

The Effects of Culture on International Banking Disclosures

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Abstract

This paper investigates the influence of national culture on banking disclosures. Seventeen developed and developing countries with a representative sample of 37 listed domestic commercial banks were examined in 2004. Long-term orientation is found to be a non-significant cultural value with banking disclosures. The explanatory power for banking disclosures is found to be similar to the findings in Gray and Vint (1995) with a cross-section of industries. More importantly, this study recommends that long-term orientation should not be used as part of the cultural framework for disclosures due to bias data. Hence, Gray's (1988) hypothesis on the secrecy / transparency dimension should be maintained with respect to the original four cultural values.

JEL Classification: G21, M41, O57

Keywords: Culture, banking disclosures, transparency

1. Introduction

The objective of this paper is to report on the empirical findings of the two research questions proposed by Hooi (2004) that may improve the Gray and Vint (1995) model of cultural influence on accounting disclosures. The first proposal was that extending the Gray and Vint study with the new inclusion of Hofstede and Bond's (1988) cultural value of long-term orientation gives the opportunity to better understand the association between national culture and accounting disclosures. The second proposal was that by focusing on only one industry, specifically banking, more significant results may be obtained - as opposed to a cross-section of industries in the Gray and Vint study.

The seminal study by Gray and Vint assessed the significance of the relationship between national culture and accounting disclosures in an international context. This is an

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important issue because prior research has suggested that cultural differences may help to explain international differences in accounting systems and patterns of accounting development internationally (Chow and Wong-Boren, 1987; Cooke and Wallace, 1990; Gray, 1985, 1988; Harrison, 1993; Harrison and McKinnon, 1986; Perera, 1989). Specifically, Gray and Vint investigated the disclosure element of Gray's model which hypothesizes a link between national culture and accounting systems. Using a comprehensive database of disclosure practices covering 25 developed and developing countries, and applying linear regression analysis, their results support the hypothesis proposed by Gray (1988) that secrecy and its impact on disclosure behavior is a function of the cultural values identified by Hofstede (1980).

There are three main reasons for focusing only on the banking industry (Hooi, 2004). First, it is considered to be the most important industry for the country's economic and financial stability. Moreover, the International Accounting Standards Board (IASB)¹ recognized its significance by issuing unique accounting standards, i.e. IAS30, IAS32 and IAS39. Second, Saidenberg and Schuermann (2003) argue that with the scope and complexity of Basel II, it provides opportunities for researching issues through Pillar 3.² Third, with national banking systems being non-homogenous, it is important to investigate the effects of national culture because prior research has argued that cultural differences have partly explained international differences in the disclosure framework of accounting systems.

This paper is organized as follows. The literature review section will discuss the theoretical framework for culture, accounting and banking disclosures, followed by sections on hypotheses formulation, research design and research results. Finally, the conclusion section summarizes the findings and their implications.

2. Literature Review

Although there are a limited number of performance studies that looked at the information content of market risk disclosures (Berkowitz and O'Brien, 2002; Estrella, Park and Peristiani, 2000; Hirtle, 2003; Jorion, 2002) and the significance of disclosures on cost of equity capital (Poshakwale and Courtis, 2005), it is important to note that there has not been any relevant literature on banking disclosures that relates to the effects of national culture.

Approaches to classification of accounting reporting systems

While there is a growing awareness of the varying influences of environmental factors on accounting disclosure development in a global context, current research suggests that systematically different patterns of accounting behavior may be applicable to various groups of countries (Gray, 1988). Research into the international classification

¹ Committed to developing, in the public interest, a single set of high quality, global accounting standards that require transparent and comparable information in general purpose financial statements.

² Pillar 3 (market discipline) refers to banking disclosures under the new capital adequacy requirements called Basel II.

of accounting systems has taken two main forms. In the deductive or judgmental approach, relevant environmental factors are identified and, by linking these to national accounting practices, international groupings or development patterns are proposed (Mueller, 1967; Nobes, 1983). In the inductive or empirical approach, individual accounting practices are analyzed, development patterns or groupings are then identified, and finally explanations keyed to a variety of economic, social, political, and cultural factors are proposed (Nair and Frank, 1980).

With regard to the accounting framework, the importance of national culture and its historical roots is increasingly being recognized (Gray, 1988). While there has been a lack of attention paid to the cultural dimension in the international classification literature, Harrison and McKinnon proposed a methodological framework incorporating culture for analyzing changes in corporate financial reporting regulation at the nation specific level. The use of this framework to assess the effects of national culture on the form and functioning of accounting was demonstrated through an analysis of Japan's accounting system. Culture is considered an essential element in the framework for understanding how social systems change because "cultural influences" refers to the norms and values of such systems and the behavior of groups in their interaction within and across systems (Perera, 1989).

Complementing this approach is the proposal by Gray (1988) which theorizes that the cultural dimension can be used to explain and predict international differences in accounting systems and to identify patterns of international accounting developments.

