

# Management's Discussion & Analysis

Korean Re delivered strong underwriting results for 2017 despite a series of large loss events including hurricanes.

Premium Income Growth

**7.8%**

## Business Highlights

The domestic insurance market continued to slow down in 2017 amid improving but still weak macroeconomic conditions. The volume of new business fell as the market reached the maturity stage. Increasing household debt also discouraged consumers from buying insurance. Despite this setback in top-line growth, insurers reported a significant improvement in bottom-line growth as their loss ratios declined in the wake of premium rate increases for motor insurance and medical expense insurance. Meanwhile, insurers in Korea have been working to increase their capital as their RBC ratios keep falling. The upcoming implementation of IFRS17 and a new RBC regime called K-ICS would increasingly put pressure on the capitalization of insurance companies.

Korean Re delivered strong underwriting results for 2017 despite a series of large loss events including hurricanes. Our underwriting profit excluding foreign exchange effects surged by 54 percent to KRW 79.4 billion, the second highest ever, on the back of strict underwriting discipline and portfolio readjustment. On the other hand, we posted weaker investment results as we booked impairment losses from our investment in KDB Life's private equity fund that was made back in 2009. As a result, net income for the year decreased by KRW 27 billion to KRW 133 billion, although it remained at a relatively stable level.

We reported a 7.8 percent increase to KRW 7,208.1 billion for 2017 compared to the prior year's 4.7 percent growth. Our net written premiums increased by 6.9 percent to KRW 5,021.8 billion. In terms of total assets, 2017 was a record year for us as we saw our total assets surpass the KRW 10 trillion mark. The value of our total assets grew by KRW 484.2 billion year over year to KRW 10,065.3 billion as of late December 2017. Our invested assets amounted to KRW 5,623.5 billion, up KRW 319 billion year over year.

For 2018, we set a goal of achieving a 4.6 percent growth in gross written premiums and a net income of KRW 200 billion. We expect our top-line growth to be supported by price increases in the U.S. and Europe and the growing business volume from our overseas branches. Net income results are also expected to be boosted by our efforts to build a more profitable book of overseas business and an improvement in investment returns such as interest gains amid rising interest rates.

## Analysis of Operating Results

Korean Re achieved a strong top-line growth for 2017, with gross written premiums increasing by 7.8 percent to KRW 7,208.1 billion. Our domestic business continued to perform robustly with a 6.5 percent growth, and premiums from our overseas business soared by 12.7 percent - a stronger growth than the previous year's 6.9 percent.

Premiums from domestic personal lines jumped by 9.5 percent year over year due to the effect of a rise in primary long-term insurance rates and increased writings of profitable life business. Domestic commercial lines of business grew by 2 percent, and the main drivers of the growth were the expansion of the mobile phone insurance market and new business covering satellite

Overseas Premium  
Income Growth

12.7%

and offshore wind power risks. Still we had to struggle with a stagnant commercial insurance market and a reduction in reinsurance cession from government-sponsored insurance plans, including crop insurance.

Our overseas business also showed an improvement in growth to 12.7 percent in 2017 from 6.9 percent in 2016, as we increased our international facultative business and focused on profitable business in the developed markets. The growth of our global business was shown in most lines of business except for casualty and marine business, which had underperformed in 2016.

In terms of net written premiums, we reported a solid growth of 6.9 percent in step with the increase in gross written premiums. The overall retention rate dropped slightly from 70.3 percent to 69.7 percent as we increased our retrocession for some of our motor and marine businesses, which recorded high loss ratios.

