999) present an empirical analysis of main banks' involvement in their troubled client firms and conclude that in Japan the market for corporate control has been replaced by banks' involvement in the management of troubled firms. Because Japanese main banks are usually the largest bank shareholders and creditors, they hold enormous power over their client firms' decisions regarding not only corporate governance but also corporate investment. This dual role by Japanese banks as their client firms' creditors and shareholders is potentially a problematic practice from the perspective of the client firms' individual shareholders, since the banks may always use their power as the largest shareholder (or one of the largest shareholders) of their client firms to promote their position as their (largest) creditors. It is quite possible that this type of behavior by Japanese banks has contributed significantly to the formation of Japan's on-going bad-loan problem (see Morck and Nakamura (2001)).¹⁴

¹⁴ Since transparent financial disclosure is not required of Japanese banks, the total amounts of non-performing loans held by Japanese banks are still unclear but they are estimated to be hundreds of billions of dollars and are still increasing under the present deflation. A number of large Japanese banks failed in the 1990s and more will likely fail. Although they have been reluctant to do so, it is most likely that Japanese taxpayers will, in the end, have to absorb most of these non-performing loans. The large Japanese banks have always had a powerful political base in the Japanese government and parliament, and their political victory by which they could transfer most of their non-performing loans to the taxpayers without much sacrifice on their part is quite possible.

4. Implications of Japanese management practices for corporate governance and economic performance

Labor markets

We have argued that many Japanese management practices are based on long-term relationships. These practices have helped to create a highly efficient production system in Japan. Another consequence is that the markets associated with such practices are often difficult for newcomers - foreign or Japanese - to crack. Long-term employment practices make it difficult for mid-career job changers to locate new jobs since secondary labour markets are very thin, particularly for highly skilled workers from large firms. Most large Japanese firms are not yet set up to take advantage of available skills outside the firms.

Suppliers market

Production-based corporate group firms tend to buy and sell goods more among themselves than through external markets. This characteristic would not be viewed as a market problem if the group supplier firms were owned by the prime manufacturer since then group transactions would simply become the prime manufacturer's intra-firm transactions. Since most group supplier firms are independent firms which transact with the group's prime manufacturer as well as other manufacturers on a long-term basis, there is a potential for an outsider to become one of the suppliers. Full vertical integration of course eliminates such potential. It is apparent that considerable effort is required on the part of a newcomer to be included in group transactions which are long-term based.

Market for corporate control

Large Japanese firms have long-term employees who have accumulated substantial firm-specific skills. This deters both friendly and hostile mergers between large firms because of the extreme difficulty in combining two firms with different firm-specific practices.¹⁵ Most listed Japanese firms also have stable shareholders (e.g. industrial firms, banks and other financial institutions) who own up to 70% of their outstanding shares. Such stable shareholding also deters mergers of any kind. These factors explain why there is no market for corporate control, at least for large firms, in Japan. The lack of a substantial labour market for skilled, mid-career workers; the lack of a market for corporate control; and the closed nature of the markets for intermediate and final products because of production-based as well as distribution-based corporate groups all reflect special features of the Japanese business system.

Corporate governance and economic performance

Since the burst of the bubble, the profitability of Japanese firms has been persistently very low. This is in contrast to U.S. firms which recovered their profitability fairly quickly in the early 1990s after restructuring themselves to achieve cost reductions. The long-term employment practices and corporate group mechanisms have been blamed as part of the reason why Japanese firms could not cut costs quickly enough and why Japanese firms could not change their product lines fast enough to capture market shares for newly emerging products. Vertical keiretsu relationships, which served Japanese manufacturing industries well in the high growth periods until the end of the 1980s, are often viewed as a significant burden in the 1990s and the 2000s, because the core manufacturers are often obliged to use vertical keiretsu suppliers even their production costs are much higher than those of independent suppliers in the global market. The following Nissan experience illustrates this point. After Renault took over Nissan's control, Renault-appointed Nissan President Carlos Ghosn reduced Nissan's keiretsu significantly. This is thought to be one of the chief reasons for Nissan's quick revival from a bankrupt to a highly profitable firm.

