

# Impacts of Moving to IFRS: Taiwan Experience

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Listed companies in Taiwan have been required to apply International Financial Reporting Standards (IFRS) on consolidated financial statements in two phases from the beginning of 2013 and 2015 respectively. The purpose of this paper is to illustrate the main differences between IFRS and GAAP and to explain the related process of the adoption of IFRS in Taiwan. The study also applies statistical data to analyze the impact of the adoption of IFRS on companies listed on the stock exchange. The results of the data analysis show that the adoption of IFRS had a significant effect on companies with regard to total asset values, total liabilities, shareholder equity, and industry net worth. The average value of total assets of all companies showed a small increase of 0.21% while liabilities increased by 2% on average and average shareholders' equity decreased slightly by 0.7%. Industry net worth fell on average by 0.52%. Beyond these averages, there was a significant difference in the impact of the IFRS between economic sectors. Finally, this paper looks at the implications of the adoption of IFRS for taxation, CPA examination questions, and education in Taiwan.

# **I Introduction**

The International Financial Reporting Standards (IFRS) has been developed by the International Accounting Standards Board (IASB) in order to more accurately reflect the economic status of businesses and improve transparency and comparability across sectors and companies. To follow the principles of the IASB, the Financial Supervisory Commission (FSC) of Taiwan announced in 2009 that Taiwan would adopt the International Accounting Standards in 2014. Many factors were considered by the FSC in making this decision, including improving the international evaluation of the capital market, strengthening the comparison of financial statements between domestic and international companies, attracting foreign investment, and reducing the cost of financing for domestic companies in the international capital market.

This study will examine the impact of this decision by first illustrating the main differences between IFRS and GAAP; It will then explain the process of IFRS adoption in Taiwan. Following this, actual statistical data will be applied to analyze the impact of the adoption of IFRS on various industries. Finally, this paper will discuss the implications of the adoption of IFRS for education and CPA exam questions and makes some concluding remarks concerning the adoption of IFRS in Taiwan.

## **II IFRS V.S. GAAP**

Generally speaking, IFRS has been developed by various organizations in recent years, including the Standing Interpretations Committee (SIC) of the International Accounting Standards, International Financial Reporting Standard (IFRS), and the International Financial Reporting Interpretations Committee (IFRIC) (Lai, 2008).

As Taiwan has for decades adopted GAAP rules, this change has had a huge impact on industry and on academia. This is fundamentally because IFRS is a principle-based accounting standard, unlike the U.S. GAAP, which is considered more rules-based (Cheng, 2008; Chou, 2010).

IFRS generally uses one of two measurement principles: the historical cost principle; or the fair value principle. Cheng (2008) points out that while the financial tsunami of 2008 has put the fair value accounting of IFRS to the most severe test it has ever faced, the development trend towards international standards that the adoption of IFRS represents has been ongoing for decades, and has too much momentum to be changed.

Selection of which principle, either rules-based or principles-based, to follow generally relates to trade-offs between relevance and faithful representation, making the choice non-trivial, as can be seen below.

### **1. Main Differences Between IFRS and GAAP**

International Financial Reporting Standards (IFRS) is the accounting method that is used in many countries across the world. It has some key differences from the Generally Accepted Accounting Principles (GAAP) implemented in the United States.

The largest difference between the US GAAP and IFRS is that IFRS is principle-based while GAAP is rule-based. Rule-based frameworks are more rigid and allow less room for interpretation, while principle-based frameworks allow for differences of interpretation.

There are pros and cons to both approaches, depending on how they are used. For example, allowing the use of a standard that fits within a “rule” but clearly does not represent the principle behind the standard is a flaw of the GAAP. Conversely, allowing the taking of an overly liberal interpretation of standards is a flaw of the IFRS.

**Table 1: Main Differences between IFRS and GAAP**

Items	IFRS	GAAP
Rules vs. Principles	Principle-based.	Rule-based.
Inventory Methods	LIFO method is not allowed.	LIFO method is allowed.
Inventory Reversal	The amount of the write-down can be reversed.	If the market value of the asset increases, the amount of the write-down cannot be reversed.
Development Costs	Development costs can be capitalized under IFRS, as long as certain criteria are met. This allows a business to leverage depreciation on fixed assets.	Development costs must be expensed the year they occur and are not allowed to be capitalized.
Intangible Assets R & D ; advertising costs	Takes into account whether an asset will have a future economic benefit as a way of assessing the value.	Recognizes assets at the fair market value and nothing more.
Income Statements	Extraordinary or unusual items are included in the income statement and not segregated.	Extraordinary or unusual items are separated and shown below the net income portion of the income statement.
Fixed Assets	Uses the revaluation model.	Uses the cost model.

Several key differences between IFRS and GAAP accounting are examined below.

