Factors Affecting the Effectiveness of Internal Control in Vietnamese Life Insurance Enterprises

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Abstract: The article presented the importance and role of internal control in life insurance enterprises. Through the qualitative research method, the research team synthesizes research results on internal control from domestic and foreign documents, reports and research articles. The result of the review show that there is no research in Vietnam to investigate the factors affecting the effectiveness of internal control in life insurance enterprises. Based on the Committee of European Insurance and occupational pensions supervisors' principles of internal control applied in insurance enterprises [CEIOPS] and the viewpoint of the Committee of Sponsoring Organizations of the Treadway Commission [COSO], the research team building a model to assess the impact of the factors Control environment, risk assessment, information and communication, control and supervision activities on the effectiveness of internal control at Vietnamese life insurance enterprises. Using quantitative research methods with Cronbach alpha reliability coefficient analysis, exploratory factor analysis and multivariate regression, 183 valid questionnaires were entered and analyzed data and analysis results. The analysis shows that 5 independent factors have a positive effect on the dependent factor. Based on the influence of each independent factor, the research team identified the remaining points that have reduced the effectiveness of the internal control system at the life insurance enterprise. This result is also the basis for businesses to have an orientation to amend and adjust the internal control system to match the development of the insurance market.

Keywords: Efficiency, Impact factors, Internal control, Life insurance enterprises, Vietnam.

1. INTRODUCTION

Internal control is a set of processes performed by all employees in an enterprise. These processes are designed to ensure the four objectives of operational effectiveness and efficiency, reliability of financial and non-financial information, risk control, business prudence, and legal compliance laws and regulations as well as internal policies and procedures (CEIOPS, 2003, p.6). Internal control through strict control of the internal operating environment of the enterprise enhances the ability to cope with events outside the enterprise and detect errors and frauds in the process and structure of the enterprise. From the insurance industry's point of view, internal control is an opportunity for enterprises to improve operational efficiency, enhance risk identification and prevention (CEIOPS, 2003, p.10). The peculiarity of insurance enterprises is to seek profits in a risky business environment. In Vietnam, the life insurance market still has a huge development space, businesses are competing more and more fiercely for market share, along with the expansion of offices and distribution channels. In addition, life insurers have a large number of employees and are distributed across the country, leading to problems such as poor operational efficiency, wasted resources, poor supervision and

organization. Therefore, although life insurance enterprises in Vietnam all have internal control systems, they have not yet brought about the desired effect. To understand the causes and difficulties affecting the effectiveness of internal control, the research team investigated three main issues. What factors affect the effectiveness of internal control in life insurance enterprises in Vietnam? Is there a relationship between factors such as Control environment, risk assessment, information and communication, control activities, and supervision? How do these factors affect the effectiveness of internal control in life insurance enterprises in Vietnam? To answer these questions, the research team first looked through the results of several studies on internal control at insurers in Vietnam and around the world.

Tunji et al. (2016) studied the role of internal control in bringing about high efficiency in the insurance business in Nigeria (pp.1-11). The study surveyed the northeastern region of Nigeria. Through statistical analysis tools, the results show that the positive impact between the independent variable is the impact of the internal control system, the measure of internal control, the leader of the insurance business, and the dependent variable is the performance of insurance companies. In addition, the study also clarifies the role of the internal control system and makes recommendations on the establishment of a mandatory internal control system at insurance enterprises, using competent internal control personnel efforts to reduce fraud and errors (Tunji et al., 2016, pp.1-11).

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In the study by Liu & Chen (2021), the impact of internal control on risk management in insurance firms in China (pp.512-515). The research results of the two authors have shown that insurance enterprises are an important part of the financial industry. Insurance enterprises face a lot of risks in their operations, so an effective internal control system will help to minimize risks arising. Through financial data of listed insurance companies in China, the research team has verified and concluded that internal control has a positive influence on risk management (Liu & Chen, 2021, pp. 512-515).