**Premium Volume**

(Units: KRW billion, USD million)

	FY2017 (KRW)	FY2017 (USD)	FY2016 (KRW)	FY2016 (USD)	YoY Change
Gross Written Premiums	7,208.1	6,360.8	6,684.5	5,690.7	7.8%
Net Written Premiums	5,021.8	4,431.5	4,697.8	3,999.4	6.9%
Earned Premiums	5,003.5	4,415.4	4,676.8	3,981.5	7.0%
Ceded Premiums	2,186.3	1,929.3	1,986.7	1,691.3	10.0%

**Breakdown of Gross Written Premiums**

(Units: KRW billion, USD million)

	FY2017 (KRW)	FY2017 (USD)	FY2016 (KRW)	FY2016 (USD)	YoY Change
Property	1,093.6	965.1	1,066.5	907.9	2.5%
Engineering	619.3	546.5	590.8	503.0	4.8%
Marine	573.6	506.2	533.2	453.9	7.6%
Casualty	1,057.8	933.5	998.8	850.3	5.9%
Long-term	1,861.0	1,642.3	1,652.4	1,406.7	12.6%
Motor	682.7	602.5	638.9	543.9	6.9%
Life	1,204.6	1,063.0	1,091.0	928.8	10.4%
Singapore Branch	92.0	81.2	89.7	76.4	2.6%
Korean Re Underwriting Ltd. (KRUL)	23.4	20.7	23.3	19.8	0.4%
Total	7,208.1	6,360.8	6,684.5	5,690.8	7.8%

\* YoY Change is based on figures in KRW.

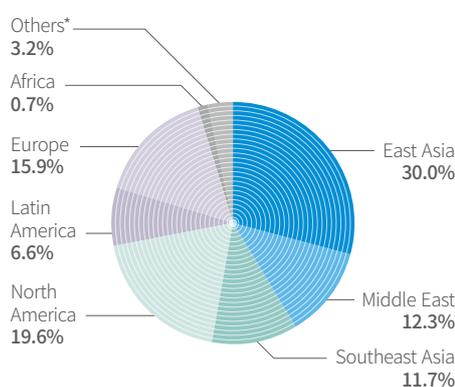
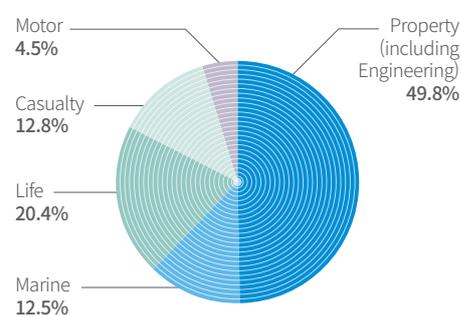
\*\* Engineering includes nuclear, agriculture and other specialty lines.

\*\*\* Individual figures may not add up to the total shown due to rounding.

**Gross Written Premiums: Domestic vs Overseas**

(Units: KRW billion, USD million)

	FY2017 (KRW)	FY2017 (USD)	FY2016 (KRW)	FY2016 (USD)	YoY Change
Domestic	5,544.5	4,892.8	5,208.3	4,434.0	6.5%
Overseas	1,663.6	1,468.1	1,476.2	1,256.7	12.7%

**Overseas Business Portfolio by Region****Overseas Business Portfolio by Line of Business**

\* Retrocession &amp; multi-territory accounts

Our strategy to build a geographically balanced overseas business portfolio continued to pay off in 2017. East Asia accounted for 30 percent of our overseas business portfolio, down from 31.5 percent in 2016. The portions of Latin America and Europe increased by 3.3 percentage points and 1.1 percentage points respectively to 6.6 percent and 15.9 percent. By country, the U.S. and China are our two major markets. The U.S. took up the largest share of 19.2 percent, followed by China at 19.1 percent.

**Combined Ratio**

Combined Ratio  
**98.4%**

Our combined ratio improved to 98.4 percent in 2017 from 98.8 percent in 2016. Domestic commercial lines posted a particularly robust combined ratio of 90.9 percent compared to the previous year's 93.1 percent, while the ratio for personal lines business was down marginally to 99.6 percent. The combined ratio for overseas business fell slightly to 100.3 percent in spite of unusually large natural catastrophes such as Hurricanes Harvey, Irma and Maria (HIM). Our retained losses were relatively limited thanks to solid protection from retrocession programs. Our strategy to reduce participation in underperforming treaties also helped improve the combined ratio. Excluding the U.S. hurricanes, our overseas business recorded a combined ratio of 96.5 percent in 2017.

