

# **The Earnings Management of Subsidiary Firm and the Role of Financial Holding Company: Evidence of Life Insurance Companies in Taiwan**

## **Abstract**

This paper studies the intervention of financial holding company (FHC) on the earnings management of its subsidiary life insurance company. Based on the data of life insurance companies in Taiwan, the result shows an insurance company behaves differently in earnings management if it is a subsidiary of an FHC. The FHC influences the subsidiary insurer's earnings management through the board directors which reduces the earnings management of the subsidiary insurer. Additionally, the empirical result confirms that the operational outcomes of FHC are significantly associated with the subsidiary insurer's earnings management. The subsidiary insurer conducts less earnings management when the parent FHC has better operational performance and better financial strength.

**Keyword:** earnings management, financial holding company, life insurance company, corporate governance, operational performance

# **The Earnings Management of Subsidiary Firm and the Role of Financial Holding Company: Evidence of Life Insurance Companies in Taiwan**

## **I. Introduction**

Conglomeration of financial institutions has become the trend in the global financial markets in recent years. The financial holding company (FHC) is then established to exploit the synergy of cross-selling and the advantage in capital efficiency, as Indicated by An (2006). In addition to the revenue increase from business expansion, business diversification may reduce the operational risk of the FHC. Boyd et al. (1993) find that the effect on reducing operational risk is better for a bank combing with an insurance company than the case of combining with a securities firm.

However, the independence in operations is a serious concern for the insurer in the process of conglomeration. Because in practice most of the FHCs are established primarily on a large bank, the performance guidelines given by the FHC might be not the best choice for the subsidiary insurer. Gaver and Pottier (2005) shows the informational relevance of credit ratings between the FHC and the subsidiary insurance company, and the FHC's financing strategies has an impact on the subsidiary insurer's solvency.

Life insurance premiums are important resource for liquidity and investment for the FHC as well as the subsidiary insurance company. Compared with bank deposits, life insurance policies are very long-term contracts and can bring in large and stable cash inflows. These huge insurance funds can greatly influence the performance of FHC, including profitability and operational risk, which is especially prominent during the period of financial crisis. The FHC may request support from the subsidiary insurer for the target earnings so as to maintain its investors because most of the FHCs are public listed firms. On the other hand, insurance industry is highly regulated to protect the policyholders. Solvency is the top consideration in insurance operations. Therefore, a subsidiary insurer sometimes encounters a dilemma between target earnings and solvency requirements.

Earnings management can be considered as purposely intervention in external financial statements in order to obtain private gains even though the deliberate accounting procedures are legitimate, according to Leuz et al. (2003). Healy and Wahlen (1999) summarize the motivations into three categories: (1) capital market motivations, (2) contracting motivations, and (3) regulatory motivations. Capital market motivation is a popular argument for earnings management because many empirical evidences show a significant connection between stock prices and the reported earnings, e.g., Anilowski, Feng and Skinner (2007). In practice the

compensation contracts for managers and the board directors are usually based on the reported earnings, which may induce motivation for earnings management as indicated by Gopalan and Jayaraman (2012).

Regulatory motivation is especially crucial for the insurers because they are subjected to special surveillance rules (e.g., IRIS and RBC).<sup>1</sup> Earnings management has been an important issue for insurance companies because it is directly associated with solvency and protection for policyholders. Grace and Leverty (2012) show there does exist manipulation in loss reserves, and weaker insurers more frequently under reserve in their liabilities. Gaver and Paterson (2000) and Nelson (2000) suggest that insurers in financial distress are more probable to manipulate loss reserves.

The techniques for earnings management in life insurance companies are more complicated than other industries because mortality risk is hard to forecast and the policy period of life insurance is very long-term. Therefore insurance companies in fact have larger space to managing earnings than other firms. It is interesting to discuss why the insurers conduct earnings management, in addition to study how to manage earnings (i.e. the techniques).<sup>2</sup>

The purpose of this paper is to investigate the influence of FHC on the subsidiary insurer's earnings management. Because the growth of life insurance industry is

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<sup>1</sup> IRIS=Insurance Regulatory Information System; RBC=Risk-based Capital.

<sup>2</sup> The techniques are usually discussed in the field of actuarial science.

higher than that of banks in Taiwan in the past decay, a great proportion of incomes of the FHC come from its subsidiary insurance company. Therefore the FHC has an incentive to request the subsidiary insurer to conduct earnings management in order to present good-looking financial statements.

This paper first analyzes whether an insurance company behaves differently in earnings management if it is a subsidiary of an FHC. Then, this paper compares the determinants of earnings management for the FHC-insurers and nonFHC-insurers. Next, this paper studies the influence of the FHC on the subsidiary insurer's earnings management by way of corporate governance, i.e., appointing the board members. Finally, this paper explores the relationship between the FHC's operational performance and the subsidiary insurer's earnings management.

Based on the quarterly data of life insurance companies in Taiwan during 2005-2017, the empirical result shows significant difference in earnings management between the FHC-insurers and other peers. The overall empirical evidences suggest that the intervention of FHC does significantly influence the earnings management of its subsidiary insurer. The intervention may be positive or negative. The FHC play a monitoring role through corporate governance and reduce the earnings management of the subsidiary insurer, especially the discretionary asset allocation and small loss adjustment. On the other hand, The FHC may request the subsidiary insurer to support

the FHC's operational outcomes through earnings management. The subsidiary insurer takes less earnings management when the parent FHC has better performance in operations and presents better financial strength.

The remainder of this paper is organized as follows. Section II reviews previous literature and develops the testing hypotheses. Section III presents sample data and research methodology. The empirical results are discussed in section IV, and then the conclusions are provided in section V.

## **II. Literature Review and Hypotheses Development**

According to Healy and Wahlen (1999), there are three motivations for earnings management: (1) capital market motivations, (2) contracting motivations, and (3) regulatory motivations. Capital market motivation is a frequently cited reason for earnings management. Anilowski et al. (2007) show empirical evidence of a significant relation between stock prices and reported earnings. Frankel et al. (1995) find that firms may conduct earnings management in order to raise their stock prices when the investors heavily rely on the reported earnings to evaluate the firm values.

Kross, Ro, and Suk (2011) provides evidence that firms having consistently met or beaten analysts' earnings expectations take more frequent earnings management forecasts than firms without that expectations. Most of the life insurance companies in

Taiwan are not public listed firms, but the FHC are. Since the FHCs in Taiwan are public listed firms and must face the pressure of stock price fluctuations, it is expected that the FHC will request its subsidiary insurer to support the financial goal of the FHC and satisfy the market expectation. Consequentially, the strategies of earnings management are expected to be different between the FHC-insurers and nonFHC-insurers. Furthermore, the determinants of earnings management for two groups of insurers are expected to be different. Therefore the testing hypotheses are as follows.

