

Implicit Contracts Between Regulator And Firms: The Case Of Japanese Casualty Insurance

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Abstract

This paper presents a dynamic model of regulatory protection. The regulator grants the industry rents in exchange for cooperation in an asymmetric information environment as part of an implicit contract enforced by a trigger strategy. At a corner-solution this contract may be stable under gradual changes of society's preference parameter, while beyond a threshold level further changes may result in drastic deregulation. Both predictions are found to hold in the case of Ministry of Finance regulation in the Japanese casualty insurance industry.

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I. Introduction

“The most important barrier we found to trade in services arise from government regulation of business”.¹ “... the Government of Japan still engages in an excessive level of regulatory activity in many sectors, which has a detrimental impact on market access.”² These claims are recognized by Japanese authorities: “The Japan Fair Trade Commission ... expressed serious concerns in 1989 with the lack of transparency and extensive use of administrative guidance by the Ministry of Finance (MoF) in regulating the insurance industry in Japan, and recommended major changes in MoF’s regulatory regime.”³

While it is widely recognized that MoF protected the industry during the postwar period by blocking not only foreign, but also domestic entry, such regulatory behavior raises fundamental question. Why does MoF, the most powerful bureaucratic institution in Japan, grant the industry supra-competitive rents? What explains the difference between the profitable and concentrated outcome in Japan and the USA, where the same industry is populated by over 1,500 independent insurers engaged in cut-throat competition? Why was this collusive arrangement stable over the postwar period, but is suddenly threatened by drastic deregulatory measures currently being introduced?

A consensus has emerged, sparked by Stigler’s (1971) path-breaking paper and subsequent contributions by Posner (1974), Peltzman (1976), Becker (1983), in the way we think about economic regulation. The consensus lies in the need to recognize that the regulator is self-interested and has an information advantage with respect to the government; that the regulator in turn suffers from a fundamental information disadvantage with respect to the firms under its regulation, and that it may be under the influence of (possibly competing) interest groups. Its intuitive appeal derived from the glaring discrepancy between the traditional, naïve description of costless regulation carried out by a regulatory agency under perfect control of a benevolent government, and the observed reality in different industries. “Regulation ... may have even engendered

¹ A. Alexander and H. Tan, *Barriers to US-Trade in Services with Japan*, Working Draft, Rand Corporation, July 1984, p. 46.

² The United States Trade Representative Report 1994, p.144.

more resource misallocation than it cured” [Peltzman (1976), p. 211] and “...empirical research...demonstrated that regulation is not positively correlated with the presence of external economies or diseconomies or with monopolistic market structure” [Posner (1974), p. 336] put the conflict between the ‘public interest’ theory and evidence clearly.

As a result, government intervention in inherently competitive markets has come to be naturally viewed with suspicion. In no small part, this shift has been driven by the development of the so-called the ‘new economics of regulation’ [summarized in Laffont/Tirole (1993) and Laffont (1994)], which analyzes optimal incentive schemes under the information asymmetry between government, regulator and industry. Such incentive schemes are often impracticable due to their complexity and information requirements.

The term ‘regulatory capture’, describing regulators pressured to confer socially costly rents to firms, is a misleading denotation. An industry cannot ‘impose’ upon the regulator an outcome of its choice, via some sort of militant conquest. This approach really highlights two facts now universally recognized: First, the regulator is self-interested. Second, the government (standing against better knowledge for a social planner) has imperfect control over the regulator due to the information advantage of the latter in regulatory matters - this advantage of specialization being, after all, the very rationale for delegating regulation to a separate agency.

These two assumptions feature centrally in the forthcoming model which shows how regulator and industry can overcome their static prisoner’s dilemma situation in a dynamic framework in form of an implicit contract. Under the terms of such tacit collusion the regulator sells protection in exchange for cooperation by the industry. Far from being weak and succumbing to industry pressure, the regulator acts in its best interest and is simply cashing in on its information advantage. This implicit contract may be stable with respect to gradual changes in society’s preferences. Only beyond a threshold level, a small change in preferences or the mere anticipation of a future change may cause drastic or even total deregulation. This model is consistent with the evidence from the Japanese casualty insurance industry.

³ dto., p. 163.

The next section presents the model. Section III presents detailed evidence from regulation in the Japanese casualty insurance. Section IV concludes.

II. The Model

This section presents a dynamic model of regulatory protection in the insurance industry, even though the approach is easily adapted to match other industries. Its focus is on the strategic interaction between the regulator (MoF) and the industry. Competition between the firms is not modeled, but is implicitly included in the reduced form payoff to the industry. The objective function of the industry is

$$U^I(P,C) = P - C ,$$

where $P \in [0,1]$ measures regulatory protection and $C \in [0,1]$ denotes the level of cooperation of the firms with MoF.⁴ Both P and C are in reality multidimensional variables specific to a particular industry context. The regulator has a variety of tools to protect the insurance industry, such as control of entry, licensing of new products, and premium setting. $P=0$ denotes complete deregulation (beyond what is necessary to prevent socially excessive underwriting risk⁵), and $P=1$ is protection resulting in monopoly profits for the industry. C represents at least three costly actions: First, safety of operations; second, cooperation with MoF-directives serving the regulator's wider interests and exceeding its statutory powers; third, direct side-payments to the regulator, or future employment of retired regulators (*amakudari*). $C=0$ is the uncooperative outcome, and $C=1$ the highest level of cooperation.

⁴ Of course the use of this simple form is without loss of generality. In general, $U^I(P,C)=e(P)-f(C)$, e and f increasing functions, and the only restrictive requirement being additive separability.

