International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Financial Soundness of New India Assurance from 2017-18 to 2025-26: A Longitudinal CARAMEL Assessment

Pragati Kumari[1], Dr. Pankaj Kumar Mahato[2]

[1]Research Scholar, P.G. Department of Commerce, Magadh University, Bodh-Gaya.
[2]Assistant Professor (Senior Scale), Department of Commerce, Gaya College.

Abstract
This article examines the financial soundness of The New India Assurance Company Limited over nine financial years, from 2017–18 to 2025–26. It uses a company-level CARAMEL profile to follow capital, asset quality, reinsurance and reserves, operating scale, earnings, and liquidity. Premium expanded at about 7.45% per year, while the solvency ratio fell from 2.58 to 1.84 times and remained above the 1.50-times reference disclosed by the company. Underwriting pressure continued, and the calculated combined ratio exceeded 100% each year, reaching 123.09% in 2025–26. Return on equity also ended below its opening value. The asset-quality estimate, however, changes substantially with the way investment categories are classified.

Keywords: CARAMEL; general insurance; New India Assurance; financial soundness; underwriting; reserves; liquidity; India.

1. Introduction

The premium growth gives only one part of an insurer's financial position. A larger book can broaden coverage and spread fixed costs, but it also exposes the company to more claims, greater retained risk, and larger technical provisions. Claims may emerge and settle over different time horizons, so current profit does not by itself show whether the balance sheet can absorb adverse experience. Investment income can support earnings when underwriting margins are thin, while the value, liquidity, and concentration of invested assets affect how readily obligations can be met. Financial soundness is therefore better read across capital, asset quality, reinsurance, reserves, operating efficiency, earnings, and liquidity than through one headline ratio.

The New India Assurance Company Limited (NIA) provides a useful setting for a company-level longitudinal assessment. Its annual reports allow the same selected indicators to be followed across nine financial years, from 2017–18 to 2025–26. That continuity also makes comparability a central concern. The underlying records include reporting-basis differences in selected totals and investment-schedule labels that do not map cleanly onto standard risk categories. Those issues matter because a ratio can move when its numerator, denominator, or reporting basis changes, even when the underlying economic exposure has not changed by the same amount.

The analytical starting point is the insurer financial-soundness approach developed by Das, Davies, and Podpiera (2003). This study follows six dimensions—capital adequacy, asset quality, reinsurance and

actuarial measures, management soundness, earnings, and liquidity—and omits market sensitivity because the assembled series does not provide a consistent market-risk measure. The indicators are presented separately. A composite score would require scaling and weighting decisions that are not established by the source data or the study design.

The article asks how NIA's measured profile changed over the period. It describes the reported series; it does not test the causes of the changes or establish actuarial adequacy.

2. Review of literature

Das, Davies, and Podpiera (2003) frame insurance-sector soundness as a linked set of capital, asset-risk, reinsurance, claims-and-reserve, operating, earnings, and liquidity questions. Later insurer research broadly supports that multidimensional view, but it also shows why individual ratios should not be interpreted as stand-alone grades. Studies of insolvency risk and financial stability find that firm characteristics, underwriting exposure, and market structure can all matter, with results varying across business lines and institutional settings (Caporale et al., 2017; Shim, 2017; Kaserer & Klein, 2018; Moreno et al., 2018). Moreno et al. (2021) further show that the choice of formula changes the information carried by an accounting-based insurer Z-score. These studies support a profile-based assessment and caution against presenting one threshold as a complete measure of soundness.

Evidence on solvency and capital is not reducible to a simple "more is better" relation. Work on U.S. property-liability firms links capital, risk-taking, and reinsurance decisions, while evidence from the United Kingdom connects insolvency risk with firm and macroeconomic conditions (Mankai & Belgacem, 2016; Caporale et al., 2017). Spanish insurer evidence links solvency margins with profitability and underwriting risk, but also reports associations with size, reinsurance use, and business mix (Moreno et al., 2018). South African panel studies find nonlinear relationships: the direction of the association between solvency and profitability or underwriting performance differs across the range of observed solvency (Horvey & Odei-Mensah, 2024, 2025). These are multi-insurer studies with different measures and identification choices. They inform how the NIA ratios may be read, but their estimated relationships cannot be transferred as causal explanations for one company's nine-year series.

Underwriting and reinsurance findings are similarly conditional. UK non-life studies report that the relationship between reinsurance, underwriting performance, and profit depends on business mix and the outcome being measured (Adams et al., 2019; Upreti et al., 2021; Shiu, 2020). A reinsurance arrangement can transfer risk, affect capital needs, and alter costs at the same time; its direction is not uniform across settings (Mankai & Belgacem, 2016; Zanotto & Clemente, 2021). Evidence from South Africa also links investment income, market share, premium growth, and underwriting risk with performance, while the estimates vary by line of business and model specification (Horvey & Odei-Mensah, 2024, 2025). For this article, retention is therefore described as exposure retained, not assigned an intrinsically favourable or unfavourable sign.

2.1 Profitability, efficiency, and financial distress

Research on profitability and efficiency identifies recurring firm-level correlates but does not produce a universal ranking of insurers. Global evidence associates efficiency with profitability, with differences between life and non-life business and a nonlinear pattern near best-practice efficiency (Eling & Jia, 2019). Indian non-life studies report productivity and efficiency changes over time, while cost, scale, ownership, age, and reinsurance relate differently to measured efficiency (Ilyas & Rajasekaran, 2019a, 2019b). Studies in Ethiopia, Kenya, Bangladesh, and India connect profitability or distress with claims experience,

liquidity, leverage, company size, and risk-management measures, though the sample, outcomes, and models differ (Isayas, 2021; Kiptoo et al., 2021; Siddik et al., 2022; Sasidharan et al., 2023; Ayinaddis & Tegegne, 2023; Kebede et al., 2024). Accordingly, this article treats employee ratios and returns as descriptive indicators, not direct measures of managerial quality.

2.2 Investment, liquidity, and integrated monitoring

Studies of investment risk and liquidity also argue for keeping underwriting, asset allocation, and capital in view together. Evidence from the COVID-19 period describes the exposure of insurer portfolios to equity, credit, and liquidity conditions, while actuarial and Solvency studies emphasise that stress assumptions and model choice affect estimated capital requirements (Liedtke, 2021; Puławska, 2021; Asadi & Al Janabi, 2020). Research on insurer risk in stochastic settings models the joint contribution of insurance and financial risks to ruin, rather than treating either side in isolation (Tang & Yang, 2019). Work on performance optimisation likewise combines underwriting and investment results and shows that the preferred balance depends on market conditions and objectives (González-Fernández et al., 2020). These studies motivate separate asset, liquidity, underwriting, and return measures in the present analysis.