*H1: The FHC background has an impact on the insurer's earnings management.*

*H2: The determinants of earnings management are different between the FHC-insurers and nonFHC-insurers.*

Regarding contracting motivations, previous literature of agency theory indicates the compensations for the board directors and top management are usually connected with the reported earnings. Therefore they may deliberately adopt certain adequate accounting methods for earnings so as to maximize their compensations, as indicate by Healy (1985). That is, the managerial incentive is an important reason for earnings management. Since the compensations of the top-management of FHC are usually contingent on the total earnings of the FHC which are greatly contributed by the

subsidiary insurer, the insurer may conduct earnings management if its board members are the top-management (employees) of the parent FHC.<sup>3</sup> On the other hand, the FHC may appoint its top management as the board directors to monitor and enhance the corporate governance of the subsidiary insurer, as indicated by Ahn and Choi (2009) about bank's monitoring the borrowing firms. Besides, the board size is also an important factor in corporate governance. Ching, Firth, and Rui (2006) show that the larger board size is associated with more earnings management. On the other hand, Xie et al. (2003) show a negative relation between the board size and the degree of earnings management. Therefore this paper considers that corporate governance may affect the FHC-insurer's earnings management, and proposes the testing hypothesis as follows.

*H3: By way of corporate governance, the FHC has an impact on the earnings management of its subsidiary insurance company.*

In addition to corporate governance, the FHC might request its subsidiary insurer to conduct earning management due to the contracting motivation for debts. Because loan contracts are highly conditioned on the financial strength of a firm, a strong credit rating usually can reduce the cost of capital. It is reasonable to expect that

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<sup>3</sup> It is a popular practice in Taiwan that the FHC's CEO or other top management serves as the board director of the subsidiary companies.

managers may conduct earnings management to meet the requirements of the debtors, as shown by Bharath, Sunder and Sunder (2008). In addition to the debtors, the investors and shareholders are concerned with stock returns and firm values which are all highly related to earnings, as indicated by Lang et al (2012). The earnings of the FHC are a combined outcome of all the subsidiary firms including bank, insurance company, securities firm, etc. Since the growth of life insurance industry is higher than that of banks in Taiwan in the past decay,<sup>4</sup> a large proportion of incomes of the FHC come from its subsidiary insurance company. Therefore the FHC has an incentive to request the insurer to conduct earnings management in order to present good-looking financial statements.

Furthermore, the FHC may have regulatory motivations for requesting earnings management from its subsidiary insurer. Because insurance is a regulated industry, insurers must meet the legal requirement of capitals to avoid penalty or regulatory control. The risk-based capital (RBC) regulations may require the insurer to raise additional capitals which need funding from its parent FHC. Gaver and Pottier (2005) show that the subsidiary insurer's solvency can be affected by the FHC's financing strategies. Therefore it is possible that the FHC will request its insurer to conduct earnings management because of its own operational outcomes or financial strength.

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<sup>4</sup> Due to the low interest rate environment in the past decay, consumers in Taiwan withdraw their bank deposits to buy endowments and annuities from life insurance companies.

This paper proposes following hypothesis to test.

*H4: The operational outcomes and financial strength of FHC will influence the subsidiary insurer's earnings management.*

### **III. Sample Data and Research Methodology.**

#### **A. Sample and Data**

The empirical study is conducted based on the quarterly data of life insurance companies in Taiwan during 2005Q1-2017Q3. Four of the sample insurers are deleted because they are insolvent during the study period and one state-owned insurer is dropped because of its special organizational form. Finally there are nineteen life insurance companies included for the empirical study, and eight of them are FHC subsidiaries. All the data are retrieved from the public data sources, including Taiwan Economic Journal (TEJ), Taiwan Insurance Institute (TII), Market Observation Post System (MOPS), and Financial Supervisory Commission (FSC). The data for the variables are drawn from the annual reports and the financial statements of the insurance companies and the FHCs.

#### **B. Basic Model and Variables**

In order to investigate the impact of FHC on the earnings management, this

paper applies panel data models for the empirical studies with considerations of individual effects of firm or time, in addition to OLS regression. The model for testing hypothesis 1 is developed as equation (1) which includes an indicator for FHC subsidiary. The model for hypothesis 2 includes the variables of insurer shown as equation (2), which will be applied two subsets of data, FHC-insurers and nonFHC-insurers. Then model (3) includes the board composition variable of FHC-insider to test hypotheses 3. The model (4) is for hypothesis 4 regarding the impact of FHC operational outcomes on the subsidiary insurer's earnings management. The exact panel data models applied for the empirical study are based on the F test and the Hausman test to select the appropriate models for each hypothesis testing.<sup>5</sup>

$$EM_{it} = \alpha_i + \nu_t + \beta FHC_{it} + \sum \theta_j InsX_{ij} + \varepsilon_{it} \quad (1)$$

$$EM_{it} = \alpha_i + \nu_t + \sum \theta_j InsX_{ij} + \varepsilon_{it} \quad (2)$$

$$EM_{it} = \alpha_i + \nu_t + \beta FhcInsider_{it} + \sum \theta_j InsX_{ij} + \varepsilon_{it} \quad (3)$$

$$EM_{it} = \alpha_i + \nu_t + \sum \beta_k FhcX_{itk} + \sum \theta_j InsX_{ij} + \varepsilon_{it} \quad (4)$$

In the equations, the dependent variable  $EM_{it}$  is the earnings management

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<sup>5</sup> Since the panel data models may be fixed-effect or random-effect (Greene, 2000), the F test and the Hausman test are applied first to select the appropriate model for each case. In SAS software, F-value is to test null hypothesis  $H_0$ : no fixed effect, and Hausman is to test  $H_0$ : with random effect. If a model can pass both test, the model with highest explanation power ( $R^2$ ) is taken for the further empirical analysis.

strategy taken by insurer  $i$  in time  $t$ . The explanatory variable  $FHC_{it}$  is a dummy variable to indicate whether the insurer  $i$  is a subsidiary firm of an FHC in time  $t$ . The variable  $InsX_{ijt}$  is a variable  $j$  of the insurer  $i$  itself in time  $t$ . The variable  $FhcX_{ijt}$  is a variable  $j$  of the insurer  $i$ 's parent FHC in time  $t$ . The definitions of all the variables are shown in the appendix.

