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Competition Among Accounting Standard Setters: A Property Rights Analysis

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Abstract

This paper develops a property rights analysis of competion among accounting standard setters. The takings decision is costly as it imposes some form of compensation to be paid to a national accounting standard setter whose property rights to issue accounting standards are taken away and conferred instead on a competing standard setting body, the IASC. Applying a scenario developed by Giammarino and Nosal (1994), a political-game play model is presented which assumes four participants: (a) IOSCO; (b) a national-based regulatory authority; and (c) a national-based accounting standard setting body and the IASC who compete for the right to set international-GAAP. The optimal linear compensation rule for the takings decision is found to depend upon with which interest group the regulatory authority's preferences coincide.

Keywords: property rights, accounting standards, compensation.

JEL Classifications: M41, L51, K11

1. Introduction

In mid-1998 a set of core accounting standards developed by the International Accounting Standards Committee ('IASC') will be submitted for endorsement by the International Organization of Securities Commission Organizations ('IOSCO'). International Accounting Standards ('IASs') are already accepted in countries where prior national-based accounting standards do not exist (e.g.: China, Eastern Europe, Russia), but they are still yet to be endorsed in Anglo-American countries with established, national-based accounting standards. This raises the question of how national-based political authorities in Anglo-American countries intend to implement IASs by taking away equivalent accounting rule-making powers of national-based accounting standard setting bodies. This paper applies the economic theory of the taking of property rights to develop a model of competition among two accounting standard setters (a national based and a competing international-based accounting standard setter) for political influence over the decision to endorse international-GAAP accounting standards that are sanctioned by IOSCO.[1] This approach provides a number of new insights into evaluating the relative social costs and benefits of such a decision.

In this case, IOSCO is assumed to retain the right to take away from a national accounting standard setter its discretion over the determination of accounting standards affecting multinational firms which seek listing status on the world's stock markets. This political discretion is assumed to be granted by a regulatory authority. The IASC competes with the national accounting standard setter over this property right. This problem setting is applicable to those countries where the voluntary use of IASC standards for financial reporting by multinationals firms has already forced national political authorities to consider appropriating existing rule-making powers from national standard setting bodies.[2]

I assume that the political decision to take away these property rights from the national standard setter will impose costs in terms of the 'market value' of political influence over the determination of accounting standards that are gained or lost from endorsing IASC-based standards. The central problem addressed by this paper is how this 'market value' is assessed, under alternative assumptions about the preferences of the national regulator, in determining the compensation schedule that determines the price for taking property rights.[3] The compensation schedule is initially predetermined by IOSCO but may be subsequently altered by the regulatory authority in determining which standard setter should be granted standard setting property rights.[4]

This form of analysis is based on the property rights literature, which examines the power of politicians and their publicly-funded delegated regulatory authorities to take property rights away from private citizens. The literature assumes that government should pay for the property it takes in order to promote efficiency. The analytical model utilised in this paper applies an argument developed by Giammarino and Nosal (1994) which finds that an optimal compensation scheme must be related to the market value of the taken property.

This form of analysis is appropriate to examine recently emerging competition among the IASC and national standard setters over what form of accounting standards are acceptable for multinational firms to meet international stock exchange listing requirements. It also bears upon the interaction of public and private-funded accounting regulators. By considering IOSCO's ultimate power to take away property rights and the consequent implement issues, this analysis is more comprehensive than that used by prior accounting studies of accounting standard setting activities, which typically assume either that one interest group dominates all others (e.g.: corporate managers – Watts, 1977) or examines interactions between regulators absent any takings decision (e.g.: the interaction of the Financial Accounting Standards Board and the Securities and Exchanges Commission - Melumad and Shibao, 1994). These prior researchers rely on an economic theory of regulation that one group typically exerts most political pressure (e.g.: Stigler, 1971)

and/or will seek to mitigate their opponents (e.g.: Pelzman, 1976). By contrast the model developed in this paper is consistent with Becker's (1983) theory of competition among pressure groups for political influence, which analyses competing political, regulatory and pressure group influences over politically contentious issues.[5] The analysis presented in this paper can thus provide powerful insights into the increasing world-wide debate as to whether national- or IASC-based accounting standards are most appropriate for multinational firms seeking to meet international stock exchange listing requirements.[6]

The rest of this paper is organized as follows. The next section examines the taking of private property rights from a national accounting standard setter to set accounting standards appropriate for multinational firms to meet international stock exchange listing requirements. Section 3 develops hypotheses about how the form of compensation rule depends upon the various interest groups affected. Section 4 contains a policy discussion of the major results. Section 5 contains a conclusion.