More specifically, Gray's (1988) motivation was to establish an association between accounting values and Hofstede's (1980) cultural values.

Structural elements of culture that affect business

Hofstede's (1980) pioneering research was aimed at detecting the structural elements of national culture, particularly those that most strongly affect known behavior in the work situations of organizations and institutions. Perhaps one of the most extensive cross cultural surveys ever conducted, psychologists collected data about "values" from employees of a multinational enterprise (IBM) located in more than 50 countries. Subsequent statistical analysis and reasoning revealed four underlying societal value dimensions, i.e. collective values, at the national level along which countries could be positioned. These dimensions are individualism, masculinity, power distance and uncertainty avoidance. Further research by Hofstede and Bond into Chinese values revealed a fifth dimension called long-term orientation. It is important to note that Hofstede (1980) has shown that countries could be grouped into cultural areas on the basis of their scores on the four value dimensions, using cluster analysis and taking into account geographical and historical factors.

If societal value orientations are related to the development of accounting systems and such values permeate a nation's social system, then Gray (1988) suggests that there should be a close match between culture areas and patterns of accounting systems internationally. Assuming that Hofstede (1980) and Hofstede and Bond have correctly identified individualism, masculinity, power distance, uncertainty avoidance and long-term orientation as significant cultural dimensions; then it can be argued that it should be possible to establish their relationship to "accounting values". If such a relationship exists, then a link

between societal values and accounting systems can be established, and consequently, the cultural influence on accounting values should be accessible.

The description of the five cultural dimensions can be summarized as follows. Individualism stands for the preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only. It relates to people's self-concept of 'I' or 'We'. The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among individuals. Masculinity stands for the preference in society for achievement, heroism, assertiveness and material success. The fundamental issue addressed by this dimension is the way in which a society allocates social (as opposed to biological) roles to the sexes. Power distance is the extent to which the members of a society accept that power in institutions and organizations is distributed unequally. This affects the behavior of the less powerful as well as the more powerful members of society. The fundamental issue addressed by this dimension is how a society handles inequalities among people when they occur. Uncertainty avoidance is the degree to which the members of society feel uncomfortable with uncertainty and ambiguity. This feeling leads to them to beliefs promising certainty and to maintain institutions protecting conformity. The fundamental issue addressed by this dimension is how a society reacts to the fact that time only runs one way and the future is unknown, and whether it tries to control the future or just lets it happen. Long-term orientation emphasizes respect for tradition, social and status obligations within limits. In business, the focus is on building relationships and market position. The fundamental issue addressed by this dimension is how a society deals with the consequences of actions taken.

The culture and accounting values model

Hofstede's (1980) four cultural value dimensions, i.e. individualism, masculinity, power distance and uncertainty avoidance, are linked to four accounting value dimensions identified by Gray (1985, 1988) which can be summarized as follows. The professionalism versus statutory control value reflects a preference for the exercise of individual professional judgment and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control. The uniformity versus flexibility value reflects a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time, as opposed to flexibility in accordance with the perceived circumstances of individual firms. The conservatism versus optimism value reflects a preference for a cautious approach to measurement that enables one to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach. The secrecy versus transparency value reflects a preference for confidentiality and the disclosure of information about the business only to those who are most closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

Gray (1988) and Perera and Mathews (1990) argue that these accounting value dimensions impact on accounting systems in terms of the nature of regulation or authority and measurement and disclosure practices. According to Gray (1988), the most influential cultural values at the level of the accounting sub-culture were likely to be those of individualism and uncertainty avoidance, with power distance being important but less significant and masculinity only weakly associated.

The secrecy / transparency dimension is a significant accounting value that stems as much from management as it does from the accounting profession because of the influence of management on the quality and quantity of information disclosed to relevant stakeholders. Secrecy or confidentiality in business relationships is nevertheless a fundamental accounting attitude (Gray, 1988). Secrecy appears to be closely related to conservatism. Generally speaking, these accounting values imply a cautious approach to corporate financial reporting. However, secrecy relates to the disclosure dimension whereas conservatism relates to the measurement dimension of accounting reporting systems.

Gray (1988) argues that secrecy could be linked most closely with the individualism, power distance and uncertainty avoidance dimensions. A preference for secrecy was suggested as being consistent with a high level of uncertainty avoidance following from the need to restrict information disclosure so as to avoid possible conflicts, restrict the uncertainties of competition and preserve security. Power distance is an influential value as it is consistent with the restriction of information to preserve power inequalities.

A preference for collectivism rather than individualism is likely to be consistent with secrecy. The reason is that collectivism is more concerned with the interests of the group most closely and directly involved with the management and financing of the firm rather than with a wide range of external parties including potential investors and the public at large. Masculinity could be significant where a more assertive and success-orientated society could exhibit a tendency towards more publicity. It is important to note that Gray (1988) did not address the fifth cultural dimension of long-term orientation to accounting values.

