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HARMONIZATION OF VOLUNTARY DISCLOSURE PRACTICES BY JAPANESE
COMPANIES

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ABSTRACT

The costs and benefits of harmonization of international accounting and disclosure practices by firms is an important policy issue. This paper investigates the extent to which voluntary disclosure practices by Japanese firms have converged since the collapse of Japan's financial 'bubble' of the late 1980's. Convergence of voluntary disclosure would suggest that Japanese firms respond to environmental and market pressures by adopting increasingly similar reporting practices. Our findings suggest that, for our sample of Japanese firms, there was neither more, nor less, convergence in selected voluntary disclosure practices over the sample period, although the average level of disclosure did increase. The results suggest that Japanese firms were in "equilibrium" in terms of the *scope* of information they voluntarily disclosed, although they perceived net benefits in increasing the *quantity* of disclosed information.

INTRODUCTION

The formation of an International Accounting Standards Committee, renamed the International Accounting Standards Board, to pursue the goal of creating a single set of accounting principles to be used around the world is premised, in part, upon a belief that there will be large cost savings from doing away with the need for companies to prepare heterogeneous financial statements in order to satisfy different regulatory standards. As well, by enabling foreign firms meeting the international standards to raise capital in financial markets of the signatory countries, an international accounting standard will help contribute to the integration of national capital markets. The latter, in turn, should help promote increased competition in regional and national capital markets with associated increases in efficiency. Many of the world's financial regulators, accounting standard setters, users and preparers have voiced support for a single set of higher quality global accounting standards (Street, 2002).

At the same time, harmonization will obviously involve compromise such that the agreed-upon international standard might be “second-best” from the strict perspective of any single regulatory regime.¹ Specifically, the information priorities of users of financial accounting information are likely to differ across national and regional markets.² Thus, if one were designing an “optimal” disclosure regime for, say, Japan, it might differ significantly from an optimal disclosure regime for the United Kingdom both because of national differences in the perceived net benefits of different disclosure items, as well as differences across countries in industrial structure.³ Hence, a disclosure regime designed to appeal to the “median international user” will inevitably reflect compromises. Given relatively heterogeneous priorities across different sets of investors, it is certainly possible that a standardized disclosure regime, if implemented, would have greater overall costs than benefits.⁴

The costs of disclosure include direct expenditures associated with data collection, processing, production and auditing, and indirect costs, including the provision of useful information to competitors (Gray, Radebaugh and Roberts, 1990). The inadvertent transfer of commercially valuable information to competitors, along with

the associated transfers of wealth might discourage innovation on the part of affected firms. This could constitute a relatively large social cost associated with mandatory harmonization of accounting standard depending upon the mandated disclosure requirements. Harmonizing domestic accounting practices with foreign accounting practices might also have deleterious effects on domestic price informativeness and securities trading volumes (Rahman, Perera and Ganesh, 2002). In the limit, firms may simply not comply with international disclosure requirements (Street and Gray, 2002).

As a practical matter, it is impossible to undertake a comprehensive evaluation of the social benefits and costs of accounting harmonization. In this context, a potentially useful piece of information to policymakers is the extent to which management of different companies perceive growing net *private* benefits to voluntary harmonization. To the extent that harmonization of accounting practices is characterized by larger private benefits an/or lower private costs, regulatory initiatives to promote accounting harmonization are more likely to enjoy positive net *social* benefits.

A number of studies have examined the extent to which accounting regulations and/or professional accounting standards across countries have become more or less similar over time.⁵ Findings of increased similarity have led some observers to conclude that accounting practices possess characteristics that are universally applicable, and that the efforts of supranational agencies to promote the harmonization of international disclosure practices are likely to be welfare enhancing.⁶ However, this view implicitly presumes that regulatory authorities are effectively acting in the interest of users of corporate information whose increasingly similar demands for information are not being satisfied by companies. In fact, increased similarities across *de jure* disclosure regimes do not necessarily signal increased similarities in disclosure priorities of companies operating within and across those regimes. That is, while priorities of national policy makers may actually be converging, perhaps driven, in turn, by the actions of the International Accounting Standards Committee, the priorities of users of corporate information may actually be diverging, or (at best) not becoming more uniform.

In short, arguments for regulatory harmonization of disclosure practices rest heavily upon the notion that constituents for corporate information have increasingly uniform demands for information, and that corporations, for one reason or another, are not meeting those demands through voluntary disclosures in a timely fashion. In fact, there is virtually no research bearing upon this issue. Most available studies focus on the convergence or divergence of disclosure standards as promulgated by regulators or accounting standards boards. Others consider the extent to which firms respond in similar or different fashions to changes in regulations or standards or to common influences such as US GAAP.⁷ Virtually no studies examine the extent to which firms within or across regulatory jurisdictions are voluntarily implementing similar accounting disclosure practices over time, independent of legal and “quasi-legal” pressures to do so.⁸ One exception is Rahman, Perera and Ganeshanandam (2002) who examine the similarity in reported mandated and non-mandated disclosure and measurement items across samples of Australian and New Zealand companies. The authors find that harmonized (across countries) disclosure regulation is positively related to disclosure practice harmonization. However, disclosure practice harmonization also depends upon a number of firm-level characteristics, and some categories of disclosure and measurement have more and others less harmonization.

