github\_pat\_11A3NC3TA0WyeC0XqSj7HJ\_IiyOidB20bq0L9bFbo7GW2W0QBvsCoSeMWv221TU0a7UCSOX3R48guYlcS2

**Task 1**

Cloud Computing has become increasingly popular in recent times with many companies using the public cloud such as AWS for their services that can help with scalability, flexibility and ultimately improve their day-to-day operations. Many financial institutions have adopted the public cloud framework for data processing, and I will discuss whether they should use it.

Financial Institutions have a lot to gain when using a public cloud, especially since AWS have started to focus on improving financial applications since 2017 and now over 90% of financial institutions have implemented some form of cloud computing in their infrastructure. One of the main advantages of the public cloud over using other resources for data is that it is highly dynamic, scalable, reliable and use the pay as you go pricing model. AWS offer many resources that can benefit financial institutions for data processing and one of the main resources they offer are the compute services. AWS offer many different types of compute services but the main 3 are Amazon Elastic Compute Cloud (EC2), Amazon Lambda and Amazon Elastic Beanstalk. Amazon EC2 is the most beneficial for financial institutions as it uses the Infrastructure as a Service (IaaS) cloud structure meaning that it gives full control over the maintenance of the software whilst not having to manage the underlying infrastructure. EC2 is an instance-based service that uses virtual machines that you can provision and manage. One of biggest advantages of EC2 is that there are several instance types that the financial institution can choose from based on their needs such as c4 and c5 for compute optimisation that provide high performance. There are also many storage options with EC2 such as Elastic Block Store (EBS) that maintains the data even after stopping the instance. Encryption can also be used. A case study found that Bankinter made use of Amazon EC2 by running over 5,000,000 simulations through a grid of multiple Amazon EC2 instances. This helped reduce their compute time from 23 hours to 20 minutes which improved the efficiency of the bank through time savings, along with cost savings. A quote from Javier Roldan, the Director of Technological Innovation “The AWS platform, with its unlimited and flexible computational power, is a good fit for our risk-simulation process requirements” illustrates that the use of the public cloud has been a benefit for this financial institution.

<https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/as-big-tech-dominates-cloud-use-for-banks-regulators-may-need-to-get-tougher-59669007>

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<https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/as-big-tech-dominates-cloud-use-for-banks-regulators-may-need-to-get-tougher-59669007>