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## **Abstract**

This paper compares the association between transparency and firm value between U.S. and non-U.S. firms. I show that firm value is more sensitive to disclosure quality and corporate governance in global companies than in U.S. companies. I adopt and modify the Disaggregation Index by Chen et al. (2015), a measure of disclosure quality, and apply it towards global companies reporting under International Financial Reporting Standards (IFRS). By showing the differential effects of transparency on firm value, this paper sheds light on an important concern expressed by U.S. investors when investing in global equities, and aims to partly explain the difference in betas between U.S. and global firms. I hypothesize U.S. equity home bias to be the main driver of the difference in coefficients, but conclude that change in U.S. ownership is not sufficient in explaining the differential effects.

## **Keywords**

Disclosure quality, Corporate governance, International accounting, Home bias

## **Disciplines**

Business

COMPARING CORPORATE VALUE DISCOUNTS OF U.S. AND NON-U.S. FIRMS  
ASSOCIATED WITH LOWER TRANSPARENCY

By

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An Undergraduate Thesis submitted in partial fulfillment of the requirements for the  
WHARTON RESEARCH SCHOLARS

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## **ABSTRACT**

This paper compares the association between transparency and firm value between U.S. and non-U.S. firms. I show that firm value is more sensitive to disclosure quality and corporate governance in global companies than in U.S. companies. I adopt and modify the Disaggregation Index by Chen et al. (2015), a measure of disclosure quality, and apply it towards global companies reporting under International Financial Reporting Standards (IFRS). By showing the differential effects of transparency on firm value, this paper sheds light on an important concern expressed by U.S. investors when investing in global equities, and aims to partly explain the difference in betas between U.S. and global firms. I hypothesize U.S. equity home bias to be the main driver of the difference in coefficients, but conclude that change in U.S. ownership is not sufficient in explaining the differential effects.

Keywords: Disclosure quality, Corporate governance, International accounting, Home bias

## **I. INTRODUCTION**

Many studies highlight the negative association between firm value and disclosure quality (Lambert et al. 2007; Botosan 1997), as well as the relationship between corporate governance and firm value (Carter et al. 2003). Low disclosure quality and poor corporate governance have been shown to discourage investments, leading to lower equity prices. This research aims to connect investor's home bias with firm value discount due to lower transparency by comparing the magnitude of discount in U.S. and non-U.S. companies. This study hypothesizes that the magnitude of stock price discount will be significantly larger in foreign companies compared to that of U.S. companies. That is, although investors will pay less for less transparent firms in both markets, the punishment will be severe for global companies. There is much research on lower disclosure quality and discount in non-U.S. markets (Bradshaw et al. 2004; Zhou 2007), but this research will contribute to the literature by verifying that the magnitude of discount is different when comparing non-U.S. markets with U.S. markets. I expect that U.S. investors will be more sensitive to lower disclosure quality and poor corporate governance in foreign companies, leading to a greater degree of firm value discount. This research will address the concerns of U.S. investors on non-U.S. companies and suggest further research topics on the area.

The paper is structured as follows: section 2 reviews related literature, section 3 elaborates on the research approach and hypotheses, and section 4 discusses data and the research methods. Results are shown in section 5 followed by discussion on section 6. Section 7 concludes the paper.

## **II. LITERATURE REVIEW**

It is generally agreed upon in international finance that home bias exists for U.S. investors. This manifests via underinvestment in foreign equities due to higher informational costs (Bradshaw et al. 2004) or corporate governance concerns (Dahlquist et al. 2003; Carter et al. 2003). In addition, emerging market discounts, attributed to low information transparency and instabilities related to each country, are known to drive down stock prices of emerging markets to lower levels than their U.S. comparables. This research will show that companies in non-U.S. markets are being discounted more heavily based on disclosure quality and corporate governance, addressing a major concern of U.S. investors when investing abroad.

