JPB REVIEW
INTERNATIONAL JOURNAL OF PROFESSIONAL BUSINESS REVIEW
ISSN: 2525-3654
OPEN ACCESS

THE RELATIONSHIP BETWEEN AUDIT SERVICES AND NON-AUDIT ACTUARIAL SERVICES IN THE AUDITOR'S REPORT

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ARTICLE INFO

Article history:

Received 30 Dezember 2021

Accepted 07 February 2022

Keywords:
Audit services;
Non-audit services;
Actuarial;
Insurance industry.

ABSTRACT

Purpose: In view of the trend toward using international financial reporting standards when generating financial statements, we looked at the interaction between audit services and non-audit services for auditors in the context of actuarial services for insurance firms. CPAs are authorized to work in banks and insurance businesses, but those with a practicing license obtained after earning a higher academic degree are not.

Design/methodology/approach: A small number of auditing firms control the decisions issued by the Iraqi Accountants Association, monopolizing audit services in banks and insurance businesses. In the case of actuarial services used in reserve estimation, they are credited to an external party's account without any verification of the Reliability of the reserve estimation procedure.

Originality/value: In addition to audit services, a scale has been developed to examine the auditors' non-audit actuarial services. The financial reporting rules for insurance contracts 17 and the examinations for acquiring an actuarial certificate in the United States of America are used to create this scale.

Findings: The findings show that there is no substantial relationship between the two services supplied, and we recommend that the actuarial services be audited by specialist international companies that support the auditors' judgment on the computation of expected reserves in the financial accounts. Conducting specialist courses in the actuarial profession, and obtaining this credential is a requirement for auditing insurance companies.

Doi: https://doi.org/10.26668/businessreview/2022.v7i2.0455

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A RELAÇÃO ENTRE OS SERVIÇOS DE AUDITORIA E OS SERVIÇOS ATUARIAIS NÃO-AUDITORIAIS NO RELATÓRIO DO AUDITOR

RESUMO
Objetivo: Tendo em vista a tendência de utilização das normas internacionais de informação financeira na geração de demonstrações financeiras, analisamos a interação entre os serviços de auditoria e os serviços não de auditoria para auditores no contexto dos serviços atuariais para empresas de seguros. Os CPAs estão autorizados a trabalhar em bancos e empresas de seguros, mas aqueles com uma licença prática obtida após a obtenção de um diploma acadêmico superior não o estão.
Desenho/método/abordagem: Um pequeno número de empresas de auditoria controla as decisões emitidas pela Associação de Contadores Iraquianos, monopolizando os serviços de auditoria em bancos e empresas de seguros. No caso de serviços atuariais usados na estimativa de reserva, eles são creditados na conta de uma parte externa sem qualquer verificação da Confiabilidade do procedimento de estimativa de reserva.
Originalidade/valor: Além dos serviços de auditoria, foi desenvolvida uma escala para examinar os serviços atuariais não-auditoriais dos auditores. As regras de relatórios financeiros para contratos de seguro 17 e os exames para aquisição de um certificado atuarial nos Estados Unidos da América são usados para criar esta escala.
Constatações: As constatações mostram que não há relação substancial entre os dois serviços fornecidos, e recomendamos que os serviços atuariais sejam auditados por empresas internacionais especializadas que apóiam o julgamento dos auditores sobre o cálculo das reservas esperadas nas contas financeiras. A realização de cursos especializados na profissão atuarial, e a obtenção desta credencial é uma exigência para a auditoria de companhias de seguros.

Palavras-chave: Serviços de auditoria, Serviços não de auditoria, Atuarial, Indústria de seguros.

LA RELACIÓN ENTRE LOS SERVICIOS DE AUDITORÍA Y LOS SERVICIOS ACTUARIALES NO RELACIONADOS CON LA AUDITORÍA EN EL INFORME DEL AUDITOR

