

K O R E A INSURANCE DEVELOPMENT INSTITUTE

CONTENTS

KOREA INSURANCE DEVELOPMENT INSTITUTE

Intro

A message from the Chairman & CEO

Introduction to KIDI

Introduction to KIDI	06
Product and Pricing Services	80
Actuarial and Consulting Services	14
Insurance Statistics Services	18
Insurance Research	20
Information Services	22
Korea Automobile Insurance Repair Research & Training Center	26

Overview

Korean Insurance Industry30Organizational Structure32Member Companies34



Over the past half-century, the Korean insurance industry has undergone groundbreaking changes, and the Korea Insurance Development Institute (KIDI) has played an integral role in growing Korea's insurance market into the seventh largest in the world.

As the successor to the Korea Non-Life Insurance Rating Association, which was established in 1983, KIDI was founded under Korea's Insurance Business Act in 1989 and has provided various insurance-related services for over 40 years. Our responsibilities encompass a wide range of tasks, including the calculation and verification of pure premium rates, confirmation of the adequacy of rates and reserves for life and non-life insurance products, production of insurance statistics, insurance research, and the operation of computer networks for insurance enrollment.

KIDI is actively addressing challenges in the insurance industry amid tough economic conditions, intensified competition, and institutional shifts driven by the convergence of traditional insurance models and digital technologies. To revitalize the stagnant Korean insurance industry and foster growth, KIDI has transformed itself into a data platform, generating future opportunities through the convergence of data linkage and insurtech while supporting innovation in the insurance sector.

Furthermore, we are expanding our professional consulting services to strengthen our role as a specialized consulting institute. The introduction of IFRS 17 presents challenges beyond insurance liability valuation, as it is expected to impact all aspects of the industry, including insurance product development, actuarial accounting, and business management. Moving beyond product development– and risk management–focused consulting, KIDI is enhancing its capabilities to provide comprehensive consulting services across all stages of the insurance business.

KIDI also seeks mutual growth in the Asian insurance market. We have taken the lead in establishing the Insurance Information and Ratemaking Forum of Asia (IIRFA), which has become a key platform for ratemaking organizations. KIDI will continue to strengthen cooperation with overseas insurance organizations to further advance the industry and enhance its expertise.

KIDI remains committed to identifying solutions to ongoing challenges and crises within the insurance industry. As a key player in both the Korean and international insurance markets, we strive to actively contribute to the industry's continued development on a global scale.

Thank You.

对对对

Chang-Eon Heo Chairman & CEO

Introduction to KIDI

KIDI was established in 1983 to protect the interests of policyholders and contribute to the development of the Korean insurance industry.

With expert knowledge and an unbiased approach to research, KIDI continues to play a vital role in the industry's success. It collects and provides data to enhance efficiency, calculates reference rates to support fair and reasonable pricing, and conducts research and analysis across various fields. These efforts drive the development and implementation of industry-leading insurance systems and government policies in Korea.



Growth and Development of the Insurance Industry through Research & Consulting, Data Bank, and Ratemaking

KIDI is a not-for-profit membership corporation established to protect the interests of policyholders and contribute to the development of the insurance industry.

Since its foundation in 1983 as a non-life insurance ratemaking organization, KIDI has continuously expanded its scope. By 1989, its operations extended to both non-life and life insurance. In 1992, it established the Korea Automobile Insurance Repair Research & Training Center (KART) as a subsidiary, followed by the Korea Insurance Research Institute (KIRI) in 1995, which later became an independent entity in 2010.

As of January 2025, KIDI has 42 member companies, consisting of 22 life and 20 non-life insurers.

Organizationally, KIDI is structured into four divisions, with KART as its subsidiary specializing in automobile research. More than 290 experts work at KIDI, dedicating themselves to the continued development of Korea's insurance industry.

KIDI's head office is located in the heart of the Yeouido Financial District, Seoul, while KART is based in Icheon, Gyeonggi Province, approximately a two-hour drive from the head office.

General Meeting

The General Meeting is KIDI's highest decision-making body, composed of chief executives from each member company. It oversees key matters, including amendments to KIDI's Articles of Association, the election of board members, budget approval, and the review and decision-making on various issues proposed by the chairman.

Board of Directors

The Board of Directors consists of two executive directors and eight non-executive directors, including four public interest representatives and four company representatives, along with two external auditors. The board is responsible for decision-making on premium rate verification and calculation, mortality tables, major business plans, and new product development.

Product and Pricing Services

Under the Insurance Business Act, KIDI is the only organization in Korea that provides with industry-wide insurance data.

Based on the collected data, KIDI calculates industry reference rates and mortality tables. KIDI also supports the healthy growth of the Korean insurance industry by reviewing the appropriateness of premium rates and liability reserve levels for new products and related policies.

Reference Rate Calculation and Verification

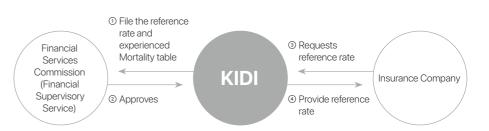
KIDI provides reference rate data, including industry mortality and morbidity tables, based on industry-wide data and in-house statistical systems. This enables insurers to calculate adequate and reasonable rates for policyholders.

Reference rates assist in ratemaking and reserve calculations, helping to establish fair premium rates while ensuring the financial soundness of insurance companies.

For life insurance, reference rates include mortality and morbidity tables covering death, disability, hospitalization, cancer, and other insurance-related statistics. For non-life insurance, reference rates serve as key factors in premium setting across various lines of business, including auto, fire, marine, liability, and long-term insurance.

Reference rates are reviewed and adjusted annually for non-life and medical indemnity insurance and every five years for life and long-term non-life insurance, based on industry-wide statistics.

Filing and Approval Procedure



Feasibility Reviews of Premiums and Reserves

At the request of insurance companies, KIDI reviews "basic documents," which are essential data sets used in the development of new insurance products.