2.3 Application to the NIA assessment

The closest Indian evidence generally uses panels of insurers or efficiency comparisons rather than a single-insurer, nine-year CARAMEL profile. That distinction is practical: panel estimates describe average cross-firm associations, whereas NIA's annual statements describe one reporting entity across changing years. A recent set of articles therefore serves as conceptual and empirical context, not as proof that this case fills a verified literature gap. The present contribution is narrower: it displays multiple CARAMEL indicators, supplies annual values and descriptive summaries, and makes classification and denominator choices visible. Table 1 presents recent empirical literature on insurer financial soundness and performance.

Table 1. Recent empirical literature on insurer financial soundness and performance (2016–2026)

Study	Settings and approach	Findings
Shim (2017)	U.S. property-liability insurers; instrumental-variable analysis	Higher market concentration was associated with lower financial stability; firm and catastrophe exposures also mattered.
Mankai and Belgacem (2016)	U.S. property-liability firms; simultaneous-equation model	Capital, risk-taking, and reinsurance interacted; reinsurance appeared partly substitutive for capital.
Caporale et al. (2017)	515 U.K. general insurers over 30 years; insolvency-risk model	Insolvency risk varied by business line, firm traits, reinsurance, and macroeconomic conditions.
Moreno et al. (2018)	Spanish insurers; dynamic panel	Solvency margins were associated with profitability, underwriting risk, size, reinsurance, and business mix.
Kaserer and Klein (2018)	183 major banks and insurers; systemic-risk measures	Aggregate insurer contribution to systemic risk was limited, but exposure differed by insurer and line.

Eling and Jia (2019)	More than 5,000 global insurers; efficiency-profitability analysis	Efficiency and profitability were positively associated, with sector differences and a nonlinear pattern.
Tang and Yang (2019)	Stochastic insurer risk model	Insurance and financial risks jointly shaped modelled ruin exposure.
Ilyas and Rajasekaran (2019a)	Indian non-life insurers; bootstrapped DEA and productivity analysis	Efficiency varied by ownership, scale, age, and reinsurance; estimates were model- and period-dependent.
Ilyas and Rajasekaran (2019b)	Indian non-life sector; productivity index, 2005–2016	Productivity improved in the sample period, with differences between public and private firms.
Adams et al. (2019)	U.K. property-casualty insurers; panel analysis	Underwriting results varied with product mix and reinsurance; profit margins moved differently.
González-Fernández et al. (2020)	Spanish non-life insurers; goal programming	Preferred profiles combined underwriting and investment outcomes and differed across scenarios.
Shiu (2020)	U.K. non-life insurers; structural model	Reinsurance and derivatives were linked with performance and risk-management choices; high loss ratios coincided with weaker performance.
Asadi and Al Janabi (2020)	Solvency II stock and bond risk models	Estimated capital needs varied by asset class, stress level, and modelling method.
Moreno et al. (2021)	183 Spanish insurers; comparison of six Z-score methods	The calculated soundness signal depended on how returns and capitalisation were summarised.
Isayas (2021)	11 Ethiopian insurers, 2008–2019; random-effects panel	Profitability, size, leverage, age, asset tangibility, and loss ratios related to distress.
Kiptoo et al. (2021)	Kenyan insurance firms; risk-management and performance panel	Credit, market, and liquidity risk-management measures showed different associations with performance.
Liedtke (2021)	Insurer investment portfolios during COVID-19; balance-sheet analysis	Equity, credit, and private-market exposures raised distinct valuation, liquidity, and solvency questions.
Upreti et al. (2021)	U.K. non-life market; panel data	Reinsurance was associated with a lower cost of equity, with a nonlinear relationship.
Puławska (2021)	European insurers, 2010–2020; financial-statement comparison	Pandemic-period effects on returns, solvency, and receivables differed across countries.
Olarewaju and Msomi (2021)	56 general insurers across 12 African countries; panel analysis	Intellectual capital and performance showed a nonlinear relationship; underwriting risk and leverage also mattered.

Zanotto and Clemente (2021)	Non-life insurer simulation under Solvency II	Reinsurance design could be evaluated against solvency and portfolio-performance objectives.
Vojinović et al. (2022)	Serbian insurers; panel investigation	Profitability estimates varied with firm size and country-level conditions.
Siddik et al. (2022)	Bangladeshi non-life insurers; fixed-effects panel	Financial insolvency was associated with lower profitability.
Sasidharan et al. (2023)	Indian general insurers; 21-firm panel	Age, loss ratio, size, premium growth, and retention were associated with financial performance.
Ayinaddis and Tegegne (2023)	Ethiopian insurers; financial-distress panel	Liquidity, profitability, and firm size were associated with distress outcomes.
Kebede et al. (2024)	Ethiopian insurance firms; distress model	Profitability, liquidity, size, claims ratio, leverage, and asset tangibility related to financial distress.
Horvey and Odei-Mensah (2024, 2025)	South African life and non-life insurer panels	Solvency and reinsurance relationships were nonlinear and differed by line of business.

3. Objectives and research questions

The study has three objectives: to assemble a nine-year CARAMEL series for New India Assurance; to describe the direction and range of the indicators; and to examine whether the main interpretations change when asset classifications or the liquidity denominator is altered. The questions are correspondingly limited: how did the measured profile move over time, and which findings are stable across the available specifications?

The study does not test causal hypotheses. Nine annual observations for one company are too few to support strong statistical claims about a trend or its causes. Accordingly, endpoint changes, annual movements, means, and ranges are used as descriptive summaries. No p-values or population-level conclusions are reported.

4. Data and methodology

4.1 Data, period and unit of analysis

The unit of analysis is the insurer–financial-year observation. The analytical sample comprises 2017–18 to 2025–26; values are expressed in ₹ crore unless stated otherwise. Inputs were assembled from New India Assurance annual reports. The company's annual reports are cited below (The New India Assurance Company Limited, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026).

The 2015–16 and 2016–17 observations are retained only as supporting history for the three-year claims benchmark. They are not part of the nine-year analytical sample. Annual flows are kept distinct from year-end stocks, and average balances are used where the measure calls for an opening-and-closing denominator. Source amounts reported in thousands or lakhs are standardised to crore in the study.