Objetivo: En vista de la tendencia a utilizar las normas internacionales de información financiera a la hora de elaborar los estados financieros, examinamos la interacción entre los servicios de auditoría y los servicios no relacionados con la auditoría de los auditores en el contexto de los servicios actuariales de las empresas de seguros. Los contadores públicos están autorizados a trabajar en bancos y empresas de seguros, pero los que tienen una licencia de ejercicio obtenida después de obtener un título académico superior no lo están.
Diseño/metodología/enfoque: Un pequeño número de empresas de auditoría controlan las decisiones emitidas por la Asociación de Contables de Iraq, monopolizando los servicios de auditoría en bancos y empresas de seguros. En el caso de los servicios actuariales utilizados en la estimación de las reservas, se abonan a la cuenta de una parte externa sin ninguna verificación de la fiabilidad del procedimiento de estimación de las reservas.
Originalidad/valor: Además de los servicios de auditoría, se ha desarrollado una escala para examinar los servicios actuariales no relacionados con la auditoría de los auditores. Para crear esta escala se han utilizado las normas de información financiera para los contratos de seguros 17 y los exámenes para adquirir un certificado actuarial en los Estados Unidos de América.
Conclusiones: Las conclusiones muestran que no existe una relación sustancial entre los dos servicios prestados, y recomendamos que los servicios actuariales sean auditados por empresas internacionales especializadas que apoyen el juicio de los auditores sobre el cálculo de las reservas previstas en las cuentas financieras. La realización de cursos de especialización en la profesión actuarial y la obtención de esta credencial es un requisito para auditar a las compañías de seguros.

Palabras clave: Servicios de auditoría, Servicios no relacionados con la auditoría, Actuariales, Sector de los seguros.

INTRODUCTION

Despite the lack of confirmed information by researchers explaining its historical origins and considerations, the emergence of the idea of insurance with the emergence of the idea of cooperation or solidarity in bearing the risks that an individual or a group may be exposed to, by distributing the losses incurred by the individual to the group, through

participation among them. The oldest types of insurance, on the other hand, were developed in the context of maritime transportation, when ship owners acquired loans from moneymen for the worth of their ship and its cargo in exchange for excessive interest rates. If the ship is sunk, the loan and interest become the property of the ship owner, and the borrower is not repaid (Fateh, 2015).

The United States experienced a crisis in the insurance industry in the 1990s, which resulted in a record number of insolvencies, and the factor most associated with the failure of the insurance company was a loss reserve deficiency. To discourage the lack of financially weak reserves, the National Association of Insurance Commissioners began to require that insurance companies include a "actuarial opinion statement," signed by a qualified actuarial expert (Gaver & Paterson, 2014).

The insurance industry is the most in demand for actuarial consultancy, and the International Actuarial Association is the oldest, having been created in 1895 and represents local professional actuarial societies and individual actuaries. It represents the work of the (IAA) to encourage and develop this profession. The IAA is professionally recognized and trusted, ensuring the public interest. International Standard of Actuarial Practice 1 (ISAP 1) outlines the general actuarial practices of actuaries (IAA., 2013). On the basis of this, actuarial consultancy services are provided to all business entities in accordance with what is stated in International Accounting Standard 17 "Insurance Contracts". The additional value of actuarial consulting services to businesses is the ability to obtain accurate estimations of current product or service values while accounting for future risks, as well as offer indicators. In the future, business entity management can help with smart financial planning and gaining recommendations for using provision investments in low-risk channels.

International Financial Reporting Standard No. 17 "insurance contracts" which was issued on May 18, 2017, has achieved a historic leap over the traditional presentation of financial statements. In order to provide more transparent and quality information, which obtains the most accurate view for users of financial statements so that they can timely assess the impact of contracts that fall within the scope of the standard on the financial position and financial performance of the company, this standard also depicts the flexibility of the new era of accounting based on standards based on general principles, this means that the jurisprudence will not be important (IFRS, 2017).

Given the advancement of communication and electronic commerce, as well as the trend toward adoption of international financial reporting standards, it was not necessary to develop the activities of the insurance industry, which is one of Iraq's neglected economic sectors, as

the problem of lack of awareness about insurance activity among members of society due to the system prior to 2003, which was adopting the idea Comprehensive insurance on various accidents without having contributions paid by individuals. With the passage of time, as well as changes in the character of the political system and other issues that arose in Iraq, there was less interest in the insurance business, which was reflected in the attention paid to financial and accounting activities. In the case of insurance firms, the lack of a certified actuary necessitates relying on an outside party to establish the amount of compensation, and predicted reserves from insurance activities are dependent on economic conditions. The social and political evaluation must last no more than five years.