### **Home Bias**

Equity home bias is the phenomenon of individuals holding less than optimal level of foreign assets. Using CAPM, Lewis (1999) suggests that the foreign equity share in mutual funds are significantly below the level of the so-called “efficient frontier”, although the amount has been increasing in time. This implies that funds are not taking the option of what the CAPM suggests should be diversifying risks away for free. Various research has given possible explanations on this observation. Investing in foreign equity can be costlier due to difficulties in acquiring information about the market and the companies (Lewis 1999). Other research focuses on the poor quality and low credibility of accounting information of foreign companies, and evaluates the correlation between US ownership and US GAAP conformity level of foreign companies’ accounting information (Ahearne et al. 2004; Bradshaw et al. 2004). Dahlquist et al. (2003) links home bias with corporate governance, claiming that investor rights and ownership structure are more attributable to home bias while barrier to international investment is decreasing. Our research will focus on disclosure quality and corporate governance and how investors are more sensitive on

these issues when investing on foreign equities.

## **Disclosure Quality**

Prior research has introduced models and indices evaluating disclosure quality of financial statements. Singhvi and Desai (1971) suggest an index of disclosure using 34 questionnaires including number of years included in summary of important financial statistics, method of inventory valuation, information on labor contracts, inventory breakdown, et cetera. A more modern approach on evaluating disclosure quality is suggested by Chen et al. (2015). They propose using the level of disaggregation of accounting data in measuring disclosure quality. By counting the number of non-missing subaccounts in the Compustat data, Chen et al. came up with a disclosure measure using the entire balance sheet and income statement, which is distinctive from previous indices such as AIMR scores or the index by Botosan (1997), which focused on voluntary disclosures or only on certain parts of the financial statements, such as the Management Discussion and Analysis.

Further research has studied the relationship between higher disclosure level and lower cost of capital (Botosan 1997; Hearly et al. 1999). Disclosure quality is negatively correlated with analyst forecast dispersion, bid-ask spread, and cost of equity (Chen et al. 2015). Lambert et al. (2007) explain that the quality of accounting information affects firms' cost of capital in both direct and indirect ways, directly by altering market's perception about the dispersion of firms' future cash flows and indirectly by influencing the real decisions that companies make. This research will focus on the differential effect on firm value on U.S. and non-U.S. companies associated with disclosure quality, as measured by the Disaggregation Index proposed by Chen et al. (2015).

## **Corporate Governance**

Corporations have provisions to protect minority shareholders from expropriation by managers and controlling shareholders (La Porta et al. 2000). Shleifer and Vishny (1997) identify corporate governance as the ways financiers assure that they get return on their financial investments. Gompers et al. (2003) classify governance provisions into five categories of delay, protection, voting, state of incorporation, and other, to construct an index of corporate governance. They also show by using their index that better corporate governance leads to higher equity prices. Other research suggest that board diversity (Carter et al. 2003) and commitment to business ethics (Pae and Choi 2011) leads to higher firm value.

## **Non-US Markets**

Previous literature examines the disclosure qualities of emerging markets in various perspectives, including regulation, auditing standards, and management. Barth et al. (2008) studied how the application of International Accounting Standards (IAS) is associated with higher accounting quality in non-US markets. Zhou (2007) examined the effect of new auditing standards in China on informational asymmetry. Although new standards significantly lowered the bid-ask spread, Zhou showed that foreign ownership of those control groups did not change. Hail and Leuz (2009) examine the cost of capital of companies cross-listed in the U.S. and demonstrated that cross-listed firms have a lower cost of capital. Pae and Choi (2011) tested the correlation between corporate governance, management commitment to business ethics, and firm valuation for Korean corporations. Porta et al. (2006) evaluate disclosure regulations of various countries. Ball et al. (2000) focus on how international institutional factors affect properties of accounting earnings, while Isidro et al. (2016) attempt to revisit the country attributes that were shown to affect financial



reporting quality and tested their validity.