An inference that might be drawn from the Rahman, Perera and Ganeshanandam (2002) study is that the association between regulatory harmonization and practice harmonization is imperfect. In particular, firm characteristics condition desired disclosure practices, and these characteristics differ across firms. Hence, regulatory efforts to develop and implement uniform disclosure practices might well impose costs of various types described above upon companies affected with less than compensatory benefits for those companies. In this context, the net social benefits of regulated uniform disclosure become more suspect.

The purpose of this study is to embellish the findings of Rahman, Perera and Ganeshanandam (2002) by providing evidence on the extent to which Japanese companies are becoming more or less similar over time in their voluntary reporting of

accounting information. Companies within a country or region are likely to face a more similar set of environmental factors conditioning the “optimal” disclosure regime than will companies from different countries. As such, if constituents for corporate information become more similar over time in their information priorities, one would expect to see greater uniformity in voluntary corporate disclosure practices over time within a sample of relatively homogenous companies. Failing to observe greater uniformity in voluntary disclosure practices across a fairly similar set of companies would cast doubt upon the hypothesis that investors and lenders are becoming increasingly similar in their information requirements on a worldwide basis, thereby accentuating concerns about high private costs relative to benefits being imposed on companies affected by mandated accounting practices.

The behavior of Japanese companies can therefore be seen as a case study of changing uniformity of disclosure practices in the private sector. While it is clearly dangerous to generalize from the behavior of participants in a single country, Japan arguably represents an informative “laboratory” for our policy focus. It has been documented that increased competition for financial capital encourages increased voluntary financial disclosure on the part of companies, including Japanese companies.⁹ Japanese companies arguably faced substantially enhanced pressures to raise financial capital outside of their Keiretsu organizations in the 1990s.¹⁰ To this extent, if lenders and investors are becoming increasingly similar in their information priorities, one might expect increased competitive pressures in external capital markets to encourage Japanese companies to become more similar in their disclosure practices even without pressure to do so from regulators.

In short, to the extent that Japanese companies became increasingly similar over time in their voluntary disclosure practices, our case study would offer some indirect support for the claim that environmental factors are encouraging greater homogeneity in the information priorities of corporate constituents. On the other hand, if Japanese companies did not become more similar in their voluntary disclosure practices, it would raise serious questions about whether environmental forces are contributing to greater

homogeneity of information demands on an international basis. In fact, we find that Japanese companies became neither more, nor less, similar in their disclosure practices over our sample period, although they did, on average, increase the level of their disclosure over that period.

Our paper proceeds as follows. Section 2 discusses the concepts of voluntary disclosure and harmonization of disclosure practice and applies those concepts to our study. Section 3 describes our samples of Japanese companies and the procedures used to identify changes in disclosure practices over time. Various measures of disclosure practices are described and analyzed in Section 4. Section 5 contains a summary and conclusions.

VOLUNTARY DISCLOSURE AND HARMONIZATION

As noted above, there is a fairly substantial literature dealing with similarities and dissimilarities in disclosure practices across accounting regimes. In broad terms, the available studies distinguish between similarities and differences across regulatory regimes and those across different companies.¹¹ In the former, increased similarity of disclosure rules and recommendations, or harmonization of rules and recommendations, is the outcome of initiatives implemented by financial regulators and/or accounting standards boards. That is, it represents a convergence of recommended or desired outcomes as promulgated by regulators, standards boards and the like. The focus of the latter is similarities and differences in actual disclosure practices of companies. Clearly, one would expect the actual disclosure practices of companies to be influenced by the rules and recommendations of regulators and boards, since the failure to implement formally recommended disclosure practices could have adverse financial consequences for many companies. Indeed, Rahman, Perera and Ganeshanandam (1996) note that the harmonization of accounting rules and standards is a primary factor driving greater uniformity in disclosure behavior across companies.

For our purposes, to the extent that changes in corporate disclosure are directly or indirectly motivated by changes in formal accounting rules and recommendations, they

are not “truly voluntary.” Rather, truly voluntary changes in disclosure arise from changes in market forces with the influence of regulation held constant. In this regard, our taxonomy is similar to that of Parker and Morris (2001). They distinguish between formal, material, and spontaneous harmonization. Formal harmonization is the harmonization of regulation; material harmonization refers to accounting practices as influenced by regulations or market forces; and spontaneous harmonization arises from market forces and not from regulations.

The distinction between the various concepts and their relation to our empirical analysis can be further explained through the following conceptual framework. Assume that there are two companies, Company A and Company B, operating under two regulatory regimes, R_1 and R_2 . In addition, assume that given current economic conditions and existing regulatory rules and recommendations, Company A is currently disclosing a set of discrete items of information denoted by the vector (V_a), while Company B is disclosing a discrete set of information items denoted by the vector (V_b). The V_a vector is defined as: $V_a = (a_1, a_2, \dots, a_m)$. The V_b vector is defined as: $V_b = (b_1, b_2, \dots, b_m)$. For purposes of simplicity, we assume that the two vectors are completely orthogonal. That is, there is no element in V_a that is also in V_b and vice-versa. Put simply, the disclosure practices of the two companies are completely dissimilar. Presumably the two regulatory regimes are also dissimilar.