⁵ The regulator has a higher preference for safety due to the absence of an effective second market for career bureaucrats, which have therefore more to lose should financial institutions under their responsibility fail. This is in addition to any extreme risk aversion often alleged to characterize Japanese public institutions, derived from the disastrous financial instability of the late 1920's and the post-war situation. Insurance firms have incentives favoring socially excessive risk-levels of their insurance portfolios. Insurers essentially sell promises now, collecting premia up front, while the production and costs of the product follows only later in a claim situation. Generous performance based executive pay mechanisms, combined with limited personal liability if a company fails, imply that rapid underwriting growth and accompanying quality deterioration may be profitable for the firms. This incentive structure is the reason for regulatory control of the market place in the first place.

The objective function of the regulator is⁶

$$U^R(P, C) = a \cdot C + (1 - a) \cdot SS(P),$$

where $a \in [0,1]$ is the weight the regulator gives to maximizing its sub-goal and measures the control-loss between a benevolent social planner and the regulatory agency.

$SS(P)$ is social surplus, a negative and convex function of P : $\frac{d^2 SS}{dP^2} > 0, \forall P \in [0,1]$. $SS(P)$ is normalized such that $SS(0)=0$.

a) Stackelberg-setup

The timing of the game is as follows. The regulator determines the level of protection based on the previous period's actions, and is committed for this period.⁷ The firms observe the current P , choose a level of cooperation, and profits are realized. This game is played repeatedly, and future payoffs are discounted by $d \in (0,1]$.

One-period contracts specifying P contingent on C chosen by the industry are not possible, since the regulator is committed to the level of protection chosen in the beginning. Once the licensing decision of new entrants and new products are made, and premium rates determined, institutional rigidity in those variables create the commitment underlying the Stackelberg setup.

The static payoff-structure is that of a prisoners' dilemma. Whatever the level of regulatory protection, the firms know that the regulator is committed with the beginning of the period, and they will therefore maximize profits by not incurring costly cooperation. Knowing that, the regulator will then be best off setting $P=0$ so as to maximize SS . However, the regulator and the industry could do jointly better by trading

⁶ Again, this is a simple example without loss of generality, and $U^R(P,C)$ could be any additively separable function of C and P with the appropriate first derivatives.

⁷ Following [Rubinstein/Yaari \(1983\)](#), this setup reduces the supergame structure of the game to a simple univariate optimization problem, where the leader announces a strategy (with commitment), and the industry reacts to it. This is of course very simplified. In reality some actions included in C are directly observable (such as bribes), others are only known to MoF with a lag (such as the risk of the insurance portfolio, which becomes obvious only with the next published claim statistics). Also, some regulatory measures are instantaneously available (for example auditing requests or new company/product licensing), while others can only be changed after some time (such as premium rates which are reviewable only periodically, or regulatory statutes).

protection against cooperation, lowering social welfare by more than their combined gain.

If players are sufficiently patient, in the repeated game any feasible outcome which gives both players (weakly) higher payoffs can be sustained with trigger strategies (Folk Theorem for repeated games of perfect information). In particular, allowing for arbitrarily long punishment phases makes even the most collusive outcomes possible in the repeated game. I am restricting attention to strategies of the following simple form. The regulator, in a Stackelberg leadership role, uses a decision rule $g(P_{-1}, C_{-1}) \rightarrow P$, where g maps the two-dimensional unit simplex into the unit interval on the real line. The subscript “-1” denotes the previous period’s observed actions. The firms follow a rule $h(P) \rightarrow C$, mapping the unit interval on the real line onto itself. Since the regulator moves first and is committed for the period, the industry reacts to the observed current level of protection. The regulator’s strategy depends only on the previous period and excludes more complex history-dependent strategies.⁸

The regulator maximizes its objective function subject to the following constraints:

- i) $P, C \in [0,1]$
- ii) $C \leq \frac{d}{1+d} \cdot P$

The first constraint is important for distinguishing interior from corner solutions, and the second is the incentive constraint of the industry required for sub-game perfection of its strategy h . This constraint mandates that under $P > 0$, the industry does not gain by cheating ($C=0$) and incurring the maximum punishment $P=0$ in the next period.⁹ It is clear from the leadership position of the regulator that ii) must hold with equality, since otherwise it could obtain higher utility while still satisfying the incentive constraint of the firms.

⁸ This could be rationalized with an argument of regulatory tenure. With finite lives and commitment linked to incumbent regulators, one could interpret the one-period punishment as the time until the next regulators take over. In general more complicated strategies using longer punishment phases could support more collusive outcomes. The current restriction on both players’ strategies, while arbitrary, is for simplicity only. Besides, there are no clear theoretical results characterizing unique optimal strategies in the infinitely repeated asymmetric prisoners’ dilemma.

Lemma 1: $C = h(P) = \frac{d}{1+d} \cdot P$

Proof: *The benefit from not cooperating in response to $P > 0$ is the loss of rents $(P-C)$ in the next period under the punishment regime, discounted by d . This gives*

$C \leq \frac{d}{1+d} \cdot P$ *as the incentive constraint, enforced by a one-period punishment strategy.*

$C > \frac{d}{1+d} \cdot P$ *would result in lower profits for the industry, and is therefore not optimal.*

Optimal strategies of the regulator, prescribing a level P in response to a pair (P_{-1}, C_{-1}) observed in the previous period, take the following form:

Lemma 2: $g(P_{-1}, C_{-1}) = \begin{cases} P^* & \text{if } C \geq \frac{d}{1+d} \cdot P \\ 0 & \text{if } C < \frac{d}{1+d} \cdot P \end{cases}$

Proof: *The incentive constraint is the most the regulator can enforce with a one-period punishment strategy (from Lemma 1). Given this reaction function, the Stackelberg leader chooses the preferred point P^* on it. This P^* is enforced by the toughest one-period punishment possible, $P=0$.*

The regulator wants to achieve a certain C^* . It offers the amount P^* necessary to buy C^* from the industry, but withdraws protection completely if the industry delivers less than the C it was ‘prepaid’ for. Off the equilibrium path, for $P \neq P^*$, if the industry delivers at least the ‘prepaid’ level of C , the regulator responds with P^* , otherwise punishment sets in.

