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The Role of Technical Reserves and Investments in Income Smoothing Operations: Empirical Evidence in Insurance Companies Operating in the Gulf Cooperation Council Countries

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Abstract: The process of withholding potential losses in insurance is a mechanism that facilitates income smoothing. It is a prominent subject in accounting research, often discussed as a potential catalyst for manipulation. However, empirical evidence from accounting studies does not support this hypothesis. This study investigates the role of technical reserves and investments in the income smoothing process. It assesses the accuracy of reserves in various categories (unearned premium reserve, investment, financial strength, and reinsurance coverage) using a sample of 25 companies operating in Gulf Cooperation Council countries from 2014 to 2022. The study explores the relationship between constructs using the Method of Moments Quantile Regression (MMQR) approach. The findings revealed a significant association between income smoothing strategies and both the unearned premium reserve and investment revenue levels. The study revealed significant correlations between reserve estimations, reinsurance, financial health, and income smoothing procedures. In order to improve income smoothing procedures for insurance companies, regulators should prioritize reserve estimations, reinsurance, and financial health, according to the study.

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Introduction

Insurance is a contractual agreement that mitigates the risk of potential loss. Despite the insurance company's obligation to compensate for losses, the firm's management can manipulate business operations to conceal fluctuations in revenue. Accounting regulations allow for some flexibility when preparing financial accounts. There is a high probability that corporations intentionally manipulate their reported income. This behaviour demonstrates an income stream that has less variance from the trend than it may initially seem, and is commonly referred to as "the repeated selection." Industries widely use it as a standard procedure (Chen et al., 2019). Profit management refers to the practice of a manager modifying agreements based on accounting data and using their evaluation of financial statements to influence stakeholders' perceptions of the organisation's financial performance. The income smoothing process, which is a component of earnings management, has been extensively studied in accounting and financial research.

This study examines the manipulation of reported reserves at insurance companies that possess substantial loss reserves and the capacity to generate increased profits. Managers have discretion in disclosing reserves due to the complexity of the loss claim procedure (Baik, Choi, & Farber, 2020). The importance of investigating the relationship between conditional accounting conservatism and income smoothing was emphasised by Paolone, Albahloul, & Tiscini (2022) due to the potential of this association to showcase conservatism and restrict managerial actions. The current study agrees with Ahalik & Christian (2020) regarding the impact of smoothing techniques on corporate accruals through reduction. The ability of accounting to provide an accurate representation of a company's financial position. Understanding the application of conditional reservations is crucial.

After reviewing the study problem, we organized the remaining material to provide a broad overview of technical insurance reserves. The subsequent section of this study provides a comprehensive review of previous research on the subjects of hypothesis formulation, accounting conservatism, and income smoothing. The third section covers the variables that affect the retention of technical reserves and associated issues. The fourth section discusses the relationship between income smoothing, technical reserves, investments, and associated matters. The fifth section presents and discusses the study's outcomes. This study concludes by presenting the main findings, recommendations, and suggestions for future research.

Technical reserves constitute a significant portion of insurance companies' liabilities. The management of these reserves is governed by regulations and instructions issued by regulatory bodies overseeing the insurance industry and its tax implications. Insurance companies establish these provisions to fulfil their financial obligations. The financing of the insurance company's liabilities towards other insurance companies is taken into account, and as a result, technical reserves are calculated, so that they are always sufficient to the degree to which the insurance company can fulfill its liabilities arising from the contracts. The formation and use of technical reserves depends on the total amount that is established on the total insurance premiums and the share of reinsurers in these reserves. With regard to technical reserves made by insurance companies.

Policies that do not expire at the end of the fiscal year pose risks that can extend into the following year. Consequently, we establish a reserve for unearned premiums. The increased premiums for each insurance policy are determined independently. The earned premiums should be reduced by the written premiums. The remaining sum will be comprised of unearned premiums. It is assumed that there exists an estimate of the exposure that remains valid until the end of the accounting period, and it is possible to make an estimate of the anticipated risk claims that will occur in the future. The settlement will occur in the year following the account closure date.