¹⁵ The on-going problem of integrating Mizuho financial group's information systems, which were inherited from the former DKB, Fuji and Industrial Bank of Japan (IBJ), caused a massive failure in early 2003 in Mizuho's on-line banking operations. This failure is attributed to the refusal by the personnel of the former DKB and IBJ to adopt Fuji Bank's technically superior banking system as Mizuho's system.

Mis-alignment in vertical keiretsu group firms' objectives

Despite the advantages of vertical keiretsu over vertically integrated production operations, the manufacturer and its suppliers do not always share equally in the profit opportunities available to a production-based corporate group. Ries (1993) shows, for example, that the windfall profits the Japanese auto industry enjoyed as a result of the 1981 U.S.-Japan voluntary export restraint agreements benefitted car manufacturers, large parts makers, and suppliers of specialized parts and services, but did not benefit many other suppliers. If the long-run goals of a prime manufacturer and its supplier firms were to seriously diverge for some reason, the production-based corporate group might no longer function as well as a vertically integrated firm. This mis-alignment in the goals of capital keiretsu firms is likely one of the most serious causes that has prolonged the current recession in Japan. Despite the implicit contracts of bonded assembler-supplier relationships, the assembler firm has been trying to locate the globally lowest cost non-keiretsu supplier outside where possible. At the same time the assembler firm also has to spend lots of energy realigning keiretsu suppliers' technical skills required for new technologies.

Current realignment in process

Many Japanese firms, particularly those in the construction and real estate industries, have been in financial distress since the burst of the bubble, causing a serious non-performing loan problem for their Japanese bank creditors. Yet there is empirical evidence that Japanese banks use their power as equity holders to enforce their rights as creditors of their client firms (Morck and Nakamura (1995), Weinstein and Yafeh (1998)). For example, these banks encouraged their client firms to borrow funds from them in the 1980s. Once these loans turned sour in the 1990s, the banks have been reluctant to allow prompt reorganization of the failing firms because of their vested interests in securing their loans. This aspect of the Japanese corporate governance system, which assigns a relatively little weight to the right of individual shareholders, served domestic market oriented Japan well until the 1980s but has not been functioning well in contemporary Japan which is exposed to the competitive pressure arising from globalization. The conflict between firms' shareholders and creditors is more significant in Japan now than before, and the lack of a realistic process to resolve this conflict promptly under the present Japanese corporate governance system is another reason for the slowness to complete the current effort to restructure the Japanese economy (Nakamura (2002)). Their poor performance due to the post-bubble bad debt problem forced the established Japanese banks, both national and regional, to consider merging with each other in the 2000-2001 period. While some proposed mergers are more group specific (e.g. the Bank of Tokyo-Mitsubishi and the Mitsubishi Trust Bank, the Sanwa and Tokai Banks and the Toyo Trust Bank), some others are across the traditional keiretsu groupings (e.g. the Sumitomo and Sakura Banks, the Fuji and Daiichi Kangyo Banks and the Industrial Bank of Japan). The effort to complete new groupings by Japanese banks and other financial institutions will undoubtedly continue into the 21st century. It remains to be seen, however, that the newly emerged financial keiretsu will behave differently than their predecessors in the 20th century in resolving the conflict of interest between creditors and shareholders.

Can the Japanese corporate governance system cope with the diverse interests of its constituents?

One policy problem that the Japanese public and private sectors must now solve is formulation of a logical basis (a conceptual framework) for developing practical methods for dealing with diverse needs and interests of their respective constituents such as taxpayers, workers, shareholders, debt holders and customers. Japanese society demands more diverse varieties than ever before in educational and employment opportunities, investment opportunities and the like, but the existing institutions, both government and corporations, continue to behave according to their norms developed in the 1960s through 1980s. Revised Japanese corporate governance practices must be compatible with these diverse interests of the public. Unfortunately this has not yet been achieved.