(1) Rules vs. Principles

A major difference between IFRS and GAAP accounting is the methodology used to assess the accounting process. GAAP focuses on research and is rule-based, whereas IFRS looks at the overall patterns and is based on principles.

(2) Inventory Methods

Under GAAP, a company is allowed to use the LIFO method for inventory estimates. However, under IFRS, the LIFO method for inventory is not allowed. The LIFO valuation for inventory does not reflect an accurate flow of inventory in most cases, and thus results in reports of unusually low income levels.

(3) Inventory Reversal

GAAP specifies that if the market value of assets increases, the amount of the write-down cannot be reversed. Under IFRS, however, in this same situation, the amount of the write-down can be reversed. In other words, GAAP is overly cautious concerning inventory reversal and does not reflect any positive changes in the marketplace.

(4) Development Costs

A company's development costs can be capitalized under IFRS, as long as certain criteria are met. This allows a business to leverage depreciation on fixed assets. With GAAP, development costs must be expensed the year they occur and are not allowed to be capitalized.

(5) Intangible Assets

IFRS takes into account whether an asset will have a future economic benefit as a way of assessing its value. Intangible assets measured under GAAP are recognized at the fair market value and nothing more.

(6) Income Statements

Under IFRS, extraordinary or unusual items are included in the income statement and not segregated. However, under GAAP, they are separated and shown below the net income portion of the income statement.

(7) Fixed Assets

When it comes to fixed assets, such as property, furniture, and equipment, companies using GAAP accounting must value these assets using the cost model. The cost model takes into account the historical value of an asset minus any accumulated depreciation. IFRS allows a different model for fixed assets called the revaluation model, which is based on the fair value at the current date minus any accumulated depreciation and impairment losses.

2. IFRS around the World

The IFRS Foundation publishes the Pocket Guide of IFRS Standards to provide an overview of the progress towards the adoption of IFRS standards in 150 jurisdictions around the world, and it also includes information about the standards and the organization. The 2016 Pocket Guide summarizes key developments in standard-setting and notes a growing number of jurisdictions requiring the use of IFRS Standards. Of the 150 jurisdictions studied to date, 126 (84 %) require IFRS Standards for all or most domestic listed companies and financial institutions. Another 13 jurisdictions (9 %) permit or require the Standards for at least some of those entities (Pacter, 2017).

Table 2: IFRS Standards by Numbers

Region	Number of Jurisdictions				
	Jurisdictions in the region	Jurisdictions that require IFRS Standards for all or most domestic publicly accountable entities	Jurisdictions that require IFRS Standards as % of total jurisdictions in the region	Jurisdictions that permit or require IFRS Standards for at least some (but not all or most) domestic publicly accountable entities	Jurisdictions that neither require nor permit IFRS Standards for any domestic publicly accountable entities
Europe	44	43	98%	1	0
Africa	23	19	83%	1	3
Mddle East	13	13	100%	0	0
Asia-Oceania	33	24	73%	3	6
Americas	37	27	73%	8	2
Totals	150	126	84%	13	11
As % of 150	100%	84%		9%	7%

Source: Paul Pacter (3 May 2017), Pocket Guide of IFRS Standards: the global financial reporting language. <https://cdn.ifrs.org/-/media/feature/around-the-world/pocket-guide/pocket-guide-2017.pdf>

III The History of IFRS Adoption in Taiwan

In 2001 Taiwan government held an Economic Development Meeting and made the decision to converge with the IFRS. However, the Financial Supervisory Commission (FSC) of Taiwan only officially announced the Roadmap for full adoption of IFRS on 14 May 2009.

### 1. Process of Planned IFRS Adoption in Taiwan

According to the Roadmap, there were two phases for companies to adopt the IFRS. In the first phase, listed and financial companies were required to prepare IFRS financial statements beginning 2013, with 2012 included as a comparative statement. The second phase, in which non-listed companies and public offering companies were included in the adoption of IFRS, began in 2015.

In accordance with Phase I of the plan, listed companies, and financial institutions, with the exception of credit cooperatives, credit card companies, and insurance intermediaries, have since 2013 been required to prepare financial reports using IFRS as endorsed by the FSC. Early adoption was allowed in 2012 for those companies that met specific criteria and gained the approval of the FSC.

In Phase II, unlisted public companies (i.e., companies that are subject to the Securities and Exchange Act and the FSC’s supervision although their shares are not listed), credit cooperatives, credit card companies, and insurance intermediaries were permitted to apply IFRS starting in 2013, and were required to prepare financial reports using IFRS as endorsed by the FSC starting in 2015.

