

DESIGN AND DEVELOPMENT OF BANK'S OPERATIONS DASHBOARD FOR GIVING USEFUL INSIGHTS TO THE BANK'S SENIOR MANAGEMENT

Project report submitted to



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Degree of Master of Science in Banking and Financial Analytics

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DECLARATION

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which is submitted by me to the department of,
Jamia Millia Islamia, New Delhi, in partial fulfilment of the requirement for the
award of the degree of Master of Science in Banking and Financial Analytics is
an original work and has not previously formed the basis for the award of any
Degree, Diploma or any other similar recognition.

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On the basis of declaration submitted by.....,
student of M.Sc. BFA., I hereby certify that the project titled “.....
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which is submitted to the Department of,
Jamia Millia Islamia, New Delhi in partial fulfilment of the requirement for the
award of the degree of Master of Science in Banking and Financial Analytics, is
an original work carried out by him/her under my guidance and supervision. To
the best of my knowledge this work has not been submitted in part or full for any
Degree or Diploma to this University or elsewhere.

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name of the internal Supervisor

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TABLE OF CONTENTS

1. KEYWORDING USING ABSTRACT.....	I
2. ABSTRACT	III
 PART- A.....	 1
3. INTRODUCTION	1
<u>3.1</u> PROBLEM DESCRIPTION AND SOLUTION OFFERED	3
<u>3.2</u> EXPECTED OUTCOMES	3
4. REVIEW OF LITERATURE (ROL)	4
<u>4.1</u> SUMMARY OF FINDING OF LITERATURE SURVEY	6
5. SIGNIFICANCE OF A DASHBOARD.....	8
<u>5.1</u> FEATURES THAT MAKE A DASHBOARD IMPORTANT FOR ANY BUSINESS TO USE:	9
<u>5.2</u> THE IMPORTANCE OF THE DASHBOARD IN OUR PROJECT REPORT.....	10
6. DATA COLLECTION AND ANALYSIS.....	12
<u>6.1</u> DATA COLLECTION	13
<u>6.2</u> KEY POINTS CONSIDERED FOR SELECTING THESE KPIs	14
7. DESIGN OF A DASHBOARD	18
<u>7.1</u> DESIGNING OPERATIONAL DASHBOARD	18
<u>7.1.1</u> Benefits of an operational dashboard	19
<u>7.1.2</u> Visual Features of Operational Dashboard	20
<u>7.2</u> HOW TO CHOOSE OR DESIGN THE DASHBOARD	21
<u>7.2.1</u> Factors of a Design.....	21
<u>7.3</u> DESIGNING OPERATIONAL DASHBOARD FOR SENIOR MANAGEMENT	23
<u>7.4</u> DASHBOARD GRAPHS.....	24
8. TECHNOLOGY/TOOLS/METHODOLOGIES	28
<u>8.1</u> TABLEAU AND POWER BI	29
<u>8.1.1</u> Features of Tableau	30
<u>8.1.2</u> Features of Power BI.....	31
<u>8.1.3</u> Tableau as our designing tool	32
<u>8.1.4</u> Other Tools.....	32
<u>8.1.5</u> Tableau Vs Power BI.....	33
<u>8.2</u> PHOTOSHOP	34
9. DEVELOPMENT.....	35
<u>9.1</u> DEVELOPMENT OF BANKING KPIs	35
<u>9.2</u> DEVELOPMENT OF INTERACTIVE AND CREATIVITY DASHBOARD	36

9.3 ADVANCED USE OF TECHNOLOGY	37
10. FINDINGS/LEARNINGS AND CONTRIBUTION	38
10.1 FINDINGS.....	38
10.2 LEARNINGS	39
10.2.1 Dashboard	39
10.2.2 Types of Dashboard.....	39
10.2.3 Banking Dashboard	41
10.2.4 Key Performance Indicators.....	41
10.2.5 Banking KPIs	41
10.2.6 Benefits of measuring banking KPIs.....	43
10.3 RESPONSIBILITIES OF THE SENIOR MANAGEMENT	43
10.4 INDIAN BANK DASHBOARD	48
10.5 CONTRIBUTION.....	49
10.5.1 Contribution with KPIs.....	49
10.6 CONTRIBUTION IN MAKING OF DASHBOARD.....	49
10.6.1 Revenue KPI Dashboard.....	50
10.6.2 Non-Performing Loan.....	51
10.6.3 Sales in Branch.....	52
10.6.4 Total Deposits.....	53
10.6.5 Expenses and client survey score	54
11. CONCLUSION AND LIMITATION	55
11.1 LIMITATIONS	55
11.2 CONCLUSION	56
12. REFERENCE AND BIBLIOGRAPHY, WEB REFERENCE	58
13. BIBLIOGRAPHY	58
 PART- B.....	 60
14. BANK LEARNINGS.....	60
14.1 CASE STUDIES	60
14.2 TYPES OF ACCOUNTS	61
14.3 ADVERTISING	62
14.5 SOCIAL RESPONSIBILITY	62
14.6 DASHBOARD.....	63

TABLE OF FIGURES

FIGURE 1: LINE GRAPH	24
FIGURE 2: PIE CHART	25
FIGURE 3: BAR GRAPH.....	26
FIGURE 4: COMPARING TWO GRAPHS.....	27
FIGURE 5: REVENUE KPI DASHBOARD.....	50
FIGURE 6: NON-PERFORMING DASHBOARD	51
FIGURE 7: SALES IN BRANCHES DASHBOARD.....	52
FIGURE 8: TOTAL DEPOSITS DASHBOARD.....	53
FIGURE 9: EXPENSE AND CLIENT SURVEY SCORE DASHBOARD.....	54

KEYWORDING USING ABSTRACT

Word	Description
Dashboard	A dashboard is an interface utilized for making data visualization to give business insight. Dashboards can arrange, store, and show significant data from numerous information sources into one utilizing representation.
Key Performance Indicators	A Key Performance Indicator monitors and measures the performance of the commercial activities that lead to a tactical target.
Visualization	The graphical representation of any set of data, information, object in the chart, graphs or any image form.
Tableau	Tableau is a powerful fast-paced growing tool used in the Business Intelligence Industry for making visualizations. It assists in making data simpler from raw data into an understandable format.
Power Bi	Power BI is a software service with numerous connectors and apps that work collectively to turn the distinct sources of data into comprehensible, visually immersive, and collaborating insights.
Photoshop	Photoshop is a product application for picture altering and photograph modifying for use on Windows or macOS PCs. Photoshop offers clients the capacity to make, improve, or in any case alter pictures, craftsmanship, and outlines
R	R is a free software of programming language that enables statistical computing and graphics supported by the Foundation of R.
Python	Python is an object-oriented, interpreted, high-level programming language with dynamic semantics. Python is a significant level inherent information structures, joined with dynamic composing and restricting.
Business Intelligence	Business intelligence encompasses the technologies and strategies used by companies for the data analysis of business evidence. BI technologies deliver historical, current, and predictive interpretations of business operations.
API	API is the acronym for Application Programming Interface, which is a software intermediary that permits two applications to converse with one another.

Google Dashboard	Google Dashboard lets users of the Internet see and oversee individual information gathered about them by Google.
Operational Dashboard	An operational dashboard is a tool that is utilized to screen business measures that regularly change and to follow the current exhibition of key measurements and KPIs.
Senior Management	Senior management is the persons at the highest level of management of an association who have the routine tasks of handling the organization.
Prototype	A prototype is an early model, sample or release of a product built to test an idea, process or the concept
Banking Executive dashboard	It is to see the recorded patterns in, say, customer or business loaning. They are additionally utilized for predictive analytics.
Banking Dashboard	A banking dashboard is an analytical showcase tool that is utilized to visually track and show banking KPIs.

ABSTRACT

This report is based on the design and development of a banking operations dashboard mainly for senior management of the banking system. The report proposes the idea and the approaches for developing an effective performance and executive dashboard for banks focusing on the bank's dynamic, multicultural and competitive nature. Reviewing the past, current and future state of banking operations. Tracking KPIs to measure the appreciated progress towards a tactical objective and to make critical choices for the forthcoming of the banks. Analyzing the performance of banking operations and visualizing the performance measures for quick and useful insights. A banking dashboard is an analytical display tool of banking operations that are linked to different banking data sets across multiple systems. It is used to visually track and display banking KPI's. The Dashboard is an on the web and intelligent focal archive of revelation information that is refreshed occasionally. It is an instrument intended to improve the viability of prudential divulgences, help market discipline and in this way support the Reserve Bank's monetary security order. The financial dashboard gives an integral asset to achieve defaulted instalment chances by envisioning all danger related information with intuitive outlines, recognizing credits and breaking down the different boundaries to plan to protect against openness to threats.

In this report, we have discussed the necessary characteristics of a banking dashboard, the need and the purpose of visualizing and tracking banking operations, comparing different dashboards used in the banks and suggesting a framework for designing and developing for existing banking operations dashboards to imitate real tactical and operational goals to offer actionable insights to the banks.

The need of the research is to analyze how exactly a dashboard can be insightful for the banking senior management and how key performance indicators are used in this approach to transform vacant banking statistics into insights that initiate useful results. The banking system has adopted digitalization as a new channel to analyze performance and visualize banking operations for improved accuracy and efficiency of KPIs. Key Performance Indicators are used to monitor and measure the appreciated progress towards a tactical objective. KPI's are used as the data content in the dashboard which includes all the performance indicators which take place in daily banking operations.

The proto-type is made using advanced tools and software methods and tools like Tableau, MS Excel, Adobe Photoshop and more. The report will focus on the banking KPIs which will help the senior management of the bank. The Key Performance Indicators selected based on the study, research and banking guidelines. The study is based on the literature, banking policies and dashboards used in various national and international banks.

Furthermore, the report focuses on suggesting the improved and effective design of the existing banking operations dashboard. And proposes recommendations in the existing banking dashboards.

PART- A

DESIGN AND DEVELOPMENT OF BANK'S OPERATIONS DASHBOARD FOR GIVING USEFUL INSIGHTS TO THE BANK'S SENIOR MANAGEMENT

CHAPTER-1

INTRODUCTION

This study aims to design an operational dashboard and develop the missing elements of banking KPIs. The study gives useful insights to the Bank's Senior Management and helps in effective decision making to increase efficiency. Thus, the report is based on the research of various types of dashboards, their uses for different businesses and tools to opt for the banks.