Now assume a change occurs in R_1 such that the regulator implements specific rules that had been implemented in R_2 in an earlier period. Further assume that the rules have the effect of requiring Company A to report item b_1 , and that b_2 can be reported for essentially no incremental cost once the company has incurred the costs of disclosing b_1 . As a result, a_1 now equals b_1 and a_2 now equals b_2 . The net result is that the disclosure practices of the two companies would become more similar. However, in our frame of reference, the increased disclosure of Company A is not voluntary. Rather, in the terminology of Parker and Morris (2001), it reflects material harmonization. Alternatively, assume that R_1 is not changed but element a_m is changed so that it is identical to b_m . Presumably, some change in the marketplace made it profitable for

Company A to change its disclosure practice to make it more similar to that of Company B. We consider the latter change to be voluntary.¹² While the change could be motivated by any one of several factors, one plausible explanation is that investors increasingly believe that the information supplied by item b_m has more value to them than the information supplied by item a_m . Equivalently, the marketplace change effectively involves constituents of Company A becoming more similar to those of Company B, at least in terms of their information priorities.

While the preceding examples described changes in existing elements of V_a , we could also have created changes in V_a by adding new elements. To the extent that at least some of the new elements were identical to elements in V_b , the two vectors would become more similar. Furthermore, if the added elements were not directly or indirectly related to changes in R_1 , we would identify the increased similarity as reflecting voluntary initiatives by Company A. Equally, Company B could add disclosure items that are equivalent to some elements in V_a .

In the preceding examples, the concept of increased similarity, or greater uniformity, is obvious, since the two vectors are initially assumed to have no elements in common. The concept is less obvious when there are some common elements to start with and then both similar and dissimilar elements are added to the two vectors. In this latter case, more formal statistical measures of correspondence among the elements of the vectors are appropriate. Nevertheless, the conceptual underpinning of the analysis remains the same. Namely, increased similarity between the vectors that are unrelated to changes in regulatory regimes may be taken to reflect market-driven changes in disclosure environments that have the effect of encouraging increased similarity in disclosure behavior on the part of companies operating in those environments.

An obvious challenge to an analysis of voluntary disclosure is to identify a time period and regulatory regime where changes in a set of disclosure items cannot be plausibly linked, directly or indirectly, to changes in the *de jure* regulatory regime. We believe that over the time period of our sample, changes in the disclosure practices of

Japanese companies, as measured by our disclosure instrument, were primarily voluntary, in that they were not obviously motivated by changes in formal regulatory requirements or by recommendations of accounting standards boards. Specifically, we investigated whether any material changes in *de jure* disclosure rules or regulations occurred in Japan that might have contributed to a significant movement toward greater uniformity of disclosure across firms as reflected in our disclosure instrument.

Although there were *de jure* changes in the Japanese accounting regime during the sample period, they were related to measurement practice rather than disclosure.¹³ We were unable to identify any changes that should have altered incentives to respond to our disclosure instrument in any specific way over our sample time period. As an example, significant regulatory changes in accounting for marketable securities, pensions, and consolidation of subsidiary companies were imposed on Japanese firms, effective in the late 1990s. While these changes were beyond our sample period, they might have stimulated voluntary changes within our sample period to the extent that the changes were anticipated by our sample firms. Although the accounting environment changes as a result of the new rules, the measure of voluntary disclosure in the Botosan instrument would be largely unaffected. The changes focused more on measurement of income and would not be reflected in the disclosure instrument. In this sense, greater or lesser uniformity in disclosure across firms in our sample can be taken to reflect voluntary changes.

Changes in the disclosure behavior of our sample of Japanese companies are also voluntary in a broader sense in that our disclosure measures are based upon English-language versions of those companies' Japanese-language annual reports. Campbell (1985) calls these "convenience translations" which may include additional disclosure items that are not required by Japanese GAAP and which may reclassify some financial information into a form that is more familiar to non-Japanese readers. As such, convenience translations should be influenced by capital market conditions outside as well as inside Japan. While such translations may not provide a perfectly accurate picture of financial reporting in Japanese, there is no reason to believe that changes in disclosure

practices over time in convenience translations offer a misleading overall picture of increased or decreased harmonization of financial reporting in the Japanese language.

In summary, actual corporate disclosure becomes more uniform when companies make increasingly similar choices among disclosure alternatives (VanDer Tas, 1992). Obviously, this can take place against the background of increased or decreased absolute levels of disclosure on the part of those companies. Some observers argue that increased similarities in disclosure practices that reflect firms reporting less information in a more similar manner is a meaningless indicator of harmonization from a public policy perspective.¹⁴ In fact, this criticism does not apply to our study, since disclosure levels, on average, increased over our sample time period for our sample companies. Hence, any harmonization that is observed is concomitant with increased overall disclosure.

SAMPLE SELECTION AND METHODOLOGY

Two specific time periods were selected to investigate the convergence or lack of convergence in disclosure practices among Japanese firms. The first period, 1987-1993, can be characterized as the “Bubble” economy that reflects relatively high economic and financial asset growth rates compared to the latter part of the 1990s, as well as relatively abundant domestic sources of financial capital. By contrast, a major recession and economic restructuring marks our second time period, 1996-1998.¹⁵ During the latter period, Japanese firms faced increasingly competitive global product markets, while a domestic banking crisis forced many firms to seek capital outside of Japan. Since this crisis has continued to the present time, it is reasonable to presume that Japanese firms did not expect the bursting of the financial bubble to be quickly reversed.¹⁶

The two time periods selected therefore reflect two distinctively different economic environments faced by Japanese companies, although the trend over the entire period was arguably one of Japanese companies facing stronger incentives to integrate into global financial markets, as well as to improve sales in foreign markets. To the extent that increased disclosure improves access to foreign capital, the incentives of Japanese companies to disclose information voluntarily over the 1990s could be expected

to increase. Furthermore, to the extent that potential investors and lenders have increasingly similar information priorities, regardless of differences in specific investing and lending opportunities, voluntary disclosure practices could be expected to exhibit greater uniformity over the period of the 1990s.