There are more than 1.4 million for-profit entities in Taiwan, of which only 2,200, some 2%, are listed, with the other 98% being small and medium-sized enterprises (SMEs). In 2015, the Ministry of Economic Affairs amended the Business Accounting Law and the Commercial Accounting Standards, and enacted the Enterprise Accounting Standards (EAS), effective January 1, 2016. The EAS is based on the IFRS framework, modified in accordance with Taiwanese domestic practices and laws. It is a set of accounting principles that share the same concepts as IFRS, but with simplified accounting policy choices and financial statement preparation.

To promote the IFRS for use in Taiwan, the FSC waved some requirements, and the mandatory effective dates of some standards were deferred beyond the effective dates adopted by the IASB. Notably, the requirements to revalue property, plant and equipment (IAS 16 Property, Plant and Equipment), intangible assets (IAS 38 Intangible Assets), and exploration and evaluation assets (IFRS 6 Exploration for and Evaluation of Mineral Resources) through other comprehensive income were eliminated.

Some conditions were imposed on using the deemed cost exemption described in IFRS 1 First-time Adoption of International Financial Standards. The effective dates of the following new/modified standards were deferred to 1 January 2015: IFRS 10 Consolidated Financial Statements, IFRS 11 Joint Arrangements, IFRS 12 Disclosure of Interests in Other Entities, IAS 27 Separate Financial Statements, IAS 28 Investments in Associates and Joint Ventures, and IFRS 13 Fair Value Measurement.

Table 3: Time Schedule for Adoption IFRS in Taiwan

Phase	Type	2010	2011	2012	2013	2015
Phase I	Listed (OTC, Exchange, emerging) Fin. Inst.	ROC GAAP		Early adoption was allowed	Required to prepare financial reports using IFRS	
Phase II	Unlisted public (Credit Cooperative, Credit Card)	ROC GAAP			Early adoption was allowed	Required to use IFRS
	Private companies			SMEs IFRS (SME, private entity)		

All companies that were covered in Phase I and Phase II now have to apply IFRS as endorsed by the FSC. Only domestic companies whose equity securities are also traded in another country may use IFRS as issued by the IASB. If a company decides to do so, it must disclose the reconciliation from IFRS as issued by the IASB to the IFRS as endorsed by FSC.

Private companies that are not subject to the Securities and Exchange Act nor the FSC's supervision, but are subject to the administration of the Ministry of Economic Affairs can choose to apply local standards (ROC GAAP) or IFRSs as endorsed by FSC.

## **2. Comparing Key Difference between IFRS and Taiwan's GAAP**

The financial accounting standards in Taiwan were formulated with reference to IAS starting in 1999. However, Taiwan did not immediately comply with later revisions of IAS, such as those regarding Financial Instruments. In addition, some IAS had specific standards on requirements, such as those relating to agricultural accounting, and Taiwan did not adopt these standards. At the end of May 2009, there were some significant differences between Taiwan's GAAP and IFRS.

**Table 4: Comparison between IFRS and Taiwan's GAAP (2009.5.31)**

Current GAAP	IFRSs
No. 1 Conceptual Framework for Financial Accounting and Preparation of Financial Statements	Framework: Framework for the Preparation and Presentation of Financial Statements IAS 1 Presentation of Financial Statements IAS 16 Property, Plant, and Equipment
No. 2 Leases	IAS 17 Leases
No. 3 Borrowing Cost	IAS 23 Borrowing Costs
No. 5 Long-term Investments under Equity Method	IAS 28 Investments in Associates
No. 6 Related Party Disclosures	IAS 24 Related Party Disclosures
No. 7 Consolidated Financial Statements	IAS 27 Consolidated and Separate Financial Statements
No. 8 Accounting Policies, Changes in Accounting Estimates and Errors	IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors
No. 9 Contingencies and Subsequent Events	IAS 10 Events after the Reporting Period IAS 37 Provisions, Contingent Liabilities, and Contingent Assets
No. 10 Inventories	IAS 2 Inventories
No. 11 Construction Contracts	IAS 11 Construction Contracts
No. 12 Accounting For Income Tax Credits	N/A
No. 13 Accounting by Debtors and Creditors for Troubled Debt Restructuring	N/A
No. 14 The Effects of Changes in Foreign Exchange Rates	IAS 21 The Effects of Changes in Foreign Exchange Rates
No. 15 Disclosure of Accounting Policies	IAS 1 Presentation of Financial Statements
No. 16 Preparation of Financial Forecasts	N/A
No. 17 Cash Flow Statements	IAS 7 Cash Flow Statements
No. 18 Accounting for Pensions	IAS 19 Employee Benefits IAS 26 Accounting and Reporting by Retirement Benefit Plans
No. 19 Development Stage Accounting	N/A
No. 20 Disclosure of Segments (in 2011 this will be replaced by No. 41 Operating Segments)	IFRS 8 Operating Segments
No. 22 Income Taxes	IAS 12 Income Taxes
No. 23 Interim Financial Reporting	IAS 34 Interim Financial Reporting
No. 24 Earnings Per Share	IAS 33 Earnings Per Share
No. 25 Business Combinations	IFRS 3 Business Combinations
No. 28 Disclosures in the Financial Statements of Banks	IFRS 7 Financial Instruments: Disclosures
No. 29 Accounting for Government Grants and Disclosure of Government Assistance	IAS 20 Accounting for Government Grants and Disclosure of Government Assistance
No. 30 Accounting for Treasury Stocks	N/A
No. 31 Interests in Joint Ventures	IAS 31 Interests in Joint Ventures



