

How Commercial Banks in Emerging Economies Can Leverage Big Data Analytics: A Perspective of Asian Countries

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Abstract

Background/ Objectives: Big Data is an incredibly big data set that needs to be examined, managed, handled and validated by way of an ordinary information management tool. Banks are among the financial services industries, which handles overwhelming amounts of transaction information managed, scrutinized, as well as used for the gain of banks and also the buyers. Hence, this particular study paper examined how BDA are managed in Malay/Indian/Indonesian industrial banks. The elements which have a bigger impact on banks in handling big data were analyzed, as well as how analytics generates value for the company.

Method/Statistical Analysis: Secondary data was collected from numerous sources like articles, websites and journals. The aspects like big data management, fraud detection, risk management, consumer segmentation, as well as business value of banking industries are studied. A conceptual framework was created to spotlight the elements which have a better influence on big data management in the banking industry.

Findings: From the research, it's examined those big data analytics has driven a visible change in the company worth of banks, and the elements having an impact on the company are highlighted.

Application/Improvements: Banks have to revamp their software architecture for dealing with the important data and follow the new technologies which boost the online business worth of the business.

Keywords: Big Data Management, Risk, Commercial Banks, Segmentation, Business Value

1. Introduction

Big Data are said to become an enormous amount of data, with 4 V's referred to as Volume, Value, Velocity and Variety. Any group in the business field must follow particular technologies and strategies to deal with, as well as manage those data to boost the prospective level of a company. Hadoop Ecosystem is a huge Data Software platform for examining the important information, particularly for the program implementation¹. Financial institutions as banking industries are believed to be much more buyer centric, and every day it receives substantial client data. Customers go to bank branches to create their investment, get advances and loans, either have a good relationship with the banks or perhaps do fraudulences.

Banks are required to focus on their customers in the perspective of 360 degrees to imagine their behavior patterns, repayment habits and the financial needs of theirs. The Government of India concentrates on creating a digitalized India by connecting all the individuals in the nation, such as countryside households, Governmental departments through

broadband highways and panchayat [9]. By analyzing the massive amount of data generated out of these people and departments, the smarter villages could be created by solving the endless issues in outlying areas [22]. In the present world, banks must determine and perform different sources of worth to create the customer connection and trust in the digital banking of its. Thus, big data analytical resources are believed to become a biggest asset for the company organization as banking business to deal with the information obtained from social networking sites [23]. Big Data programs strategies help banks identify fraudulences by showcasing the actual area, lowers the risk factors of the group, and also segments clients depending on the size of services and products.

2. Literature review

2.1 Big Data Management in Malay/Indian/Indonesian Commercial Banks

Big information is said to be a great amount of information measured in terminology of terabytes, which flows in different technological devices,

including mobile phones and computers [24]. A firm or any organization can drive all those information to increase their business value with the proper solutions. Today, major data analysis tools and technologies can transmute some business organizations, particularly the financial service sectors as banking industries [2]. Lack of abundant information is the main cause to manage danger in a company as a banking business. The study has additionally highlighted that thirty seven % of the bankers have claimed they cannot predict about the expenditure to be created to control the chance to obtain the biggest return of the organization [4]. The best 5 big data use cases examined by SAP in financial services and banking are fraud detection and security, regulatory reporting and compliance, client segmentation, risk management and personalized merchandise offering [11]. Sap a program helps financial services and banking industry to continue the expectations of the buyers, raises the profit margins throughout all gateways, and for changing to electronic banking and have world class banking methods as well as solutions [1]. Oracle Corporation in 2015 has pushed an outline for the adoption of analytic capabilities and big data in next generation architecture, which could meet the requirements of financial services and banking industries like Capital and Risk Management, Wealth Management; Customer Intimacy, and additionally to enhance fraud detection. Big data structure allows the group to get more insight into information in a good way, which in turn allows the firm for a booming choice making [5]. Cloudera6 has discovered that the 3 things like Prioritization; Competitive Advantage, Regulatory Compliance; recession recovery, segmentation and customer profiling establish Big Data in financial services.

Capgemini Consulting Group has examined how banks maximize the importance of their customer data. The study has examined that only thirty seven % of banks are using BDA, while most continue to be testing for adopting big information. Big data analytics helps banks focus on the customer sections at micro levels by blending information, including behavior patterns of the buyers, market analysis, and sentiment variables from social networking. Big data analytics helps banks keep a good client relationship management, this subsequently increases profitability and revenue for the organization [3]. The analysis has additionally highlighted that business silos are believed to be a maximum screen for dealing with big information. Big data analytics in the banking business is believed to become a greatest advantage if attractive and correct analytics structure the information. The study has highlighted that few banks, specifically Citibank, Deutsche Bank and Bank of America, have

been too compete for big data, especially to identify fraudulences and provide personalized services. The writer has narrated that PropelStream is believed to become a genuine time analytics remedy, which extracts information from different sources like Facebook, Twitter and various social networking channels. PropelStream encourages the banking industry to send out the planning on communications on the receivers or maybe clients through different routes, including cell phone systems, pages of fraud detection, as well as file methods [6]. This particular PropelStream Database also supports the banks to resolve organizational challenges, including controlling huge volume, velocity and variety of information from different departments, information protection, detection of fraudulences, Customer Segmentation, managing risks, Analyzing Customer Experiences and monitoring regulatory compliances.

The goal of this study is to analyze how big data analytics is managed by Asian banks, and what factors impact the handling and management of data and how analytics are creating value for these banks in Asia.