These clauses pertain to claims that have been notified but not reimbursed. It is expected that certain provisions will be generated from claims where the payment amount may not have been made or may not have been apparent on the balance sheet date. The determination is made by external entities, such as the judiciary. Therefore, an estimated allowance is made for the existing claim and must be provided by the insurance company. It is crucial for insurance companies to accurately assess and allocate funds for anticipated losses. A reserve is established to estimate the funds allocated for a claim that will be paid in the future, regardless of the timing of the payment. Reserves refer to future liabilities that are recorded as obligations on the balance sheet of insurance companies. When a claim is reported, it signifies that it has been addressed. If a claim is not reported, it implies that all claims that occurred on that day are reported collectively. The estimation of technical reserves has implications for the financial position of the company and may raise regulatory concerns. A loss reserve error may occur upon claim closure. Errors in reserves can occur due to two main reasons: miscalculation and manipulation. Forecasting future payments for claims and loss reserves is difficult due to the unpredictable nature of the claims process. Insurance companies may manipulate reserves to meet specific objectives. The determination of loss reserve levels may involve more than mere speculation. Research has offered guidance for companies in strategically managing their reserves and has sought to identify the motivations and potential consequences of estimating the error in loss reserves.

Motivations for income smoothing and technical compensation have been identified (Shu & Thomas, 2019). The relationship between uncertainty, loss claims, and manipulation is examined. The impact of reserve estimation (over- or under-estimation) on companies varies. According to Di Fabio, Ramassa, & Quagli (2021), financially vulnerable insurance companies may decrease their reserves in order to conceal their financial challenges. There is a higher probability of detecting "accounting fraud" when the levels of reserves are lower. Moreover, external investors may perceive an insurance company as significantly reducing reserves when market data indicates poor profitability, despite the financial statements reflecting an acceptable level of profit (Osma, Mora, & Porcuna-Enguix, 2019).

An examination of how insurance firms handle their reserve benefits in relation to investment income has been one of the initial endeavours in the literature. This study examines reported underwriting revenue that may result from the manipulation of loss reserves, as well as the factors influencing income smoothing in loss reserve management. The relationship between investment risk and reserve estimation is further analysed in the second section. The results indicate a positive correlation between reservation risks and default risks for investments. The relationship between investment income and the loss reserve estimate indicates that the loss reserve is used to balance overall revenue by considering both underwriting and investment income.

This study aims to address a gap in the existing literature by investigating the relationship between conditional conservatism and income smoothing. The relationship in question has been examined in prior research by Dantas, Merkley, & Silva (2023). This study finds that unsmoothing organisations exhibit a greater level of conditional accounting conservatism compared to bootstrapped businesses. This finding is consistent with the previous findings reported by Al Ani & Chong (2021). Furthermore, researchers suggest that specific types of field studies have implications for governance policies in enterprises within the Gulf Cooperation Council nations. The purpose of these studies is to enhance understanding of competitive dynamics in emerging markets (De et al., 2019).

Literature Review and Development of Hypothesis

Knudsen (2020) put forward the concept of accounting conservatism as "the accountant's tendency, with a higher level of verification, to recognize good news as gains rather than recognizing bad news as losses." In order to promote conservatism, managers should prioritise the early recognition of economic losses over economic benefits. This is important for protecting investors by preventing managers from receiving excessive compensation due to inflated earnings. In the 1890s, studies in finance, accounting, and risk management focused on analysing income smoothing behaviour. Income smoothing aims to reduce fluctuations in reported results that are typically considered normal for a company. Yet, income smoothing is regarded by Ruß & Schelling (2021) as a particular instance of insufficient financial information disclosure. The purpose of this technique is to artificially lower the volatility of earnings streams by making deliberate attempts to disclose financial information.

Income smoothing is used in scenarios where the outcome is predetermined, lowering when the outcome is high and rising when the outcome is low, according to Ames et al. (2019). It was also found that the capital cost of a third party for income-oriented companies is less likely to be lower, and the weight of long-term indebtedness to the capital structure. Moreover, the variable risks of litigation against the company's work will be controlled. Several studies have investigated the relationship between conditional conservatism and income smoothing using various methods, yielding different results. The distinction between smoothing techniques and conditional reservation was emphasised. Conditional conservatism has a slight negative impact on profits in relation to operational cash flow. However, the use of smoothing techniques helps to reduce the volatility of earnings (Che, 2019).