In literature there are many measurements for earnings management ( $EM$ ). Because of various motivations, as indicated in the above, the strategies of earnings management are quite different to reflect their purposes. After considering the features of financial industries and the data availability, this paper takes five proxies for the earnings management strategies of the insurer as follows.

#### 1. Available-for-sale Financial Assets Ratio ( $AFS$ )

Because of the accounting principle IAS39, the changes in the valuation of Available-for-sale Financial Assets will not be included in the net income of current period but just listed as other comprehensive income. The categorization of these assets is not strict but depending on the managerial discretion,<sup>6</sup> which gives an opportunity for earnings management. Usually the higher  $AFS$  implies the higher degree of earnings management.

#### 2. Earnings Smoothing ( $SMTH$ )

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<sup>6</sup> Some financial assets can be classified either as "Current Financial Assets at Fair Value through Profit or Loss" (CFAFV) or "Available-for-sale Financial Assets (AFIA). The changes in the value of CFAFV must show in the income statement of current period, but AFIA does not. Therefore the managers may categorize assets as AFIA to avoid the fluctuations of earnings on income statement.

According to An, Li and Yu (2016), managers incline to maintain stable streams of earnings due to the capital market motivation. *SMTH* is defined as the ratio of standard deviation of net income to standard deviation of cash flow, which measures the reduction in variations of earnings due to accrual accounting.

### 3. Small Loss Adjustment (*SLA*)

Regarding the approach of earnings management, Leuz, Nanda and Wysocki (2003) indicate that it is easier for the managers to adjust small loss than big loss because they only have limited authority. Besides, Burgstahler and Dichev (1997) find that firms may manipulate earnings to match the analyst prediction and satisfy market expectation. Since a big change in earnings may cause scrutiny of investors and/or even the regulators, we consider earnings management is more possibly done through small adjustment in earnings. “Small change” in earnings can be defined as the ratio *SLAR*, after-tax earnings /total assets, fall into a small range.

This paper uses a dummy variable *SLA* to represent earnings management strategy.  $SLA = 1$  if *SLAR* falls within the range  $[-0.0025, 0.0025]$ ,<sup>7</sup> which implies the insurer conducts earnings management so as to keep the earning ratio fluctuating within a small range, otherwise  $SLA=0$ .

### 4. Meet or Beat Expectations for EPS (*MBE*)

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<sup>7</sup> Leuz et al. (2003) suggest “small loss” as a loss within the range  $[-0.01, 0]$ , and a small profit as  $[0, 0.01]$ . However, for the insurance companies in Taiwan, we find  $[-0.0025, 0.0025]$  is a reasonable range after comparing with other ranges such as  $[-0.0015, 0.0015]$ ,  $[-0.002, 0.002]$ .

In order to satisfy the expectations of investors and increase firm value, the insurer may overstate the reported earnings, as indicated by Dechow and Skinner (2000). The change in earnings per share ( $\Delta EPS$ ) is usually relevant to earnings management. According to Lo, Ramos and Rogo (2017), firms may control changes in EPS to meet or beat prior year's earnings to satisfy market expectation. This paper uses a dummy variable *MBE* for the strategy of earnings management to “meet or beat expectations” of stakeholders.  $MBE = 1$  if  $\Delta EPS > 0.7$ ,<sup>8</sup> which implies the insurer possibly overstate EPS to meet the investors' expectation.

#### 5. A Composite Index for Earnings Management (*EMX*)

In addition to the individual measurement, this paper follows the study of An et al. (2016) and uses an integrated index for earnings management *EMX*, which is equal to the first principle component based on the above four individual measurements.<sup>9</sup>

Other explanatory variables include many variables related to the FHC and the insurer. The dummy variable *FHC*=1 if the insurer is a subsidiary of an FHC, otherwise *FHC* = 0. In literature corporate governance is usually represented by the board structure. The variables for corporate governance include the board size and the

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<sup>8</sup> We have considered several values for the  $\Delta EPS$ , such as 0.5 and 0.6, but the model using 0.7 has highest explanation power ( $R^2$ ).

<sup>9</sup> According to the principle component analysis,  $EMX = 0.179636AFS + 0.498740SMTH + 0.663068SLA + 0.528516MBE$ .

board independence. Jensen (1993) suggests that large board size can cause inefficiency. Suzan et al. (2012) also find a similar result that more directors can reduce the chance of earnings management.

Previous literature suggests that the independent directors of the board can reduce the agency conflicts, e.g., Chung and Wynn (2008). Dechow et al. (1996) show a higher chance of fraud in financial statements when the proportion of inside directors is more than 50% of the board. In this paper the board size (*Bsize*) and the board independence (*Indep*) are included in the model. Besides, the proportion of insiders on the board who are managers of FHC (*FH-insider*) are applied in the models to consider the intervention of FHC in the subsidiary insurer's corporate governance.

The operational outcomes of the FHC as well as the insurer may have an impact on the strategies of earnings management. In literature several variables are frequently applied for measuring operational outcomes of a firm. Return on assets (*ROA*) is a common measurement for performance in literature. Additionally, the variation of returns is also an important measurement for operations because operational stability usually can contribute to firm value. This paper follows the approach of de Haan and Poghosyan (2012) and takes the volatility of ROA as the proxy for operational risk.<sup>10</sup>

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<sup>10</sup> Although some literature also uses ROE to measure operational performance, this paper does not take it. Because some of the sample insurers are public listed, some are subsidiary of FHC, and some are branch office of foreign insurers, the purpose of these equity owners may be different.

Business diversification is the motivation for forming FHC, and is a distinguished character of FHC. Since the revenues of FHC come from its subsidiary firms, the Herfindahl index based on the revenues of subsidiaries is applied to measure the business diversification of FHC (*FH-DIV*). Business diversification of the insurer (*DIV*) is the Herfindahl index calculated based the premium incomes of four major product lines: life insurance, accident insurance, health insurance, and annuities.

Financial strength is an important determinant for insurance shopping because consumers are always concerned with solvency. Therefore three variables are included in the models for financial strength: liquidity (*Liquid*), asset size (*lnAsst*) and leverage (*Levg*). Ng (2011) and An et al. (2016) indicate liquidity and leverage are relevant factors for earnings management, and asset size is a control variable commonly used in most papers. The summary of the sample statistics is shown in the appendix.