2. The Model

Assume initially that a national accounting standard setter allocates its expenditure in standard setting activities to two forms of accounting standards, one of which affects generally accepted accounting principles ('national-GAAP') used by national-based firms and another acceptable for GAAP used by multinational firms to meet international stock exchange listing requirements ('international-GAAP'). Once expenditures in these activities have been made the market value of the accounting standards thereby promulgated is revealed, at which time the private property rights to issue international-GAAP standards can be revoked

For the purposes of the foregoing discussion, expenditures in standard setting activities are assumed to be nonstorable and perfectly divisible. These are compactly denoted by the level of expenditure (in the form of time, energy amd money) $\theta x \tau$ and $g(y)$, where x and y are expenditure levels and $\tau \varepsilon \{0,1\}$ is the property right needed to

issue international-GAAP accounting standards, where $\tau = 1$ means that the property right has been retained and $\tau = 0$ means that it has been revoked. I assume that $g' > 0$ and $g'' < 0$. Since these expenditures cannot be stored, set $y = 1 - x$. When property rights are revoked then the expenditure in setting international-GAAP accounting standards. I follow the property rights literature in referring to the revocation of property rights as a taking. For ease of discussion, the model is applied to the specific case of an international-GAAP standard that can by set by a national accounting standard setter involving a relatively high level of expenditure or, alternatively by the IASC with no incremental accounting standard setting expenditure.[7]

For the national accounting standard setter, investment $g(1 - x)$ can be viewed as risk-free in two dimensions. First it does not require any deliberations on complex and contentious issues associated with developing international-GAAP, and second, they are not subject to any regulatory-induced uncertainty. These assumptions are made only for convenience. Expenditures θxt are 'risky' in the sense that property rights may be taken, and, if they are not, they are subject to regulatory uncertainty. Let θ represent the regulatory risk, where θ is distributed according to the pdf $f(\theta)$, where $f(\theta) > 0 \; \forall \; \theta \in [\theta_0, \theta_1]$ and $f(\theta) = 0$ otherwise.

When rights to set international-GAAP accounting standards are taken away from the national accounting standard setter, they are given instead to the IASC, who presumably sets such standards instead with an expenditure saving of β.[8] Let β be a random variable that is distributed according to the pdf $h(\beta) > 0 \; \forall \; \beta \in [\beta_0, \beta_1]$ and $h(\beta) = 0$ otherwise. Unless otherwise specified, it will be assumed that $h(\beta) > 0 \; \forall \; \beta \in [\beta_0, \beta_1]$. The state of the world is given by the pair (θ, β).

When property rights are revoked, a national-based regulator is assumed to compensate the national accounting standard setter $C(\theta x)$. I assume that $C(\theta x)$ can be precommitted to in that once a cost is established for setting international-GAAP accounting standards it must be known. Note that this politically-determined cost is not a function β. Although the 'market value' of this lost property right can be made verifiable to a court of law, it would be extremely difficult, if not impossible to

empirically observe this value in setting international-GAAP accounting standards.[9] Thus one can interpret the compensation schedule, $C(\theta x)$, as an incomplete contract.

The taking action is represented by the function $\tau(\theta,\beta/\omega) \in \{0,1\}$, where $\tau(\theta,\beta/\omega) = 0$ means that the property rights is taken, $\tau(\theta,\beta/\omega) = 1$ means that it has not and 'ω' is a parameter that relates to the regulatory authority's preferences.

In summary, timing and information structure of Giammarino and Nosals' (1994) three date model is as follows. At date t_{-1} the rules governing compensation for taking accounting standard property rights are established by IOSCO. Once these rules are established IOSCO 'vanishes' from the scene. Between dates t_{-1} and t_0, all the remaining (economic) agents are 'born'. At this time all the agents are symmetrically and imperfectly informed. Specifically, (i) no agent knows the true state of the world, (ii) all hold identical probability distributions over the state of the world, and (iii) all know the politically-determined compensation schedule $C(\theta x)$. At date t_0, accounting standard setting expenditures are incurred (when information is still imperfect). Between dates t_0 and t_1 all agents learn the true state of the world (θ,β). At date t_1 the takings decision is made and final compensation is paid.