Contrary to this, Chang et al. (2021) did not find any evidence supporting a connection between revenue smoothing in bankrupt firms and managers' conservatism. Khalilov & Osma (2020) identified a negative association between conservatism and profitability management. This study examined 480 non-financial companies listed on the Tehran Stock Exchange from 2001 to 2008. Mehrtash, Hobbs, & Ela (2023) conducted a study on conditional conservatism in US firms with high and low technology. The findings of the research confirmed the hypothesis that income smoothing hinders the timely detection of negative information by a company. The study found that conditional reservation is less prevalent in high-tech industries, and that its occurrence increases with the impact of litigation. Additionally, it was observed that conditional reservation in low-tech industries is primarily influenced by litigation risks.

H1: The association between income smoothing procedures and unearned premium reserve is statistically significant.

Corporations participate in income smoothing practices. The objective is to decrease taxes, attract investors, increase stock prices, lower financing costs, and reduce the risk premium associated with capital assets. Kustono (2021) found a negative association between firm value and profits volatility. However, other studies have indicated According to Jung et al. (2020b), there is a relationship between income smoothing and the claim package that is tied to CEO compensation. Managers within the economic model do not avoid risk due to the company's inability to borrow or lend from capital markets. Additionally, the process of smoothing income contributes to the company's market value growth. Wijaya & Mauren (2020) found that the majority of financial managers consider profits as the main indicator of a company's success. In their study, 78% of the 400 executives surveyed expressed a preference for prioritising short-term profit gains over long-term value. Accounting measurement and reporting procedures that aim to ensure consistent revenue streams can be utilised when recognising income. According to Demerjian, Donovan, & Lewis-Western (2020), there is a relationship between earnings volatility and business value. Executives believe that even small fluctuations in profits can benefit the firm. Significant income fluctuations negatively impact the company's value.

Many managers prefer income smoothing in order to maintain their employment. Several publications have discussed the reasons behind income smoothing in the insurance industry. Chen, Weng, & Lin (2020) investigate the impact of reserve estimating errors on excess. Policyholders exert influence on underwriting revenue consistency. Tee (2020) linked inadequate loss reserve calculation to underwriting. Although the sample of firms' incidence of over- or under-retention mistakes was non-random, insurers are presumed to adjust technical reserves to improve underwriting outcomes. Chen et al. (2020) assumed that income smoothing poses a significant obstacle to an insurance company's objective of maximising cash flow in their general model. Kliestik et al. (2021) conducted tests to examine the impact of smoothing activity and external economic developments on the estimation error of loss booking.

The average net income over the past three years exhibited a negative correlation with the error in the calculation of the loss reserve. Monjed & Ibrahim (2020) found that small general insurance firms with positive earnings tend to have smaller technical reserves compared to small insurance companies with negative earnings. Companies with high earnings tend to report decreasing income reserve accruals more frequently, whereas companies with low earnings tend to report increasing income reserve accruals. Enterprises that generated positive revenue experienced a higher frequency of excess reserve estimate mistakes. Chen et al. (2020) discovered that profitable insurers tend to over-reserve in order to underreport their income, while smaller enterprises tend to under-reserve more compared to those reporting losses. The findings do not fully support the income smoothing theory, which posits that insurance firms with larger losses should reduce their reserves to a greater extent. Yu, Hagigi, & Stewart (2018) observed no correlation between income distribution characteristics and the inaccuracy of loss reserve estimation. Utami & Evana (2020) and other researchers have established a link between management compensation and income smoothing activities.

H2: The amount of investment revenue are positively correlated in income smoothing procedures.