### **III. RESEARCH APPROACH AND MODEL**

Motivated by the previous literature connecting disclosure quality and corporate governance with firm value, this study will compare the slope of the regression between U.S. and non-U.S. companies. I expect that non-U.S. companies will exhibit a greater degree of firm value discount. I first reaffirm the relationship of disclosure quality and corporate governance with firm value in US and global companies, stated formally in the following hypotheses:

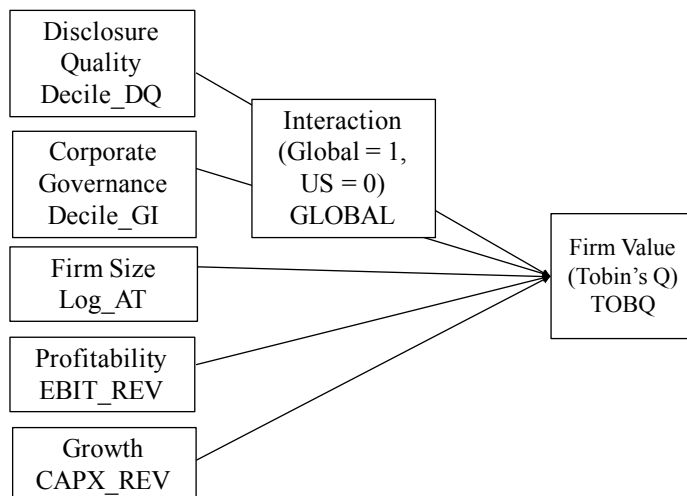
H1: Firm value is positively associated with disclosure quality for non-U.S. companies.

H2: Firm value is positively associated with corporate governance for non-U.S. companies.

Tests on H1 and H2 will show the association between transparency and firm value in a stand-alone setting. After confirming the correlation between the indices and firm value, I move on to test our main hypothesis, that the degree of firm value discount is greater in non-U.S. companies.

H3: Firm value discount due to lower disclosure quality is significantly larger in non-U.S. companies than in U.S. companies.

H4: Firm value discount due to poor corporate governance is significantly larger in non-U.S. companies than in U.S. companies.



<Figure 1: Research Model>

Figure 1 summarizes the main research model of this paper. I utilize an OLS Regression with dummy variables indicating U.S. or non-U.S. firms to show the differential slopes for disclosure quality and corporate governance between U.S. and non-U.S. firms. I include the natural log of total assets, EBIT-to-sales ratio, and ratio of capital expenditure to sales were added as control variables to control for firm size, profitability, and growth opportunities, respectively (Berger and Ofek 1995). The estimation model is as follows.

$$TOBQ_i = \beta_0 + \beta_1 Decile\_DQ_i + \beta_2 Decile\_GI_i + \beta_3 Global_i + \beta_4 DQ * Global_i + \beta_5 GI * Global_i + \beta_6 Log\_AT_i + \beta_7 EBIT\_REV_i + \beta_8 CAPX\_REV_i + \varepsilon_i$$

For non-US companies, I perform additional analyses regressing U.S. ownership on transparency to quantify the U.S. equity home bias related to disclosure quality and corporate governance.

## IV. DATA AND RESEARCH METHOD

### **Data on Disclosure Quality, Corporate Governance, and Firm Value**

Disclosure quality is measured using the Disaggregation Quality (DQ) proposed by Chen et al. (2015). This index is calculated as the proportion of non-missing Compustat subaccounts in both the balance sheet and the income statement. DQ captures the fineness of financial data and how detailed the disclosure information is. Finer information reduces information asymmetry and leads to more accurate valuation (Fairfield et al. 1996; Jegadeesh and Livnat 2006). DQ also captures the credibility of disclosure information, as management would have less discretion on its reporting numbers when it is reporting through more detailed subaccounts (Hirst et al. 2007; D'Souza et al. 2010). Chen et al. (2015) show that the index agrees with the previous information quality indices through validation tests examining association with analyst forecast dispersion, forecast accuracy, bid-ask spread, and cost of equity.

I use Disaggregation Quality (DQ) over other measures of information quality because of its subjectivity. DQ does not require any judgement by its users. Also, DQ could be easily replicated using the Compustat data, which includes disclosure data for a wide range of firms. Some adjustments were required on DQ for global companies since it is only applicable to firms under US GAAP. I replicated the process of identifying subaccounts and parent accounts in IFRS, and calculated DQ for balance sheet and income statement for global companies (Appendix A, B). Because IFRS tend to be more principles-based standards, as opposed to rules-based standards under U.S. GAAP, the number of subaccounts for IFRS in Compustat are smaller compared to US GAAP.