2.1. The National Accounting Standard Setter

The national accounting standard setter owns the property rights to issue accounting standards which involve capital expenditures for initially establishing the standard setting procedure (a constant) as well as expenditures of types θx and $g(y)$. At date t_0, before the state is revealed but after the compensation rule is in place, the national accounting standard setter selects the level of standard setting expenditure $x \in [0,1]$ and $y = 1 - x$ in order to maximize their expected payoff, $U_l(x/C,\tau)$, where

$$U_l(x/C,\tau) = \int_{\theta_0}^{\theta_1}\int_{\beta_0}^{\beta_1} \pi^F(s,t)h(t)f(s)dtds$$

and

$$\pi^l(\theta,\beta) = g(1 - x) + \tau(\theta,\beta/\omega)C(\theta x) + (1 - \tau((\theta,\beta/\omega))\theta x.$$

The solution to the national accounting standard setter's problem is denoted as x.

2.2. The IASC

The IASC does not initially incur any expenditures in setting international-GAAP accounting standards for the country analysed here.[10] However it receives the benefit of any taking decision and pays any compensation to secure the property right that might be charged by the regulatory authority. The expected payoff for the IASC is given by

$$\int_{\theta_0}^{\theta_1}\int_{\beta_0}^{\beta_1} \pi^C(s,t)h(t)f(s)dtds$$

where

$$\pi^C(\theta,\beta) = t(\theta,\beta/\omega)(\beta - v(\theta x))$$

and $v(\theta x)$ is the fee paid to the regulator for gaining accounting standard setting rights.[11] Following Giammarino and Nosal (1994) I will compactly represent the preferences of the IASC by $U_S(x,C,\tau)$.

2.3. The Regulatory Authority

The regulatory authority is given the power by IOSCO (see below) to revoke the national standard setter's property rights to issue accounting standards at time t_1.[12] But in so doing it must abide by the compensation rule established by IOSCO at time t_{-1}. That rule requires that the regulatory body compensate the national accounting standard setter according to the schedule $C(\theta x)$ when property rights are revoked and that sufficient costs are charged to the IASC to avoid a deficit.[13] Since the regulatory authority acts after expenditures have been made and knowing the state of the world,

it will base the taking decision on the ex post payoffs to the national standard setter and to the IASC.

The specification of the regulatory authority's objective function reflects the extent to which its action is influenced by votes, their own beliefs, lobbying or bribes by the competing standard setters etc. The regulatory authority's objective function will be to maximise

$$\max_{\tau(\theta,\beta/\omega)\in\{0,1\}} \quad G(\tau,\theta,\beta/\omega) = \omega\pi^{l}(\theta,\beta) + (1 - \omega)\pi^{c}(\theta,\beta)$$

subject to the budget constraint

$$v(\theta x) - C(\theta x) = 0$$

where $\omega \in [0,1]$ is a weight that reflects the importance of the two constituencies to the regulatory authority. When $\omega = 0.5$, the regulatory authority is 'benevolent' in the sense that its objectives are in line with that of IOSCO. In addition to $\omega = 0.5$, consider the case where $\omega = 0$, ie the regulatory authority 'cares' only for the IASC - and where $\omega = 1$ ie., the regulatory authority 'cares' only about the national standard setter. It may be the case that the regulatory authority is indifferent between taking and not taking property rights. In this circumstance, it is assume that the regulatory authority takes that action which maximises IOSCO's objective function. Following Giammarino and Nosal (1994) the solution to the regulatory authority's problem is compactly denoted by $\tau(0,B/\omega)$.

2.4. IOSCO

At date t_{-1} IOSCO establishes a rule, $C(\theta x)$ governing the taking of property rights at date t_1. IOSCO's problem can be viewed as a single principal, two agent problem. Formally, IOSCO's problem is

$$\max_{\{C(\theta x)\}} \quad W(x,\tau,C(\theta x)) = U_S(x,C,\tau) + U_F(x/C,\tau) \qquad (SW)$$

subject to

$$U_l(x/C,\tau) \geq U_l(x/C,\tau) \;\forall\; x \in [0,1] \qquad (IC_l)$$

and $\forall\ \beta \in [\beta_0,\beta_1]$ and $\forall\ \theta\ \varepsilon\ [\theta_0,\ \theta_1]$

$$G(\tau,\theta,\beta) \geq G(\tau,\theta,\beta),\ \tau \in \{0,1\} \qquad (IC_i)$$

Define $W(x,t,C(\theta x))$ to be the social welfare function for the setting of accounting standards and it is this which IOSCO seeks to maximize. The constraints (IC_l) and (IC_i) represent the incentive constraints for the established accounting standard setter and the regulatory authority, respectively. {(SW), (IC_l),(IC_p)} is referred to as IOSCO's constrained problem. For simplicity attention is restricted to linear compensation schedules i.e: $C(\theta x) = a + b\theta x$.