These documents are examined to ensure that premium rates are sufficient to meet the obligations outlined in insurance policies.

KIDI also validates various calculations, including premium rates and liability reserve levels, to ensure policy fulfillment and overall soundness.

As a neutral public service entity, KIDI verifies the appropriateness of premium rates set by insurance companies and helps prevent inadequate reserve levels that could negatively impact their financial stability.

Product Review Procedure



Adequacy of Rate Reviews

KIDI is responsible for reviewing the statistical data used to calculate rates, specifically evaluating the validity of mortality and morbidity table calculations conducted by insurance companies.

Through this review process, KIDI enhances public confidence in the insurance industry. In addition to traditional mortality and morbidity tables, KIDI provides various data calculation methodologies for long-term care, critical illness insurance, and annuities, supporting the growth and development of new markets.

KAIRS

KIDI Artificial Intelligence Rate reviewing System KIDI recently launched an AI-driven project called KAIRS, designed to streamline the insurance product validation process.

KAIRS facilitates a smoother review of premium adequacy and reserve levels by comparing newly developed products with existing ones. Key features include the Terms and Conditions Comparison System, which assesses the clarity of insurance policy clauses between similar products, as legally required. Additionally, KAIRS enables users to evaluate mortality and morbidity levels for certain risks relative to industry benchmarks. By leveraging artificial intelligence, KAIRS enhances both efficiency and accuracy in these processes.

CLIP

Commercial Line Information Portal

KIDI established the CLIP system to support insurers in pricing and commercial insurance underwriting.

Through the CLIP system, KIDI provides a wide range of information, including loss ratios, loss costs, building location and structure, business type, and valuation data for individual building risk assessments. With this in-depth information, insurers can calculate judgment rates and determine the appropriate level of underwriting efficiency.

POS

Pet Insurance Claims Online Processing System KIDI is currently developing the Pet Insurance Claims Online Processing System (POS) to establish a seamless connection between veterinary hospitals and insurance companies.

With POS, policyholders will be able to file claims directly at the hospital and pay only their portion of the medical expenses. POS is also expected to contribute to the healthy growth of the pet insurance market.

New Product Development and Ratemaking Services

KIDI provides services to support new product development and rate-making, either on demand or in response to emerging market risks.

These efforts contribute not only to the development of new markets for government-sponsored natural disaster relief insurance—including agriculture, flood and storm, and aquaculture insurance—but also to the effective management of government funds.

KIDI has played an active role in the development of government-subsidized insurance by creating products that cover natural disasters in alignment with national disaster management policies. This strengthens the role of insurers in risk management and enhances financial stability for those in the agricultural and aquacultural industries.

KIDI is developing a catastrophe model to address natural disasters and the COVID-19 pandemic. This model will be used for advanced premium rate calculation, underwriting, damage assessment, and reserve calculation, with continuous expansion of its applications.

While Korea's insurance industry has historically been driven by personal lines, demand for commercial lines premium ratemaking has steadily increased since deregulation in April 2016. KIDI continues to monitor market needs and is providing more reference rates for commercial lines than ever before.

Rate Review Procedure



Disaster Insurance Information System

KIDI operates the comprehensive information system on disaster safety mandatory insurance, a government-wide integrated system entrusted by the Ministry of Interior and Safety in accordance with the law.

This system is designed for the systematic management of various national-level disasters. Its primary goal is to increase the subscription rate of mandatory disaster safety insurance by utilizing insurance subscription information and historical data on insurance and mutual aid subscriptions. By running this system, KIDI strengthens the social safety net against disaster risks by optimizing investments across departments, minimizing budget overlaps, and ensuring swift and adequate compensation for damages.

Support for Insurance Product Development for Individuals with Medical Conditions

KIDI has developed a model to calculate the "health age" of policyholders by predicting the likelihood of major illnesses such as cancer and stroke based on health indicators (e.g., BMI, blood pressure).

This model supports the development of insurance products that offer differential premiums based on health age instead of chronological age. KIDI has also conducted research on the correlation between unhealthy behaviors—such as smoking, alcohol consumption, and physical inactivity—and 20 major illnesses, including heart attacks and strokes. By sharing this data with insurers, KIDI has helped encourage policyholders to adopt healthier lifestyles while improving loss ratios for insurers.

Improved Statistical Systems for Product and Risk Development

The demand for insurers to produce experience statistics for developing new products, risk rates, and underwriting has grown significantly. At the same time, the methods for generating these statistics have become more complex and diverse.

To meet these demands, KIDI restructured its methods for aggregating data and developed program manuals to streamline processes. The statistical format for long-term non-life insurance has been customized for each insurance line, enabling tailored data aggregation, and statistical verification processes have been strengthened. Additionally, KIDI further enhanced efficiency by standardizing the methods for extracting aggregated statistical data. These improvements have raised the quality of the statistics KIDI provides while ensuring timely responses to the evolving statistical needs of insurers.

Underwriting Information and Merit-Demerit Rates

KIDI provides insurance companies with individual and group merit-demerit class information, calculated based on industry-wide policy and claims data, for use as a reference in premium calculation.

This information is provided for auto, hull, marine cargo, and workers' compensation insurance. By ensuring that all insurance companies share the same data, KIDI promotes fairness in rate-making and enhances the efficiency of underwriting processes.

Publication of Vehicle Actual Cash Value and Vehicle Model Ratings

KIDI publishes quarterly reports on vehicle value tables, which insurance companies use as an actual cash value standard for calculating premium rates. This information is also used to assess physical damage coverage and claim settlements in cases of physical loss.

Additionally, KIDI calculates a vehicle model rating each quarter by evaluating the damageability and repairability of individual vehicles through crash impact tests and industry-wide insurance statistics.

This service promotes fair processing in automobile insurance underwriting and claims while enhancing insurers' workflow efficiency.

Support for the Improvement of Auto Insurance System

KIDI enhances consumer rights and supports the sound development of the auto insurance industry by improving the auto insurance system used by regulatory bodies.