Data were collected for one year for each sample time period. The specific years selected were 1989 (for the Bubble period) and 1998 (for the Current period). This time period is sufficiently long so that any trend in disclosure behavior should be evident. When annual reports for specific companies were not available for the specific year, the next closest preceding year was used, with 1987 as a cut-off year. Given the time consuming and costly nature of the data collection process, it was not feasible to collect disclosure information for all years between 1989 and 1998. In choosing specific years that essentially bracket the entire period, our assumption is that changes in disclosure are not reversible and proceed relatively deliberately, such that observed changes between discontinuous years do not mask significant (and possibly contradictory) unobserved changes between non-sample years.¹⁷ While it is possible that averaging disclosure values for two or more years of any sub-period might reduce purely transitory variations in “equilibrium” disclosure behavior, the individual years chosen for this study are arguably sufficiently separated in time so as to capture meaningful changes in disclosure behavior over the decade of the 1990s.

Disclosure Instruments and Scores

Various methods have been used in the literature to measure the extent of a firm’s disclosure.¹⁸ For purposes of this study, the disclosure index developed by Botosan (1997) is used. It was chosen principally because the measurement categories more closely reflect voluntary disclosure behavior for the sample firms of this study than do the instruments in other studies. For example, the focus of the questionnaire is on voluntarily disclosed information with high predictive value as opposed to disclosure of various historical accounting issues for regulatory purposes. Since a large number of the disclosure questions were unrelated to accounting disclosures, per se, the instrument is less susceptible to potential bias resulting from changes in the *de jure* regulatory regime.

In addition to the focus on voluntary disclosure, the instrument's reliability and validity disclosure is the most rigorously tested of those cited in the literature. A copy of the instrument used to measure the disclosure score for each firm is presented in Appendix 1.

Two specific potential concerns with the use of the Botosan index might be briefly mentioned. One is that the index was designed specifically for U.S. companies, and it is therefore inappropriate to apply the index to a sample of Japanese companies. In fact, if the primary pressures influencing disclosure behavior are emanating from a growing need to acquire financial capital in international capital markets, the use of a disclosure instrument that reflects the priorities of international investors and lenders seems appropriate. A second concern is that the Botosan index is not a comprehensive description of the disclosure behavior of our sample companies. Specifically, some disclosed information may not be identified by the index. If changes in the unidentified disclosure items are dissimilar to changes inferred from Botosan's index, inappropriate conclusions might be drawn from an analysis based solely upon Botosan's index. However, there is no reason to believe that the disclosure items from the Botosan index are idiosyncratic or unrepresentative of a broader range of disclosure behavior.

The major components of the index are classified into the following five categories: background information, ten- or five-year summary of historical results, key non-financial statistics, projected information and management discussion and analysis of operations. The different categories of information reflect the proposition that different types of information are disclosed for different reasons (Gray, Meek & Roberts, 1995). Each category contains specific questions that represent management's voluntary disclosure of information for the given category. Disclosure requirements initiated during the sample period by regulatory authorities were reviewed to insure that they were not included as voluntary disclosure questions in the instrument.

Specific disclosure questions can be scored on a quantitative or qualitative basis. Points for each individual firm (j) are awarded for specific disclosure items within each category (i) for a given sample year (t). Each category (i) has a score based on the

number of items within the category. A category disclosure score ($DISC_{ij}$) measures the total points awarded for disclosure for a given category (i) for firm (j) for time period (t).

The maximum disclosure score for each category is:

Background Information	26 points
Ten or Five Year Summary of Historical Results	7 points
Key Non-financial Statistics	40 points
Projected Information	28 points
Management Discussion and Analysis of Results	26 points
<hr/>	
Total Possible Disclosure Points (Score)	127 points

A total disclosure score measures the total points awarded for disclosure by the j th firm in time period (t) for all categories.¹⁹ The maximum DISC score using this instrument is 127- the total number of disclosure items.

The disclosure index score is based upon information in each firm's annual report to shareholders. Although the annual report is not the only source or means of disclosure, as noted by Knutson (1992), it is typically the most important source of information for most analysts. In addition, Lang and Lundholm (1993) noted a high, positive correlation between annual report disclosure and disclosure in other sources (such as press releases or regulatory filings). The annual reports for our sample of firms are the English language version for each firm. It could be argued that the English language version of Japanese firms' annual reports would fail to capture disclosure effects unique to the Japanese business environment. However, the purpose and scope of our paper is the response of Japanese firms to the global marketplace. Hence, this criticism is inappropriate.

The annual reports for each sample firm were obtained from the Tokyo Stock Exchange. Each annual report was analyzed and assigned points by one of the authors. The same author assigned scores for all firms to ensure consistency. The scores from each annual report constituted the Disclosure Score (DISC) for each firm in each sample year.²⁰

Sample Firms

Our sample firms were randomly selected from a stratified sample of firms in the Nikkei 225 Index. The Nikkei Index includes 225 of the major firms listed on the “first section” of the Tokyo Stock Exchange. We excluded firms in industries that are highly regulated, for example, banking, insurance and securities, since their levels of disclosure will be primarily conditioned by regulatory practices. We also excluded service-related firms that are less likely than their manufacturing counterparts to compete in international input and output markets, and may, as a result, be less integrated into international financial markets. The sample firms are therefore drawn primarily from manufacturing-related industries that share relatively similar disclosure environments.