4.2 Indicator specification

This study reports 24 CARAMEL measures and sensitivities. The main capital indicators compare net premium with the capital base and capital with gross total assets; the company-reported solvency ratio is

shown separately as regulatory context. Asset measures include receivables relative to gross written premium, equity investments relative to gross assets, and two asset-risk specifications. The narrower specification uses separately identified equity and real-estate categories with insurance receivables; the broad legacy version also includes infrastructure or housing and other-than-approved investments. Neither is described as a regulator-certified risk ratio.

For reinsurance and reserves, retention is net written premium divided by gross written premium. Net technical reserves are compared with the three-year average of net claims paid. This ratio is a balance-sheet indicator, not an actuarial opinion on reserve adequacy.

The underwriting ratios use net claims incurred and underwriting expenses relative to net earned premium. The combined ratio is their sum. Investment income is shown separately because the available series does not provide a fully reconciled bridge from underwriting results to profit. For liquidity, the baseline numerator comprises short-term investments, short-term loans, and cash and bank balances. The main denominator is the current-liabilities field. A second calculation adds disclosed provisions; it is a broader accounting coverage measure, not a stress test or an assertion that every provision falls due within one year.

4.3 Data quality and analytical procedures

Ratios were recalculated from the annual reports of the NIA. The analysis compares annual values and summarises endpoints, means, minima, and maxima. The compound annual growth rate for gross premium is calculated across the eight intervals between the opening and closing years. A combined ratio above 100% indicates that the selected claims and expense components exceed earned premium before investment income; it does not, by itself, mean that the company recorded an overall accounting loss.

5. Findings and analysis

5.1 Operating scale and capital adequacy

Table 2. Selected annual input values (₹ crore)

FY	Gross premium	Net premium	PAT	Capital base	Gross assets
2017-18	26554.39	20956.35	2200.91	15882.85	77454.54
2018-19	28017.10	22120.86	604.77	16337.53	80402.84
2019-20	31243.86	24487.05	1435.67	16329.95	75521.37
2020-21	33046.41	26965.84	1627.75	18485.38	91239.83
2021-22	36834.61	29760.23	177.92	18953.76	95676.11
2022-23	38791.48	31126.57	1061.29	20704.91	97812.73
2023-24	41996.46	34407.40	1091.12	21844.33	108124.69
2024-25	43618.40	36315.15	972.22	22756.09	109770.69
2025-26	47173.80	39330.61	1353.57	24626.05	110356.22

Source: Annual reports of the NIA

Gross written premium rose from ₹26,554.39 crore in 2017–18 to ₹47,173.80 crore in 2025–26, an annualised increase of about 7.45%. Profit after tax did not rise in step. It fell to ₹177.92 crore in 2021–22, compared with ₹2,200.91 crore at the start and ₹1,353.57 crore at the end of the period. These

movements describe the series; the data assembled here do not identify whether claims, investment realisations, or other factors account for them.

Net premium relative to the capital base increased from 1.32 to 1.60 times. Capital as a share of gross assets moved from 20.51% to 22.32%. The solvency ratio went in the other direction, declining from 2.58 to 1.84 times. The lowest annual value was 1.66 times, above the 1.50-times reference cited in the company's disclosure. This is evidence that the reported ratio stayed above that reference in the observed years; it is not a guarantee against future claims, market, or reserving shocks.

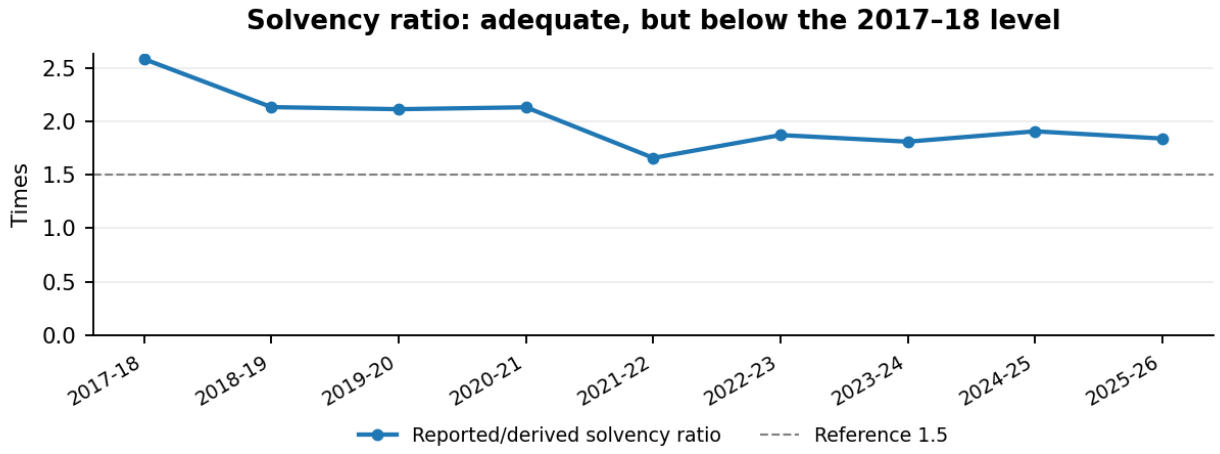


Figure 1. Annual solvency ratio and the 1.50-times reference cited in company disclosure.
Source: annual-report-linked series.

5.2 Asset quality and risk concentration

Receivables relative to gross premium declined from 34.04% to 14.53%. This shows that receivables became smaller in relation to premium in the study calculation; it does not establish that collection quality improved, because the measure can also move with product mix, premium recognition, or classification. Equity investments as a share of gross assets fell from 35.87% to 22.44%. That ratio, too, is a book-value comparison rather than a measure of market risk or credit quality.

The classification choice has a marked effect on the estimated asset-risk share. In the narrower specification, it falls from 11.77% to 6.34%; in the broad legacy version, it moves from 22.18% to 20.65%. The 2025–26 gap between these estimates is 14.30 percentage points. Most of that difference reflects what is counted in the numerator, rather than a change in the underlying balance sheet. The narrower measure is easier to relate to the intended equity, real-estate, and receivables categories.