3. Development of Propositions

This property rights model presented above yields propositions which could be employed to develop predictions about the nature of the compensation payable for the taking of property rights under various scenarios. The Giammarino and Nosal (1994) model is now applied to investigate each of these possibilities. In each case the predicted regulatory outcome is found to depend on with which interest group the regulatory authority's preferences coincide.

3.1. Regulator's Preferences Coincide with That of IOSCO

First consider the case where the regulatory authority's and political body's preferences coincide, i.e. $\omega = 0.5$. Giammarino and Nosal (1994) show that it is always possible to implement a first best allocation through a lump sum compensation schedule that is independent of the market value of the taken property right.

As a benchmark this outcome is characterized by solving an unconstrained political problem {(SW)}. IOSCO chooses a level of accounting standard setting

expenditure $x \in [0,1]$ and a function $m:[\beta_0,\beta_1] \rightarrow [\theta_0,\theta_1]$, ie: $\theta = m(\beta)$. The function m relates to the taking decision. Specifically, for the state of the world (θ,β), if $m(\beta) > \theta$, then a taking occurs and if $m(\beta) < \theta$, then a taking does not occur.

IOSCO will choose x and m so as to maximize its welfare

$$\int_{\beta_2}^{\beta_1}\int_{m(t)}^{\theta_1} sxf(s)h(t)\mathrm{d}sdt + \int_{\beta_0}^{\beta_1}\int_{\theta_0}^{(m(t)} \beta f(s)h(t)dsdt + g(1 - x)$$

The first order conditions to IOSCO's problem can be simplified to

$$\theta = m(\beta) = \frac{\beta}{x} \tag{1}$$

and $$\int_{\beta_0}^{\beta_1}\int_{m(t)}^{\theta_1} \theta f(s)h(t)dsdt - g'(1 - x) = 0 \tag{2}$$

Condition (1) defines the set of states where, for a given x, the benefit of IASC setting international-GAAP accounting standards equals the market value. That is, for a given m, condition (2) establishes the first best level of standard setting expenditure – the point where the expected marginal private benefits from the IASC setting international-GAAP standards is equal to the marginal private benefits of them being established by a national accounting standard setting body. The findings of this section are summarized in the following proposition:

> *Proposition 1*: When the regulatory authority has preferences that coincide with IOSCO, it is always possible to implement the set of first best allocations by having a compensation rule that is completely independent of market value associated with setting international-GAAP accounting standards.

This result implies that it is possible to implement the first best with a compensation rule that is completely independent of the market value of setting international-GAAP accounting standards. However it should be noted that when the level of expenditure in accounting standard setting activities can affect the takings decision, i.e. if a = b = 0, there will be over-expenditure in the accounting standard setting activity. In this situation the national accounting standard setter will overspend in standard setting activities in order to reduce the probability of a taking.[14]

3.2. Regulator's Preferences Coincide with that of the IASC

The next two sections examine various scenarios available under second best implementations as identified by Giammario and Nosal (1994). In each case the optimal compensation schedule is examined where incentive constraints (IC_l) and (IC_i) both bind, that is, when IOSCO's problem is given by {(SW), (IC_l), (IC_i)}. In these cases assume that $\omega = 0$. Given the objectives of the regulatory authority, the national standard setter's optimal level of international-GAAP standard setting expenditure is

$$\arg\max_{x} \int_{\theta_0}^{\theta_1} \int_{\beta_0}^{a+bsx} sxh(t)\, f(s)dtds + \int_{\theta_0}^{\theta_1} \int_{a+bsx}^{\beta_1} (a + bsx)h(t)f(s)dtds + g(1 - x)$$

or, alternatively, is given by the solution to

$$\int_{\theta_0}^{\theta_1} \int_{\beta_0}^{a+bsx} sh(t)f(s)dtds - g'(1 - x) +$$

$$\int_{\theta_0}^{\theta_1} (b\theta^2 x - abs - b^2 s^2 x)h(a + bsx)f(s)ds + \int_{\theta_0}^{\theta_1} \int_{a+bsx}^{\beta_1} bsh(t)f(s)dtds = 0 \qquad (3)$$

