Comparisons on selected ratios between IFRS and US GAAP companies

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Abstract

Purpose – The purpose of this paper is to provide evidence of the effect of the differences related to reporting inventory, property plant and equipment, intangible assets, and development costs between International Financial Reporting Standards (IFRS) and US Generally Accepted Accounting Principles (US GAAP) companies.

Design/methodology/approach – Both univariate tests (*t*-tests) and multivariate tests (ANOVA, probit and logit analyses) are used to compare the ratios between IFRS and US GAAP companies.

Findings – Results consistently show that IFRS-country firms have a significantly higher current ratio, a significantly lower asset turnover ratio, and a significantly lower debt-to-asset ratio.

Research limitations/implications – This paper only focuses on inventory, property plant and equipment, intangible assets, and development costs. Other financial variables are not considered.

Practical implications – The results are useful for individuals who are interested in reporting and investing in countries using different financial reporting systems.

Originality/value – This paper is a timely examination of the recent emphasis of mandating IFRS.

Keywords Accounting standards, International standards, Financial reporting

Paper type Research paper

1. Introduction

The harmonization of world financial reporting standards has taken a faster pace in recent years since the two major standards setting bodies, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB), have committed to the convergence of accounting standards. In 2002, the European Union (EU) approved a regulation that requires all companies listed on its regulated markets to follow the International Financial Reporting Standards (IFRS), starting in 2005. In 2007, the US Securities and Exchange Commission (SEC) eliminated the requirement for listed foreign companies that adopt IFRS to reconcile IFRS to US Generally Accepted Accounting Principles (GAAP) in Form 20-F. The SEC now accepts financial statements prepared in accordance with IFRS without a reconciliation to GAAP (Barth, 2008; Hopkins *et al.*, 2008; Gupta *et al.*, 2007). The reconciliation requirement has been mandatory for foreign companies since 1982. It was a cost-effective compromise, less costly than requiring full GAAP financial statements (Ciesielski and Weirich, 2008). The SEC published its proposed roadmap for conversion from US GAAP to IFRS on November 14, 2008 (Rapp and Zell, 2009). Mandatory transition will begin in 2014, and companies are permitted to switch voluntarily as early as 2010. These rapid developments will require accountants and other users of financial statements to understand the major differences between IFRS and US GAAP very quickly.

The framework of the IASB, which is similar to the US conceptual framework, states that:

> [...] the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions (Epstein and Jermakowicz, 2008).

Thus, the goal of IASB is to develop high-quality, understandable, and IFRAS for general purpose financial statements (Ciesielski and Weirich, 2008).

Some of the advantages of preparing financial statements in accordance with IFRS may include the following: improved comparability, quality, and transparency (Daske *et al.*, 2008), as well as a decrease in accounting labor (Thomson, 2008). Thus, there has been a decrease in preparation costs of global firms with the SEC's elimination of the reconciliation requirement from IFRS to US GAAP. Epstein (2009), Barth (2008), and Ball (2006) highlight the notion that global harmonization may also decrease the cost of capital and increase the ability of share prices to reflect financial information and trading volume. These effects allow companies to view adopting IFRS as a labor- and cost-efficient way to access foreign capital markets (Cabrera, 2008). Fornelli (2008), Executive Director of the Center for Audit Quality, indicates that 62 percent of the investors surveyed stated that confidence would increase with the creation of a single, uniform, international set of accounting standards. Even though the effect of economic consequences may not be readily apparent, the effects on financial statements and financial ratios may be significant.

At present, an important question for multinational firms, certified public accountants (CPAs), and investors is "What are the effects of the differences between IFRS and GAAP on financial reports?[1]" The answer to this question is important to multinational firms because a less than perfect understanding of the impacts will impair their ability to defend their financial reports and to raise capital in international markets (Fajardo, 2007). The answer to this question is important to CPAs because they have to be able to accurately interpret and audit IFRS- and GAAP-based financial reports prepared by US companies as subsidiaries or owners of foreign companies, as well as reports prepared by foreign companies as subsidiaries or owners of US companies (Tie, 2007). Also, it is important to investors because, without awareness of the effects, their investment returns will decrease, given their diversification of portfolios into international markets.