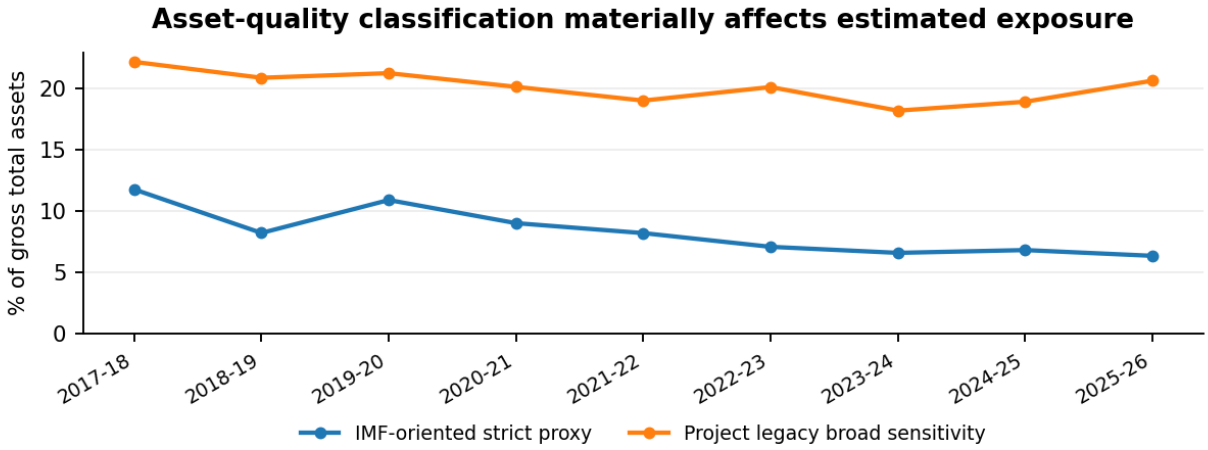


Figure 2. Narrower and broader asset-risk specifications. Neither is a regulatory risk-asset ratio; the final-year receivables classification remains under audit.

5.3 Reinsurance, retention and actuarial provisions

The retention ratio rose from 78.92% to 83.37%. A higher ratio means a larger share of written premium was retained, but it is not automatically favourable: it may increase the amount of risk borne by the insurer. Treaty terms, line-of-business exposures, and loss distributions would be needed to judge whether the change improved or weakened the company's risk position.

Net technical reserves divided by the three-year average of net claims paid declined from 2.13 to 1.77 times. It peaked at about 2.36 times in 2020–21 and moved lower thereafter. This describes reserves against a historical claims benchmark. It cannot establish whether the reserves are sufficient, because the calculation does not test actuarial assumptions, claim development, or uncertainty in incurred-but-not-reported claims.

5.4 Management soundness

Gross premium per employee increased from ₹1.49 crore to ₹4.53 crore, and gross assets per employee rose from ₹4.33 crore to ₹10.61 crore. These measures show that the company's financial scale per recorded employee increased. They should not be read as direct evidence of better management: outsourcing, distribution channels, technology, staffing mix, and branch structure can all affect the ratios.

5.5 Earnings and underwriting performance

Underwriting is the least ambiguous concern in the series, subject to the stated calculation basis. The combined ratio exceeded 100% in all nine years, rising from 112.83% to 123.09% and reaching 124.49% at its highest. The claims ratio increased from 85.66% to 98.65%, while the expense ratio declined from 27.17% to 24.44%. Lower expenses did not offset the increase in claims relative to earned premium.

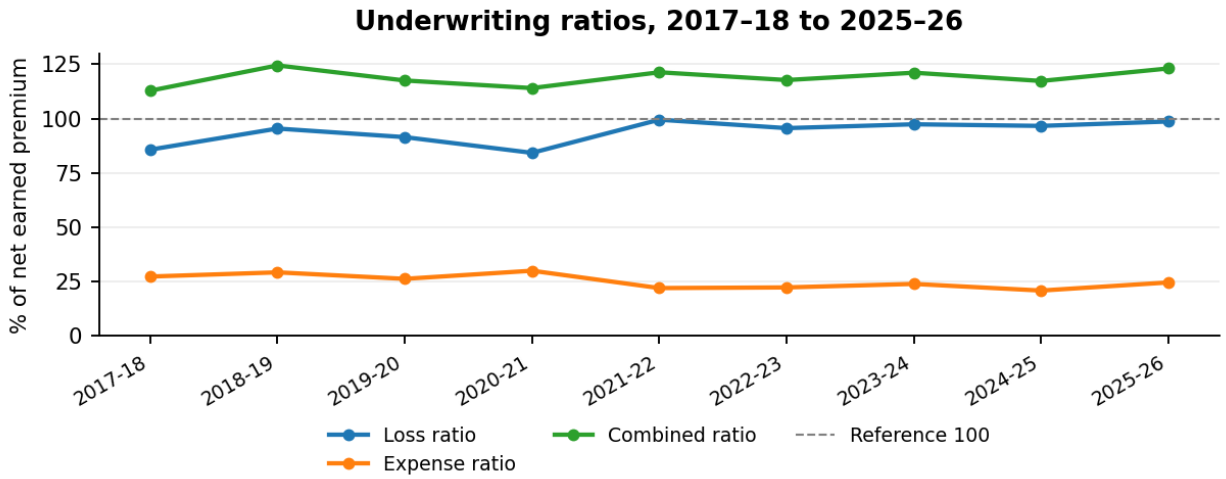


Figure 3. Claims, expense, and combined ratios. The 100% line marks the calculated underwriting break-even point before investment income.

The nine-year mean combined ratio was 118.83%, suggesting that the underwriting shortfall was persistent in this calculation rather than confined to one year. Investment income relative to net written premium rose from 24.65% to 28.22%. That series provides context for why underwriting pressure and positive accounting profit can coexist. It does not show how much investment income offset underwriting losses; answering that would require a reconciled income bridge across the relevant accounts.

Calculated return on equity fell from 15.55% to 5.71%, with a low of about 0.95% in 2021–22. Return on gross assets moved from 2.99% to 1.23%.

5.6 Liquidity and current obligations

Liquid assets relative to the NIA current-liabilities field increased from 0.38 to 0.52 times and reached about 0.60 in 2024–25. In 2025–26, the NIA has ₹27,973.60 crore of liquid assets against ₹53,528.97 crore of current liabilities, yielding coverage below one. The ratio improved over the period, but the calculated liquid-asset total remained below the selected denominator.

When the separately disclosed ₹18,226.55 crore of provisions is added, the 2025–26 denominator rises to ₹71,755.52 crore and coverage falls to about 0.39 times. This wider denominator is a sensitivity, not a claim that all provisions are payable within twelve months. Liquid assets relative to net technical reserves increased from roughly 0.36 to 0.48 times, offering another accounting comparison. Neither measure captures the timing of cash flows or the realisable value of assets under stress.

