C-ROSS and insurer operations in China and abroad

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Introduction

The People’s Republic of China (PRC or China), one of the four origins of human civilization, represents roughly 20% of the global population and has the world’s third largest area comprising 22 provinces, five autonomous regions, four municipalities and two special administrative regions (ie Hong Kong and Macau). In recent decades, largely since the adoption of Deng Xiaoping’s Open Door Policy in 1978, China has relentlessly reshaped its socialist economy with market-oriented reforms. The private sector is liberalized, albeit not completely, and the competition in the sector is based primarily on price, product and service differentiation. For many of those firms with a strong human and economic capital position, their markets are no longer domestic. Citizens, in the coastal and inner provinces alike, become beneficiaries of economic affluence and private property ownership rights. At the same time, senior management are asked to exercise due diligence more stringently in managing their firms for their clients and all other stakeholders. Government is a de facto stakeholder of all private firms, especially where their operations have broad public policy implications.

Making insurance widely available at affordable rates from sound insurance companies is undoubtedly a public policy issue in China. Despite the relative short history of private insurance and the challenge of transitioning into a market economy, the Chinese government, state-owned insurance enterprises and private sector insurers have worked together, successfully, to create an emerging insurance market. In 1986, the government abolished the monopoly of the People’s Insurance Company of China (PICC), which was restructured in 1996 and again in 2003. At the same time named the People’s Bank of China as the insurance regulatory authority and licensed five national companies (eg Ping An, China Pacific, New China Life, Tai Kang Life and Hua Tai Assurance) and four regional insurers.

In 1995, the National People’s Congress promulgated the Insurance Law of the PRC, which was amended twice including a major overhaul in 2009 and is being revised at the time of writing. In 1999, the China Insurance Regulatory Commission (CIRC) was established as the insurance regulatory and supervisory authority. In late 2001, China became a World Trade Organization (WTO) member with a promise to gradually remove compulsory cession to China Re. The Chinese government also assisted two dozen or so top-ranked universities in establishing insurance and/or actuarial science programs in the early 1990s. Today, almost 100 universities in China educate students interested in the insurance profession.

The State Council, the chief administrative authority of China, issued the Several Opinions on the Reform and Development of the Insurance Industry in 2006. It points out that the then “small-and-immature industry” needed to speed up its development to protect more effectively citizens and businesses from natural calamities, economic uncertainty, as well as population aging and other demographic risks. It also stresses the importance of innovation, efficiency in asset management and governance in insurance services. The State Council unprecedentedly issued its second opinions about the insurance industry in 2014 in support of the China Risk Oriented Solvency System (C-ROSS).

The CIRC has introduced several other measures and provisions throughout the 2000s and this decade concerning, for example:

- foreign-invested insurance companies (2002);
- establishment of reinsurance companies (2002);
- administration of reinsurance business (2005 and 2010);
- administration of insurance companies (2005 and 2009);
- nonlife business reserves (2005);
- insurer solvency (2003 and 2008);
- utilization of insurance funds (2010);
- business scope of insurance companies (2013);
- compulsory motor vehicle liability insurance (2006 and 2012); and
- mergers and acquisitions of insurance companies (2014).
In particular, the 2013 regulations on the business scope prescribe that a newly licensed nonlife insurance company may write one or more of the five classes in the “basic” category - automobile insurance, property and engineering, marine hull, cargo & transit, and short-term accident & health - with a minimum capital of RMB 200 million per class. Underwriting in the “extended” category requires not only a minimum of three years of insurance operations but also demonstration of greater capital capacity and risk management records. In fact, it is probably correct to state that every angle of the insurance business in China is subject to certain regulations, measures, notices or other layers of documents.

The scope of the first-generation solvency regime in China, which was more or less institutional in nature, was presented in the insurer solvency provisions in 2003. The provisions, revised in 2008, lacked comprehensiveness as a scientific, analytical tool, as well as flexibility in adjusting to major economic events. CIRC began its work on a new solvency regime and began to announce its plan for the second generation. In the first statement related to this initiative published in June 2012, CIRC presented the following plan:

- Implementation of a scientific, international experience-based tool that protects the interests of insurance policyholders and that helps the insurance industry further its development while practicing risk-oriented solvency management;
- Announcement of the new solvency regime in line with internationals standards within three to five years;
- A new, risk-oriented regime comprised of three pillars;
- A regulatory regime “being of Chinese and adapted to the Chinese insurance market environment” while integrated with international insurance regulatory standards; and,
- Development of tools based on a comprehensive review of existing quantitative and qualitative standards in insurance and other financial services in leading economies.