This paper first investigates the differences between IFRS and GAAP in reporting inventory, property plant and equipment, intangible assets, and development costs. Following a brief history of the accounting, this paper discusses the effects of these items on current ratio, inventory turnover ratio, asset turnover ratio, debt-to-asset ratio, and return on assets. Sample firms are from Australia, France, Germany, Italy, the UK and the USA. The first five countries require IFRS for all domestic listed companies (Deloitte, 2007), while the USA adopts GAAP. Sample firms are divided into two groups: IFRS firms versus GAAP firms. Univariate tests, specifically *t*-tests, are used to compare each of the five financial ratios of the two sample groups. Multivariate tests, specifically analysis of variance (ANOVA), logit, and probit, are used to simultaneously compare the financial ratios of the two sample groups or classify sample firms using the financial ratios.

2. Hypotheses development

The major effort in harmonizing world financial reporting standards started in 1973 with the establishment of the International Accounting Standards Committee (IASC). It issued 41 International Accounting Standards (IAS) until 2001, when the International Accounting Standards Board (IASB) was established to replace the IASC. To date, the IASB has issued eight IFRS. Both IAS issued by the IASC and IFRS issued by the IASB are customarily referred to as IFRS.

The major difference between IFRS and GAAP is that the former is principle-based, while the latter is rule-based (Benston *et al.*, 2006). Thus, GAAP provides more detailed rules for financial reporting purposes, and the Accounting Principles Board (APB) and the Financial Accounting Standards Board (FASB) have issued a larger number of accounting standards[2]. Even though there are convergent efforts between the USA and ISAB, there are still many detailed differences between IFRS and GAAP. This paper focuses on some of these differences on reporting inventory, property plant and equipment, intangible assets, and development costs by examining ratios that are affected by these accounts.

Inventory
Three important differences exist in the valuation of inventory. First, the last-in first-out (LIFO) inventory method is not allowed under IFRS (IAS no. 2), but is allowed under GAAP. Second, the reversal of inventory write-downs is allowed under certain conditions under IFRS. This is prohibited under US GAAP. Third, IAS2 allows only the lower of cost or net realizable value, while the US GAAP allows the lower of cost or market with the market subject to a ceiling and a floor. In each possible scenario, the value of inventory for IAS2 is going to be equal to or greater than US GAAP. The US GAAP is a more conservative approach.

The restriction on using LIFO for IFRS may help in simplifying the comparison of two companies, eliminating the need to adjust the valuation of inventory from one method to the other. More importantly, for this paper, the effect is that inventory value on the balance sheet is higher under IFRS, given that prices of assets generally have increased over the years. It also has the effect of reporting higher total assets.

Theoretically, LIFO is not allowed as a valuation method under IFRS for a few reasons. One reason is IFRS emphasizes principles rather than rules. Another reason is that LIFO method originated as an extension of the base stock method used in the USA and Great Britain in early 1990s. The basic theory of base stock is that the base stock (an inventory amount determined by management's judgment) is never sold. However, if the base stock is depleted, the goods sold are regarded as being borrowed from the base stock and are returned using the current market value. The deficiency is charged to cost of sales and subtracted from inventory, resulting in inventory understated during periods of rising costs. The US Treasury Department prohibited the base stock method for taxes in 1919, and 11 years later, the Supreme Court also ruled against the application of the base stock method. At approximately this same period, LIFO cost-flow assumption was developed as an alternative to the base stock method as well as a method to smooth income (Davis, 1983).

Since LIFO was not as arbitrary and subject to management's manipulation, it was easier for various acts and pronouncements to be passed to allow LIFO. Under the Revenue Acts of 1938 and 1939, Congress initially allowed the use of LIFO for a select

group of industries on a limited basis only under certain conditions. But the 1939 act permitted its use by all industries. In 1947, a passage in Accounting Research Bulletin No. 29 also restricted the use of LIFO, but was rescinded in 1953, allowing LIFO to be used in most instances. Finally, in 1981, IRS substantially modified the conformity rule incorporated in the 1939 Revenue Act, requiring companies that elect to use LIFO for taxes to also use first-in first-out (FIFO) for financial reports (Davis, 1983).