One of the most widely used measures of corporate governance is the Governance Index

proposed by Gompers et al. (2003). The Governance Index is simply the sum of numbers of provisions that restricts shareholder rights. The provisions are divided into five categories of Delay, Protection, Voting, Other, and State. There are total of 24 provisions that are tested, and this measure also does not require any judgement by the user. The Governance Index for US companies is accessible through ISS (formerly RiskMetrics). Since Governance Index is not available for global companies, WGI by World Bank, a country-level data on corporate governance is used instead. Global companies have different institutional and legal characteristics based on their domiciled country, and country-level characteristics are important factors of firm-level corporate governance (La Porta et al 2006; Henry 2000). Using country-level data on corporate governance might potentially introduce a problematic assumption that underlying governance level of companies in a given country is the same. Without finer firm-level data on governance, however, I cannot obtain a more detailed measure of firm-level corporate governance for non-U.S. firms.

Firm value is measured through Tobin's Q, which is calculated as Equity Market Value divided by Equity Book Value. Tobin's Q estimates how a firm is undervalued or overvalued. A higher Tobin's Q value indicate that the investors are willing to pay more than the company's book value for its equity.

## **Research Method**

I conduct OLS regression analyses to verify the association among DQ, Governance Index and Tobin's Q. After showing that DQ and Governance Index are correlated with firm value for both US and global companies, the coefficients of US and global companies are compared to test the main hypothesis. Since DQ for US firms and DQ for global firms are somewhat different, direct comparison cannot be made between the two groups. Rather, DQ for US firms and DQ for global

firms are categorized into deciles from the highest to the lowest. Here I am not making assumption that the average levels of disclosure quality in US and non-US countries are the same. Only the association between relative transparency within its group and firm value is tested.

The sample consists of 2,440 firm years, with 1,285 firm years of US companies in S&P Composite 1500 Index and 1,155 global companies included in S&P 700.

## V. RESULTS

Table 1 demonstrates the OLS regression result for U.S. companies. As hypothesized, disclosure quality measured by Disaggregation Quality is positively correlated with firm value. Corporate governance, on the other hand, did not show a statistically significant result. The OLS regression result for global companies is presented in Table 2 (H1, H2). As in U.S. companies, disclosure quality is again positively correlated with firm value; however, it is mildly significant. Corporate governance is not a statistically significant factor for global companies' firm value.

**Table 1: OLS Regression Results on US Companies**

|                  | coef    | Std err | t      | P >  t | [95.0% Conf. Int.] |        |
|------------------|---------|---------|--------|--------|--------------------|--------|
| <b>Const</b>     | 2.2768  | 0.226   | 10.086 | 0.000  | 1.834              | 2.720  |
| <b>Decile_DQ</b> | 0.0344  | 0.013   | 2.593  | 0.010  | 0.008              | 0.060  |
| <b>Decile_GI</b> | 0.0051  | 0.013   | 0.390  | 0.696  | -0.020             | 0.031  |
| <b>Log_AT</b>    | -0.1254 | 0.026   | -4.570 | 0.000  | -0.176             | -0.075 |
| <b>EBIT_REV</b>  | 0.5701  | 0.111   | 5.149  | 0.000  | 0.353              | 0.787  |
| <b>CAPX_REV</b>  | -0.0239 | 0.247   | -0.097 | 0.923  | -0.508             | 0.461  |

**Table 2: OLS Regression Results on Global Companies**

|                  | coef   | Std err | t     | P >  t | [95.0% Conf. Int.] |       |
|------------------|--------|---------|-------|--------|--------------------|-------|
| <b>Const</b>     | 3.4903 | 2.665   | 1.310 | 0.191  | -1.738             | 8.718 |
| <b>Decile_DQ</b> | 0.1484 | 0.099   | 1.506 | 0.132  | -0.045             | 0.342 |

|                  |         |       |        |       |         |        |
|------------------|---------|-------|--------|-------|---------|--------|
| <b>Decile_GI</b> | 0.2109  | 0.212 | 0.993  | 0.321 | -0.206  | 0.628  |
| <b>Log_AT</b>    | -0.3414 | 0.113 | -3.014 | 0.003 | -0.564  | -0.119 |
| <b>EBIT_REV</b>  | 14.6029 | 2.443 | 5.977  | 0.000 | 9.810   | 19.396 |
| <b>CAPX_REV</b>  | -8.1465 | 3.036 | -2.683 | 0.007 | -14.104 | -2.189 |

Table 3 shows the results of our main hypotheses (H3, H4). As expected, the interaction terms, DQ\*Global and GI\*Global, showed positive coefficients. DQ\*Global is statistically significantly associated with firm value, while GI\*Global is only marginally significant. These results support our model that the firm value of global companies are more sensitive to transparency. I also observe that the main effect of Decile\_DQ, which was positively significant in both US and non-US companies (Table 1, 2) goes away once the interaction term is included.