CIRC noted that it would conduct special studies for a two to three year period, starting from 2012, that included examination of the content of the three pillars, establishment of “working (meaningful)” minimum capital standards by class and line of insurance business, and an analysis of counter-cyclical regulatory issues.

In May 2013, CIRC – under the auspices of the State Council and after extensive consultation with industry and academic leaders – announced its plan to adopt a second-generation solvency framework and issued a discussion paper titled, the Overall Framework of the Second-Generation Solvency Supervision System of China (known today as the China Risk Oriented Solvency System or C-ROSS). This new risk-based, three-pillar solvency system shares similarities with, for example, the EU’s Solvency II and the US Solvency Modernization Initiative. All three examine both quantitative and qualitative aspects of insurer operations with an equal-weighted emphasis of self-regulation. CIRC has published draft C-ROSS guidelines or working documents twice and is known to have conducted pilot, solvency stress tests with a sample of 15 companies prior to the release of the third draft in September 2014. It plans finalization of C-ROSS technical provisions by December 2014, a transitional period for year 2015 and full implementation from 2016.

The State Council reiterated its support for the insurance industry and released the Opinions of the State Council on Accelerating the Development of the Insurance Industry in August 2014. The State Council recognized that the insurance industry in China has grown since the release of the prior opinions in 2006 but that it is “not adequately meeting the needs of the economy and society” and needs to be further developed to become a modern industry. The council notes that the industry should be [more] market-oriented and guided by policy, that reform and innovation should continue and that continuing attention must be made to “regulatory perfection [competence] and risk prevention,” thus needing modernization in insurance regulation.

2 See http://www.naic.org/index_smi.htm
Further, the State Council encourages “taking-in” and “going-out” policies, indicating the need for further liberalization of the Chinese insurance market and Chinese insurers’ expansion of business scope to overseas markets through “various channels and means.” The government supports establishment of regional and special insurance companies as well as insurer IPOs in domestic and overseas capital markets. The government’s commitment to further the development of commercial insurance and reinsurance is clear. The council targets year 2020 for the accomplishment of these and other goals listed in the 2014 guidelines. C-ROSS is certainly an essential tool for modernization of the insurance market and the CIRC cannot afford lagging behind in helping the government meet the targets. C-ROSS thus needs to be implemented at its earliest possibility.

The C-ROSS structure
C-ROSS has three pillars in the middle layer. The pillars have Company’s Own Solvency Management (COSM) for supervisory foundation and converge to CIRC’s One Supervision strategy. The One Supervision approach means that CIRC will remain the sole authority for regulation and supervision for insurance business in China. While this approach differs little from what China has maintained, CIRC plans to conduct its regulatory and supervisory activities more at the headquarters’ level in Beijing. This approach will likely limit the authorities of the regional offices, including its Shanghai office which they have exercised either explicitly or implicitly. The exception being those practices closely related to regional or cultural differences. The One Supervision approach means that China may maintain a single authority approach as compared to, say, a twin-peaks approach, thus leaving policymaking and prudential supervisory matters solely with CIRC.

The new solvency regime will furthermore reflect the common characteristics of fast-developing emerging markets, as compared to those of developed markets. As such, the quantitative and qualitative analyses of insurer operations in C-ROSS will reflect the speed of adaptability of insurance companies during the initial period of implementation. This philosophy signals a gradual rise in the minimum capital that insurers will need in the future as their risk management and efficiency in capital management improve. Finally, meeting the minimum capital under C-ROSS does not mean – and should not be viewed as such – that the insurer will be free from exercising its own enterprise risk management. Each company should have its Company’s Own Solvency Management (COSM) program in place, thus remaining responsible for, at a minimum, preventing insolvency. This internal risk management program should embed, among others, differences in risk and investment portfolio composition and size, scope of operations by line and by territory and risk appetite of the company.