Two initial samples were created. Their characteristics are summarized at Table 1, and they encompass 109 firms for 1998 and 48 for 1989. While there is some overlap in the identities of firms in the two samples, they are obviously heterogeneous samples, and they are referred to in this way. These sample sizes are comparable to those used in other disclosure studies.²¹ Since these samples are not identical in terms of the identities of the included firms, changes in the calculated disclosure indices over time may reflect changes in the composition of firms across the samples, rather than the “uniform” influence on firms of capital market pressures to harmonize disclosure behavior. In this context, two procedures are adopted to address this potential problem. In one procedure, we isolate a sample of 41 firms that are part of both the beginning and end period samples. We refer to this as our homogeneous sample. By focusing on changes in disclosure practices among these 41 firms, we eliminate the potential for sample results to reflect changes in the identities of sample firms. We describe and discuss this sample below.

In a second procedure, we assess whether and how changes in the number and the identities of firms in our two time period samples might influence measured disclosure behavior. We do this by company, two groups of firms: 48 in the first time period and 69 in the second time period. We call this our heterogeneous sample.²²

Meek, Roberts and Gray (1995) identify three factors that are statistically significant determinants of voluntary disclosure: company size, country/region of origin and international listing status.²³ Industry effects are also present, although they are not as statistically robust as the previously mentioned factors.²⁴ Hence, if factors such as size and international listing status became more homogeneous across our samples of firms over the sample period, we could expect to observe harmonization of disclosure practices independent of any influences from “exogenous” factors in the external environment.²⁵ On the other hand, if there was no convergence or divergence across sample firms in the main factors influencing disclosure, particularly firm size, international listing status and industrial classification, there would be reason to believe that our heterogeneous sample was biased for or against identifying increased uniformity of disclosure over time.

Our sample of heterogeneous firms was employed in order to increase the number of data points and, hence, the robustness of our empirical analysis. Notwithstanding the fact that the firms are not identical in the two sample periods, we were able to determine that the industrial composition of the heterogeneous sample is constant over the sample time period.²⁶ As well, no changes in the distribution of international listing status occurred between the two sample years. Specifically, the proportion of internationally listed companies was not significantly different between the two sample years. Constancy of the statistical distributions of industrial classification and listing status also apply to our sample of 41 firms. Hence, changes in the size distributions of firms over time are the main potential confounding factor in attempting to identify changes in the uniformity of firm-level disclosure in either the sample of 41 firms whose identities are constant over the time period, or our larger sample containing firms of changing identities..

It must be acknowledged that changes in other firm-specific factors might also influence disclosure behavior, on the margin. These factors include profitability, debt-to-equity ratios, membership in a keiretsu and the degree of “multinationality” of the firm.²⁷ There is no reason to believe that debt-to-equity ratios should systematically converge or diverge in either the “sample of 41” or the heterogeneous sample, since capital structure

tends to be related to industry classification, which is constant in both samples, as noted above. The multinationality of a company is strongly related to firm size (Dunning, 1993). Since the distributions of firm size may well vary over our sample time period, it is again advisable to evaluate whether changes in firm size distributions might be influencing observed changes in disclosure behavior, and we do so below. However, it must be acknowledged that results for our broad sample of firms may reflect changes over time in the distribution across firms of factors that we have not explicitly evaluated, most notably profitability and capital structure.

DISCLOSURE BEHAVIOR

Mean disclosure scores, standard deviations and coefficients of variation for total disclosure and for each specific information category are presented in Table 2 for the sample of 41 identical companies and in Table 3 for the heterogeneous sample. The results indicate that mean voluntary disclosure increased in every specific disclosure category for both samples of firms. Increases in mean disclosure scores are statistically significant for all information categories, except for “non-financial statistics” and “management discussion” in the case of the homogeneous sample. Results for the heterogeneous sample are similar with differences in the average disclosure scores for the non-financial statistics and summary information categories being statistically insignificant. The difference in the total disclosure index is statistically significant in both the homogeneous sample and the heterogeneous sample. Significant increases in the disclosure of some categories of information, but not of others, suggest that firms place different degrees of emphasis and importance on the disclosure of specific types of information.²⁸

Differences in the mean levels of disclosure do not equate to greater uniformity in the disclosure of information by firms. Greater uniformity of disclosure would be indicated by greater similarities (or fewer differences) in disclosure preferences on the part of international companies. A number of statistical measures of harmonization are discussed in the literature, most notably the Herfindahl index. (Parker and Morris, 2001). A relatively simple way of testing for greater similarity of disclosure over the two sample

periods is to compare the variance in disclosure across the samples of firms for the two periods. A reduction in variance over time would be consistent with more similar disclosure practices. That is, an increase in mean disclosure combined with reduced variance in disclosure would indicate that our sample firms are voluntarily reporting more information, and that the information reported is increasingly similar. This methodology is similar to that used by Makhtari and Rassekh (1989) in their analysis of factor price convergence, except that they employed continuous time series data, whereas we use two discrete time periods.