P^* is found by maximizing the regulator’s objective function subject to the above best response $C = (d/1+d) \cdot P$, and the constraint on the P space (those two constraints together imply that the constraint on the C space is slack).

Substituting $C = (d/1+d) \cdot P$ into U^R , the regulator maximizes:

$$\max_P \left\{ a \cdot \frac{d}{1+d} \cdot P + (1-a) \cdot SS[P] \right\} \text{ s.t. } P \in [0,1].$$

⁹ It is easily confirmed that for longer punishment strategies this incentive constraint will converge to the

Three cases are possible:

$$\text{a) } a \cdot \frac{d}{1+d} + (1-a) \frac{dSS}{dP} < 0 \text{ at } (0,0): \text{ Corner-solution, } P^*=C^*=0.$$

$$\text{b) } a \cdot \frac{d}{1+d} + (1-a) \frac{dSS}{dP} > 0 \text{ at } \left(1, \frac{d}{1+d}\right). \text{ Corner-solution, } P^*=1 \text{ and } C^* = \frac{d}{1+d}.$$

$$\text{c) } a \cdot \frac{d}{1+d} + (1-a) \frac{dSS}{dP} = 0 \text{ for } P \in [0,1]. \text{ Interior solution, determines } P^* \text{ implicitly.}$$

These outcomes are illustrated in Picture 1:

In Picture 1, the indifference curves of the industry are straight lines parallel to the 45° line, increasing in northwest direction. Therefore the firms prefer a point as high as possible up on their incentive constraint $C = (d/1+d) \cdot P$. Cases a-c) then hinge on whether the $MRS_{P,C}^R$ is less than, greater than or equal to the slope of the incentive constraint. This is seen by expressing the LHS of the FOC as $\frac{a}{(1-a)} \cdot \frac{dSS}{dP}$, and the RHS

$$\text{as } \frac{(1+d)}{d}.$$

The negative of this LHS expression is the MRS. The MRS is positive and rises if a is large and/or (dSS/dP) small. A large a means that the regulator gives less weight to maximizing SS, and a small (dSS/dP) means that any sub-goal pursuit is less expensive in terms of lower SS. Hence a higher a implies that the indifference curves of the regulator turn clock-wise. As the control-loss between the (benevolent) government and the regulator falls, the terms (P^*, C^*) of the implicit contract between regulator and industry are adjusted downward, benefiting society. Of course it is in general costly to lower the control-loss, and society will design its institutions balancing these two considerations.

45° line. Hence the present restriction to single-period punishment regimes is without loss of generality.

Interestingly, if we start out at the corner solution b), a change in a will initially not have any effect on the terms of the implicit contract. Only if a falls below a threshold level \bar{a} ¹⁰ will deregulation set in, with possibly large consequences if the regulator's indifference curves are not strongly curved.

What happens if there is uncertainty about next period's tastes of society? If the industry assigns a positive probability that a will be lower in the following period, then the punishment with which the regulator enforces the terms of the current implicit contract will lose bite. This is a result of the fact that a lower expected a results in lower expected terms (P^*, C^*) next period in an interior solution, lowering the expected rents at stake from $(P^* - C^*)$ to $b \cdot (P^* - C^*)$ for some $b \in [0, 1)$. This rotates the *current-period* incentive constraint counter-clockwise to $C \leq \frac{b \cdot d}{1 + b \cdot d} \cdot P$. The future uncertainty lowers the current C^* , while it may cause P^* to rise or fall depending on the curvature of the regulator's indifference curves. This curvature, which depends on the way social surplus changes in P , i.e. $\frac{d^2 SS}{dP^2}$, determines current industry payoff. Since the punishment phase is less damaging in expectation if there is deregulatory uncertainty, the industry may obtain larger rents in the current period; this need not happen, however, since the regulator is aware of the tighter incentive constraint and may accordingly lower P sufficiently to make the firms worse off.

As long as this uncertainty remains, even if a remains in fact unchanged in the next period, the relevant incentive constraint will be the steeper one, making drastic adjustments to any existing implicit contract more likely. Anticipated deregulation may cause current deregulation, being thus a self-fulfilling expectation. After the uncertainty goes away, the game returns to the original incentive constraint, and the result may be

¹⁰ This threshold level \bar{a} is defined as $\bar{a} = \frac{\frac{1+d}{d} \cdot \left| \frac{dSS}{dP} \right|_{P=1}}{1 + \frac{1+d}{d} \cdot \left| \frac{dSS}{dP} \right|_{P=1}}$.

that in the aftermath of a fundamental deregulation, regulator and industry coordinate on a new equilibrium implicit contract partially re-instituting the lost regulatory protection.

It is unlikely that preferences of society undergo as drastic changes as do the deregulatory measures commonly observed. Political economy explanations of the determination of society's monitoring efforts of regulators, i.e. of the control loss parameter, could include recessionary periods as well as financial sector instability, both of which occurred in Japan since the late 80's and accompany the current deregulation push in the casualty insurance industry. This model explains both the phenomenon of apparently ineffective deregulation efforts (at the corner-solution), and sudden large-scale deregulation triggered by comparatively small changes in society's preferences.

b) Simultaneous Moves

The generous terms of the implicit contract which has been the outcome in the previous section were obtained under the Stackelberg setup with the regulator being able to commit to a level of P in the beginning of the period. Since commitment possibilities enlarge the set of subgame-perfect outcomes this section analyzes the simultaneous moves model in order to ascertain that implicit contracts can emerge in a more general framework.