IOSCO's constrained problem is given by

$$\max_{\{a,b,x\}} \int_{\theta_0}^{\theta_1} \int_{B_0}^{a+bsx} sxh(t)f(s)dtds + \int_{\theta_0}^{\theta_1} \int_{a+bsx}^{\beta_1} th(t)f(s)dtds + g(1 - x)$$

subject to constraint (3). The first order conditions to IOSCO's problem are

$$\int_{\theta_0}^{\theta_1} (sx - a - bsx)h(a + bsx)f(s)ds + \lambda\left(\int_{\theta_0}^{\theta_1} (s - 2bs)h(a + bsx)f(s)ds \right)$$

$$+ \int_{\theta_0}^{\theta_1} (b^2x - abs - b^2s^2x)h'(a + bsx)f(s)ds\Big) = 0 \qquad (4)$$

$$\int_{\theta_0}^{\theta_1} (s^2x^2 - asx - bs^2x^2)h(a + bsx)f(s)ds +$$

$$\lambda\Big(\int_{\theta_0}^{\theta_1} (2s^2x - as - 3bs^2x)h(a + bsx)f(s)ds + \int_{\theta_0}^{\theta_1} \int_{a+bsx}^{\beta_1} sh(t)f(s)dtds$$

$$+ \int_{\theta_0}^{\theta_1} (bs^3x^2 - abs^2x - b^2s^3x^2)h'(a + bsx)f(s)ds\Big) = 0 \qquad (5)$$

and

$$\int_{\theta_0}^{\theta_1} \int_{\beta_0}^{a+bsx} sh(t)f(s)dtds - g'(1 - x) + \int_{\theta_0}^{\theta_1} (xbs^2 - abs - b^2s^2x)h(a + bsx)f(s)ds +$$

$$\lambda\Big(\int_{\theta_0}^{\theta_1} (2s^2b - 2b^2s^2)h(a + bsx)f(s)ds) + g''(1 - x) +$$

$$\int_{\theta_0}^{\theta_1} (b^2s^2x - ab^2s^2 - b^3s^3x)h'(a + bsx)f(s)ds) = 0 \qquad (6)$$

As might be expected, the optimal compensation schedule will not be independent of the market value of setting international-GAAP accounting standards, as demonstrated in the following proposition:

> *Proposition 2*: When the preferences of the regulatory authority coincide with that of the IASC, the optimal compensation schedule must depend upon the market value of the international-GAAP accounting standard setting expenditure incurred by the national accounting standard setter, i.e., $b \neq 0$.

Proof of Proposition 2: See the appendix.

The implication of Proposition 2 is that the market value associated with the expenditure incurred by the national-based accounting standard setter in developing

international-GAAP accounting standards is an important tool in aligning its interests with that of the regulatory authority and the IASC. The intuition is that, when the regulatory authority is only concerned with the welfare of the IASC, it must be induced to internalize the foregone national accounting standard setting body's expenditure, θx. To see this, suppose that b is set to zero and $a > 0$. In this case the regulatory authority will take whenever $\beta > a$ independent of the lost accounting standard setting activity. But for efficient taking decisions one must compare θx with β. When $b \neq 0$, the regulatory authority's decision must reflect a measure of foregone expenditure via the compensation schedule.

3.3. Regulatory Authority's Preferences Coincide with that of the National Accounting Standard Setter

Giammarino and Nosal (1994) show that the case where the regulatory authority cares only about the national accounting standard setter is in a sense 'qualitively different' from the previous case. Given the preferences of the regulatory authority, it is not inherently interested in β and, except for $a = 0$ and b = 1, cannot be made to internalize β through the compensation schedule.

Given the compensation $a + b\theta x$, the national accounting standard setter's optimal level of international-GAAP standard setting expenditure is

$$\arg\max_{x} \int_{\frac{a}{(1-b)x}}^{\theta_1} sxf(s)ds + \int_{\theta_0}^{\frac{a}{(1-b)x}} (a + bsx)f(s)ds + g(1 - x)$$

or, alternatively, is given by the solution to

$$\int_{\frac{a}{(1-b)x}}^{\theta_1} sf(s)ds + \int_{\theta_0}^{\frac{a}{(1-b)x}} bsf(s)ds - g'(1 - x) = 0 \qquad (7)$$

Note that the above functions are well defined only if $b = 1$. Following Giammarino and Nosal (1994), proceed by restricting $b \in \Re\backslash\{1\}$. IOSCO's constrained problem is given by

$$\max_{\{a,b,x\}} \int_{\frac{a}{(1-b)x}}^{\theta_1} sxf(s)ds + \int_{\beta_0}^{\beta_1} \int_{\theta_0}^{\frac{a}{(1-b)x}} th(t)f(s)dtds + g(1-x) \tag{8}$$

subject to (7). The first order conditions (with respect to a and b) are

$$-\frac{a}{(1-b)^2 x} + \frac{\int_{\beta_0}^{\beta_1} th(t)dt}{(1-b)x} + \lambda\left(\frac{-a}{(1-b)^2 x^2} + \frac{ba}{(1-b)^2 x^2}\right) = 0 \tag{9}$$

and

$$-\frac{a}{(1-b)^2 x} + \frac{\int_{\beta_0}^{\beta_1} th(t)dt}{(1-b)x} + \lambda\left(\frac{-a}{(1-b)^2 x^2} + \frac{ba}{(1-b)^2 x^2} + \frac{(1-b)}{af\frac{(a)}{(1-b)x}} x \int_{\theta_0}^{\frac{a}{(1-b)x}} sf(s)ds\right) = 0 \tag{10}$$