Indeed, audit standards prohibit the auditing company from determining the insurance company's reserve policy. As a result, the audit firm's client uses its own actuaries or third-party actuaries to provide management with initial actuarial capabilities, so it is acceptable for the audit firm's actuaries to review it, certify the reserves created by the client, and sign the actuarial statement. Given the environment's orientation toward the application of international accounting standards and financial reporting standards, auditing companies face weak capabilities required to audit the services of actuarial activities. On the other hand, there are no specialized companies to control and audit the insurance activity, nor do these companies have actuarial experts who can audit and discuss the actuarial information. The study seeks to determine whether auditors can examine the appropriateness of the accounting measurement of insurance reserves by external actuaries, with the goal of ensuring that the measurement and accounting disclosure of those reserves provide quality information to users, as well as the extent to which the financial statements can be relied on in making various decisions.

THE PREVIOUS STUDIES

The actuarial issue is one of the important topics because of the role of the actuarial expert in insurance companies, and because of the small number of studies that dealt with this topic, and thus it attracts the attention of many researchers, and among these studies is the study of (Daykin, 1999), which attempted to figure out what role it plays the actuarial expert in British insurance companies, particularly in assessing pension entitlements, and one of the study's most important results is that insurance companies should seek an actuary's advice on technical provisions in insurance companies once every three years. As for the study of (Pike, 2003), it aims to know the relationship between the quality of the audit for the size of the estimated error and the actuarial expert and the auditor in insurance companies specialized in insurance against property losses at high rates. The study of (Kinney et al, 2004) aimed to identify the impact of

non-audit services fees on the independence of the external auditor, which in turn leads to affecting the quality of financial reports and reducing their importance. Drafting the financial statements in a manner that achieves the benefit of obtaining non-audit services such as tax services from the audit company itself.

The study of (Von, 2006), which was conducted in South Africa, aims to determine the extent of the actuarial expert's impact on the financial statements of insurance companies listed on the South African Stock Exchange in terms of obligations related to profits and accounting policies for insurance and earnings. The study of (Tripp, 2008) demonstrates the direct, long-term effects of actuarial professionals in the United Kingdom, and one of the study's most important recommendations is that the actuary play a role in corporate risk management. While the study of (Grace & Leverty, 2011) highlighted the importance of the external auditor and actuary expert in evaluating insurance company reserves. The study concluded that insurance companies' reliance on the actuarial auditor leads to a reduction in estimation errors of 53% to 59% that a high-quality actuarial auditor is linked to better estimates of reserves in insurance companies, and that actuarial auditing companies have more influence in determining reserves than auditing companies. The study of (Krishnan et al, 2011) aimed to identify the impact of the non-audit services provided by the auditor in America on his independence, and the US Securities and Exchange Commission believes that the non-audit services provided by the auditor affect the objectivity of the auditor. So, in 2003, the US Securities and Exchange Commission reduced many types of non-audit services provided by auditors, and the study discovered a correlation between discretionary receivables prior to the implementation of the US Sarbanes-Oxley-SOX Act and the reduction in the types of non-audit services provided by the auditor, as well as a decrease in the degree of association between profit management and declining non-audit services in the post-application period. The study of (Kamiya et al, 2013) identifies the function of actuarial specialists in American insurance firms' operations of risking property losses, as well as the extent to which they contribute to the decision-making of insurance companies. The statistical analysis used square regression, and the study concluded that the presence of actuarial professionals in senior positions or senior management is related to the percentage of cash available in the insurance company and reinsurance, and that the presence of actuarial professionals in senior positions has an impact on insurance company risks. The study of (Gaver & Paterson, 2014) conducted research to determine the link between audit quality and non-audit services given by audit firms to their clients. According to the study, auditing companies provide lower-quality auditing to their customers when they audit the company's records and provide actuarial services to the company through reserve actuarial

