

CSCR Exam 4 – Introduction to Catastrophe Risk Management

Learning Objective No. 38-40

Study Note

The study note below is designed to be a study aid for the following three Learning Objectives:

- LO 38: Annual renewal cycles in the Re/Insurance industry.
- LO 39: Staff deployment options and team structures.
- LO 40: Catastrophe model deployment models.

The information provided in this study note is for guidance and should be used to supplement research done by the candidate.

Learning Objective 38: Annual Renewal Cycles

Ins/Reinsurance is a cyclical business and as a result each market place experiences annual renewal cycles. Renewal cycles vary across the main Ins/Reinsurance markets of US, UK, Bermuda, Europe, Middle East and Asia. Given the variation it is understood that the student should do further research with regards to their local market place. The information below summarises the main renewal cycles that occur in most market places.

General Renewal Cycles

Renewal Date	Renewal Activity
1 st January	Major renewal date for Insurance, Reinsurance and Retrocession business focusing on all product lines in US, UK, Bermuda and Europe
1 st April	Japanese market
1 st May	US property Insurance renewal in UK
1 st June	Florida Hurricane and US Coastal carriers
1 st July	Large National and Global carriers
3 rd Quarter	Global retrocession

**NB other local market renewals occur in between and during the dates specified above. The table is meant to cover the main multimarket renewal periods.*

As a catastrophe risk professional it is important to consider the varying roles and responsibilities required throughout a renewal period. Depending on your company, region and department structure you may be required to support the business in the following ways throughout a renewal cycle. Typically a catastrophe risk professionals' involvement in any renewal period could vary from one to three months.

Ins/Reinsurance Carriers

The commencement of any renewal period would involve pre-bind pricing support to Underwriting teams. This could vary from providing catastrophe modelling results and insight to help inform pricing decisions to the marginal impact analysis of policies including portfolio management against risk tolerances.

Once the quoting process is well progressed the focus will begin to move towards the management of the bound portfolio. This could involve the data gathering and capture of bound policies into the risk management tools available within your organisation through to completion of the bound portfolio for each line of business. This will likely involve the rollup of the renewed portfolio, liaison with company executives to articulate the updated results with explanations of movements and trends through to sign-off of the portfolio for company and regulatory reporting.

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Once portfolios are signed off as complete catastrophe risk professionals focus will move to the completion and submission of reports both within organisations and for regulatory bodies and/or outwards reinsurance panels.

Ins/Reinsurance Brokers

As a catastrophe risk professional within a broking firm your role and responsibility will differ from the above to some degree. Commencement of a renewal period will typically begin a few weeks prior to that of a risk professional working for a carrier.

The majority of the beginning period of a renewal will be spent working with clients on the preparation of their submission packages including modelling information, portfolio exhibits and statistics to accompany any data provided to markets. This would typically be an iterative process working closely with clients to agree the submission information and explain potential movements of a portfolio before submission.

Once that process is complete and renewal packs are out in the market the main role of the risk professional will be to support the markets on any questions they may have on modelling results, assumptions and projections made.

Learning Objective 39: Staff Deployment and Team Structures

Every company will deploy its staff and structure its teams in different ways that best suits that particular business. Team structures vary for several reasons the most common of which are the size of the organisation and the types of business written as well as the regulatory regime that the entity falls under. It is expected that a risk professional should be aware of the structure of their own company and others through networking with peers in their market place. As a result the bullet points below give some general background as to differing structures.

- Catastrophe risk management can exist within the broader exposure management function of an entity or remain separate from that broader function due to the expertise required in the catastrophe risk management space.
- Catastrophe risk management would normally fall within one of the following business areas: actuarial, underwriting, risk management or operations.
- Catastrophe risk management in larger organisations can be subdivided into individual business lines for underwriting support accompanied by reporting and portfolio management functions.
- It would be common that Catastrophe Risk Management is either centralised to perform a function for the entire business or devolved to be part of each underwriting division. In the case of the second option this could potentially involve a centralised reporting and portfolio rollup function within Cat risk management.
- Within a team it would be normal to have a head of the team overall with then divisional heads and analysts of varying years of experience making up the entirety of a team. If part of an ins/reinsurance group it could potentially result in a group division and with teams representing each entity within a group potentially over differing geographies.