Current GAAP	IFRSs
No. 32 Revenue	IAS 18 Revenue
No. 33 Accounting for Transfers of Financial Assets and Extinguishments of Liabilities	IAS 39 Financial Instruments: Recognition and Measurement
No. 34 Financial Instruments: Recognition and Measurement	IAS 39 Financial Instruments: Recognition and Measurement
No. 35 Impairment of Assets	IAS 36 Impairment of Assets
No. 36 Financial Instruments: Disclosure and Presentation	IAS 32 Financial Instruments: Presentation IFRS 7 Financial Instruments: Disclosures
No. 37 Intangible Assets	IAS 38 Intangible Assets
No. 38 Non-current Assets Held for Sale and Discontinued Operations	IFRS 5 Non-current Assets Held for Sale and Discontinued Operations
No. 39 Share-based Payment	IFRS 2 Share-based Payment
No. 40 Insurance Contracts	IFRS 4 Insurance Contracts
No. 41 Operating Segments	IFRS 8 Operating Segments
Not Yet Applied.	IAS 29 Financial Reporting in Hyperinflationary Economies
N/A	IAS 40 Investment Property
N/A	IAS 41 Agriculture
N/A	IFRS 1 First-time Adoption of International Financial Reporting Standards
N/A	IFRS 6 Exploration for and Evaluation of Mineral Resources
Supersedes IAS 39 Classification of financial assets, not currently revised No. 34 under IFRS 9	IFRS 9 Financial Instruments

Source: Financial Supervisory Commission, R.O.C. Taiwan's International Financial Competitiveness, <https://www.fsc.gov.tw/en/home.jsp?id=6&parentpath=0>

### 3. University-sponsored Conferences on IFRS

In addition to the promulgation of IFRS by the regulators, the “IFRSs Working Group” was formed by the Taiwan Stock Exchange, Taipei Exchange to set up an IFRS information website<sup>1</sup> and coordinate with academic institutions, accountants, and the Bureaus of the FSC and other relevant entities including the CPA, the Accounting Research and Development Foundation (ARDF), the Taiwan Accounting Association (TAA), Universities, etc. to promote IFRS. University conferences played an important role in this process.

For example, The TAA, which was established in 1995 and is a non-profit organization under the jurisdiction of the Ministry of Internal Affairs of the Republic of China, has continuously sponsored conferences and teaching workshops on IFRS. From 2009 to the first quarter of 2017, the Financial Supervisory Commission (FSC) and related institutions, including the Taiwan Stock Exchange, Taipei Exchange, the Accounting Research and Development Foundation, and various universities, have held 42 IFRS publicity briefings. At least three of these were held by Soochow University.

As one of the organizers, Soochow University held conferences on IFRS in 2009 and 2011 with sponsorship from the TAA or the Taipei Exchange.



**Table 5: Soochow University Sponsored Conferences on IFRS**

Theme	Date	City/County	Organizer
Implementation and Challenges of International Accounting Principles	2009/12/17~2009/12/18	Taipei City	Soochow University
IFRS Educational Seminar	2011/12/19~2011/12/20	Taipei City	Soochow University
IFRS Teaching symposium	2011/8/31 ~ 2011/9/1; 2011/9/8 ~ 2011/9/9	Taipei City	Soochow University, Taipei Exchange, Taiwan Stock Exchange

#### 4. Challenges Facing Industry

Adopting IFRS posed a number of challenges in Taiwan. One challenge faced by industry in Taiwan was the translation of IFRS into Chinese. The First Committee of the FSC IFRS Task Force was responsible for the translation and final review of the Traditional Chinese-language version of IFRS. The translation project was completed before the end of 2011.

The FSC IFRS Task Force was also assigned responsibility over other aspects of the adoption of IFRS. For instance, the Fourth Committee of the FSC IFRS Task Force was responsible for professional training and public dissemination of IFRS-related information. They sponsored many workshops and classes that allowed practitioners to obtain updated knowledge regarding the adoption (Chou, 2010).