We use the coefficient of variation (CV), a scale neutral measure of variation, to describe the extent of variation in voluntary disclosure over the sample firms in each time period. Specifically, CV values are calculated for each category of disclosure for both the homogeneous and heterogeneous samples. The results are reported in Table 4. A significant reduction in CV values when comparing the second sample period to the first would indicate a decrease in the variance of disclosure practice for the specific information category. That is, it would indicate that sample firms became more similar in their disclosure behavior over time while increasing their overall level of disclosure. Conversely, a significant increase in CV values would indicate that firms became more dissimilar in their disclosure behavior.

The results in Table 4 indicate that, for the homogeneous sample, the CV statistic decreased for all categories of disclosure except “Background Information”. For the heterogeneous sample, Table 4 shows that the calculated CV decreased for the “Summary,” “Non-financial,” “projection” and “MDA” categories of information. The CV statistic increased in the case of Background Information. However, tests of statistical significance indicate that the reported differences in CV values are, by and large, statistically insignificant. Specifically, only the CVs for the Summary Disclosure category in the case of the homogeneous sample are significantly different at the .05 level (using an F-test).²⁹ Hence, we are led to conclude that there has essentially been no significant convergence or divergence of disclosure preferences on the part of international companies across our sample of Japanese firms. The broad inference one

might draw from this result is that the information demands of the constituents of Japanese companies became neither more nor less distinct over time. Thus, while constituents, on average, demanded more information from companies, the nature of the information did not converge in similarity.

As noted above, a convergence or divergence of firm sizes over our sample period could contribute to convergence or divergence of disclosure practices. In this case, a failure to observe a statistically significant change in disclosure might reflect changes in firm-size distributions that offset the influence of changes in capital market conditions. In fact, F-tests allow us to accept the hypothesis that the coefficients of variation for two measures of firm size, total assets and the natural log value of total assets, are equal when comparing the two sample years. Hence, the failure to observe either increased or decreased harmonization of disclosure over our sample period does not appear to be a statistical artifact associated with diverging (or converging) firm size distributions over the same period.

SUMMARY AND POLICY CONCLUSIONS

Our analysis shows that the voluntary disclosure practices of Japanese firms did not converge or diverge over the time period from the late 1980s to the late 1990s. This finding suggests that Japanese firms have distinctive clienteles for information and that there has been no significant convergence in demand patterns for information across those clienteles. The observed constancy in the nature of information disclosure spans a period of time in which our sample was disclosing more overall information, presumably in response to market pressure for more information.

For reasons discussed earlier, we believe that Japanese companies provide a useful focus for studying the possible convergence of disclosure preferences on the part of international companies. In particular, market pressures on Japanese companies to supply their clienteles with information deemed useful by the latter arguably increased substantially over the sample period. The fact that convergence in disclosure practice did not occur in a relatively homogeneous sample of firms suggests that pressures for

convergence are even weaker among more heterogeneous multinational companies headquartered in different countries.

To the extent that our findings can be generalized beyond our sample of Japanese companies, they call into question the wisdom of international accounting standards bodies demanding greater uniformity of corporate disclosure practices.³⁰ Specifically, our results suggest that competitive pressures will compel firms to disclose voluntarily more accounting information to the marketplace. However, the constituencies for such information vary across different types of firms such that groups of firms will find it advantageous to disclose different types of information. Moreover, there is no evidence that those constituencies are becoming more similar over time in their disclosure priorities. Enforced uniformity might therefore lead to increased disclosure of certain types of information for many firms where the full private costs of disclosure exceed the associated private benefits. Regulatory and standards boards should therefore proceed cautiously in their efforts to promote harmonized *de jure* disclosure regimes, both domestically and (especially) internationally.

Appendix 1
 Disclosure Index Scoring Sheet
 Disclosure Level and the Cost of Equity Capital
 Christine A. Botosan
 (The Accounting Review, Volume 72, No. 3, July 1997)

Company Name:		
Report Type: Annual report/10-k/Summary annual report		
Year end:		
Background Information:	Qual.	Quan.
a. A statement of corporate goals or objectives is provided.		
b. A general statement of corporate strategy is provided.		
c. Actions taken during the year to achieve the corporate goal are discussed.		
d. Planned actions to be taken in future years are discussed.		
e. A time frame for achieving corporate goals is provided.		
f. Barriers to entry are discussed.		
g. Impact of barriers to entry on current profits is discussed.		
h. Impact of barriers to entry on future profits is discussed.		
i. The competitive environment is discussed.		
j. The impact of competition on current profits is discussed.		
k. The impact of competition on future profits is discussed.		
l. A general description of the business is provided.		
m. The principal products produced are identified.		
n. Specific characteristics of these products are described.		
o. The principal markets are identified.		
specific characteristics of these markets are described.		
Summary of historical results:	10 or more years	Fewer than 10 years
a. Return-on-assets or sufficient information to compute return-on-assets (i.e. net income, tax rate, interest expense and total assets is provided.		
b. Net profit margin or sufficient information to compute net profit margin (i.e. net income, tax rate, interest expense and sales is s provided,		
c. Asset turnover or sufficient information to compute asset turnover (i.e. sales and total assets) is provided.		
d. Return-on-equity or sufficient information to		