In the study of Okoli & Isaac (2021), on internal control and risk management effectiveness in Nigerian insurance companies (pp.127-137). The objective of the study is to assess the link between the effectiveness of risk management and internal control measures such as the Regular Reporting Regime; perform the work in the regulations; Establish internal control measures; Control unusual activities and build a reasonable organizational structure. Through quantitative and qualitative research methods, the results show that a good implementation of internal control will improve the effectiveness of risk management. At the same time, the author also makes recommendations on the independence and autonomy of internal control staff and their ethics in front of authorities and in their work at the enterprise (Okoli & Isaac, 2021, pp.127 -137).

Research by Magablih & Alshira'h (2021) on the impact of an effective internal control system on reducing fraud in public insurers in Jordan (pp.84-100). Through the quantitative research method on 168 research samples (subjects to the survey of business leaders, heads of departments and managers at government organizations), the research team has collected 168 questionnaires with valid words for analytical use. Research results have shown that there is a statistically significant effect from the application of an effective control system that reduces fraud. The research team also proposes a number of measures to enhance the effectiveness of the internal control system, such as improving the quality of internal control staff, continuously performing risk assessment, and strengthening the information and media (Magablih & Alshira'h, 2021, pp.84-100).

Upadhaya & Niroula (2022) research the internal control system in improving the efficiency of insurance business administration in Nepal. Through qualitative research, the author uses the convenience sampling method in Nepalese insurance enterprises to examine the relationship between four independent variables, namely risk assessment, monitoring and supervision, control environment, and risk assessment control and internal audit along with three dependent variables independent board members, transparency and accountability. Research results have indicated that internal control activities will affect the success of corporate governance (pp.232-243).

Phuong (2019) studies the factors affecting the effectiveness of the internal control system in non-life insurance enterprises in Vietnam. Through qualitative and quantitative research methods, the author has built a model to evaluate the effectiveness of the internal control system in non-life insurance enterprises in Vietnam. The study identifies independent variables as Risk Assessment; Control activities; Information Communication; Information technology; Control and Monitoring Environment. The analysis results also show a positive impact of all these 5 factors on the effectiveness of the internal control system. Based on the impact level of each factor, the author has proposed solutions to improve the effectiveness of internal control activities (para 1).

Research by Nha et al. (2021) on factors affecting the effectiveness of internal control in payment of medical examination and treatment costs at the Social Insurance agency. The author has identified the factors affecting internal control including Control activities, Monitoring, Control environment, Information and Communication and Risk assessment. Based on the theory of internal control according to COSO in 2013 and the results of quantitative research, the author has determined that all 5 factors above affect internal control at the social insurance agency. The author also proposes some measures for governance activities such as perfecting the risk assessment process, managing information and communication quality; perfect monitoring and control environment (pp.91-110).

Research by Giang (2021) on organizational structure affecting the effectiveness of internal control of non-life insurers in Vietnam. Research results have shown that organizational structure factors have a direct influence on the effectiveness of internal control in Vietnamese non-life insurance enterprises. In addition, the research results also show that the organizational structure and internal control structure are suitable and have a positive impact on the research model of the effectiveness of the internal control system (para 1).

Research by Thu & Nghia (2021) on factors affecting the effectiveness of the internal control system at enterprises. The article also provides an overview of the internal control system and identifies 5 factors control environment; risk assessment; Control activities; Information and communication; Monitoring impacts on the effectiveness of the internal control system. The research team also proposed solutions to improve the effectiveness of the internal control system in rubber manufacturing and trading enterprises in Kon Tum province. Strengthening risk identification and assessment activities, applying control procedures to detect errors and frauds, strongly applying informatics in management, building a separate inspection and testing department and strengthening monitoring activities are the recommendations of the authors (para 1).

Research by Zen et al. (2023) on building a model of factors affecting the effectiveness of the internal control system in Vietnamese enterprises. The study presented the basis of internal control and background theory (regulatory theory; delegation theory; institutional theory, uncertainty theory of organizations, and theory of social psychology of organizations. organization) to support the development of research models. Based on theory and background theory, the

research team has built a research model of factors affecting the effectiveness of the internal control system including control environment, risk assessment, activities control, information and communication, and monitoring (pp.730-735).