services, and that involving two companies in providing services rather than one provides multiple benefits for the joint audit process. The study of (Rahman, 2017) intends to investigate the impact of inventorying non-audit services that local audit companies in Bangladesh compete for, as well as the four major audit companies. The study concluded that the four main audit firms believe that the companies listed on the Bangladesh Stock Exchange do not appoint small local consulting firms or small-sized audit firms for the purpose of providing non-audit services, rather, they believe that the companies that provide non-audit services are large consulting companies or major audit companies. The goal of the study (Klumpes et al, 2019) is to determine the relationship between audit fees and non-audit services represented in actuarial services provided by British life insurance companies, as well as the extent to which these non-audit services have an impact on auditor fees. The study concluded that British insurance companies purchase non-audit actuarial services in order to integrate audit services provided by the auditor with non-audit services provided by the actuary, and that contracting with the auditor to provide non-audit services will compromise the auditor's independence. There is no link between audit fees and fees for non-audit services. As for the study of (Adams & Jiang, 2020), it aimed to identify the relationship between the financial experience at the level of the insurance company's board of directors and six performance measures based on the data of British insurance companies, and the study concluded that actuaries have a positive impact on the performance of British insurance companies, and there are relationships between actuaries and good performance of financial results for all six selected performance measures.

THEORETICAL FRAMEWORK

The concept of actuary in the activity of insurance companies

The term "actuary" refers to an expert in insurance matters, and the studies offered by the actuary expert are part of the insurance sector's long-term plans and strategies, particularly in the field of budgeting. This is because insurance offers many benefits to the individual and society, including encouraging the undertaking of various economic projects. Ensuring the continuity of economic projects and increasing productivity. Life insurance as a means of saving, in addition to strengthening credit and providing solutions to some social problems (Jum'a & Omar, 2019). Interest is due to actuarial science for its role in evaluating the probability of future events, and reducing the likelihood of undesirable events (Parrish, 2011).

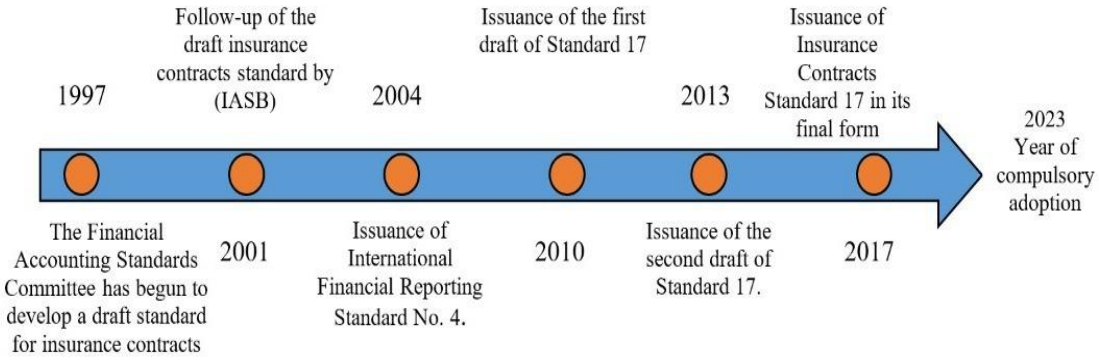
Actuarial science, also known as insurance accounting science or insurance statistics science, is a scientific field that studies the level of risk in the insurance and financial industries using mathematical and statistical methodologies. Actuaries are professionals with the

necessary education and experience in the subject (Jamil, 2016). A business owner who measures and manages the economic impact of risk and uncertainty is known as an actuary or appraiser. This name has anything to do with actuarial science or insurance accounting. These risks can affect both the assets and liabilities side of the balance sheet, necessitating investment and liability management as well as valuation expertise (Parrish, 2011).

In insurance companies, the actuarial expert plays an essential role, and the appointment of the actuary has become a requirement in determining the required pensions and retirement benefits. In the United Kingdom, the role of the actuary is critical in reporting violations of the British Pensions Act of 1995 (Turnbull, 2017). Contributions for various types of insurance are measured at an amount determined by the insurance company, and these contributions are estimated by the insurance company's actuarial experts, based on actuarial methods and statistics related to the insurance business, as well as generally accepted practices and relevant issued laws (Benioussef & Hemrit , 2019).