The timing of the game is now simultaneous, i.e. the regulator and the firms set their level of P and C in ignorance of each other's moves in the current period. Again I am restricting attention to one-period punishment strategies, and the analysis can readily be modified to accommodate strategies using longer punishment periods. Both the industry and the regulator follow strategies which revert to $C=0$ and $P=0$ for one period if in the most recent period the other side has failed to provide at least the level of C^* or P^* specified in the implicit contract.

Without loss of generality it is assumed the regulator has all bargaining power, i.e. it is able to announce a strategy $P(C)$ specifying the trigger level of C which will cause it to revert to a punishment period. This setup affects the distribution of joint surplus which the implicit contract provides for both players compared to the non-collusive outcome. As in the previous section, the regulator maximizes its objective function subject to the

constraints. Both indifference maps and the incentive constraint of the industry are identical to the previous section. In addition, subgame perfection requires the regulator to abide by its own incentive constraint:

$$\text{iii) } |SS(P)| \leq k \cdot C \text{ where } k = \frac{a}{1-a} \cdot \frac{d}{1+d} \geq 0^{11}$$

In the picture this is a convex curve from the origin with a positive slope, and only point below it satisfy the constraint:

Pictures 2 and 3 display the two possible constellation. In picture 2, the only point where constraints ii), iii) and iv) hold simultaneously is (0,0), i.e. no trade of P for C is subgame perfect. In Picture 3, the constraints hold simultaneously in the shaded area, and the terms of the implicit contract are chosen to maximize the regulator's utility function in similar fashion as in the previous section. Cases a), b) or c) depend as before on the slope of the regulator's indifference curves.

The relevance of both the Stackelberg-setup in the previous section and the current simultaneous moves comes from the fact that in actual practice the regulator has several instruments under its control. In any industry-specific context, some of those can be adjusted at short notice and little cost, and therefore fall in the simultaneous category. Others, however, can only be periodically adjusted (such as premium rates) or are costly to reconsider at short notice, and the firms are therefore protected against the regulator renegeing on an implicit contract. The less commitment is contained in the multidimensional variable P in actual practice, the more stringent is the regulatory incentive constraint introduced in the present section.

What happens in this model if social preferences change? If a decreases both the regulator's incentive constraint and its indifference curves rotate clockwise. The former rotates around the origin in such a way as to decrease the shaded area, tending to (weakly) increase the terms of the implicit contract, while the latter tends to (weakly) lower the terms along the shaded area. The result is that for gradual changes in a the

¹¹ This incentive constraint follows from requiring that one-period deviations be unprofitable:

$$\frac{a \cdot C + (1-a) \cdot SS(P)}{1-d} \geq a \cdot C + d^2 \cdot \frac{a \cdot C + (1-a) \cdot SS(P)}{1-d}$$

implicit contract tends to remain stable at high levels, until α falls to the level where the shaded area in Picture 3 vanishes and the implicit contract breaks down completely (Picture 2). Hence as social preferences gradually change in favor of closer monitoring of regulators, there is initially little or no effect and the implicit contract remains stable at high levels. As a critical threshold is crossed, the set of subgame perfect implicit contracts shrinks to a single point, the origin in the P, C - space. The result of this marginal change in α is complete deregulation in an environment characterized by high and stable tacit collusion between regulator and industry up to then.

III. Evidence From Japanese Casualty Insurance

a. *The Players in the Game*

MoF is staffed by elite career bureaucrats, who typically enter the ministry upon graduation from college and spend all their working life in different jobs within the ministry.¹² Even though only the top students of a few elite universities enter MoF, their salary is low in comparison with private sector jobs.¹³ Official retirement from the ministry occurs between age 50 - 55. At this point a bureaucrat begins a lucrative second career in the private sector (*amakudari*).

The issue of bureaucratic power in Japan has been the subject of debate among political scientists. A group of scholars attribute the real power not to political institutions, but to the bureaucrats in key ministries. This view is articulated in a well-known passage by Chalmers Johnson: “the elite bureaucracy of Japan makes most major decisions, drafts virtually all legislation, controls the national budget, and is the source of all major policy innovations in the system.”¹⁴ Owing to its responsibility for both the national budget and financial sector oversight, MoF is the most powerful bureaucratic institution in Japan. While the political authorities possess large formal power, ministers are in reality like figureheads, merely ‘rubberstamping’ bureaucratic proposals. Reasons

¹² A good overview of this process can be found in Ulrike Schaede, *The “Old Boy” Network and Government-Business Relationships in Japan*, Journal of Japanese Studies, Summer 1995.

¹³ Ramseyer/Rosenbluth 1993, p. 116.

¹⁴ Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*. Stanford University Press, 1982, p. 20.

for the structure of alleged puppet politics lie in the specialization advantage of bureaucrats who outlast transient political office holders.

Forceful opposition to this theory of ministerial impotence comes from Ramseyer/Rosenbluth (1993). They point to the fact that politicians control the career of bureaucrats. Not only are significant promotions to key position within the ministry dependent on the minister's approval, it is also a government agency which controls the post-retirement career of ex-bureaucrats. The relatively high salary they earn in the second careers can be seen as the disbursement of a bond held during the tenure in the ministry against satisfactory performance and loyalty to the ruling party. This dependence of the bureaucrats' lifetime career on LDP approval causes them to self-select in advance, where only those sympathetic to LDP policy enter the ministry.

The present model parameterizes both these views. The social control-loss parameter α measures the ability of MoF to pursue its own sub-goals. α ranges from 0 (full loyalty to government objectives) to 1 (complete bureaucratic autonomy). Besides direct side-payments and future employment, bureaucratic sub-goals include a high level of safety in the insurance portfolio of the industry, and cooperation of the firms with wider MoF-objectives such as keeping stock prices above levels critical for troubled banks. The last two are important for MoF since the biggest threat to career bureaucrats lies in failures in the financial system.

