

The influence of conservatism and secrecy on the interpretation of verbal probability expressions in the Anglo and Latin cultural areas

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Abstract

We use Gray's [Gray, S.J. (1988). Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, 24 (1), 1–15.] theory of the influence of culture on accounting to develop hypotheses about the effect the interaction of the accounting values of conservatism and secrecy and the context in which probability expressions are used in accounting standards will have on accountants' interpretations of those expressions. Specifically, we expect accountants in a high conservatism country to assign a higher (lower) numerical probability to verbal probability expressions that determine the threshold for the recognition of items that increase (decrease) income than accountants in a low conservatism country. We expect accountants in a high secrecy country to assign higher numerical probabilities to verbal probability expressions that establish the probability threshold for the disclosure of information than accountants in a low secrecy country. We survey professional accountants in Brazil (higher conservatism and higher secrecy) and in the United States (lower conservatism and lower secrecy) to test our hypotheses. We obtain some support for the first conservatism hypothesis related to the recognition of income-increasing items, but no support for the second conservatism hypothesis related to income-decreasing items. We obtain stronger results in support of our hypothesis related to secrecy and disclosure. This study contributes to the literature by investigating the impact of culture on interpretation of verbal probability expressions in the Latin cultural area and by testing Gray's theory, especially the secrecy hypothesis, at the individual-accountant level. © 2006 University of Illinois. All rights reserved.

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1. Introduction

A growing number of countries have adopted International Financial Reporting Standards (IFRSs) developed by the International Accounting Standards Board (IASB), and other countries plan to adopt or converge with IFRSs in the future. One goal of international accounting convergence is the comparability of financial statements across countries. Adoption of a common set of accounting standards is a necessary, but not sufficient, condition to achieve this goal. Accountants in different countries also must interpret and apply the common standards similarly.

Gray (1988) develops a theoretical framework of the influence of culture on accounting that posits causal relations between cultural (societal) values, four accounting values, and four dimensions of national accounting systems as shown in Fig. 1. Gray completes the theory by developing directional hypotheses that relate cultural values to each of the four accounting values, and by predicting how different cultural areas will rank on each of the accounting values. The framework predicts, for example, that a country that ranks high on the cultural dimension of uncertainty avoidance will rank high on the accounting value of secrecy, which will result in less disclosure being provided in financial reports in that country. The framework implies that cultural differences could cause accountants from different countries to apply a common accounting standard differently, thus possibly affecting the cross-national comparability of financial statements.

Of the four accounting values listed in Fig. 1, conservatism and secrecy most directly affect the nature of the information provided in corporate financial reports through their influence on the measurement of assets and profits (conservatism) and the disclosure of information (secrecy).¹ Cross-national differences in conservatism and secrecy have the potential to adversely affect the international comparability of financial statements.

The basic question addressed in this study is: “Do differences in culture cause accountants in different countries to interpret and apply the same financial reporting standards differently?” To date, the only study to specifically address this question is Douplik and Richter’s (2004), and they do so only with respect to the influence of *conservatism* on accountants’ interpretation of accounting standards, in the Anglo and Germanic cultural areas.

The primary objectives of the current study are to test Gray’s secrecy hypothesis with respect to its implications for accountants’ interpretations of common-disclosure rules and to extend tests of Gray’s conservatism hypothesis to a cultural area that has not yet been examined. To achieve these objectives, we use the approach taken by Douplik and Richter (2004) and ask a sample of accountants in an Anglo country (United States) and a more-developed Latin country (Brazil) to interpret verbal probability expressions used in IFRSs as thresholds for both recognition and disclosure decisions.

Through its influence on the accounting value of secrecy, we obtain strong support for the hypothesis that culture affects the interpretation of verbal probability expressions used in establishing the threshold for disclosures. Our results also provide support for the hypothesis that, through its influence on the accounting value of conservatism, culture

¹ Professionalism and uniformity primarily influence the authority for accounting standards and their enforcement.

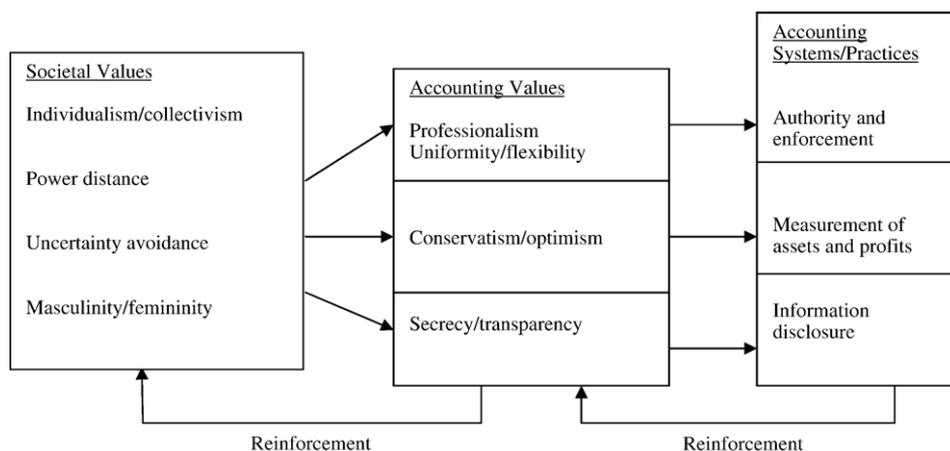


Fig. 1. Culture and accounting systems in practice.

affects the interpretation of verbal probability expressions used in establishing the threshold for recognizing elements that increase income. These results are consistent with those obtained by Douplik and Richter (2004) and suggest that Gray's conservatism hypothesis applies when comparing recognition decisions made by accountants in the Anglo and more-developed Latin cultural areas.

We also conduct additional analyses to explore the possibility that Brazilian accountants working for Big 4 public accounting firms possess Anglo cultural values, which cause them to interpret probability expressions in a manner similar to U.S. accountants. We find no support for this; differences in the interpretation of probability expressions between U.S. and Big 4 Brazilian accountants are similar to differences between U.S. and Brazilian accountants in general.

This study contributes to the literature on both theoretical and practical levels. It adds to the body of research that has empirically tested various parts of Gray's theoretical framework by extending this research to a previously unexamined cultural area and by testing Gray's secrecy hypothesis at the individual accountant level. The results provide additional evidence supporting Gray's theory. On a practical level, the results of this study have negative implications for the consistency with which a common accounting standard might be applied across cultural areas, which could adversely affect the cross-national comparability of financial statements. This applies to the interpretation of both disclosure and recognition standards. Moreover, affiliation with Big 4 accounting firms does not appear to affect this result.

The remainder of this paper is organized as follows. We describe Gray's theoretical framework for culture's influence on accounting and summarize prior research testing the framework in the next Section. In Section 3, we develop hypotheses and describe the criteria used to select countries to test them. We describe the research instrument and method used to gather data in Section 4. In Section 5, we report results, and in the final section, we summarize and conclude.