The capital adequacy pillar
The centrepiece of C-ROSS is its three pillars. The capital adequacy pillar, comprised of five parts, covers quantitative regulatory requirements including: balance sheet evaluation, actual capital standards, minimum capital standards, capital adequacy standards and other regulatory measures.

For the “actual capital” calculation, C-ROSS defines admissible assets and non-admissible assets in the Actual Capital Rules. The list of admissible assets seems so simple that the quality of a number of assets – for example, stocks, corporate bonds, asset-backed securities and infrastructure investment – may matter little. A similar observation is made in the list of long-term equity investments and the list of receivables and prepayments. Conversely, there is a relatively short list of non-admissible assets. Examination of admissible and non-admissible liabilities indicates that there is a need to refine these lists because the lack of clarity in the definition can lead to noise in the asset or liability valuation, thus reducing the C-ROSS regulation effect. We should note that, as discussed later, C-ROSS offers a separate set of definitions of eligible assets and their valuation for market risk calculation.
With respect to "insurance risk capital," C-ROSS defines the minimum capital using an equation comprising insurance risk, market risk and credit risk. The equation controls correlations of these risks using the coefficients stipulated in the Minimum Capital Rules. At the time of writing, it is not clear as to what data and methodologies CIRC has used to propose the coefficients. Nevertheless, the coefficient table shows some, albeit not very strong, relationships between insurance and market risks (0.37), insurance and credit risks (0.20) and market risk and credit risks (0.25). As such, applicability of these coefficients to insurer’s own solvency risk modelling, as well as comparability of the minimum capitals between the C-ROSS approach and the insurer’s internal model, remains a concern.

The Minimum Insurance Risk Capital Rules cover premium risk, reserve risk and catastrophe risk. The minimum premium capital \[EX \times (RF0 + K)\], where EX denotes the exposure units, under the rules is specific with respect to the "risk factor (RF)" and the "characteristic coefficient (K comprising sub ks)." For example, the rules governing automobile insurance suggest that the greater the number of exposure units, the lower the combined ratio during the recent past six months or the variation of the combined ratios during two consecutive six-month periods (proxies for K). Or the larger the net non-proportional reinsurance premiums ceded during the past 12-month period, then the lower the minimum capital needed by the insurer becomes. The RFs for this line of business range from 9.30% (premiums up to RMB 1 billion) to 8.19% (exceeding RMB 40 billion). The k1 (the combined ratio during the recent six months) ranges from 0.05 discount for a combined ratio at or less than 95% to a surcharge of 0.1 for a ratio at 105% or greater.

A similar application is found for all other major nonlife lines of business with respect to minimum capital for premium and reserve risks. From comparing RFs in those lines, we construct the following RF spreads:

<table>
<thead>
<tr>
<th>Business line</th>
<th>Premium Risk</th>
<th>Reserve Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Spread</td>
</tr>
<tr>
<td>Automobile</td>
<td>9.3% – 8.19%</td>
<td>1.11</td>
</tr>
<tr>
<td>Property</td>
<td>40.2% – 29.1%</td>
<td>11.10</td>
</tr>
<tr>
<td>Special cargo</td>
<td>28.0% – 24.6%</td>
<td>3.40</td>
</tr>
<tr>
<td>Liability</td>
<td>14.5% – 9.0%</td>
<td>5.50</td>
</tr>
<tr>
<td>Acciden&amp;health</td>
<td>22.8% – 8.9%</td>
<td>13.90</td>
</tr>
<tr>
<td>Agriculture</td>
<td>33.8% – 18.9%</td>
<td>14.90</td>
</tr>
<tr>
<td>Credit guarantee</td>
<td>46.7% – 37.3%</td>
<td>9.40</td>
</tr>
</tbody>
</table>

Both premium and reserve risk capitals remain not only lowest for automobile insurance, but also smallest with respect to the surcharge spread. Premium risks are relatively high in property, agriculture and credit guarantee insurance, and reserves risks high in property, special cargo and credit guarantee insurance. We thus conclude, albeit crudely, those large insurers writing commercial liability risks or compulsory motor liability risks would be able to release some of their capitals under the C-ROSS regime. The charge for catastrophe, specifically typhoon risk is uniform in all lines of business.