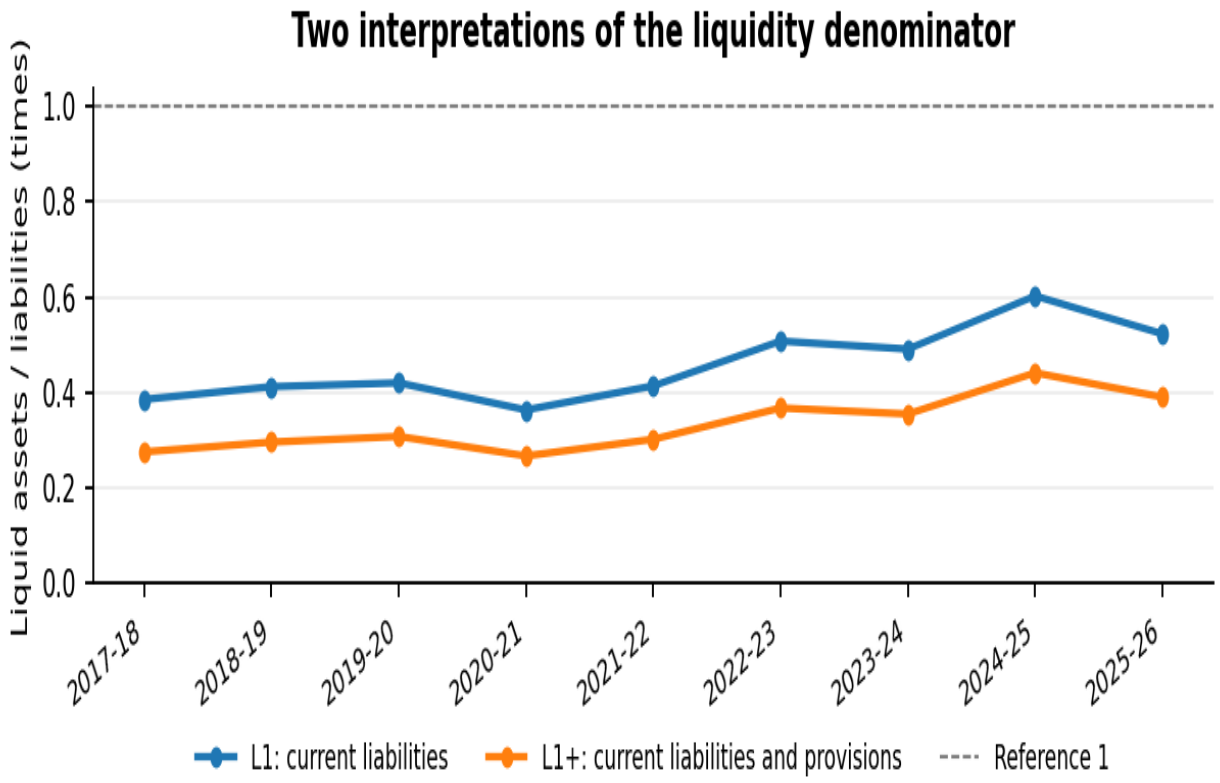


Figure 4. Baseline liquidity coverage and the broader-liability sensitivity. These accounting ratios are not liquidity stress tests.

5.7 Consolidated interpretation of the six dimensions

Table 3 presents selected CARAMEL endpoints and nine-year means.

Table 3. Selected CARAMEL endpoints and nine-year means

Code	Unit	2017–18	2025–26	Change	Nine-year mean
C2	%	20.51	22.32	1.81	20.77
C3	×	2.58	1.84	-0.74	2.00
A1	%	11.77	6.34	-5.43	8.32
A1B	%	22.18	20.65	-1.54	20.15
A2	%	34.04	14.53	-19.51	21.63
RA1	%	78.92	83.37	4.46	80.83
RA2	×	2.13	1.77	-0.37	2.02
E3	%	112.83	123.09	10.26	118.83
E6	%	15.55	5.71	-9.84	6.55
L1	×	0.38	0.52	0.14	0.46
L1P	×	0.27	0.39	0.12	0.33
L2	×	0.36	0.48	0.13	0.42
Source: Author's calculation from NIA annual reports					

Taken together, the series shows premium expansion, solvency above the company-disclosed reference, and sustained underwriting pressure. The full indicator set in Table 4 shows that this is not a single-ratio story: asset risk falls under two specifications, although the gap between the narrow and broad estimates remains large; employee-scale ratios rise; profitability ratios weaken from their opening values; and all three liquidity measures remain below one at the period end. Literature on insurer distress and financial-stability monitoring likewise treats these dimensions as related but non-interchangeable (Caporale et al., 2017; Moreno et al., 2021; Ayinaddis & Tegegne, 2023; Kebede et al., 2024). No composite score is reported because the weights and classifications would be analyst-imposed.

The additional figures make the differences across capital, operating scale, and returns easier to inspect. Each remains a descriptive view of the same nine observations.