compute return-on-equity (i.e. net income and stockholders equity) is provided.		
	Yes	No
e. A summary of sales and net income for at least the most recent eight quarters is provided.		
Key non-financial statistics:	Amount	
a. Number of employees,		
b. Average compensation per employee.		
c. Order backlog .		
d. Percentage of order backlog to be shipped next ear.		
e. Percentage of sales in products designed in the last five ears.		
f. Market share.		
g. Dollar amount of new orders laced this ear.		
h. Units sold.		
i. Unit selling rice.		
j. Growth in units sold.		
k. Rejection/defect rates.		
l. Production lead time.		
m. Age of key employees.		
n. Sales growth in key regions not reported as geographic segments.		
o. break-even sales \$'s		
p. volume of materials consumed		
q. prices of materials consumed		
r. ratio of inputs to outputs		
s. average age of key employees		
t. growth in sales of key products not reported as product segments		
Projected information:	Pos., Neg. Or Neutral	Qual. or Quan.
a. A comparison of previous earnings projections to actual earnings is provided.		
b. A comparison of previous sales projections to actual sales is provided.		
c. The impact of opportunities available to the firm on future sales or profits is discussed.		
d. The impact of risks facing the firm on future sales or profits is discussed.		
e. A forecast of market share is provided.		
f. A cash flow projection is provided.		
g. A projection of ca ital expenditures or R&D is provided.		
	Pos.,	Qual Wgt.

	Neg. or Neutral	or Quan	
h. A projection of future profits is provided.			
i. A projection of future sales is provided.			
Management discussion and analysis: (explanations for changes must be provided)	Qual or Quan	Prod seg.	Tot. firm
a. Change in sales.			
b. Change in operating income.			
	Qual. or Quan.	Total firm	
c. Change in cost of goods sold.			
d. Change in cost of goods sold as a percentage of sales.			
e. Change in gross profit.			
f. Change in gross profit as a percentage of sales.			
g. Change in selling and administrative expenses.			
h. Change in interest or interest income.			
i. Change in net income.			
j. Change in inventory			
k. Change in accounts receivable.			
l. Change in capital expenditures or R&D.			
m. Change in market share.			

TABLE 1
Summary of Sample Firms

	Time Period	
	<u>96-98</u>	<u>87-93</u>
Firms in Nikkei Index	225	225
Less firms in regulated, specialized or service related	<u>78</u>	<u>78</u>
Available for selection	147	147
English language annual report not issued or incomplete	<u>38</u>	<u>99</u>
Total firms selected for heterogeneous sample	<u>109*</u>	<u>48*</u>

* 41 firms had annual reports in both time periods and constitute the homogeneous sample.

TABLE 2
Descriptive Statistics by Disclosure Category
Homogeneous Sample (n = 41)

‘Current’ Time Period (96-98)						
	Disclosure		Category			
	<u>Background Information</u>	<u>Summary</u>	<u>Non-financial</u>	<u>Projection</u>	<u>MDA</u>	<u>Total</u>
Maximum Possible Score	<u>26</u>	<u>7</u>	<u>40</u>	<u>28</u>	<u>26</u>	<u>127</u>
Mean Disclosure Score	10.2	3.7	4.1	3.8	9.1	30.8
Standard Deviation	2.3	1.4	2.4	2.9	4.8	9.3
Coefficient of Variation (x 100)	22.7	39.1	59.2	76.3	53.4	30.3
‘Bubble’ Time Period (87-93)						
	Disclosure		Category			
	<u>Background Information</u>	<u>Summary</u>	<u>Non-financial</u>	<u>Projection</u>	<u>MDA</u>	<u>Total</u>
Maximum Possible Score	<u>26</u>	<u>7</u>	<u>40</u>	<u>28</u>	<u>26</u>	<u>127</u>
Mean Disclosure Score	8.1	2.7	3.5	1.8	6.6	22.7
Standard Deviation	1.6	1.4	2.2	1.7	4.2	7.0
Coefficient of Variation (x 100)	20.2	53.7	62.1	94.9	62.9	31.0

TABLE 3
Descriptive Statistics by Disclosure Category
Heterogeneous Sample

‘Current’ Time Period (96-98) n = 109

	Disclosure		Category			
	Background Information	Summary	Non-financial	Projection	MDA	Total
Maximum Possible Score	<u>26</u>	<u>7</u>	<u>40</u>	<u>28</u>	<u>26</u>	<u>127</u>
Mean Disclosure Score	10.1	2.9	4.0	3.5	8.4	28.9
Standard Deviation	2.4	1.5	2.4	3.2	4.5	10.0
Coefficient of Variation (x 100)	24.2	50.1	61.1	91.3	53.4	34.6

‘Bubble’ Time Period (87-93) n = 48

	Disclosure		Category			
	Background Information	Summary	Non-financial	Projection	MDA	Total
Maximum Possible Score	<u>26</u>	<u>7</u>	<u>40</u>	<u>28</u>	<u>26</u>	<u>127</u>
Mean Disclosure Score	7.9	2.6	3.5	1.6	6.5	22.2
Standard Deviation	1.7	1.5	2.2	1.7	4.1	7.1
Coefficient of Variation (x 100)	21.5	55.5	64.3	102.2	62.1	31.8

TABLE 4
Summary of Results

Homogeneous Sample (n = 41)

	<u>Disclosure</u>		<u>Category</u>			
	<u>Background Information</u>	<u>Summary</u>	<u>Non-financial</u>	<u>Projection</u>	<u>MDA</u>	<u>Total</u>
Coefficient of Variation (x 100)						
Current	22.7	39.1	59.2	76.3	53.4	30.3
Bubble	20.2	53.7	62.1	94.9	62.9	31.0
Direction (1)	D	C	C	C	C	C

Heterogeneous Sample (n = 109, 48)

	<u>Disclosure</u>		<u>Category</u>			
	<u>Background Information</u>	<u>Summary</u>	<u>Non-financial</u>	<u>Projection</u>	<u>MDA</u>	<u>Total</u>
Coefficient of Variation (x 100)						
Current	24.2	50.1	61.1	91.3	53.4	34.6
Bubble	21.5	55.5	64.3	102.2	62.1	31.8
Direction (1)	D	C	C	C	C	D

(1) Direction:

C = Convergence, evidence of more harmonization of disclosure over the time period.