The division of power between regulator and industry is typically seen as extremely unbalanced. One school focuses on the delegated law-making monopolistic capacity of the regulatory agency. The industry then has little power, and is a passive servant of the noble (or not so noble) goals motivating regulatory decisions. This idea is particularly widespread in research on the Japanese economy, which has been dubbed a 'state-lead capitalism'. "... Japan is the most unambiguous case of state autonomy and strength."¹⁵

This view obscures recognition of the limitations of state power. First, while MoF looks very powerful, this power is contingent on its behavior. Only as long as it delivers benefits to the insurance companies, will they cooperate in granting MoF exercise of what looks like unlimited control. If MoF tried to regulate the industry in a manner that

¹⁵ Richard Samuels, *The Business of the Japanese State*, Cornell University Press 1987, p. 19.

hurts industry interests, firms would not cooperate. “Japanese big business successfully resisted attempts to subordinate profits to patriotism.”¹⁶ R. Samuels, concluding his study of the role of the state in regulating energy markets, states “The most important empirical lesson ... is the consistency with which state programs for market control and direct intervention were transformed. In no case did the state prevail against private interests.”¹⁷ The industry clearly benefits in very tangible ways from MoF-protection.

However, the picture of a strong industry, forcing MoF to grant regulatory protection, is equally incomplete. MoF does frequently constrain industry behavior, and imposes unwanted and onerous pieces of regulation on firms. In practice MoF-approval is a necessary condition for any important decision, and it is consulted in advance at all stages.

Firms maximize profits, part of which is consumed or shared with employees. Insurers acquire private information about the safety of their operations. Verification of relevant information is costly, and it may be easy to manipulate or withhold it.¹⁸ Two reasons suggest that firms have incentives to run a socially excessive level of risk. First, the high probability of a MoF-orchestrated bail-out in case of insolvency functions as implicit insurance scheme.

Second, limited personal accountability of insurance executives. Insurance companies sell promises, resulting in a large cash flow up front, while the claims resulting from these policies may be years away. An investigation into insolvencies by the US congress found that “...most people involved with obvious wrongdoing at insolvent insurance companies simply walk away with no real investigation of their activities. Many of them continue to be active in the insurance business.”¹⁹ The report summarizes the common elements among the insolvencies it studied as “...rapid expansion, ... excessive

¹⁶ Barrington Moore, Jr. *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Boston, Beacon 1966, p. 301.

¹⁷ Richard Samuels, *The Business of the Japanese State*, Cornell University Press 1987, p. 289.

¹⁸ This information problem between firms and the public is not unique to the insurance industry. For example, there are persistent charges that tobacco companies are able to manipulate nicotine levels, and may be doing so to increase sales to addicted smokers. While the pure ability to control nicotine levels should be in theory verifiable information, it has so far eluded public interest groups and regulators, with the effect that no effective action can be taken against the alleged practice.

underpricing, reserve problems, false reports, reckless management, gross incompetence, fraudulent activity, greed, and self-dealing. There were also similar failures of state regulators and independent audit firms to identify and correct such problems...”²⁰

b) The Regulatory Outcome

No Entry

MoF has not allowed any significant entry into the industry since World War II, and the market shares of the 22 domestic firms have remained fairly stable over time. As of April 1992 there were 34 foreign companies, with a combined market share of around 3%.

Fixed Premium Rates

The *Fire and Marine Insurance Rating Association of Japan* (1948) determines the uniform premium rates for fire, personal accident and inland transit policies for the entire industry, subject to MoF approval. The *Automobile Insurance Rating Association of Japan* (1964) determines the industry-wide rates for both voluntary and compulsory²¹ automobile insurance policies, which together account for about 60% of total premium income of the industry. In addition to these lines, the rates for marine, hull, cargoes, aviation, atomic energy and engineering are agreed upon and applied uniformly by the industry, while not fixed by law. For that purpose, formal industry-wide consultations in organizations such as the *Japanese Hull Insurers' Union* (1963), the *Union of Machinery Insurers of Japan* (1956) and the *Japan Atomic Energy Insurance Pool* (1960), as well as informal meetings are sanctioned by MoF and exempted from application of the *Anti-Monopoly Law*.²² Thus all personal line rates are fixed throughout the industry .

¹⁹ *Failed Promises, Insurance Company Insolvencies*. A Report by the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, U.S. House of Representatives, February 1990, p. 74.

²⁰ dto., p. 2.

²¹ This is a government sponsored, third party liability cover.

²² The original reason for exemption from the *Anti-Monopoly Law* is that certain risks are too large to be assumed by a single insurer alone, necessitating co- and reinsurance. This is a common justification for a similar exemption in many countries.

Standardized Products

The rate-setting organizations also serve as communication channels for the firms to coordinate the terms and conditions of all major insurance lines. As a result, all products marketed are homogeneous. Furthermore, MoF only rarely approves new product types. Any new products favorably considered are developed by all companies at the same time. No company can gain an innovator's advantage, since MoF refers all applications to the rate-setting associations for consideration, thus sharing the strategic information about new product developments among all firms.

Insurance Brokers Not Permitted

Until 1996, insurance brokers were not allowed in Japan.

Delegation of Government Authority

MoF delegates crucial regulatory functions to the industry associations, such as determining rates and conditions of most insurance policies, and the assessment of new product applications. While final approval rests with MoF, in practice the Insurance Division in the Banking Bureau of MoF is understaffed, and the firms to play an active role in the rule-making process.

Regulation Through Extra-Legal Administrative Guidance

The framework laws sanctioning MoF power are written in very general form, giving it sweeping regulatory authority over the industry. In practice regulation consists of a highly discretionary, situational set of non-written ad hoc rules.²³ This administrative guidance (*gyoousei shidoo*) allows MoF to fine-tune industry behavior. By the informal and non-compulsory nature of administrative guidance, there is no effective recourse in situations perceived as unfair regulatory treatment.