One of the jobs of insurance companies is that they issue life insurance or savings policies, and they work to keep funds as a percentage of the value of their operations in the form of an arithmetic reserve to face the risks associated with them. It should be sufficient to pay all compensation for valid policies, and the said reserve is formed for each insurance policy separately and on a mathematical basis (Menzietti & Pirra, 2017; Khan et al, 2019). According to actuarial calculations, (Sukhorukova & Chistyakova, 2018), the mathematical reserve in insurance companies is derived based on the statistics in the mortality tables and is adjusted for valid documents once every three years and that the arithmetic reserve in insurance companies differs from the rest of the other reserves, as the arithmetic reserve is one of the expenses that must be charged to the account of revenues and expenses, as it represents a provision to meet already existing obligations (Handoyo et al, 2019). Here comes the actuary expert's role in determining those reserves in a way that benefits both the community and the company's operations. The accounting profession has paid close attention to actuarial activity due to its importance, given that the insurance sector is one of the most important, particularly in capitalist countries, and Figure 1 provides a historical overview of the IFRS 17 insurance contracts standard's development.

Figure 1. A historical development of the insurance contracts standard.



Source: (Saleh, 2020), with revise.

It means that there are papers related to the subject matter that are fully adopted and finalized at the beginning of fiscal year 2023, according to the IFRS 17 international reading schedule for contracts that hold papers for up to twenty years while the time period in which their final papers expire. This is due to a variety of factors, including the standard's relationship with other accounting standards, which necessitates knowledge of other accounting standards by the actuarial accountant or the accountant and auditor in insurance companies. The most important of them are International Financial Instruments Standard 32, lease contracts 16, employee benefits 19, and retirement plans 25 while the most important financial reporting standards are Financial Instruments Standard 9, revenue from contracts with customers 15, share-based payment 2, business combination 3.

Actuarial Audit

Because each branch of accounting has a distinct sort of audit known as specialization in the field of activity, actuarial accounting is a unique specialist that combines accounting and auditing, as well as statistical and mathematical understanding. The actuarial accountant, on the other hand, plays a very important position in insurance businesses, particularly in relation to risk management. Aside from adding value to the company, the Certified Public Accountant (CPA) is the most similar to an actuarial accounting major in the United States, because the accountant has to complete the term of practical training required by the donors for the actuarial accounting major (Fateh, 2015).

There is a difference between the actuarial audit and the non-audit or advisory services for the auditors, because the non-audit services that the auditors perform, negatively affect the independence of the external auditor more than the provision of these services by a separate department in the auditing company itself, and this is what many found Of the studies, the most

important of which are (Canning & Gwilliam, 1999; Jenkins & Krawczyk, 2000; Jenkins & Krawczyk, 2001 Jenkins & Krawczyk, 2001; Ashbaugh & Mayhew, 2003). Although non-audit services are not regarded one of the auditor's functions for audited companies, auditing these services given by a third party is one of the auditor's responsibilities to assure the quality of auditing of the services offered to the customers.

RESEARCH METHODOLOGY

The audit companies audit all the consequences of the statement of financial position, and the actuarial services obtained by the insurance companies are the basis for estimating the provisions and compensation. As a result, because the quality of services provided by these companies is directly reflected in the financial statements, auditing companies should have the experience and skill to ensure that the quality of services provided by these companies. The aim of the study is to ensure that auditing companies are capable of auditing actuarial services.

The research problem is that the auditing company's client employs actuarial experts to supply management with the knowledge needed to calculate actuarial reserves. The results of these reserves are approved by the auditing company. A survey conducted by researchers based on a set of questions prepared based on (Finan, 2007), it was discovered that auditing companies lack audit experience with regard to auditing the actuarial activity, and that auditors lack the capabilities required to audit the services of the actuarial activities. On the other hand, there are no specialized companies specialized in controlling and auditing the insurance activity, or these companies own actuarial experts who can audit and discuss the actuarial information.

Throughput this study, we follow the findings of a study (Gaver & Paterson, 2014), which aimed to identify the relationship between audit quality and non-audit services provided by audit companies to their clients. While our current study investigates the ability of audit companies to audit actuarial services provided by a third party to insurance companies.

H1: There are no statistically significant differences in the relationship between audit services and non-audit actuarial services.

The research sample included a group of auditors who obtained a chartered accountant certificate in private companies and the Federal Office of Financial Supervision, totaling more than 157 auditors with at least 5 years of audit work experience.

Estimates are measured using a unified accounting model, which assists investors and insurance market participants by transferring the investment process from the local market to the global market and contributes to increased insurance awareness among individuals. Reliance on international financial reporting standards also helps to make timely and suitable

economic decisions, and this will develop as a result. In the long run, the economic sector is important. The process of measuring variables is used to prove or disprove the research hypothesis, which is based on what was mentioned in the IFRS 17 standards that will be mandatory in 2023, as well as the extent to which the auditors understand the mechanisms of applying the standard in the absence of any previous international standards.