Factors discouraging friendly and hostile large-scale mergers for improved efficiency

The high level of firm-specificity in management methods and personnel management cultured by long-term employment at Japanese firms makes it very difficult for two separate firms (even in the same financial keiretsu group) to have a friendly merger, let alone a hostile merger. That is, long-term employment practices and associated management practices represent a barrier for mergers between Japanese firms. The height of this barrier increases with the size of a potential merger.

For example, in 1971 when the Daiichi Bank and Kangyo Banks joined together in a friendly merger to form the Daiichi-Kangyo Bank (DKB), no former employee of either Daiichi or Kangyo Bank was laid off. DKB kept intact the two personnel management systems inherited from the former Daiichi and Kangyo Banks for ten years, during which period the former employees of the Daiichi Bank and the Kangyo Bank were assessed and promoted according to their former respective banks' personnel management criteria. Many financial analysts cite the merger as a source of DKB's inefficiency (e.g. lower profits per worker) relative to its competitors. Other examples of this sort include the mergers involving Yawata Steel and Fuji Steel in 1970 (to form Nippon Steel), and the Mitsui Bank and the Taiyo Kobe Bank (to form the Sakura Bank). In the 1990s failed friendly merger attempts include those between the Mitsui and Sumitomo Chemicals (both in the chemical products industry) and Sega and Sammy (entertainment / computer game industry). Firm-specificity in management is not the only barrier to large-scale mergers in Japan, however. Large fractions of listed Japanese firms' outstanding shares are held by stable shareholders. Because of this, individual and other investors who are hostile to the present management usually can be, and are, ignored. Long-term investments in workers' human capital by both firms and workers might be worthless if a sudden change in firm management policy occurred as a result, for example, of a hostile takeover. Stable shareholding practices help to provide long run protection for human capital investments.

Stable shareholding practices and the high level of firm specificity in personnel and other management methods are two primary reasons why there is virtually no market for corporate control in Japan, particularly for large firms. Foreign firms generally cannot count on being able to purchase large Japanese firms outright in order to gain entry to the Japanese market.¹⁶ This is in contrast to some purchases by Japanese firms of large U.S. corporations that took place in the 1980s.

Because of the relatively small weight that Japanese firms accord external shareholders who are not part of stable shareholding arrangements, Japanese firms' boards of directors are mostly company executives, with the company CEO being the chairman of the board. In the U.S., the board often exercises its power to restructure a firm's management when the firm is under-performing its industry peers. Board oversight does not function well, however, when all firms in an industry are performing poorly (i.e. under-performing the economy). It is in this latter case that a hostile takeover, or the threat of it, disciplines the firm management. In Japan, board oversight on firm management is not effective because most directors of the board are executives on the company management team. Unlike the U.S. case, there is no market for corporate control which could discipline firm management when the entire industry is doing poorly either.¹⁷

Faced with poor management performance, it is the large shareholders such as the main bank and other related firms that play a disciplining, or prop-up, role in Japan. (Large, informed shareholders can enhance firm value (Morck, Nakamura and Shivdasani (2000), Shleifer and Vishny (1986)). The role of a firm's main bank is particularly crucial. As discussed above, Japanese banks' dual roles as many firms' shareholders and creditors are not necessarily desirable from the shareholder value maximization, the standard criterion for firm managers in the West. It is suspected that this dual role of Japanese banks is used by the banks to promote their positions as creditors and hence undermines the performance of their client firms (Morck and Nakamura (2001)).

¹⁶ The only exceptions occur when failing Japanese firms cannot find domestic rescuers. Then foreign firms can come in.