Researchers widely acknowledge that insurers have the ability to manipulate their financial statements by adjusting technical reserves in response to underwriting periods that are either favourable or unfavourable. The incentives for managing reserves can vary over time due to factors such as price regulation and compensation incentives. Research on administrative compensation and reinsurance acquisition complements the manipulation of technical reserves. Managers can optimise their remuneration by managing technical reserves. Ding et al. (2020) found that managers with stock awards are more inclined to short reserve options when they have the opportunity to promptly sell either the stock or the options. Ozili (2019) examined the relationship between granting stock options to CEOs of insurance companies and reserve-keeping policies. The study reveals that a greater sensitivity to stock price option-based compensation is associated with either a higher underestimation of conservatism or a reduced overestimation of conservatism. Vasilakopoulos, Tzovas, & Ballas (2018) found that managers with uncapped bonuses tend to under-hold reserves for current year losses, while managers with capped incentives or no bonuses tend to over-hold reserves. Insurance firms feel a stronger obligation to disclose their retained reserves due to the expertise and reputation of the external auditors they employ, such as actuaries and auditors. Field research suggests that auditors should exercise caution when selecting clients and should be less inclined to internalise the goals presented in management reports. Senior auditors have been associated with more accurate reserve calculation errors in financially struggling insurance companies.

According to Alhassan (2018), income smoothing is a practice used to mitigate fluctuations in a company's financial performance within normal operating conditions. The absence of evidence suggests that the smoothing procedure does not result in total income, unless there is a strong correlation between the loss reserve error and revenue changes. Companies can adjust reserves to optimise underwriting profits. If the correlation between the loss reserve error and income fluctuations is weak, there is no evidence of a smoothing effect on total income. Companies may adjust the reserve to support income underwriting. Strong evidence of income smoothing towards total revenue will be found if a statistically significant association exists between the loss reserve error and the volatility of investment income and risks in investment activities. Income smoothing has a temporary positive effect on a company's value, as suggested by Ma & Pope (2020). However, in the long term, investors, analysts, and shareholders will not be misled.

H3: The amount of reserve estimations in insurance firms is significantly correlated with income smoothing procedures.

Technical reserves are the primary determinant of reinsurance and are largely determined by the insurance company, with limited control over assumed actions. Reinsurance is expected to negatively affect reserve error. Exaggerating reserves slightly can help a company negotiate more favourable terms with reinsurers and maintain positive relationships with brokers. A correlation was discovered between reinsurance agreements and the payment of commissions to brokers by companies, as well as the minor issue of overestimating retention. Nevertheless, the relationship between the two variables is not significant when it comes to underestimating retention (Alford, Luchtenberg, & Reddie, 2018). Abbass & Alrashedy (2020) found that firms with high revenue over a five-year period may not need to decrease their reserve in order to maintain their income level. They measured the soft incentive by using a variable index that was based on the profit distribution of the industry. Veprauskaite & Adams (2018) did not find any evidence of income smoothing after controlling for the examined variables. Measuring income distribution based on reported income is not accurate due to potential manipulation of underwriting income, which represents the overall income of the firm. The level of reserve discretion significantly affects underwriting income. The apparent parallel would thus be misleading. In order to calculate the "true" income, it is necessary to utilise a reserve error estimate.

Veprauskaite & Adams (2018) conducted a study to examine the potential relationship between the type of audit company and the accuracy of technical reserve estimation in insurance companies. Our analysis reveals that insurers facing financial stress and employing large corporate auditors tend to adopt a more conservative approach in valuing their assets. However, when considering the entire sample, there is no significant variation in the level of conservatism between insurance companies of different types. Lei (2019) found that insurance companies facing financial difficulties were less likely to reduce reserves when they engaged auditors from large audit firms. Altuntas, Garven, & Rauch (2018) argue that the mistake should be included in the overall pre-tax revenue or underwriting income. The statistical evidence for insurers smoothing underwriting results to estimate reserve error is inconclusive due to the omission of other factors.

H4: Reinsurance company and income smoothing activities have a statistically significant connection.