The Regulatory Rules Governing Minimum Market Risk Capital cover interest rate risk, equity price risk, real estate price risk, overseas asset price risk and exchange rate risk. The formulae for calculation of these risks are similar to those of insurance risks. Differences exist, however. The RFs for “interest rate risk” are based on the duration of bonds, asset securitization products and other fixed-income products. The default RFs for “equity price risk” are assigned to the equities traded in Shanghai-Shenzhen, Small Medium Enterprise (SME) and Growth Enterprise Market
RFs tend to be lower for equities of listed companies as compared to non-listed companies. They are also lower for equities of public entities as compared to non-public ones. All these differences indicate, albeit crudely, that invested assets in listed, public companies whose shares are traded in the aforementioned stock markets are less risky than other types of invested assets. A reasonable assumption based on the above, but with a certain lack of transparency regarding weight assignments!

Regarding “real estate price risk,” C-ROSS favours real properties located in the municipalities directly under the central government, provincial capitals and municipalities with independent planning status to those in other regions in China which are in turn favoured over the properties in foreign countries. Regarding overseas asset price risk, C-ROSS requires lower minimum capital for overseas fixed-income or equity investment assets (with exceptions) in developed economies than such assets in emerging markets. Regarding foreign currency-denominated assets and liabilities, C-ROSS surcharges none to those in or pegged to the US dollar, a small amount for the Euro or UK pound and a relatively high amount for other currencies.

The Regulatory Rules Governing Minimum Credit Risk Capital cover the charges for counterparty risk in insurer operations. The credit rating standards are principally in accordance with the Guidelines of the People’s Bank of China on Credit Ratings of 2006. C-ROSS prescribes the RFs for “spread risk” based on the combining effect of duration and credit rating of each investment. Obviously, the shorter the period or the higher the rating, the smaller the minimum risk capital charge becomes. It would be premature, however, to predict the actual impact of this part of the C-ROSS regulation because typical portfolios of insurance companies in China are less diversified as compared to those of companies in developed economies. The rules prescribe that the capital charge for the “counterparty default risk” is favourable to term and negotiated deposits, to commercial banks that meet the capital adequacy ratio and to state-owned banks, followed by joint stock commercial banks and post savings banks.

Risk charges for financial bonds as well as tier I and 2 capital instruments issued by, for example, banks are based on a similar logic. The charge for counterparty risk (eg reinsurance) is based on the combining effect of credit rating and country of domicile, under which Chinese companies with higher solvency margins are given a favourable treatment. Among overseas reinsurers, those companies that meet the solvency adequacy ratio and offer a contract guarantee such as a letter of credit are asked to carry a lower capital than other overseas reinsurers. Finally, there are risk charge differentials based on the account age of reinsurance recoverables.

The Regulatory Rules Governing Solvency Stress Tests prescribe that regulated insurance companies conduct stress tests under “basic” and “stress” scenarios. The basic test is based on the assumption that the insurer continues its business as per its business planning. The stress tests comprise required scenario tests, scenario self-tests and reverse stress tests. CIRC governs the required test scenarios. For example, the assumptions for the macroeconomic risk scenario include an interest rate rise by 50bp; a reduction in equity asset value by 15%; a spread increase by 100bp; and a real estate price fall by 20%. The elements for the insurance risk scenario include premium growth by 30% (or 50% if the insurer has less than three years of operating experience) and a rise in the combined ratio by 6% (or 10% if less than three years of operating experience). An insurer may set a self-test scenario using a minimum of two major risk factors. When an insurer’s solvency adequacy ratio is between 100% and 150%, it must conduct a reverse stress test. A more stringent test requirement is imposed on the companies with a capital adequacy ratio below 100%.
The risk management pillar
The risk management pillar is primarily associated with qualitative regulatory solvency requirements including: company-wide risk management requirements, regulatory capital measurement and risk management supervision and inspection. C-ROSS notes the importance of selected risks that are not easily quantified because of difficulty in finding common denominators for measurement, lack of historical data or potentially significant variations in the risk level depending on the methodologies one uses. Accordingly and as prescribed in the Regulatory Rules Governing Solvency Risk Management Requirements and Assessment, CIRC requires that insurance and reinsurance companies create a risk management committee responsible for maintaining a working, enterprise-wise risk management program.

