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(Research Article)

Evaluation of Claim Settlement on Operating Efficiency and Profitability in Indian Life Insurance Sector

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Abstract

The study investigates the claim settlement scenario in the Indian life insurance sector, focusing on individual death claims and its impact on profitability. The analysis is based on secondary data obtained from IRDAI's annual reports (2013-14 to 2023-24) and life insurers' reports. Simple ratios and correlation analysis are used to examine the relationship between claim settlement indicators and financial performance. Linear regression analysis is applied to assess the effect of financial indicators such as equity share capital, assets under management, and profit after tax on individual death claims.

The findings highlight that the life insurance sector has exhibited high claim settlement efficiency, with a settlement rate of 98.45% in 2022-23. Private sector insurers, such as Max Life and HDFC Life, have recorded some of the highest settlement rates. The correlation analysis reveals significant positive relationships between equity share capital and individual death claims, as well as between assets under management and equity capital. Interestingly, profit after tax shows weak correlations with other variables, suggesting that profitability is influenced by factors beyond the scope of the analysis. Regression results further indicate that equity share capital has a significant positive relationship with individual death claims, while profit after tax has a negative but significant effect. Overall, equity capital and profitability play crucial roles in shaping the claim settlement process, while assets under management do not significantly impact claim volumes.

Keywords: Death Claims; Equity Share Capital; PAT; Solvency ratio

1. Introduction

Claim settlement in the insurance sector involves the evaluation and disbursement of funds by insurers in response to claims filed by policyholders. This process is essential to maintaining customer satisfaction and enhancing the reputation of insurers, as it directly affects policyholders' trust in the company. The process generally consists of several steps, beginning with claim intimation, where policyholders or nominees notify the insurer of the claim event, such as hospitalization or death, as stipulated in the policy (Bhowmik, 2021).

As defined by IRDAI, a claim refers to a demand for payment made by the insured in relation to an insured event that has occurred, as specified under an operative clause of the insurance policy. As per the Insurance Regulatory and Development Authority of India (IRDAI), claim settlement is the process of paying out the sum assured to the policyholder or nominee when an insured event, such as death or hospitalization, occurs. This includes verifying the claim, processing it, and ensuring that payment is made promptly in accordance with the policy's terms and conditions. According to the International Association of Insurance Supervisors (IAIS), claim settlement is defined as the procedure through which an insurance company pays out benefits to policyholders or beneficiaries based on the terms of the insurance policy.

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Adherence to regulatory guidelines, such as those provided by IRDAI in India, ensures a fair and standardized approach to settlements across the industry. Additionally, the integration of technology, including AI and data analytics, has led to faster claim processing and enhanced fraud detection, further improving settlement timelines. Effective customer service, characterized by transparency and open communication, is also crucial in ensuring that policyholders feel supported throughout the claims process, thus enhancing customer satisfaction and loyalty (Bhowmik, 2021; KPMG, 2022).Efficient claim settlement practices are fundamental in building and maintaining trust within the insurance sector, making them a key area of focus for insurers seeking long-term success (IRDAI, 2023).In life insurance, claims can be made under two primary scenarios: death of the insured or maturity of the policy. The following outlines the steps for each scenario:

1.1. Death Claim Procedures

When a life insurance policyholder, known as the "life assured," passes away, a claim intimation should be promptly sent to the insurer by the assignee, nominee, or a close relative. This initial intimation should provide details such as the date, location, and cause of death. Insurance agents often support the deceased's family or nominee in coordinating with the insurance provider to complete the required formalities.

Upon receiving the intimation, the insurance company will request the following documents:

- A completed claim form provided by the insurer,
- The death certificate,
- The original policy document,
- Deeds of assignment or reassignment, if applicable,
- Legal proof of title if there is no designated assignee or nominee, and
- A signed and witnessed discharge form.

These documents facilitate the insurer's processing of the claim, helping ensure timely disbursement of the insured amount to the rightful claimant.

1.2. Maturity Claim Procedures

For policies reaching maturity, the insurance provider typically notifies the policyholder a few months in advance. This notification often includes a discharge voucher detailing the payable maturity amount. The policyholder must sign and witness this discharge voucher, which acts as a receipt, and return it to the insurer along with the original policy document. If the policy has been assigned to another party (e.g., a lending institution), the maturity amount will be paid to the assignee, who is required to provide the necessary discharge. These claim processes are designed to ensure that beneficiaries receive the insurance benefits promptly and efficiently upon the occurrence of a qualifying event (IRDAI, 2023).

2. Review of Literature

An endeavour is made to examine the existing literature. The following are the key observations from the review of existing literature.