2.2 Factors which have a much better effect on Commercial Banks for Handling Big Data

2.2.1 Risk Management

Financial institutions as banking industries should have a comprehensive knowledge of theirs, since banks are believed to become an industry which meets recognition risks. Big data analytics helps banks build many predictive indicators by extracting information from different data sources, including advertising databases and social networking sites [26]. This predictive indicator allows the banks to imagine the actions of the customers⁹. Banks have brought overwhelming measures to incorporate methods by utilizing big data analytical resources to acquire consumer information. This also allows the group to lessen the risk factors, which in turn allows the banks to imagine a complete connection with all the consumers. By synthesizing, correlating, correlating and scrutinizing the increased amount of information, big data analytics tools as well as methods provide the company worth for the organization [10]. Banks must use a 360 degree view towards every buyer to focus on them along with the proper items, and adjust depending on the requirements of the buyers. Thus, analytics helps banks learn and evaluate the dimensions of risk faster, without amplifying the man resources [7]. Connecting information from various methods is essential for the banks to imagine the possible threat. Thus, it's extremely needed for the banks to compute risks by keeping a typical platform

that links the analytical programs and the chances involved [21].

2.2.2 Fraud Detection

Big data analytics platforms are believed to become a roadmap for the banks to control as well as examine huge quantities of information. IBM has highlighted that utilizing these kinds of solutions, banks could evaluate the occurrence of transactions, identify the fraud, and quit it before it yields considerable damages [13]. Financial institutions as banks began investing in great data analytics tools and technologies to instantly notice the occurrence of fraudulences. These data analytics aid the banks boost the validity and confidence in fraud detection by producing big data sets from different resources, such as social networking sites [15]. This can help bankers acquire aggregate views of customers [14]. Detection of frauds in banking business is believed to become a scating task, which can propagate a sequence of fraudulent schemes done either by bank employees or maybe customers, including Corruption, Cash Transactions, Billing, Check Alteration, Skimming, Larceny, Reimbursement of expenses, Fraud on financial statements, Register Disbursements as well as Payroll [8]. The fundamental data analytics tools help the banks record the spot in which the fraud has occurred, kind of the indicators and fraudulent activity of the frauds was evaluated by utilizing information sources. Big Data analytics plays a crucial role in detecting frauds in financial institutions as banking industries. BDA tools will scrutinize the information from huge velocity and different variety, pointing out the actual spot in which the fraudulences have occurred, without annoying the buyer services [16].

2.2.3 Customer Segmentation

Banks, by using both internal and outside details, customize their services and products to every consumer to boost the customer centric functionality of the business. This kind of resource planning helps the group facilitate financial solutions based on the buyer segmentation [19]. BDA analytical resources support the banking industry for client segmentation in different dimensions, like developing advertising plans for specific clients, loyalty program creations for card use, of pricing methods and creating a good connection with the faithful customers [18]. BDA analytical techniques and tools help banks see consumer information from an angle of 360 degrees. Micro Segmentation, along with predictive analytics strategies of Accenture, drags the information from real time feeds, and merges the info to historical information to generate awareness. These power tools help bank operators move forward techniques to

obtain escalating conflict of the customers. Adoption of Big Data Analytics uses the company group to boost the possible development for business value development, increased efficiency and magnified services [17].

2.2.4 Implication of the Model

Out of the conceptual framework, it could be examined that financial institutions as banking industries face many challenges in handling big variety, velocity and volume of data in daily life. Risk Management, Customer Segmentation and Fraud detection would be the elements that have the more impact on big data management in the banking industries [25]. The important information analytical software programs and methods will help the company group identify the occurrence of frauds from the actual sources sources, decrease the risk factors, and help facilitate client segmentation to facilitate monetary solutions depending on the main concern and target customers, since banking business is believed to become a client centric business. As shown in Fig 1 below, big data analytical tools satisfy different scenarios of the banking industry, consequently it creates new business opportunities for a company, which increases the value for the company organization.

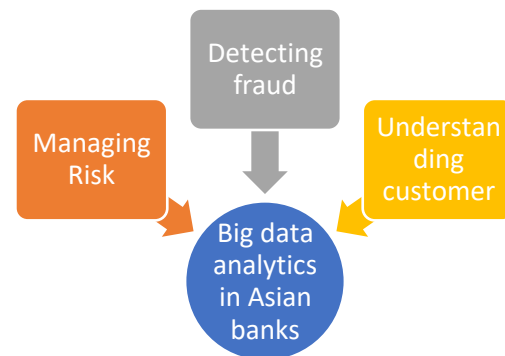


Figure 1. Drivers of big data in Asian banks

3. Analytics Creates Business Value for the Organization

Big data analytics provides value to the online business organization, particularly financial institutions as banking industries, by supporting customer service, raising the assortment of revenues and profits, controlling the risk factors and supporting regulatory compliances. Banks might use the massive amount of unstructured details to get the competitive advantage, which allows the group to find business opportunities, producing values on the online business

organization [20]. Financial institutions as banks may also generate great added treatments, depending on the structured and unstructured details, to evaluate the buyer's conduct about the practice of fee completed by POS devices, and to prioritize the buyers to guide them [12].

4. Conclusion

Banks today and today have begun to use great details, analytical programs and technology to boost the company's value and for business opportunities to facilitate financial solutions to its loyal customers. But based on Capgemini, just thirty-eight % of the bank clients think the bank understands and satisfies their financial needs. Not many banks are purchased analytical tools and technologies to manage and control big. Banks have to revamp their software architecture for managing the important data and adopt the brand new technologies which boost the company worth of the business.

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