From the above studies, we can see that the research of published foreign authors focuses on the study of the internal control system towards the impact on the value of the enterprise, the impact on risk management, and the impact on risk management. There are very few studies on the impact factors of the internal control system on improving operational efficiency. In domestic studies, the authors have focused on studying various issues related to internal control activities such as building models of the internal control system according to COSO or evaluating the status of internal control activities in the enterprise. In the insurance sector, there are currently only a few studies on the internal control system in the public insurance sector and non-life insurers and no research on the internal control system at enterprise Life insurance in Vietnam. Recognizing this research gap, the research team assessed the impact of internal factors on the internal control system such as control environment, risk assessment, and control activities, information and communication, and monitoring thereby improving the effectiveness of internal control in life insurance enterprises.

2. METHODS

2.1. Research Process

To achieve the stated research objectives. The research team has reviewed previous studies related to internal control and the effectiveness of internal control. Previous studies are classified according to the views and tendencies of the authors. The content of the research review also identifies issues that have been agreed upon, issues with differences of opinion and issues that need further research to identify gaps for research implementation.

Qualitative research by hand-to-hand interview method with qualified and experienced experts who have worked and operated for many years in related fields such as the Department of the Insurance Supervisory Authority, Insurance Association of Vietnam. This research step aims to solve the research question: What factors affect the effectiveness of the internal control system in Vietnamese life insurance enterprises?

Collecting data and conducting quantitative research: This step will be carried out next with the aim of determining the factors affecting the effectiveness of the internal control system in life insurance enterprises in Vietnam. Nam, measure the impact of those factors by exploratory factor analysis and multiple regression models.

2.2. Building Models, Research Hypotheses and Scales

The research model is built on the basis of the principles applied to the internal control of an insurance enterprise which are control culture, risk assessment, control activities and assignment of duties, information & communication, information and communication technology, supervision (CEIOPS, 2003, p.1-8) and the components of the internal control system of COSO (1992) with three objectives includ-

ing: ensure the effectiveness and efficiency of operations; ensure the reliability of financial statements; ensure compliance with laws and regulations (p.81). The model includes 5 independent variables, namely Control environment, Risk assessment, Control activities, Information and communication, Monitoring and an independent variable, Internal control effectiveness.

Research Hypothesis

H1: The control environment has a positive (+) impact on the effectiveness of the internal control system in life insurance companies in Vietnam.

H2: Risk assessment has a positive (+) impact on the effectiveness of the internal control system in life insurance enterprises in Vietnam.

H3: Control activities have a positive (+) impact on the effectiveness of the internal control system in life insurance enterprises in Vietnam.

H4: Information and communication have a (+) impact on the effectiveness of the internal control system in life insurance enterprises in Vietnam.

H5: Monitoring has a positive (+) impact on the effectiveness of the internal control system in life insurance companies in Vietnam.

The factors in the research model of factors affecting the effectiveness of the internal control system in life insurance enterprises in Vietnam are coded into symbols. Each factor has observed variables that are survey questions that will be numbered after each symbol from 1; 2;3; … until the very end. "Effectiveness of internal control" is a dependent variable that is also coded into a symbol, the questions for surveying the dependent variable are also numbered followed by the symbol. Using a five-point Likert scale of "strongly disagree" – "disagree" – "normally" – "agree" – "strongly agree" with the corresponding scores: 1 – 2 – 3 – 4 – 5.

Table 1. Survey Questionnaire for the Entire Scale.

Ampersand	Content
CE	Control environment
CE1	Enterprises have built a set of standard principles of integrity and ethical values
CE2	Enterprises have full implementation and require complying and effectively implement according to the principles of the developed set of standards.
CE3	Business leaders work independently with business departments/departments when it comes to making decisions. At the same time, supervise the operation of internal control.
CE4	Enterprises have established an organizational structure, division of responsibilities and powers to achieve the goal of strict management in business activities.
CE5	Enterprises have annual training and retraining policies for professional staff to ensure that they meet their tasks