Equation (9) implies that $a = 0$. Comparing equations (9) and (10), since $\int_{\theta_0}^{\frac{a}{(1-b)x}} sf(s)ds > 0$, it must be the case that $\lambda = 0$. If IOSCO's unconstrained problem is given by (8), then the optimal level of international-GAAP based accounting standard setting expenditure is the solution to

$$\int_{\frac{a}{(1-b)x}}^{\theta_1} sf(s)ds - g'(1-x) = 0 \tag{11}$$

Equations (11) and (7) will be equal to one another - and thus constraint (7) will not bind in IOSCO's problem {(8),(7)} - if $b = 0$. The optimal compensation schedule is a constant payment.

It is not difficult to demonstrate that $a = \boldsymbol{E}(\beta) = \int_{\beta_0}^{\beta_1} th(t)dt$. Given that it is optimal to have $b = 0$, the national regulator's problem is to choose a so as to maximize

$$\int_{\frac{a}{x}}^{\theta_1} sxf(s)ds + \int_{\beta_0}^{\beta_1}\int_{\theta_0}^{\frac{a}{x}} th(t)dsdt$$

The first order condition for this problem is

$$\frac{-\mathbf{1}}{x}\left(af\left(\frac{a}{x}\right)\right) + \frac{1}{x}\int_{\beta_0}^{\beta_1} th(t)f\left(\frac{a}{x}\right)dt = \mathbf{0}$$

or $a = \boldsymbol{E}(\beta)$, where $\boldsymbol{E}(\beta) = \int_{\beta_0}^{\beta_1} th(t)dt$.

In this case the takings decision already reflects the value of foregone expenditure, i.e. the regulatory authority has the preferences of the national accounting standard setter. Furthermore, for any compensation rule in which $b = 0$ there is another compensation rule with $b = 0$ which results in the same takings decision. On the other hand, setting $b = 0$ distorts the international-GAAP accounting standard setting expenditure decision. The optimal compensation rule is one in which $b = 0$ and a set in a way that deals with the takings decision. Giammarino and Nosal (1994) conclude that by setting $a = \boldsymbol{E}(\beta)$, the takings decision will be correct on average.

The above analysis can be summarised by the following proposition:

> *Proposition 3*: If the regulatory authority has preferences that coincide with that of the national standard setter, then the optimal compensation will be either a lump sum payment or the market value of the national accounting standard setter's activity. The lump sum payment schedule, a, is characterized by $a = \boldsymbol{E}(B)$ with inefficiencies associated with both taking and accounting standard setting expenditure decisions. The market value compensation schedule is characterized by efficient taking decisions and over-expenditure by the national accounting standard setting body.

4. Policy Discussion

The Giammarino and Nosal (1994) model has been applied to characterize optimal compensation schemes under various assumptions pertaining to the regulatory authority. For the institutional setting specified, IOSCO should specify the set $\{(a_\omega, b_\omega\}, \omega \in (0, 0.5, 1)$, where ω represents the preferences of the regulatory authority and (a_ω, b_ω) represents the optimal compensation schedule when the regulatory authority's preferences are ω. As noted by Giammarino and Nosal (1994), there are however a number of practical issues associated with such a compensation schedule that must be addressed, each of which are briefly discussed below.

It is not, for instance, possible to specify a compensation schedule that is a function of the preferences of the regulatory authority alone. One could amend the analysis so that IOSCO holds priors over the 'type' of regulatory authority that will execute the taking decision and one could characterize the optimal compensation schedule that results when the schedule is independent of the preferences of the regulatory authority. IOSCO would, therefore, specify a compensation schedule that is essentially a fixed payment parameter a and a slope parameter, b. Given that $a_\omega > 0$ for some ω and $b_\omega > 0$, it will be the case that both a and b will be positive.

