

## Financial services migrating to public cloud

Amazon Web Services (AWS) recently posted Q2 2016 revenues of over US\$2.9B, proving once again Jeff Bezos has built one of the largest online retailers on the planet, and also creating an infrastructure capability of dwarfing other public cloud offerings. That, coupled with major announcements by other Fortune Global 50 corporations around mass application migrations from corporate data centers to AWS and other providers, clearly indicates that if large enterprises are reticent about deploying a public cloud strategy, they risk of completely missing one of largest trends in how software is created, deployed, and used.

For years mid-sized and large financial institutions have pushed back on the concept of leveraging public cloud capabilities due to perceived security risks and the requirement that all their applications and data need to be “within our four walls”.

The arguments continue, despite major public examples that even the largest financial institutions, banks, and trading firms are not safe from making basic IT security mistakes. The last defense of the those who lead infrastructure teams has always been that global financial regulators will not allow them to outsource their

Recently, the Financial Conduct Authority (FCA) drove the first stake in that argument by publishing a guidance whitepaper on outsourcing and the public cloud. The FCA is framing the discussion paper with a goal of increasing innovation in financial services, something that the companies and institutions have been consistently unable to accomplish.

Highlights from what is a very readable paper include:

- As is expected, financial services firms will not be able to outsource responsibility with infrastructure. They will retain regulatory obligations even if they engage vendors to run processes or perform tasks on top of public cloud infrastructure.
- The paper emphasizes that there needs to be a compelling reason for leveraging public cloud services and that the institution needs to extend its operational, InfoSec and other risk management processes to include any externally managed infrastructure.
- Data privacy, protection, and residency laws are not relaxed when you move to public cloud – especially within the EU. Cloud providers need to support geographic data and infrastructure segregation and financial services firms need to build this capability into their hosted data environments.
- Financial services firms need to have a clear understanding of sub-contacting relationships that their cloud



vendors have so they can ensure their controls flow through to the last company in the chain.

- Existing business continuity planning processes and infrastructure will need to be adapted to the public cloud so as to ensure equivalent or better SLAs on recovering from both major and minor events.
- It will be critical to ensure regulators do not lose access to “business premises”. This requirement is going to be complex to achieve with large public cloud companies like AWS so will likely need clarification. Even determining where a “business premise” is might be difficult when data is replicated across multiple data centers and regions and fully virtualized.
- Maintain equivalent or better IT and process change management controls – ensuring that modifications to “production” systems are very tightly managed and monitored and all changes are handled via a detailed change control process. Given how bad most corporations are at dev-ops, migration onto public cloud can help but improve this aspect of their controls.
- Incorporate living will provisions into vendor contracts and core processes to ensure a regulator maintains the ability to wind down portions or all of the institutions business in a controlled way.
- Provide a way for the firm to exit the outsourcing relationship and ensure that they are not so tied to the cloud provider that they can never leave without rebuilding their entire infrastructure. This provision will create challenges for institutions who want to leverage cloud-specific capabilities (e.g. AWS Lambda) that are unique to one company.
- Given that most of the Internet is run on the public cloud, a large portion of it on AWS (Netflix, Twitter, The Weather Channel – the list goes on and on), global financial regulators are going to need to embrace the concept to allow startups to be successful even if large banks continue to move slowly. After all, what startup contemplates building a data center these days? You may as well build your own power plant to power the lights and your own aqueduct to bring in water to the office bathrooms. Hosting is truly a utility in today’s global Internet environment.

It is great to see the FCA take a step towards clearer guidelines and hopefully we’ll see the Federal Reserve comment next.

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