In this report we have covered:

- 1- Study on different types of dashboards- Operational, Analytical, Strategic and banking.
- 2- Dashboards opted for the banks.
- 3- Research on Banking KPIs- selection, drill-downs, usage, tracking performance and missing metrics.
- 4- Indian Bank Dashboard
- 5- Designing and developing an operational dashboard for the bank using advanced tools and techniques
- 6- Insightful results for the senior management
- 7- A designed prototype in existing layouts
- 8- Recommendations for further research and development

The report focuses on making a dashboard that helps bank's management by tracking, analyzing and monitoring the performance of the key performance indicators (KPIs).

They are designed using advanced software like tableau, photoshop Ms excel and more. The dashboard is specifically made for the banks to meet the set targets and needs of a department and banks. This interactive prototype connects our KPIs data into the visual and informative format. The data is attached based on real-time (assumed) using software services and API's, in the form of graphs, tables, pie charts, bar charts, line charts, and gauges. Our proposed prototype is an effective way to measure numerous data using metrics to analyze performance and monitor. As actual-time monitoring decreases the time period of examining and gives insightful outcomes comparatively.

Dashboards were originally established for the automobile industry, though, now they are accepted by most industries. But sector like banking is still using the old interface for daily operations and have not adopted the modern and advanced techniques and tools of the dashboard.

For this report, we aim to explore the advanced features of the modern interface that will be insightful for banking management and develop a dashboard using new techniques.

PROBLEM DESCRIPTION AND SOLUTION OFFERED

After carefully analyzing the dashboard of Indian Bank, one thing can be said that the dashboard lacks certain KPIs which are necessary to be addressed. The dashboard is not interactive but also it is complex as well. The dashboard's major task is to give effective solutions to the most complex data they have. It is necessary to dwell on those KPIs which are important to the bank. With the help of this project, we will be able to make a prototype dashboard that will address the existing KPIs and also the KPIs which are missing. It will help to make the whole system interactive and easy to understand for the senior management of the bank.

EXPECTED OUTCOMES

After the pandemic, the world has changed, and it is no doubt that the banking sector in India did make some policy changes. Regardless of the current situation, a bank must know the impact of the policy that they have implemented. To review the policy more efficiently, a dashboard will most certainly help the bank in taking any further decision regarding the policy. For example, a bank gives a cashback or any additional coupon after 3 transactions done online using their application. The banks can analyze the impact of this strategy by seeing the data before the strategy was implemented and after that. This project will help the banks to make an effective dashboard considering the KPIs and policy changes that banks make and help them to analyze the effect of the same.

What does the study say about the use of dashboard in the banks? Is it necessary? Yes, says the available literature. We have study and tried to identify the literature review on dashboards. We found that according to the research a dashboard is used as an interface where the data is showed on a net page that is connected to a record, which permits the report to be continually updated. It is stated that a dashboard can examine the past, current and future position of the bank, report information to management and expand the quality of the important decisions and give additional time to analyze statistics.

The dashboard is projected as a provision to enable decision makings, such as monitoring the sustainability of the life cycle and its products and levels of consumption **(Traverso et al., 2012)**¹. In addition, as non-specialists who are beleaguered by scientists and experts are part of the procedure of making a decision, the vibrant performance of this information is an obligation **(Traverso et al., 2012)**, which strengthens the importance of using the dashboard to utilise and sort data efficiently **(Donhost and Anfara Jr, 2010)**². Besides, the increase of dispersed decision-making has augmented the importance of investigating the effects of the decisions being made by managers at the operational level, and not by the executives **(March and Hevner, 2007)**.

¹ The Operational Process Dashboard for Manufacturing, Gröger, Christoph

² COMPARATIVE STUDY AND REVIEW OF PRINCIPLES FOR DASHBOARD DESIGN, Sindhu, Krupa

According to the research, we conclude a dashboard is a tool for banks that gives a comprehensive solution in banking analytics that helps to transform complex data into easy and meaningful insight to make important decisions.

This research is based on different sources such as papers, articles, books by using various sources such as google scholar, research gate and other verified sources with available data by typing the keywords “use of banking dashboard”, ”banking operational dashboard”, “banking KPIs”, “banking operations” etc. to examine the usage of dashboard in the banks that give insightful outcomes to the bank’s management.

The study shows there are different definitions for the dashboard, each sector defines dashboards by the way it is used in their organisation. Here, we define this banking dashboard as the dashboards created by selecting key performance indicators and preparing the data based on the real-time banking operations that show nicely crunched data.

Moreover, this study supports the operational dashboard to opt. **(Rahman et al. 2017)**³ have founded that 13 papers from 23 published papers are nominated by the Systematic Literature Review from 2010-2017 are operational dashboards. The rest 6 have are tactical and 3 papers are of strategic dashboards and 1 paper is a mixture of tactical dashboards and operational.

According to **(Principles for the design and development of dashboards: literature review)**.

³ Modelling human resources dashboard with balanced scorecard in customer and financial perspective (case study: Sepah Bank), Peidaie, Mir Mehrdad

The operational dashboard is well known for speed and consistency of analysis, transparency of data information, monitoring the activity of all operations, measuring and detecting relevant information.

Using a literature search (**Case Study of TMB Bank**) suggests identifying the ideal characteristics of an effective dashboard, exploring the current reporting system and identifying the missing elements to fill the gaps to enhance the current reporting system.

SUMMARY OF FINDING OF LITERATURE SURVEY

The existing dashboards do lack certain KPIs which are crucial for any bank to look into before making decisions. The KPIs for customers are limited. Certain characteristics which are ideal for KPIs are missing from the Bank dashboard. The dashboards are an essential part of any successful company to solve any problem with ease. In India, the dashboards are not used as much as they are used in Europe and in the west. Either it is a lack of awareness or lack of technical knowledge to handle a dashboard. The banks in India lack interactivity which makes the dashboard easily readable. The shortage of skilled data professionals has aggravated the situation. Many banks are still using old methods that waste valuable time and hinder data integration with analytic tools.

Similarly, in this study we identify and target the Key Performance Indicators KPIs, ideas which will be insightful for the bank's senior management are described, making an analysis of banking operations using performance indicators in the dashboard and at last, re-classify the available KPIs in the current reporting system and suggested frameworks. Designing the dashboard using existing and new performance indicators by visually displaying the dashboards in the existing literature.

The design module means building a model or outline then emerging the appropriate system of measurement while data are the definite inputs then show data visualisation to direct both data and design (**Harbour, 2011**).

This paper defines the dashboard as a layout of graphical presentation and visualization of any data which is presented systematically and meets all the purposes and combined data and represent it visually on the single format known as dashboard. To keep a regular check and monitor data information of current and past performance and measure timely change. **According to Wexler et al. study “Dashboard is a visual display of data, which is used to facilitate understanding, and monitor conditions, which entails narrative visualizations and infographic elements”.** The dashboard is not just for one organisation or one industry, it can be used in every domain to manage and monitor daily, weekly, monthly, or yearly operations in the field of banking, business intelligence, corporate, data, hospitals and more. The dashboard is designed differently for each sector according to their needs and objectives. Some industries can use the dashboard for visualisation, graphics or to work with data while others can use it for tracking, monitoring, or using advanced technology etc. Because of this, there is a pool of software available to make different types of the dashboard with modern techniques and advanced features.

The dashboard has been adopted by each sector as an advanced feature of technology in growing industry as it has new interactive interfaces, data connectors, advanced software and tools which is user-friendly and supports decision making, tracking in real-time, measuring and easy way to see daily operations. The dashboard has turned complex data into an easy visual graphic that is easy to understand, analyse, predict and make informed decisions with the help of business- intelligence dashboard tools.

FEATURES THAT MAKE A DASHBOARD IMPORTANT FOR ANY BUSINESS TO USE:

Data transparency – The most valuable asset of any firm is its data. However, it will be useless if no one can comprehend or use it. A well-designed dashboard gives us instant access to all our key KPIs.

Access to data – A dashboard, as the name suggests, combines many data sources, including Excel, into a single interface. As a result, we will be able to see a thorough overview of our company at a glance. Even better, it cuts down on the time it takes to produce reports, allowing us to save time.

Better decision making – Dashboards provide an unbiased picture of not only the company's overall success but also the performance of each department. If each department has access to the dashboard, it can serve as a springboard for more discussion and better decision-making. To increase client acquisitions and boost demand generation, the sales and marketing departments, for example, might connect their data and experiences.

Accountability – While it's always wonderful to see what we are doing right, to improve our performance, we also need to see and comprehend what we are doing incorrectly. Business dashboards can show us where our problems are, and provide us with the data we need to fix them. They can also hold different departments accountable for both the ups and downs by making the dashboards visible throughout the firm.

Interactivity – A dynamic experience is provided by some of the top dashboards. Rather than presenting static data, we and our users may filter it, interact with charts to monitor changes over time, and even utilise an ad-hoc component to make changes

on the fly. That means we can obtain as much or as little information as we like on individual parameters.

Gamification – The metrics, whether it's website traffic or product sales, are the important numbers we want to keep improving. The most successful companies have been able to gamify various business indicators in order to boost customer retention. If we are thinking about gamification, business dashboards can help to track our progress.

The importance of the dashboard in our project report

Now, talking about how the dashboard will help in our project report, we are proposing an idea of the design of an operational dashboard that may help senior management of the bank.

The dashboard will support management in informed and effective decision making and eliminate biased and uninformed decisions which mislead the target. It will help in working towards the objective and support measuring performance according to it. Management can take advantage of visualisation tools to make the data accurate, user-friendly, less complex and easy graphic representation.

This template shows how our dashboard will be helpful and what work it is going to perform.

Purpose of the dashboard - Insightful to the senior management using banking KPIs and metric.

Gaps in performance- Not based on real data with real-time performance.

Dashboard users- Senior management of the bank

Goals to be achieved- To track daily operations using KPIs and make an informed decision towards the goals -

State of the data infrastructure- Excel sheets, Banking KPIs, Tableau

Data latency requirements- Sample dataset using banking Key performance indicators.