Although expenditure in setting international-GAAP accounting standards is well defined in the Giammarino and Nosal (1994) model, they note in reality this is not the case. For example, suppose that two sets of national-based international GAAP accounting standards differ only with respect to their distribution of the random variable θ. The optimal compensation schedules will, therefore, be different for the two accounting standard setting activities. However, in order to implement these compensation schedules one would have to be able to verify that, for example, that the expected market value of accounting standard setting expenditure is higher for one set of standards than the other, where this expected value is calculated in some previous period – even though their market values may be identical today. This being the case, the optimal compensation schedule cannot be made a function of the

characteristics of the standard setting activity (other than its market value). The compensation schedule can only specify a single pair (a, b) that applies to all accounting standard setting activities. Again, it will be the case that $a > 0$ and $b > 0$.

Another practical problem that arises relates to what exactly is meant by a taking. In the model presented above, a taking is well defined; in practice this may not be the case. For example, suppose that the national-based international GAAP accounting standard setting activity that is subject to a taking (in the above model) can be subdivided into n standards, each 'owned' by individual sub-accounting standard setting activities.[15] The benefit associated with taking any one of the standards is B/n and the lost accounting standard setting activity is $\theta x/n$. Suppose that it turns out that the regulatory authority has preferences that coincide with the national accounting standard setter, $B < \theta x$ and $a + b\theta x < \theta x$. If the regulatory authority could only take all the accounting standard setting activity or none of it, then it would make the optimal decision of not taking that activity. If the regulatory authority could instead make n takings – because, after all the regulatory authority is taking from n separate accounting standards – then the regulatory authority will make n takings if a + $b\theta x > x/n$. For large enough n, the regulatory authority will always take the entire accounting standard setting activity. A national accounting standard setter could always arrange itself so the n is large.[16] Thus, the existence of the fixed payment implies that there will be 'too many takings' when the regulatory authority has preferences that coincide with the national accounting standard setter. Holding all else constant, a should be reduced.

Based on this type of reasoning, Giammarino and Nosal (1994) argue that in a sense the parameter a in the compensation function has 'lost' its economic relevance. First, its existence adversely affects the takings decision. Second, the reason for having a fixed payment component in the compensation schedule has been greatly diminished. Recall that the fixed payment component exists only to elicit appropriate accounting standard setting activity. Since the compensation schedule now applies to

all takings – the usefulness to have $a > 0$ as a means of obtaining the 'right' level standard setting expenditure has, for all practical purposes, vanished.[17]

For these (practical) reasons, Giammarino and Nosal (1994) conclude that a compensation schedule should be set at $a = 0$. This value would be the 'optimal' setting for b if one could condition on the type of regulatory authority. They demonstrate that if $\omega = 0.5$, then $b = 0$, i.e., with $b = 0$ there is over-expenditure. If the regulatory authority has preferences that coincide with that of IOSCO, then $b > 0$. To see this suppose that $b = 0$. In this case the regulatory authority would always making a takings decision. The national accounting standard setting body, anticipating this, would set $x = 0$. Given that some accounting standard setting activity is subject to a taking which is socially desirable, it must be that $b > 0$. Finally, if the regulatory authority has preferences that coincide with the IASC, then $\beta = 1$ strictly dominates $\beta = 0$, i.e., both deliver the same level of expenditure, but $\beta = 1$ makes the ex post socially optimal takings decision. If expenditure and compensation cannot be made conditional on the preferences of the regulatory authority and the priors of the political body place positive weights on $\omega = 0$, then it will be the case that the compensation schedule will specify $b > 0$. In summary, taking account of practical considerations of implementing a compensation rule imply that the compensation payment should be set to some proportion of market value.

5. Conclusion

This paper has applied a model for analysing the taking of property rights developed by Giammarino and Nosal [1994] to analyse competition among a national accounting standard setter and the IASC over the promulgation of international-GAAP that are endorsed by IOSCO. This dispute can only be resolved by the imposition of compensation rule by a regulatory authority. The regulatory authority's decision as to the optimal form of compensation rule that must be paid for taking

away this property right was analysed, under various assumptions about with which accounting standard setting body its preferences might coincide.

The analysis demonstrates that when the behaviour of the regulatory authority deviates from that of IOSCO, the market value of the taking becomes an important factor in determining the compensation payment. When a first best implementation is not possible then an optimal, politically-determined compensation rule for the taking of property rights to set international-GAAP accounting standards by the IASC is one which must account for the incentives of all three interest groups which are party to its implementation – in this case the regulatory authority and both the competing accounting standard setters.