#### **IV. Empirical Results**

The comparison of earnings management and other variables for the insurers is shown in table 1. The result shows that the earnings management through asset discretionary allocation (*AFS*) and income stablization (*SMTH* and *SLA*) of the FHC-insurers are significantly higher than that of the nonFHC-insurers, which is

consistent with the significant difference in the composite index of earnings management (*EMX*). The difference in earnings management for market expectations of EPS (*MBE*) is insignificant between the two groups of insurers. It is probably caused by the fact that most of the insurers are not publicly listed firms and thus have less pressure to meet or beat market expectations.

Regarding corporate governance, the result in table 1 shows that the FHC-insurers have significantly lower board independence and larger board size, which implies a less efficient board of directors. The difference in operational performance (*ROA*) is insignificant between the groups of insurers, but the operational risk (*StdROA*) of the FHC-insurers is significantly lower which suggests the affiliation with FHC can reduce operational fluctuations. The business diversification (*DIV*) of FHC-insurers is significantly lower, which probably is due to the concentration of target customers.<sup>11</sup> For the financial aspects, the asset size of the FHC-insurers is significantly higher than the peers, but not the liquidity and leverage.

*[ Table 1 Comparison of Earnings Management and Characteristics for Insurers ]*

The OLS regression result in table 2 shows that the FHC dummy has a significantly positive impact on the earnings management through discretionary asset

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<sup>11</sup> The customers of FHC-insurers primarily are the bank customers of the FHC.

allocation (*AFS*), earning smoothing (*SMTH*) and the composite index (*EMX*). This result supports hypothesis 1 that FHC background has an impact on the insurer's earnings management. Additionally, several firm characteristics are significantly associated with the earnings management, including board size, ROA, volatility of ROA, firm size, and leverage.

*[ Table 2 The Effect of FHC on Insurer's Earnings Management - OLS ]*

With consideration of the effects of individual firm and time, the result of panel-data model is show in table 3. The result shows that the FHC dummy has a significantly positive relation with the earnings management through income smoothing (*SMTH*). This result indicates that the FHC may prefer its subsidiary insurer to maintain stable earnings. Other strategies of earnings management are not significantly related to FHC background when panel-data model is applied, which probably is due to individual firm effect already including FHC background. This evidence suggests that individual effect of firm and time are important factors for insurer's earnings management.

The corporate governance also contributes to insurer's earnings management. The board independence can reduce the discretionary asset allocation (*AFS*) but increase income smoothing (*SMTH*). The board size is positively related to

discretionary asset allocation and negatively related to meeting market expectation (*MBE*). ROA is negatively related to small loss adjustment (*SLA*) and the composite index (*EMX*), which suggests that insurers with higher ROA will conduct less earnings management. The volatility of ROA is the most relevant factor for earnings management. All the five measurements are strongly related to the volatility of ROA. It is positively related to discretionary asset allocation, but negatively to other four measurements of earnings management.

Furthermore, business diversification and liquidity seem not associated with earnings management. Asset size has a negative impact on the discretionary asset allocation, income smoothing, and composite index, which implies large insurers conduct less earnings management. Leverage is positively related with income smoothing, small loss adjustment, and composite index, which indicates that insurers with higher leverage may take more earnings management.

*[ Table 3 The Effect of FHC on Insurer's Earnings Management - Panel-data ]*

A further analysis for the determinants of earnings management for the two groups of insurers is included in tables 4a and 4b, which shows different influential factors for the earnings management in insurance companies. The corporate governance (the board independence and the board size) has a significant impact on

earnings management through assets discretion (*AFS*) for the nonFHC-insurers, but not the FHC-insurers. ROA has a negative effect on small loss adjustment for non FHC insurer, but a positive impact on the *AFS* for FHC-insurer. The volatility of ROA is significantly and positively related to *AFS* for the nonFHC-insurers, but not the FHC-insurers. However, the effect of the ROA volatility is negative on the other four measurements of earnings management for both groups of insurers.

Business diversification (*DIV*) is not an important factor for earnings management of the nonFHC-insurers, but highly influential for the FHC-insurers. Liquidity has an impact on discretionary asset allocation for both groups of insurers, but the effect is opposite. The asset size also significantly influences the earnings management for both insurers, and the effects are similar. Leverage only has a significantly positive impact on income smoothing (*SMTH*) for nonFHC-insurers. On the other hand, leverage is significantly related to four other measurements of earnings management for FHC insurers, except for *SMTH*. In summary, the empirical evidence support hypothesis 2 that the determinants of earnings management are different between the two groups of insurers.

*[Table 4a The Determinants of Earnings Management for the nonFHC-insurers]*

*[Table 4b The Determinants of Earnings Management for the FHC-insurers]*

Table 5 shows that the effect of corporate governance on the earnings management of the FHC-insurers. The result shows that the proportion of the board directors who are employed in the parent FHC (*FH-Insider*) has a significantly negative impact on the insurer's earnings management through discretionary assets (*AFS*), small loss adjustment (*SLA*), and the composite index (*EMX*). This result implies the FHC-insider directors play a monitoring role to reduce its subsidiary insurer's earnings management. The board size only has a little positive effect on earnings management to meet market expectation, which implies a less efficient board may increase the chance of earnings management. In summary, corporate governance (especially the board independence) is an important factor for FHC-insurer's earnings management and hypothesis 3 is supported. The effects of other variables are similar to those in table 4b, and thus the discussion is omitted.

*[Table 5 Effect of Corporate Governance on FHC-Insurer's Earnings Management]*

The result in table 6 shows that the operational outcomes of the parent FHC are associated with the earnings management of its subsidiary insurer, in addition to the corporate governance indicated before. The FHC's operational performance (*FH-ROA*) has a significantly negative relation with the insurer's earnings management in small loss adjustment (*SLA*), meeting market expectation (*MBE*), and the composite index

(*EMX*). This evidence indicates that the subsidiary insurer take less earnings management when the parent FHC itself has better ROA since the subsidiary insurer is usually an important contributor to the profitability of the FHC. Besides, the volatility of ROA of the parent FHC is negatively related to earnings management by MBE and composite index, which suggests that the FHC present more fluctuations in ROA when the subsidiary insurer conducts less earnings management.

The result in table 6 also shows that subsidiary insurer takes more earnings management to meet market expectation (*MBE*) when the FHC has more diversified business. This evidence probably indicates the FHC would request the insurer to take earnings management to support other business. Furthermore, the insurer's earnings management in *AFS* is negatively related to the liquidity and the asset size of FHC, which implies that an FHC with better financial strength requires less earnings management from the subsidiary insurer. The earnings management in income smoothing (*SMTH*) is also negatively related to the asset size of FHC, which implies a larger FHC needs less managing earnings from its subsidiary insurer.