Data storage and several data sources- Open file of dummy dataset.

We have collected our data by three methods :

1. Studied the dashboard used by the Indian bank and tried to extract the KPIs used by the banks, not only those KPIs which were used also the missing elements of the dashboard and missing KPIs which can be included.
2. Browsing banking KPIs using literature studies and web.
3. Discussing selection and implementation of metrics with bank's associate and colleagues.

We were not able to collect the real-time KPIs as the bank did not allow us to collect the data due to the privacy and banking norms. So, we have collected our data based on our studies and research. We have taken help from the internet to make our sample data and display it through the dashboard using visualization techniques. We have used tools to perform EDA on our data to process, clean, filter and format in a systematic manner for presentation.

In addition, we have taken a set banking KPIs list and selected five KPIs to connect with the dashboard using tableau. We have made a dummy data set after selecting the KPIs and conducted EDA on the same by using Microsoft Excel.

DATA COLLECTION

To design an effective dashboard the selection of the right metrics and KPIs is very important, the design will not be useful for the management, if the data is not accurate and has no relevance to the bank. No matter how good the visualisation is if it is not connected to the right KPIs selection and does not provide meaningful insights it will just end up being a good display and not useful.

So, we have collected and defined appropriate performance indicators for our operational dashboards. We have selected the KPIs which will give a better understanding to the management of the bank. Here, we have added only those KPIs which were missing from Indian Bank's Dashboard. We have made a sample dataset using MS Excel with dummy numbers.

The first step we have taken in creating data for our dashboard project is nailing down the missing KPIs from the bank's dashboard. The 5 KPIs we have selected are-

- Revenue
- Total deposits
- Total volume of accounts
- Sales per Branch
- Client Survey score

KEY POINTS CONSIDERED FOR SELECTING THESE KPIs

To create a dataset, we have considered the following:

1. To determine the end goal

To create a useful dataset, we have implied KPIs which will help the bank's senior management. To achieve this objective, we have made a dummy dataset, using Excel techniques connected KPIs with our objective that will be strategic and impactful to the bank. To have a clear picture of having the insightful data that will be displayed without working towards an undefined audience and target. It will waste the efforts, time, energy, money and resources altogether.

2. Identify what information is already available on the internet or other sources

Before creating our own dataset, we have searched for the available information through literature reviews, banking dashboards, articles, sample dataset sites. But in our case, very little information was available for the banking operations dataset for the bank's management. So, we have created our own dummy dataset to include all the necessary data that will be needed for the dashboard and filtered the dataset on many parameters.

3. Collecting supporting data

We have collected additional information to select and create a KPI by the Indian bank dashboard. This information has helped us narrow down the search and guided us to the missing banking KPIs in their dashboard. And pinpoint six metrics that will benefit our senior management to track based on their performance, strengths, weaknesses, opportunities and threats.

4. Analyzing goals for the KPI

If we fail to analyse the goal, it will not directly result in a bad decision of selecting a certain KPI. But on the contrary, the data created can help to recover performance for the future. By recognizing the performance and inadequacies, management can make modifications within the process.

5. Delegating responsibility for KPIs

Before finalising KPIs we studied so many moving factors with KPI development and maintenance. From creating a dummy dataset to do filtration, assessment, data collection and interpretation, monitoring and presenting of KPIs on the dashboard for the management.

The example of selected KPI format

Name of the KPI: Client satisfaction score

The goal of the KPI: What approach will the KPI measure and how will it help the senior management of the bank?

The KPI measures will display how well or how poor the ratings are given by the customer for the banking services and management can take the feedback and can boost customer satisfaction rate.

Audience: To whom does the data help and presented?

The data will be presented to the bank's senior management.

Who can access: To whom the data is accessible?

Anyone associated with a bank, designed especially for senior management.

Questions to inquire for Key Performance: What queries does this KPI answer?

The question answers that How happy our clients are with our banking services.

Usage of the KPI: How do you mean to use this data?

The management board will utilize this information to assess the relationship with our clients.

Sources of the data: How have we collected this data?

We have created this data based on the customer feedback form.

Frequency of reporting: How frequently will this KPI report?

This KPI is based on customer feedback. The report can be made daily or monthly.

Targets of the KPI: What is your target for this KPI?

Our target is to rise the customer satisfaction rate and make it in a positive range.

KPI limitations and usefulness: Does this KPI is useful for management or does it have any limitations?

As the data is not original and based on dummy data. It cannot be more but gives the idea of the correct rate on the level of customer satisfaction.

Negative significance: How could this have resulted in a negative influence on this data?

There will be some customers who will give negative feedback for the services because they will be unsatisfied.

Date of expiration: When will this indicator expire?

The KPI will be reviewed every day or month to get an average scorer to ensure it remains relevant.

In this project report, we are designing an operational dashboard. Here, we are defining design as the key to any data that is represented visually. A well-planned and designed dashboard can convert the dummy data into an extremely well-formatted data design by using catchable graphs, themes, colours, format and font. When data is represented in a well-designed manner with graphics information, it becomes easy for the management and organization to observe, predict and analyse.

The design of dashboards plays a vital role. Choosing the right colours that can improve the graphical representation of dashboards, misusing or overusing certain colour and theme palettes can harm the display design to decision making. Using eye-tracking technology is as important as collecting the right data, as it is said that the haphazard use of colours in the dashboards makes it complex and non-detective to make an appropriate decision.

DESIGNING OPERATIONAL DASHBOARD

Following are the reasons to choose an operational dashboard for designing:

We have chosen the Operational dashboard for our design because it is well known for its fast-paced work. We have decided to work on the operational dashboard as it is going to track metrics performance against predetermined targets set by senior management. Here we have compared all the types of dashboards and resulted in the data updates very frequently in the operational dashboard. The operational dashboard is designed to be observed numerous times throughout the period. They are repeatedly used for monitoring the progress of the set target.

We are designing the dashboard for the bank's senior management, so we need to select the dashboard that helps to track the current performance of the KPIs, sometimes minute-by-minute. This dashboard can also be used to send alerts automatically when deviations occur from set standards. It collects more information and details of the data without using too many drill-downs. Bank deals with daily operations, so an operational dashboard is a perfect fit for our theme design as it ensures that all banking operations are moving towards the target.

BENEFITS OF AN OPERATIONAL DASHBOARD

1. Supporting Proactive Management
2. Permitting At-a-Glance
3. Perceptibility in Real-Time Fostering
4. Continuous Improvement in Every Activity

a) Consistency

- It is used to upsurge consistency and speed of analysis
- It is used for transparency of data and information

b) Monitor

- It is used to monitor the information of groups and individual
- It is used to monitor business activity
- It monitors and detects applicable information
- It measures the performance of each

c) Communication

- It delivers feedback on the performance on each level
- It helps in extracting useful information from the group.

d) Analysis

- It is used in analysing the learning outcomes
- It helps to analyse the own information of the user
- It is used to analyse all the effects

VISUAL FEATURES OF OPERATIONAL DASHBOARD

- It has a screen feature which fits on the single screen
- It shows percentage indicator
- The use of graphical presentation using a bar, line, network, pie, gauge, spider, Trend.
- It displays the additional graph like a concept map
- User can insert tables
- Use of various filters.
- Use of badges
- It has the feature of zoom in and out
- User can give ratings
- Accessible calendar feature

- It has an attentive mechanism

HOW TO CHOOSE OR DESIGN THE DASHBOARD

To design or choose and incorporate the correct KPIs to our dashboard, we have ensured that our dashboard design meets all the required expectations that help management with detailed information, that we have considered the following key point in selecting the design and correct data.

FACTORS OF A DESIGN

Following are the factors on which our dashboard design is based:

- **Simplicity-** We are ensuring to eliminate unnecessary complex themes and irrelevant data that makes it difficult for the user to use and implement. Simply designing the dashboard is our first principle
- **Design for the target audience-** The design of our dashboard is for senior management of the bank, so we are focusing on banking KPIs to ensure good design and utility which may help management to track and monitor metrics in real-time and control actions accordingly
- **Implement correct data on the correct position -** Databases are collected and manipulated to make the data logically organised to ensure easy implementation. We have made our own dummy data to implement on the dashboard in the right eye-catching position
- **Meaningful-** To make the data meaningful, selecting data and the KPIs as our supporting framework for the dashboard was the foremost step taken. For a highly efficient dashboard, we have arranged the data in an informative and meaningful manner to be displayed with proper graphs patterns.

- **Usable-** The main purpose for making this dashboard is to get clear, concise, goal-based information, to make it usable and choose a simple way to present the data, to get a better understanding. To enable the management to perform basic analyses and track KPIs and get the proper idea by simply viewing the dashboard.
- **Quality-** Maintaining data quality by having accurate information, timeliness and relevance of the metrics. Displaying data with quality will make the dashboard more accurate.

DESIGNING OPERATIONAL DASHBOARD FOR SENIOR MANAGEMENT

- **Performance measurement-** The dashboard will help the management to measure the performance of the KPIs by analyzing the current performance with set targets. This will help management to numerically measure performance, which will offer accurate data that facilitates analysis, and helps them to improve the quality of performance and take strategic actions.
- **Decision making-** This dashboard helps the senior management in effective decision-making as the data is integrated and interpreted, which transforms it into useful information. This dashboard will be the support mechanism to facilitate multiple avenues of decision making to the management.
- **Monitoring the target-** The set target is compared to the current performance of the KPIs through data visualisation in the operational dashboard as it is designed to be monitored banking operations multiple times throughout the day. They are often used to monitor progress towards a target.
- **Change in plans/ policies-** The dashboard displays and tracks the current performance of the metrics which is monitored by senior management and if there are any deviations in the performance, the management will change the implementation of the current metrics to others. Switch of KPIs or change in plans will help management to cut losses and make future strategies to run the organisation and improve risk management for the banks.
- **Increased accuracy of reporting-** The dashboard of the senior management shows the real-time metrics, which is efficient and accurate for reporting. There is no risk of data fraud or manipulations. It shows the actual change in performance and allows the management to analyse and make actions accordingly for the betterment of the bank.