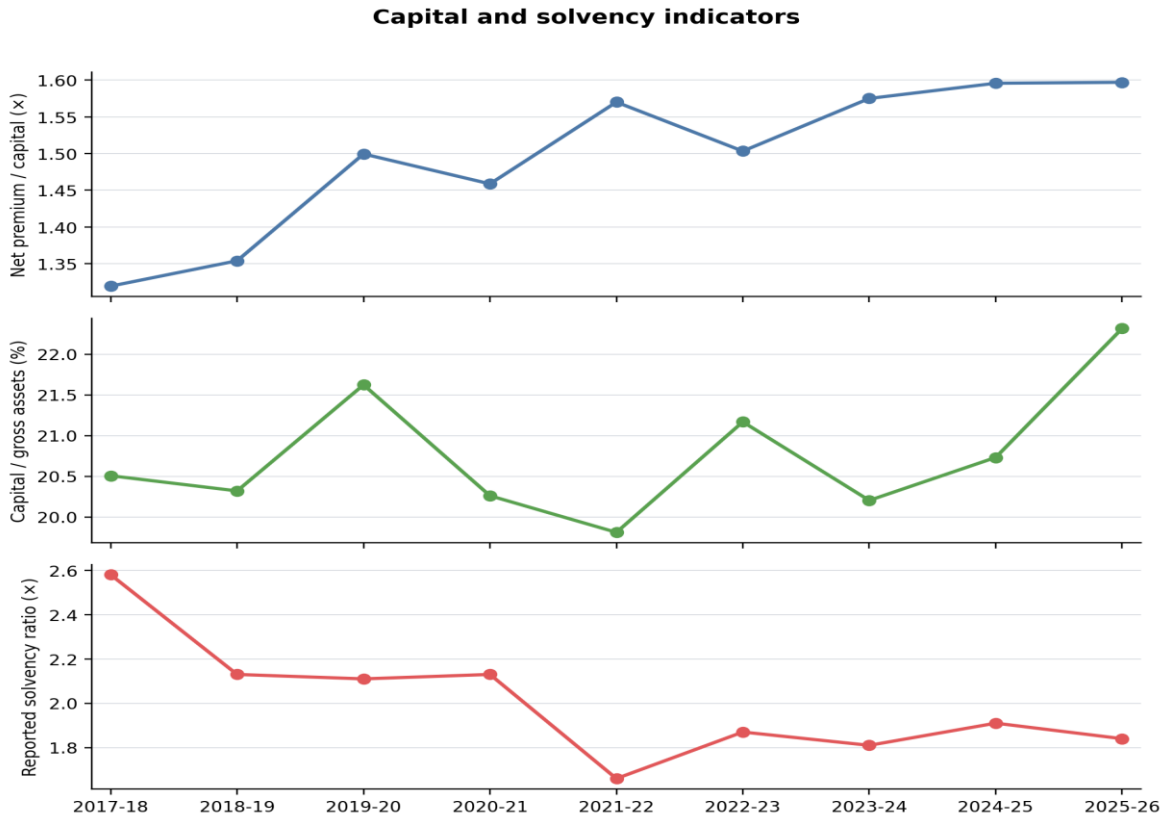


Figure 5. Annual capital and solvency indicators. C1 and C3 are shown in multiples; C2 is a percentage.

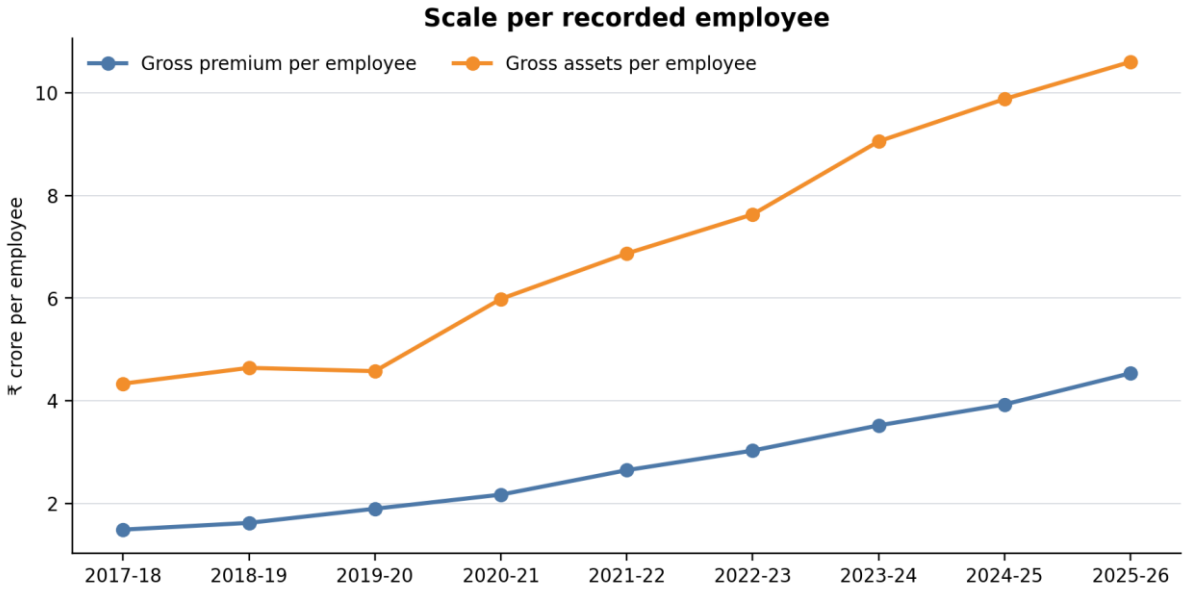


Figure 6. Gross premium and gross assets per recorded employee (₹ crore per employee).

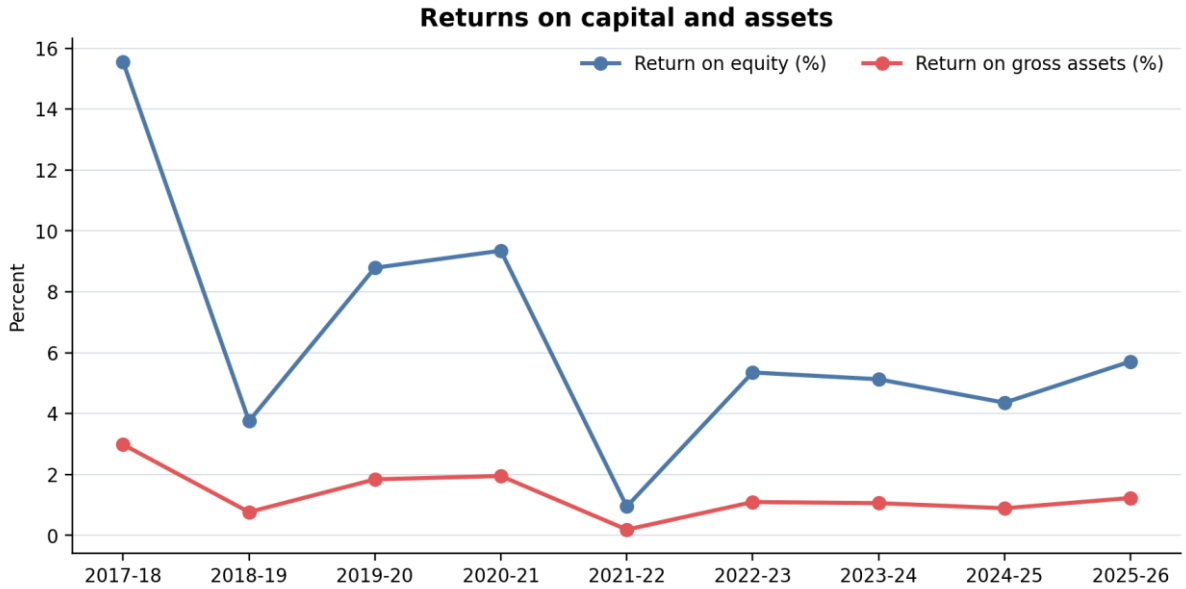


Figure 7. Return on equity and return on gross assets.