²³ While difficult to quantify, administrative practice is estimated to constitute in excess of 2/3 of all regulation in some industries, and the insurance industry is certainly one of the most tightly regulated industries in Japan. See U. Schaede, *The Old Boy Network and Government-Business Relationships in Japan*, Journal of Japanese Studies, Summer 1995.

Non-Price Competition Contained

Regulation protects cartel rents by preventing non-price competition. For example, comparative advertising has been legally banned since 1948 (it is partially allowed since 1996),²⁴ and other forms of advertising have mainly taken coordinated form.²⁵

This outcome is consistent with an implicit contract specifying the regulatory protection which the firms extract from MoF in return for their cooperation.²⁶ This protection results in high cartel rents, which are evident from the combined ratio of the industry.²⁷ The average of the quoted sector's²⁸ combined ratio over the 12 fiscal years 1984-95 is 97.3 - by contrast, the combined ratios of the US and UK over the past 20 years have been 108.2 and 107.5 respectively.²⁹ Thus Japan has consistently been the only industrialized country where insurance underwriting is profitable, while usually profits are made not on the risk-coverage per se but at the investment of the premium pool. This high profitability is even more impressive because protection results in significant cost-inefficiencies. In fact the expense ratio³⁰ of the most efficient firm (Tokio Marine) is on average over the past years about 4 points lower than that of the industry average, and this is not to suggest that this firm has reached highest efficiency. MoF has consistently pursued a no-dropout policy, setting rates at levels which keep even the least cost-efficient firm alive. As a result no domestic company failed since the war. It is at least in part a result of the high premium rates that the diffusion of insurance products among the population in Japan is low by international standards.³¹

²⁴ Nihon Keizai Shimbun, Aug 9, 1994.

²⁵ Only once a year, during November, the non-life insurance industry conducts extensive advertising campaigns, mainly in concerted fashion. Fact Book 1993-94, The Marine and Fire Insurance Association of Japan, Inc., p.60.

²⁶ That MoF regulation causes high profit margins to persist, is also a theme in the life insurance industry. See C. McKenzie, *Stable Shareholdings and the Role of Japanese Life Insurance Companies*, in Paul Sheard (Ed.), *International Adjustment and the Japanese Firm*, Allen & Unwin, Sydney, in association with the Australia-Japan Research Centre, Canberra, 1992.

²⁷ The combined ratio takes the sum of expenses and claims, divided by total premiums earned.

²⁸ The quoted sector refers to the 14 largest companies which are listed at the Tokyo Stock Exchange.

²⁹ BZW Research Ltd., Aug. 1996

³⁰ The expense ratio divides expenses by total premiums earned.

³¹ Quoting figures from Sigma, a publication of Swiss Reinsurance Company, the Fact Book 1993-94, by the Marine and Fire Insurance Association of Japan, Inc., shows that Japan ranks 10 in the world in 1992 in terms of per capita premiums, and produces only a quarter of the US premia (with half the population of US), and only little more than Germany, but with roughly twice its population size (US Yen 38,000 bn, Japan 10,000bn, Germany 8,000bn).

The firms pay for this protection by cooperating with MoF in many ways. Anecdotal evidence suggests that direct side-payments occur.³² Even though fewer than 50% of the firms actually hire the few retiring insurance regulators (*amakudari*)³³ directly, the number gets bigger if one counts affiliated companies (such as the research institutes operated by many firms in the industry). MoF also benefits in form of peaceful relations, since the industry refrains from open conflict. More importantly, the industry cooperates by submitting to detrimental regulation serving MoF's wider interests,³⁴ giving MoF more flexibility than it has assigned by statutes.

Perhaps the most significant benefit MoF obtains from the industry is the extremely high level of safety in insurance operations. The solvency margin standard, a risk-weighted assessment of capital adequacy of an insurer, is a direct numerical indicator for the safety of operations. One analyst uses preliminary calculations of the solvency margin standard introduced in 1996 and obtained a weighted industry average of 432.6, which indicates an overcapitalization by international safety standards of about 400%.³⁵ A more recent calculation shows that the industry leader Tokio Marine operates under a solvency margin over 500% of what can be considered an adequate level of safety.³⁶

³² Scandals involving kick-backs paid to career bureaucrats rarely become public, and certainly data are not available. Occasionally anecdotal evidence reaches the media, such as when two small financial institutions collapsed in 1995. It turned out that two senior MoF officials had repeatedly accepted personal favors from executives of the troubled institutions, ranging from private plane vacation trips to all-expenses-paid golf trips and direct cash payments, in exchange for MoF planning a public bail-out of the two companies. The top-level bureaucrats were not dismissed, but their careers as bureaucrats certainly took a turn for the worse. (*The Nikkei Weekly*, March 20, 1995).

Much of the side-payments is channeled through the trade associations, probably to avoid excessive competition between the members of the industry. Schaede (1997) reports that most Japanese industries participated in a centralized donation system through the umbrella organization Keidanren. And in one trade association, "there is always one employee specifically in charge of buying large numbers of theater, kabuki and sumo tickets for politicians and bureaucrats."

³³ Ulrike Schaede, *The Old-Boy Network and Government-Business Relationships in Japan*, *Journal of Japanese Studies* Summer 1995.

³⁴ Examples for the wide range of cooperation opportunities for the industry abound. For example, MoF has a strong interest in keeping stock-market movements under control, since it directly affects the strength of banks' balance sheets. When prices at the Tokyo Stock Exchange fell close to levels considered dangerous for many banks in 1993, MoF used informal regulatory pressure to prevent insurers from selling part of their stockholdings, an action it has used repeatedly. (*The Nikkei Weekly*, September 6, 1993). For the same purpose, insurers were barred from issuing convertible bonds between 1989 and 1994, since the capital markets in this period were particularly shaky due to the fall-out of the end of the bubble economy. (*Nikkei Monday*, May 24, 1993 and *The Nikkei Weekly* April 18, 1994)

³⁵ *Credit Suisse Japan Research*, 1993.