In the overseas market, Korean Re increased its business in profitable markets and reduced participation in poorly performing treaties such as U.S. liability and Chinese property in order to improve overall profitability.

### Underwriting Results

(Units: KRW billion, USD million)

	FY2017 (KRW)	FY2017 (USD)	FY2016 (KRW)	FY2016 (USD)	YoY Change
Incurred Losses	3,999.0	3,528.9	3,819.1	3,251.3	4.7%
Net Operating Expenses	925.8	817.0	821.9	699.7	12.6%
Earned Premiums	5,003.5	4,415.4	4,676.8	3,981.5	7.0%
Combined Ratio	98.4%		98.8%		- 0.4%p

### Solvency Margin Ratio

	FY 2017	FY 2016	YoY Change
Solvency Margin Ratio	221.1%	222.2%	- 1.1%p

We reported a solvency margin ratio of 221.1 percent in 2017, although it was down 1.1 percentage points from a year earlier. This drop in the ratio, also known as the RBC ratio, was attributable to a growth in risk exposures and a reduction in mark-to-market gains on available for sale securities following interest rate hikes.

### Net Income

We managed to deliver robust business results for 2017 with a net income of KRW 133 billion, although it was down from the previous year. Net underwriting income sharply increased to KRW 170.1 billion, while net investment income fell to KRW 25.4 billion. When excluding foreign exchange effects, our net underwriting income was KRW 79.4 billion, the second-highest in our history, whereas net investment income amounted to KRW 132.9 billion, according to the Separate Financial Statements.

A strong Korean won had a negative impact on the company's bottom-line for 2017. Large natural catastrophe events eroded our after-tax net income by KRW 48.6 billion. We sustained KRW 47.6 billion in losses from HIM and KRW 16.5 billion in losses from Typhoon Hato in Hong Kong.

On the investment operation side, we posted weaker investment results in 2017 as we booked impairment losses from our investment in KDB Life's private equity fund that was made back in 2009. When excluding gains and losses from foreign exchange hedging for insurance liabilities, our net investment income amounted to KRW 132.9 billion, with an investment return of 2.5 percent. As we are working to build a more diversified investment portfolio, we expect our investment yield to improve next year, helped particularly by interest gains amid rising interest rates.

## Korean Re's Share Price

The domestic stock market surged amid price hikes of large-cap stocks and strong net buying position of foreign investors. The market capitalization of the Korea Composite Stock Price Index (KOSPI) hit a record high of KRW 1,664 trillion. KOSPI went through the roof to a record close of 2,467.49p on the last day of trading in 2017, up 21.8 percent from a year before.

The closing price of the first trading day of the year marked a yearly low of 2,026.16p, and the stock market continued to fly high on the back of solid fundamentals of local businesses including cyclical stocks, which are sensitive to economic ups and downs. In particular, pharmaceuticals, electric and electronic companies and securities brokerage firms showed a substantial improvement in their business results. The North Korea risk emerged in August and September, sending the stock market fall instantly but only to a limited extent. The market soon rallied and set a yearly high of 2,557.97p at the close of trading on November 3. Afterwards, the market weakened slightly on the Bank of Korea's decision to raise its benchmark interest rate in late November.

Korean Re's stock relatively underperformed in 2017 with the year-end closing price down 3.5 percent to KRW 11,000. It recorded a yearly high of KRW 13,500 on August 2. This weak stock performance was attributable to two factors: declines in some of our business indicators such as net income and ROE; and strong long positions by investors toward large-cap stocks.

Most stock market analysts present an optimistic prospect for our stock performance going forward in spite of weakening valuation in the past year. They agree that Korean Re's stock is substantially undervalued and has the potential for a notable turnaround. As of year-end, the price-to-book ratio remained at 0.58. In 2018, we expect our stock to gain some strength, with improving underwriting and investment results backed by renewal price hikes and increasing interest rates. Another factor behind the positive outlook is the launch of the KRX 300 Index where Korean Re was incorporated. This may help increase investment flows into mid and lower cap stocks, helping to boost our stock valuation going forward.