RA	Risk assessment
RA1	The risk forecasting department is well-established and operational.
RA2	Regularly identify risks, analyze, and assess risks. Timely warning of risks affecting the control objectives of the enterprise
RA3	Life insurers are concerned about potential risks that may affect control objectives such as fraud in insurance policies, interest relationships and other frauds that may occur.
RA4	Appropriate reward policies for employees who detect risks and report timely handling of those risks.
RA5	New policies on personnel, salaries and commissions undermine the goal of internal control
CO	Control operation
CO1	Control procedures are very strictly regulated.
CO2	Thoroughly apply information technology to the internal control system
CO3	Life insurance companies regularly organize inspections of insurance business activities
IC	Information and communication
IC1	Life insurers collect information on continuous, timely and accurate insurance business activities
IC2	All information about sales policies, benefit payment, when there is an insurance event, is firmly grasped by the controlling staff
IC3	Life insurance companies do well in internal communication
IC4	Life insurance companies do a good job of communicating externally
IC5	Management information system ensures timely provision of customer information when there is an insurance event
MNT	Monitor
MNT1	Regular monitoring of activities inside the enterprise
MNT2	Business leaders are interested in the oversight of employees and functional departments to evaluate whether the operation and operation of internal controls are effective
MNT3	Employees supervise and report fully and promptly the problems they find.
EIC	Efficiency of internal control
EIC1	Effective internal control will help life insurers strictly control business activities
EIC2	Internal controls increase the reliability of financial statements that help provide accurate information to businesses and customers, regulators

EIC3	Internal control ensures the proper implementation of the provisions of law, in accordance with the requirements, principles and internal processes of the enterprise

Source: Proposal of the research team.

2.3. Study Sample and Survey Sample Size

To collect information for research purposes and conduct in-depth interviews with experts. The research team has researched, contacted and evaluated the depth of expertise of experts in the insurance field. After contacting and discussing with leaders of life insurance companies, experts from the Department of the Insurance Supervisory Authority and Insurance Association of Vietnam about the research purpose and interview plan. The research team compiled a list of experts who agreed to participate in the interview and carried out the planned step-by-step interview.

Determining the sample size according to the population estimate often requires a large sample size. Two methods that require large sample sizes are usually multiple regression and exploratory factor analysis. Because the study uses a combination of treatment methods, the largest required sample size among the methods will be taken. This research topic uses exploratory factor analysis and regression analysis, so we will use the method of calculating sample size according to exploratory factor analysis.

According to Hair et al. (2014), the minimum sample size to use exploratory factor analysis is 50, preferably 100 or more. The ratio of observations to an analyte is either 5:1 or 10:1, which some researchers suggest should be 20:1. "Number of observations" simply means the number of valid questionnaires required; "measured variable" is a measurement question in the survey (courtesy of Tho, 2014, p.415). In the Textbook of Scientific Research Methods in Business, author Tho (2014) also thinks that the best sample number is 10:1 or more (p.415). Sample size in the study by exploratory factor analysis = 24 * 10 = 240 observations. So, the number of survey samples in this study is from 240 samples or more.

2.4. Data Sources and Methods of Data Collection in the Study

Data related to the research objective include primary and secondary data collected from the following sources. Secondary data is taken from sources accessible to the author in the form of annual summary reports of life insurance enterprises. Documents from domestic and foreign studies on the internal control system in the form of articles, and research works, collected by research groups by topic and research period. Based on these data, the research team can conclude theoretical issues about the internal control system and the effectiveness of the internal control system at the insurance enterprise. Primary data is synthesized from analysis, synthesis, results collected through direct interviews with questionnaires, and one-on-one interviews with experienced experts in the insurance field. The data collection period was conducted from February to April 2022. The data used in the quantitative study of study are data obtained directly from the cleaned survey tables in order to exclude eliminate survey responses that are incomplete or do not meet the requirements of the study.

2.5. Methods of Data Analysis

The objective uses a quantitative research method with the aim of testing the proposed research model of factors affecting the effectiveness of the internal control system in life insurance enterprises in Vietnam. After collecting data through a questionnaire. The research team used descriptive statistical analysis software SPSS 22.0 to process the collected information.