Ashturkar's (2015) study focuses on claim settlement practices in India's life insurance sector, highlighting the importance of timely claims processing for customer satisfaction and company reputation. Following economic reforms under LPG (Liberalization, Privatization, and Globalization), the Indian insurance industry grew rapidly, increasing competition and expanding coverage. Analyzing both public and private insurers, the study finds that private companies like ICICI Prudential, HDFC Life, and SBI Life are more efficient than LIC in settling claims within 30 days.

Bawa S and Bhagat(2016) in their joint paper have analysed the life insurance sector in India through the use of DEA Model. The study analysed the efficiency of 12 select life isnruance companies. The study focused from the period 2008-09 to 2012-13. From the analysis, the authors have found that, the DEA analysis results conclude that, Kotak Life and SBI Life insurance companies were able reach the efficiency level in 2011-12, Where as, LIC achieved the efficient level in all the select period of the study.

Talla (2017) investigated claim settlement management as a crucial quality aspect of life insurance services, focusing on its impact on operational efficiency and profitability in Indian public and selected private life insurers. Using an exploratory design and convenience sampling, the study analyzed LIC and private insurers like ICICI Prudential, HDFC

Life, SBI Life, and Bajaj Allianz from 2001-2013, using data on benefit payments and metrics such as ROA, CSR, and CRR. Findings showed LIC's dominance in policy sales and payments, with ICICI Prudential leading among private insurers.

Subbalaxmi, and Vijayakumar (2024) analyzed the financial performance of the life insurance sector, which provides financial protection to individuals and families against events such as death, illness, or disability. Their study focused on the top six life insurance companies by market share out of 24 companies in 2019, using 12 years of secondary data from 2010-2011 to 2021-2022. Tools such as profitability, liquidity, and solvency ratios, along with Mean, CV, CAGR, trend analysis, and the Chi-square test, were employed. Results indicated satisfactory financial performance across the companies, with ratios aligning with IRDAI norms, supporting the industry's capacity to meet maturity payments and cover unexpected events.

Oladunni et al. (2024) investigated how claims settlement practices affect profitability within Nigeria's insurance industry, focusing separately on life and non-life insurance sectors. Using an ex-post facto design, the study analyzed data from Nigerian insurance digests and the National Insurance Commission over a 10-year span (2012-2022). Regression analysis indicated that claims settlement significantly influences profitability for both life and non-life insurance companies.

BodlaB and Verma S (2017) conducted a comparative analysis of the profitability of life insurance companies in India, focusing on both public and private sectors. Their study covered a 10-year period from 2007 to 2016 and examined a sample of 13 private life insurers and the public sector Life Insurance Corporation of India (LICI). Key financial metrics used in the analysis included net premium, investment income, underwriting income, return on assets, combined ratio, solvency ratio, and profit after tax.

Goud et al. (2012) analyzed the Indian insurance industry, highlighting its position as the sixth largest globally with a life insurance market share of 2.69% in 2010. They noted a rise in insurance penetration from 2.15% in 2001 to 4.40% in 2010, attributed to increased public awareness and competition post-liberalization. The study used statistical methods to assess the industry's growth and performance, revealing that while private sector insurers gained market share, LIC faced a decline despite growth in total premiums and policies issued.

Objectives

- To examine the company wise claim settlement scenario in Life Insurance Sector
- To analyze the individual death claim of Life Insurance companies in India.
- to ascertain the relationship between financial indicators of Life Insurance sector in India.
- to evaluate the Claim Settlement on Operating Efficiency and Profitability in Indian Life Insurance Sector

3. Methods

The study is sourced from secondary data. The required data is extracted from the IRDAI Annual reports from the period 2013-14 to 2023-24. Further, the annual reports of Life insurance companies are also taken into consideration. The articles, journals are supplemented to obtain the required literature review and idea generation for the analysis.

To examine the year wise claim settlement, simple ratios and averages are applied. To analyze the relationship between indicators of claim settlement and profitability, correlation analysis is applied. Further, to statistically ascertain the impact of claim settlement on profitability of life insurers, the Linear regression method is applied to generate the results.

4. Discussion

The objective wise discussion is presented here.

4.1. Claim settlement ratio of life insurance companies

As per IRDAI's Annual Report for 2023-24, the overall claim settlement performance in the life insurance sector demonstrates high efficiency, with a total of 1,077,124 claims filed and 98.45% successfully settled across both public and private insurers. Private sector insurers show a slightly lower settlement rate at 98.02% compared to the public sector. Max Life achieved the highest settlement rate at 99.51%, closely followed by HDFC Life at 99.39% and Aegon at 99.37%, indicating strong claim settlement practices. However, the performance varies significantly among insurers, with companies like ICICI Prudential and Future Generali showing lower settlement rates of 95.28% and 95.04%, respectively, highlighting areas for improvement. The Life Insurance Corporation of India (LIC), which manages the largest claim volume, achieved a settlement rate of 98.52%, illustrating robust handling of claims despite its vast policy base. This high performance across many companies reflects the sector's commitment to minimizing repudiation rates, thereby maintaining customer trust.