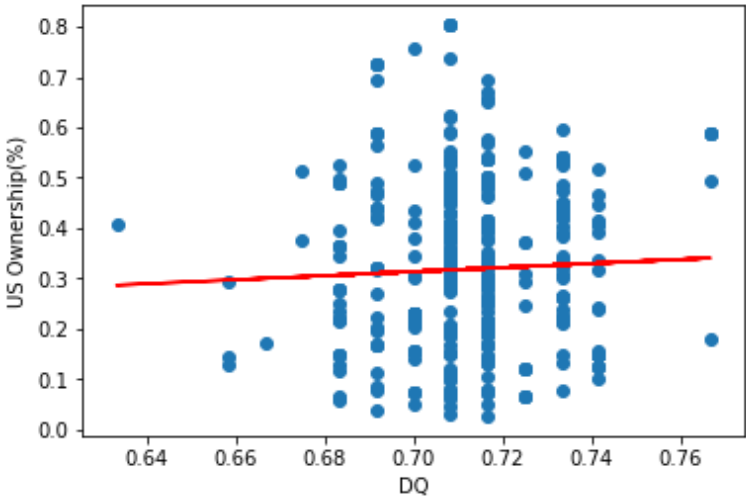
**Table 3: OLS Regression Results with Interaction Terms**

|                  | <b>coef</b> | <b>Std err</b> | <b>t</b> | <b>P &gt;  t </b> | <b>[95.0% Conf. Int.]</b> |        |
|------------------|-------------|----------------|----------|-------------------|---------------------------|--------|
| <b>Const</b>     | 4.1190      | 0.724          | 5.689    | 0.000             | 2.699                     | 5.539  |
| <b>Decile_DQ</b> | -0.0197     | 0.064          | -0.306   | 0.760             | -0.146                    | 0.107  |
| <b>Decile_GI</b> | 0.0446      | 0.063          | 0.708    | 0.479             | -0.079                    | 0.168  |
| <b>Global</b>    | -0.1863     | 1.429          | -0.130   | 0.896             | -2.988                    | 2.615  |
| <b>DQ*Global</b> | 0.1921      | 0.093          | 2.069    | 0.039             | 0.010                     | 0.374  |
| <b>GI*Global</b> | 0.2416      | 0.162          | 1.492    | 0.136             | -0.076                    | 0.559  |
| <b>Log_AT</b>    | -0.3516     | 0.067          | -5.219   | 0.000             | -0.484                    | -0.220 |
| <b>EBIT_REV</b>  | 1.4750      | 0.501          | 2.945    | 0.003             | 0.493                     | 2.457  |
| <b>CAPX_REV</b>  | -0.1633     | 1.054          | -0.155   | 0.977             | -2.229                    | 1.903  |

## VI. DISCUSSION

By testing our hypothesis, I examine whether the effect of transparency on firm value is greater in global companies. I perform additional analysis to discover the causes driving the difference in coefficients. The underlying assumption is that that global companies' firm value

will be more sensitive to their transparency level due to U.S. being more responsive to the transparency level of non-U.S. companies. Prior literature discussed on US investors' concerns on global companies in various aspects, focusing on higher informational costs. Bradshaw et al. (2004) show that accounting choices in global companies affect U.S. investors' behavior, while DeFond and Hung (2007) find that analysts provide cash flow forecasts more frequently in countries with poor investor protection. To examine the effect of U.S. equity home bias on the results, I perform a regression analysis of U.S. ownership proportion on disclosure quality. The regression showed a positive association between U.S. ownership and disclosure quality, however, the association was not statistically significant. Figure 2 depicts the fitted line between two variables.