Table 4 presents the descriptive statistics for all the reportable CARAMEL indicators for all the nine annual observations from 2017-18 to 2025-26.

Table 4. Descriptive statistics for all reportable CARAMEL indicators (nine annual observations)							
Code	**Indicator**	**Unit**	**2017–18**	**2025–26**	**Mean**	**Range**	**SD**
C1	Net premium/capital	×	1.32	1.60	1.50	1.32–1.60	0.10

C2	Capital / gross assets	%	20.51	22.32	20.77	19.81–22.32	0.79
C3	Solvency ratio	×	2.58	1.84	2.00	1.66–2.58	0.27
A1	Risk assets / gross assets (narrow proxy)	%	11.77	6.34	8.32	6.34–11.77	1.93
A1B	Risk assets / gross assets (broad sensitivity)	%	22.18	20.65	20.15	18.20–22.18	1.26
A2	Insurance receivables / gross premium	%	34.04	14.53	21.63	14.53–34.04	6.12
A3	Equity investments / gross assets	%	35.87	22.44	27.21	21.90–35.87	4.66
RA1	Retention ratio	%	78.92	83.37	80.83	78.37–83.37	1.86
RA2	Net technical reserves / 3Y claims	×	2.13	1.77	2.02	1.76–2.36	0.22
RA4	Net reserves / gross premium	×	1.12	1.23	1.21	1.12–1.29	0.04
M1	Gross premium per employee	₹ cr	1.49	4.53	2.76	1.49–4.53	1.07
M2	Gross assets per employee	₹ cr	4.33	10.61	7.06	4.33–10.61	2.39
M3	Operating expenses / gross premium	%	13.31	11.80	12.30	8.50–16.23	2.22
E1	Incurred claims / earned premium	%	85.66	98.65	93.81	84.19–99.46	5.54
E2	Underwriting expense / earned premium	%	27.17	24.44	25.02	20.71–29.85	3.25
E3	Combined ratio	%	112.83	123.09	118.83	112.83–124.49	3.96
E4	Investment income / net written premium	%	24.65	28.22	26.12	22.01–33.55	3.61
E5	Investment yield	%	9.66	14.13	11.44	9.66–14.50	1.87
E6	Return on equity	%	15.55	5.71	6.55	0.95–15.55	4.21
E7	Return on gross assets	%	2.99	1.23	1.34	0.19–2.99	0.82
E8	Underwriting margin	%	-12.80	-23.09	-18.82	-24.41–-12.80	3.95
L1	Liquid assets / current liabilities	×	0.38	0.52	0.46	0.36–0.60	0.08

L1P	Liquid assets / current liabilities plus provisions	×	0.27	0.39	0.33	0.27–0.44	0.06
L2	Liquid assets / net technical reserves	×	0.36	0.48	0.42	0.34–0.54	0.07
Source: Author's calculation from the NIA annual reports							

6. Discussion and research implications

For monitoring, the results support reading underwriting performance alongside capital and investment income. A focus only on premium growth would miss the continued combined ratios above 100%, while a focus only on solvency ratio would not describe the profitability of the underlying book. This combination is consistent with literature that treats underwriting results, capital buffers, investment outcomes, and reinsurance as connected but distinct elements of insurer performance (González-Fernández et al., 2020; Adams et al., 2019; Horvey & Odei-Mensah, 2024, 2025). The reserve measure adds context, but it cannot substitute for claim-development analysis. These are implications for monitoring and interpretation, not evidence that any particular management or regulatory decision caused the observed pattern.

The measurement exercise also shows why ratio definitions need to travel with the results. Counting every "other than approved" investment and infrastructure or housing holding as a risky asset produces a materially broader numerator than the narrower specification. Adding provisions to current liabilities likewise lowers measured liquidity coverage. Neither alternative is inherently correct for every purpose; each answers a different accounting question. The article's main contribution is to keep those distinctions visible rather than bury them in a composite score.

A useful next study would compare several insurers using a common reporting basis and a documented mapping of schedule items. A matched panel could help distinguish company-specific movements from changes shared across the sector, but only if definitions, reporting entities, and treatment of reinsurance are aligned. More detailed analysis would also need line-of-business claims, reserve development, and a bridge between underwriting results and realised investment income.

7. Limitations and audit priorities

The principal limitation is inconsistent reporting basis. For example, a broad classification of risk assets would show a different ratio when compared to a narrow classification. Similarly, using net assets in the ratio would result in different figures when compared with using gross assets in the ratio. Finally, book-value ratios cannot replace actuarial review, market-value stress analysis, or a regulatory liquidity assessment.

These limitations, however, do not reduce the study's descriptive patterns in premium, reported solvency, retention, and calculated underwriting ratios. They do narrow what can responsibly be said about asset risk, profitability on a comparable reporting basis, and the adequacy of reserves.

8. Conclusion

Across 2017–18 to 2025–26, NIA expanded its premium book and remained above the company-disclosed solvency reference. At the same time, the calculated combined ratio exceeded 100% in every year, and return on equity ended below its opening level. Retention increased, while reserves relative to the historical

claims benchmark declined. The expanded tables and charts show these movements across the complete reportable indicator set, but the same measurement limits apply.

The evidence supports a qualified conclusion: reported capital capacity and business growth coexisted with persistent underwriting pressure. Asset-quality and liquidity judgments are more sensitive to classification choices, and several return measures require a consistent reporting basis. The series is therefore best treated as a transparent company-level description and a starting point for a matched insurer comparison, not as a causal evaluation or a final solvency verdict.