³⁶ *BZW Research Ltd.*, Aug. 1996.

Even the lowest solvency margin in the industry is far more than adequate.³⁷ This high level of safety is valuable to MoF, because disruptive company failures would be seen as a failure of regulatory supervision, and invite criticism and investigation of the malfunctioning in MoF's responsibility. Such an incident could seriously damage MoF's status, and have high cost to MoF through loss of power and by inviting outside scrutiny and control.³⁸

The discretionary nature of regulation accepted by the industry allows MoF to hand out punishments and rewards to firms individually and thus is a powerful tool to enforce cartel stability. The fact that administrative guidance is non-codified and thus non-transparent hides the discretionary element of such measures from outsiders. In particular, it prevents consumer interest groups from seizing upon welfare-lowering regulatory decisions by initiating anti-trust action. The extra-legal character of administrative guidance obstructs any fair complaint procedure of firms, since compliance is voluntary and the sanctions enforcing it are future obstruction of business. In short, administrative guidance is an extremely powerful tool to enforce cartel discipline. By handing over such power to MoF the firms are able to retain control of the market.

c)Deregulation

Starting with the end of the bubble economy, and the ensuing protracted recession, there have been various ongoing attempts at deregulation in the Japanese insurance market. After over three years of deliberations and research, the Insurance Council³⁹ produced a report entitled "A New Role Demanded of the Insurance Industry" on May 29, 1992.⁴⁰ The revision of the *Insurance Business Law (1939)* in April 1996 follows

³⁷ BZW Research Ltd., Feb. 1994.

³⁸ As a result of the bad-loan crisis in the banking sector, which MoF is partially held responsible for, during 1996 a reform proposal circulated in the government proposing a split up of MoF's jointly held functions of drafting the national budget and overseeing the financial sector. While this is unlikely to become law (at least in this extreme form), it illustrates what is at stake for the regulator if it fails to prevent instability. (*The Nikkei Weekly*, June 10, 1996)

³⁹ The Insurance Council acts as advisory body to MoF and is composed of scholars, journalists, industry representatives (including but not limited to the insurance industry) and consumer interests.

⁴⁰ The report is published in translation in *Japan Insurance News*, issues July/August, September/October, November/December 1992.

closely the recommendations of the report. In parallel, trade negotiations between Japan and the US culminated in two agreements, October 1994 and December 1996.

The insurance agreement of 1994 has been judged a complete failure,⁴¹ and the revised *IBL* has also not produced any changes in the competitive environment.⁴² The reason is that both leave the source of the implicit contract unscathed: fixed premium rates, and the discretionary power MoF wields over the insurance industry. It may be presumed that this was MoF's condition during the deregulation deliberations, since the *Final Report* explicitly reaffirms the need to retain the so-called system of 'substantive control' (this term includes the right of the regulator to control insurers using specific orders of conduct and discretionary guidance, in addition to fixed laws and written regulations).⁴³ Without introducing price-competition and reducing MoF's discretionary powers, other deregulatory measures are useless.⁴⁴

These inconsequential attempts contrast with the effective deregulation since late 1996. In November 1996 Prime Minister Hashimoto announced a "Japanese Big Bang," which in turn gave the ongoing trade negotiations on insurance a shot in the arm and led to the agreement of December 1996. While only time will tell how serious the government is about its announced target of complete financial deregulation by 2001, the political commitment is strong and the results of the trade agreement are very significant. The key measures go right at the heart of the implicit contract, eliminating the power of rating associations to fix rates and attempting to eliminate direct MoF intervention in the business of regulated industries.⁴⁵ That the impact is real is underscored by the heavy losses suffered by casualty insurance stocks upon the announcement of the insurance

⁴¹ American Chamber of Commerce in Japan, "Making Trade Talks Work," 1997

⁴² "But although it is now legal for Japanese life insurers to sell non-life products if they so wish, and vice versa, the finance ministry has yet to give any firms official approval to do so." *The Economist*, June 15th, 1996, p. 73.

⁴³ "This committee feels that the main framework of the existing control should be maintained for the future, as the industry cannot be regulated by publicity, laws and regulations alone because of the complexity of the products and accounting systems." Japan Insurance News, November/December 1992, p. 18.

⁴⁴ For example, since the industry offers homogeneous products at fixed rates, brokers could not carry out their main function of striking favorable deals with insurance companies on behalf of consumers, and find the best policy for their clients. Thus the 1996 revision of the *IBL* providing for brokers to operate is ineffective in raising competitiveness in the industry.

⁴⁵ *Business Times* Nov. 12 and Dec. 17, 1996.

agreement.⁴⁶ The following lists the most important changes in the regulatory environment of the insurance industry:

Premium liberalization

The power of rating associations to set rates in personal line fire and automobile insurance, which account for almost two thirds of the premium total, will be eliminated.

Direct competition between lifes and non-lifes

Life and non-life insurance companies will be able to enter each others' traditionally separated fields of business through majority-owned subsidiaries. As a concession to US trade demands, mutual entry in the so-called 'third area' (sickness, injury and nursing care lines, which in the gray area of demarcation between life and non-life) will be slowed down until 2001. Foreign companies have argued that this is the only area they are strong in, and to open the 'third area' before other areas of insurance are liberalized would jeopardize their existence.

Introduction of a solvency margin standard

The solvency margin standard is a risk-weighted evaluation of the capital base of an insurer, and serves to indicate its financial soundness. Consumers can use this to select a safe insurer, and MoF is to use it to grant permission to expand into new business areas.