This system enables the establishment of special rates for high-value vehicles prone to expensive repairs and allows for contract policy adjustments on car rental payment standards.

Car Insurance Premium Discount/ Surcharge Inquiry System

KIDI developed a system to help policyholders better understand the factors that influence their automobile insurance premiums.

The system incorporates various rating factors, including insurers' merit-demerit rates, accident history, traffic law violations, age, and other elements that may increase or decrease premiums. Users can also see how applying add-ons affects insurance pricing.

ICCS

Auto Insurance Minor Injury Claims Control System KIDI operates the Auto Insurance Minor Injury Claims Control System (ICCS), which provides details on compensation for individuals involved in minor automobile injuries and indexes assessing the adequacy of personal insurance payments.

By offering comparisons and indicators—such as vehicle repair costs and the likelihood of overtreatment by the claimant—we assist insurance companies in making timely decisions on suspected overtreatment cases during the compensation process. This, in turn, plays a key role in mitigating moral hazard among insurance consumers.

VeTI

Vehicle Total Information System The VeTI system reduces the time required to issue an insurance policy and enables quick vehicle assessments by allowing consumers to enter their license plate numbers.

The system then automatically retrieves essential vehicle information, including model, current value, safety features, and add-ons. This streamlines the process, reducing operating expenses for insurers and enhancing consumer convenience.

Readability Test of Insurance Policies

KIDI is responsible for assessing the readability of insurance policies, as required by the Insurance Business Act. This assessment is conducted semiannually for both life and non-life insurance products to evaluate the clarity, simplicity, and brevity of policy clauses, helping consumers better understand the insurance products they purchase.

Since 2021, in addition to insurance policies, insurance product descriptions have also been included in the evaluation.

Actuarial and Consulting Services

KIDI provides specialized insurance services for advanced insurance systems that require in-depth research on actuarial issues and accounting systems.

KIDI also keeps the insurance industry up to date on the latest benchmarks derived from global case studies. These efforts extend to related practices aimed at strengthening the actuarial and risk management sector. In response to the global trend toward stronger risk management and fair value disclosure, KIDI monitors actuarial and accounting developments in advanced markets and shares its research findings with insurance companies and regulators.



Research on Actuarial Issues and Accounting System

KIDI utilizes insurance market data to provide information on key assumptions such as policyholder behavior, mortality rates, morbidity rates, survival rates, and lapse rates for liability assessment.

Through research on assumption calculation methodologies, KIDI supports insurance companies in their evaluation processes. Additionally, KIDI offers insights into practice standards for insurance liability valuation and actuarial systems that align with the latest insurance standards.

Risk Measurement Research

KIDI conducts surveys and research to support the development and improvement of risk-related systems such as the Korean Insurance Capital Standard (K-ICS) and the Own Risk and Solvency Assessment System (ORSA).

KIDI provides consulting services on insurance adequacy, interest rate risk, and management policies to help insurance companies mitigate their own risks and enhance ORSA adequacy. Additionally, KIDI contributes to insurance risk management by facilitating the K-CRO forum and working-level consultative groups, providing a platform for identifying and addressing issues in insurance risk management.

KIDI-ESG Pro

Economic Scenario Generator KIDI's economic scenario generator, KIDI ESG Pro, evaluates embedded options and guarantees within insurance liabilities.

This software tool simulates future economic projections of financial markets by incorporating various factors, including yield curve generation, parameter estimation, and economic scenario modeling. KIDI ESG Pro provides detailed guidance, allowing insurance companies to easily access potential economic scenarios across the global market.

ARK Solution for IFRS 17

Agile, Reliable & Keen

In collaboration with ninepence insurance companies, KIDI developed ARK, an integrated IFRS 17 system, in accordance with IFRS 17 standards.

The ARK system consists of two main components: ARK Package and ARK Portal. ARK Package functions similarly to commercial actuarial software, enabling future cash flow calculations. ARK Portal allows users to inquire about accounting settlement results, calculate and manage assumptions, and utilize the pricing system.

ARK provides a comprehensive solution for calculating and managing actuarial assumptions, future cash flows, and insurance-related income statements, all with the convenience of a single click. Beyond financial accounting, the system supports various applications, including cash flow pricing, managerial accounting, insurance risk calculations, and financial ratio analysis to ensure a strong financial foundation. ARK features high-speed computation through CPU/GPU-based parallel programming.

As of January 2025, nine Korean insurance companies are using the system.

SolV

Solution for Reserve

SolV (Solution for V) is a PC-based actuarial software developed by KIDI, leveraging its expertise in designing the IFRS 17 settlement system.

SolV enables the swift generation of IFRS 17 and K-ICS cash flows without requiring server linkage, allowing for comparative verification with cash flows computed by insurance companies.

The software features high-speed calculation of summary information on insurance liabilities and a detailed calculation function that examines the entire process, including insurance premiums, claims, and expenses. By streamlining actuarial tasks, SolV significantly reduces the time required for various calculations.