The Taiwan Accounting Research and Development Foundation (TARDF), the accounting standard-setting organization in Taiwan, also helped with many of the challenges of IFRS adoption. They published a journal for articles relating to the adoption of the IFRS, issued guidelines for usage, and provided translations of important documents. The TARDF, along with many educators, formed a Valuation Standards Committee to facilitate smooth transitions from historical cost principles to the fair value accounting of IFRS.

### IV Impact of the Conversion to IFRS on Industry in Taiwan

The conversion to IFRS has had a number of significant impacts on industry in Taiwan. In particular, the change in retained earnings due to the adjustment of the assessment of each asset and liability of the balance sheet for the first time adoption of IFRS may have potentially affected the company's shareholder equity and undistributed earnings.

There is some evidence to support this from overseas research. Iuliana Eugenia Georgescu et al. (2015) compare indicators from the financial statements reported according to the national regulations and the indicators reported according to IFRS using the results from the financial year 2011. This confirmed that introducing the IFRS influenced the results of listed companies in Romania. However, the analysis showed that the adjustments that the IFRS made on the Profit and Loss Statement did not depend on the company's assets. They also found that the impact on listed companies caused by adopting the IFRS differed greatly depending on the industry sector that the company was part of (the food sector, the energy sector, telecommunications, etc.).

To examine if a similar result was found in Taiwan, this paper surveyed 1145 listed companies in Taiwan using the database of the Taiwan Economic Journal. Accounts were retrieved from these companies'

consolidated financial statements, and market value was assessed to obtain the net worth, total assets, total liabilities, and other data of each company for Q3 2011 and Q3 2012. The changes between these two quarters were used to analyze the impact of the conversion to IFRS on total assets, total liabilities, and equities. The results are summarized in the following table.

### **1. Impacts Faced by Industries from the Conversion to IFRS**

The results of the analysis of the conversion to IFRS show that the average value of total assets of all companies surveyed only displayed a minor change, exhibiting a small increase of 0.21%. However, different industrial sectors showed very different impacts. The Paper and Pulp industry and the Finance and Insurance industry, for instance, increased by over 2%, while in contrast, the Building Material and Construction industry decreased by 3.33%.

With regard to the change in total liabilities, the average impact for all industries was a 2% increase. Within this, Electronic Products Distribution decreased by 0.05%, while Shipping and Transportation increased by 5.33%. Average shareholders' equity for all listed companies decreased slightly by 0.7%, with the Building Material and Construction decreasing by 9.95% and the Finance and Insurance increasing by 4.06%.

### **2. Impact of IFRS on Industry-Net Worth**

Using financial statements prepared in accordance with IFRS, this research carried out a comparison with indicators from the market to see how the net worth of each company was affected by IFRS. The results showed an average decrease of 0.52% in net worth for the whole sample of companies.

The average net worth in most industries showed a decrease, except for an increase in net worth in the Paper and Pulp sector, the Electrical and Cable sector, the Glass and Ceramic sector, the Trading and Consumers' Goods sector, and the Cement and Ceramics sector. Of all sectors, the total net worth of the Building Materials Construction industry decreased the most, -7.3%, which is between 3 to 7 times the decrease in other industries. With the exception of the Building Material and Construction industry, the effect on net worth of all industries was within 2%.