The leverage of FHC also has some connection with the insurer's earnings management in small loss adjustment (*SLA*) and market expectations (*MBE*). This evidence suggests that subsidiary insurer take less small loss adjustment but conducts more earnings management to meet market expectation when its parent FHC with

higher leverage (i.e., weaker financial strength). In summary, the result in table 6 support hypothesis 4 that the operational outcomes of the FHC will influence the subsidiary insurer's earnings management.

*[Table 6 Effect of FHC Operations on Subsidiary Insurer's Earnings Management]*

## **V. Conclusion**

The financial holding company (FHC) is established to exploit the advantages of cross-selling and capital efficiency. However, the FHC sometimes may intervene in the operations of the subsidiary firms. An insurance company might not be independent in its operations when it is a subsidiary of an FHC. Because the insurer's performance greatly contributes to the profitability and operational risk of the FHC, the FHC may request the subsidiary insurer's support to maintain its target earnings.

This paper investigates the influence of FHC on the subsidiary insurer's earnings management. The result shows an insurance company behaves differently in earnings management if it is a subsidiary of an FHC. The FHC can influence the subsidiary insurer's earnings management through corporate governance. By appointing its employees to be the board directors of the subsidiary insurance company, the FHC can monitor and reduce the earnings management of the subsidiary insurer.

Additionally, this paper explores the effect of the FHC's operational performance

on the subsidiary insurer's earnings management. The empirical result confirms that the operational outcomes of FHC are significantly associated with the subsidiary insurer's earnings management. The performance indicator ROA and the volatility of ROA of the FHC both are negatively associated with the subsidiary insurer's earnings management. That is, the subsidiary insurer takes less earnings management when the parent FHC performs better. The empirical result also indicates the insurer take less earnings management when the FHC presents better financial strength.

The overall empirical evidences suggest that the intervention of FHC does significantly influence the earnings management of its subsidiary insurer. The intervention may be positive or negative. The FHC play a monitoring role through corporate governance, i.e. the board of directors, and reduce the earnings management of the subsidiary insurer, especially in the discretionary asset allocation and small loss adjustment. On the other hand, The FHC may request the subsidiary insurer to support the FHC's operational outcomes through earnings management. These findings provide suggestions regarding informational relevance of reported earnings between the FHC and the subsidiary insurer.

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Table 1 Comparison of Earnings Management and Characteristics for Insurers

Variable	FHC-insurer		nonFHC-insurer		t Value	(Pr >  t )
	Mean	(std.dev)	Mean	(std.dev)		
<i>AFS</i>	0.9157	(0.0981)	0.8796	(0.1563)	-3.66	(0.0003)***
<i>SMTH</i>	-0.1251	(0.1702)	-0.2282	(0.2975)	-5.56	(<.0001)***
<i>SLA</i>	0.7634	(0.4258)	0.6626	(0.4734)	-2.80	(0.0053)**
<i>MBE</i>	0.6450	(0.4794)	0.6521	(0.4769)	0.19	(0.8524)
<i>EMX</i>	0.2331	(1.0857)	-0.1575	(1.2031)	-4.17	(<.0001)***
<i>Indep</i>	0.1310	(0.1276)	0.4342	(0.1933)	24.52	(<.0001)***
<i>Bsize</i>	11.9275	(4.9571)	8.5850	(2.3470)	-10.21	(<.0001)***
<i>ROA</i>	0.0428	(0.2867)	0.0449	(0.6230)	0.06	(0.9516)
<i>StdROA</i>	0.166	(0.1195)	0.2856	(0.3163)	6.57	(<.0001)***
<i>DIV</i>	0.3826	(0.1433)	0.4113	(0.1305)	2.56	(0.0106)*
<i>Liquid</i>	0.3450	(0.1647)	0.3454	(0.1706)	0.03	(0.9736)
<i>lnAsst</i>	20.1791	(1.6356)	19.3179	(1.2307)	-7.30	(<.0001)***
<i>Levg</i>	0.9514	(0.0176)	0.9491	(0.0344)	-1.14	(0.2562)

Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Table 2 The Effect of FHC on Insurer's Earnings Management- OLS model

EM model	<i>AFS</i> OLS	<i>SMTH</i> OLS	<i>SLA</i> OLS	<i>MBE</i> OLS	<i>EMX</i> OLS
<i>Intercept</i>	1.74971 (<.0001)***	-3.51070 (<.0001)***	-2.25183 (0.0034)**	2.27852 (0.0057)**	-7.95571 (<.0001)***
<i>FHC</i>	0.04899 (0.0041)**	0.09573 (0.0003)***	0.02272 (0.6941)	-0.01963 (0.7517)	0.26459 (0.0457)*
<i>Indep</i>	0.01823 (0.5763)	0.12169 (0.0165)*	0.07558 (0.4953)	0.16920 (0.1556)	0.57726 (0.0240)*
<i>Bsize</i>	-0.00770 (<.0001)***	-0.00635 (0.0121)*	0.00894 (0.1076)	0.01584 (0.0081)**	0.00780 (0.5402)
<i>ROA</i>	-0.05138 (<.0001)***	-0.00157 (0.9325)	-0.08035 (0.0501) <sup>+</sup>	0.01585 (0.7185)	-0.16307 (0.0825) <sup>+</sup>
<i>StdROA</i>	-0.16042 (<.0001)***	-0.23201 (<.0001)***	-0.45339 (<.0001)***	-0.58311 (<.0001)***	-1.95828 (<.0001)***
<i>DIV</i>	0.10921 (0.0110)*	-0.02509 (0.7042)	-0.02652 (0.8553)	-0.41878 (0.0075)**	-0.45626 (0.1713)
<i>Liquid</i>	0.04201 (0.2790)	0.03669 (0.5434)	-0.04316 (0.7433)	0.11886 (0.4012)	0.18527 (0.5428)
<i>lnAsst</i>	0.00298 (0.5357)	0.01812 (0.0156)*	-0.00821 (0.6150)	-0.10682 (<.0001)***	-0.08731 (0.0209)*
<i>Levg</i>	-0.92524 (<.0001)***	3.16853 (<.0001)***	3.30475 (<.0001)***	0.55781 (0.5036)	10.43704 (<.0001)***
R2	0.2006	0.3226	0.1564	0.1343	0.3076
F-test	15.31	28.37	11.31	9.47	26.46
(p-value)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
N	559	546	559	559	546

Regression coefficients are listed with p-values in the parentheses. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001. F-test is to test the model fitness for the OLS regression.