<Figure 2: US Ownership on Disclosure Quality>

The additional analysis show that the difference in coefficients between U.S. and non-U.S. companies cannot be fully explained by U.S. equity home bias. Further research in this area should investigate the driver of the difference in coefficients. Another limitation in this study is the use of country-level data in measuring corporate governance for global companies. Although country-

level characteristics are shown to be important factors of firm-level corporate governance in global setting, it is clear that more detailed analysis would have been possible with firm-level data. The statistical significance on the association between governance and firm value might also be stronger with more granular firm-level data on global companies, rather than the more coarse country-level data.

## **VII. CONCLUSION**

I find that firm value is more sensitive to transparency in non-U.S. companies compared to U.S. companies. I also confirm the association among disclosure quality, corporate governance, and firm value after replicating Disaggregation Index (Chen et al. 2015) to the IFRS setting. The underlying presumption is that the U.S. equity home bias would be the major factor leading the difference in coefficients, however additional analysis showed that home bias is not sufficient in explaining the different slopes.

This research contributes to the existing literature by showing that companies in non-U.S. emerging markets are punished more heavily on lower disclosure quality and poor corporate governance compared to U.S. companies. This paper attempts to make meaningful connections by discussing transparency in US and global settings, as well as by connecting U.S. equity home bias to firm transparency. Further research can further explore the drivers of differential sensitivity of firm value on transparency and investigate further on U.S. investors' concern in investing on global equities. Comparison among various emerging markets to specify the investors sentiment on each market is also a plausible research topic, once firm-level data on corporate governance in non-U.S. firms is available.



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## Appendix A. Linking Table for Balance Sheet – IFRS

| SUB ACCOUNTS | DESCRIPTION                                      | PARENT | GROUP |
|--------------|--|--------|-------|
| CH           | Cash and Due from Banks                          | CHE    | ACT   |
| IVST         | Short-term Investments – Total                   | CHE    | ACT   |
| RECTR        | Accounts Receivable/Debtors – Trade              | RECT   | ACT   |
| RECCO        | Accounts Receivable/Debtors – Other              | RECT   | ACT   |
| INVRM        | Inventories/Stocks – Raw Materials               | INVT   | ACT   |
| INWIP        | Inventories/Stocks – Work in Progress            | INVT   | ACT   |
| INVFG        | Inventories/Stocks – Finished Goods              | INVT   | ACT   |
| INVO         | Inventories/Stocks – Other                       | INVT   | ACT   |
| XPP          | Prepaid Expense                                  | ACO    | ACT   |
| TSCA         | Treasury Stock (Current Assets)                  | ACO    | ACT   |
| ACOX         | Current Assets – Other Excluding Prepaid Expense | ACO    | ACT   |
| CHE          | Cash and Short-term Investments                  | ACT    | AT    |
| RECT         | Accounts Receivable/Debtors – Total              | ACT    | AT    |
| INVT         | Inventories/Stocks – Total                       | ACT    | AT    |
| ACO          | Current Assets – Other – Total                   | ACT    | AT    |
| PPEGT        | Property, Plant and Equipment (Gross) – Total    | PPENT  | AT    |
| DPACT        | Depreciation and Amortization (Accumulated) (-)  | PPENT  | AT    |
| IVGOD        | Investment Grants and Other Deductions (-)       | PPENT  | AT    |
| DC           | Deferred Charges                                 | AO     | AT    |
| TSTLTA       | Treasury Stock (Long-term Assets)                | AO     | AT    |
| UNL          | Unappropriated Net Loss                          | AO     | AT    |
| EA           | Exchange Adjustments (Assets)                    | AO     | AT    |
| AOX          | Assets – Other – Excluding Deferred Charges      | AO     | AT    |
| ACT          | Current Assets – Total                           | AT     | AT    |
| PPENT        | Property, Plant, and Equipment (Net) – Total     | AT     | AT    |