In practice, the degree of secrecy or transparency would tend to vary across countries with resulting differences in the amount of information publicly disclosed. Therefore, Gray (1988:11) hypothesized that “The higher a country ranks in terms uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity the more likely it is to rank highly in terms of secrecy”.

Using linear regression analysis, Gray and Vint’s findings tend to support Gray’s (1988) hypothesis that secrecy and its impact on disclosure behavior is a function of the four cultural values defined by Hofstede (1980) of individualism, masculinity, power distance and uncertainty avoidance. Gray and Vint suggested that the greater (lesser) the number of items of financial and non-financial corporate information publicly disclosed by firms in a society then the higher (lower) the influence of transparency or the lower (higher) the influence of secrecy.

The Gray and Vint model can be summarized by the following points. First, accounting disclosure practices from a survey conducted in 1982/1983 involving a cross-section of industries in 25 developed and developing countries. Second, the mean disclosure practice scores per country were computed from all firms where the arbitrary disclosure practice score per firm range from 0 to 6, representing seven percentage bands. In regards to the four cultural values, the paper used Hofstede’s (1984) index values for the countries involved. Third, the signs of the correlation between the four cultural values and the mean disclosure practice (transparency) are consistent with Gray’s (1988) hypothesis, i.e. positive correlation for individualism and masculinity and negative correlation for uncertainty avoidance and power distance. However, only individualism and uncertainty avoidance were found to be statistically significant.

Research issues on the secrecy hypothesis

Doupnik and Tsakumis (2004) provide a current critical review of the secrecy hypothesis. Besides Gray and Vint, there are four other studies that test the secrecy hypothesis using multiple regression analysis. First, Zarzeski (1996) involves seven developed countries and the main focus is on the effects of three market forces, i.e. foreign sales / total sales, debt ratio and firm size on investor-oriented disclosures using disclosure rate. The findings suggest that all the explanatory variables have the expected sign except for power distance. The unexpected sign of power distance may be a function of its moderately high correlation with individualism. Zarzeski (1996: 35) concludes that “international firms from secretive countries are likely to be motivated to disclosure higher levels of public information than they would at home, in order to show the quality of their operations”.

Second, Wingate (1997) involves 39 developed and developing countries and found that all the national cultural values are significant except for power distance. Wingate concludes that culture areas offer greater explanatory power than the four cultural values for the disclosure index. Third, Jaggi and Low (2000) involve six developed countries and the main focus is on legal origin. The findings suggest that national culture has no significant influence on disclosure in common law countries. However, the influence of national culture in civil law countries is significant but not always in the expected sign. Finally, Hope (2003) involves 39 developed and developing countries and the main focus is to further test the findings by Jaggi and Low. Hope (2003: 239) concludes that “it is too early to write off culture as an explanatory variable for annual report disclosure levels”.

There are two important issues in the research methodology that test the secrecy hypothesis. First, Hofstede (1980) suggests that national culture changes only very slowly over time. However, it is not clear whether the cultural indices accurately reflect accountants' values because they are derived from data provided by non-accountants, i.e. IBM employees. Second, Gray (1988) suggests that societal values influence a society's institutions, which in turn influence accounting disclosures. In other words, the institutional consequences variable is a mediating variable. However, Jaggi and Low and Hope did not test the legal origin as a mediating variable.

Banking disclosures

At present, disclosure requirements for financial institutions are set by the IASB and by the accounting standard-setting bodies of relevant countries. The Basel Committee, which is an independent body on banking supervisory matters, has decided to implement additional banking disclosure requirements by 2008 to its member countries. The 13 member countries include Belgium, Canada, France, Germany, Italy, Japan, Luxemburg, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States. These additional disclosure requirements are represented under Pillar 3 of the new capital adequacy framework called the New Basel Accord or more commonly known as Basel II.

The purpose of Pillar 3 (market discipline) is to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2) of Basel II. The Committee aims to encourage market discipline by developing a set of disclosure requirements

which will allow market participants to assess key elements of information on the scope of application, capital, risk exposure and risk assessment processes (New Basel Capital Accord 2003). Hence, the Committee believes that uniting the three elements of Basel II, i.e. Pillars 1, 2 and 3, is essential for the effectiveness of Basel II as a replacement of the current Basel I (1988), which focuses on credit risk.

The Committee has recognized the need for a Pillar 3 disclosure framework that does not conflict with requirements under accounting standards, which are broader in scope (Basel Committee on Banking Supervision 2003). The narrower focus of Pillar 3 is specific to the disclosure of bank capital adequacy. It is the Committee's intention to maintain an ongoing relationship with the accounting bodies and to monitor developments in this area to promote consistency between the disclosure frameworks. Accordingly, Pillar 3 disclosures will not be required to be audited by external auditors, unless otherwise required by accounting standard-setters, securities regulators or other authorities.