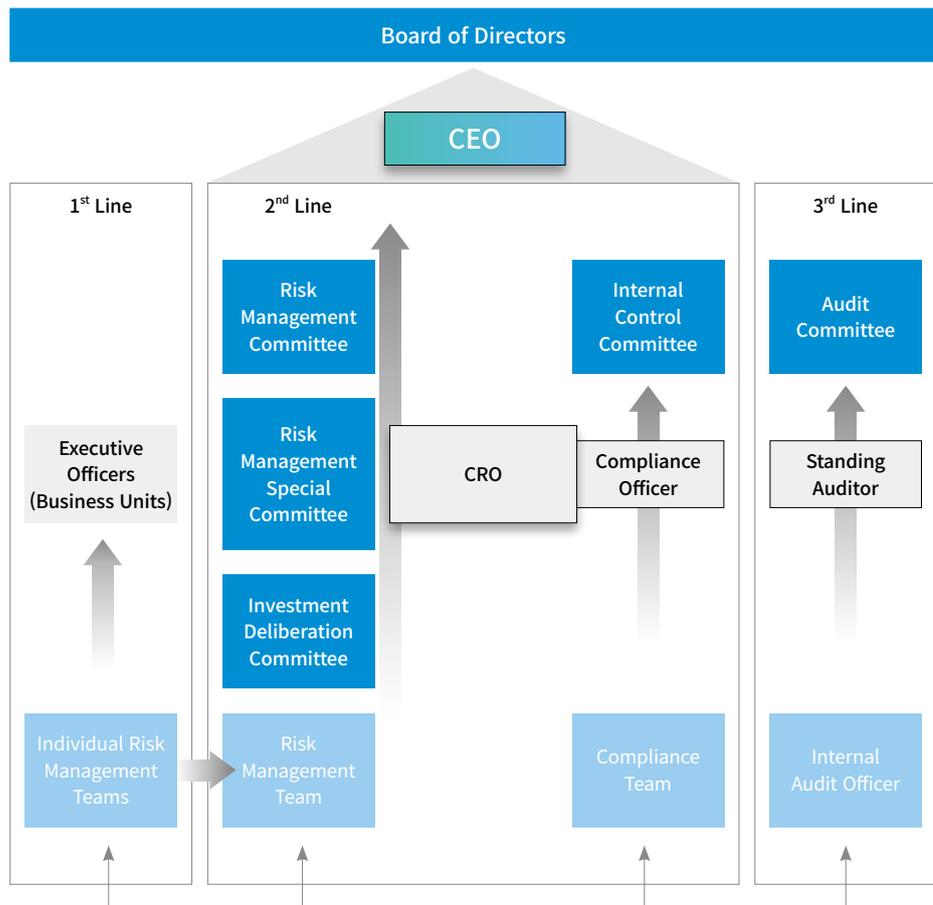
## Risk Management Report

### Objectives

Korean Re implements enterprise risk management to achieve a set of risk management objectives. The objectives are as follows:

- Establishing risk management infrastructure to achieve 'Vision 2050'  
: Achieving long-term sustainable growth and high profitability
- Continuously enhancing shareholder value
- Maintaining a high credibility with stakeholders, credit rating agencies and supervisory agencies; and
- Diversifying insurance and investment portfolios and enhancing risk management with regard to overseas business growth

### Three Lines of Defense



## Risk Governance

Korean Re has built a comprehensive framework for risk governance based on central oversight and controls of risks with clear accountability. This structure supports risk-based decision-making and oversight across all operations of our business. Risk governance defines the roles and responsibilities of the Board of Directors, committees, management structures, and related teams. It also involves the implementation of three lines of defense as part of the structure.