Al-Driven Data Meta-Analysis and Marketing Consulting Services

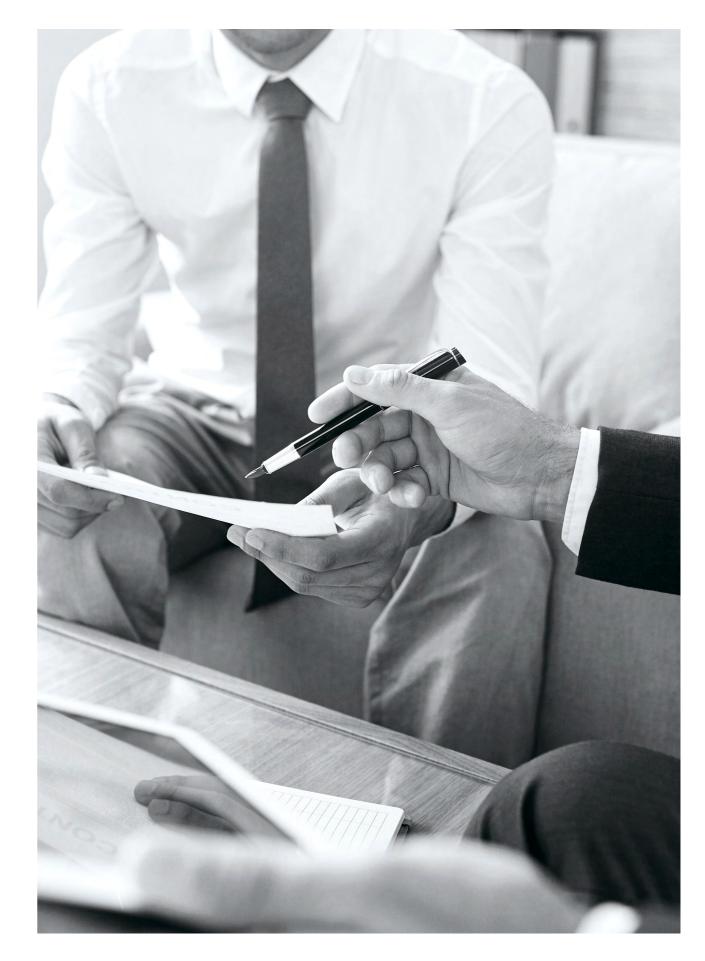
In response to the growing momentum of digital transformation driven by AI and inter-industry data convergence, KIDI actively supports the innovative growth of the insurance industry through the adoption of insurtech, including AI and big data.

KIDI creates added value by combining its data with that of external agencies, providing insurance companies with insights for developing innovative products.

Additionally, KIDI identifies new business models for the insurance industry in the digital big data era by exploring AI technologies, researching insurtech trends, and offering consulting services to uncover opportunities in emerging markets.

Actuarial and Consulting Services





Insurance Statistics Services

KIDI is the only institution in Korea specializing in the collection of insurance statistics from industry-wide policy and claims data.

It provides statistical data to support the evolving needs of the highly competitive insurance industry.



Collection of Raw Insurance Data

KIDI collects and compiles policy-based contract and claims data submitted by all life and non-life insurance companies in Korea.

The non-life insurance sector covers 12 different categories, including automobile, fire, cargo, hull, long-term, casualty, workers' compensation, and guarantee insurance, among others. Additionally, policy and claims data from all life insurance and retirement pension plans are included in the collected data.

Production of Insurance Statistics

After collecting raw data, KIDI processes and converts it into insurance statistics based on industry and risk characteristics.

Using data from various sources, KIDI publishes the Yearbook, Monthly Insurance Statistical Reports, Yearly Statistics, and Rate Review Reports by business sector annually. To support insurance companies in underwriting and pricing, KIDI operates specialized systems such as the merit-demerit system, mortality calculation system, and risk-factor-based loss analysis system.

Beyond traditional statistical analysis used in ratemaking and risk calculation, KIDI provides comparative and linked analyses across different business sectors, domestic and international markets, and tailored statistical insights for individual companies. These services enhance the competitiveness of the insurance industry, particularly in product development, marketing, and profit management.

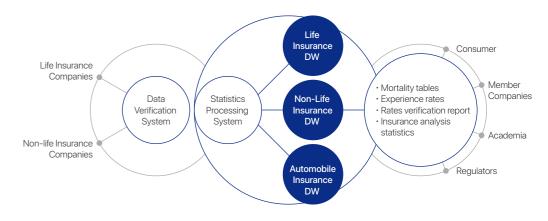
Delivery of Insurance Statistics

To meet the growing demand for insurance statistics, KIDI has developed a data warehouse covering 12 industry sectors, including life, non-life, and automobile insurance.

The online analysis system leverages these data warehouses, enabling end users to independently generate and analyze statistical data for efficient rate-making and data validation.

KIDI provides statistical data and services to insurance companies through publications, seminars, and its statistical system. Insurers utilize these resources to assess the adequacy of their rates and risks and to develop strategies for marketing and underwriting.

Workflow of Insurance Statistics Services



Insurance Research

KIDI conducts research on practical applications related to product development and insurance system operations, enabling greater flexibility in new product development, underwriting, and marketing to meet rapidly changing market demands.

Additionally, KIDI explores new growth opportunities for the Korean insurance industry by analyzing global market trends, advanced insurance systems and policies, pricing methodologies, and new product development techniques.

The findings from this research are shared in detail through seminars and publications, ensuring their immediate application in day-to-day insurance operations.

As Applied and the second seco

Aging Population Research

With Korea's population aging at an unprecedented rate and government funding facing limitations, discussions on expanding the private sector's role in social security are gaining momentum.

In anticipation of socioeconomic changes driven by demographic aging, KIDI conducts field-based research to help the insurance industry identify new business opportunities and enhance its competitive edge.

The main areas of aging-related research include:

- Research on recent policy reforms addressing population aging in advanced countries
- Development of insurance products tailored for the elderly
- Analysis of longevity risk and hedging-related risks
- Publication of "KIDI Retirement Report", which provides a comprehensive analysis of aging population statistics and retirement trends

These research findings support product development, underwriting guideline revisions, and government policymaking.

Research on Advanced Pricing and Product Development Methodologies and Industry Competitiveness

As the insurance market matures, insurers are increasingly adopting targeted marketing strategies to better meet the diverse needs of well-defined market segments. KIDI actively supports insurers in assessing risk appropriately and identifying market opportunities by researching local and global risk rates and product development methodologies. This includes strategies for underwriting substandard risks while achieving sustainable returns.

KIDI is also examining ways to enhance the insurance industry's competitiveness amid growing challenges from other financial sectors, driven by financial integration and the removal of intra-sector restrictions. One key area of competition is retirement pensions, where insurance companies, banks, and securities firms compete for market share. To support the industry's long-term growth, KIDI conducts research on various strategic areas to strengthen the insurance sector's competitive edge.