Insurance companies with weaker financial standing are more likely to reduce their technical reserves. The risk-adjusted capital (RBC) ratio is used to quantify the financial vulnerability of a corporation. The RBC formula was developed based on actuarial and financial research to assess the risks faced by businesses and determine the necessary capital to mitigate those risks (Peterson & Arun, 2018). Low RBC ratio is indicative of financial fragility. The research on income smoothing yielded varying outcomes, depending on the specific aspect of the income smoothing process that each study focused on. Putri & Lutfillah (2020) conducted a study to examine the impact of governance on income smoothing and its relationship with stock returns. The study analysed 555 companies listed on the Indonesia Stock Exchange. One finding suggests that the company's effective management reduced income smoothing and stock returns. Dewi, Mukhtaruddin, & Prayudha (2018) conducted a study on 65 companies in the Indonesian stock market from 2011 to 2013 to investigate the reasons behind their continued utilisation of income smoothing. The authors conducted a comprehensive investigation on the impact of income smoothing on market performance. This investigation focused on three aspects: the market's response to current investors, the market's risks for potential investors, and the market value as perceived by management. The study revealed the effects of income smoothing. This study examines the market response to a company's performance in the marketplace. Wasan & Mulchandani (2020) investigated the income smoothing practices of Indian companies listed on the National Stock Exchange of India. Indian corporations were found to have limited smoothing processes. The size of the firm has a negative impact on the income smoothing process. The sector type does not affect income smoothing. Lubis (2021) examined the utilisation of income smoothing techniques by banks during the financial crisis.

The study analysed nearly 25,000 bank observations from 2007 to 2010 and found that banks increased their profits and stabilised their income by underestimating the value of loan provisions. Kusuma (2018) examined income smoothing techniques employed by non-industrial businesses listed on the Indonesian Stock Exchange from 2007 to 2011. The objective of Malik, Aziz, Saiti, and Din's (2021) study was to examine the interrelationships between profitability ratios (ROA and ROE), tax income, and income smoothing in businesses listed on the Karachi Stock Exchange. The study revealed a significant correlation between tax income ratios, income smoothing, and financial success. The study by Pinto, Gaio, & Gonçalves (2020) examines the manipulation of technical reserves in insurance for the purpose of income-smoothing across various time periods.

H5: Income smoothing procedures and the company's financial health are statistically significantly correlated.

Research Methods

This study examines the role of technical reserves and investments in the process of income smoothing. It assesses the accuracy of reserves in various categories (unearned premium reserve, investment, financial strength, and reinsurance covers) using a sample of twenty-five companies operating in the Gulf Cooperation Council countries from 2014 to 2022. The study developed the equation given below:

$$ISP_{it} = \alpha_0 + \beta_1 UPR_{it} + \beta_2 IR_{it} + \beta_3 RE_{it} + \beta_4 RI_{it} + \beta_5 FH_{it} + e_{it} \quad (1)$$

Where;
ISP = Income Smoothing Process
t = Time Period
i = Countries
UPR = Unearned Premium Reserve
IR = Investment Revenue
RE = Reserve Estimation
RI = Reinsurance
FH = Financial Health

The study employed the income smoothing process as the primary variable proxy, specifically using the ratio of sales to net income. The study employed five predictors, referred to as unearned premium reserve proxies, investment revenue proxies, reserve estimations proxies, reinsurance proxies, and financial health proxies. These predictors were represented by the log of unearned premium reserve, log of revenue received from investment, log of total reserve, log of reinsurance value, and the ratio of total debts to equity, respectively. The variables are provided in Table 1.

Table 1: Measurements of Variables.

S#	Variables	Measurement	Sources
01	Income Smoothing Process	Ratio of sale to net income	Financial Statements
02	Unearned Premium Reserve	Log of unearned premium reserve	Financial Statements
03	Investment Revenue	Log of revenue received from investment	Financial Statements
04	Reserve Estimations	Log of total reserve	Financial Statements
05	Reinsurance	Log of reinsurance value	Financial Statements
06	Financial Health	Ratio of total debts to equity	Financial Statements

The study employed descriptive statistics to analyse the mean values, minimum and maximum values, and standard deviations of all variables. The study employed a correlation matrix to analyse the relationships between variables. In addition, the study employed the variance inflation factor (VIF) to assess multicollinearity between variables. The equations are mentioned below:

$R^2_Y \longrightarrow Y_{it} = \alpha_0 + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + e_{it}$ **(2)**