2. Review of the theoretical framework and empirical tests of the framework

2.1. *Theory of the influence of culture on accounting*

Fig. 1 presents Gray's framework for the relation between cultural values (identified by Hofstede (1980)),² four accounting values, and four dimensions of national accounting systems. Gray (1988, p. 8) describes the four accounting values as follows:

Professionalism versus Statutory Control — 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.

Uniformity versus Flexibility — 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 companies.

Conservatism versus Optimism — a preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach.

Secrecy versus Transparency — a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

In identifying the dimensions that characterize accounting systems, Gray distinguishes between the statutory authority for accounting systems, and their enforcement, and the measurement and disclosure characteristics of accounting systems. The accounting values of Professionalism and Uniformity are posited to influence the authority for accounting rules and their enforcement; Conservatism influences the manner in which assets and profits are measured; and Secrecy affects the extent to which information is likely to be disclosed.

Gray's theoretical framework suggests that shared cultural values within a society lead to shared accounting values which in turn influence the nature of a nation's accounting system. Gray develops very specific directional hypotheses as to how Hofstede's (1980) cultural values affect the four accounting values, and Radebaugh and Gray (2002) incorporate long-term orientation into these hypotheses.³ Conservatism and secrecy most directly affect the measurement and disclosure of information in financial reports and

² The cultural (societal) values identified by Hofstede (1980) are: Power distance (the extent to which unequal power distribution in organizations is accepted); Individualism (the level of interdependence among individuals in a society); Uncertainty avoidance (the degree to which individuals in a society feel uncomfortable with uncertainty and ambiguity); and Masculinity (the extent to which a society emphasizes performance and achievement).

³ Hofstede and Bond (1988) add a fifth cultural dimension, originally referred to as Confucian Dynamism, to the four dimensions identified by Hofstede (1980). This dimension, later renamed as Long-term Orientation, was originally developed through the use of a Chinese Value Survey.

therefore are the accounting values that have the greatest potential to affect the cross-national comparability of financial statements. We limit our discussion to Gray's conservatism and secrecy hypotheses.

Gray (1988, p. 8) describes conservatism as “a preference for a cautious approach to measurement.” Conservatism implies a tendency to defer recognition of assets and items that increase net income (revenues, profits, gains) and a tendency to accelerate the recognition of liabilities and items that decrease net income (expenses, losses). Gray's conservatism hypothesis as expanded by Radebaugh and Gray to include long-term orientation is developed as follows (Radebaugh and Gray, 2002, p. 47, emphasis added):

To what extent then can conservatism be linked to societal value dimensions? *Conservatism can be linked perhaps most closely with the uncertainty–avoidance dimension and the short-term versus long-term orientation.* A preference for more conservative measures of profits and assets is consistent with strong uncertainty avoidance that stems from a concern with security and a perceived need to adopt a cautious approach to cope with the uncertainty of future events. A less conservative approach to measurement is also consistent with a short-term orientation where quick results are expected and hence a more optimistic approach is adopted relative to conserving resources and investing for long-term results. *There also seems to be a link, if less strong, between high levels of individualism and masculinity,* on the one hand, and *weak uncertainty avoidance* on the other, to the extent that an emphasis on individual achievement and performance is likely to foster a less conservative approach to measurement.

Gray (1988, p. 8) describes the accounting value of secrecy as “a preference for confidentiality and the restriction of disclosure of information about the business.” Secrecy manifests itself through a tendency to restrict the disclosure of information available to outsiders. The secrecy hypothesis is developed as follows (Radebaugh and Gray, 2002, p. 48, emphasis added):

To what extent then can secrecy be linked to societal value dimensions? A preference for *secrecy is consistent with strong uncertainty avoidance* because the latter stems from the need to restrict the disclosure of information to outsiders to avoid conflict and competition and to preserve security. *A close relationship between secrecy and power distance* also seems likely in that high power-distance societies are likely to be characterized by the restriction of information to preserve power inequalities. *Secrecy is also consistent with a preference for collectivism, as opposed to individualism,* in that its concern is for the interests of those most closely involved with the firm rather than external parties. *A long-term orientation also suggests a preference for secrecy* that is consistent with the need to conserve resources within the firm and ensure that funds are available for investment relative to the demands of shareholders and employees for higher payments. *A significant but possibly less important link with masculinity* also seems likely to the extent there will be a greater tendency to publicize such achievements and success.

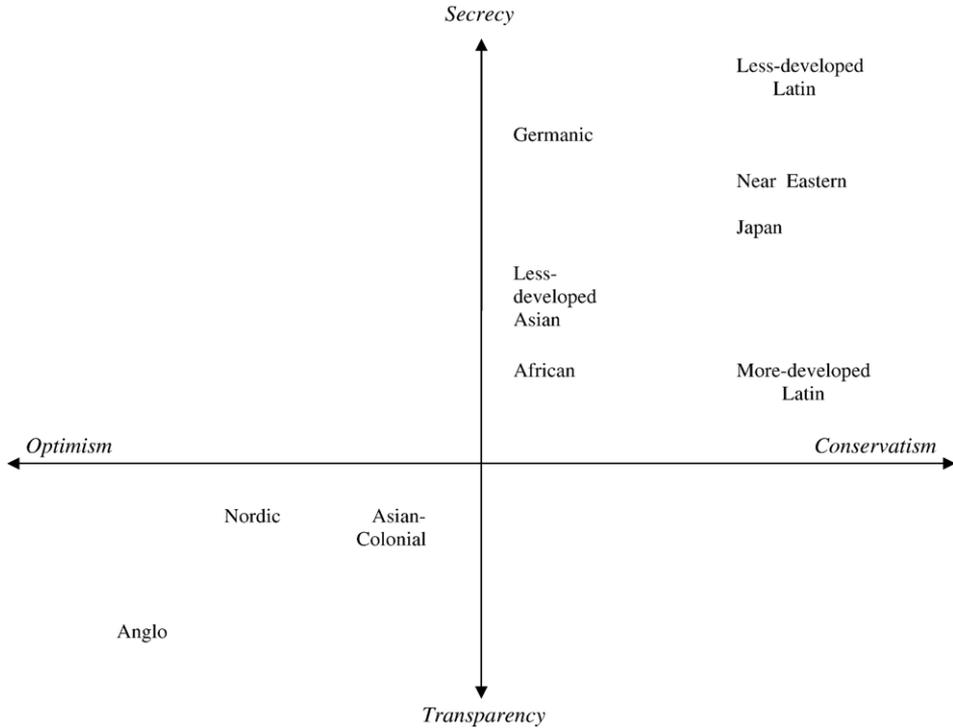


Fig. 2. Accounting systems: measurement and disclosure.

Hofstede (1980) identifies ten cultural areas with distinctly different patterns of cultural values. Gray applies his hypotheses to these cultural areas by positioning them along an optimism/conservatism continuum and a secrecy/transparency continuum, as shown in Fig. 2. The Anglo cultural area is hypothesized to be at the extreme optimism end and the extreme transparency end of these continua. Several cultural areas (more-developed Latin, Japan, Near Eastern, and less-developed Latin) are placed at the extreme conservatism end of the optimism/conservatism continuum and the Less-developed Latin area is placed at the extreme secrecy end of the secrecy/transparency continuum.