Cronbach's Alpha Reliability Analysis Method

Cronbach's reliability coefficient is a statistical test of how closely the items in the scale correlate with each other. According to Tho (2014), Cronbach alpha is the most commonly used coefficient when assessing the reliability of multivariate scales. This method measures the consistency of observed variables in the same scale to measure the same concept (p.369). According to this author, a scale has a good reliability coefficient when it varies between 0.75 and 0.95. If the Cronbach alpha coefficient is too large (alpha > 0.95), duplication will be encountered (Tho, 2014, pp.364-365). In addition, according to Nunnally & Bernstein (1994) in the analysis of the reliability coefficient we need to pay attention to the total variable correlation coefficient. If a measurement variable has this coefficient ≥ 0.3, then that variable meets the requirements (according to Tho, 2014, p.365).

Exploratory Factor Analysis

The exploratory factor analysis method belongs to the group of interdependent multivariate analysis (Tho, 2014, p.378). Factor analysis is the generic name for a group of procedures used primarily to shrink and summarize data. In studies, we can collect data on a fairly large number of variables, and most of these variables are related. That's why we need to reduce the number of smaller variables that we can use. According to author Tho (2014), in factor analysis, the method of extracting Principal Components Analysis along with Varimax rotation is the most commonly used method (p.411). According to Hair et al. (1998), Factor loading (factor loading factor or factor weight) is the criterion to ensure the practical significance level of exploratory factor analysis: Factor loading > 0.3 is considered to have reached the level of exploratory factor analysis minimum; Factor loading > 0.4 is considered important; Factor loading > 0.5 is considered to be of practical significance (p.111). The Kaiser - Mayer - Olkin index [KMO] will assess the suitability of exploratory factor analysis, $0.5 \leq KMO \leq 1$ (Tho, 2014, p.414). A large KMO value is appropriate for factor analysis. Also, according to Trong & Ngoc (2008), the Bartlett test is used to examine the correlation of variables in the population, and it is statistically significant when Sig. < 0.05 and vice versa, if Sig. < 0.05, observed variables are correlated with each other (p.30). In addition, the percentage variation of the observed variable Percentage of variance > 50% is considered to guarantee the explanation of each factor and the succinctness of the factor analysis (Thong & Ngoc, 2008, p.31).

Linear Regression Method

Multivariate regression was developed based on simple linear regression. This method is used when we want to predict the value of one variable based on the value of two or more other variables. The variable to be predicted is called the dependent variable. The variables used to predict the value of the dependent variable are called independent variables (Tho, 2014, p.578). Multivariate regression also allows us to determine the degree of influence of each independent variable on the change of the dependent variable. The results of multivariate regression analysis are accepted and meaningful when the total residual = 0, has a normal distribution and does not occur collinearity, autocorrelation, and unequal variance.

To evaluate the relationship and impact direction of the group of Control Environment components; Risk assessment; Control activities; Information and communication; Supervising in the above analysis, this study used the regression analysis method with the support of SPSS 22 software. In the regression equation to be performed, it is a multivariate regression equation, in order to identify the important role of each component in assessing the relationship between the effectiveness of the internal control system in life insurance enterprises in Vietnam for the components of the scale. The multivariable regression equation showing the relationship between the effectiveness of the internal control system on the Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring has the following form: :

$Y = a\_0 + a\_1X1 + a\_2X2 + a\_3X3 + a\_4X4 + a\_5X5$ (Tho, 2014, p.576)

In there:

Y: The dependent variable represents the predictive value of the effectiveness of the internal control system in life insurance companies in Vietnam.

$a_0, a_1, a_2, a_3, a_4, a_5$: Are regression coefficients

X1, X2, X3, X4, X5: Are the independent variables in order: Control environment, Risk assessment, Control activities, Information and communication, Monitoring.

3. RESULTS

With 250 questionnaires distributed, the research team collected 210 votes, of which 27 were invalid, the remaining 183 votes were entered and analyzed for sufficient data for analytical methods in this study.