Publications and Policy Proposal

KIDI presents its research findings through various seminars and publications, including CEO Reports, Auto Insurance Issue Report Quarterly, Practitioner's Guidebooks, Overseas Market Brief, and the monthly KIDI Brief, providing valuable insights for insurance companies, policymakers, and government authorities.

If research findings indicate a need for policy changes, KIDI submits proposals to policymakers outlining the justifications for the changes along with detailed recommendations to support necessary policy adjustments.



Information Services

KIDI's extensive database, Insurance Information Network (IIN) contains insurance contracts and claims data from insurers. Through IIN, KIDI provides insurance statistics and information promptly and effectively to the member companies, the government, and related organizations.

IIN is used in rate making and verification, insurance fraud prevention and detection, contract maintenance and claims payment.

Information Services 1

Insurance Information Services



IIN

Insurance Information Network The Insurance Information Network (IIN) serves as a hub connecting KIDI with its member companies and various insurance associations, generating over 100 million search results per month.

KIDI supports its members by providing extensive underwriting data across various insurance types, including automobile insurance contracts and claims data, workers' compensation merit-demerit data, livestock insurance data, and co-insurance information for marine and casualty insurance.

IIN plays a particularly vital role in the auto insurance industry, offering essential underwriting data. It provides detailed policyholder information, including insurance policies, claims history, merit-demerit scores, and traffic violation records, aiding insurers in risk assessment.

Additionally, KIDI operates an automated pool system to assist policyholders whose insurance applications have been rejected by auto insurance companies.

Car History Service

Accident History Service for Used Vehicles Car History provides automobile insurance information to protect used car buyers and promote fairness in the secondary car market.

The system offers detailed vehicle information, including manufacturer, production year, engine displacement, number of previous owners, and history of commercial use. It also provides past claims data, accident history with repair costs, and records of extraordinary incidents such as total loss, flood damage, and theft.

The Car History website (www.carhistory.or.kr) supports multiple languages, including Korean, English, Vietnamese, Spanish, Arabic, Russian, and Mongolian.



CAIS

Car Accident History Inquiry System To prevent false and duplicate claims and support claim assessment, CAIS collects an entirety of data on vehicle damage and accidents. Its primary goal is to prevent improper claim payments and improve the loss ratio of auto insurance.

INcos

Insurance Statistics
Consumer Service

Through INcos, KIDI provides comprehensive insurance statistics on life, long-term non-life, non-life, and automobile insurance.

BIGIN

Big Data Insurance Information Platform

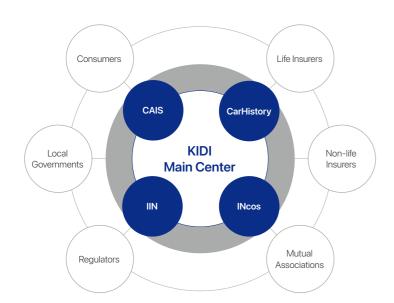
KIDI operates BIGIN, the Big Data Insurance Information Platform, which offers useful information about insurance. Insurers can leverage BIGIN's extensive array of data, including domestic and global insurance statistics and trends, to explore new markets and develop new products.

Medical Insurance Smart Claims System

In accordance with the revised Insurance Business Act, KIDI serves as a transmission agency, facilitating a one-stop medical indemnity insurance claims process for consumers. Through the transmission system for insurance claims documents, KIDI enables the electronic submission of medical receipts, detailed billing statements, prescriptions, and medication receipts from healthcare providers to the insurance companies offering medical indemnity insurance.

Starting from October 25, 2024, consumers can easily file claims for medical expenses through the "Silson 24" web portal (PC) or mobile app (available for Android/iOS) connected to healthcare providers affiliated with KIDI. For clinics and pharmacies, this service will be available from October 25, 2025.

Insurance Information Services



Information Services 2

Law-based Information Services

Compulsory Automobile Insurance Management Network KIDI operates the Compulsory Automobile Insurance Management Network to help prevent and reduce the number of uninsured vehicles as part of the social safety net. The system is managed in collaboration with the government's national information network.

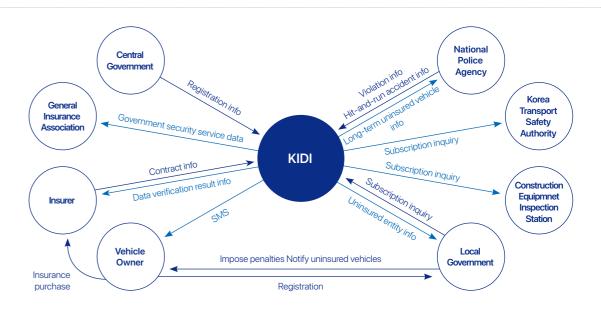
By integrating vehicle registration data from the Ministry of Land, Infrastructure and Transport with compulsory automobile insurance policy data from insurers and related associations, authorities such as vehicle registration offices and police departments can quickly verify whether a vehicle is properly insured.

KIDI also regularly provides municipal governments with lists of uninsured vehicles, using traffic violation records from the police and insurance policy data. Additionally, the network supports accident victims by facilitating compensation for damages caused by uninsured or hit-and-run vehicles. The system collects offender information from the National Police Agency's database and provides it to the Traffic Accident Compensation Supervisory Service, ensuring claimants receive indemnification as quickly as possible.

Traffic Violation Rates Inquiry System

To calculate automobile insurance premium rates for individuals, KIDI receives traffic violation records including driving under the influence and traffic light violations from the National Police Agency. KIDI generates traffic violation rates using this data and provides them to insurers through an online inquiry system.

Workflow of Compulsory Automobile Insurance Management Network



KART

The Korea Automobile Insurance Repair Research & Training Center (KART), a subsidiary of KIDI, was established in March 1992. It carries out a wide range of tasks that contribute to the development of the insurance industry and the protection of insurance consumers.