The Regulatory Rules Governing Classified Regulation (Comprehensive Risk Rating) suggest that this pillar comprises four parts. First, CIRC conducts “integrated risk rating,” a comprehensive evaluation based on the analyses of both qualitative and quantitative risks as defined in the first pillar and other sections of this pillar. Second, insurance and reinsurance companies are required to establish a corporate governance structure. Third, CIRC conducts on- and off-site inspection of the regulated companies. Finally, insurers failing to meet the qualitative requirements under this pillar may be subject to supervisory intervention by the CIRC.

The qualitative requirement is more stringent for Class I companies; that is, insurers and reinsurers which have met two of the following conditions—1) “actual premiums” exceeding RMB 5 billion or total assets greater than RMB 20 billion, 2) incorporation history longer than five years, or 3) five or more provincial branches. Foreign reinsurance companies are in principle Class II companies. The committee, thus its risk management program, should cover insurance risk, market risk, credit risk, operational risk, strategic risk, reputational risk, liquidity risk and information disclosure risk. The embedded aspect of the company’s risk appetite as well as consistency in the program evaluation is also a critical element of the risk management pillar. We should note that this program is built on top of the Company’s Own Solvency Management (COSM).

The information disclosure pillar
The information disclosure pillar is mainly related to the transparency of the regulatory and solvency requirements including: regulatory reporting requirements and public disclosure of information. This pillar is intended to guide, facilitate and utilize the power of stakeholders in the market, primarily consumers, rating agencies, industry analysts and the general public, as well as to leverage market disciplinary power by means of public disclosure. CIRC hopes that other stakeholders can effectively monitor the market for growth, efficiency and policyholder protection. However, the C-ROSS rules are silent about the scope, frequency and means of disclosing insurance data.

Summary and policy implications
This second-generation of solvency regulation, C-ROSS, will certainly change the way insurers do business in China, and potentially in other countries in which they underwrite risks when the group supervision rules are fully developed. It is likely to change the composition of insurers by size, line of business and territory, their asset and liability portfolios and reinsurance transactions. The number of insurance companies may change as small to medium-sized companies would attempt M&A’s to effectively reduce their capital charges. Insurance and reinsurance companies “in China” will need to adjust their risk management behaviours, thus their risk appetite to take the full advantage of C-ROSS. They will incur more regulatory cost, but the overall benefit from operating in the C-ROSS environment is likely to exceed the cost.
The proposed C-ROSS structure is not, and should not be, significantly different from the risk-based capital solvency regulations of the EU, the US and selected other countries. However, there are certain C-ROSS elements worth noting. First, C-ROSS is not likely to cause a sudden or significant shift in the capital structures of insurance companies per se or of the nonlife insurance market in China. It is expected that any shift will be gradual and under CIRC’s guidance.

Second, the benefits of C-ROSS will not be equally felt by all companies. The capital adequacy pillar suggests that insurance companies exhibiting one or more of the following traits may enjoy a release of excess capital:

- Being capital/equity rich;
- Leading in the line of business in terms of premium income;
- Maintaining asset investment portfolios comprising more shares or bonds issued by public companies or traded in selected domestic capital markets; or,
- Investing in real estate in central government and other qualified locations.

Investment of assets within China seems to be preferred to investment abroad. Regarding foreign investment of assets, preference is given to the assets in developed economies rather than in emerging economies, or to assets in or pegged to the US dollar as opposed to the Euro or the UK pound. These three currencies in turn receive preferred treatment relative to other currencies. The capital adequacy pillar is silent about investment in other economies.

There is both a technical issue and an economic policy issue related to this approach. Estimating the quality of insurance underwriting based on combined ratios needs refinement. A combined ratio is the sum of two ratios:

1. A loss and loss adjustment expense ratio, which reflects an insurer’s attempt to manage cash outflows for “external,” covered events; and,
2. The expense ratio, which is the result of “internal” cost management. An economic policy issue stems from the use of risk charge differences based on the classification of issuers of invested assets and the location of real property investment.

Given the typical asset portfolios in today’s insurance industry in China, this methodology may result in some short-term stability after C-ROSS’ implementation. However, it may not promote much further diversification of insurers’ asset portfolios. Neither would it reflect the underwriting risk and asset market risk relationship in overseas operations of Chinese companies. This approach is furthermore not completely in line with a State Council opinion of August 2014 that encourages “taking-in” and “going-out” policies. The use of a more refined methodology, for example, political risk ratings by country is thus suggested.