DASHBOARD GRAPHS

Design of the graphs we have used in our dashboard. These graphs are specifically taken for individual selected KPI.

1. Line Graph

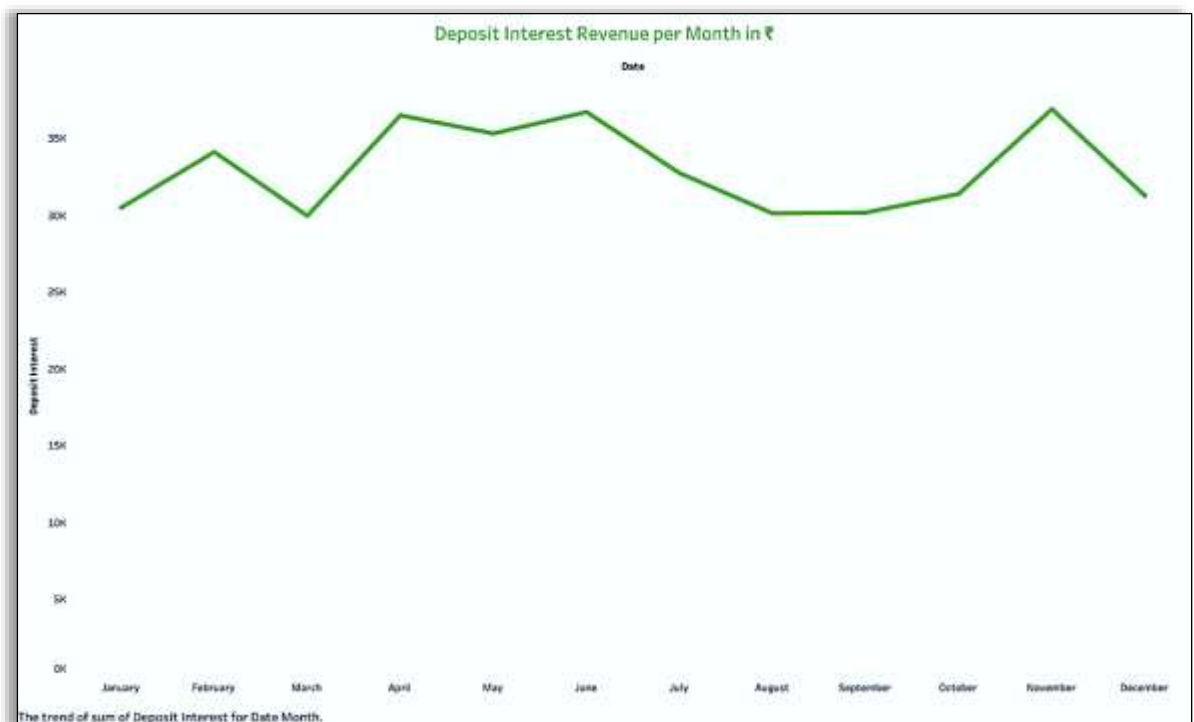


FIGURE 1: LINE GRAPH

The above graph shows the monthly deposit revenue distribution. The Line graph gives a detailed view of the whole year. One can hover the mouse to see the exact figures when seen on an electronic device. As it is dummy data there's no analysis to it.

2. Pie Chart

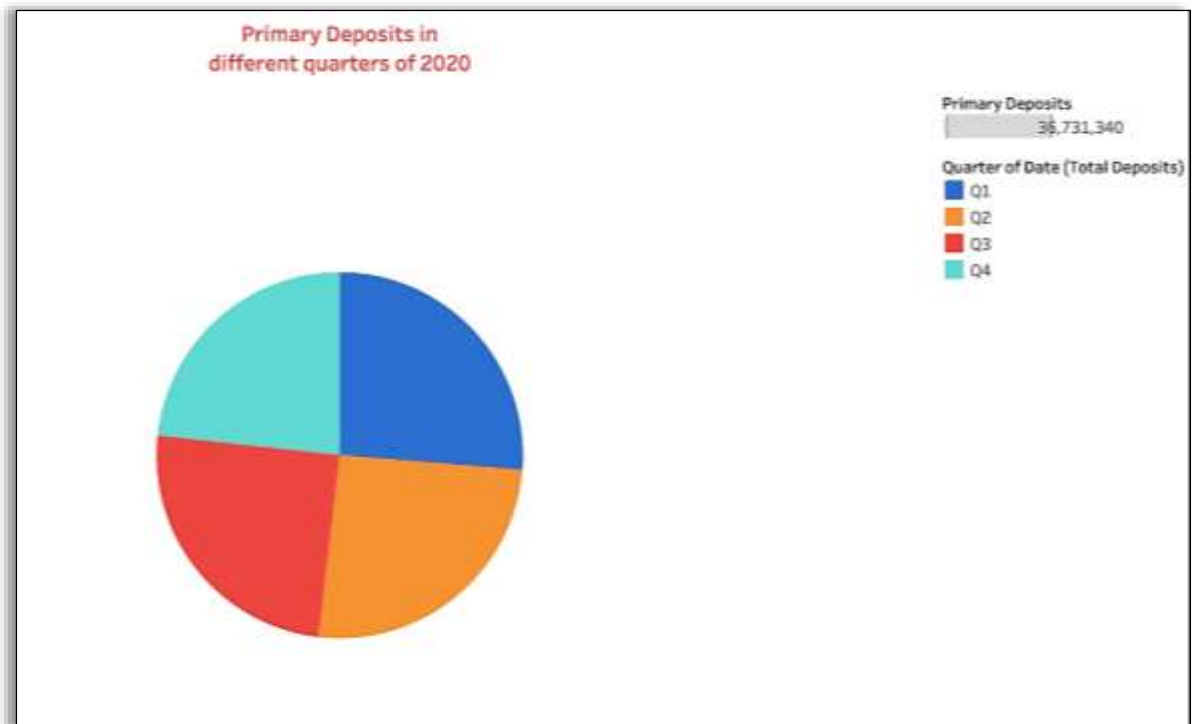


FIGURE 2: PIE CHART

Another useful EDA figure we can use to make our dashboard more interactive is Pie Chart. The above chart tells us about the four quarters of 2020. The distribution is about Primary Deposits.

3. Bar Graph

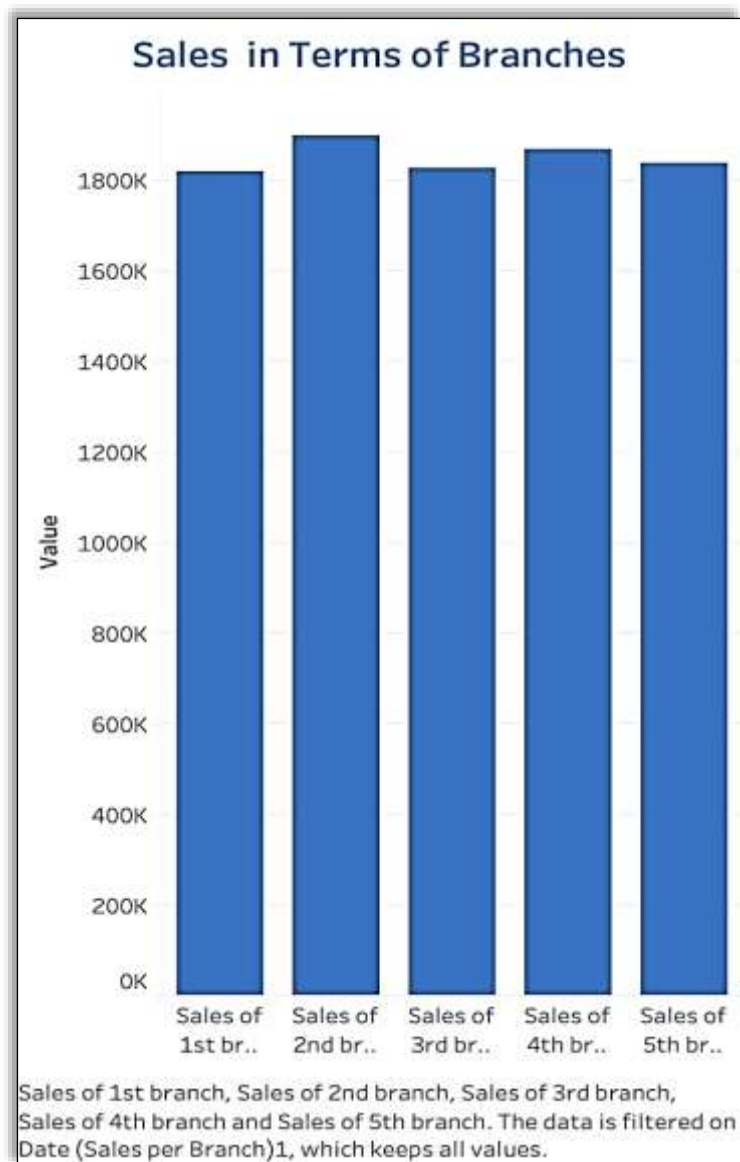


FIGURE 3: BAR GRAPH

The above graph is a representation of Sales. It gives us a comparison as to which branch is doing better and which branch is not performing up to the mark. Although the graph is a yearly comparison but can be drilled down to a quarter, month or even days.