Currently, the relevant banking disclosures consist of three mandatory international accounting standards (IAS) which can be equivalent or similar to local accounting standards, i.e. "IAS30 Disclosures in the Financial Statements of Banks and Similar Financial Institutions", "IAS32 Financial Instruments: Disclosure and Presentation" and "IAS39 Financial Instruments: Recognition and Measurement".

Since the expected implementation year for Pillar 3 in Basel member countries is 2008, it would be regarded at this stage as voluntary disclosures. Pillar 3 consists of 12 categories of qualitative and quantitative disclosures, i.e. "Capital Structure", "Capital Adequacy", "Credit Risk: General Disclosures for All Banks", "Credit Risk: Disclosures for Portfolios subject to the Standardized Approach and Supervisory Risk Weights in the Internal Risk Book (IRB) Approaches", "Credit Risk: Disclosures for Portfolios subject to IRB Approaches", "Equities: Disclosures for Banking Book Positions", "Credit Risk Mitigation: Disclosures for Standardized and IRB Approaches", "Securitization: Disclosures for Standardized and IRB Approaches", "Market Risk: Disclosures for Banks Using the Standardized Approach", "Market Risk: Disclosures for Banks Using the Internal Models Approach (IMA) for Trading Portfolios", "Operational Risk" and "Interest Rate Risk in the Banking Book (IRRBB)".

3. Hypotheses Formulation

The objective of this study is to establish an association between Hofstede's (1980) and Hofstede and Bond's cultural values and banking disclosures. Gray's (1988) secrecy / transparency dimension links Hofstede's (1980) four cultural values of individualism, masculinity, power distance and uncertainty avoidance to accounting disclosures. Since disclosure is a proxy for transparency, it is reasonable to extend the characteristics of accounting disclosures to banking disclosures because the basic difference between them is that banking disclosures are specific to the banking industry.

Gray (1988) argues that individualism is likely to be consistent with transparency. This is because individualism is more concerned with a wide range of external parties including potential investors and the public at large rather than the interests of the group most closely and directly involved with the management and financing of the firm.

H1: *There is a significant positive relationship between individualism and banking disclosures.*

Gray (1988) argues that masculinity is likely to be consistent with transparency. This is because masculinity suggests an assertive and success orientated society which could exhibit a tendency towards more publicity.

H2: *There is a significant positive relationship between masculinity and banking disclosures.*

Gray (1988) argues that power distance is likely to be consistent with secrecy. This is because power distance is compatible with the restriction of information to preserve power inequalities.

H3: *There is a significant negative relationship between power distance and banking disclosures.*

Gray (1988) argues that uncertainty avoidance is likely to be consistent with secrecy. This is because a society of uncertainty avoidance needs to restrict information disclosure so as to avoid possible conflicts, restrict the uncertainties of competition and preserve security.

H4: *There is a significant negative relationship between uncertainty avoidance and banking disclosures.*

The fifth cultural value of long-term orientation should be considered as part of Gray's (1988) secrecy / transparency dimension. This is because the characteristics of building relationships and market position in business suggest that long-term orientation is a significant cultural dimension for corporate governance in a highly competitive global market. Hence, long-term orientation is likely to be consistent with transparency.

H5: *There is a significant positive relationship between long-term orientation and banking disclosures.*

4. Research Design

The selection of countries was determined by the data availability of the five cultural values of individualism, masculinity, power distance, uncertainty avoidance and long-term orientation from Hofstede's (2001) cultural indices. Consequently, a maximum of 19 countries were available. Since the cultural values are at national level, it is only appropriate to correspond with domestic banks, i.e. parent banks which are incorporated in the countries of origin. For this study, listed commercial banks were used to represent the banking industry. Basic information such as total assets was sourced from the Compustat database to obtain the current population of listed domestic commercial banks

per country. Total assets is important for determining the sample of bank(s) per country as will be discussed in detail shortly. New Zealand and Nigeria have to be excluded from the 19 countries due to the non-existence of listed domestic commercial banks. Hence, this research will focus on 17 developed and developing countries. Table 1 presents Hofstede's (2001) national cultural indices of individualism, masculinity, power distance, uncertainty avoidance and long-term orientation for the study.

Table 1
Hofstede's (2001) National Cultural Indices for the Study

Country	IDV	MAS	PDI	UAI	LTO
Australia	90	61	36	51	31
Brazil	38	49	69	76	65
Canada	80	52	39	48	23
Germany	67	66	35	65	31
Hong Kong	25	57	68	29	96
India	48	56	77	40	61
Japan	46	95	54	92	80
Netherlands	80	14	38	53	44
Pakistan	14	50	55	70	0
Philippines	32	64	94	44	19
Singapore	20	48	74	8	48
South Korea	18	39	60	85	75
Sweden	71	5	31	29	33
Taiwan	17	45	58	69	87
Thailand	20	34	64	64	56
United Kingdom	89	66	35	35	25
United States	91	62	40	46	29
<i>World average</i>	43	50	55	64	45

IDV = Individualism, MAS = Masculinity

PDI = Power Distance, UAI = Uncertainty Avoidance

LTO = Long-term Orientation

Note: A higher value indicates more of that particular cultural dimension

A sampling technique was required to ensure the study has a representative sample of banks per country. Obviously, the smallest sample per country is one. The sampling technique involves the comparison between the country's population ratio (Pop ratio column in Table 2) with the country's sample ratio (Sample ratio in Table 2). The country's sample ratio must be equivalent or similar to the country's population ratio in order to achieve the above. From Table 2, the required total sample for the 17 countries is 37 banks and it represents 11% of the total population of 335 banks.