Table 3 The Effect of FHC on Insurer's Earnings Management – Panel-data model

EM model	<i>AFS</i> Fixed-2	<i>SMTH</i> Fixed-2	<i>SLA</i> Fixed-2	<i>MBE</i> Fixed-2	<i>EMX</i> Fixed-2
<i>Intercept</i>	4.191784 ( $<.0001$ )***	-0.55709 (0.6069)	-0.81581 (0.7313)	3.892012 (0.1024)	4.926669 (0.3567)
<i>FHC</i>	-0.01192 (0.5956)	0.315212 ( $<.0001$ )***	0.105762 (0.4925)	-0.1615 (0.2957)	0.538284 (0.1142)
<i>Indep</i>	-0.11655 ( $<.0001$ )***	0.284494 (0.0007)***	-0.22325 (0.2171)	0.101498 (0.5751)	0.078212 (0.8487)
<i>Bsize</i>	0.01294 (0.0010)**	-0.01145 (0.3823)	0.021269 (0.4274)	-0.05775 (0.0318)*	-0.04763 (0.4613)
<i>ROA</i>	0.00472 (0.4838)	-0.01736 (0.4023)	-0.11242 (0.0153)*	-0.05444 (0.2402)	-0.25751 (0.0120)*
<i>StdROA</i>	0.065491 ( $<.0001$ )***	-0.31124 ( $<.0001$ )***	-0.20994 (0.0273)*	-0.64498 ( $<.0001$ )***	-1.5693 ( $<.0001$ )***
<i>DIV</i>	-0.00171 (0.9600)	-0.1087 (0.3230)	0.06754 (0.7731)	-0.19494 (0.4063)	-0.2751 (0.6121)
<i>Liquid</i>	0.000406 (0.9900)	-0.0267 (0.7890)	-0.34491 (0.1208)	-0.12946 (0.5607)	-0.68847 (0.1624)
<i>lnAsst</i>	-0.14413 ( $<.0001$ )***	-0.07305 (0.0809) <sup>+</sup>	-0.07012 (0.4410)	-0.06668 (0.4645)	-0.49581 (0.0165)*
<i>Levg</i>	-0.58591 (0.0105)	1.600859 (0.0237)*	3.154646 (0.0442)*	-0.86579 (0.5808)	5.96321 (0.0873) <sup>+</sup>
R <sup>2</sup>	0.8429	0.4703	0.3239	0.3965	0.4815
F-value	30.43	2.02	1.84	3.23	2.43
(p-value)	( $<.0001$ )	( $<.0001$ )	(0.0002)	( $<.0001$ )	( $<.0001$ )
N	559	546	559	559	546

Regression coefficients are listed with p-values in the parentheses. "Fixed-2" means the model is 2-way fixed effect. F-test is for testing the null hypothesis of no fixed effect model. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Table 4a The Determinants of Earnings Management for the nonFHC-insurers

EM	<i>AFS</i>	<i>SMTH</i>	<i>SLA</i>	<i>MBE</i>	<i>EMX</i>
Model	Fixed-2	Fixed-2	Fixed-2	Fixed-2	Fixed-2
<i>Intercept</i>	3.726871 (<.0001)***	-1.66732 (0.4197)	3.164008 (0.4673)	11.26393 (0.0089)**	15.02327 (0.1346)
<i>Indep</i>	-0.12645 (0.0015)**	0.500938 (<.0001)***	-0.14872 (0.5620)	0.444066 (0.0792) <sup>+</sup>	0.929107 (0.1267)
<i>Bsize</i>	0.02336 (<.0001)***	-0.01687 (0.4211)	0.024996 (0.4883)	-0.04544 (0.2008)	-0.02623 (0.7965)
<i>ROA</i>	0.001815 (0.8184)	-0.01041 (0.6630)	-0.13743 (0.0080)**	-0.02811 (0.5788)	-0.27479 (0.0184)*
<i>StdROA</i>	0.075063 (<.0001)***	-0.2907 (<.0001)***	-0.1216 (0.2817)	-0.64694 (<.0001)***	-1.45307 (<.0001)***
<i>DIV</i>	-0.15599 (0.0065)**	-0.1973 (0.2752)	0.45025 (0.2247)	0.420101 (0.2494)	0.435518 (0.6194)
<i>Liquid</i>	0.198846 (0.0003)***	-0.0439 (0.7890)	-0.15769 (0.6568)	-0.22629 (0.5170)	-0.23283 (0.7700)
<i>lnAsst</i>	-0.14594 (<.0001)***	-0.06918 (0.4662)	-0.26442 (0.1753)	-0.38186 (0.0470)*	-1.05444 (0.0227)*
<i>Levg</i>	-0.14599 (0.6350)	2.905586 (0.0019)**	2.914449 (0.1462)	-2.95866 (0.1337)	6.14339 (0.1718)
R <sup>2</sup>	0.8716	0.5719	0.4039	0.4469	0.5127
F-Value	21.47	1.79	1.69	3.02	1.72
(p-value)	(<.0001)	(0.0012)	(0.0030)	(<.0001)	(0.0023)
N	332	319	332	332	319

Regression coefficients are listed with p-values in the parentheses. “Fixed-2” means the model is 2-way fixed effect. F-test is to test the null hypothesis of no fixed effect model. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Table 4b The Determinants of Earnings Management for the FHC-insurers