NB – The student is encourage to expand their knowledge of team structures in various organisation through networking and peer to peer discussions.

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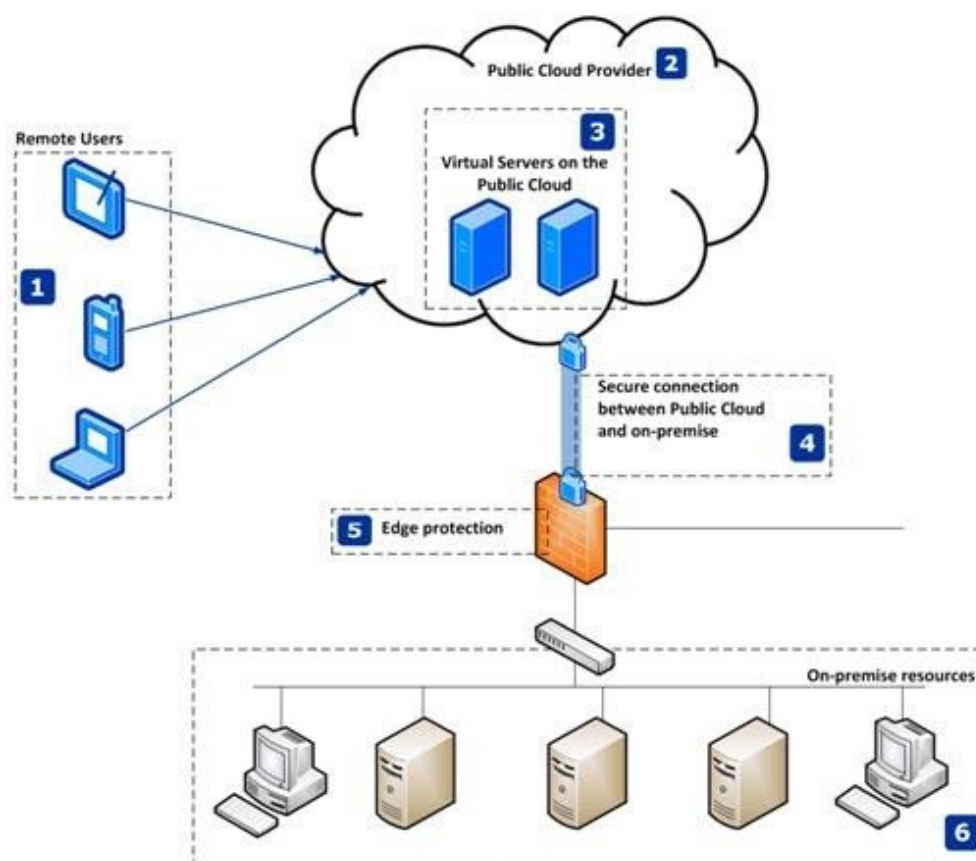
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Learning Objective 40: Catastrophe Risk Management Software Deployment Models

It is by no means essential that a Catastrophe Risk professional understand or be aware of the deployment method of the software they use to perform their jobs. In larger organisations it would be expected that this would not be something professionals outside of IT would be aware of. However given the complexity of the software used to perform day to day tasks some knowledge of the two most common deployment methods could assist in the general understanding of how that system operates and in turn aid the professional in the troubleshooting of potential issues experienced as part of performing daily tasks.

Below is a diagram to represent possible options used by organisations for deployment of catastrophe modeling software. The two most common deployment methods are termed **on-premise** or **cloud deployed**. On-premise means that the hardware and software reside within your organisation and are managed by your IT department with software being licensed directly from the vendors themselves. Cloud deployed means the hardware and sometimes software are purchased through a license agreement with the maintenance and support of that software provided by either the cloud provider or software provider or both depending on the options chosen.