2.2. Empirical tests of Gray's framework

Gray's theoretical framework is universal in that it identifies culture as a source of the differences in accounting systems that exist across all countries and cultural areas. Determining the extent to which the theory holds is of academic interest but has practical implications as well.

Douppnik and Tsakumis (2004) provide a comprehensive review of the literature that has examined one or more relations embodied in Gray's theoretical framework. The majority of studies testing Gray's framework use archival data at the country level to examine the relation between Hofstede's cultural dimensions and one or more aspects of national

accounting systems. Most of this research focuses on Gray's secrecy hypothesis, examining the relation between cultural values and disclosures provided in corporate financial reports (Gray & Vint, 1995; Hope, 2002; Jaggi & Low, 2000; Wingate, 1997; Zarzeski, 1996). Three studies also examine Gray's conservatism hypothesis, studying the link between culture and measurement of assets and profits at the country level (Eddie, 1990; Salter & Niswander, 1995; Sudarwan & Fogarty, 1996). Country-level tests generally support the secrecy hypothesis but tests of the conservatism hypothesis yield mixed results.

Several studies have examined one or more aspects of Gray's framework using accountants' opinions as the data for analysis. Roberts and Salter (1999) conducted an opinion survey of accountants in 23 countries to test Gray's uniformity hypothesis. MacArthur (1996, 1999) examined comment letters submitted to the IASC on E32, "Comparability of Financial Statements," to determine whether preferences expressed by letter writers from different countries were consistent with Gray's hypotheses. These studies provide support for some of the relations between culture and accounting values posited by Gray, but not for others.

Two studies have used Gray's framework as the theoretical basis for investigating the influence of culture on accountants' interpretation and application of accounting standards (Doupnik & Richter, 2004; Shultz & Lopez, 2001). Schultz and Lopez (2001) use Gray (1988) and other literature to hypothesize that a country's legal system, major source of financing, and level of uncertainty avoidance cause differences in estimates of warranty expense made by accountants across countries. Consistent with their hypothesis, they find accountants in France and Germany (code-law legal system, nonequity-based financing system, and high uncertainty avoidance countries) estimate warranty expense more conservatively than U.S. accountants (common law, equity-based financing, and low uncertainty avoidance country). Schultz and Lopez (2001) did not test the influence of culture alone on warranty estimates. Their theoretical development and research design does not allow them to separate the impact of culture from the influence of legal systems and sources of financing on such estimates.

Doupnik and Richter (2004) is the only study published to date that focuses solely on the influence of culture on the interpretation and application of accounting standards. They use verbal probability expressions used in IFRSs as thresholds for recognizing assets and income as proxies for accounting standards. From Gray's theory they develop hypotheses with respect to how the accounting value of conservatism and the context in which verbal probability expressions are used interact to influence accountants' interpretations of those expressions.⁴ Through a survey of accountants in the United States and Germany, they test and find substantial support for their hypotheses. Consistent with Gray's framework that suggests German accountants are more conservative than U.S. accountants, German subjects tend to assign higher (lower) numerical probabilities than U.S. subjects to expressions used as the threshold for recognizing an asset (liability) or an increase (decrease) in income.

⁴ For example, they posit that when a probability expression such as "probable" is used to establish the threshold for recognition of an asset or an increase in income, accountants in more conservative countries will assign a higher numerical probability to that term to defer recognition. Conversely, when a probability expression is used to establish the threshold for recognition of a liability or decrease in income, accountants in more conservative countries will assign a lower numerical probability to the expression to accelerate recognition.

Douplik and Richter (2004) find differences in the interpretation of accounting standards consistent with Gray's conservatism hypothesis using accountants from countries that are representative of two cultural areas: Anglo (United States) and Germanic (Germany). Gray's framework predicts differences across all cultural areas. The current study extends previous research to the more-developed Latin cultural area, an area that has not been subject to extensive study in the accounting domain. This study also adds to the stream of research that tests aspects of Gray's theory by examining the implications of his secrecy hypothesis for accountants' interpretation of accounting disclosure standards.

3. Research question, hypotheses, and country selection

3.1. Research question and hypotheses

The basic question we address in this study is: Do differences in culture cause accountants in different countries to interpret and apply the same financial reporting standards differently? To address this question we need to identify countries that are likely to have significant differences in cultural values and therefore are likely to have significantly different accounting values. We also need to identify accounting standards that require accountants to exercise their judgment, which could be influenced by their accounting values. For practical reasons, we are especially interested in the effect culture might have on accountants' interpretation and application of IFRSs.

Verbal probability expressions are used in several IFRSs to establish the threshold for disclosure of information or recognition of an accounting element. For example, *IAS 37* uses the expression "remote" to establish the threshold for the *disclosure* of a contingent liability and "probable" to establish the threshold for *recognition* of a provision. Probability expressions used as recognition thresholds are used to establish the threshold for *income-increasing* items (e.g., *IAS 18* requires recognition of revenue when economic benefits are "probable") as well as *income-decreasing* items (e.g., *IAS 11* requires recognition of a loss on construction contracts when the loss is "probable"). Douplik and Richter (2004) successfully used requirements in IFRSs that rely on verbal probability expressions to represent accounting standards that require the application of judgment. We follow a similar approach in the current study.

Because verbal probability expressions are used to establish the threshold for recognition of various accounting elements, the level of conservatism shared by accountants in a country should influence the interpretation of those expressions. This leads to the following conservatism hypotheses (based on Gray's framework):

H1. Accountants in a country that scores higher in terms of uncertainty avoidance and long-term orientation and lower in terms of individualism and masculinity will assign a *higher* numerical probability to verbal probability expressions that determine the threshold for recognition of items that *increase* net income than accountants in a country that scores lower on uncertainty avoidance and long-term orientation and higher on individualism and masculinity.

H2. Accountants in a country that scores higher in terms of uncertainty avoidance and long-term orientation and lower in terms of individualism and masculinity will assign a *lower* numerical probability to verbal probability expressions that determine the threshold for recognition of items that *decrease* net income than accountants in a country that scores

lower on uncertainty avoidance and long-term orientation and higher on individualism and masculinity.

Because verbal probability expressions also are used to establish the threshold for the *disclosure* of various items of information, the level of secrecy shared by accountants in a country should influence the manner in which those expressions are interpreted.⁵ Gray's framework applied in this context leads to the following secrecy hypothesis:

H3. Accountants in a country that scores higher in terms of uncertainty avoidance, power distance, and long-term orientation and lower in terms of individualism and masculinity will assign a *higher* numerical probability to verbal probability expressions that determine the threshold for the disclosure of an item of information than accountants in a country that scores lower on uncertainty avoidance, power distance, and long-term orientation and higher on individualism and masculinity.

To test the conservatism and secrecy hypotheses we identify two countries likely to differ significantly on the accounting values of conservatism and secrecy.

