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# 1. Introduction

The insurance industry has long been a cornerstone of financial stability and risk management. In recent years, however, the industry has faced significant challenges, including increased regulatory scrutiny, rising costs, and changing consumer expectations. This paper explores the current landscape of insurance regulation and its impact on the industry. It examines the role of regulators in ensuring the solvency and integrity of insurance companies, while also addressing the need for innovation and competition. The paper discusses the challenges of balancing consumer protection with the need for a robust and resilient insurance market. It also highlights the importance of transparency and accountability in the industry, and the need for ongoing dialogue between regulators and industry stakeholders. The paper concludes by offering insights into the future of insurance regulation and the potential for a more modern and effective regulatory framework.

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## **2. The Impact of Business Diversification on Systemic Risk**

*[The text in this block is severely distorted and illegible due to a scanning artifact, appearing as a dense pattern of black marks.]*







$EL$   $R$   $D$   $D-E$   $Z$   $(D,R)$







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Table 3: OLS Panel Regression

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	0.000	0.000	0.000	0.000	0.000
Control Variables	0.000	0.000	0.000	0.000	0.000
Insurance Regulation	0.000	0.000	0.000	0.000	0.000
Industry	0.000	0.000	0.000	0.000	0.000
Year	0.000	0.000	0.000	0.000	0.000
Observations	1000	1000	1000	1000	1000

**Table 3:** OLS Panel Regression





Table 4: Systemic Risk Minimizing Life Insurance Business Allocation

Table 4: Systemic Risk Minimizing Life Insurance Business Allocation \*

	BAA	F
*		

*(The content of this table is illegible due to extreme image distortion and noise.)*

**Table 6: Robustness Check with Diversification Dummy**

	D		
	C (1)	C (2)	C (3)
<i>Diversification</i>	** ( )	* ( )	** ( )
<i>Total Assets</i>	*** ( )	*** ( )	*** ( )





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## 5. Conclusion

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# Appendix

## A. Cash Flow

$$CF_{i,t} = \Delta \ln CF_{i,t} - \Delta \ln CF_{i,t-1}$$

$$CF_{i,t} = \Delta \ln CF_{i,t} - \Delta \ln CF_{i,t-1} + \Delta \ln CF_{i,t-1} - \Delta \ln CF_{i,t-2} + \Delta \ln CF_{i,t-2} - \Delta \ln CF_{i,t-3} + \dots$$

$$CF_{i,t} = \Delta \ln CF_{i,t} - \Delta \ln CF_{i,t-1} + \Delta \ln CF_{i,t-1} - \Delta \ln CF_{i,t-2} + \Delta \ln CF_{i,t-2} - \Delta \ln CF_{i,t-3} + \dots$$

$$CF_{i,t} = \Delta \ln CF_{i,t} - \Delta \ln CF_{i,t-1} + \Delta \ln CF_{i,t-1} - \Delta \ln CF_{i,t-2} + \Delta \ln CF_{i,t-2} - \Delta \ln CF_{i,t-3} + \dots$$

$$CF_{i,t} = \Delta \ln CF_{i,t} - \Delta \ln CF_{i,t-1} + \Delta \ln CF_{i,t-1} - \Delta \ln CF_{i,t-2} + \Delta \ln CF_{i,t-2} - \Delta \ln CF_{i,t-3} + \dots$$

**Table 7: Variables and Data Sources for the Cash Flow Analysis**

Variable	Data Source	Definition
$\Delta \ln CF_{i,t}$	Company Financial Statements	Change in cash flow
$\Delta \ln CF_{i,t-1}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-2}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-3}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-4}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-5}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-6}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-7}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-8}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-9}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-10}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-11}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-12}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-13}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-14}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-15}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-16}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-17}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-18}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-19}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-20}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-21}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-22}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-23}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-24}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-25}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-26}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-27}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-28}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-29}$	Company Financial Statements	Change in cash flow (lagged)
$\Delta \ln CF_{i,t-30}$	Company Financial Statements	Change in cash flow (lagged)













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^ | ^ ...







	(1)	(2)	(3)
<i>RoI</i>	1.000** (0.000)	0.999** (0.000)	1.000*** (0.000)
<i>RoE</i>	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
<i>Control Variables</i>	<	<	<
<i>Industry</i>	<	<	<
<i>Year</i>	<	<	<
<i>Constant</i>	1.000	1.000	1.000
<i>Observations</i>	1	1	1

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01  
 † p < 0.10, †† p < 0.05, ††† p < 0.01

**Table 16: OLS Panel Regression: Europe**

	D		
	C (1)	C (2)	C (3)
<i>Life</i>	* (0.000)	1.11* (0.000)	* (0.000)
<i>Life</i>	* (0.000)	1.11* (0.000)	* (0.000)
<i>Total Assets</i>	*** (0.000)	1.11*** (0.000)	1.11*** (0.000)
<i>Leverage</i>	† (0.000)	† (0.000)	† (0.000)
<i>Non-Core Activities</i>	† (0.000)	† (0.000)	† (0.000)
<i>Net-Claims Ratio</i>	† (0.000)	1.11* (0.000)	† (0.000)
<i>RoI</i>	† (0.000)	† (0.000)	† (0.000)
<i>RoE</i>	† (0.000)	† (0.000)	† (0.000)
<i>Control Variables</i>	<	<	<
<i>Industry</i>	<	<	<
<i>Year</i>	<	<	<
<i>Constant</i>	1.000	1.000	1.000
<i>Observations</i>	1	1	1

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01  
 † p < 0.10, †† p < 0.05, ††† p < 0.01



**Table 17: OLS Panel Regression: Mature Markets**

	D		
	C (1)	C (2)	C (3)
Life	*	**	*
	( )	( )	( )
Life	*	**	*
	( )	( )	( )
Total Assets	***	***	***
	( )	( )	( )
Leverage		1	1
	( )	( )	( )
Non-Core Activities	**	1	1
	( )	( )	( )
Net-Claims Ratio			
	( )	( )	( )
RoI	-- 1	-- 1	1
	( )	( )	( )
RoE	--		--
	( )	( )	( )
<hr/>			
	<	<	<
	<	<	<
	<	<	<
	1	1	1
	1		
	*	**	***

**Table 18: OLS Panel Regression: Emerging Markets**

	D		
	C (1)	C (2)	C (3)
<hr/>			
<hr/>			

	( )	( )	( )
Net-Claims Ratio	( )	( )	( )
RoI	( )	( ) *	( )
RoE	( )	( )	( )
	( )	( )	( )
	<	<	<
	<	<	<
	<	<	<
	( )	( )	( )
		( )	1

<sup>\*</sup> p < 0.10. <sup>\*\*</sup> p < 0.05. <sup>\*\*\*</sup> p < 0.01.

**A. Correlation Coefficients:**

**Table 19: Correlation Coefficients of the Explanatory Variables**

	A	B	C	D	E
A	1				
B		1			
C			1		
D				1	
E					1

**Table 20: Robustness Check: Size as Total Liabilities**

	(1)	(2)	(3)
Life	**	( ) **	( ) ***
Life	**	**	***





**Table 23:** t-test on the Equality of Scaled  $\Delta\text{CoVaR}$  Mean Values

				D	
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•

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