A ‘Three Lines of Defense model’ that we implement demonstrates our risk governance, specifying the roles of business and oversight organizations in managing our risk profile. The first line of defense includes front-line managers and staff who are responsible for day-to-day risk management and decision-making (global office managers and staff are also the first line of defense). They have primary responsibility for maintaining an effective control environment and ensuring that all activities are within our risk appetite. The second line of defense deals with setting risk policies and overseeing our risk management status. It involves the Risk Management Team, Chief Risk Officer, risk management committees, and compliance functions such as the Compliance Team, Compliance Officer and Internal Control Committee. The third line of defense provides independent assurance through an internal audit and validates the effectiveness of the first and second lines of defense in fulfilling their responsibilities and managing our risk profile.

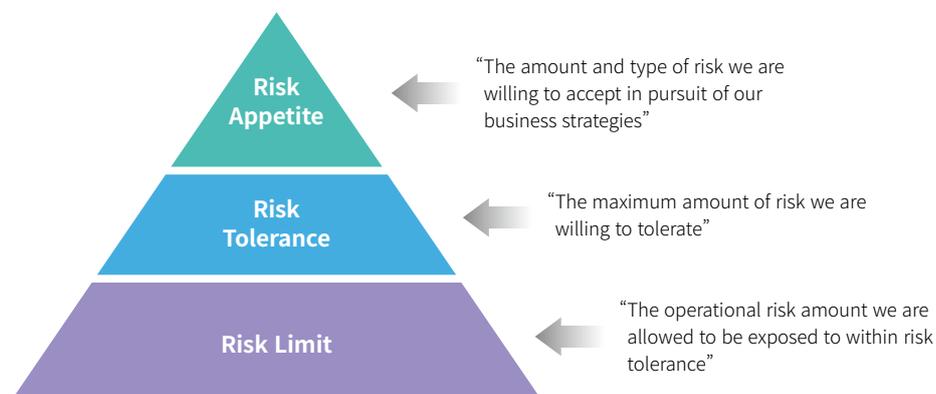
63

## Strategic Risk Management

Korean Re’s business strategy is aligned with the risk management strategy and risk appetite. The Risk Appetite Framework provides the main direction to steer the company, and all risks are managed under the clear risk appetite framework. Based on the capital plan and financial targets linked to our risk appetite, we establish business plans and operate the business with stability by monitoring and evaluating business performance according to risk indicators.

---

### Risk Appetite Framework



Korean Re's risk appetite framework is an enterprise-wide risk management guideline made up of three important components: risk appetite, risk tolerance, and risk limit.

Risk appetite defines the amount of risk we should accept in consideration of its vision and business objectives. The risk appetite statement is as follows:

- Focus on the business in which we have comparable advantage and achieve an ROE of more than 9 percent
- Retain risks at a medium-low level considering capital level
- Maintain the solvency ratio within an optimal range (200 - 250 percent)
- Improve capital efficiency by optimizing insurance and investment portfolios; and
- Maintain credit ratings of 'A' or above

Risk appetite plays a significant role in maintaining our risk profile within the boundaries defined by different objectives such as profitability, solvency, growth, and liquidity. Risk appetite provides a solid foundation for decision-making: strategic asset allocation, capital planning, portfolio management and more.

Risk tolerance represents a quantitative level of risk acceptance within the risk appetite and provides macro guidelines for capital adequacy, liquidity, and concentration. The risk tolerance statement is as follows:

- Maintain the solvency ratio within a stable range (above 170 percent)
- Continuously improve Risk Adjusted Return on Capital (RAROC)
- Annual Nat. Cat. loss  $\leq$  15 percent of available capital
- Ability to fulfill continuous responsibilities (liquidity)
  - Keeping the liquidity ratio over 100 percent under a stressed scenario

Risk limit describes the risk capacity constraints determined by capital and liquidity resources to ensure compliance with our risk appetite and risk tolerance.

### Capital Planning

Korean Re's capital is managed through a framework which provides a robust foundation for capital management. To ensure Korean Re's sound capital management, we align our risk management strategy with our long term business strategy. Strategic objectives are examined from the perspective of risk management strategy to be certain if they are in accordance with our risk appetite, and the results are reflected to the business plans.