KART's primary function is research. It studies various subjects, including damageability and repairability of vehicles to minimize repair costs, vehicle safety to reduce personal injuries from traffic accidents, and repair cost standards, such as repair time, methods, and paint costs.

KART is also responsible for developing and distributing the electronic repair cost calculation and estimation system (AOS, Automobile repair cost On-line Service). Additionally, it plays a key role in training automobile insurance loss adjusters and other professionals.

To enhance its educational capabilities, KART unveiled new training facilities covering 2,889m² in June 2012. The facility includes a fully equipped vehicle repair workshop and a state-of-the-art dormitory that can accommodate up to 60 trainees. These upgrades are expected to improve training conditions and enhance the quality of courses on vehicle repair techniques and claims adjustment.

To simulate real-world accident scenarios, KART conducts various types of crash tests. It introduced a towing vehicle crash test system to improve test accuracy and reproducibility. These advancements not only help save lives but also reduce economic costs associated with insurance claims and property losses.





Damageability & Repairability and **Vehicle Model Group** Ratings

The group rating system, designed to ensure reasonable insurance premiums, is based on the damageability and repairability of a vehicle.

KART conducts 10 km/h and 15 km/h crash tests on newly launched vehicles following RCAR test protocols. The results help encourage manufacturers to enhance their vehicle designs for improved damageability and repairability.

Vehicle Safety Study

KART has conducted 64 km/h frontal crash tests, whiplash research, and various carto-car crash tests to enhance passenger safety and minimize automobile-related casualties.

Recently, KART has been researching Advanced Driver Assistance Systems (ADAS), including Autonomous Emergency Braking (AEB) and Parking Assistance Systems (PAS), which are expected to reduce the frequency and severity of vehicle accidents.

Minor Vehicle Accident Injury Study

In 2022, KIDI introduced Research Council for Automobile Repairs (RCAR) standards for determining injury validation methods and registered its clinical treatment guidelines for minor patients with the Korean Medical Association.

To support the implementation of RCAR standards and enhance their application, KIDI is currently conducting clinical trials to adapt the international standard for use in Korea as a benchmark for insurance payments. Additionally, its clinical treatment guidelines will be test-applied to the treatment of passengers in minor accidents to expand their use in medical settings.

Since 2020, KIDI has also provided a traffic accident injury risk analysis service for suspected cases of overtreatment, helping ensure the appropriateness of insurance payments for minor injuries.

Standard Repair Time Study

KART researches repair methods and repair times for vehicles damaged in accidents and provides this data to insurers and workshops.

Actively participating in government-led research projects, KART announced standard repair time results in 2005 and 2018, which have since been widely used as a reliable industry standard.

Initially focused on domestic vehicles, KART's research has recently expanded to foreign vehicles and motorcycles. The repair time data provided by KART is designed to be reasonable and effective in reducing auto insurance premiums and resolving disputes between insurers and workshops.

AOS

Automobile repair cost On-line Service

The first electronic repair cost estimation system, known as the Automobile Repair Cost Computation (ARECCOM), was developed in 1991 to provide quick and accurate repair cost estimates.

In 2003, an online version of ARECCOM, called AOS, was introduced for various users, including insurers, repairers, auto parts dealers, glass parts dealers, and rental car service companies.

Today, almost 80% of independent repair shops and all claim adjusters from insurance companies and mutual aid associations use AOS, with over 80% of all vehicle claims processed through the system.

In 2020, KART developed AOSa, an Al-based repair cost estimation system. AOSa utilizes Al algorithms to recognize vehicle damage from uploaded photos and calculates the total expected repair cost. Users can simply upload images of damaged vehicles to receive an instant repair cost estimate.

Training

KART provides specialized training programs to professionals working for insurance companies, mutual aid associations, traffic police, and repair shops.

The programs cover areas such as advanced technology, automobile body structure, repair cost estimation, damage assessment, accident analysis, and hands-on repair training.

In response to evolving trends in the post-pandemic era, KART offers both in-person and online training. In 2024, KART trained 496 graduates across 13 specialized courses, including 28 courses for the insurance and maintenance industries.

With the 2024 revision of the Insurance Business Act requiring mandatory training for claims adjusters every two years, KART is expanding its educational programs by developing new curricula and strengthening both online and offline training.

Accreditation of Non-OEM Auto Parts

KART has been researching to promote the use of aftermarket automotive parts certified in accordance with the Automobile Management Act as a member of the certification evaluation committee.

Since January 2015, KART has been designated as the official testing body for exterior automotive parts certification tests and has conducted various certification tests such as tensile strength test, thermal expansion test, etc.

We also promote the use of not only accredited non-OEM auto parts but also recycled parts. Through this new initiative, KART is playing its part in reducing vehicle maintenance costs and providing more options to consumers.

Accident **Investigation &** Consultation

KART provides consultation services for insurance companies, including accident investigations and claim adjustment assessments.

It conducts in-depth mechanical failure analyses to determine possible vehicle defects or recall implications. KART also investigates whether repairs were excessive or unnecessary part replacements were made, examines the causes of vehicle fires, and replicates accidents through crash tests to provide objective evidence.

Research, Collaboration, and **Industry Insights**

KART provides insurers and industry authorities with the latest information on new vehicles, the appropriateness of spare and repair part costs, statistical analyses and forecasts of vehicle repair costs, advanced claim processing, system improvements, and global case studies.

KART also collaborates with international organizations and acquires new insights by participating in global events, including RCAR annual seminars, RCAR working groups (P-safe, Repairability, Damageability, Aftermarket Parts, Cybersecurity, ADAS Calibration), and Korea-China-Japan technology exchange meetings with Japan's JKC and China's CIRI.



Korean Insurance Industry

The Korean insurance market ranks 7th globally and 3rd in Asia in terms of premium volume.