Table 1 Claim settlement ratio of life insurance companies 2023-2024

Insurance Company	Total Claims	Claims paid		Claims Repudiated	
	Number of Policies	Number of Policies	% of Total Claims	Number of Policies	% of Total Claims
Max Life	19659	19563	99.51%	96	0.49%
HDFC Life	17558	17451	99.39%	103	0.59%
Aegon	316	314	99.37%	2	0.63%
Edelweiss Tokio	500	496	99.20%	4	0.80%
Bharti Axa	2116	2097	99.10%	19	0.90%
PNB Met Life	5292	5242	99.06%	48	0.91%
Bajaj Allianz	15502	15353	99.04%	145	0.94%
Tata AIA	5475	5421	99.01%	53	0.97%
Canara HSBC OBC	2119	2098	99.01%	19	0.90%
Pramerica Life	753	744	98.80%	8	1.06%
Aviva	803	793	98.75%	10	1.25%
Reliance Nippon	8759	8635	98.58%	122	1.39%
LIC	922207	908576	98.52%	8003	0.87%
Kotak Mahindra	4333	4257	98.25%	65	1.50%
Aditya Birla Sun Life	6314	6195	98.12%	119	1.88%
Sahara	657	643	97.87%	7	1.07%
Shriram	4003	3899	97.40%	86	2.15%
SBI Life	36896	35807	97.05%	1007	2.73%
India First	3147	3054	97.04%	83	2.64%
Exide Life	2143	2063	96.27%	30	1.40%
Star Union	1806	1735	96.07%	68	3.77%
Ageas Federal	1445	1388	96.06%	45	3.11%
ICICI Prudential	14333	13656	95.28%	638	4.45%
Future Generali	988	939	95.04%	49	4.96%
Private Sector Total	154917	151843	98.02%	2826	1.82%
Grand Total	1077124	1060419	98.45%	10829	1.01%

Source: IRDAI Annual reports, 2013-14 to 2022-23

4.2. Analysis on Death claim of Life Insurers

The data presented in table-2 on Individual Death Claims of life insurers from 2013-14 to 2022-23 reveals a consistent improvement in claims management. The number of claims pending at the start of the year declined, indicating better handling of backlogged claims. While the number of claims booked saw fluctuations, peaking in 2020-21 due to the pandemic, claims paid steadily increased, reflecting insurers' efficiency in settling claims. The number of repudiated or rejected claims decreased over time, and unclaimed amounts reduced significantly by 2022-23. Overall, the life insurance sector has shown better efficiency in processing claims, particularly in managing surges during exceptional events, leading to a reduction in pending claims by the end of each year.

Table 2 Individual Death Claim of Insurers

Particulars	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Pending cases at the beginning of the year(A)	12267	8496	7061	6031	4145	1250	1017	6194	3055	2578
Total cases intimated/Booked (B)	873094	869332	869619	873462	843841	861987	873832	1095113	1605869	1074576
Total claims(A+B)	885361	877828	876680	879493	8479876	863237	874849	1101307	1608924	1077124
Claims paid(D)	856622	851250	854171	859884	828314	842847	846476	1083623	1587110	1060419
Claims repudiated/rejecter	18423	18175	15157	12769	9286	10069	11189	12559	16509	15173
Unclaimed(F)	1819	1342	1321	2695	9132	9304	10990	2070	2727	696
Claims pending at the end of the year	8496	7061	6031	4145	1254	107	6194	3055	2578	836

Source: IRDAI Annual reports, 2013-14 to 2022-23

4.3. Relationship between Claim Settlement indicators and Profitability indicators

The correlation analysis reveals significant relationships between the key financial metrics in the life insurance sector.

Table 3 Correlation Results

Measure		**Individual death claims**	**Equity share capital**	**Assets under management of life insurers**	**profit after tax**
Individual death claims	R	1.00	0.825**	0.662*	0.131
	Sig. (2-tailed)		0.003	0.037	0.719
	N	10	10	10	10
Equity share capital	R	0.825**	1.00	0.874**	0.622
	Sig. (2-tailed)	0.003		0.001	0.055
	N	10	10	10	10
Assets under management of life insurers	R	0.662*	0.874**	1.00	0.597
	Sig. (2-tailed)	0.037	0.001		0.068
	N	10	10	10	10
profit after tax	R	0.131	0.622	0.597	1.00

