

C-ROSS Phase II and its Impact on the Insurance Industry

Xiaoxuan(Sherwin) Li, FCAA, FCAS, FIA

1. The Overall of C-ROSS Phase II

2. The Main Changes of C-ROSS Phase II

3. Conclusions

1.1 The Goals of C-ROSS Phase II

- In September 2017, CIRC issued the "Construction Plan for C-ROSS Phase II, and stated the main goals and tasks of C-ROSS Phase II.

Focus on highlighting the requirements for keeping the bottom line of risks in the environment of preventing financial risks

Further improve the scientificity, effectiveness, pertinence and adaptability of the solvency supervision of the insurance industry

Revise and improve the controversial content in Phase I

- Three Quantitative Impact Studies(QIS) have been carried out in the insurance industry so far.



- **The first QIS : from January to February 2020**



- **The second QIS : from July to August 2020**



- **The third QIS : from July to August 2021**

- There are some trends in C-ROSS Phase II.



Capital requirements for risks(insurance, market, credit etc.) will be tightened

Growth of capital requirement for large insurers may be higher than smaller insurers (adjustment of layered risk factors, excessive growth factor)

The trend of unified supervisory standards for banking industry and insurance industry appears (e.g. change of credit guarantee insurance)

1. The Overall of C-ROSS Phase II

2. The Main Changes of C-ROSS Phase II

3. Conclusions

C-ROSS is based on a 3-pillar regulatory framework.

Quantitative Capital Requirement

Capitalized Risks

- Insurance Risk
- Credit Risk
- Market Risk

Supervisory Tools

- Quantitative capital requirement
- Actual capital assessment
- Capital stratification
- Stress test
- Regulatory measurement

Regulatory Discipline

- Comprehensive Solvency Ratio
- Core Solvency Ratio

Qualitative Supervisory Requirement

Uncapitalized Risks

- Operation Risk
- Strategy Risk
- Reputation Risk
- Liquidity Risk

Supervisory Tools

- Integrated Risk Rating (IRR)
- Solvency Aligned Risk Management Requirements and Assessment (SARMRA)
- Liquidity Risks
- Analysis and Examination (A&E)

Regulatory Discipline

- IRR Ratings
- Control Risk Scores

Market Discipline Mechanism

Unregulated Risks

Supervisory Tools

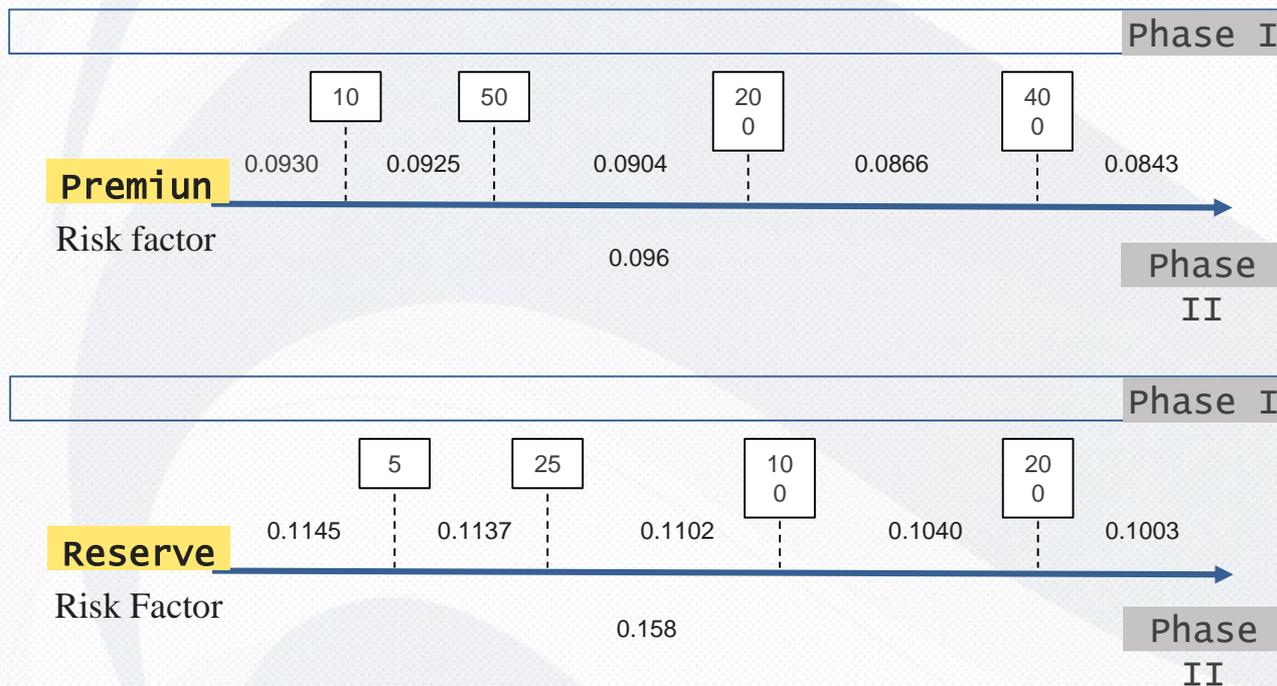
- Company Information Disclosure
- Regulator Information Disclosure
- Credit Rating