¹⁷ The recent revisions of corporate governance laws have introduced the notion of outside board directors and more transparency in the governance mechanisms for Japanese corporations. Yet these new governance structures have not been implemented widely yet. It is unclear how much power will be given, for example, the firms' individual shareholders.

5. Concluding remarks

Many analysts agree that the Japanese business system in the 1980s before the burst of the bubble was in equilibrium. This means that, in order to bring about restructuring to achieve a better equilibrium, it is not sufficient simply to undertake marginal or uni-dimensional adjustments. Comprehensive changes would be needed and these will become possible only when the Japanese business system as a whole finds them in its own interest. It may require simultaneous radical change in many market elements of the system. For example, to promote more large-scale friendly mergers would require significant relaxation of the current long-term based employment system and development of secondary labor markets. At this time many Japanese firms, which have been under serious global competition, have removed or modified downward automatic wage increases due to workers' seniority but little systematic change seems to have taken place in terms of the long-term employment practices.¹⁸ This implies the continuing importance placed on firm-specific worker skills. Under these circumstances labor mobility seems still constrained and well-functioning secondary labor markets do not appear to be developing; and also, workers may continue to have a strong input into firms' corporate governance decisions such as mergers with other firms.

New corporate governance system and an emerging market for corporate control?

Some large and competitive firms have switched their financing method from the traditional indirect bank financing to direct financing from domestic and foreign capital markets. (Direct financing by ordinary corporations has recently been largely deregulated.) Nevertheless, Japanese banks still provide significant portions of Japanese firms' capital needs (Nakamura (2002)). Main banks still play an important role in dealing with their client firms' financial distress. If many of what the Japanese banks regard as desirable client firms were to desert them in favor of direct financing, the main bank system would become less profitable to the banks. Then the banks might decide to abandon it. Even under such a scenario, however, Japanese banks would likely try to retain their dual roles as creditors and shareholders in some forms, since doing so is legal and to be an active investor in their client firms would allow banks to reap extra profits from these firms as creditors. The prolonged recession has seriously eroded the power enjoyed by the Japanese workers and labor unions. Major firms employ considerably fewer regular employees and the continuing pressures for downsizing have also reduced the size of the workforce at Japanese firms. The administrators of the proposed large-scale mergers say that they would not be able to tolerate the two-company under the same roof approach which was consistently used by the past large scale mergers. Where the immediate economic efficiency becomes an important criterion for successful mergers, the Japanese market for corporate control allows foreign firms' entry into the market, for example, to act as acquirers of Japanese firms. Historically foreign firms could come in during the recession period to purchase failing Japanese firms no other Japanese firms would rescue. This has already happened in the finance sector and also in the manufacturing sector. For example, many Japanese automobile manufacturers, anticipating having serious cash flow problems in meeting required massive investments in environment in the near future, have given up their control to foreign competitors. Now Nissan is controlled by Renault, Mazda by Ford, the Mitsubishi Motor by Daimler Chrysler, and Fuji and Isuzu by GM. Only Toyota and Honda are Japanese controlled (Horiuchi and Nakamura, 2001). The question still remains regarding whether or not the current flow of foreign capital to buy into failing Japanese firms represents a permanent change of the Japanese system (both private practices and public policies) in the Japanese market for corporate control.

What will change?

We have argued that some of these Japanese management practices and policies are not about to change, despite the current severe and prolonged recession. For example, Kato (2001) finds that participatory management, one of the key industrial relations practices in Japan, is still widely used at Japanese firms. At the same time many Japanese management practices have begun incorporating Western (particularly U.S.) practices. Which aspects of the Japanese system are likely to change first?

¹⁸ For example, Fujitsu has recently introduced a new wage system which does not have any seniority component in their employees' wage determination.