4. Showing comparison using two graphs

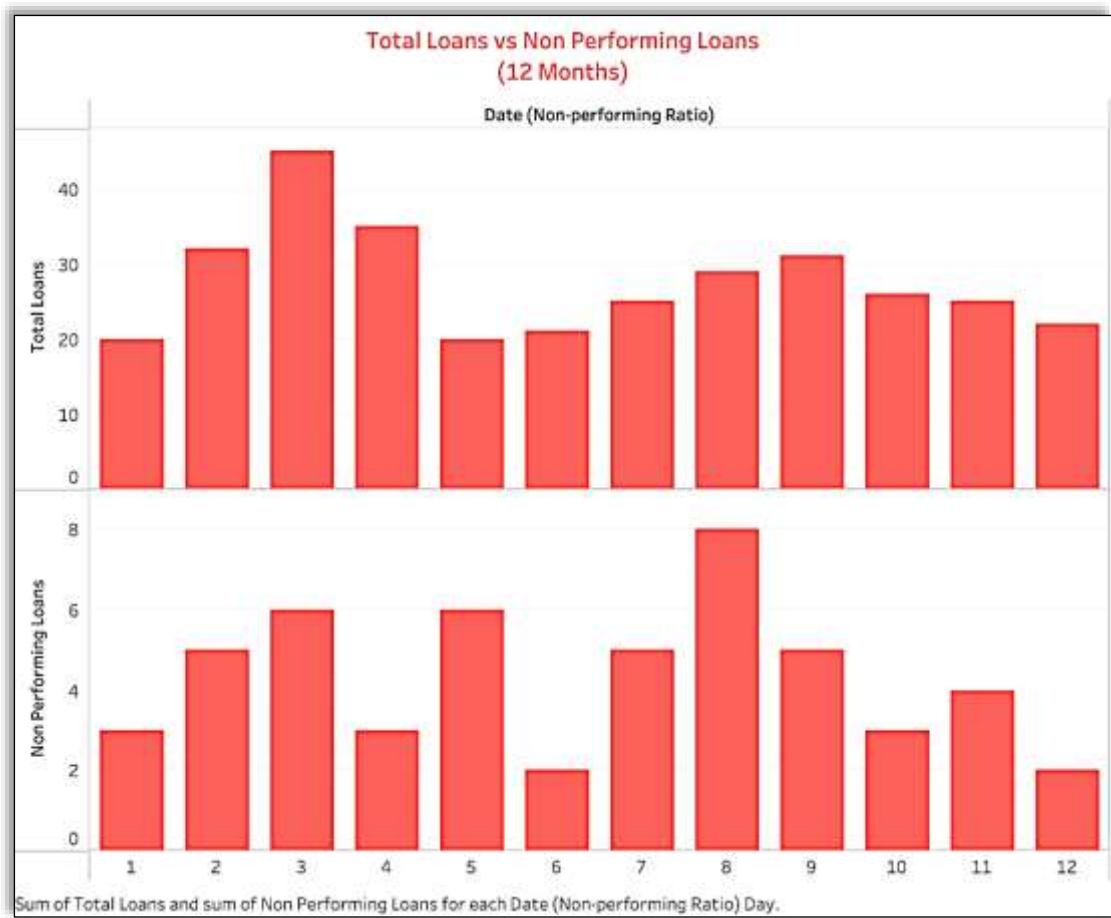


FIGURE 4: COMPARINING TWO GRAPHS

The above graph is a comparison of Total loans in a month to non-performing loans in a month. It is important to notice that it is a monthly comparison but can be drilled down to dates as well. Again, this is dummy data and we cannot considerably do any analysis on it.

There are so many software's that are available in the market for designing a dashboard. To choose the best software for our project report, we have pinned down the most common and popular software- Tableau and Power Bi. And compared each to find the most suitable software to make our operational dashboard.

The software has progressive data storing keys and data mining tools that enable us to access and connect our data. The software has advanced features that organize and systematically analyze our dataset. Software like Tableau and Power BI displays a variety of features with modern techniques which helps any organisation, company, or management in better understanding and visualizing and making informed decisions and taking strategic actions.

As there is a variety of tools available for visualization in the market. The demand and competition have made the dashboard tools more advanced and easy to use for each business. Visualization allows us to display complex data in an easy format and discover relevant trends and patterns with the help of the dashboard. In Power Bi and Tableau we can see a huge variety of tools accessible to display statistical data through infographics, pie charts, bar charts, and more. Any business can choose the design or custom their own dashboard with the help of their modern features. This software allows different companies to create and manage their dashboard and customize multiple dashboards and build their own analytics dashboards for their required needs.

TABLEAU AND POWER BI

Tableau and Power BI, in the business intelligence market, is a sophisticated and rapidly increasing data visualisation tool. It enables us to convert raw data into a format that is simple to comprehend.

Making a dashboard on Tableau is very fast because of the fast data analysis, and the visualizations are created using advanced features, statistical tools, graphs and worksheets. This helps any professionals to understand the data better and in an easy way at any level in an organization. Whereas, Microsoft Power BI is another popular business intelligence tool that helps companies to handle and collect data from different sources and display visualization after completing the cleaning and integration process. It also provides multiple software connectors and services.

Tableau is known for its data visualisation capabilities, whereas Power BI provides a variety of data points for data visualisation. Tableau can manage a large volume of data with superior performance, however, Power BI can only manage a small amount of data.

Tableau performs best when there is a large amount of data in the cloud, but Power BI does not perform better when there is a large number of data. Tableau employs MDX for measures and dimensions, whereas Power BI relies on DAX for calculations and measurements.

Tableau is used by analysts and experienced- users mostly for their analytics purposes and Power BI is used by both naive and experienced users. There are some similarities and different features for Tableau and Power Bi

FEATURES OF TABLEAU

1. Data blending
2. No need for technical knowledge
3. Real-time analysis
4. Data collaboration and data notifications
5. DAX analysis function
6. Patented technology from Stanford university
7. Toggle view and drag-and-drop
8. List of native data connectors
9. Highlight and filter data
10. Share dashboards
11. Embed dashboards within
12. Mobile-ready dashboards
13. Tableau reader for data viewing
14. Dashboard commenting
15. Create "no-code" data queries
16. Translate queries to visualizations
17. Import all ranges and sizes of data

FEATURES OF POWER BI

Here, are essential features of Power BI

1. Dashboards that can be customised
2. Sets of data
3. Documents and reports
4. Pane of navigation
5. A question and answer section
6. Buttons for help and criticism
7. Reporting and analysis on an ad hoc basis
8. Analytical Processing in Real-Time (OLAP)
9. Indicators of trends
10. Authoring interactive reports
11. Tools for comprehensive reporting and data visualisation
12. Real-time dashboards that assist business owners in resolving issues as they arise
13. Offers Power BI installed, azure service that permits applications to connect and interact with Power BI
14. The Q&A highlight of Power BI permits users to pose inquiries utilizing natural language to find solutions in a particular graphical structure.
15. Content Packs: for imparting dashboards to the group.

TABLEAU AS OUR DESIGNING TOOL

We are using tableau for our project because it has certain benefits that would help us in making a dashboard.

- Less expense of training
- Very quick and simple to make data graphical representations
- Loyal customer support
- Capabilities of interpreting data and storytelling feature
- Tableau offers for creating data visualization
- It assists you with combining shapes and cleaning the dataset for analysis.
- It assists you with taking care of a lot of information and data.
- Uses prearranging dialects scripting languages like Python and R to avoid complex table computations.
- Allows clients to make reports, dashboards, and story-telling feature utilizing Tableau.

OTHER TOOLS

We found some disadvantages in using other tools like PowerBi, Python, R

- In PowerBi reports and dashboards are shared with operators having similar email domains. It does not mix imported data, which is accessed from real-time

connections. Power BI can't accept file sizes larger than 1 GB. And the dashboards created in PowerBi never accept or pass user, account, or other entity parameters.

- We found complex use of coding and packages to make visualisation and graphs which makes it difficult to use python language for making our dashboard
- Similarly to use R language we have to do heavy coding to use visual graphics and import data in the correct formatting to run the code and import ggplot and more packages to make the dashboard. Using R or python makes it difficult to create an interactive dashboard than tableau comparatively

TABLEAU VS POWER BI

- Tableau BI can deal with an enormous volume of information with better execution while Power BI can just deal with a restricted volume of information
- Tableau is recognized for its data conception functionality. The users of this software can use 24 diverse kinds of visualizations in Tableau. Though, PowerBi offers numerous data facts to suggest data visualization. It is offering more than 3500 informed data points for narrowing down the dataset.
- The software tableau provides outstanding customer support and has a huge community forum for discussions while Power BI gives restricted customer support to its users with a free account of Power BI.
- Tableau works best when there is tremendous information in the cloud though Power BI doesn't work better with a gigantic measure of information
- Tableau is utilized by Analysts and experienced clients for their investigation purposes and PowerBi is utilized by both guileless and experienced clients

- Tableau can interface with various information sources though Power BI associates restricted information sources while expanding its information source connectors in monthly updates.
- Tableau is appropriate for medium and large sort of organization and Power BI is reasonable for small, medium and enormous kind of organization.

PHOTOSHOP

Another tool that is used here but has no relation to the dashboard is Adobe Photoshop. Photoshop is an excessive tool for editing photos and creating logos and templates. Photoshop has hundreds of tools that will help the user to create attractive and interactive templates and designs. We have used photoshop to create background templates for our dashboard. Photoshop not only helps us create a background easily but it also helps us follow proper alignment and aesthetics which is much needed when we build a dashboard. There are certain tools apart from Photoshop which can help in creating a template for a dashboard like Adobe Illustrator, Canva (online photo editing platform), Photopea, etc. But Photoshop is superior because of its user-friendliness and the various tools that it offers.

DEVELOPMENT OF BANKING KPIs

These KPIs help to track the progress towards a goal. We have selected these KPIs as these were missing from the Indian bank dashboard. The KPIs are also effective for management use. These KPIs will help in monitoring the performance. These KPIs are selected based on the following qualities:

1. **Specific:** The selected KPIs are detailed, simple and clear, which will be insightful to be presented on the dashboard. These KPIs are specific to track the performance of the banking operation.
2. **Measurable:** These KPIs are quantifiable which can be measured through their performance. To measure the performance management keep track and monitor regularly.
3. **Achievable:** These all KPIs have achievable outcomes, which ensures that the banking operations work towards the targets, set by the management and are motivated to follow and fulfil set realistic expectations and show positive results.
4. **Relevant:** The KPIs we have chosen are completely relevant to the data, needed by the bank's senior management. All the KPIs are being selected by learning banking KPIs and their usage and outcomes.
5. **Time-bound:** These KPIs are based on dummy data for a sample dashboard, but the use of real-time KPIs is dependable on time. The KPIs should be monitored on the set time, daily, weekly, quarterly, monthly or on the calendar year, depending on each KPI.

6. **Evaluate:** Regular check on performance, to ensure the metrics are still working towards the right objectives that were set. And if not the performance can be taken into account and action to change the data, KPI or plan can be strategies towards the right outcome.
7. **Regular Monitoring:** Any performance can be measured and the right action can be taken if reevaluation of selected KPIs for any business organisations is done. For example- Senior management will keep a regular check on performance and reevaluate at specific periods to decide whether it's necessary to make changes to our banking KPIs so they're up to date, achievable, relevant and in line with our set objectives or not.