D = Divergence, more variation in disclosure over the time period.

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ENDNOTES

¹ This is obviously a general problem in trade and investment harmonization initiatives. For example, the developed countries in the WTO have a different perspective on appropriate member standards for labor practices than do the developing countries. A skeptical assessment of whether national governments will ever come to an agreement on global accounting standards is provided in Bryan-Low (2003)

² Evidence on this point is provided in Amir, Harris and Venuti (1993), Barth and Clinch (1996), and Parker and Morris (2001).

³ Gray, Radebaugh and Roberts (1990) provide evidence that financial executives in U.S. and U.K. multinationals differ significantly in their perceptions of the net costs or net benefits of individual items of disclosure, although both sets of respondents tend to perceive most voluntary items as giving rise to a net cost.

⁴ To the extent that the choice of disclosure practice is voluntary, many firms may simply avoid adopting the recommended international standard if it departed significantly from the standard that the firm believed was optimal for its own constituencies. Collett, Godfrey and Hrasky (2001) explicitly question whether the benefits of international harmonization exceed the associated costs. They also argue that global harmonization of accounting is arguably the most challenging and controversial issue currently confronting accounting standard setters and market regulators.

⁵ A review of a number of such studies is provided in Tay and Parker (1990).

⁶ In this regard, see Aitken and Islam (1984) and Cooke and Wallace (1990).

⁷ See, for example, Frost and Kinney, Jr. (1996) and Parker and Morris (2001).

⁸ Meek, Roberts and Gray (1995) consider the degree to which U.S., U.K. and European multinational companies disclose accounting information in excess of regulatory requirements. However, they do not identify the extent to which voluntary disclosures are becoming more or less similar across those multinationals.

⁹ See, for example, Meek, Roberts and Gray (1995). Singleton and Globerman (2002) reference other relevant studies and also document increasing financial disclosure in Japan in the 1990s.

¹⁰ Evidence supporting this assertion is provided in Singleton and Globerman (2002).

¹¹ An extensive typology of disclosure-related terminology is provided in Tay and Parker (1990).

¹² Parker and Morris (2001) would classify this latter change as spontaneous harmonization.

¹³ Nair and Frank (1980) noted the importance of the distinction between measurement practices and disclosure.

¹⁴ See, for example, VanDer Tas (1992).

¹⁵ For convenience, we refer to this as the “current” period.

¹⁶ The growing reliance on foreign sources of capital continues to the present. See, for example, Singer (2002).

¹⁷ Partitioned time periods to analyze disclosure behavior have been used in other studies. For example, Sengupta (1989) adopts this procedure to assess the impacts of disclosure on a firm's cost-of-capital.

¹⁸ See, for example, Cooke (1991), Cooke (1992), Frost and Pownall (1994a), Gray, Meek and Roberts (1995), Botosan (1997), Sengupta (1998). Also, Marston and Shrives (1991) provide an extensive analysis and discussion of the limitations and use of disclosure indices.

¹⁹ The points and scores assigned treat each disclosure item equally, i.e. they are unweighted. However, since there are more disclosure items for some categories of information than for others, Botosan's (1997) instrument implicitly weights information categories differently.

²⁰ Additional details on the estimation of the index values will be provided upon request.

²¹ Sample sizes for related studies are as follows: Cooke (1991) – 48; Cooke (1992) – 35; Frost and Pownall (1994b) – 93; Gray, Meek and Roberts (1995) – 116 U.S., 64 U.K.; Botosan (1997) – 122; Sengupta (1998) – 103.

²² Note, the heterogeneous sample includes the 41 firms comprising the homogeneous sample.

²³ Other studies also identify the relevance of firm size and listing status to disclosure behavior, albeit without a specific focus on voluntary disclosure. See, for example, Meek and Saudagaran (1990), Cooke (1991), Choi and Levich (1991) and Ashbaugh (2001).

²⁴ For additional evidence on the impact of industry classification on disclosure, see Cooke (1992), Botosan (1997) and Sengupta (1998).

²⁵ Obviously, country of origin effects are implicitly held constant, since all firms in the sample are Japanese.

²⁶ Using a chi-square test, we cannot reject the hypothesis that the industrial distribution of the sample firms in 1987 is identical to the industrial distribution in 1998.

²⁷ These characteristics are discussed in Meek, Roberts and Gray (1995) and Cooke (1996).

²⁸ This interpretation is consistent with findings reported in Gray, Meek and Roberts (1995).

²⁹ The test is described in Freund and Walpole (1980).

³⁰ This caution has also been raised in Ashbaugh (2001), and Collett, Godfrey and Hraskey (2001).