US GAAP does not require the inventory method adopted by a company to conform to the actual physical flow of the goods. This is important since LIFO rarely corresponds to the actual physical flow of goods. Since LIFO charges the most recent costs to the income statement, the balance sheet is based on older LIFO layers and values. When actual inventory decreases, this can result in LIFO liquidation, leading to extraordinary mismatching of timing of costs and sales, thus further distorting the differences between IFRS and US GAAP accounting. In practice, even though the majority firms use FIFO, many companies use more than one cost flow assumption when determining the price of inventory. In a survey by the AICPA in 2005, approximately 38 percent of the 600 firms surveyed used some form of LIFO. Of those 229 firms that used LIFO, only 16 (approximately 3 percent) applied LIFO to all inventories, while close to 50 percent (49.3 percent) used LIFO in 50 percent or more of their inventories (Iofe and Calderisi, 2006).

2.1 Fair value reporting

Post-World War I inflation in Germany and Austria contributed heavily to the theory of inflation and its accounting treatment. Numerous theorists contributed, but Fritz Schmidt's work with current market (replacement costs) basis and Eugen Schmalenbach's work on indexing and other versions of inflation accounting, as well as the Dutch accountant Theodore Limperg's replacement value theories (Mattessich and Kupper, 2003) stand out as some of the earliest theories on fair value accounting.

In the USA, proposals made for accounting to respond to inflation were made by Henry W. Sweeney as early as the 1920s. He was influenced by accounting inflation writings in Europe, and his dissertation *Stabilized Accounting* was the basis of the first book to include a comprehensive inflation-accounting model in the USA (Henry and Graves, 1996)[3].

In 1976, the SEC in the USA issued a ruling specifying that selected replacement cost data had to be disclosed by certain companies. However, there was no requirement that this replacement cost data had to be published in annual reports. Three years later, SFAS No. 33 was issued during a period of high inflation in the USA. This statement required supplementary information to be reported to show the effects of inflation on the financial statements of the annual reports. By the mid-1980s, inflation had subsided and SFAS No. 33 was superseded by SFAS No. 89, which made the supplementary disclosures required in SFAS No. 33 voluntary.

During the past 15 years, fair value measurements have become an integral part of a company's financial statements. The focus on fair value accounting has resulted in various statements by the FASB requiring the use of fair value in areas such as investment in debt and equity securities, derivative instruments, hedging activities, business combination, and impairments (Campbell *et al.*, 2008). Most recently, the FASB has issued SFAS No 157, which provides a framework for fair value measurement.

One of the reasons why fair value is becoming more popular is that it is a superior measure of assets and liabilities than historical cost. Other advantages of using fair value may include the following: first, fair value provides up-to-date information in reporting assets and liabilities. Investors are more concerned with values than costs. Second, fair value provides a truer economic income, representing an unbiased measurement that is based on the market; thus, it is in agreement with the more widely accepted Hicksian definition of income. Third, fair value leads to more relevance and clarity in financial reporting. Last but not least, with the passage of time, historical prices may become irrelevant (Penman, 2007).

As stated in IFRS (IAS no. 16), fair value is allowed for measuring property plant and equipment, but it is not allowed under US GAAP, which allows only historical cost. The effect is reported value of property plant and equipment on the balance sheet is higher under IFRS; and the reported total assets are also higher. Notably, fair value is also allowed for revaluating intangible assets under IFRS (IAS no. 38), but it is not allowed under US GAAP. For example, IFAB allows development costs as well as subsequent expenditures on purchased in-process research and development cost to be capitalized if certain criteria are met. Reported intangible assets and total assets on the balance sheet, therefore, are higher. Development costs are capitalized under IFRS (IAS no. 38), but are expensed under US GAAP. Both intangible assets and development costs also cause reporting of higher total assets on the balance sheet under IFRS.

2.2 Previous research

A review of past studies found that comparing financial characteristics using financial ratios has been a popular methodology in both the finance and accounting literature for a long time. For example, Beaver (1968) and Altman (1968) used financial ratios to predict bankruptcy; Meric *et al.* (2002, 2004) used ratios to compare financial characteristics of EU and other manufacturing firms; and Sueyoshi (2005) used financial ratios to analyze the electric power industry.