3.2. Country selection

As noted earlier, Gray places the Anglo cultural area at the extreme optimism end of a conservatism/optimism continuum, and at the extreme transparency end of a secrecy/transparency continuum. Countries from this cultural area, which includes the United States, are natural candidates for inclusion in studies examining the impact of culture on accounting, as they act as a type of experimental control. Countries from any other cultural area are expected to exhibit a higher level of both conservatism and secrecy. We selected the United States to represent the Anglo culture.

To extend previous research beyond a comparison of countries from the Anglo and Germanic cultural areas, we looked for an economically significant non-Germanic country in a region of the world where little cultural accounting research has been conducted. Prior studies investigating the impact of culture on accountants' judgments have focused on accountants in the United States, Europe, and Asia-Pacific.⁶ As a region, Latin America has been relatively neglected in this stream of research.⁷

Brazil is the largest country in Latin America in area, population, and economic importance.⁸ While the Brazilian stock market is small compared to those in the United

⁵ For example, *IAS 37*, "Provisions, Contingent Liabilities and Contingent Assets," indicates that a contingent liability should be *disclosed* unless the likelihood of an outflow of resources is *remote* (para. 28).

⁶ The subjects comprising this body of research come from: Australia and China (Gul & Tsui, 1993), United States and Taiwan (Ho & Chang, 1994; Karnes, Sterner, Welker, & Wu, 1990), United States and Germany (Agacer & Douppnik, 1991; Douppnik & Richter, 2003, 2004), United States, France and Germany (Schultz & Lopez, 2001), Australia, India, and Malaysia (Patel, Harrison, & McKinnon, 2002), and United States and seven European countries (Arnold, Bernardi, & Neidermeyer, 2001).

⁷ Cohen, Pant, and Sharp's (1995) study of the influence of culture on auditors' ethical perceptions includes subjects from the U.S., Japan, and undisclosed countries in Latin America. Among the 23 countries surveyed by Roberts and Salter (1999), in addition to the U.S. and Canada, 11 countries are in Europe, eight are in Asia-Pacific, and two are Latin American (Brazil and Mexico).

⁸ Brazil is the fifth largest country in the world in terms of area and population, and has the ninth largest economy measured in terms of purchasing power parity-adjusted GDP (World Bank, 2003). Brazil is the ninth most popular destination for foreign direct investment; third among developing countries (United Nations, 2001).

Table 1
Hofstede's Index Scores for Brazil and the United States

Cultural value	Brazil		United States
Power distance	69	>	40
Uncertainty avoidance	76	>	46
Individualism	38	<	91
Masculinity	49	<	62
Long-term orientation ^a	65	>	29

Source: Hofstede (1980).

^a Hofstede (2001).

States and other developed countries, it is the largest in Latin America, and many Brazilian firms cross-list on foreign stock exchanges.⁹ Among Latin American countries, Brazilian companies generally comprise the largest component in international stock mutual funds.¹⁰ The comparability of Brazilian financial statements with those of United States and other Anglo companies arguably is an important harmonization objective, making Brazil a worthy subject for cross-cultural accounting research.¹¹

The Brazilian accounting system can be characterized as law-based with taxation exerting a strong influence. Until the early 1990s, the country was wracked with high rates of inflation and financial statements were required to be adjusted for changes in the general price level. As is true in many countries, the Big 4 firms dominate the auditing industry.

According to Hofstede (1980), Brazil is one of the countries comprising a more-developed Latin cultural area. Gray places the more-developed Latin area at the extreme conservatism end of the conservatism/optimism continuum and on the secrecy side of the secrecy/transparency continuum. Table 1 presents Hofstede's (1980) indices for Brazil and the United States. Brazil ranks substantially higher than the United States on uncertainty avoidance and long-term orientation, substantially lower on individualism, and somewhat lower on masculinity, all of which would indicate stronger conservatism among Brazilian accountants. These relationships, along with Brazil's higher rank on power distance, also suggest that Brazilian accountants will exhibit a higher level of secrecy than U.S. accountants.

With the exception of long-term orientation, Hofstede's index scores were developed in the 1970s. Although Hofstede suggests that culture remains relatively constant over time, there has been no comprehensive replication of his original study to verify that this is so. In addition, Hofstede's index scores are based on a survey of IBM employees, most of whom presumably

⁹ In June 2005, 96 Brazilian companies had ADRs in the United States. A list of foreign companies with ADRs in the United States is available on the Bank of New York website at www.adrbny.com.

¹⁰ As examples, on March 31, 2005, Brazil comprised 53.2 percent of the holdings in the Fidelity Latin America Fund and 57.5 percent of the holdings in the Merrill Lynch Latin America Fund (Mexico was second at 36.7% and 31.9%, respectively); among Latin American countries, Brazil represented the greatest percentage of holdings by Vanguard's International Growth, International Value, and Emerging Markets Stock Index funds.

¹¹ Mexico is the second most important economy in Latin America and would be an interesting country to include in a study that examines the impact of culture on the interpretation of probability expressions. However, because of the geographic proximity between Mexico and the United States and the significant economic and cultural interaction between the two countries, we believe Brazil is likely to have greater cultural distance from the United States and therefore represents a better comparison country to test Gray's model. We defer the inclusion of Mexico in cross-cultural studies to future research.

were not accountants. Whether differences in index scores obtained from IBM employees are applicable to professional accountants is an open question. [Montagna \(1986\)](#) questions whether Hofstede's uncertainty avoidance index is necessarily valid for accountants suggesting that U.S. accountants are more likely to avoid uncertainty situations than members of other U.S. professions. Culture is the treatment variable in the current study, but it cannot be manipulated. To verify that U.S. and Brazilian accountants differ on cultural values in the direction identified by Hofstede, we incorporate Hofstede's Values Survey Module (VSM) into our research instrument and administer it to the accountants participating in the study.¹²

3.3. Influence of Big 4 firm affiliation

[Soeters and Schreuder \(1988\)](#) hypothesize that through self-selection and/or socialization Dutch accountants working for (at that time) Big 8 public accounting firms will possess values consistent with the Anglo culture. They administer Hofstede's VSM to a sample of Dutch accountants working for Dutch and Big 8 accounting firms and find evidence that supports their hypothesis.

If the self-selection/socialization hypothesis accurately describes Brazilian accountants, we could expect Big 4 Brazilian accountants to possess cultural values more similar to U.S. accountants than the general population of Brazilian accountants. This should result in the Big 4 Brazilian accountants and U.S. accountants being more similar in accounting values, which in turn should mean that there will be no significant differences in the interpretation of probability expressions.

To explore this possibility, we split the Brazilian sample into those accountants employed by Big 4 firms and those employed by other firms and we retest our hypotheses by comparing the probability expression interpretations of U.S. and Big 4 Brazilian accountants.

4. Methodology

To test the hypotheses, we selected 11 excerpts containing five different verbal probability expressions from seven different IFRSs (shown in the Appendix). We included the excerpts in a research instrument in which professional accountants in the United States and Brazil were asked to assign a numerical probability on a scale of 0% to 100% to each verbal probability expression. The excerpts cover a wide variety of accounting contexts in which probability expressions are used.