$j = R^2_Y, R^2_{X1}, R^2_{X2,} R^2_{X3,} R^2_{X4,} R^2_{X5}$ **(3)**

$Tolrance = 1 - R^2_j \quad VIF = \frac{1}{Tolerance}$ **(4)**

The study examines the relationship between constructs using the MMQR approach. The introduction of this concept is credited to Machado & Silva (2019). The topic of outliers is addressed and regarded as the most effective approach (Adebayo et al., 2022). This approach also provides asymmetric and nonlinear associations, which are considered to be extraordinary features (Ike, Usman, & Sarkodie, 2020). Thus, conditional quantile $Q\tau(\tau/X)$ for the "locational-scale alternate model" is mentioned below:

$$Y_{it} = \alpha_i + X_{it}\beta + (\delta_i + Z_{it}\lambda)U_{it} \quad (5)$$

In equation (5) $P\{\delta_i + Z_{it}\lambda > 0\} = 1$ exposed the probability, $\alpha, \beta, \lambda \; and \; \delta$ exposed the parameters, α_i, δ_i i = 1, ……, n exposed the precise fixed effect, z exposed the k-vector, and the constituents are altered with component l given below:

$$Zl = Zl\,(X), l = 1, \ldots\ldots, k \quad (6)$$

In equation (6), U_{it} exposed the orthogonal to X_{it} and consistent with achieving the moment situations that do not encompass stringent heterogeneity. So, in equation (5), the conditional quantile of Y is established given below:

$$Q\tau(\tau/X_{it}) = (\alpha_i + \delta_i q(\tau)) + X_{it}\beta + Z_{it}\,\lambda\, q(\tau) \quad (7)$$

In equation (7), X_{it} exposed the predictors, for example, UPR, IR, RE, RI and FH and Y_{it} represented the predictive variable, like, ISP. So, $Q(\tau)$ is formulated given below:

$$Min_q = \sum_t \sum_i p\tau\,(R_{it} - (\delta_i + Z_{it}\,\lambda\,)q) \quad (8)$$

Study Results

The study employed descriptive statistics to analyse the mean values, minimum and maximum values, and standard deviations of all variables. The study findings showed that the mean value of ISP was 15.092, UPR was 5.093, and IR was 24.983. The results revealed that the mean value of RE was 13.391, RI was 3.201, and FH was 0.549. The values are listed in Table 2.

Table 2: Descriptive Statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
ISP	225	15.092	1.098	12.088	22.876
UPR	225	5.093	0.832	2.987	8.102
IR	225	24.983	4.391	17.928	34.382
RE	225	13.391	1.282	11.092	16.928
RI	225	3.201	0.981	2.119	7.329
FH	225	0.549	0.442	0.281	0.753

The study employed a correlation matrix to analyse the relationships between variables. The results revealed a positive correlation between predictors and predictive variables. The values are listed in Table 3.

Table 3: Matrix of Correlations.

Variables	ISP	UPR	IR	RE	RI	FH
ISP	1.000					
UPR	0.743	1.000				
IR	0.526	0.543	1.000			
RE	0.672	-0.728	-0.633	1.000		
RI	0.415	0.172	0.201	-0.642	1.000	
FH	0.552	-0.664	-0.362	-0.372	0.554	1.000

Moreover, the study employed VIF to assess multicollinearity among variables. The results indicate that the VIF figures are all below five and the reciprocal values are all above 0.20. The analysis revealed no evidence of multicollinearity among the predictors. The values are listed in Table 4.

Table 4: Variance Inflation Factor.

	VIF	1/VIF
UPR	3.784	0.264
IR	3.563	0.281
RE	2.891	0.346
RI	1.976	0.506
FH	1.453	0.688
Mean VIF	2.733	.

The study revealed a significant association between income smoothing strategies and the unearned premium reserve, as well as the level of investment revenue, supporting hypotheses H1 and H2. The study's findings indicate significant correlations between reserve estimations, reinsurance, financial health, and income smoothing procedures, supporting hypotheses H3, H4, and H5. The associations are presented in Table 5.

Table 5: Panel Quartile Estimation (MMQR).