As the emphasis of mandating IFAS is relatively recent, there has been little research analyzing the differences on financial statements of companies from countries using US GAAP as compared to those using IFRS. A few studies had examined the transitional effects on various components of the financial statements when companies change from local GAAP to IFAS. For example, Agca and Aktas (2007) examined specific ratios among countries to determine the effect on the financial statements for first-time users of IFRS under the provisions of the Turkish Capital Markets Board. They found only the change in the ratios of cash ratio ([liquid assets and marketable securities]/short term liabilities) and asset turnover were statistically significant. Fuibier *et al.* (2008) examined the effects of differences between companies that followed IFRS and US GAAP on leasing. There were minor changes in profitability ratios and valuation multiples, but it is worth noting here that the study was limited by various attributes.

Several studies had attempted to analyze changes in various measures of liquidity and return by examining the annual reports of firms operating in countries that had mandated IFRS. For example, Aubert and Grudnitski (2008) found significant differences in European companies' returns on assets computed under the newly mandated IFRS as compared to GAAP. For most countries, there were significant positive differences in the return on assets. Daske *et al.* (2008) found a market liquidity increase at the time of introduction of IFRS as well as a decrease in firms' cost of capital

and an increase in equity valuations. Platikanova (2007) also found liquidity changes in French, German, Swedish, and the UK companies after the adoption of IFRS, but noted that the changes decreased over times.

2.3 Hypotheses
The differences in reported inventory value and total assets theoretically have effects on financial ratios such as current ratio, inventory turnover ratio, asset turnover ratio, debt-to-asset ratio, and return on assets ratio[4], [5]. These financial ratios are defined as follows:

$$\text{Current ratio} = \frac{\text{total current assets}}{\text{total current liabilities}} \qquad (1)$$

$$\text{Inventory turnover ratio} = \frac{\text{cost of goods sold}}{\text{average inventory value}} \qquad (2)$$

$$\text{Asset turnover ratio} = \frac{\text{sales}}{\text{average total assets}} \qquad (3)$$

$$\text{Debt}-\text{to}-\text{asset ratio} = \left(\frac{\text{total debt}}{\text{total assets}}\right) \times 100 \qquad (4)$$

$$\text{Return on assets ratio} = \left(\frac{\text{income before extraordinary items}}{\text{total assets}}\right) \times 100 \qquad (5)$$

Inventory is a part of total current assets, and a higher inventory value increases the numerator of current ratio, while a lower inventory value decreases the numerator of current ratio. Thus, a higher inventory value increases current ratio, while a lower inventory value decreases current ratio. If reported inventory value is higher under IFRS, then current ratio is higher for firms from countries that adopt IFRS. A hypothesis stated in alternative form is as follows:

H1. IFRS firms have a significantly higher current ratio than GAAP firms.

During periods of inflation, firms using LIFO, instead of other inventory methods, report a lower inventory value on the balance sheet and a higher cost of goods sold on the income statement. Thus, a lower inventory value accompanied by a higher cost of goods sold results in a higher inventory turnover ratio. Conversely, a higher inventory value accompanied by a lower cost of goods sold results in a lower inventory turnover ratio. If reported inventory value is higher under IFRS, then inventory turnover ratio should be lower for firms from countries that adopt IFRS. A hypothesis stated in alternative form is:

H2. IFRS firms have a significantly lower inventory turnover ratio than GAAP firms.

Total assets have no effect on sales, the numerator of asset turnover ratio. They do, however, have effects on the denominator of asset turnover ratio. Higher total assets decreases asset turnover ratio, while lower total assets increases asset turnover ratio. If reported total assets are higher under IFRS, then asset turnover ratio is lower for

firms from countries that adopt IFRS. Two hypotheses stated in alternative forms are as follows:

> *H3.* IFRS firms have a significantly lower asset turnover ratio than GAAP firms.

> *H4.* IFRS firms have a significantly lower debt-to-asset ratio than GAAP firms.