DEVELOPMENT OF INTERACTIVE AND CREATIVITY DASHBOARD

Dashboards are supposed to serve a purpose that it uses less space and time and gives the most efficient information to the people. One of the things we noticed while researching on Dashboard is that they are not interactive enough. They do take certain important KPIs but don't serve the purpose of presenting them in a way that people understand with ease. Creativity is also an important factor in a dashboard. It is not only necessary to have important KPIs but it is important to show them in a way that there are some valuable insights. Interactiveness and creativity should be given the right balance to showcase a perfect dashboard.

ADVANCED USE OF TECHNOLOGY

Dashboards are a gift from technology which we should cherish if made right. There are different tools with the importance of their own. Some of the important tools that we have reviewed in our research are Tableau, Power BI, R, Python and Excel. Tableau and Power BI are power-packed software that will give you tools to create the perfect dashboard.

The above developments are necessary for any company to follow if they are not already. These developments will help the company grow as they will help them generate better and valuable insights. These insights will further help the top management to take effective decisions. It will not only help them in generating more profits but the probability of error also decreases.

FINDINGS

When we have analysed the banking Dashboard of an Indian bank, we found that the following dashboard does not cover the complete set of KPIs which should be considered. The dashboard was not giving a clear picture of the performance and has failed to track the current performance. It does not record the past data to compare the performance, we found that there is a lack of banking KPIs for the use of senior management. One cannot track the performance by using the Indian bank's dashboard. The dashboard is not up to date with the use of modern technologies and interactive screens. The number of missing elements which was present in the dashboard cannot help any banking industry to track the daily operations and do not support decision making. We found the dashboard was at lower and middle level to monitor the current scenario. It is not insightful for top-level management. The senior management needs to have a dashboard that helps them to monitor certain KPIs with their performance, interactions, maintenance and more. To narrow down the search, we have studied the types of the dashboard to find which will be more insightful for the bank's senior management. By the study, we found that the operational dashboard is the most suitable dashboard for the use of the bank's management to monitor and track all the operations which will help them to build the target, policies and achieve it. Then we have selected some KPIs to design the dashboard and found the advanced software tableau to make an interactive modern dashboard with new techniques and advanced features for the missing elements.

LEARNINGS

We have learned about the different types of the dashboard, various ways to design a dashboard, using new and advanced tools and techniques. Selecting banking KPIs which fulfil the requirement needed by any business and selecting based on the following factors such as audience, targets, drill-downs, users and more. Let us discuss all the learnings.

DASHBOARD

A dashboard is a tool used for business intelligence and information management. A dashboard keeps data organized, store, and show significant information from numerous data sources into a single interface using visualization.

An actual dashboard focus on the highest level of data related to the complete success of the business. Moreover, in many cases, each metric supports the business most important measure: the lowest line. The business goal is to have a dashboard that not only communicates data but facilitates success through an easy understanding of business activities through the dashboard and proper alignment between divisions, makes responsible to each team and department to achieve set goals and targets, and assist operators in identifying zones that need instant action.

TYPES OF DASHBOARD

There are three types of Dashboards:

Operational Dashboards – This is the most widely recognized dashboard type, with measurements showing daily information identified in real-time. The core purpose of an operational dashboard is to deliver an exhaustive depiction of execution and a

complete performance report, which implies that one should combine a large amount of detail with less use of drill-downs.

Analytical Dashboards – Use information from the past to distinguish patterns that can impact future dynamic and decision-making. The dashboard enables interaction with the data on this analytical dashboard, it includes the use of drill-downs and pivot tables. The perfect audience for inspecting analytical dashboards are database analysts, as they classically require understanding to access the dashboard smoothly.

Strategic Dashboards – These dashboards track the performance of the KPIs to align the actions with strategy. This dashboard is used by the entire organization for creating a strategic dashboard. It shows the transparency of data which leads to increase unexpected benefits and motivation.

The dashboard we have chosen is the operational dashboard, the question may arise: Why is the operational dashboard chosen? The answer to the question is because the operational dashboard is more insightful for the banks as the data operations in the bank's updates more often and thus banks need the dashboard which can deliver monitoring and tracking the operations process frequently. Thus, this type of dashboard is designed in a way that the management can always monitor the recent progress, even on a minute-by-minute basis and thus always have an updated view every time throughout the day. So, it is necessary to use an operational dashboard in a bank that records all the operations performed and thus provides detailed insights to monitor bank activities that change frequently and also to track the KPI's and Key metrics constantly for the current performance.

In this project report, we will focus on the Operations dashboard for banks which help us give useful insight to the bank's senior management. The report will focus on the

necessary features of a banking operations dashboard and propose an outline to design and develop it. A dashboard is necessary for any company because of how it makes any data easy to interpret.

BANKING DASHBOARD

Banking Dashboard is nothing different from any dashboard. The only difference between a banking dashboard and any organization dashboard is the variety they use. An organization will use different KPIs than what a bank would use in its dashboard. The banking dashboards are created by selecting key performance indicators and by preparing the data which is based on the external real-time banking operations that show nicely crunched operational data.

In the banking dashboard, choosing KPIs display banking outcomes, by keeping a regular track of customer trends, and financial performance will help the top management in analysing performance, setting targets and making future decisions.

KEY PERFORMANCE INDICATORS

A Key Performance Indicator monitors and measures the performance of the business operations and activities that lead to a strategic planned goal.

BANKING KPIs

Banking KPIs are the quantitative values used to determine how efficiently and effectively specific banking operational goals and targets are achieved by the banking industry over a convinced period of time which helps the senior management to monitor each banking operation to take further actions of the bank's interest.

Some of the common Key performance indicator used in banking dashboards -

1. Revenue

2. Expenses
3. Operating Profit
4. Efficiency Ratio
5. Operating Expense
6. Total Loans outstanding
7. Total Deposits
8. Non-performing loan ratio
9. Loan yield
10. Banking tech infra expense
11. Return on equity
12. Return on assets
13. Asset under management
14. Return on asset
15. The total volume of accounts
16. Sales per branch
17. Client survey score
18. Account setup error rate

Banking KPIs are implemented in the banking industry to measure the performance of the metrics, staffs and their devotion to industry regulations.

BENEFITS OF MEASURING BANKING KPIs

1. Improve productivity and performance management of banking staff
2. Increase customer acquisition and retention
3. Improve customer experience and cross-selling
4. Reduce the amount of banking operations cost

RESPONSIBILITIES OF THE SENIOR MANAGEMENT

Roles and responsibilities performed by senior management of banks are explained as,

1. Perform administrative duties

The senior management of a bank is responsible for performing administrative duties, conducting banking operations and policies. These operations include how the bank performs its functions according to the policies and procedures governing operations such as lending requirements, mortgage requirements, opening an account, savings account rules, checking account rules, interest paid to customers and profit margins on money under the bank's control. The senior management is answerable to the customers, shareholders and the Federal Reserve Bank for violations of these policies. The management has several other additional levels of management. While the top management is ultimately responsible for the overall success of the operations and policy of the bank. Monitoring all the operations concerning the administrative goals.

2. Resolve complex issues

Resolving the issues that take place in the banks is one of the major duties performed by the senior management to maintain the decorum of the work. Complex issues such as changing business models, customer retention, security breaches, cyber-crimes, competition, a cultural shift in techniques is a lookout of senior management to cope up and maintain a work according to a banking regulatory and matching changing standards. To resolve all the complex issues senior management has the committee's to plan and find solutions for the challenges and issues taking place in the banking.

3. Evaluate credit and collateral files

Senior management is responsible to analyse and appraise loan requests in accordance with the prevailing credit policy and procedures and assess the types of risk involved as managing risk, business risk, financial risk, collateral risk and legal risk. Management carries out an evaluation of credit and collateral files to set the credit targets. They make sure that banks implement and maintain a set of policies and procedures to minimize the amount of capital tied up in debtors and to minimize the exposure of the banks to bad debts. Credit policies must be communicated throughout the organization, monitored and periodically revised to take into account changing internal and external circumstances for building collateral and evaluating by keeping a track record of the applicant's data and using asset value appraisals.

4. Documents and organize all financial transactions

Keeping data record of all the correspondence financial statements like financial transactions, reporting, all the internal document requests, and other dynamic documentation and stay compliant with the current laws and regulations by the bank's management through various methods using Softwares, Hard Copies, Paperworks, Human Factor, Audit trails, Regulatory Compliance. Bank's management keeps electronic and paperwork data records for the sake of proof of statements and documentation for organising the regular data and monitoring it. Bank's maintain all the necessary records of transactions between the RE and the customer, both domestic and international, for at least five years from the date of transaction for identification records.

5. Gather, compile and file reports for the management

Bank's perform daily operations which are evaluated in the performance reports. These reports are submitted to the senior management of the bank to evaluate and analyse the operations performed in the bank in order to achieve the timely target. There are different daily, weekly, monthly, quarterly, yearly reports for banking operations and each different team. The senior management gathers compiles and files these reports to analyse and measure performance, build and modify policies, plan targets, set new procedures to improve gains.

6. Screen, refer and respond to inbound calls and incoming mails

Management keeps the record for inbound calls to make their customer services better to enhance the customer experience and have constant feedback on the issues. The calls are typically fielded by the call centre or help desk which handles

the customer's complaint or request. Banks may have a toll-free or non-toll free number that customers can reach out to when they have complaints or requests. Senior management will look out for utilising the inbound calls tools and software to analyze the customer's request for increasing productivity, quality assurance, reporting and improving customer's experience. The bank processes the inbound call during the first interaction and will take follow up with the customer via email or over the phone again to resolve issues and enhance the productivity from feedback.

7. Evaluate proposals and submit them for approval

There are tons of requests for banking operations, policies, loans, credit, procedure, techniques, frameworks etc. with the bank management. The top management has to evaluate each request with all the background knowledge of the proposals and check their profitability, efficiency for the banks within the set frameworks and policies. Senior management mainly focuses on approving policy to approve the proposals with responsibility and formulate the approval from the perspective of the bank. Banks follow credit appraisal policies for approving credit requests. Once management finds the proposal productive, they can further pass the approval to the branch by collecting various data records and submissions.