Variables	Method of Moments Quantile Regression (MMQR)										
	Location	Scale	Grid of Quartiles								
			0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
UPR	0.765***	0.543*	0.542**	0.954**	0.102*	0.674**	0.443*	0.454	0.464*	0.044	0.764*
IR	0.546**	0.271*	0.102**	0.453*	0.281*	0.773***	0.643	0.329**	0.392**	0.009	0.453*
RE	0.673***	0.531**	0.122**	0.222**	0.372*	0.893	0.774*	0.209**	0.222*	0.553**	0.019
RI	0.454**	0.562**	0.642*	0.464**	0.664**	0.192	0.298**	0.982**	0.403**	0.012	0.544*
FH	0.493*	0.443**	0.344*	0.754**	0.201***	0.553*	0.217*	0.210	0.310*	0.343*	0.444*

***, **, and * represent significant level at 1%, 5%, and 10%, respectively

Discussions

The study found a significant correlation between income smoothing procedures and unearned premium reserve. According to Johny, Purwoko, & Merawaty (2021), insurance companies that implement a policy to minimise fluctuations in their income levels or financial performance, particularly to influence client preferences, are likely to generate unearned income reserves. The premium is regarded as the income of the insurer. The company's unearned premium reserves are determined by the methods used to even out the income level over various accounting periods. These results are in line with Aggelopoulos, Georgopoulos, & Kotsiantis (2023), which throws light income smoothing as influencing the unearned premium reserve. The study implies that the insurance company where the administrators are concerning about the financial health depicted through the company reports and apply income smoothing via different methods, it sets the amount of premium reserves carefully and make changes in unearned premium reserves. The findings align with Tarsono, Ardheta, and Amriyani's (2020) study, suggesting that the company's policy of implementing various income smoothing techniques encourages the creation of unearned premium reserves as a means of mitigating the risks associated with policy cancellations. Income smoothing procedures have a significant impact on unearned premium reserves.

The results also showed a positive correlation between investment revenue and income smoothing procedures. The findings of Baik et al. (2022) suggest that companies should make adjustments to their revenues in order to control fluctuations in net income across different accounting and reporting periods. This may involve generating sufficient revenues from irregular sources to create reserves as needed. A company that generates investment income can make flexible decisions regarding the reporting period to showcase its total earnings. Higher investment revenues facilitate the implementation of income smoothing procedures. The findings are consistent with Baik et al.'s (2020) study. This study examines the relationship between investment and income smoothing in companies. The study emphasises that companies can maximise their total revenues over a certain period of time by maintaining potential investments in various projects, things, or organisations and generating high revenues from these investments. Thus, companies can easily implement income smoothing using this approach. The findings align with Obeidat's (2021) assertion that companies that allocate a portion of their profits to reserves and invest from these reserves are able to generate revenue from non-standard sources, thus mitigating fluctuations in regular sales or income. Therefore, increased investment revenues enhance the company's ability to engage in income smoothing. The study findings indicated a strong correlation between the reserve estimations in insurance firms and the implementation of income smoothing procedures. The findings of Lai, Lin, & Kuo (2018) provide support for the notion that insurance companies establish reserves based on the premiums collected from insured individuals when entering into contracts for various types of insurance policies. The estimation of reserves by insurance firms plays a crucial role in determining the company's ability to mitigate risks associated with sudden policy cancellations. It manages the variations in the company's revenue at the conclusion of successive fiscal years. The estimation of reserves in insurance firms has a significant impact on income smoothing. The findings align with the research conducted by Han, Lai, & Ho (2018), which highlights the importance of accurate reserve estimations for insurance companies. By effectively managing reserves, companies can improve their financial stability and implement income smoothing strategies. The findings align with the research conducted by Dantas et al. (2023), suggesting that insurance companies calculate the amount to be set aside from client premiums as reserves, separate from the value of the promised coverage for losses. The calculations of the reserve amount assess the funds held by the company and its ability to invest in external sources. Consequently, the company is able to generate indirect revenues and demonstrate profits that are sufficient to mitigate the impact of income fluctuations from year to year. It helps to smooth out income fluctuations.

The study findings revealed a statistically significant connection between reinsurance companies and income smoothing activities. These findings are backed by the research conducted by Soye, Olumide, & Adeyemo (2022). Highlighting the importance of reinsurance companies, the study emphasises that their presence in the market can help mitigate risks such as insurance contract terminations, significant client losses, low investment earnings, or investment losses. The findings align with Hsiao and Shiu's research (2023), highlighting that insurance companies serve as financial institutions that offer financial protection to parties involved in contracts to mitigate potential losses. These firms may experience losses or face client losses, which can disrupt their financial stability and market value. Reinsurance companies offer a valuable source of financial security to traditional insurance firms, protecting them from unexpected mishaps or losses. Thanks to robust security measures, insurance firms can maintain a stable income level and financial worth in the eyes of stakeholders. The results align with the findings of a study conducted by Chang, Chen, & Weston (2020). The study suggests that insurance companies provide a guarantee to general companies, small businesses, or individuals. However, it is currently facing financial difficulties and is in need of financial support. When losses are transferred to reinsurance companies and a company can maintain income smoothing, it helps to stabilise overall financial performance.