3.1. Check the Quality of the Scale

The results of the analysis of reliability coefficients for each scale of independent and dependent variables are summarized in Table **1**. Cronbach's alpha of each scale is greater than 0.8. The correlation coefficient of the smallest sum of the components of the scales is guaranteed to be >0.7 and Cronbach's alpha coefficient if the variable type (the largest) is smaller than the confidence coefficient. From the above results, we can conclude that the scale used in the study is suitable, reliable and a good measurement scale. The scales also ensure to simultaneously satisfy two conditions for keeping the observed variable for exploratory factor analysis and further research steps.

Table 2. Summary of Scale Quality Inspection Results.

Control environment scale	Average Scale if Item Deleted	Variance Scale if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Control environment. α = 0.900				
CE1	15.84	11.830	.782	.871
CE2	15.96	12.042	.771	.874
CE3	15.87	11.957	.739	.881
CE4	15.95	12.168	.739	.881
CE5	15.90	11.716	.731	.883
Risk assessment. α = 0.931				
RA1	13.78	18.054	.820	.915
RA2	13.78	17.757	.852	.909
RA3	13.87	18.001	.848	.910
RA4	13.90	17.995	.851	.910
RA5	13.75	19.255	.723	.913
Control operation. α = 0.927				
AGENCY1	7.36	4.583	.878	.872
CO2	7.25	4.571	.880	.870
CO3	7.35	5.273	.799	.925
Information and communication. α = 0.922				
IC1	14.93	16.451	.787	.907
IC2	14.85	16.456	.813	.901
IC3	14.93	16.820	.788	.906
IC4	14.83	16.585	.811	.902
IC5	14.86	16.141	.791	.906
Monitor. α = 0.843				
MNT1	7.87	2.660	.795	.697
MNT2	7.81	2.767	.749	.742
MNT3	7.84	3.002	.692	.8 33

Efficiency of internal control. α = 0.887			
EIC1	7.65	3.569	.779	.842
EIC2	7.66	3.412	.797	.825
EIC3	7.74	3.447	.765	.853

Source: Data processing results of the research team.

3.2. Exploratory factor Analysis

The results of multiplier analysis for each independent and dependent scale are summarized in Table **3**. KMO coefficient >0.5 for all scales, the lowest KMO belongs to the MNT scale = 0.669 and the coefficient the largest KMO belongs to IC = 0.884. Thus, the KMO coefficient has satisfied the first condition for exploratory factor analysis. The sig value of the entire scale of independent variables is less than 0.05. The total variance extracted from the independent variable scale is all greater than 50% and converges to only one common factor with large factor weights of 0.5. From these results, it can be concluded that all 21 observed variables of the independent factor are suitable and are kept for the next analysis. For the scale of the dependent variable, we perform the same analysis as the independent variable scale, the results are also summarized in Table **3**. The results of exploratory factor analysis for the dependent variable scale found KMO = 0.746, Percentage of variance = 81,654 and converged on a common factor.

Table 3. Synthetic Results of Exploratory Factor Analysis for each Scale.

Scale	KMO coefficient	Sig	Total variance explained	Number of factors eliminated	Number of converging factors
CE	.851	0.000	71.578	0	1
RA	.860	0.000	78.552	0	1
CO	.744	0.000	87.282	0	1
IC	.884	0.000	76.322	0	1
MNT	.669	0.000	76.540	0	1
EIC	.746	0.000	81.654	0	1

Source: Data processing results of the research team.

Table 4. Extracted from the Exploratory Factor Analysis Table Common to all Independent Variable Scales.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.							,839		
Bartlett's Test of Sphericity				Approx. Chi-Square			**2849,095**		
				df			**210**		
				Sig.			,000		
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %	Total	% Of Variance	Cumulative %
1	6.588	31.370	31.370	6.588	31.370	31.370	3.964	18.876	18.876

2	3.364	16.021	47.390	3.364	16.021	47.390	3.841	18.291	37.167
3	2.522	12.008	59.398	2.522	12.008	59.398	3.606	17.170	54.337
4	2.089	9.950	69.348	2.089	9.950	69.348	2.627	12.511	66.847
5	1.789	8.517	77.865	1.789	8.517	77.865	2.314	11.017	77.865
6	.545	2.595	80.460						
21	.098	.469	100.000						
Extraction Method: Principal Component Analysis.									