Market Discipline

-
-

2.1 Cancellation of Layered Risk Factors

Take motor insurance for an example.



When the growth rate of motor business of a P&C insurer is faster than the industry, an excessive growth factor will be applied.

$$MC = EX \times RF, \quad RF = RF_0 \times (1 + K), \quad K = K_1 + K_2 + \dots$$

Excessive Growth Factor

For an insurer with motor GWP < RMB 2b:

$$K_4 = 0$$

For an insurer with market share > 20%:

$$K_4 = \begin{cases} 0.00 & (-\infty, 0\%] \\ 0.15 & (0\%, 2\%] \\ 0.25 & (2\%, +\infty) \end{cases}$$

For others:

$$K_4 = \begin{cases} 0.00 & (-\infty, 10\%] \\ 0.15 & (10\%, 20\%] \\ 0.25 & (20\%, +\infty) \end{cases}$$

Regulatory consistency between banking industry and insurance industry and avoidance of regulatory arbitrage:

Current C-ROSS

$$\begin{array}{|c|} \hline \text{MC} \\ \hline \text{Minimum} \\ \text{capital} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{EX} \\ \hline \text{exposure} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{RF} \\ \hline \text{Risk factor} \\ \hline \end{array}$$

- Minimum capital measuring distinguishes premium risk between reserve risk.
- Premium risk exposure is net retained premium during the past 12 months; Reserve risk exposure is the amount of net loss reserves.
- $RF = \text{Basic risk factor } (RF_0) \times \text{Characteristic factor } (1 + k)$