The study findings indicate a strong correlation between income smoothing procedures and the financial health of the company. The findings of Manukaji (2018) shed light on the income smoothing procedures and their impact on the financial well-being of the company. Implementing income smoothing techniques in a company is crucial for preserving the company's financial stability in a competitive market. These findings align with the research conducted by Osma et al. (2019). The study emphasises that, similar to other industries, insurance companies in the financial sector require investment from shareholders, investors, or lenders, as well as support from other stakeholders such as legal authorities, to demonstrate their strong financial health. Managing income fluctuations is crucial for demonstrating a company's strong financial health. The results align with the findings of a study conducted by Jung et al. (2020a), which suggests that company management often utilises income smoothing procedures to ensure the financial well-being of the organisation.

Conclusion and Suggestions

This study seeks to provide empirical data on the extent to which insurance firms engage in income smoothing behaviour. The findings illustrate that insurance firms employ income smoothing techniques. Insurance companies inflated their profits. Income smoothing was commonly employed by insurance businesses. The results clearly demonstrate a significant difference in the earnings per share between the firms that implemented smoothing techniques and those that did not. Companies that engaged in income smoothing reported higher profits per share (EPS) compared to those that did not. It appears that the main goal of income smoothing, especially in insurance companies, is to maintain a favourable level of earnings despite experiencing low earnings. The report presents the following recommendations based on its findings and conclusions:

Insurance companies engage in a wide range of private activities. Technical reserves are an important component of their balance sheet as they are used to cover obligations related to insurance and reinsurance. Accounting principles such as offsetting, reserving, and accrual basis are applied in managing these reserves. This study aims to address the question of whether insurance companies... These reserves are utilised in the income smoothing process. It aims to provide pertinent information on the extent to which insurance companies utilise the income smoothing process. The research revealed that insurance companies participate in the practice of income smoothing, resulting in a significant difference in profits per share between companies that engage in smoothing and those that do not. Given the higher profitability of levelling firms compared to non-levelling ones, it can be inferred that the objective of smoothing is to maintain earnings at a positive level. The findings highlight the connection between underwriting and investing activities and the misestimation of reserves. The level of investment income volatility and its relationship to the process of income smoothing through loss reserves are connected. Insurance companies often provide less precise information about their loss reserves when they face higher investment risks. Insurance companies tend to experience higher error rates in their loss reserves when investment income becomes more volatile.

Higher average investment income levels lead to a reduced estimate for loss reserves. Furthermore, there exists a robust and favourable connection between the level of default risk in bond and subsidiary investments and the loss reserve. This analysis suggests that reported loss reserves are influenced by an insurance company's investment strategy when reserves are managed to maintain consistent revenues. Greater risks come with greater fluctuations in profits, so it becomes necessary to adjust reserves in order to stabilise income. Another observation is that gross revenue, which includes underwriting and investment income, is the target when loss reserve is used as a means of smoothing. The data collected in this investigation further supported the theory of reinsurance agreements. Previous studies have shown that insurers with weaker financial standings may manipulate their reserves to hide their financial problems. On the other hand, financially stronger insurers tend to make larger over-conservative mistakes and under-conservative errors, indicating that they may struggle with effective reserve management. Based on the research findings, it can be inferred that:

Conduct a thorough investigation to understand the factors that impact the income smoothing process in Iraqi businesses and determine effective methods to reduce this practice. Establish regulations and legislation to curb the utilisation of various accounting methods by businesses, aiming to curb the manipulation of their financial records. Additionally, ensure that income smoothing companies are held accountable if they employ this practice with the intent of deceit and manipulation. Providing individuals with accounting data and financial statements to help them understand income smoothing, allowing them to evaluate businesses and determine their preference for smoothing.

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