References

1. Adams, M., Upreti, V., & Chen, J. (2019). Product-market strategy and underwriting performance in the United Kingdom's property–casualty insurance market. The European Journal of Finance, 25, 1012–1031.
2. Asadi, S., & Al Janabi, M. A. (2020). Measuring market and credit risk under Solvency II: Evaluation of the standard technique versus internal models for stock and bond markets. European Actuarial Journal, 10, 1–32.
3. Ayinaddis, S. G., & Tegegne, H. G. (2023). Uncovering financial distress conditions and its determinant factors on insurance companies in Ethiopia. PLOS ONE, 18, e0292973. https://doi.org/10.1371/journal.pone.0292973
4. Caporale, G. M., Cerrato, M., & Zhang, X. (2017). Analysing the determinants of insolvency risk for general insurance firms in the UK. Journal of Banking & Finance, 84, 107–122.
5. Das, U. S., Davies, N., & Podpiera, R. (2003). Insurance and issues in financial soundness (IMF Working Paper No. 03/138). International Monetary Fund. https://doi.org/10.5089/9781451856002.001
6. Eling, M., & Jia, R. (2019). Efficiency and profitability in the global insurance industry. Pacific-Basin Finance Journal.
7. González-Fernández, A. I., Rubio-Misas, M., & Ruiz, F. (2020). Goal programming to evaluate the profile of the most profitable insurers: An application to the Spanish insurance industry. International Transactions in Operational Research, 27, 2976–3006.
8. Horvey, S. S., & Odei-Mensah, J. (2024). Factors influencing underwriting performance of the life and non-life insurance markets in South Africa: Exploring for complementarities, nonlinearities, and thresholds. Journal of African Business, 26, 164–192. https://doi.org/10.1080/15228916.2024.2348435
9. Horvey, S. S., & Odei-Mensah, J. (2025). Re-examining the microeconomic and macroeconomic determinants of nonlife insurers profitability in South Africa: Insights from linear and threshold analysis. Journal of Innovation and Entrepreneurship, 14. https://doi.org/10.1186/s13731-024-00461-w
10. Ilyas, A. M., & Rajasekaran, S. (2019a). An empirical investigation of efficiency and productivity in the Indian non-life insurance market. Benchmarking: An International Journal.
11. Ilyas, A. M., & Rajasekaran, S. (2019b). Productivity of the Indian non-life insurance sector. International Journal of Productivity and Performance Management.
12. Isayas, Y. N. (2021). Financial distress and its determinants: Evidence from insurance companies in Ethiopia. Cogent Business & Management, 8.

13. Kaserer, C., & Klein, C. (2018). Systemic risk in financial markets: How systemically important are insurers? Journal of Risk and Insurance.
14. Kebede, T. N., Tesfaye, G., & Erana, O. T. (2024). Determinants of financial distress: Evidence from insurance companies in Ethiopia. Journal of Innovation and Entrepreneurship, 13. https://doi.org/10.1186/s13731-024-00369-5
15. Kiptoo, I. K., Kariuki, S., & Ocharo, K. (2021). Risk management and financial performance of insurance firms in Kenya. Cogent Business & Management, 8. https://doi.org/10.1080/23311975.2021.1997246
16. Liedtke, P. (2021). Vulnerabilities and resilience in insurance investing: Studying the COVID-19 pandemic. The Geneva Papers on Risk and Insurance—Issues and Practice, 46, 266–280.
17. Mankai, S., & Belgacem, A. (2016). Interactions between risk taking, capital, and reinsurance for property–liability insurance firms. Journal of Risk and Insurance, 83, 1007–1043. https://doi.org/10.1111/jori.12080
18. Moreno, I., Parrado-Martínez, P., & Trujillo-Ponce, A. (2018). Economic crisis and determinants of solvency in the insurance sector: New evidence from Spain. Accounting & Finance. https://doi.org/10.1111/acfi.12422
19. Moreno, I., Parrado-Martínez, P., & Trujillo-Ponce, A. (2021). Using the Z-score to analyze the financial soundness of insurance firms. European Journal of Management and Business Economics.
20. Olarewaju, O. M., & Msomi, T. (2021). Intellectual capital and financial performance of South African development community's general insurance companies. Heliyon, 7, e06712. https://doi.org/10.1016/j.heliyon.2021.e06712
21. Puławska, K. (2021). Financial stability of European insurance companies during the COVID-19 pandemic. Journal of Risk and Financial Management, 14.
22. Sasidharan, S., Ranjith, V., & Prabhuram, S. (2023). Determinants of factors affecting the financial performance of Indian general insurance firm: Panel data evidence. Contemporary Economics. https://doi.org/10.5709/ce.1897-9254.508
23. Shiu, Y.-M. (2020). How does reinsurance and derivatives usage affect financial performance? Evidence from the UK non-life insurance industry. Economic Modelling, 88, 376–385.
24. Shim, J. (2017). An investigation of market concentration and financial stability in property–liability insurance industry. Journal of Risk and Insurance, 84, 567–597. https://doi.org/10.1111/jori.12091
25. Siddik, M. N. A., Hosen, M. E., Miah, M. F., Kabiraj, S., Joghee, S., & Ramakrishnan, S. (2022). Impacts of insurers' financial insolvency on non-life insurance companies' profitability: Evidence from Bangladesh. International Journal of Financial Studies, 10, 80. https://doi.org/10.3390/ijfs10030080
26. Tang, Q., & Yang, Y. (2019). Interplay of insurance and financial risks in a stochastic environment. Scandinavian Actuarial Journal, 2019, 432–451.
27. Upreti, V., Adams, M., & Jia, Y. (2021). Risk management and the cost of equity: Evidence from the United Kingdom's non-life insurance market. The European Journal of Finance, 28, 551–570. https://doi.org/10.1080/1351847X.2021.1936588
28. Vojinović, Ž., Milutinović, S., Sertić, D., & Leković, B. (2022). Determinants of sustainable profitability of the Serbian insurance industry: Panel data investigation. Sustainability, 14, 5190. https://doi.org/10.3390/su14095190

29. Zanotto, A., & Clemente, G. P. (2021). An optimal reinsurance simulation model for non-life insurance in the Solvency II framework. European Actuarial Journal, 12, 89–123.
30. The New India Assurance Company Limited. (2018). Annual report for the financial year 2017–18. https://www.newindia.co.in/company-financials
31. The New India Assurance Company Limited. (2019). Annual report for the financial year 2018–19. https://www.newindia.co.in/company-financials
32. The New India Assurance Company Limited. (2020). Annual report for the financial year 2019–20. https://www.newindia.co.in/company-financials
33. The New India Assurance Company Limited. (2021). Annual report for the financial year 2020–21. https://www.newindia.co.in/company-financials
34. The New India Assurance Company Limited. (2022). Annual report for the financial year 2021–22. https://www.newindia.co.in/company-financials
35. The New India Assurance Company Limited. (2023). Annual report for the financial year 2022–23. https://www.newindia.co.in/company-financials
36. The New India Assurance Company Limited. (2024). Annual report for the financial year 2023–24. https://www.newindia.co.in/company-financials
37. The New India Assurance Company Limited. (2025). Annual report for the financial year 2024–25. https://www.newindia.co.in/company-financials
38. The New India Assurance Company Limited. (2026). Annual report for the financial year 2025–26. https://www.newindia.co.in/company-financials