To ensure that the U.S. and Brazilian respondents differed on Hofstede's cultural values and in the direction expected, Hofstede's VSM as revised in 1994 was included as part of the research instrument.¹³ [Hofstede \(1994\)](#) cautions that "(i)ndexes calculated with the old and new formulas are not necessarily the same! However, the old and new formulas should produce approximately the same score differences between countries."

The research instrument consisted of four parts: (1) instructions, including two non-accounting examples; (2) excerpts from IFRSs; (3) Hofstede's VSM; and (4) demographic

¹² In two recent accounting studies researchers independently verified the cultural characteristics of the countries under study by incorporating Hofstede's VSM into their research materials ([Patel, 2003](#); [Patel et al., 2002](#)).

¹³ Hofstede's VSM can be obtained from www.geert-hofstede.com and may be freely used for research purposes.

Table 2
Portuguese-language translations of IAS probability expressions

Probability expression	Portuguese translation
Probable	Provável
Reasonable assurance	Razoável segurança
Reasonable certainty	Razoável certeza
No longer probable	Não seja provável
Remote	Remoto/remota

questions. Instructions and demographic questions were first written in English, translated into Portuguese, and then translated back into English to ensure equivalence with the original. We used “VSM-Portugues,” the Portuguese translation of Hofstede’s VSM, to include VSM questions in the Portuguese version of the research instrument.¹⁴

To the extent available, we used Portuguese translations of International Accounting Standards (*Normas Internacionais de Contabilidade*) prepared by the Brazilian Institute of Accountants (IBRACON, 1998). Although *IAS 37* and *IAS 38* became effective in 1999, IBRACON had not yet translated these standards into Portuguese at the time data were gathered for this study. We included excerpts containing three probability expressions from these standards in the questionnaire: probable, virtually certain, and remote. “Probable” is used in other standards and is consistently translated by IBRACON as *provável*, so we used this translation in our instrument. “Remote” and “virtually certain” previously had not been translated by IBRACON. We literally translated these expressions as *remoto/remota* and *virtualmente certo/certa* and asked a small group of public accountants in São Paulo to verify that these were appropriate translations. This group agreed that *remoto/remota* was the best translation of remote, but did not believe that *virtualmente* was an expression likely to be used in a Portuguese-language Brazilian accounting standard. The group suggested *praticamente* (practically) *certo/certa* as an adequate translation that would be more readily interpretable by Brazilian accountants. As a result, we included *praticamente certo/certa* in the Portuguese language version of the questionnaire. Subsequent to data collection, IBRACON published its translation of *IAS 37* and *IAS 38*. “Remote” is translated as *remoto/remota*, but contrary to the expectations of our expert group “virtually certain” is translated as *virtualmente certo/certa*. Because our translation of “virtually certain” is inconsistent with that of IBRACON, and therefore would not be used by Brazilian accountants applying IFRSs, we exclude data related to “virtually certain” and *praticamente certo/certa* from our analysis.

Excerpts were presented in the same random order in each version of the questionnaire. Table 2 shows the Portuguese-language translations of the IAS probability expressions examined.

In the United States, the English-language version of the instrument was distributed to members of the audit staff in offices of international (Big 4) and local public accounting firms in the southeastern United States. In Brazil, the Portuguese-language version was distributed to audit staff members in offices of international and local public accounting firms in the state of São Paulo, and to public accountants participating in a continuing education seminar at the University of São Paulo.

¹⁴ VSM-Portugues uses the Portuguese spoken in Portugal, which differs in some ways from the Portuguese spoken in Brazil. We made changes to restate several phrases in Brazilian Portuguese.

Table 3
Response rates and respondent profiles

	Brazil	United States
Sample	200	200
Number of respondents	77	107
Response rate	38.5%	53.5%
Big 4	42	75
Other	35	32
Mean age (in years)	30.7	29.6
Mean years of professional experience as accountant	9.1	6.7
Nationality at birth same as country of residence	98.7%	93.5%

The independent variable in this study is culture, with two levels — Anglo and more-developed Latin. We use multiple probability expressions from IFRSs to address each hypothesis, resulting in multiple dependent variables. We test our hypotheses using multivariate analysis of variance (MANOVA), grouping probability expressions according to hypothesis. For those groups of expressions in which MANOVA indicates a significant global difference between the two nationalities, we then conduct univariate tests (ANOVA) to identify probability expressions for which significant differences exist.

5. Results

5.1. Responses

Table 3 reports response rates and respondent profiles. The response rate was higher in the United States than in Brazil. Each group of respondents had an average of more than

Table 4
Cultural value scores from VSM for sample of professional accountants in Brazil and the United States

Panel A: Full sample of Brazilian and U.S. respondents

Cultural value	Brazil <i>n</i> =77		United States <i>n</i> =107	Direction of difference consistent with Hofstede's Scores
Power distance	16	>	4	Yes
Uncertainty avoidance	55	>	28	Yes
Individualism	97	<	115	Yes
Masculinity	49	>	32	No
Long-term orientation	69	>	38	Yes

Panel B: Brazilian sample split into respondents employed by Big 4 firms and other firms

Cultural value	Other firms <i>n</i> =35		Big 4 firms <i>n</i> =42
Power distance	16	>	15
Uncertainty avoidance	60	>	51
Individualism	87	<	105
Masculinity	61	>	39
Long-term orientation	70	>	68

6 years of professional experience. A larger percentage of U.S. respondents is employed by Big 4 firms. Almost all respondents were born in the country in which they work suggesting that the respondent groups are representative of their national cultures.

5.2. Cultural value scores

Panel A of Table 4 reports cultural-value scores for our two groups of respondents. The scores derived from our VSM are different from those obtained by Hofstede (1980) (reported in Table 1).¹⁵ However, with the exception of masculinity, the direction of differences on our VSM scores between Brazilian and U.S. accountants is consistent with the direction of differences in Hofstede's indices for these two countries. As noted earlier, Gray (1988) and Radebaugh and Gray (2002) view uncertainty avoidance and long-term orientation as having the greatest influence on conservatism, and these two values along with power distance and individualism are viewed as having a close relationship with secrecy. Our sample of Brazilian accountants has substantially higher scores on power distance, uncertainty avoidance, and long-term orientation and a somewhat lower score on individualism than the U.S. accountants in our sample. Only our VSM results for masculinity differ in direction from Hofstede's indices. Because Gray believes that masculinity has only a weak relation with the accounting values of conservatism and secrecy, we conclude that the cultural value scores obtained from our survey participants are consistent with our assumptions that Brazil is a higher conservatism and a higher secrecy culture than the United States. Based on the VSM scores we obtain, our Brazilian sample of accountants should exhibit greater conservatism and secrecy than the U.S. sample of accountants when interpreting verbal probability expressions used in IFRSs.