Table 2
Determination of Required Bank Sample for the Study

Country	Pop	Pop ratio	Sample	Sample ratio
Australia	10	3%	1	3%
Brazil	5	1%	1	3%
Canada [#]	8	2%	1	3%
Germany [#]	30	9%	3	8%
Hong Kong	11	3%	1	3%
India	10	3%	1	3%
Japan [#]	92	27%	10	27%
Netherlands [#]	2	1%	1	3%
Pakistan	8	2%	1	3%
Philippines	14	4%	1	3%
Singapore	5	1%	1	3%
South Korea	8	2%	1	3%
Sweden [#]	4	1%	1	3%
Taiwan	15	4%	1	3%
Thailand	12	4%	1	3%
United Kingdom [#]	15	4%	1	3%
United States [#]	86	26%	10	27%
Total banks	335 [*]	100%	37	100%

[#] Basel member

^{*} Original total population was 348. Excluded 5 banks because of a lack of basic information and 8 banks which became subsidiaries.

The selection of banks depends on the country's sample size. If the country's sample requires only one bank as in the case of most countries, the bank was selected when it had the smallest absolute deviation to the population mean of total assets. It is important that the country's population should be sorted by total assets, using the ascending order option before making the selection. If the country's sample requires more than one bank as in the case of Germany, Japan and the United States; the procedure was to use the number of required banks in the country to stratify the country's population. Similarly, the country's population should be sorted by total assets, using the ascending order option before stratifying. For each stratification, the stratification mean of total assets was computed. Each bank per stratum was selected when it had the smallest absolute deviation to the stratification mean of total assets.

Confirming the selection of bank(s) per country depends on the availability of audited annual reports which is the primary source of banking disclosures. 2004 annual reports were used for the following two reasons. First, 2004 was considered the most stable year for the 17 countries in the new millennium. Second, it was less challenging to obtain the English

version of annual reports from bank websites, especially for developing countries - but the most current annual report for the Philippines was 2003. It is acceptable to correspond Hofstede's (2001) cultural indices with disclosure years of 2003-2004 because national culture is relatively more stable in the long run compared to firm culture. If the annual report was not available for the selected bank, the second preferred bank was used based on the next smallest absolute deviation of either the population mean or the stratification mean of total assets. If required, this process was repeated until the total sample of banks have their corresponding annual reports.

From each annual report, specific information relating to banking requirements was extracted to represent total banking disclosures. The total banking disclosures consisted of mandatory, voluntary and other relevant disclosures which were based on the 2001 Basel survey checklist. There are two reasons why this study used the 2001 Basel survey checklist. First, it is a benchmark to compare and contrast banking disclosures among the 17 countries, to reveal differences, if any, in disclosure practices. Second, the Basel Committee has conducted annual surveys since 1999 among its 13 member countries to identify current trends of disclosure practices of internationally active banks and to encourage these to further enhance transparency especially with the implementation of Basel II in the near future. It is important to note that 2001 was the latest year that Basel surveyed its member countries.

In fact, Cheah and Kean (2004) used the same Basel survey checklist to compare the disclosure levels in 2001 between Malaysian commercial banks and the internationally active banks of Basel's member countries. Table 3 shows the 12 categories of the 2001 Basel survey checklist which include some key aspects of the mandatory disclosures (IAS), a summary of the 12 categories of voluntary disclosures (Pillar 3) and other relevant disclosures to represent a wider perspective of banking requirements. For example, some IAS30 issues are addressed under category 11 and some IAS32 issues are addressed under categories 8 and 9. This study used equal weighting for all the banking disclosure items.³ The disclosure rate per bank is defined by the compliance rate as a percentage of the total 104 disclosure items.

³ Zarzeski (1996) have shown that cross-sectional OLS regression between equal weighting of firm disclosures and national culture have extremely similar results to those with unequal weighting of disclosure items.