|       |   |      |     |
|-------|---|------|-----|
| IVAEQ | Investments and Advances – Equity Method                | AT   | AT  |
| IVAO  | Investments and Advances – Other                        | AT   | AT  |
| INTAN | Intangibles   | AT   | AT  |
| AO    | Assets – Other  | AT   | AT  |
| DD1   | Long-term Debt Due in One Year                          | DLC  | LCT |
| NP    | Notes Payable   | DLC  | LCT |
| XACC  | Accrued Expenses  | LCO  | LCT |
| TXP   | Taxes Payable   | LCO  | LCT |
| APO   | Accounts Payable/Creditors – Others                     | LCO  | LCT |
| PRODV | Proposed Dividends                                      | LCO  | LCT |
| LCOX  | Current Liabilities – Other – Excluding Accrued Expense | LCO  | LCT |
| MIB   | Redeemable Noncontrolling Interest                      | MIBT | LT  |
| MIBN  | Nonredeemable Noncontrolling Interest                   | MIBT | LT  |
| DLC   | Debt in Current Liabilities                             | LCT  | LT  |
| AP    | Accounts Payable  | LCT  | LT  |
| LCO   | Current Liabilities – Other                             | LCT  | LT  |
| LCT   | Current Liabilities – Total                             | LT   | LT  |
| TXDB  | Deferred Taxes (Balance Sheet)                          | LT   | LT  |
| DLTT  | Long-term Debt – Total                                  | LT   | LT  |
| MIB   | Minority Interest (Balance Sheet)                       | LT   | LT  |
| RVUTX | Reserves – Untaxed                                      | LT   | LT  |
| LO    | Liabilities - Other                                     | LT   | LT  |
| PSTKR | Preferred Stock – Redeemable                            | PSTK | SEQ |
| PSTKN | Preferred Stock – Nonredeemable                         | PSTK | SEQ |
| PSTK  | Preferred Stock - Total                                 | SEQ  | SEQ |
| CSTK  | Common Stock  | SEQ  | SEQ |
| SCO   | Share Capital - Other                                   | SEQ  | SEQ |

|        |  |     |     |
|--------|--|-----|-----|
| PRC    | Participation Rights Certificates                | SEQ | SEQ |
| TSTK   | Treasury Stock – All Capital – Total             | SEQ | SEQ |
| CAPS   | Capital Surplus/Share Premium Reserve            | SEQ | SEQ |
| RVLRV  | Revaluation Reserve                              | SEQ | SEQ |
| RE     | Retained Earnings                                | SEQ | SEQ |
| UNNP   | Unappropriated Net Profit (Shareholders' Equity) | SEQ | SEQ |
| ERO    | Equity Reserves – Other)                         | SEQ | SEQ |
| TRANSA | Cumulative Translation Adjustment                | SEQ | SEQ |

## Appendix B. Linking Table for Income Statement – IFRS

| SUB ACCOUNTS | DESCRIPTION                                  | GROUP |
|--------------|--|-------|
| COGS         | Cost of Goods Sold                           | XOPR  |
| XSGA         | Selling, General, and Administrative Expense | XOPR  |
| RAWMSM       | Raw Materials, Supplies and Merchandise      | XOPR  |
| STKCH        | Change in Stocks (-)                         | XOPR  |
| CAPCST       | Capitalized Costs (-)                        | XOPR  |
| XSTF         | Staff Expense – Total                        | XOPR  |
| XOPRO        | Operating Expense – Other                    | XOPR  |
| DFXA         | Depreciation of Fixed Assets (Tangible)      | DP    |
| AM           | Amortization of Intangibles                  | DP    |
| INTC         | Interest Capitalized                         | NOPI  |
| IDIT         | Interest and Dividend Income – Total         | NOPI  |
| NOPI         | Nonoperating Income (Expense)                | NOPI  |
| TXC          | Income Taxes – Current                       | TXT   |
| TXDI         | Deferred Taxes (Income Account)              | TXT   |
| TXO          | Income Taxes – Other                         | TXT   |

|       |                                   |     |
|-------|-----------------------------------|-----|
| EIEA  | Equity in Earnings – After Tax    | NIT |
| PACQP | Preacquisition Profits            | NIT |
| NIO   | Net Items – Other                 | NIT |
| DVP   | Dividends – Preferred             | DVT |
| DVC   | Dividends – Common/Ordinary       | DVT |
| DVSCO | Dividends – Share Capital - Other | DVT |

### **Appendix C. Linking Table for the Balance Sheet – US GAAP**

Refer to the Internet Appendix of Chen et al. (2015)