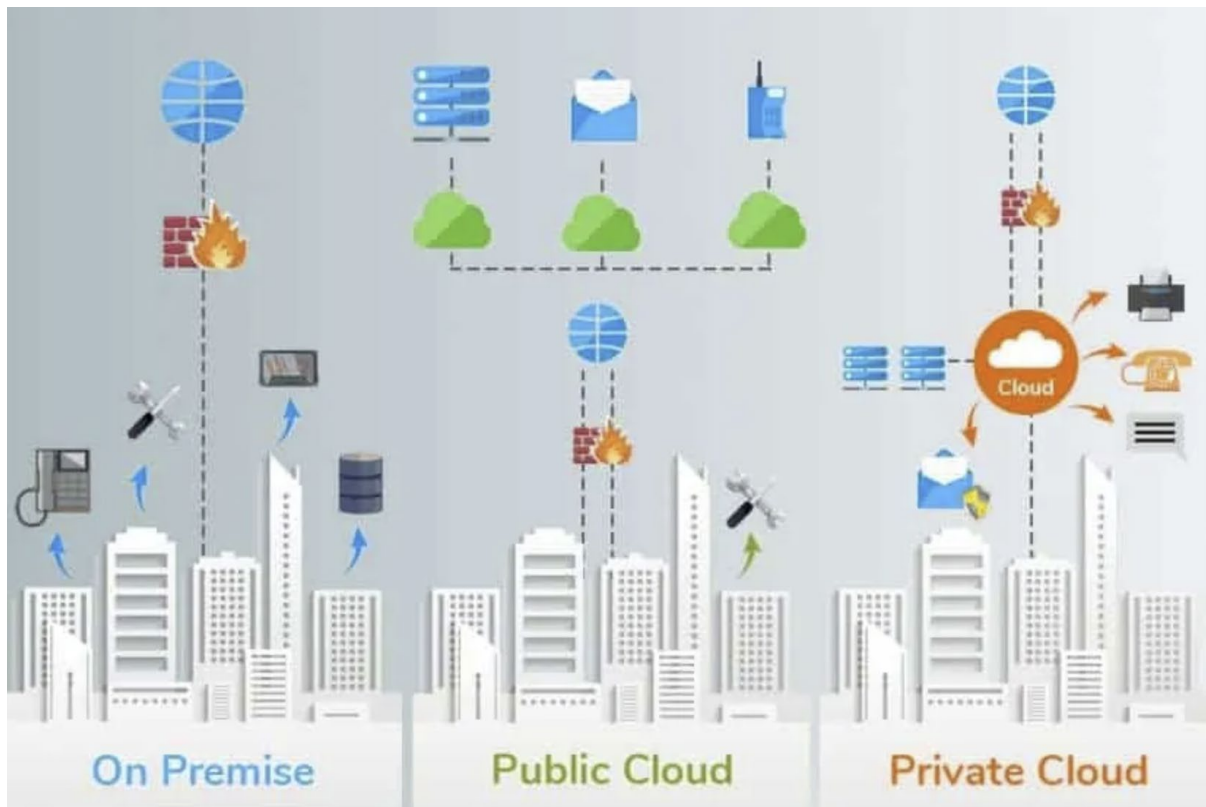
The diagram above shows both types of deployment in one diagram. Box 6 represents the on-premise deployment and if this was the option chosen would be controlled and managed by your IT department. A cloud deployment would be the entire diagram including box 6 as it would be likely

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that some level of on premise hardware would be required such as desktop machines to access cloud hosted software and servers.



The second diagram above illustrates the potential for a company to deploy in three different ways using either on-premise, public or private cloud. The main difference being in the on-premise model everything up to, and including, the firewall is managed by an organisations IT department. The public cloud model means that everything outside the firewall is managed by the cloud provider such as Amazon AWS or Microsoft Azure. The third option is where an organisation may have its own private cloud environment managed by its own IT department or third party.

As a final note the deployment method over recent times has moved rapidly towards the private/public cloud space due to efficiency and cost and scalability. This pattern is only likely to accelerate in the future.