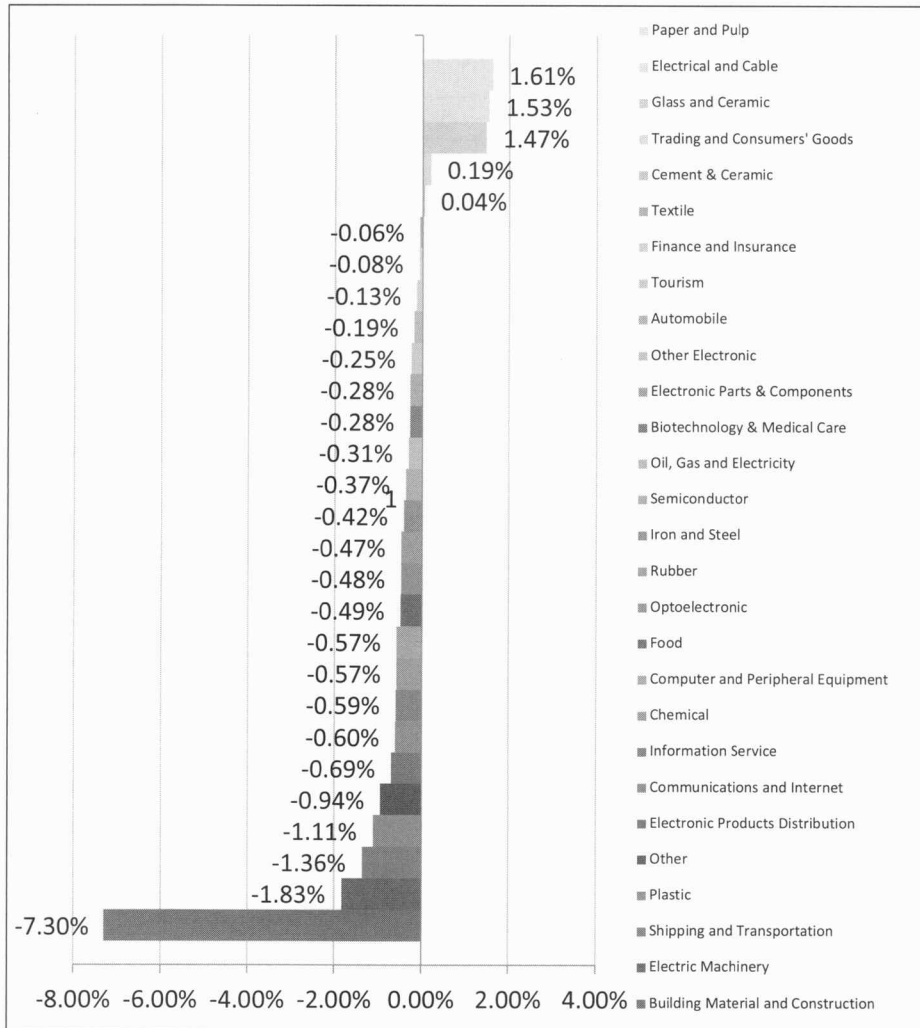
**Table 6: Impact of the Conversion to IFRS by Industry in Taiwan**

Unit: %

Industry	N	Total Assets	Total Liabilities	Equities
Cement & Ceramic	5	0.71%	1.58%	0.16%
Food	15	-0.27%	2.23%	-1.63%
Plastic	20	0.19%	2.47%	-1.23%
Textile	43	0.12%	1.21%	0.74%
Electric Machinery	56	0.78%	3.54%	-1.20%
Electrical and Cable	15	1.00%	0.69%	3.75%
Glass and Ceramic	3	0.53%	1.09%	-0.10%
Paper and Pulp	6	2.51%	1.10%	2.66%
Iron and Steel	34	0.55%	1.49%	0.07%
Rubber	5	-0.15%	1.78%	-1.27%
Automobile	6	0.60%	1.67%	-0.58%
Building Material and Construction	54	-3.33%	0.43%	-9.95%
Shipping and Transportation	18	1.06%	4.33%	-1.66%
Tourism	13	0.21%	2.89%	-0.69%
Finance and Insurance	64	2.26%	3.21%	4.06%
Trading and Consumers' Goods	12	-0.07%	1.13%	-1.80%
Biotechnology & Medical Care	56	0.20%	2.42%	-0.58%
Oil, Gas and Electricity	9	0.20%	0.54%	-0.03%
Chemical	32	0.38%	2.98%	-0.72%
Semiconductor	120	0.66%	3.20%	0.01%
Computer and Peripheral Equipment	91	0.29%	1.96%	-0.28%
Communications and Internet	61	0.05%	0.88%	-0.67%
Optoelectronic	94	0.05%	1.10%	-0.54%
Electronic Products Distribution	30	-0.31%	-0.05%	-0.62%
Electronic Parts & Components	144	0.06%	1.46%	-0.85%
Information Service	28	0.00%	3.14%	-1.64%
Other Electronic	54	0.22%	2.54%	-1.15%
Other	57	0.05%	1.88%	-1.21%
All Industry	1145	0.21%	2.00%	-0.74%

Source: Research by the author based on the database from the Taiwan Economic Journal.

Figure 1: Impact of the Conversion to IFRS on Net Worth



Source: Research by the author based on the database from the Taiwan Economic Journal

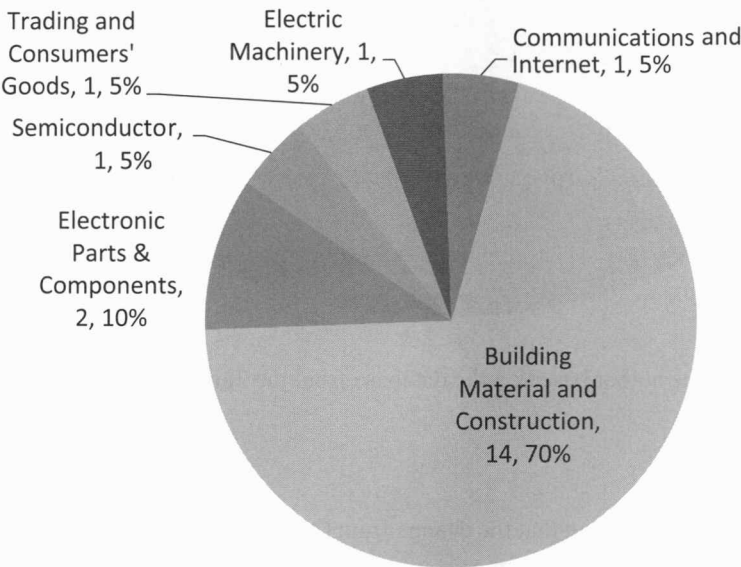
The net worth of the Building Material and Construction industry was affected by IFRS by as much as 7.3%. The main reason for this is that the IAS 11 standard has stricter conditions for the application of the “percentage of completion method”, meaning most domestic housing sales transactions can no longer be recognized by the “percentage of completion method”. In other words, the income that has been recognized by the original contractor but not yet completed is not recognized, which is the main cause of the significant decrease in net worth for this sector.