8. Maintain all documentation with corrected deficiencies

Maintaining correct documentation provides input to establish proper financial records. Financial documents are pre-numbered to ensure all transactions are

recorded and accounted for. With proper numbering of documentation, tracing documents that relate to following up queries/claims and questions from customers. Senior management makes sure to correct the deficiencies which exist in banking documentation. They prevent, detect and correct misstatements on a timely basis. A deficiency in design, documentation and statements exists when a control objective is missing, or not properly designed so to monitor the correctness of the banking documentation is the duty of senior management to maintain all the records by following authorities and policies.

9. Maintain all records of payments and update

Senior management keeps all the records of the payment and obtains printed copies of bank statements, and gets timely updates for credits, deposit details, loans, customer requests, cancelled checks, approved checks, money in loans, money with the bank. Bank's keep the record for five years for verification, proof, banking history, identification history, tax inquiry, customer record etc. It is one of the major duties to monitor monetary transactions in banks and to keep control over the flow of money in the right direction.

10. Ensure compliance with all state, federal laws relating to banking

The foremost duty of the bank's management is to ensure that all the activities, operations and transactions performed in the bank comply with the laws of all state and federal. Senior Management is directly reliable to the government, state and federal for any misconduct, fraud performed in the bank. So, the management

keeps control over all the operations that take place should lie under the policies, procedures and laws of the bank.

INDIAN BANK DASHBOARD

The dashboard used by the Indian bank is bancs software, which has a very old interface that does not support interactive features. When we studied the Indian bank dashboard, we found a lack of creativity, interaction, does not support advanced features of new tools and techniques. The layout selected for the design is too simple and old which do not help the user or any management to monitor KPIs.

Here, are the banking KPIs we have seen in the Indian bank

1. Savings Account
2. Current Account
3. Housing Loan
4. Vehicle Loan
5. Debit card
6. Credit card
7. Point of sale
8. Bhim Adhar
9. BQM
10. Internet Banking
11. Mobile Banking

12. UPI

13. Life Insurance

14. Non-Life insurance

15. Mutual Fund

CONTRIBUTION

CONTRIBUTION WITH KPIs

After carefully analysing Indian Bank's dashboard and various other dashboards. An operational dashboard is an ideal fit for industries that are involved in providing services. These data reporting and business intelligence visualization tools monitor business operations that often change to track the current performance of the key performance indicators (KPIs). We have compared our dashboard to other types of dashboards, information in these dashboards updates more frequently on a minute-by-minute premise. Experts used this dashboard to monitor the progress towards a set target and it automatically generates alerts when deviations occur from set targets. The additional analysis and corrective actions are the foundation for any information. The operational dashboards additionally hold more information than different kinds of dashboards.

Contribution in the making of Dashboard

We have made a design of a dashboard that will be used to track the performance of the KPIs to give useful insight to the bank's senior management.

1. REVENUE KPI DASHBOARD

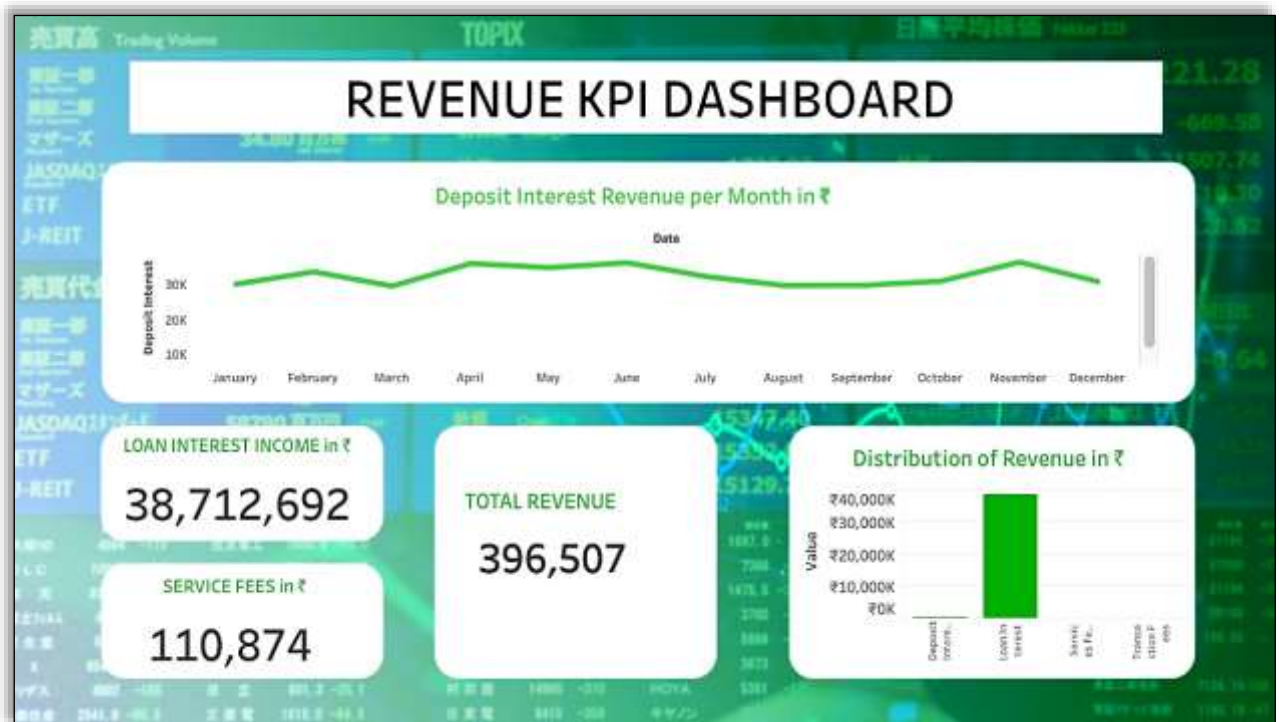


FIGURE 5: REVENUE KPI DASHBOARD

The above dashboard shows the followings:

- Deposit Revenue in terms of Months
- Loan interest income
- Service Fees income
- Total Revenue
- Distribution of Revenue

2. NON-PERFORMING LOAN



FIGURE 6: NON-PERFORMING LOAN DASHBOARD

The above dashboard shows the followings:

- a) Total Loans
- b) Non-performing loans
- c) Average of non-performing ratio

3. SALES IN BRANCH

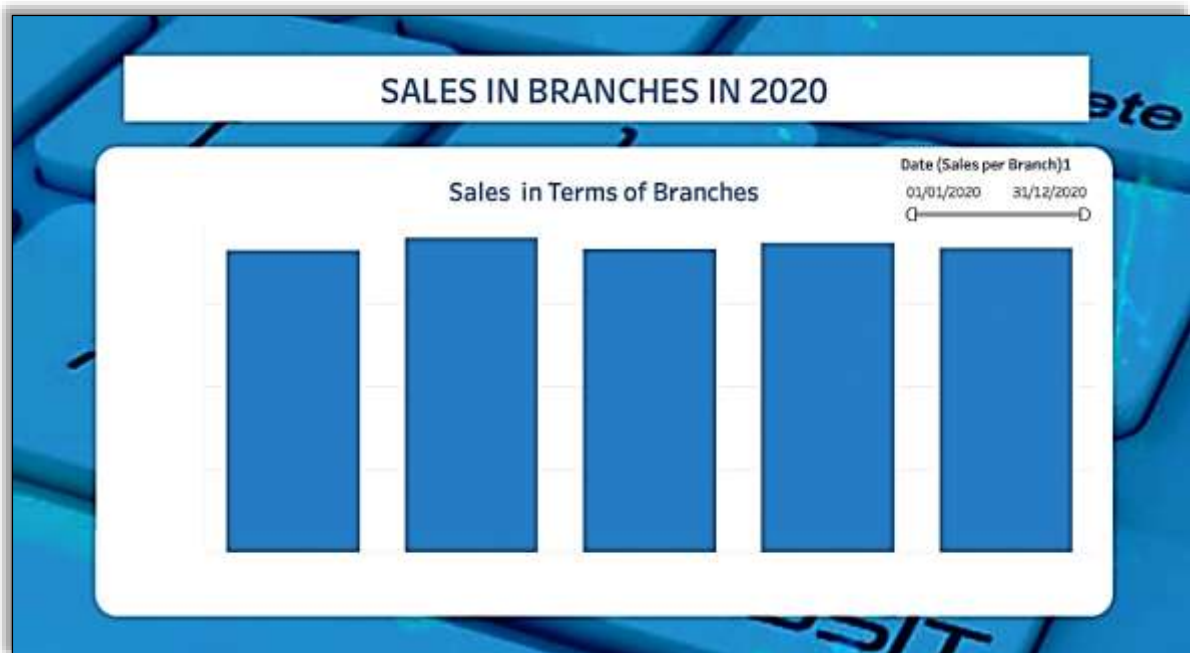


FIGURE 7: SALES IN BRANCH DASHBOARD

The above dashboard shows the followings:

- a) Sales performed by 5 different branches in one year.