Premium Volume in 2023

The total premium of the Korean insurance market accounted for 2.6% of the global market share, ranking 7th worldwide and 3rd in Asia.

[Unit: USD million, %]

Rank	Country		Premium Volume in 2022			
		Total	M/S	Life	Non-Life	Total
1	United States	3,226,684	44.9%	714,859	2,511,826	2,987,988
2	China	723,664	10.1%	390,400	333,264	696,128
3	United Kingdom	374,936	5.2%	236,941	137,995	336,767
4	Japan	362,719	5.0%	277,198	85,521	360,543
5	France	282,800	3.9%	170,098	112,702	258,856
6	Germany	245,464	3.4%	93,325	152,139	236,981
7	South Korea	185,917	2.6%	84,364	101,552	192,099
8	Canada	170,520	2.4%	70,319	100,201	170,520
9	Italy	159,442	2.2%	110,549	48,892	154,564
10	India	135,958	1.9%	100,185	35,773	129,765
	World	7,186,174	100.0%	2,888,998	4,297,176	6,772,753

Source: Sigma No 3/2024, Swiss Re

Insurance Density

Premiums Per Capita (USD) in 2023

Korea's insurance density reached US\$3,606 (life: \$1,635 and non-life: \$1,968) in 2023, ranking 15th globally.

[Unit: USD]

					[01111.03D]		
Rank	Occupation :	Population	Premiums Per Capita in 2023				
	Country	(millions)	Total	Life	Non-Life		
1	United States	335	9,640	2,136	7,504		
2	Hong Kong	7	8,769	7,574	1,195		
3	Singapore	6	7,799	6,264	1,536		
4	Denmark	6	7,485	5,565	1,921		
5	Switzerland	9	6,830	2,832	3,998		
6	Ireland	5	5,672	3,806	1,866		
7	Finland	6	5,364	4,362	1,003		
8	Netherlands	18	5,216	724	4,492		
9	United Kingdom	68	4,759	3,466	1,294		
10	Luxembourg	1	4,644	1,997	2,647		
15	South Korea	52	3,606	1,635	1,968		
	World	7,967	889	361	528		

Source: Sigma No 3/2024, Swiss Re

Insurance Penetration

: Premiums in % of GDP in 2023

Insurance penetration in the Korean market stood at an impressive 11.0% in 2023, placing it 5th globally and 2nd in Asia. Similar to insurance density, the non-life insurance sector recorded a higher penetration rate of 6.0% compared to 5.0% for life insurance.

[Unit: USD billion, %]

Donk	Country	CDD	Premiums in % of GDP in 2023			
Rank	Country	GDP	Total	Life	Non-Life	
1	Hong Kong	382	17.2	14.8	2.3	
2	United States	27,143	11.9	2.6	9.3	
3	South Africa	377	11.5	9.2	2.3	
4	Denmark	404	11.0	8.2	2.8	
5	South Korea	1,695	11.0	5.0	6.0	
6	Taiwan	756	10.3	7.1	3.2	
7	Finland	300	10.0	8.1	1.9	
8	United Kingdom	3,342	9.7	7.1	2.6	
9	Singapore	501	9.2	7.4	1.8	
10	Japan	4,092	8.9	6.8	2.1	
	World	100,676	7.0	2.9	4.2	

Source: Sigma No 3/2024, Swiss Re

Total Asset

The total assets of the Korean insurance industry decreased by 6.5%, reaching KRW 1,244.6 trillion in 2023. Life insurers held the majority of the assets at KRW 880.9 trillion, while non-life insurers accounted for KRW 343.7 trillion.

[unit: KRW trillion, %]

Category	FY'19	FY'20	FY'21	FY'22	FY'23
Life	918.1 [7.1]	977.2 [6.4]	992.4 [1.6]	938.2 [-5.5]	880.9 [-6.1]
Non-Life	320.7 [7.4]	344.0 [7.3]	366.3 [6.5]	371.8 [1.5]	343.7 [-7.6]
Total	1,238.9 [7.2]	1,321.2 [6.6]	1,358.7 [2.8]	1,310.0 [-3.6]	1,224.6 [-6.5]

Source: Statistics Kore

Note: Figures in parentheses represent the growth rate compared to the previous year.