5.3. Tests of hypotheses

Table 5 summarizes our specific expectations with regard to whether U.S. or Brazilian accountants will assign a higher mean probability to the verbal probability expressions included in the research instrument. Probability expressions are grouped according to hypothesis. For example, IAS 18 indicates that revenue should be recognized when "it is probable that economic benefits associated with the transaction will flow to the enterprise" (para. 14). In this context, "probable" is used as a threshold for the recognition of an item that *increases income*. If Brazilian accountants are *more conservative* and they want to defer income recognition, they should require a *higher numerical probability* (on a 0–100% scale) to meet the threshold "probable." The responses to this excerpt are used in testing H1 related to the recognition of increases in income. Five additional excerpts relate to this hypothesis.

As a further example, IAS 11 indicates that a loss on a construction contract should be recognized "when it is probable that total contract costs will exceed total contract revenue" (para. 36). In this context, "probable" is used as the threshold for the recognition of an item

¹⁵ As noted earlier, Hofstede warns that administration of the VSM revised in 1994 will not necessarily result in scores similar to those he obtained from his original survey. Thus, the fact that our VSM results differ from Hofstede's is not surprising. Indeed, Soeters and Schreuder (1988) administered the original VSM to a group of Dutch accountants and obtained scores that were different from Hofstede's. In the extreme case they obtained a *negative* score on uncertainty avoidance. Thus, replication of Hofstede's scores using accountants is not necessarily to be expected.

Table 5

Expectations for differences in mean numerical probabilities between Brazilian (BR) and U.S. (US) professional accountants in the interpretation of in-context probability expressions

IAS#	Probability expression	Context	Impact on income	Expectation
<i>H1: Recognition of increases in income</i>				
8	Probable	Revenue	+	BR>US
20	Reasonable assurance	Government grants	+	BR>US
11	Probable	Construction contracts	+	BR>US
17	Reasonably certain	Leases	+	BR>US
38	Probable	Development costs	+	BR>US
12	Probable	Deferred tax asset	+	BR>US
<i>H2: Recognition of decreases in income</i>				
11	Probable	Construction contract loss	–	US>BR
12	No longer probable	Deferred tax asset	–	US>BR
37	Probable	Provision	–	US>BR
<i>H3: Disclosure</i>				
37	Remote	Contingent liability	none	BR>US
37	Probable	Contingent asset	none	BR>US

that *decreases income*. If Brazilian accountants are more conservative and they have a preference to accelerate the recognition of a decrease in income, they should require a *lower numerical probability* to meet the “probable” threshold. This excerpt, along with two others, is used in testing H2 related to recognition of decreases in income.

With respect to the verbal probability expressions used in making *disclosure* decisions, regardless of whether the disclosure involves an asset (gain) or a liability (loss), we expect Brazilian accountants to establish higher numerical probability thresholds in order to defer or avoid making the disclosure. Responses to the IFRS excerpts related to the disclosure of contingent liabilities and contingent assets are used to test H3.

Table 6 reports the mean numerical probabilities assigned by the U.S. and Brazilian accountants to the 11 verbal probability expressions from selected IFRSs.¹⁶ We use MANOVA to determine whether a significant global difference exists between the U.S. and Brazilian respondents across the set of probability expressions relating to each hypothesis. We then examine responses to individual expressions to determine whether the direction of differences is consistent with our hypothesis and which expressions contribute to the differences between the two groups.

5.3.1. Tests of conservatism hypotheses — H1 and H2

MANOVA indicates a significant difference ($p=.044$) between the two groups of accountants across the six verbal probability expressions that relate to the recognition of increases in income. Panel A of Table 6 shows that differences in the mean probabilities assigned by the two groups occur in the predicted direction for four of the six expressions and univariate tests (ANOVA) indicate significant differences ($p<.05$) in three cases. Two

¹⁶ Although the research instrument includes excerpts involving 13 probability expressions, as noted earlier, we do not analyze the expression pair *virtually certain/praticamente certo(a)* included in two excerpts because of improper translation.

Table 6

Mean numerical probabilities assigned by Brazilian and U.S. professional accountants and results of statistical tests

Panel A: Full respondent sample

IAS#	Expression (context)	Brazil n=77	United States n=107	Direction expected	F	Sig.
<i>H1: Recognition of increases in income</i>						
Multivariate test					2.217	.044**
Univariate tests						
18	Probable (revenue)	78.43	> 73.58	yes	3.831	.026**
20	Reasonable assurance (gov't grants)	70.53	< 75.15	no	3.407	.034**
11	Probable (construction contracts)	77.65	> 74.94	yes	1.383	.121
17	Reasonable certainty (leases)	76.29	< 78.88	no	1.244	.133
38	Probable (development costs)	78.49	> 74.13	yes	2.883	.046**
12	Probable (deferred tax asset)	76.56	> 71.95	yes	3.045	.042**
<i>H2: Recognition of decreases in income</i>						
Multivariate test					.191	.903
Univariate tests						
11	Probable (construction contract loss)	73.19	> 71.56	no	.403	.263
12	No longer probable (deferred tax asset)	44.57	> 42.96	no	.178	.337
37	Probable (provision)	64.81	> 64.32	no	.035	.426
<i>H3: Disclosure</i>						
Multivariate test					13.031	.000***
Univariate tests						
37	Remote (contingent liability)	23.88	> 12.67	yes	23.971	.000***
37	Probable (contingent asset)	74.31	> 71.79	yes	.862	.177
Panel B: Reduced respondent sample						
IAS#	Expression (context)	Brazil n=60	United States n=99	Expected direction	F	Sig.
<i>H1: Recognition of increases in income</i>						
Multivariate test					4.660	.000***
Univariate tests						
18	Probable (revenue)	80.50	> 75.18	yes	4.952	.014**
20	Reasonable assurance (gov't grants)	75.26	< 76.73	no	.438	.255
11	Probable (construction contracts)	79.17	> 75.24	yes	2.895	.046**
17	Reasonable certainty (leases)	76.50	< 80.96	no	4.180	.022**
38	Probable (development costs)	83.15	> 75.07	yes	12.920	.000***
12	Probable (deferred tax asset)	80.33	> 72.97	yes	10.550	.001***
<i>H2: Recognition of decreases in income</i>						
Multivariate test					.528	.663
Univariate tests						
11	Probable (construction contract loss)	74.58	> 71.99	no	1.045	.155
12	No longer probable (deferred tax asset)	46.43	> 43.30	no	.549	.230
37	Probable (provision)	65.85	> 65.33	no	.041	.420

Table 6 (continued)

IAS#	Expression (context)	Brazil <i>n</i> =60	United States <i>n</i> =99	Expected direction	F	Sig.
<i>H3: Disclosure</i>						
	Multivariate test				14.969	.000***
	Univariate tests					
37	Remote (contingent liability)	21.88	> 12.71	yes	26.486	.000***
37	Probable (contingent asset)	78.28	> 73.09	yes	4.413	.019**

Univariate test results (Sig.) are 1-tailed.

Statistically significant coefficients are denoted by: *** less than 0.01, ** less than 0.05, *** less than 0.10.

differences are in the opposite direction of what was expected and one of these differences is significant at conventional levels ($p < .05$).