Looking at the difference in net worth by proportion of market value shows that the Building Material and Construction industry (31.26%), the Plastics industry (10.58%), the Semiconductor industry (7.17%), the Computer and Peripheral Equipment industry (7.16%), the Shipping and Transportation industry (5.28%), and the Optoelectronic industry (5.22%) accounted for a large proportion of the amount.

The plastics industry was the second-highest at 10.58%, and this was mainly due to the fact that Formosa Plastics, Nanya Technology, and Formosa Chemicals and Fiber increased their employee’s pension liabilities, and CPDC increased its estimated liabilities for decommissioning expenses.

The top 20 companies with the largest reduction in net worth by sector are shown in Figure 2. 14 of the top 20 are in the Building Material and Construction, 2 in Electronic Parts & Components, 1 in Semiconductor, 1 in Trading and Consumers' Goods, 1 in Electric Machinery, and 1 in Communications and Internet.

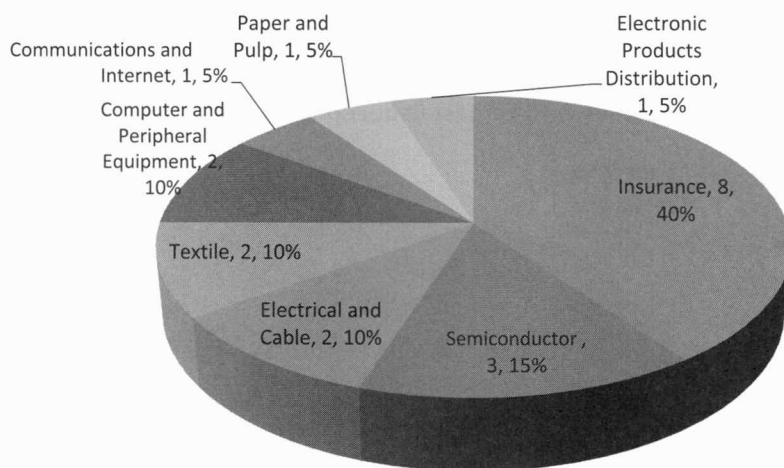
**Figure 2: Top 20 Companies with Largest Reduction in Net Worth by Sector**



Source: Research by the author based on the database from the Taiwan Economic Journal

The top 20 companies with the largest increase in net worth by sector are shown in Figure 3. It is worth noting that the Finance and Insurance industry accounts for 8 of the top 20 companies. IFRS 4, which was prescribed on March 31, 2004, did not apply to other assets and liabilities of an issuer, such as financial assets and financial liabilities within the scope of IAS 39 before 2006. This was amended under IFRS-IAS Financial Guarantee Contracts on 18 August 2005, effective for annual periods beginning on or after 1 January 2006. The increase in net worth of companies in the insurance industry is mainly due to the decrease in Insurance Contracts liabilities which results in an increase in the sector's net worth. Other areas impacted for insurers include the fair valuation rule on liabilities, the replacement of current locked-in assessment interest rates by risk-free discount rates, the mismatch of assets and liabilities, and other concrete implementation issues (Du, 2010).

**Figure 3: Top 20 Companies with the Largest Increase in Net Worth by Sector**



Source: Research by the author based on the database from the Taiwan Economic Journal

## V Discussion

From the above analysis, it can be seen that the change from GAAP to IFRS had a significant impact on companies' financial statements. Further, this impact was unevenly felt across the various sectors of the economy, with significant variations between sectors.

The ongoing implementation of IFRS continues to generate significant changes within accounting practices in Taiwan that have important implications for firms. Taking the "investment property" standard as an example, IAS 40 allows companies to use either the cost method or fair value method for subsequent measurement. However, in order to avoid excessive fluctuations in fair value which might cause financial reports to fail to reflect economic substance and other factors, companies were not allowed to choose the fair value method in 2013. Companies were allowed to adopt the fair value method one year later, and then they could evaluate and choose the accounting policy by themselves (Cheng and Huang, 2014).