RESULTS AND DISCUSSIONS

The internal consistency test of the scale

The Cronbach's Alpha coefficient is used to verify the Reliability of the internal consistency and stability of the questionnaire, which indicates that the questionnaire's stability coefficient is high (0.87). It shows that the questionnaire in all aspects obtains a high and acceptable degree of stability and thus can be adopted. Furthermore, the questionnaire can be used in conducting the analysis and implementing the results; the Reliability is equal to the root of the reliability coefficient, where the questionnaire's Reliability value is (0.93), which is a high value indicating the scale's Reliability. Table 1 displays the variables' computed relative values.

Table1. Content Reliability Test

Factors	Stability coefficient value	Reliability of the Scale	The total value of the stability coefficient	The total Reliability of the scale
Audit Services	0.69	0.001	0.87	0.93
Non-audit actuarial services	0.63	0.004		

Descriptive results

In this section of the research, we present the findings of the researchers' field study, which were analyzed using descriptive statistics tools represented by the arithmetic mean to determine the extent to which the selected sample agreed with the questionnaire questions in order to create an image or general framework for the respondents' preferences and general orientations with regard to the research variables, through Likart quinquennial scale, which is an ordinal scale, and expresses the weights, which are (exactly agree = 5, agree = 4, neutral = 3, disagree = 2, do not agree at all = 1) and the arithmetic mean (weighted mean) is determined of the scale from determining the length of the first range, which is equal to the result of dividing 4 by 5, as 4 represents the number of spaces, while the number 5 represents the number of choices. Thus 4 divided by 5 is 0.8 which represents the length of the range. This statistical method has been relied upon by several studies, including the study (Flayyih et al., 2019). According to this perspective, the results can be presented in Table 2.

Table 2. Descriptive statistics results

Variables	Arithmetic mean	Standard deviation	Variation coefficient	Relative importance
Audit services	4.12	8.25%	91.75%	91.85%
non-audit actuarial services	4.4	0.25	5.68%	94.32%

The descriptive statistics results show that the arithmetic mean of the two variables is greater than the hypothetical mean, confirming the findings that there is agreement among the sample members on the questions asked. The standard deviation and coefficient of variation results show that there is a low dispersion for both variables. The findings also show that non-audit actuarial services were more important in insurance companies than audit services. Based on the idea of the importance of actuarial services, these results reinforce the importance.

Inferential results

To test the research hypothesis, it is necessary to test the normal distribution of the data before selecting the necessary statistical tools, whether they are parametric statistical tools or non-parametric statistical tools. When the data is examined, it is discovered that (Sig. = 0.000) for audit services and (Sig. = 0.000) for non-audit services, indicating that the data follows an abnormal distribution. For this reason, we go with Mann-Whitney.

Table 3. Mann-Whitney test

Mann-Whitney	6.000
Wilcoxon W	42.000
Z	3.041-
Asymp. Sig. (2-tailed)	0.002

The results of the Mann-Whitney test in Table 3 show that the value of (Sig. = 0.002) is less than the significance level of 5%, which is consistent with the researchers' assumption that there are significant differences between audit services and non-actuarial services in the auditor's report.

CONCLUSIONS

Examining auditors' ability to determine the appropriateness of external actuaries' accounting measurement of insurance reserves, and the extent of objectivity of measurement and accounting disclosure of those reserves in providing quality information for users, as well as the possibility of relying on financial statements in making various decisions, is an unstudied topic in the various auditing and financial literature regarding in our local area. This is due, on the one hand, to the university's lack of involvement in establishing institutes for obtaining the

actuarial certificate and actuarial auditing, and, on the other, to a shift away from international accounting standards in measurement, presentation, and disclosure. The inevitability of these results will contribute significantly to the impossibility of proving the existence of a relationship between the studied variables. The findings of this study support interest in a variety of areas, including the formation of institutes for acquiring an actuarial specialist certificate and increasing the mix of audit and actuarial activities in light of financial reporting standards. We further propose that the auditors be given a deadline to complete financial actuary training courses, and that the audit of insurance companies be delegated to international businesses with financial actuary experience.

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