MANOVA indicates that there is no significant difference ($p = .903$) between the two groups across the three expressions comprising H2. The differences in the mean probabilities on the three expressions related to H2 are all in the opposite direction of what was predicted. However, none of the differences is statistically significant.

5.3.2. Test of secrecy hypothesis — H3

MANOVA indicates a significant difference ($p = .000$) between the two groups across the two expressions related to H3. Table 6 indicates that the differences in mean responses between the two groups occurs in the expected direction for both of the excerpts related to H3. The difference in mean numerical probabilities assigned to the term “remote” is large and highly significant. These results are consistent with the expectation that Brazilian accountants have a higher level of accounting secrecy and are less willing to provide disclosures.

A number of respondents provided responses to one or more expressions that are inconsistent with the range of probability commonly associated with those expressions. This phenomenon may indicate a lack of understanding or a lack of attention by respondents. For example, several respondents associated a probability of 50% or higher with the word “remote,” whereas others assigned a probability of less than 50% to the expressions “reasonable assurance,” “reasonable certainty,” or “probable.” The responses of these subjects were removed from the data set and statistical tests were conducted on the reduced sample. The results reported in Panel B of Table 6 on the reduced sample are generally consistent with those from the full sample. There is stronger support for H1 and H3 and still no support for H2.

5.4. Influence of Big 4 firm affiliation

To explore the possibility that Brazilian accountants working for Big 4 firms have accounting values similar to U.S. accountants, which in turn affects their interpretation of probability expressions, we split the Brazilian sample into those accountants employed by Big 4 firms and those employed by other firms. We calculate cultural value indices for both groups and we retest our hypotheses by comparing the probability expression interpretations of U.S. and Big 4 Brazilian accountants. Panel B of Table 4 reports cultural value scores for the two subsets of Brazilian accountants. For each cultural dimension, the Big 4 Brazilian accountants’ score is closer to that of the U.S. accountants than the scores obtained for the Brazilians working for other firms. However, the difference in scores between the Big 4 Brazilians and

Other Firm Brazilians is relatively small for power distance, uncertainty avoidance, and long-term orientation. Individualism and masculinity are the only cultural dimensions on which the Big 4 accountants move considerably closer to the United States' score.¹⁷

Table 7 reports the results of statistical tests comparing the responses of Big 4 Brazilian accountants and U.S. accountants. Panel A reports results without removing those subjects who provided inconsistent responses; Panel B reports the results of tests after removing those who provided inconsistent responses on one or more cases. Significant differences reported in Panels A and B of Table 7 are generally consistent with those reported in Panels A and B of Table 6. The Big 4 Brazilian accountants (both full and reduced samples) differ significantly from the U.S. accountants in their interpretation of "probable" when used in the contexts of recognizing revenues, development costs, deferred tax assets, and disclosing contingent assets, and in their interpretation of "remote" when used as the threshold for disclosing contingent liabilities. We also compare the mean responses of Big 4 and Other Firm Brazilian accountants and find only one significant difference between the two groups (not included in the tables). The Big 4 Brazilian accountants actually exhibit a higher level of conservatism than the Other Firm Brazilian accountants by assigning a higher numerical value to "probable" when used in the context of recognizing development costs as an asset. Thus, we find no evidence that employment by a Big 4 firm dampens the relative conservatism or secrecy exhibited by Brazilian accountants in interpreting probability expressions.

6. Summary and conclusions

We examined Gray's conservatism and secrecy hypotheses in the context of interpreting verbal probability expressions used as recognition and disclosure thresholds in IFRSs. We obtain substantial support for the hypothesis that, through its influence on the accounting value of conservatism, culture affects the interpretation of verbal probability expressions used to establish the threshold for recognizing *increases* in income. This is consistent with the results obtained by Douppnik and Richter (2004) and provides evidence of the generalizability of Gray's conservatism hypothesis to the more-developed Latin cultural area. We also obtain strong support for the hypothesis that, through its influence on the accounting value of secrecy, culture affects the interpretation of verbal probability expressions used to establish the threshold for when disclosures should be made. Future research investigating these hypotheses in other cultural areas is necessary before we can conclude that Gray's theory as applied to the interpretation of accounting standards by individual accountants is universally valid.

The practical implications of these results are important in that they suggest that national cultural values can affect accountants' interpretation of probability expressions used in IFRSs, and as a result, differences in cultural values across countries could lead to differences in recognition and disclosure decisions based on those interpretations. Application of accounting standards that include probability expressions as recognition or disclosure thresholds necessarily involves considerable accountant judgment. The generalizability of this study's findings to other areas requiring accountant judgment,

¹⁷ Because cultural dimension scores are measured only at the group level, and not at the individual level, it is not possible to evaluate the statistical significance of the differences in scores.

Table 7

Mean numerical probabilities assigned by Brazilian accountants employed by big four firms and U.S. professional accountants and results of tests

Panel A: Full sample of Big Four Brazilian and U.S. respondents							
IAS#	Expression (context)	Brazil <i>n</i> =42		United States <i>n</i> =107	Expected Direction	F	Sig.
<i>H1: Recognition of increases in income</i>							
Multivariate test						3.269	.005***
Univariate tests							
18	Probable (revenue)	78.81	>	73.58	yes	3.117	.040**
20	Reasonable assurance (gov't grants)	71.70	<	75.15	no	1.231	.135
11	Probable (construction contracts)	79.21	>	74.94	yes	2.720	.051*
17	Reasonable certainty (leases)	76.50	<	78.88	no	.694	.203
38	Probable (development costs)	82.45	>	74.13	yes	9.075	.002***
12	Probable (deferred tax asset)	79.67	>	71.95	yes	8.117	.003***
<i>H2: Recognition of decreases in income</i>							
Multivariate test						1.409	.243
Univariate tests							
11	Probable (construction contract loss)	76.45	>	71.56	no	3.032	.042**
12	No longer probable (deferred tax asset)	47.64	>	42.96	no	1.071	.152
37	Probable (provision)	64.76	>	64.32	no	.024	.439
<i>H3: Disclosure</i>							
Multivariate test						18.488	.000***
Univariate tests							
37	Remote (contingent liability)	25.05	>	12.67	yes	35.223	.000***
37	Probable (contingent asset)	76.48	>	71.79	yes	2.448	.060*
Panel B: Reduced sample of Big Four Brazilian and U.S. respondents							
IAS#	Expression (context)	Brazil <i>n</i> =35		United States <i>n</i> =99	Expected direction	F	Sig.
<i>H1: Recognition of increases in income</i>							
Multivariate test						3.381	.000***
Univariate tests							
18	Probable (revenue)	79.71	>	75.18	yes	2.475	.059*
20	Reasonable assurance (gov't grants)	77.76	>	76.73	yes	.154	.348
11	Probable (construction contracts)	78.77	>	75.24	yes	1.566	.107
17	Reasonable certainty (leases)	77.51	<	80.96	no	1.838	.089*
38	Probable (development costs)	84.51	>	75.07	yes	11.764	.001***
12	Probable (deferred tax asset)	78.77	>	72.97	yes	4.360	.020**
<i>H2: Recognition of decreases in income</i>							
Multivariate test						1.232	.301
Univariate tests							
11	Probable (construction contract loss)	75.46	>	71.99	no	1.332	.126
12	No longer probable (deferred tax asset)	48.31	>	43.30	no	.996	.160
37	Probable (provision)	63.43	<	65.33	yes	.408	.250

(continued on next page)

Table 7 (continued)

Panel B: Reduced sample of Big Four Brazilian and U.S. Respondents

IAS#	Expression (context)	Brazil <i>n</i> =42		United States <i>n</i> =107	Expected Direction	F	Sig.
<i>H3: Disclosure</i>							
	Multivariate test					20.152	.000***
Univariate tests							
37	Remote (contingent liability)	24.49	>	12.71	yes	39.360	.000***
37	Probable (contingent asset)	77.63	>	73.09	yes	2.376	.063*

Univariate test results (Sig.) are 1-tailed.