Table 3
2001 Basel Survey Checklist

No	Basel survey categories	Disclosure items
1	Capital Structure	14
2	Capital Adequacy	7
3	Market Risk Internal Modeling	16
4	Internal and External Ratings	4
5	Credit Risk Modeling	5
6	Securitisation Activities	8
7	Asset Quality	13
8	Credit Derivatives and Other Credit Enhancements	6
9	Derivatives (other than Credit Derivatives)	9
10	Geographic and Business Line Diversification	10
11	Accounting and Presentation Policies	7
12	Other Risks	5
Total		104

Cross-sectional OLS regression analysis will be applied to the total sample of banks. The basic banking disclosure model with respect to Hofstede's (1980) four cultural values of individualism, masculinity, power distance and uncertainty avoidance is given as:

$$DSC_b = a_0 + a_1IDV_c + a_2MAS_c + a_3PDI_c + a_4UAI_c + \varepsilon \quad (1)$$

DSC = disclosure

IDV = individualism

MAS = masculinity

PDI = power distance

UAI = uncertainty avoidance

$a_1 - a_4$ = coefficients of the explanatory variables

Subscripts: *b* = bank level, *c* = country level

A stepwise regression will be applied to determine the significance of the new cultural value of long-term orientation. Hence, the extended banking disclosure model is given as:

$$DSC_b = a_0 + a_1IDV_c + a_2MAS_c + a_3PDI_c + a_4UAI_c + a_5LTO_c + \varepsilon \quad (2)$$

DSC = disclosure

IDV = individualism

LTO = long-term orientation

MAS = masculinity

PDI = power distance

UAI = uncertainty avoidance

$a_1 - a_5$ = coefficients of the explanatory variables

Subscripts: b = bank level, c = country level

Finally, there are two interesting differences in the methodology used between Gray and Vint and Zarzeski. First, Gray and Vint used countries to regress as opposed to firms. Second, Gray and Vint used disclosure bands as opposed to disclosure rates. For this study, the second difference is more relevant. Hence, this paper will regress with respect to both disclosure types to determine whether there is a significant difference in terms of the model's explanatory power. Table 4 presents the Gray and Vint's converted band values ranging from 0 to 6.

Table 4
Conversion from Disclosure Rate to Disclosure Band*

DSC Rate	DSC Band
91 - 100%	6
76 - 90%	5
51 - 75%	4
26 - 50%	3
11 - 25%	2
1 - 10%	1
0	0

* Adapted from Gray and Vint (1995).

5. Research Results

Descriptive analysis

Table 5 presents the descriptive statistics for the total sample of banks. On average, the banking disclosure level across all countries a moderate 48%. From Table 6, the correlation coefficients show very little to moderate multicollinearity across the explanatory variables. However, individualism and power distance show moderately high collinearity at -0.78 , which is expected because each of these cultural variables defines a person's relationship in society. Individualism defines a person's relationship with other people in a society, while power distance defines a person's relationship with powerful institutions in a society.

Table 5
Banking Disclosure Model Descriptive Statistics

All banks (n=37)	Mean	Std Dev	Min	Max
DSC	0.48	0.05	0.05	0.87
IDV	59.81	4.41	14.00	91.00
MAS	65.08	3.72	5.00	95.00
PDI	49.81	2.32	31.00	94.00
UAI	61.51	3.82	8.00	92.00
LTO	49.89	4.29	0.00	96.00

Table 6
Correlation Matrix of Explanatory Variables for all Banks

	IDV	MAS	PDI	UAI	LTO
IDV	1.0000				
MAS	-0.0827	1.0000			
PDI	-0.7774	0.1146	1.0000		
UAI	-0.3996	0.6540	0.1229	1.0000	
LTO	-0.5934	0.4628	0.4420	0.6244	1.0000

Banking Disclosure Model

From Table 7, equation 1 using disclosure rate is significant at 1% with an adjusted R^2 of 45.4%. By comparison, the explanatory power is similar to the findings in Gray and Vint of 45% with a cross-section of industries. Even though the estimated coefficients for masculinity and power distance are consistent with the expected relationships but they are found to be non-significant at 5%. However, applying simple regression to individualism and power distance, the study found that they are significant at 1%; a table is not presented. This confirms that the moderately high correlation between individualism and power distance have resulted them in being non-significant as a model. Therefore, uncertainty avoidance is the only cultural value which is found to be significant (at 1%).

Equation 2 using disclosure rate with the inclusion of the new cultural value, long-term orientation has a slightly higher adjusted R^2 of 46.2% which is significant at 1%. Long-term orientation is not found to be significant at 5% despite the fact that its estimated coefficient is consistent with expected relationship. Similarly to equation 1, uncertainty avoidance is the only cultural value which is found to be significant (at 1%) for equation 2.