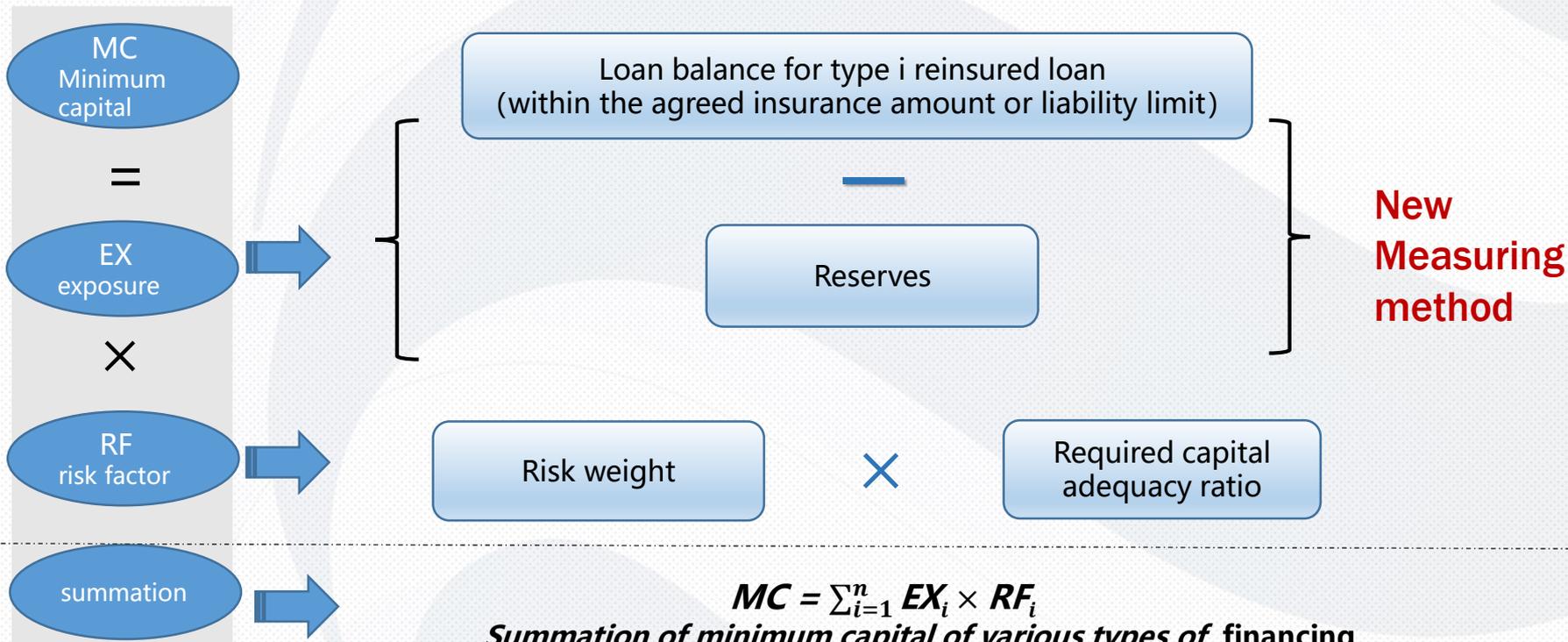
Commercial bank capital management regulation

- $\text{Capital Adequacy Ratio} = \frac{\text{General Capital} - \text{Corresponding Capital Deductions}}{\text{Risk-weighted Assets}}$
- Risk-weighted assets of credit risk = (Book value of the assets - Impairment reserve) × Risk weight

$$\begin{array}{|c|} \hline \text{MC} \\ \hline \text{of Credit Risk} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Book value of the} \\ \text{assets} \\ \hline - \\ \hline \text{Impairment} \\ \text{reserve} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Risk weight} \\ \hline \times \\ \hline \text{Required} \\ \text{capital} \\ \text{adequacy ratio} \\ \hline \end{array}$$

2.3 Financing Credit Guarantee Insurance (continued)

Future Framework: minimum capital measurement for financing credit guarantee insurance



$$MC = \sum_{i=1}^n EX_i \times RF_i$$

Summation of minimum capital of various types of financing credit guarantee insurance directly

Main changes in the risk framework of agricultural insurance:

Cancellation of catastrophe risk module

- Catastrophe risk would be incorporated into premium risk due to the obscure boundary between catastrophe and non-catastrophe risks for agricultural risk.

Introduction of the characteristic factor for policy-based agricultural insurance business

- Start-up of policy-based agricultural insurance business.
- The greater weight of policy-based business, the greater the capital discount factor.