Statistically significant coefficients are denoted by: *** less than 0.01, ** less than 0.05, * less than 0.10.

such as estimation of bad debts, is unknown but represents an important area of future research.

We do not find that Brazilian accountants employed by Big 4 public accounting firms exhibit less conservatism or less secrecy in their interpretations of probability expressions than accountants in non-Big 4 firms. This result implies that, at least in Brazil, we cannot assume that affiliation with a Big 4 firm by itself will mitigate the effect that culture otherwise might have on differences in interpretation of probability expressions. Future research might examine whether this result obtains in other cultures and in other contexts.

Financial reporting decisions based on probability thresholds are a function of two factors: (1) interpretation of the probability expression threshold, and (2) analysis of facts and circumstances to determine whether the probability threshold has been achieved. This study and prior research has focused on the first factor, whether national culture affects interpretation of probability thresholds. Future research might investigate the second component of the decision process; whether the accounting values of conservatism and secrecy systematically influence the manner in which accountants in different countries interpret the facts of a particular case. Either factor could lead to different financial reporting decisions being made in similar facts and circumstances, thereby reducing the cross-national comparability of financial reporting.

This study drew samples from specific regions within the United States and Brazil. To the extent that regional differences exist with respect to cultural and/or accounting values, the results may not be generalizable to other regions. In terms of practical implications, this is less of a problem in Brazil, because approximately 40% of Brazilian GDP is generated in the state of São Paulo. Examining whether differences in accountants' values exist across regions of the United States could be an interesting topic for future research.

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Appendix A. IAS excerpts containing verbal probability expressions

IAS 18 Revenue

“Revenue from the sale of goods should be recognized when it is **probable** that the economic benefits associated with the transaction will flow to the enterprise.”

In this context, **probable** corresponds to a probability
greater than what percentage?

 %

IAS 20 Accounting for Government Grants

“A government grant is not recognized as income until there is **reasonable assurance** that the enterprise will comply with the conditions attaching to it, and that the grant will be received. Receipt of a grant does not of itself provide conclusive evidence that the conditions attaching to the grant have been or will be fulfilled.”

In this context, **reasonable assurance** corresponds to a probability
greater than what percentage?

 %

IAS 11 Construction Contracts

“When the outcome of a construction contract can be estimated reliably, contract revenue and contract costs associated with the construction contract should be recognized as revenue and expenses respectively by reference to the stage of completion of the contract activity at the balance sheet date (percentage of completion method).”

“In the case of a cost plus contract, the outcome of a construction contract can be estimated reliably when all the following conditions are satisfied:

- a) it is **probable** that the economic benefits associated with the contract will flow to the enterprise, and
- b) the contract costs attributable to the contract can be clearly identified and measured reliably.”

In this context, **probable** corresponds to a probability
greater than what percentage?

 %

“When it is **probable** that total (construction) contract costs will exceed total contract revenue, the expected loss should be recognized as an expense immediately.”

In this context, **probable** corresponds to a probability
greater than what percentage?

 %

IAS 17 Leases

“When a lease is classified as a finance lease, an asset and a liability are recognized at the inception of the lease at an amount equal to the fair value of the leased property. A finance lease gives rise to a depreciation expense for the depreciable asset. If there is **reasonable certainty** that the lessee will obtain ownership by the end of the lease term, the asset should be depreciated over the useful life of the asset (even if this is longer than the lease term).”

In this context, **reasonable certainty** corresponds to a probability *greater than* what percentage?

 %
IAS 38 Development Costs as an Intangible Asset

“An intangible asset arising from development (or from the development phase of an internal project) should be recognized if, and only if, it is **probable** that future economic benefits that are attributable to the asset will flow to the enterprise.”

In this context, **probable** corresponds to a probability *greater than* what percentage?

 %
IAS 12 Deferred Tax Assets

“Deferred tax assets are the amounts of income taxes recoverable in future periods. A deferred tax asset should be recognized for the carryforward of unused tax losses and unused tax credits to the extent that it is **probable** that future taxable profit will be available against which the unused tax losses and unused tax credits can be utilized.”

In this context, **probable** corresponds to a probability *greater than* what percentage?

 %

“The carrying amount of a deferred tax asset should be reviewed at each balance sheet date. An enterprise should reduce the carrying amount of a deferred tax asset to the extent it is **no longer probable** that sufficient taxable profit will be available to allow the benefit of the deferred tax asset to be utilized.”

In this context, **no longer probable** corresponds to a probability *less than* what percentage?

 %

IAS 38 Useful Life of an Intangible Asset

“An intangible asset should be amortized over its useful life. For an intangible asset that is a legal right (such as a copyright or patent), the useful life of the intangible asset should not exceed the period of the legal right unless the legal right is renewable and the renewal is **virtually certain**.”

In this context, **virtually certain** corresponds to a probability *greater than* what percentage?

%

IAS 37 Provisions, Contingent Liabilities and Contingent Assets**Provisions**

“A provision is a liability of uncertain timing or amount. A provision (liability) and related expense should be recognized when it is **probable** that an outflow of resources embodying economic benefits will be required to settle the obligation. For the purpose of this Standard, an outflow of resources or other event is regarded as probable if it is more likely than not to occur, i.e., the probability that the event will occur is greater than the probability that it will not.”

In this context, **probable** corresponds to a probability *greater than* what percentage?

%

Contingent Liabilities

“A contingent liability is a possible obligation whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events. Unless the possibility of any outflow of resources is **remote**, an enterprise should disclose for each class of contingent liability a brief description of the nature of the contingent liability and, if practicable, an estimate of its financial effect.”

In this context, **remote** corresponds to a probability *less than* what percentage?

%

Contingent Assets

“A contingent asset is a possible asset whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the enterprise.”

“If the inflow of economic benefits from the contingent asset is **probable**, an enterprise should disclose a brief description of the nature of the contingent asset and, where practicable, an estimate of its financial effect.”

In this context, **probable** corresponds to a probability *greater than* what percentage ?

%

“If, for a contingent asset, it has become **virtually certain** that an inflow of economic benefits will arise, the asset and the related income are recognized in the financial statements.”

In this context, **virtually certain** corresponds to a probability *greater than what percentage?*

%

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