Rethinking Solvency : Let's go back to the fundamentals

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Limitations

- The views and Model presented in this document are based on author's own view. They do not necessary reflect PwC's view.
- This presentation only talks about solvency. It is not a complete analysis of insurance company's financial condition.

Solvency System

Issues with today's Solvency System :

- All solvency system today focus on capital adequacy, but
    - Capital is not necessary cash.
    - There are many ways to create capital without cash.
    - No solvency system focus on company expenses at a going concern basis, but
        - Company expenses are about 1/3 of company's revenue.
        - Some operating expenses are even higher than losses.

Solvency System

Suggest to add the following criteria to current solvency requirement:

- To provide enough cash to meet its cash flow needs so company can continue its normal operation.
- This is not necessary equal to capital adequacy.

Issues outside the current system: Things that can be used to manipulate solvency measure

- Solvency measure is only be as good as the information that feeds it!
  - Peculiar Reinsurance Recoverable
  - Peculiar investment items
  - Invest in holding company's securities
  - Under-Estimate loss and premium reserve

Issues inside the current system

Solvency system can only be as good as the people who operates them:

- Too complicated
- Difficult to monitor by third party
- Difficult to see if there is a mistake made
- Only a very small group of people know how to use it

Characteristic of a robust solvency system

- It focus on data that is hard to manipulate.
  - Objective financial information
  - Observed value, not estimated value in financial statements
- It looks at cash flow needs.
- It is simple for people to use.
- It is easy for third party to monitor.
- Test on real issues, not on some statistical theory.

Solvency System

A Complete Solvency System should check the following of a company:

- Pass certain solvency score
- Sustain normal random fluctuation in cash flow
- Survive(both on capital and cashflow basis) under certain stressed Scenarios during the year as well as at the end of year.

Pass Certain Solvency Score

- Set passing score :
- Passing score should balance between absolute and relative standard:
- Absolute standard:
    - Based on what you think the minimum score should be. However, what if everyone failed based on this standard?
    - Therefore, need to consider the practicality of the standard.
- Relative standard
    - Run the scoring formula to all companies and pick a score at certain percentile; or
    - Run the scoring formula to all companies, pick the highest one and set the score as a percentage of this company.
- Adjust passing score as social climate change.

Sustain a random cash flow fluctuations

- Cash flow adequacy analysis
  - For example, will it sustain random fluctuations in cash flow needs?

Bank deposits		1,000,000		
Stock and securities.		3,000,000		
Real Estate (fair value)		1,000,000		
Total Investment assets (fair value)		5,000,000		
	Company Total Cashflow Testing			
Time	Insurance liability	Non-Insurance Liability	Operating Expenses	Cash outflow(cumulative)
1Q	700,000	10,000	300,000	1,010,000
2Q	500,000	10,000	300,000	1,820,000
3Q	300,000	10,000	300,000	2,430,000
4Q	100,000	20,000	300,000	2,850,000
2 year	50,000	0	900,000	3,800,000
3 year	20,000	0	900,000	4,720,000
4 year	10,000	0	900,000	5,630,000
5 year	0	0	900,000	6,530,000
Total	1,680,000	50,000	4,800,000	28,790,000

Survive Certain Stressed Scenarios

- Scenarios should be based on actual events in the industry that lead to companies solvency issues, not some random occurring statistical event.
- The follow scenarios are actual events in Taiwan that have put companies in financial trouble:
    - Large amount reinsurance recovery that is unrecoverable
    - Large losses from investment
    - Large number of policy cancellations
    - Large unexpected losses from insurance business
    - Catastrophic event (fire, flood and earthquake)
    - Severely under reserving

Comments on Singapore Stress Testing for Non-life Insurers

- Clear, to the point, not complicated: practical.
- Seems to define non-insurance stress scenarios (equity drop 40%, Government and Corporate spread changes)
    - Impact is probably low since investment risk are usually not high for Non-life companies.
- Insurance related events are not clearly defined, only states they need to be considered (termination, drop in business…)
- Clearly defined items will probably not impact non-life insurance companies
- Not clearly defined items will probably impact companies the most.
- Does not seem to consider stress on cash flow.
    - So what if company pass the test but run out the cash, will it be OK?
    - Assume companies can borrow enough money in time?
- Does not seem to consider company employees.
    - So what if company pass the test but does not have enough left to pay employees, will it be OK?
    - Assume companies can borrow enough money in time?

How to bring a company out of insolvency

There is only one way that can save a company from insolvency :

- CASH…a lot of cash injection.
    - Not increasing its Capital (unless it is cash),
    - Not buy more reinsurance
    - Not reduce business writing
    - Not conducting actuarial analysis
    - Not increase its premium rates
    - Not tighten its underwriting control
   - Not merge with another equally weak company

Important Concepts About Solvency System

- Solvency system does not tell company how to operate
  - It only tells company the **minimum** standard company needs to comply
  - Within the minimum standard set by the solvency system, there are flexibility for a company to determine how it wants to operate.
  - If solvency standard is set too high, then it would become inefficient for company to operate and difficult to earn appropriate ROE.
- Solvency system will not avoid company bankruptcy
  - Solvency system is a way to effectively manage solvency, not avoid solvency
  - Bad companies should be eliminated by market force to keep the market healthy.
  - Need to ensure a smooth exit strategy for bad companies.

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Final Note : So what's next?

- Let's go back to the fundamentals; Let's get down to the basics.
  - Need to look at cash flow
  - Need to consider items not in balance sheet : employee salary, Tax…etc.
  - The model itself needs to be simple
    - As long as the models are created by human, it will have flaws and contain mistakes.
    - Therefore, we need to make sure other people can detect our mistakes before it is too late.
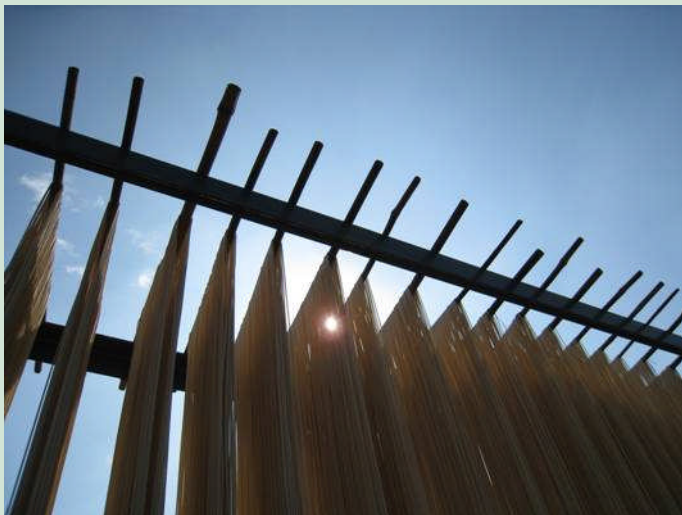
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Yin Lawn is a senior manager of PwC's actuarial service practice in Asia.

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Between 1999 and 2009, Yin has also been providing merger and acquisition, reserving, solvency and pricing supports to a number of foreign and local insurers in China, Hong Kong and Taiwan.

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