	Sig. (2-tailed)	0.719	0.055	0.068	
	N	10	10	10	10

Source: Compiled from IRDAI Annual reports, 2013-14 to 2022-23

A strong positive correlation of 0.825 (significant at the 0.01 level) is observed between Equity Share Capital and Individual Death Claims, suggesting that larger insurers with higher capital tend to handle a greater number of claims. Additionally, a moderately strong positive correlation of 0.662 (significant at the 0.05 level) exists between Individual Death Claims and Assets Under Management, indicating that insurers with larger asset bases tend to experience higher claim volumes. A very strong positive correlation of 0.874 (significant at the 0.01 level) is found between Equity Share Capital and Assets Under Management, highlighting that insurers with higher capital often have larger asset portfolios. However, Profit After Tax shows weak and insignificant relationships with the other variables, with correlations of 0.131 with Individual Death Claims**,** 0.622 with Equity Share Capital, and 0.597 with Assets Under Management, suggesting that profitability may be influenced by factors not captured in this analysis.

4.4. Regression results

The regression analysis explores the impact of key financial variables—Equity Share Capital**,** Assets Under Management**,** and Profit After Tax**—**on the Individual Death Claims **in** the life insurance sector.

Table 4 Impact of Claim settlement on Profitability of Life Insurance Sector

Method	**R**	**R^2**	**Adjusted R^2**	**S.E.E.**
1	0.960[a]	0.922	0.883	80580.110

ANOVA[a]

Model		SS	df	MS	F	Sig.
1	Regression	462164317263.065	3	154054772421.022	23.726	0.001[b]
	Residual	38958924805.835	6	6493154134.306		
	Total	501123242068.900	9			

a. Dependent Variable: Individual death claims

b. Predictors: (Constant), profit after tax, Assets under management of life insurers, Equity share capital

Coefficients[a]

Method		USC		S.C.	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1306255.800	338809.419		-3.855	0.008
	Equity share capital	87.657	16.312	1.302	5.374	0.002
	Assets under management of life insurers	-0.022	0.047	-0.108	-0.458	0.663
	profit after tax	-0.131	0.031	-0.614	-4.181	0.006

Source: Compiled from IRDAI Annual reports, 2013-14 to 2022-23

The R value of 0.960 suggests a very strong correlation between the predictors and the dependent variable. The R^2 value of 0.922 indicates that approximately 92.2% of the variation in individual death claims can be explained by the combination of these three financial variables, and the Adjusted R^2 of 0.883 accounts for the number of predictors in the model, further reinforcing the strong explanatory power of the model.

The ANOVA results show a significant overall model (F = 23.726, p = 0.001), indicating that the regression model is statistically significant in explaining the variation in individual death claims. The Sum of Squares for the regression is considerably large (462,164,317,263.065), and the residual sum of squares (38,958,924,805.835) confirms that the model provides a good fit. Looking at the coefficients, Equity Share Capital has a significant positive relationship with individual death claims (B = 87.657, p = 0.002), suggesting that higher equity capital is associated with an increase in individual death claims. On the other hand, Assets Under Management has an insignificant negative relationship (B = -0.022, p = 0.663), indicating that it does not significantly influence the number of individual death claims in this model. Profit After Tax shows a significant negative relationship (B = -0.131, p = 0.006), implying that higher profitability might be associated with a lower number of death claims, potentially reflecting the insurer's ability to manage claims better or have fewer claims filed.

In conclusion, Equity Share Capital and Profit After Tax are significant predictors of Individual Death Claims, with equity capital positively impacting claims and profitability negatively correlated with claims. Assets Under Management, however, does not significantly influence death claims in this analysis.

5. Conclusions

The life insurance sector in India plays a significant role in the financial stability of policyholders and contributes to the country's overall economic growth. Effective claim settlement, especially in relation to individual death claims, is a key factor in ensuring customer trust and satisfaction. This research aims to analyze the claim settlement performance across various life insurance companies, examine the relationship between financial indicators, and evaluate the impact of claim settlement on the operating efficiency and profitability of insurers in India. The study relies on secondary data sourced from the IRDAI Annual Reports (2013-14 to 2023-24) and the annual reports of life insurance companies, applying methods like ratio analysis, correlation, and linear regression. The findings reveal a high level of efficiency in claim settlement within the sector, with most companies demonstrating a decline in repudiated claims and unclaimed amounts over time. Significant correlations were observed between equity share capital, assets under management, and individual death claims, with higher capital and larger asset bases correlating with greater claims volumes. Regression results indicate that equity share capital has a positive effect on death claims, while profitability (measured as profit after tax) is negatively associated with claim volumes. These findings suggest that strong financial indicators, particularly capital, contribute to more efficient claim settlement, ultimately enhancing profitability in the life insurance sector.

Compliance with ethical standards

Disclosure of conflict of interest

All authors have here by declared that there is no conflict of interest. The article is based on academic work based on authors' research area.

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