Third, with all other things being equal, insurers primarily underwriting risks in automobile, liability, accident & health or special cargo insurance will likely be subject to lower premium risk capital charges than those in property, agriculture or guarantee insurance. Preference in the form of lower reserve risk capital is likely for insurance companies in automobile and liability insurance. Additional risk changes are levied to insurers underwriting catastrophe (typhoon) risk. C-ROSS encourages certain reinsurance arrangements, such as ceding risks to qualified domestic reinsurers or to other reinsurers that not only carry a satisfactory solvency adequacy ratio but also offer contract guarantees, for example, letter of credit. The risk factors (RF) and characteristic coefficients (ks) generally support this contention. However, the data that CIRC has used is necessary to understand more about the weights and spreads of the factors and coefficients.
Quite a few of the C-ROSS rules imply that, a capital-strong, domestic market leader in automobile and liability insurance may need a comparatively smaller capital cushion to absorb shocks in their insurance, investment and risk management operations, than is required under the current solvency regime. Similarly, a multi-line, national insurer would be subject to a comparatively lower capital charge than, say, a mono-line, regional insurer. Third party compulsory motor liability insurance however, remains the only line in China that is subject to national premium rate tariffs. Foreign reinsurer companies may benefit from re-domesticating their branch operations, thus becoming locally incorporated companies in China.

C-ROSS does require discipline in business operations and due diligence in managing capital. As noted earlier, its three-pillar approach is similar to that of Solvency II and of the anticipated US methodology. C-ROSS also shares a number of commonalities with the International Association of Insurance Supervisors’ (IAIS) Core Principles. Nonetheless, C-ROSS is mainly focused on individual insurer operations within China. CIRC touches upon group supervision, but this will probably be limited to financial services group activities in China. In the Regulatory Rules Governing Insurance Company-owned Non-insurance Subsidiaries (Interim) issued in October 2014, CIRC examines direct measures for insurance companies and indirect measures for other financial services companies or non-financial sector companies, whether they be a subsidiary or a holding company. The measures cover investment in non-insurance subsidiaries, control of non-insurance subsidiaries, transactions between subsidiaries and outsourcing business to non-insurance subsidiaries. From the Regulatory Rules Governing Insurance Group II issued in November 2014, CIRC clarifies the limits in its regulatory authority and potential difficulty in directly regulating so-called, international mixed insurance groups.

Several countries in Asia have revised, or are in the process of revising, solvency/capital, investment and corporate governance regulations. Indonesia introduced its own risk-based capital (RBC) regulations in 2012. Indonesia’s RBC scheme reflects key unique characteristics in the country, such as Takaful insurance operation. Japan, which is Solvency II equivalent, maintains a hybrid of European solvency and North American RBC regulations. Malaysia adopted an RBC framework in 2007, which was revised in June 2013. The Philippines, which adopted an RBC regulation in 2006, may revise it in the near future so that their regulations are more in line with international standards. The new Korean RBC regime, revised in 2011 prescribes specific minimum capital calculation formulae to each of insurance, credit, interest rate, market and operational risks. The RBC II framework of Singapore currently under review seeks to measure the volatility and the impact on insurer capital need of selected risk groups. The first-ever RBC framework of Sri Lanka, adopted in 2013, has been tested for a planned full implementation in 2016. Thailand continues to maintain its RBC regime, adopted in 2011.

Despite the differences in the specifics, solvency regulation regimes in these and other Asian countries are more about insurer operations within their own borders than about domestic insurers’ risk taking in foreign soils. Hence, it can safely be concluded that solvency regulation regimes in Asia tend to be isolated and will remain stand-alone with each jurisdiction for the foreseeable future. Regionalization of insurance markets, thus the harmonization of regulatory approaches, remains an aspirational goal but not attainable in the near future. In the meantime, growth and stability of each of the local markets in Asia should receive the priority attention of local governments. Stability in, not necessarily the speed of, regulation and supervision is another requisite all want to see in the insurance market.

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3 See, http://www.iaisweb.org/Principles-39