EM	<i>AFS</i>	<i>SMTH</i>	<i>SLA</i>	<i>MBE</i>	<i>EMX</i>
Model	Fixed-2	Fixed-1	Random-1	Random-2	Random-1
<i>Intercept</i>	3.738975 ( $<.0001$ )***	1.586737 (0.1731)	-4.0138 (0.0528) <sup>+</sup>	-0.58497 (0.7833)	-8.75289 (0.0573) <sup>+</sup>
<i>Indep</i>	0.169533 (0.0111) <sup>*</sup>	0.144555 (0.4101)	0.644876 (0.0232) <sup>*</sup>	0.199464 (0.4933)	1.736749 (0.0061)**
<i>Bsize</i>	-0.00245 (0.6729)	0.002562 (0.8793)	-0.00021 (0.9784)	0.014595 (0.0634) <sup>+</sup>	-0.00678 (0.6880)
<i>ROA</i>	0.077773 ( $<.0001$ )***	-0.07644 (0.1650)	-0.10246 (0.4098)	-0.19254 (0.1334)	-0.46762 (0.0912) <sup>+</sup>
<i>StdROA</i>	-0.04693 (0.1547)	-0.62816 ( $<.0001$ )***	-0.7414 (0.0029)**	-1.56487 ( $<.0001$ )***	-4.15484 ( $<.0001$ )***
<i>DIV</i>	0.082179 (0.0290) <sup>*</sup>	0.134161 (0.2423)	-0.46892 (0.0163) <sup>*</sup>	-0.6757 (0.0008)***	-1.09906 (0.0114) <sup>*</sup>
<i>Liquid</i>	-0.07435 (0.0407) <sup>*</sup>	0.06472 (0.4810)	-0.18674 (0.3650)	0.072355 (0.7331)	-0.1829 (0.6894)
<i>lnAsst</i>	-0.10053 ( $<.0001$ )***	-0.09096 (0.0014)**	0.012544 (0.6064)	-0.09912 (0.0001)***	-0.08865 (0.1021)
<i>Levg</i>	-0.91459 (0.0026)**	-0.03026 (0.9757)	5.062207 (0.0111) <sup>*</sup>	3.702771 (0.0704) <sup>+</sup>	12.41658 (0.0051)**
R <sup>2</sup>	0.8987	0.2378	0.2002	0.3460	0.4135
F-value	8.05	2.35			
(p-value)	( $<.0001$ )	(0.0247)			
Hausman			0.69	9.04	4.60
(p-value)			(0.9996)	(0.3388)	(0.7995)
N	227	227	227	227	227

Regression coefficients are listed with p-values in the parentheses. “Fixed-1” (or “Fixed-2”) means the model is 1-way (or 2-way) fixed effect. “Random-1” (or “Random-2”) means the model is 1-way (or 2-way) random effect. F-test is to test the null hypothesis of no fixed effect. Hausman test is to test the null hypothesis of with random effect. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Table 5 The Effect of Corporate Governance on FHC-Insurer's Earnings Management

EM	<i>AFS</i>	<i>SMTH</i>	<i>SLA</i>	<i>MBE</i>	<i>EMX</i>
Model	Fixed-2	Fixed-1	Random-1	Random-2	Random-1
<i>Intercept</i>	3.812815 (<.0001)***	1.749537 (0.1608)	-3.44355 (0.0941) <sup>+</sup>	0.126542 (0.9526)	-6.18749 (0.1733)
<i>FH-Insider</i>	-0.16394 (0.0154)*	-0.1351 (0.4450)	-0.61505 (0.0295)*	-0.14123 (0.6285)	-1.57714 (0.0118)*
<i>Bsize</i>	-0.00092 (0.8774)	0.003261 (0.8476)	0.001101 (0.8835)	0.015555 (0.0473)*	-0.00313 (0.8507)
<i>ROA</i>	0.076257 (<.0001)***	-0.08029 (0.1491)	-0.13928 (0.2595)	-0.18929 (0.1405)	-0.51908 (0.0581) <sup>+</sup>
<i>StdROA</i>	-0.04878 (0.1659)	-0.70045 (<.0001)***	-0.85791 (0.0008)***	-1.71961 (<.0001)***	-4.6296 (<.0001)***
<i>DIV</i>	0.097221 (0.0178)*	0.116089 (0.3404)	-0.41464 (0.0367)*	-0.75323 (0.0003)***	-1.14488 (0.0093)**
<i>Liquid</i>	-0.07794 (0.0416)*	0.041015 (0.6756)	-0.07627 (0.7194)	-0.0411 (0.8521)	-0.23662 (0.6143)
<i>InAsst</i>	-0.09981 (<.0001)***	-0.09061 (0.0017)**	0.007387 (0.7589)	-0.09948 (<.0001)***	-0.09715 (0.0691) <sup>+</sup>
<i>Levg</i>	-0.84901 (0.0061)**	-0.05823 (0.9537)	5.171149 (0.0094)**	3.199292 (0.1198)	11.65164 (0.0081)**
R <sup>2</sup>	0.8996	0.2461	0.2145	0.3596	0.4414
F-Value (p-value)	7.92 (<.0001)	1.99 (0.0581)			
Hausman (p-value)			0.66 (0.9996)	4.91 (0.7675)	2.77 (0.9478)
N	222	222	222	222	222

Regression coefficients are listed with p-values in the parentheses. "Fixed-1" (or "Fixed-2") means the model is 1-way (or 2-way) fixed effect. "Random-1" (or "Random-2") means the model is 1-way (or 2-way) random effect. F-test is to test the null hypothesis of no fixed effect. Hausman test is to test the null hypothesis of with random effect. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Table 6 The Effect of FHC Operations on Subsidiary Insurer's Earnings Management

EM	<i>AFS</i>	<i>SMTH</i>	<i>SLA</i>	<i>MBE</i>	<i>EMX</i>
Model	Fixed-2	Fixed-2	Random-1	Random-1	Random-1
<i>Intercept</i>	5.971165 ( $<.0001$ ) <sup>***</sup>	13.82091 ( $<.0001$ ) <sup>***</sup>	2.979926 (0.2429)	-3.35303 (0.1698)	-3.27172 (0.5309)
<i>FH-Insider</i>	-0.32707 ( $<.0001$ ) <sup>***</sup>	0.503953 (0.0867) <sup>+</sup>	-0.47076 (0.0798) <sup>+</sup>	-0.2498 (0.3237)	-1.39691 (0.0106) <sup>*</sup>
<i>Bsize</i>	-0.01672 (0.0050) <sup>**</sup>	-0.01839 (0.4316)	0.010634 (0.3231)	0.020792 (0.0127) <sup>*</sup>	0.015177 (0.3895)
<i>FH-ROA</i>	0.003203 (0.9350)	0.171751 (0.2566)	-2.12966 ( $<.0001$ ) <sup>***</sup>	-0.66607 (0.0149) <sup>*</sup>	-3.85732 ( $<.0001$ ) <sup>***</sup>
<i>FH-StdROA</i>	-0.08805 (0.2388)	-0.18073 (0.5300)	-0.45887 (0.3455)	-2.48889 ( $<.0001$ ) <sup>***</sup>	-4.38835 (0.0002) <sup>***</sup>
<i>FH-DIV</i>	0.057589 (0.2942)	0.144514 (0.4754)	-0.35015 (0.2125)	1.035879 (0.0001) <sup>***</sup>	0.866992 (0.1294)
<i>FH-Liquid</i>	-0.35628 (0.0001) <sup>***</sup>	-0.24492 (0.4818)	0.263225 (0.5810)	-0.61252 (0.1936)	-0.12074 (0.9060)
<i>FH-lnAsst</i>	-0.16709 (0.0005) <sup>***</sup>	-0.56285 (0.0030) <sup>**</sup>	0.090325 (0.2725)	0.012712 (0.8594)	0.091176 (0.5538)
<i>FH-Levg</i>	-0.89933 (0.1205)	-1.75695 (0.4496)	-3.7382 (0.0848) <sup>+</sup>	4.016359 (0.0618) <sup>+</sup>	3.395491 (0.4592)
R <sup>2</sup>	0.8714	0.3821	0.3264	0.3322	0.4226
F-Value (p-value)	6.33 ( $<.0001$ )	1.59 (0.0137)			
Hausman (p-value)			3.99 (0.8582)	2.07 (0.9789)	7.33 (0.5017)
N	226	226	229	229	224