Historically the Japanese system has always been based on some forms of risk sharing. Such risk sharing arrangements often took private forms. One could view Japanese practices such as bonus payments, keiretsu, and even the business-government relations as parts of the contemporary risk sharing system which successfully functioned in the post-WWII period. Successful risk sharing mechanisms increase economic efficiency. (See Korkie and Nakamura (1997) for estimating keiretsu's portfolio diversification effects in the stock market.) The Japanese risk sharing system was successful because the private incentives and, more broadly, incentives at the corporate and national levels of the risk sharing practices were well aligned. This type of alignment no longer seems to exist and the present risk sharing arrangements must change. What kinds of public arrangements, for example, will replace the failing parts of the existing risk sharing system is at the root of the current public policy debate in Japan. It seems likely that, with an introduction of some type of public mechanisms to support laid off workers, Japanese society will accept short-term employment and more frequent layoffs. In fact, the current spread of term employment contracts may be consistent with this.

On the other hand, the keiretsu practice, whether capital or bank based, does not appear to be vanishing. They appear to be only being re-shaped and re-focused towards their group goals.

In conclusion the Japanese system will continue to explore its configuration until it finds one which is satisfactory to all the participants of the system. Until then Japan may continue to appear aimless and experience low economic growth, which reflects the cost of adjustment to a new equilibrium.

References

1. Aoki, M., *Information Incentives, and Bargaining in the Japanese Economy*, Cambridge Univ. Press, New York, 1988.
2. Caves, R.E., and Uekusa, M., *Industrial Organization in Japan*, Brookings Institution, Washington, D.C., 1976.
3. Fruin, W.M., *Kikkoman: Company, Clan, and Community*, Harvard Univ. Press, 1983.
4. Fruin, W.M., *The Japanese Enterprise System: Competitive Strategies and Cooperative Structures*, Oxford Univ. Press, 1992.
5. Fuss, M., and Waverman, L., "The Extent and Sources of Cost and Efficiency Between U.S. and Japanese Motor Vehicle Producers," *Journal of the Japanese & International Economies* 4, 1990.
6. Horiuchi, K., and Nakamura, M., "Environmental Issues and Japanese Firms," in M. Nakamura (Ed.), *The Japanese Business and Economic System: History and Prospects for the 21st Century*, London: Palgrave/Macmillan Press and New York: St. Martin's Press, 2001, 364-384.
7. Kato, T., "Participatory Employment Practices in Japan," in M. Nakamura (Ed.), *The Japanese Business and Economic System: History and Prospects for the 21st Century*, London: Palgrave/Macmillan Press and New York: St. Martin's Press, 2001, 46-80.
8. Korkie, B., and Nakamura, M., "Block Holding and Keiretsu in Japan: The Effects of Capital Markets Liberalization Measures on the Stock Market," *Journal of International Money and Finance* 16, 1997, 113-140.
9. Krafcik, J.F., "Triumph of the Lean Production System," *Sloan Management Review*, Fall 1988.
10. Lawrence, R.Z., 1993. "Japan's Different Trade Regime: An Analysis with Particular Reference to Keiretsu," *Journal of Economic Perspectives* 7, Summer 1993, 3-19.
11. Lieberman, M.B., and Asaba, S., "Inventory Reduction and Productivity Growth: A Comparison of the Japanese and US Automotive Sectors," *Managerial and Decision Economics* 18, March 1997, 73-85.
12. Morck, R., and Nakamura, M., "Banks and Corporate Governance in Canada," in *Corporate Decision-Making in Canada*, Industry Canada Research Series, Univ. of Calgary Press, 1995, pp. 787-805.
13. Morck, R., and M. Nakamura, "Banks and corporate control in Japan," *Journal of Finance* 54, 1999, 319-339.