Major changes in catastrophe risk framework:

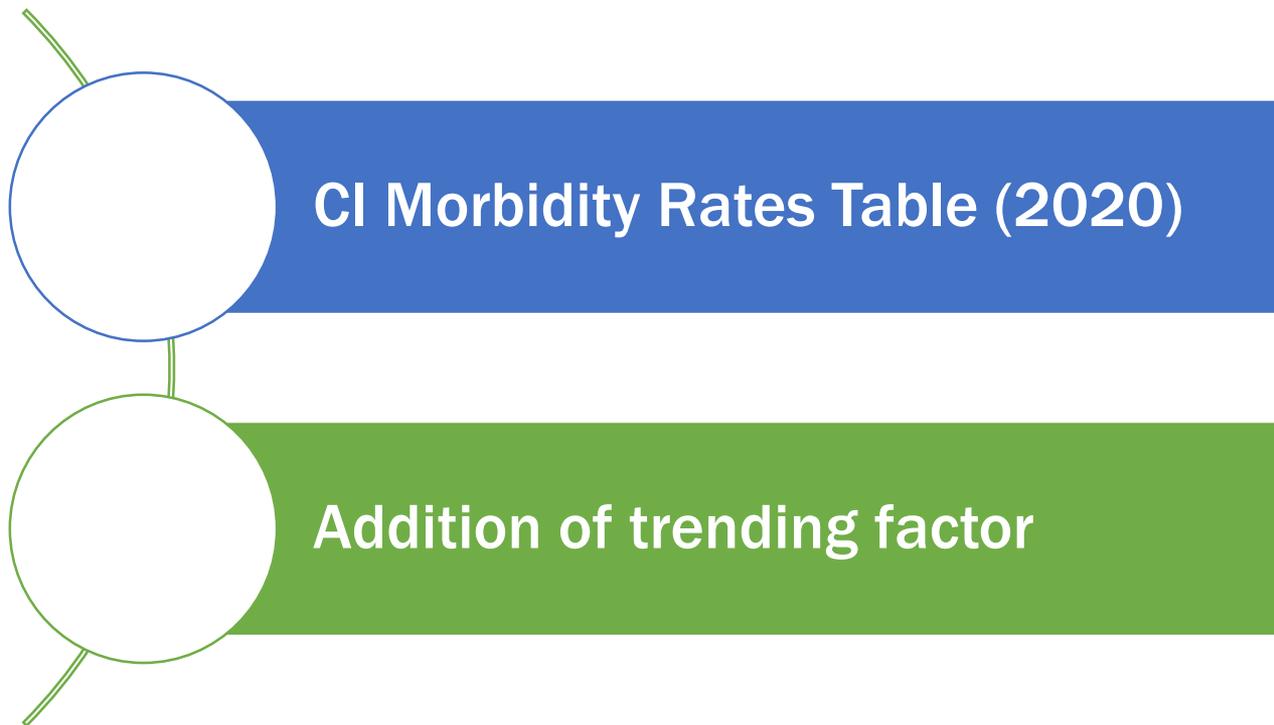
Refinement of the catastrophe risk of overseas business

- Territory partitions includes Asia Pacific, North America, Europe, and the rest.
- The catastrophe risk exposure of overseas business is measured on the basis of premiums.

Improvement and optimization of catastrophe risk for domestic business

- Cancellation of agricultural catastrophe risk module.
- Increasingly reasonable handling of catastrophe excess of loss reinsurance.

Major changes in morbidity rates:



Major changes in market risk:

Increase of risk factors

Interest rate risk factor is applied to all bonds

Addition of Asset Concentration Risk Factor

The risk factors for foreign reinsurers decrease

1. The Overall of C-ROSS Phase II

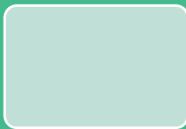
2. The Main Changes of C-ROSS Phase II

3. Conclusions

- Confronting the changes in C-ROSS Phase II, it is recommended that insurers should make some preparations for it.



Prepare for the increase of capital requirement



Better utilize capital tools including reinsurance



Sketch business structure adjustment in advance

THANKS

谢 谢



中再产险
CHINA RE P&C

September 2019