Korean Re's capital management framework is comprised of three main modules including 'capital planning,' 'business planning,' and 'risk planning'. Each module is structured to ensure compliance with Korean Re's risk appetite and tolerance.

## Optimized Portfolio

Korean Re establishes annual plans for the insurance business by analyzing risk and profitability of each line of business. Each underwriting team analyzes the attractiveness of their business through various market analysis and forecasts growth and profitability of each line of business. Based on this, the Strategic Planning Team draws up plans for optimal insurance portfolios and then finalizes annual plans that can achieve capital efficiency under risk appetite and maximize profitability after going through a comprehensive analysis of profitability and risk.

## Key Risks

We manage five key risks – insurance risk, credit risk, market risk, liquidity risk and operational risk – that are likely to have a significant impact on our financial results or operational viability. In doing so, we implement a series of procedures including risk identification, measurement, control, analysis and reporting.

With regard to insurance, market and credit risks, we measure them on a regular basis using our internal model that takes the Value-at-Risk approach through stochastic simulation.

Key Risks		
<b>Insurance Risk</b>	<b>Financial Risk</b>	<b>Liquidity Risk</b>
<ul style="list-style-type: none"> <li>• Premium Risk</li> <li>• Reserve Risk</li> <li>• Nat. Cat. Risk</li> </ul>	<b>Market Risk</b> <ul style="list-style-type: none"> <li>• Interest Rate Risk</li> <li>• Equity Risk</li> <li>• Exchange Rate Risk</li> </ul> <b>Credit Risk</b>	
<b>Other Key Risks</b>		
<b>Strategic Risk</b>	<b>Reputational Risk</b>	<b>Emerging Risk</b>

## Insurance Risk

Korean Re defines insurance risk as the risk of unexpected financial losses arising from the inadequacy of premiums or reserves for natural catastrophe or non-catastrophe events, or from the unpredictability of biometric risks such as the mortality rate.

We manage insurance risks in a consistent manner across the company by assessing and monitoring them in accordance with clearly defined underwriting guidelines. Furthermore, we utilize a natural catastrophe modelling program and an accumulation management system to effectively control catastrophe risk at the enterprise level.

### Market Risk

Korean Re defines market risk as the risk of losses arising from fluctuations of the value of assets and liabilities due to changes in relevant factors such as interest rates, stock prices and foreign exchange rates. We manage this risk in our day-to-day operations and, in particular, hedge against foreign exchange risk using derivatives in order to keep our exposure at a reasonable level.

Meanwhile, we closely monitor global economic and financial market conditions and outlook that can affect our investment performance in order to analyze their potential impact and come up with effective countermeasures.

### Credit Risk

Our credit risk system focuses on any losses arising from the failure of the counterparty to a reinsurance contract to meet its contractual obligations or from deterioration in the credit quality of invested assets.

We conduct an analysis of potential losses before making any high-risk business decisions, for example, on whether to write new business or invest in derivatives. When necessary, such decisions are made through the review process of the Risk Management Special Committee and the Investment Deliberation Committee. Identifying any abnormal signs related to the retained risks is also an essential element of our preemptive risk management system.

### Liquidity Risk

We plan and manage our liquidity positions in order to deal with future claims payments and expenses as they arise. To this end, we set liquidity limits based on our future cash flow and monitor them regularly.

### Operational Risk

Korean Re defines operational risk as the risk of potential losses arising from inadequate or failed internal processes, personnel or systems, or from external events. We have identified a set of operational risks that cover various business units and activities including new product development, pricing, underwriting, claims management, client risk, fraud, accounting, and strategy.

We manage these risks through effective policies and procedures including a clear segregation of duties, timely internal control and reporting systems. Through the internal control system, operational risks are managed systemically based on the Code of Conduct, regulations and ethics.

Furthermore, we control key risks through the Top Risk Assessment. The Top Risk Assessment is a framework to identify, assess, manage, mitigate and monitor material risks. The company defines the risks that are likely to have a significant impact on the financial results or operational viability.