Regression coefficients are listed with p-values in the parentheses. "Fixed-2" means the model is 2-way fixed effect. "Random-1" means the model is 1-way random effect. F-test is to test the null hypothesis of no fixed effect. Hausman test is to test the null hypothesis of with random effect. Significance levels: + p<0.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

## Appendix

Table A1. Definition of Variable

Variable	Definition
$AFS_{it}$	$= AFIA / (CFAFV + AFIA)$ for insurer $i$ in time $t$ CFAFV=Current Financial Assets at Fair Value through Profit or Loss AFIA= Available-for-sale Financial Assets
$SMTH_{it}$	$= -\sigma$ (net income) / $\sigma$ (cash flow) for insurer $i$ in time $t$ $\sigma$ =standard deviation
$EM_{it}$	$SLA_{it}$ $= 1$ if $SLAR_{it}$ within $[-0.0025, 0.0025]$ for insurer $i$ in time $t$ , $= 0$ otherwise. SLAR=after-tax earnings/total al assets
$MBE_{it}$	$= 1$ if $\Delta EPS_{it}$ within $[-0.7, 0.7]$ for insurer $i$ in time $t$ , $= 0$ otherwise. $\Delta EPS_{it} = EPS_{it} - EPS_{it-1}$ , $EPS$ =earnings per share before abnormal profit or loss
$EMX_{it}$	$=$ first principal component of (AFS, SMTH, SLA, MBE) for insurer $i$ in time $t$ , $= 0.179636AFS + 0.498740SMTH + 0.663068SLA + 0.528516MBE$ .
$FHC_{it}$	$= 1$ if the insurer $i$ in time $t$ is a subsidiary of FHC, $= 0$ otherwise.
$Indep_{it}$	$=$ number of independent directors/ total number of directors on the board for insurer $i$ in time $t$
$Bsize_{it}$	$=$ total number of directors on the board for insurer $i$ in time $t$
$FH-Insider_{it}$	$=$ number of directors employed in the parent FHC / total number of directors on the board for insurer $i$ in time $t$
$ROA_{it}$ ( $FH-ROA_{it}$ )	$=$ [net income + interest expense*(1-t)] *100/ mean assets for insurer (FHC) $i$ in time $t$ (tax rate $t=17\%$ )
$StdROA_{it}$ ( $FH-StdROA_{it}$ )	$=$ standard deviation of ROA for time $[t-3, t]$ for insurer (FHC) $i$ in time $t$
$ROE_{it}$ ( $FH-ROE_{it}$ )	$=$ [net income*100/mean net worth] for insurer (FHC) $i$ in time $t$
$StdROE_{it}$ ( $FH-StdROE_{it}$ )	$=$ standard deviation of ROE for time $[t-3, t]$ for insurer (FHC) $i$ in time $t$
$DIV_{it}$	$= 1 - \sum (\text{premium}_j / \text{total income})^2$ $j$ is the $j$ -th product line of the insurer, including life insurance, health insurance, accident insurance, and annuity.

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$FH-DIV_{it}$	$= 1 - \sum (\text{income}_k / \text{total income})^2$ k is the subsidiary K of the FHC
$\frac{Liquid_{it}}{(FH-Liquid_{it})}$	= current assets / total assets for insurer (FHC) i in time t
$\frac{lnAsst_{it}}{(FH-LnAsst_{it})}$	= ln (total assets) for insurer (FHC) i in time t
$\frac{Levg_{it}}{(FH-Levg_{it})}$	= total liabilities / total assets for insurer (FHC) i in time t

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The variables  $X$  and  $FH-X$  have the same definition; however,  $X$  is the measurement for the insurer and  $FH-X$  is for the FHC.

Table A2 Summary of the Sample Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
<i>AFS</i>	666	0.89364	0.13766	0.31395	1.00000
<i>SMTH</i>	640	-0.18664	0.25879	-2.73000	0
<i>SLA</i>	674	0.70178	0.45782	0	1.00000
$\Delta$ <i>EPS</i>	673	0.03141	1.13732	-4.71000	7.00000
<i>MBE</i>	673	0.64933	0.47753	0	1.00000
<i>EMX</i>	635	0	1.17210	-5.87669	1.29644
<i>FHC</i>	674	0.38872	0.48782	0	1.00000
<i>Indep</i>	674	0.31634	0.22585	0	0.88889
<i>Bsize</i>	674	9.88427	3.94369	5.00000	21.00000
<i>ROA</i>	674	0.04410	0.51853	-4.40000	3.78000
<i>StdROA</i>	620	0.23744	0.26202	0.02000	2.05000
<i>ROE</i>	674	0.15965	13.02900	-149.56000	67.17000
<i>StdROE</i>	620	6.32187	8.87234	0.31000	82.70000
<i>DIV</i>	616	0.40020	0.13617	0.04350	0.73324
<i>Liquid</i>	674	0.34525	0.16823	0.05015	0.88310
<i>lnAsst</i>	670	19.65468	1.46356	15.70008	22.51463
<i>Levg</i>	674	0.95004	0.02908	0.79858	1.00432
<i>FH-Insider</i>	253	0.87221	0.12521	0.66667	1.00000
<i>FH-ROA</i>	253	0.14909	0.11381	0	0.73000
<i>FH-STDROA</i>	253	0.07590	0.05931	0.00577	0.29193
<i>FH-ROE</i>	253	2.36079	1.83304	0	17.05000
<i>FH-STDROE</i>	253	1.26215	1.15783	0.09416	8.15496
<i>FHDIV</i>	253	0.30795	0.18403	0.05714	0.72394
<i>FH-Liquid</i>	253	0.19398	0.07914	0.08827	0.48247
<i>FH-lnAsst</i>	314	21.74744	0.54565	20.10463	22.88918
<i>FH-Levg</i>	253	0.93689	0.02080	0.83500	0.96820