Pre-approval of new products

Certain new or modified products will no longer require individual approval by MoF before being marketed. The categories of such products are still restricted to mainly commercial lines, but in the future the pre-approval system is expected to apply to the popular personal lines as well.

Investment liberalization

Investment regulation is gradually freed to take better advantage of international investment opportunities in an increasingly liberalized global capital market.

⁴⁶ These measures were fiercely protested by the insurance industry. (Business Times Dec. 17, 1996) The *Economist* commented on these protests with customary satire: "There are few things so pleasing to the ear as the wail of a dying cartel." (The Economist, Dec. 21, 1996)

Capital gains can be used to pay dividends to policyholders

This increases flexibility in investment strategy, since companies need no longer focus on interest and dividend income, and permits a better risk-return management. This permits companies to distinguish themselves from competitors via superior investment performance, which translates into higher returns to policy holders.

Introduction of insurance broker system

Brokers tend to increase competition between insurers. Brokers are independent of any insurance company, and advise their clients on the suitable and most competitive insurance product to meet their needs.

New sales channels

Mail order sales of insurance policies will be allowed, facilitating market penetration of entrants by reducing the dependence on existing sales channels through an agency network.

The official line of justification for these measures are changes in the socio-economic environment in Japan, such as population aging, higher living standards, changing values and lifestyle of consumers, and liberalization, internationalization and securitization of finance. More concretely there has been a gradual change in social preferences in favor of a higher weight on efficiency and consumer surplus, at the expense of the weight on safety and producer interests which were paramount during the high-growth decades.⁴⁷

Beside foreign pressure, three main factors can be identified which caused the move to deregulation. First, MoF emerged significantly weakened from the aftermath of the bubble-economy.⁴⁸ The melt-down in asset prices in the first half of the 1990's and the bad-loans mountain jeopardizing financial sector stability is widely seen as the result of misguided MoF policies. In addition, opacity of the regulatory system in an increasingly complicated financial environment led to several high-profile corruption scandals, further weakening support for the established regulatory system. MoF responded to this criticism by scaling down its profile and adopting a more hands-off policy. This

⁴⁷ The Nikkei Weekly Nov. 11, 1996.

⁴⁸ Nikkei News Bulletin, July 26, 1996 , Business Times Feb. 13, 1996 and The Nikkei Weekly Feb. 26, 1996 discuss the diminished profile of MoF as a result of the blame it took from the *jusen* fiasco and the general aftermath of the bubble economy.

retrenchment is an attempt to save what can be saved, i.e. to escape more drastic institutional reform stripping it off part of its powers.

The second factor is a more reform-minded government in recent years, more susceptible to acceding to domestic and foreign deregulatory pressure. Since the LDP was thrown out of power for the first time in post-war history in 1993, the traditionally strong alliance between the government and the bureaucracy has suffered, culminating in the all-out attack on bureaucratic interests in Prime Minister Hashimoto's announcement of a Japanese deregulatory 'Big Bang' in November 1996.

A third factor is the increasing inefficiency of a tightly regulated financial system in the current liberalized and integrated international financial markets. For example, free capital markets allow firms to raise fund directly, instead of relying on loans from insurance companies. This means that the insurance industry is losing traditionally loyal loan customers, and is increasingly handicapped by the strict investment restrictions.

The industry itself is strongly opposed to any premium liberalization and has a vital interest in keeping MoF control over its cartel practices. MoF itself realizes that the previous system can not be maintained, and accedes to deregulation to avoid more damaging institutional reform.

The predictions of the present model are that gradual changes in social preferences are inconsequential at the corner solution where the implicit contract grants maximum protection to the industry. This explains the failure of both previous trade negotiations and the reform of the *Insurance Business Law* to produce any significant enhancement in competitiveness.⁴⁹

This development corresponds to an incremental change in the social preference parameter α in the present model, which after years of ineffective deregulatory efforts, eventually crossed the threshold value separating the full-protection corner solution from

⁴⁹ Only in October 1996 the first life- and non-life insurance cross entry units began operations (The Nihon Keizai Shimbun, Oct. 1, 1996), among allegations that MoF had requested them to refrain from direct competition (The Nihon Keizai Shimbun, Sep. 20, 1996). Life insurance companies risked direct confrontation with MoF by not submitting to informal guidelines restricting them to a moderate and gradual process of entering the casualty insurance market (The Nikkei Weekly, Sep. 23, 1996). This incidence illustrates the strains on the existing implicit contract, and the move to a scaled-down version.

a tangency at lower implicit contract terms, or even directly complete deregulation. The sweeping deregulation introduced at the end of 1996 may be partly caused by uncertainty about next period's α as shown in the model.

IV. Conclusion

The implicit contract theory has strong implications for the political science issue of regulatory capacity. Institutions are not designed for a static context. Players naturally attempt to exploit their environment and strike mutually beneficial deals wherever possible. This interpretation is entirely in the spirit of R. Samuels, when he notes that "... in the development of Japanese ... industry powerful and stable private actors emerged who established enduring alliances with politicians and bureaucrats. These same actors vigilantly checked market-displacing intervention. ... private actors have learned how to limit and enhance state power simultaneously. They surrender jurisdiction to retain control"⁵⁰ and "Thus emerges a Japanese guarantor-state, not from its own inherent capacity but from the complexity and stability of its interactions with market players." The opportunity for an agency to abuse delegated authority are higher in a dynamic context. If anything the lesson of this research is one of *laissez faire* in the design of regulatory institutions - the only way to reduce the scope of such socially costly implicit intertemporal contracts is to reduce the discretionary power of the regulator.

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⁵⁰ Richard Samuels, *The Business of the Japanese State*, Cornell University Press, 1987, p. 2.

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