Total assets affect the denominator but not the numerator of return on assets ratio. Higher total assets decrease the ratio, while lower total assets increase the ratio. If reported total assets are higher under IFRS, then return on assets ratio is lower for firms from countries that adopt IFRS. A hypothesis stated in alternative form is:

> *H5.* IFRS firms have a significantly lower return on assets ratio than GAAP firms.

3. Data
In this paper, financial characteristics of US GAAP firms are compared to those using IFAS by using financial ratios. Data were collected using the following parameters:

- Data are from 2001 to 2005.
- Data for US firms are from Research Insight database while data for Australian, French, German, Italian, and British firms are from Global Vantage database[6].
- Financial firms and utilities firms are excluded because they are different in nature from other firms, and their financial ratios are different from those of other firms (Hyland and Diltz, 2002). All other firms are retained for analyses[7].
- Collected data include total assets, total stockholders' equity, and sales for descriptive purposes, and current ratio, inventory turnover ratio, asset turnover ratio, debt-to-asset ratio, and return-on-assets ratio for impact analyses.

The final sample consists of 52,225 firm-year observations. 19,610 are IFRS firms, while 32,615 are GAAP firms. Among the IFRS firms, 5,860 are Australia firms, 2,890 are French firms, 2,905 are German firms, 1,205 are Italian firms, and 6,750 are British firms.

4. Results
Descriptive statistics regarding sales, total assets, and total stockholders' equity for each sample group (IFRS and GAAP), and for each country (Australia, France, Germany, Italy, the UK, and the USA) are reported in Table I. Mean values of IFRS firms are compared with mean values of GAAP firms using *t*-tests. Results indicate that US firms are significantly larger than IFRS firms in sales, total assets, and total stockholders' equity which can have an effect on the result.

In order to test the five hypotheses separately, five *t*-tests were performed, with the results reported in Table II. *H1*, *H3*, and *H4* are confirmed, i.e. firms from countries that adopt IFRS have a significantly higher current ratio, a significantly lower asset turnover ratio, and a significantly lower debt-to-asset ratio. *H2* regarding inventory turnover ratio is not confirmed since the *t*-value has a wrong sign. Inventory turnover for the companies using IFRS is substantially higher than for companies using US GAAP, even though large minorities of US GAAP companies are using LIFO for at least part of their cost flow assumptions in determining inventory. As indicated before, during periods of rising costs, companies using LIFO should have smaller values

			IFRS = 1							IFRS = 0				t-value for comparison of means
	Valid *n*	Mean	Median	Min.	Max.	SD	Valid *n*	Mean	Median	Min.	Max.	SD	
SALES	17,272	2,024.78	55.81	0	306,731	13,234.18	27,745	2,326.12	106.26	0	328,213	11,278.5	−2.58*
TA	17,463	2,121.95	55.88	0	219,516	12,367.32	27,830	2,919.32	129.84	0	750,507	16,517.08	−5.49*
SHE	17,462	676.48	23.75	−1,526	90,924	4,272.08	27,819	1,028.84	50.18	−25,869	206,313	5,582.36	−7.13*
Australia													
SALES	4,943	423.2	6.1	0	36,185	2,268.32							
TA	5,012	431.51	15.44	0	41,948	1,996.15							
SHE	5,012	197.17	9.98	−687	17,153	884.62							
France													
SALES	2,647	2,859.89	119.56	0	122,700	10,563							
TA	2,659	3,199.59	114.22	0	106,144	10,406.17							
SHE	2,659	933.69	39.41	−1,308	46,637	3,562.94							
Germany													
SALES	2,768	3,449.01	134.06	0	152,873	13,854.84							
TA	2,779	3,695.77	118.07	0	207,410	17,799.42							
SHE	2,778	869.86	40.59	−421	44,484	3,643.11							
Italy													
SALES	1,072	2,265.48	272.09	0	73,728	8,581.93							
TA	1,079	3,383.44	384.67	6	100,749	12,678.19							
SHE	1,079	677.25	123.74	−113	36,868	2,449.06							
UK													
SALES	5,842	2,282.53	47.25	0	306,731	18,841.8							
TA	5,934	2,100.42	47.14	0	219,516	14,708.89							
SHE	5,934	875.39	20.81	−1,526	90,924	6,307.24							