Source: Data processing results of the research team.

Performing exploratory factor analysis for the entire scale of independent variables, the research team also obtained the results of total variance extracted = 77.865%>50%. KMO index = 0.839. In addition, sig also gives a result of 0.000 < 0.05 which meets the requirements for our analysis. Finally, the research team checks the results of the factor rotation matrix to see how many factors the observed variables will converge on, and which observed variables are made up of. The results of the factor rotation matrix show that 21 observed variables converge on 5 factors that do not change compared to the factors established in the research process and do not generate new factors. The converging factors are Control Environment; Risk assessment; Control activities; Information and communication; Monitoring with all factor weights is 0.5. Thus, these factors are made up of the original observed variables in the scale, not forming new factors. Therefore, we keep the scales and observation boundaries unchanged for the next steps of analysis.

3.3. Test Model and Research Hypothesis

The results of Pearson's correlation analysis show that there is a correlation between the dependent variable, the effectiveness of internal control, and the independent variables, which are Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitor because the sig values are all less than 0.05. On the other hand, the sig value between the independent variables is the Control Environment; Risk assessment; Control activities; Information and communication; Monitoring is very large and greater than 0.05, this means that the independent variables have no correlation, and it further confirms the good "Independence" between these independent variables.

The results of the linear regression analysis are as follows:

Table 5. Linear Regression Results.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770ᵃ	.593	.582	.58675
a. Predictors: (Constant), CE, RA, CO, IC, MNT				
b. Dependent Variable: EIC				

Source: Compiled and analyzed survey data of the research team

We see that Adjusted R square = 0.593 > 0.5 indicates 5 Control Environment components; Risk assessment; Control activities; Information and communication; Monitoring has

an impact on the effectiveness of internal control in life insurance enterprises in Vietnam. Thus, the fit of the model is relatively high.

Hypothesize

H0: Control environment factors; Risk assessment; Control activities; Information and communication; Supervision and effectiveness of internal control in life insurance enterprises in Vietnam do not have a relationship with each other.

H1: Control environment factors; Risk assessment; Control activities; Information and communication; Supervision and effectiveness of internal control in life insurance enterprises in Vietnam have a relationship with each other.

Table 6. ANOVA Test.

ANOVAᵃ					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	88.800	5	17.760	51.586	.000ᵇ
Residual	60.937	177	.344		
Total	149.738	182			

Source: Compiled and analyzed survey data of the research team.

With the significance level = 0.05, the results of the ANOVA test showed that the test value F = 51,586 at the significance level sig = 0.000 < α = 0.1. Thus, we reject hypothesis H0 and accept hypothesis H1, that is, 5 components of independent variables Control environment; Risk assessment; Control activities; Information and communication; Monitor and dependent variables Internal control effectiveness have a relationship with each other. Therefore, the model fits the data set and can be generalized to the population.

The results of multivariate regression analysis are presented in Table **7**.

The table of regression results shows that the regression coefficients of the Control Environment factor; Risk assessment; Control activities; Information and communication; Monitoring has a positive sign and R = 0.770 > 0 (Table 5), showing that these components have a positive impact on Internal control effectiveness in life insurers in Vietnam. Thus, the hypothesis of the research model is accepted that the independent components have a positive relationship with the dependent variable in the scale. At the same time, the table of regression results also shows that the variance

Table 7. Results of Multivariable Regression Model.