However, when one considers the practical problems that might be encountered in attempting to implement the optimal compensation that is suggested by the model in practice, it is concluded that the compensation payment for the taking decision should be set as a fraction of market value. In practical terms, this market value is not quantifiable but rather is defined in terms of rule-making power derived from a zero sum game struggle for political influence. Thus the compensation schedule desired by the 'winner' (i.e.: the IASC) must also be acceptable to the 'losers', who can either directly lobby IOSCO against the takings decision or otherwise attempt to gain ex post influence over the rule-making processes of the IASC itself.

When viewed purely as a political process, competition among accounting standard setters over the promulgation of internationally acceptable GAAP provides opportunities for national-based regulatory authorities to secure political influence over IASC deliberations by developing compensation schedules to take property rights away from the national standard setter and confer it upon the IASC. The success of this process ultimately depends upon the willingness of each body to accommodate political compromise. Further research is needed to examine whether the propositions developed here can be applied to particular institutional settings.

FOOTNOTES

1. Examples of this literature include De Alessi (1969), Blume et al. (1974), Epstein (1985), Fischel and Shapiro (1988) and Giammarino and Nosal (1994).

2. Within the past twelve months this type of takings decision has recently been made by regulatory authorities in Australia and many Eastern European and Asian countries. The likely and imminent endorsement of IASC standards IOSCO in mid-1998 will likely increase pressures for national regulators in other Anglo-American countries.

3. This is a reasonable assumption if national-based accounting standards are more onerous than IASC-determined standards.

4. For ease of exposition, I assume that initially only a single national standard setter issues accounting standards. Of course in practice this may not necessarily be the case.

5. Klumpes (1998) applies Becker's (1983) model to develop a theory of competition among multiple interest groups over the determination of accounting standards.

6. For a discussion of this conflict, see Beresford (1997) [United States of America] and Langford (1997) [United Kingdom].

7. This difference arises from the economy-of-scale advantages of the IASC producing a single set of harmonised international-GAAP standards.

8. The assumption that the IASC can set standards at a lower level of expenditure than the established accounting standard setting is made for convenience only.

9. One could however in an *ex post* sense define these activities in terms of the opportunity costs of firms using national-based versus IASC-based international-GAAP. Adopting IASC standards restricts the ability otherwise available to corporate

managers to self-select those national-based standards that allow income smoothing.

10. This is because the IASC is presumed to have previously incurred capital expenditures in setting international-GAAP accounting standards.

11. The assumption that privately-funded accounting standard setting bodies are taxed in this manner is made so that the discussion focuses on the takings issue. If this assumption were relaxed, then the more general problem of optimal taxation to support government regulation of accounting standards would need to be addressed.

12. In Anglo-American countries, the legal existence of such a publicly-funded regulatory authority is presumably established under corporate laws which require firms to comply with that country's GAAP (e.g.: the Securities and Exchanges Commission (USA), Australian Securities Commission (Australia).

13. This is equivalent to the notion of a political zero-sum game (Becker, 1983).

14. One can envisage this situation arising in those Anglo-American countries where national standard setting bodies have already established an independently developed 'conceptual framework' (e.g.: UK, USA).

15. The IASC frequently 'cherry picks' what it perceives to be 'best practice' from the plethora of national accounting standards that exist on a particular issue.

16. This form of accounting standard setting behaviour has previously been documented. Walker (1987) observes that just prior to the sanctioning of Australian accounting standards the Australian Accounting Research Foundation issued many accounting standards on various issues.

17. In any case these expenditures are 'sunk' and are unlikely to be recoverable via political influence over subsequent IASC standard setting deliberations.

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Appendix

Proof of Proposition 2 (Giammarino and Nosal, 1994).

Assume the contrary, i.e.: that $b = 0$. Equation (2) becomes

$$\int_{\theta_0}^{\theta_1} \int_{\beta_0}^{a} sxh(t)f(s)dtds = g'(1 - x) \qquad \text{(A.1)}$$

and equation (A.1) becomes

$$\int_{\theta_0}^{\theta_1} \int_{\beta_0}^{a} sxh(t)f(s)dtds = g'(1 - x) - lg''(1 - x). \qquad \text{(A.2)}$$

Equations (A.1) and (A.2) imply that $l = 0$. If $b = l = 0$, then equation (4) becomes

$$a = x\boldsymbol{E}(\theta),$$

where $\boldsymbol{E}(\theta) = \int_{\theta_0}^{\theta_1} sf(s)ds$, and equation (5) becomes

$$a = \frac{xE(\theta^2)}{E(\theta)}$$

But $\boldsymbol{E}(\theta^2) = (\boldsymbol{E}(\theta))^2$, a contradiction. Thus it cannot be that $b = 0$.

Q.E.D.