Risk Modelling Challenges – Towards the Cloud

MBE recently attended a webinar hosted by The Actuary magazine entitled 'Risk Modelling Challenges – Towards the Cloud'.

The event was very informative and was hosted by three speakers:

- *John Winter (Director of Product Management, Insurance, FIS)*
- *Rick Yuan (Head of Actuarial Modelling and Transformation, AIA Group)*
- *Werner Matula (Chief Actuary, Vienna Insurance Group)*

Cloud Computing is defined as "the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer." In an insurance company sense the two main areas of interest are those of Storage and Computing capabilities.

During the webinar the speakers raised some interesting points that have been summarised below under two headings: 'Benefits of Cloud Computing' and 'Drawbacks and Challenges of Cloud Computing'.

Benefits of Cloud Computing

- *It can provide more storage capacity needed for more data. There has been a host of regulatory changes over recent years, which have created a need for more data. IFRS 4 Phase II is an excellent example of future legislation that will require insurers to have more granular data. Therefore, companies will want to think about the storage they want, for example slow/cheap storage compared to fast/expensive storage.*
- *It can provide more computing capacity for faster processing of data and results. A decreased risk appetite requires more immediate and accurate data. Results require a day turnaround time rather than a week previously. The deadlines are shorter and require more granular results.*
- *It can make more efficient use of computing capacity. The speakers mentioned examples where about 60% of the computing capacity in most insurers is unused. This can therefore lead to a 30-40% saving according to the examples given by the speakers.*
- *There is more flexibility with respect to computer resources across regions. Cloud computing can support collaborative workflows across geographies via easy access using any browser.*
- *There is a financial advantage in that there is a reduction in capital investment.*
- *Time to market may be shorter because companies don't have to set up infrastructure.*
- *There may be a reduction in IT resources needed to manage computer resources.*
- *Even if not ready for a cloud production environment, businesses can still use the Cloud for testing and development tasks.*

Drawbacks and Challenges of Cloud Computing

- *There are concerns about transferring data to the cloud and integration of data from the cloud. Companies should rethink disaster recovery as cloud has some good options. Business continuity and regulatory requirements need to be met and generally make use of contractual Service Level Agreements (SLAs).*
- *There are also concerns about data security. Therefore companies need to consider data contents and techniques needed to shield it as sensitive data is generally not needed to perform a valuation.*
- *Some jurisdictions have limits on where data can physically reside, therefore businesses need to understand where your data is physically located and whether this may be a problem.*
- *Getting the approval of the regulator of each country may be challenging because cloud computing is a relatively new idea and regulators are generally conservative. Therefore, a strong legal team may be needed.*
- *Cloud computing may be more expensive for some users over a period of time. There is a big need to consider the cloud providers charging structure. For example, if you pay for each download then you may want to store locally to analyse the data.*
- *There are lots of stakeholders (for example shareholders, regulators, management) involved and all need to be in agreement about the solution. Therefore cloud computing can be challenging to implement. Actuaries prefer individual control over data and workflows. Therefore, half of the time needed for the project was spent on change management.*
- *Companies have to put trust in external providers, therefore need to go with providers with a proven track record.*

Cloud computing is definitely something to keep on your radar over the coming years, especially as it becomes more ubiquitous. It is not a simple exercise to implement a cloud computing project and there are many concerns that need to be addressed, but the benefits for insurance companies may be more than worth the effort. The full set of slides for this webinar may be found here.

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