Notes: Significant at *p < 0.01; IFRS = 1 for firms from countries that adopt International Financial Reporting Standards (Australia, France, Germany, Italy, and UK), IFRS = 0 for US firms; SALES, sales; TA, total assets; SHE, stockholders' equity

Table I.
Descriptive statistics

| | IFRS = 1 | | | IFRS = 0 | | | t-value for comparison |
	Valid n	Mean	SD	Valid n	Mean	SD	of means
CR	17,381	4.34	29.90	27,180	3.30	14.20	4.92[*]
IT	12,394	58.05	725.56	19,455	31.57	276.72	4.59[*]
AT	16,333	1.05	1.03	26,306	1.09	1.26	−3.43[*]
DA	17,326	20.80	57.30	27,446	45.63	174.47	−18.12[*]
ROA	13,808	−18.86	2,267.35	22,786	0.82	239.69	−1.11

Notes: Significant at [*]$p < 0.01$; IFRS = 1 for firms from countries that adopt International Financial Reporting Standards, IFRS = 0 for US firms; CR, is current ratio; IT, is inventory turnover; AT, is asset turnover; DA, is debt-to-asset ratio; ROA, is return on assets

Table II.
t-tests

of inventories and greater cost of goods sold. Thus, given everything else equal, the inventory turnover should be greater for US GAAP companies. One explanation for this abnormality is the size differential between the two samples. First, as presented in Table I, the US GAAP firms are significantly larger, which may distort the ratios for comparison purposes. In addition, companies in European and Australian countries may be more likely to carry less inventory relative to the amount of sales or costs of goods sold, thus distorting the LIFO effect. *H5* is not supported as the *t*-value is not statistically insignificant, although with a correct sign. There may be a couple reasons why this *t*-value is not significant. First, firms using IASs in Europe and Australia may be slightly more profitable than US GAAP companies, which would mediate the effect of the increased value of total assets due to writing the assets up to fair value. Second, since US GAAP companies have the choice to use LIFO in valuing inventories, the increased charges to cost of goods sold will result in smaller net income figures, thus going in the opposite direction of the hypothesis.

Current ratio, asset turnover ratio, and debt-to-asset ratio are included in an ANOVA to test *H1*, *H3*, and *H4* separately and jointly. Inventory turnover ratio and return on assets ratio are excluded since their results reported in Table II are not consistent with *H2* and *H5*. Results of ANOVA are reported in Table III. They indicate that current ratio, asset turnover ratio, and debt-to-asset ratio separately and jointly confirm *H1*, *H3*, and *H4* since the univariate *F*-values and the multivariate *F*-value are statistically significant. Thus, by examining statistics separately and jointly, we see

| | Mean | | | | | |
	IFRS = 1	SD	IFRS = 0	SD	Univariate F	p-value
CR	4.07	29.97	3.20	8.24	19.19	0.00
AT	1.05	1.10	1.10	1.25	19.57	0.00
DA	20.15	44.61	45.04	174.13	318.78	0.00

Valid $n = 41,724$
Multivariate $F = 116.95$
$p < 0.01$

Notes: IFRS = 1 for firms from countries that adopt International Financial Reporting Standards; IFRS = 0 for US firms; CR, is current ratio; AT, is asset turnover; DA, is debt-to-asset ratio; note that the means are a little different from those in Table II because only 41,724 firm-year observations have all required data for ANOVA

Table III.
ANOVA

that IFRS firms have a significantly higher current ratio, a significantly lower asset turnover ratio, and a significantly lower debt-to-asset ratio.

In addition to ANOVA, a logit analysis and a probit analysis were performed to examine the joint classification power of current ratio, asset turnover ratio, and debt-to-asset ratio. Results are reported in Table IV. They indicate that current ratio, asset turnover ratio, and debt-to-asset ratio jointly classify firms into the two sample groups effectively since the χ^2-values are significant. The coefficients for the three ratios are all significant, with the correct signs indicating that $H1$, $H3$, and $H4$ are supported.