Table 7
Regression Results using Disclosure Rate

Panel A: Equation 1

Total Sample (n = 37)

Variable	Expected Relationship	Estimated Coefficient	t-Stat	p-value
Intercept	NA	1.3406	3.3234	0.0022
IDV	+ve	-0.0008	-0.2940	0.7706
MAS	+ve	0.0011	0.4660	0.6444
PDI	-ve	-0.0080	-1.7889	0.0831
UAI	-ve	-0.0078	-3.0813	0.0042
F-Stat: 8.49	F-value: 0.0000			
Adjusted R^2 :	0.4541			

Panel B: Equation 2

Total Sample (n=37)

Intercept	NA	1.2759	3.1591	0.0035
IDV	+ve	0.0001	0.0440	0.9652
MAS	+ve	0.0005	0.2081	0.8365
PDI	-ve	-0.0083	-1.8747	0.0703
UAI	-ve	-0.0087	-3.3182	0.0023
LTO	+ve	0.0024	1.2192	0.2320
F-Stat: 7.19	F-value: 0.0001			
Adjusted R^2 :	0.4623			

From Table 8, equation 1 using disclosure band is significant at 1% with an adjusted R^2 of 46.5% and equation 2 with the inclusion of the new cultural value, long-term orientation has a slightly lower adjusted R^2 of 46.0% which is significant at 1%. By comparison, the use of disclosure bands tends to yield slightly better results in terms of explanatory power to disclosure rates for equation 1 only as they can be shown from Tables 7 and 8.

Table 8
Regression Results using Disclosure Band

Panel A: Equation 1

Total Sample (n=37)

Variable	Expected Relationship	Estimated Coefficient	t-Stat	p-value
Intercept	NA	6.1841	3.3064	0.0023
IDV	+ve	0.0033	0.2709	0.7882
MAS	+ve	0.0078	0.7363	0.4669
PDI	-ve	-0.0328	-1.5833	0.1232
UAI	-ve	-0.0335	-2.8530	0.0075
F-Stat: 8.83	F-value: 0.0000			
Adjusted R ² :	0.4651			

Panel B: Equation 2

Total Sample (n=37)

Intercept	NA	5.9717	3.1516	0.0036
IDV	+ve	0.0062	0.4899	0.6277
MAS	+ve	0.0059	0.5417	0.5919
PDI	-ve	-0.0339	-1.6265	0.1140
UAI	-ve	-0.0363	-2.9654	0.0058
LTO	+ve	0.0078	0.8524	0.4005
F-Stat: 7.15	F-value: 0.0002			
Adjusted R ² :	0.4605			

After conducting a closer examination of the data values for long-term orientation in Hofstede's (2001), it was discovered that the top 40% of the total 23 countries which have high long-term orientation values are eastern countries. For example, China has the highest value (118) whereas more developed countries such as the United States and the United Kingdom have significantly low values of 29 and 25 respectively. This suggests that the data is likely to be biased towards eastern countries. In other words, the characteristics of long-term orientation may not correspond to countries that genuinely possess them because successful firms in some developed countries would reasonably be expected to have made strategic decisions to foster strong business relationships and market positions. This situation may lead to spurious regression results for long-term orientation. Therefore, this study would like to recommend the exclusion of long-term orientation value from the cultural framework for disclosures due to biased data. Hence, Gray's (1988) hypothesis on the secrecy / transparency dimension should be maintained with respect to the original four cultural values of individualism, masculinity, power distance and uncertainty avoidance.

As far as the hypotheses formulation is concerned, the regression results shown in Table 7 suggest that all the hypotheses except H4 should be rejected. Hence, there is a

significant negative relationship between uncertainty avoidance and banking disclosures. In other words, uncertainty avoidance has been found to be the primary cultural dimension for banking disclosures. Future research could investigate the Gray's (1988) institutional consequences of culture such as investor protection and capital market in a banking disclosure framework. Currently, disclosure-culture studies by Jaggi and Low and Hope have investigated primarily on the influence of legal origin, i.e. common and civil laws. Finally, the significance of long-term orientation as a cultural dimension for Gray's (1988) framework warrants future research in developing a more representative data set globally.

6. Conclusion

This paper has provided empirical findings of the two research questions proposed by Hooi that may improve the seminal study by Gray and Vint of cultural influence on accounting disclosures. The first proposal was that by extending the Gray and Vint study with the new inclusion of Hofstede and Bond's cultural value of long-term orientation, we have the opportunity to better understand the association between national culture and accounting disclosures. The second proposal was that by focusing only on one industry, specifically banking, we may obtain more significant results as opposed to a cross-section of industries in the Gray and Vint study. Seventeen developed and developing countries with a representative sample of 37 listed domestic commercial banks were examined in 2004. Since American and Japanese banks constitute 54% of the total sample, the conclusions for this study are subject to this limitation.

Long-term orientation is found to be a non-significant cultural value with banking disclosures. In fact, the only significant cultural dimension is uncertainty avoidance. The explanatory power for banking disclosures is found to be similar to the findings in Gray and Vint with a cross-section of industries. The study also found that the use of disclosure rate tends to yield slightly better results in terms of explanatory power compared to disclosure band. Finally, this study recommends that long-term orientation should not be used as part of the cultural framework for disclosures due to bias data. Hence, Gray's (1988) hypothesis on the secrecy / transparency dimension should be maintained with respect to the original four cultural values of individualism, masculinity, power distance and uncertainty avoidance.