These results have important implications in a number of areas, which are discussed below.

### 1. Impact of IFRS on Industry Taxation

An important implication of the transition to IFRS is the impact on taxation. Given the changes to company balance sheets brought about by the transition to IFRS, the potential for significant changes in taxation for companies is very high. It would be useful to analyze the effect of the change to IFRS on taxation, in terms of both the financial obligation of companies as well as on managerial decisions in order to fully understand the impact of this change.

For multinational companies, the taxation issues concerned are not limited to the region of Taiwan, and also include overseas branches and subsidiaries. For example, is the tax policy within the group affected by different accounting standards in different countries? Do the figures on financial statements impact its taxable income? In addition, in the case that the functional currency is not the local currency required by the tax law, will the company also be affected by various tax rules?

2. Impact of IFRS on CPA Exam Questions

The change to IFRS necessitated a change in CPA exam questions to ensure professional standards under the new regime. After a company adopts IFRS, it has a significant impact on accounting processing and accounting information systems, and it is necessary for the CPA examination to reflect this.

In order to collaborate with the campaign for enterprises to adopt IFRS, accounting-related subjects both in the local and national civil service examinations and CPA examination have included IFRS in their scope since 2012. Before this, Taiwan FSC made an official request to the Ministry of Examination in March 2010 to include IFRS contents in future CPA examinations. Chou (2010) indicates that, on average, IFRS-related questions made up more than 20% of total questions in Taiwanese CPA examinations during the period of 2005 to 2009.

IFRS content included in the scope of these examinations encompassed the following: No. 34 Financial Instruments: Recognition and Measurement, No. 35 Impairment of Assets, No. 37 Intangible Assets, No. 38 Non-current Assets Held for Sale and Discontinued Operations, and No. 39 Share-based payment (Chou, 2010).

Some consideration for the introduction of IFRS has been made in the CPA examination, as is detailed above. However, given the significant impact of the IFRS identified in this research, it is worth examining if this consideration is sufficient to ensure relevant Taiwanese professionals are adequately prepared for the IFRS, and if this should be strengthened in future CPA examinations.

Table 7: The Percentage of IFRS-related Questions in Taiwanese CPA Examinations

Year	Total %	Problems	Objective questions
2005	30%	20%	10%
2006	22%	20%	2%
2007	33%	25%	8%
2008	25%	15%	10%
2009	19%	15%	4%

3. Impact of IFRS on Education and Training

Just as the implementation of IFRS required an adjustment in the CPA examination, it is also crucial that the education and training of professionals in Taiwan incorporate due consideration for the IFRS to ensure the maintenance of professional standards. However, there are a number of challenges that remain in this area.

One important factor in this is the availability of textbooks. There are international-version IFRS English textbooks that can be used in tertiary education courses in Taiwan, but relatively few traditional Chinese textbooks. This represents a major barrier to education and training for the IFRS in Taiwan.

National universities and prestigious private universities prefer to use the international version of accounting textbooks, meaning it is easier for them to adjust to the new standards. However, most of the large number of private universities and universities of science and technology prefer to use Chinese-language accounting textbooks. These Chinese-language accounting textbooks only partially introduce the IFRS, meaning that many of the students enrolled in these education and training programs are not being sufficiently taught about the requirements of the IFRS.

Thus, the provision of Chinese-language textbooks or a major revision of how accounting education and training are carried out in private universities and universities of technology is an important area of the



adaptation to IFRS that needs further consideration.

In addition, the change to IFRS may also require educational changes with regard to teaching methods. Important issues for consideration include: emphasizing understanding the environment of the transaction; developing students' critical thinking, analytical skills, and professional skills; and using multiple learning methods such as case studies, role-playing, cross-debating, etc.

## VI Conclusion

In the era of globalization, the move towards the development of corporate accounting standards that are in the public interest, of high quality, easy-to-understand, and mandatory is an irresistible trend that Taiwan must adapt to. The introduction of IFRS in Taiwan was divided into two phases beginning in 2013 and 2015 respectively, and it was promoted for SMEs in 2016. After the introduction of IFRS, accounting principles and statements for companies show a significant change, as is detailed in this paper. This adoption of IFRS in Taiwan has a number of significant implications worthy of future study, including those relating to taxation, CPA examination questions, and education relating to IFRS. It is vital that these issues be fully understood for the future integrity of professional accounting standards and corporate governance in Taiwan.

### Annotation

- 1 The related URLs are linkable. <https://www.twse.com.tw/IFRS/about>; <https://www.sfb.gov.tw/ch/home.jsp?id=929&parentpath=0%2C2>; <http://www.ardf.org.tw/>

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