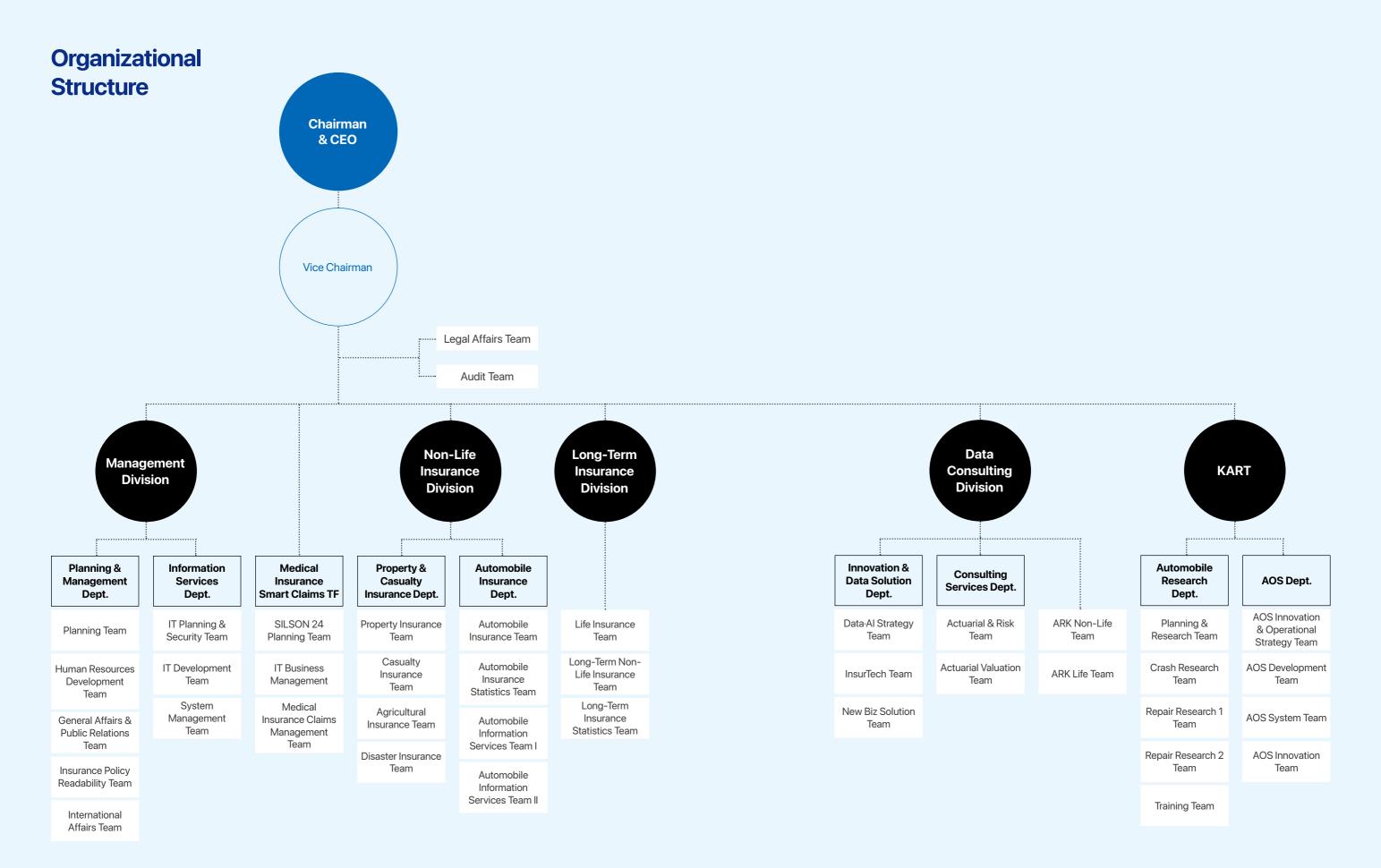
Number of Insurance Companies in Korea

As of 2023, 53 insurers were operating in Korea, of which 22 were life insurers while 31 were non-life insurers.

Category	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Life	25	25	25	25	24	24	24	23	23	22
Non-Life	31	31	31	31	31	30	30	30	32	31
Total	56	56	56	56	55	54	54	53	55	53

Source: Financial Statistics Information System, FSS

Note: The number of non-life insurance companies includes reinsurance companies and foreign insurance company branches operating in Korea. All figures are on a year-end basis.



Member Companies*

*Listed according to the date of establishment in Korea



Life Insurance

Companies Hanwha Life Insurance Co., Ltd. ABL Insurance Co., Ltd. Samsung Life Insurance Co., Ltd. Heungkuk Life Insurance Co., Ltd. Kyobo Life Insurance Co., Ltd. Fubon Hyundai Life Co., Ltd. Shinhan Life Insurance Co., Ltd. DB Life Insurance Co., Ltd. TongYang Life Insurance Co., Ltd. MetLife Insurance Company of Korea, Ltd. Chubb Life Korea, Ltd. DGB Life Insurance Co., Ltd. KDB Life Insurance Co., Ltd. Mirae Asset Life Insurance Co., Ltd. KB Life Insurance Co., Ltd. LINA Life Insurance Korea, Ltd.

BNP PARIBAS CARDIF Life Insurance Co., Ltd. IBK Pension Insurance Co., Ltd. NongHyup Life Insurance Co., Ltd. Kyobo Lifeplanet Life Insurance Company

American International Assurance Korea

Hana Life Insurance Co., Ltd.

Webpages

www.hanwhalife.com

www.abllife.co.kr www.samsunglife.com www.heungkuklife.co.kr www.kyobo.co.kr www.fubonhyundai.com www.shinhanlife.co.kr www.idblife.com www.myangel.co.kr www.metlife.co.kr www.chubblife.co.kr www.dgbfnlife.com www.kdblife.co.kr Life.miraeasset.com www.kbli.co.kr www.lina.co.kr www.aia.co.kr www.hanalife.co.kr www.cardif.co.kr www.ibki.co.kr www.nhlife.co.kr www.lifeplanet.co.kr

Non-Life Insurance

Companies

Meritz Fire & Marine Insurance Co., Ltd. Hanwha Non-Life Insurance Co., Ltd Lotte Insurance Co., Ltd MG Non-Life Insurance Co., Ltd. Heungkuk Fire & Marine Insurance Co., Ltd. Samsung Fire & Marine Insurance Co., Ltd. Hyundai Marine & Fire Insurance Co., Ltd. KB Insurance Co., Ltd. DB Insurance Co., Ltd. Seoul Guarantee Insurance Company AXA General Insurance Co., Ltd. Mitshui Sumitomo Insurance Co., Ltd. Korea Branch American Insurance Group, Inc. Ace American Fire and Marine Insurance Company Korea, A Chubb group Company Hana Insurance Co., Ltd. Shinhan EZ General Insurance, Ltd. NongHyup Property & Casualty Insurance Co., Ltd. Allianz Global Corporate & Specialty SE Korea Branch Carrot General Insurance Co., Ltd. Kakaopay Insurance Corp.

Webpages

www.meritzfire.com www.hwgeneralins.com www.lotteins.co.kr www.mggeneralins.com www.heungkukfire.co.kr www.samsungfire.com www.hi.co.kr www.kbinsure.co.kr www.idbins.com www.sgic.co.kr www.axa.co.kr www.ms-ins.co.kr www.aig.co.kr www.chubb.com/kr

www.hanainsure.co.kr www.shinhanEZ.co.kr www.nhfire.co.kr www.agcs.allianz.com/global-offices/south-korea www.carrotins.com www.kakaoinsure.com