5. Conclusion

This paper has focused to examine the difference between IFRS and US GAAP firms in reporting inventory, property plant and equipment, intangible assets, and development costs. The general belief is that requirements by IFRS theoretically would lead to a higher reported inventory value and higher total assets. This paper empirically investigated the effects on inventory and total assets-related financial ratios of IFRS country firms (Australian, French, German, Italian, and British firms) versus GAAP country firms (US firms). Results using univariate and multivariate tests consistently indicate that IFRS-country firms have a higher current ratio, a lower asset turnover ratio, and a lower debt-to-asset ratio (significant at $p < 0.01$) than others. For some reasons, two ratios namely inventory turnover and return on assets show no significant differences between IFRA and US GAAP firms.

In conclusion, this paper provides some preliminary evidence of the differences between IFRS and US GAAP companies based on selected financial ratios. These dissimilarities may be due to the differences between IFRS and US GAAP in applying the accounting treatments for the selected ratios. However, these differences may also be caused by other factors that have not been accounted for in this paper. For example, the age of the company, management style, type of industry, profitability, and size of the companies as well as many other factors, may all affect the size and magnitude of financial ratios.

Even though the adoption of IFRS may not be the only cause of the differences in the financial characteristics of the two major governing bodies of accounting, differences between US GAAP and IFRS must be considered with the adoption of the new data requirements and information needs. IFRS represents the future of accounting in the USA. Hence, CPAs and financial analysts need to understand GAAP

	Logit	t-statistics	Probit	t-statistics
Valid n	41,724		41,724	
Intercept	-0.225	-13.41***	-0.184	-18.92***
CR	0.001	1.75*	0.001	2.47***
AT	-0.033	-3.44***	-0.021	-3.70***
DA	-0.008	-21.64***	-0.003	-21.42***
χ^2-value	924.51***		740.61***	

Notes: Significant at *$p < 0.10$, **$p < 0.05$, and ***$p < 0.01$, respectively; the dependent variable is IFRS; IFRS $= 1$ for firms from countries that adopt International Financial Reporting Standards, IFRS $= 0$ for US firms; CR, is current ratio; AT, is asset turnover and DA, is debt-to-asset ratio

Table IV.
Logit and probit analyses

differences to accurately interpret and audit IFRS and GAAP based financial reports. In addition, investors must be aware of these differences when investing in companies in international markets. Multinational firms must have a full understanding of these differences so that they will not impair their ability to defend their financial reports and raise capital in an international market. And finally, as we push for harmony between the boards, it will become even more significant to understand the differences between US GAAP and companies reporting under IFRS to make educated decisions in an international environment.

Notes

1. In anticipating the US adoption of IFRS or acceptance of IFRS as a reporting choice, a related question is "What are the effects on financial reports by switching from GAAP to IFRS?"

2. APB issued 31 Opinions until 1973. FASB has issued 160 Statements up to December of 2007.

3. A history of inflation accounting during the 1950s and 1960s is quite rich and voluminous and includes exposure drafts, discussion papers, and numerous texts and articles on the effects of inflation by such noted theorists and academicians as E.O. Edwards, P.W. Bell, R.T. Sprouse, M. Moonitz, R. Chambers, and R.R. Sterling, to name a few.

4. It is more logical to compare financial ratios than to compare inventory or total assets. Financial ratios are free of biases created by difference in firm size. Table I shows that IFRS firms are significantly smaller than GAAP firms in terms of total assets, sales, and total stockholders' equity.

5. It is defined by Research Insight database and Global Vantage database. The former database is for US firms, while the latter is for foreign firms. The acronyms are as follows in Research Insight and Global Vantage: current ratio is CR, inventory turnover ratio is INVX, asset turnover ratio is ATT, and debt-to-asset ratio is DAT.

6. Australia, France, Germany, and the UK are the founding countries of IASC (Ball, 2006) and support IFRS. These four countries and Italy require their listed companies to adopt IFRS.

7. Further deletion is avoided for keeping the maximum possible sample size. Outlier problems are handled by 1 percent winsorization (Barnett and Lewis, 1994).

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