<table>
<tr><td colspan="9" align="center">Coefficients^a</td></tr>
<tr>
<td colspan="2" rowspan="2" align="center">Model</td>
<td colspan="2" align="center">Unstandardized Coefficients</td>
<td align="center">Standardized Coefficients</td>
<td rowspan="2" align="center">t</td>
<td rowspan="2" align="center">Sig.</td>
<td colspan="2" align="center">Collinearity Statistics</td>
</tr>
<tr>
<td align="center">B</td>
<td align="center">Std. Error</td>
<td align="center">Beta</td>
<td align="center">Tolerance</td>
<td align="center">VIF</td>
</tr>
<tr>
<td rowspan="6" align="center">1</td>
<td align="center">(Constant)</td>
<td align="center">-1.142</td>
<td align="center">.368</td>
<td></td>
<td align="center">-3.106</td>
<td align="center">.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td align="center">CE</td>
<td align="center">.381</td>
<td align="center">.069</td>
<td align="center">.270</td>
<td align="center">5.532</td>
<td align="center">.000</td>
<td align="center">.950</td>
<td align="center">1.053</td>
</tr>
<tr>
<td align="center">RA</td>
<td align="center">.119</td>
<td align="center">.043</td>
<td align="center">.139</td>
<td align="center">2.779</td>
<td align="center">.006</td>
<td align="center">.902</td>
<td align="center">1.109</td>
</tr>
<tr>
<td align="center">CO</td>
<td align="center">.101</td>
<td align="center">.043</td>
<td align="center">.120</td>
<td align="center">2.330</td>
<td align="center">.021</td>
<td align="center">.851</td>
<td align="center">1.176</td>
</tr>
<tr>
<td align="center">IC</td>
<td align="center">.346</td>
<td align="center">.050</td>
<td align="center">.384</td>
<td align="center">6.988</td>
<td align="center">.000</td>
<td align="center">.750</td>
<td align="center">1.333</td>
</tr>
<tr>
<td align="center">MNT</td>
<td align="center">.353</td>
<td align="center">.058</td>
<td align="center">.332</td>
<td align="center">6.044</td>
<td align="center">.000</td>
<td align="center">.749</td>
<td align="center">1.335</td>
</tr>
<tr><td colspan="9" align="center">a. Dependent Variable: EIC</td></tr>
</table>

Source: Synthesized analysis from survey data of the research team.

magnification factor VIF<2 meets the best conditions, proving that we do not have the problem of multicollinearity in this study. So, the regression equation for the standardized coefficients Beta is as follows:

$$EIC = 0.387IC + 0.343CE + 0.256MNT + 0.136RA + 0.117CO$$

4. DISCUSSION AND CONCLUSION

The table of regression results allows us to test the regression coefficients in the model. Components with a statistical significance of less than 5% are kept, and components with a statistical significance greater than 5% are discarded. The larger the beta coefficient of a component, the greater the impact of that component on the dependent variable. From the table of results of the multivariable regression model, we see that the constant has no statistical significance (Sig = $0.765 > 0.05$), the remaining 5 factors Control environment; Risk assessment; Control activities; Information and communication; Monitoring is appropriate and has a positive effect on the effectiveness of the internal control system. The biggest impact is the Information and Communication component with a Beta coefficient of 0.387 (t=7.005 and Sig < 0.05). The Control Environment component has the second largest impact on the effectiveness of internal control with a Beta coefficient of 0.343 (t= 6.205 and Sig < 0.05). Third is the Supervision component with a Beta coefficient of 0.256 (t= 5.223 and Sig < 0.05). The Risk assessment component has the fourth largest impact on the effectiveness of internal control with a Beta coefficient of 0.136 (t= 2.700 and Sig < 0.05). Finally, the Control Activity component with a Beta coefficient of 0.117 (t = 2.244 and Sig < 0.05) is also the component that has the lowest impact on the effectiveness of internal control in personal insurance enterprises longevity in Vietnam.

According to the research team's assessment, insurance enterprises are currently implementing an internal control system that is not synchronous and unstandard. Most life insurers in Vietnam have not paid much attention and have not issued specific policies related to integrity and ethical values. Life insurers have not yet appreciated the risk assessment

process. Enterprises have not regularly updated important information for employees. Leaders of life insurance businesses have not really paid attention to regular control in the operation process, but usually only when unusual events occur will they exercise control. The market and insurance activities develop over time, so the internal control of life insurance businesses also needs to change to keep up with the development of the business. Therefore, the continuous revision and adjustment of internal control is the core idea. This is applicable as a principle of Internal Control and as a general approach whenever dealing with Internal Controls.

CONFLICT OF INTEREST

The authors reported no potential conflict of interest.

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