14. Morck, R., and M.Nakamura, "Japanese Corporate Governance and Macroeconomic Problems," in M.Nakamura (Ed.), *The Japanese Business and Economic System: History and Prospects for the 21st Century*, London: Palgrave/Macmillan Press and New York: St.Martin's Press, 2001, 325-349.
15. Morck, R., Nakamura,M., and A.Shivdasani, "Bank Equity Ownership and Firm Value in Japan," *Journal of Business* 73, 2000, 539-569.
16. Morck, R., Shleifer, A., and Vishny, R., "Alternative Mechanisms for Corporate Control," *American Economic Review* 79, 1989, 842-852.
17. Morgan, J.C., and Morgan, J.J., *Cracking and Japanese Market: Strategies for Success in the New Global Economy*, The Free Press, 1991.
18. Nakamura, A., and Nakamura, M., "Inventory Management Behavior of American and Japanese Firms," *Journal of the Japanese and International Economies* 3, 1989, 270-291.
19. Nakamura, A., and Nakamura, M., "Risk Behavior and the Determinants of Bonus versus Regular Pay in Japan," *Journal of the Japanese and International Economies* 5, 1991, 140-159.
20. Nakamura, M., "Japanese Industrial Relations in an International Business Environment," *North American Journal of Economics and Finance* 4, 1993, 225-251.
21. Nakamura, M. (Ed.), *The Japanese Business and Economic System: History and Prospects for the 21st Century*, 432 pages, Palgrave/Macmillan/St.Martin's Press, 2001.
22. Nakamura, M., "Mixed ownership of industrial firms in Japan: debt financing, banks and vertical keiretsu groups," *Economic Systems* 26, 2002, 231-247.
23. Nakamura, M., and Hubler, O., "The Bonus Shares of Flexible Pay in Germany, Japan and the U.S.: Some Empirical Regularities," *Japan and the World Economy* 10, 1998, 221-232.
24. Nakamura, M., Sakakibara, S., and Schroeder, R., "Adoption of Just-in-Time Manufacturing Methods at U.S. and Japanese Owned Plants: Some Empirical Evidence," *IEEE Transactions on Engineering Management* 45, 1998, 230-240.
25. Nakamura, M., Sakakibara, S., and Schroeder, R., "Just-in-Time and Other Manufacturing Practices, and Market Environment: Implications for Manufacturing Performance," in J.Liker, M.Fruin and P.Adler (Eds.), *Remade in America: Transplanting and Transforming Japanese Management Systems*, Oxford University Press, 1999, 361-381.
26. Nakamura, M., and Vertinsky, I., *Japanese Economic Policies and Growth:Implications for Businesses in Canada and North America*, University of Alberta Press, 1994. (New copies currently available from M.Nakamura (masao.nakamura@commerce.ubc.ca)).
27. Nakatani, I., "The Economic Role of Financial Corporate Grouping," in M.Aoki (Ed.), *The Economic Analysis of the Japanese Firm*, North-Holland, Amsterdam, 1984, 227-258.
28. Ries, J.C., "Windfall Profits and Vertical Relationships: Who Gained in the Japanese Auto Industry from VERs?" *Journal of Industrial Economics* 41, 1993b, 259-276.
29. Sheard, P., "The Role of Firm Organization in the Adjustment of a Declining Industry in Japan, The Case of Aluminum," *Journal of the Japanese and International Economies* 5, 1991, 14-40.
30. Shleifer, A., and Vishny, R., "Value maximization and the acquisition process," *Journal of Economic Perspectives* 2, 1988, 7-20.
31. Shleifer, A., and Vishny, R.W., "A Survey of Corporate Governance," *Journal of Finance* 52, 1997, 737-783.
32. Shleifer, A., and Vishny, R., "Large Shareholders and Corporate Control," *Journal of Political Economy* 95, 1986, 461-488.
33. U.S. General Accounting Office, *Reports to Congressional Requesters: Foreign Investment, Growing Japanese Presence in the U.S. Auto Industry*, Washington, D.C.
34. Weinstein,D., and Yafeh,Y., "On the costs of a bank-centered financial system: Evidence from the changing main bank relations in Japan," *Journal of Finance* 53, 1998, 635-672.