References

- Basel Committee on Banking Supervision, 2003, "Third Consultative Paper", Bank for International Settlements.
- Berkowitz, J. and O'Brien, P., 2002, "How accurate are Value-at-Risk Models at Commercial Banks?", *Journal of Finance* 57(3), 1093–1111.
- Cheah, K.G. and Kean, O.Y., 2004, "Financial Disclosure and Reporting in Malaysian Commercial Banks", *Journal of Accounting and Finance* 3, 1–13.

- Chow, C. and Wong-Boren, A., 1987, "Voluntary Financial Disclosure by Mexican Corporations", *The Accounting Review* 62(3), 533–541.
- Cooke, T.E. and Wallace, R.S.O., 1990, "Financial Disclosure Regulation and its Environment: A Review and Further Analysis", *Journal of Accounting and Public Policy* 9(2), 79–110.
- Doupnik, T.S. and Tsakumis, G.T., 2004, "A Critical Review of Tests of Gray's Theory of Cultural Relevance and Suggestions for Future Research", *Journal of Accounting Literature* 23, 1–48.
- Estrella, A., Park, S. and Peristiani, S., 2000, "Capital Ratios as Predictors of Bank Failures", *Federal Reserve Bank of New York Economic Policy Review* 6(2), 33–52.
- Gray, S.J., 1985, "Cultural Influences and the International Classification of Accounting Systems", paper presented to the EIASM Workshop on "Accounting and Culture", Amsterdam.
- Gray, S.J., 1988, "Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally", *Abacus* 24(1), 1–15.
- Gray, S.J. and Vint, H.M., 1995, "The Impact of Culture on Accounting Disclosures: Some International Evidence", *Asia-Pacific Journal of Accounting* 2, 33–43.
- Harrison, G.L., 1993, "Reliance on Accounting Performance Measures in Superior Evaluative Style: the Influence of National Culture and Personality", *Accounting, Organisations and Society* 18(4), 319–339.
- Harrison, G.L. and McKinnon, J., 1986, "Culture and Accounting Change: A New Perspective on Corporate Reporting Regulation and Accounting Policy Formulation", *Accounting, Organisations and Society* 11(3), 233–252.
- Hirtle, B.J., 2003, "What Market Risk Capital Reporting Tells Us About Bank Risk", *Federal Reserve Bank of New York Economic Policy Review* 9(3), 37–54.
- Hofstede, G.H., 1980, *Culture's Consequences: International Differences in Work-Related Values*, Sage Publications.
- Hofstede, G.H., 1984, "Cultural Dimensions in Management and Planning", *Asia Pacific Journal of Management* January, 81–99.
- Hofstede, G.H., 2001, *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations*, Sage Publications.
- Hofstede, G.H. and Bond, M.H., 1988, "The Confucius Connection: From Cultural Roots to Economic Growth", *Organizational Dynamics* 16(4), 5–21.
- Hooi, G., 2004, "Culture, Accounting and Banking Disclosures", *Intelligent Finance: A Convergence of Mathematical Finance with Technical and Fundamental Analysis refereed conference paper*, Melbourne.
- Hope, O.-K., 2003, "Firm-level Disclosures and the Relative Roles of Culture and Legal Origin", *Journal of International Financial Management and Accounting* 14(3), 218–248.
- Jaggi, B. and Low, P.Y., 2000, "Impact of Culture, Market Forces, and Legal System on Financial Disclosures", *The International Journal of Accounting* 35(4), 495–519.
- Jorion, P., 2002 "How Informative are Value-at-Risk Disclosures?", *The Accounting Review* 77(4), 911–931.
- Mueller, G.G., 1967, *International Accounting*, New York, Macmillan.

- Nair, R.D. and Frank, W.G., 1980, “The Impact of Disclosure and Measurement Practices on International Accounting Classifications”, *The Accounting Review* 55(3), 426–450.
- New Basel Capital Accord (2003), Bank for International Settlements.
- Nobes, C., 1983, “A Judgmental International Classification of Financial Reporting Practices”, *Journal of Business Finance and Accounting* 10(1), 1–19.
- Perera, M.H.B., 1989, “Towards a Framework to Analyse the Impact of Culture on Accounting”, *The International Journal of Accounting Education and Research* 24(1), 42–56.
- Perera, M.H.B. and Mathews, M.R., 1990, “The Cultural Relativity of Accounting and International Patterns of Social Accounting”, *Advances in International Accounting* 3, 215–251.
- Poshakwale, S. and Curtis, J.K., 2005, “Disclosure Level and Cost of Equity Capital: Evidence from the Banking Industry”, *Managerial and Decision Economics* 26, 431–444.
- Saidenberg, M. and Schuermann, T., 2003, “The New Basel Capital Accord and Questions for Research”, *working paper*, Federal Reserve Bank of New York.
- Wingate, M.L., 1997, “An Examination of Cultural Influence on Audit Environments”, *Research in Accounting Regulation* 11(Supp), 129–148.
- Zarzeski, M.T., 1996, “Spontaneous Harmonization Effects of Culture and Market Forces on Accounting Disclosure Practices”, *Accounting Horizons* 10(1), 18–37.