4. TOTAL DEPOSITS

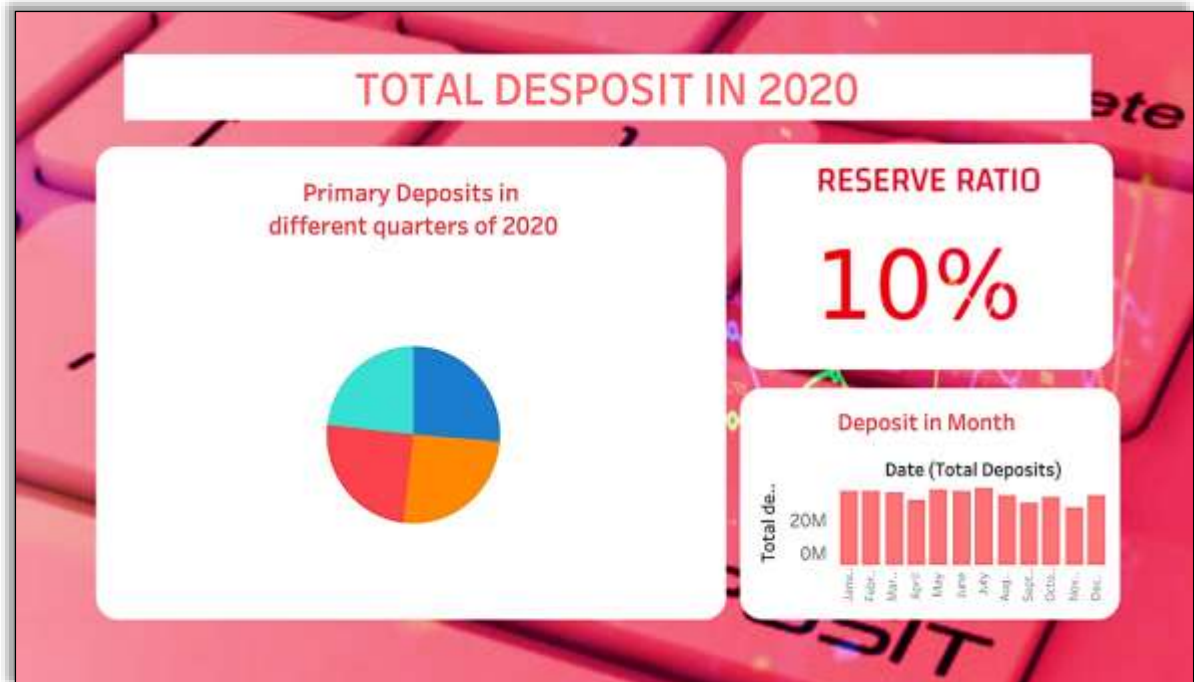


FIGURE 8: TOTAL DEPOSITS DASHBOARD

The above dashboard shows the followings:

- a) Total sales performed in 2020
- b) Primary deposits collected in different quarters
- c) Reserve Ratio
- d) Deposits as per the months

5. EXPENSES AND CLIENT SURVEY SCORE

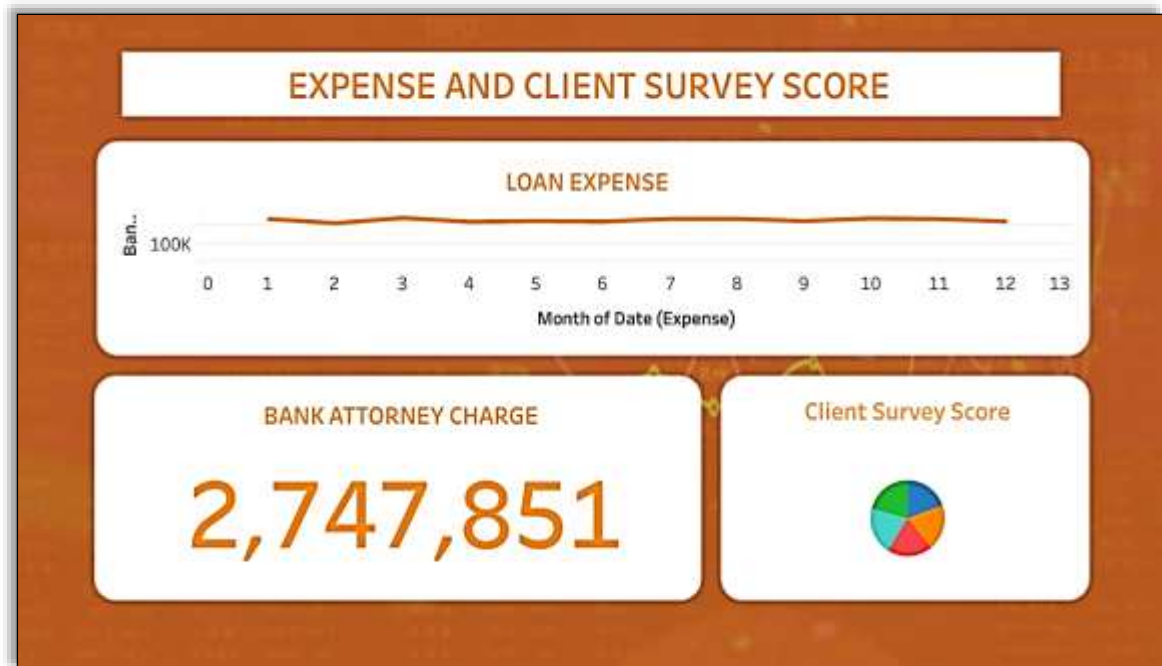


FIGURE 9: EXPENSE AND CLIENT SURVEY SCORE DASHBOARD

The above dashboard shows the followings:

- a) Loan expense as per months
- b) Bank attorney charges
- c) Client survey score

LIMITATIONS

Our report has several limitations that can be improved for further research. Our data was based on a dummy dataset. Unavailability of original data of metrics and KPIs due to the privacy issue of the bank. No official data, snapshots of the dashboard were allowed to use. No survey can be conducted with the senior management as they are not connected directly. No data allowed to take on banking operations. This paper is mainly designed for senior management, no other user can make use of it. We have used only five KPIs because of no availability of actual data. This dashboard is only developed for the banking industry, not useful for another. Therefore, we suggest more research study on other banking KPIs and to provide actual data. So, the dashboard can show the accurate real-time performance of the metrics and test the overall performance of the dashboard. We have only designed and proposed the idea to make an operational dashboard for the management. The study needs to be done on other dashboards to gain more knowledge on the dashboard performance and to know which is the better dashboard to make informed decisions. We hope to get the chance to take the study further and can inspire other organizations and researchers to discover this projected design.

CONCLUSION

This report has the following investigation and results.

1. Which type of dashboard, KPIs, design, is useful for the management to track and monitor
2. How should it be designed to simplify decision making and how insightful it is for the bank's senior management?

With the help of the existing research and study of banking operations and KPIs, we have developed an operational dashboard for senior management of the bank using a tableau with six different KPIs. And proposed a design, theme, layout to make a user-friendly, interactive dashboard.

We have identified five KPIs that will be insightful for senior management and designed a dashboard using simple, easy and advanced techniques and how the dashboard and KPIs are grounded in exploring existing research and to help in making decisions.

Our framework embraces:

1. Type of dashboard
2. Number of KPIs,
3. Making sample dummy data,
4. Processing data filtration,
5. Visual representation,
6. Advance tools and techniques and

7. Tracking and monitoring.

We hope this report can be insightful for the senior management of the bank, as we contribute to academia with the design of an operational dashboard and development of missing banking KPIs.

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CASE STUDIES

1. Student Loan

Our bank offered a lot of different loans to the people who had a bank account there. One of them that we were able to witness was Student loans. Someone who wants to go abroad needs to listen to how a loan is sanctioned to a student who is planning to study abroad. One of the main things is that he has an approval letter from the university he/she is planning to go to. Apart from that, another important aspect is that the person must have applied to a university that is in the top 100 universities according to their bank's guidelines. The loan is given to the student without any collateral involved but a parent is kept as a nominee. The CIBIL score of the borrower is -1 as the person is a student and doesn't have any credit history. The person applied for Queens College, which was a Top 100 college and helped him to get the loan sanctioned from the bank. Although, due to the pandemic the process was slow all the necessary documents were checked thoroughly.

2. Vehicle Loan

How do you buy a car? Some doubts are better cleared when you go to the bank on your own.

Vehicle Name: Fortuner

Price : 40,00,000

Loan: 35,00,000

The loan is given to a person who resides near our branch. His loan had taught us a lot of things. For eg when someone buys a car the car is hypothecated in the name of the Bank and not him. As soon as the loanee pays the amount the car is

transferred to that person. Apart from that, the manager had gone to the loanee's residence to double-check if the party was good enough to be given a loan. The CIBIL score of the party was up to the mark and had no problem but the bank had a policy of double-checking and going to the residence. The loan was passed in a week and the car was delivered to the loanee.

3. Card Blockage

Another major concern that technology has given is that of fraudulent activities. During our time in the branch, we saw various customers who either had problems with their cards being misused or being blocked due to their negligence. The former had more impact though. The misuse of cards was something that happened quite often and there were almost two to three customers who came there with a complaint that we had been looted because someone asked us about the OTP and we gave them thinking that we were talking to the officials.

TYPES OF ACCOUNTS

1. Dormant Account:

A dormant account is an account that has had no financial activity for a long period of time, except for the posting of interest. Financial institutions are required by state laws to transfer resources held in dormant accounts to the state's treasury after the accounts have been dormant for a certain period of time. The amount of time varies depending on the state. Accounts that can become dormant include checking and savings accounts, brokerage accounts, 401(k) accounts, pension fund accounts, and other accounts for financial resources.

2. Salary Account

A Salary Account is an account to which your salary gets credited. Usually, banks open these accounts at the request of corporations and major companies. Each

employee of the company gets their own Salary Account which they are required to operate on their own. When the time comes for the company to pay its employees, the bank takes the money from the company's account and then distributes it to the employers accordingly. So, what exactly is the difference between a Savings Account and a Salary Account? Purpose While a Salary Account is usually opened with the purpose of an employer crediting the salary to the employee, a Savings Account is opened to deposit money to hold or save it with the bank. Both Savings and Salary Accounts can be opened as an Insta Account.

ADVERTISING

It is an important part of dealing with people. They must sell policies and different insurance as well to keep the bank's profit in good figures. Most of the marketing is done through word of mouth. Although there are posters stuck on the wall there are separate staff for insurance. Another thing that we noticed was how an SBI Employee came to the branch and asked the Branch Manager to give him customers. It can be said that selling policies in Banks have now become a norm that almost every bank is following.

SOCIAL RESPONSIBILITY

1. Don't know how to write

There are instances when customers don't know how to read or write. They cannot practically do anything. Some of them are just helpless of the fact that most of the things are in English and they are unable to understand anything. As bank intern, we were taught that people who are of this category are to be given special service. Someone from the bank staff will help them in the whole process. The staff will understand the whole process of the person and will guide suitably. Staff will not

only guide but will also happen to help them fill forms that are complicated in nature.

2. Elderly

It is no doubt that elderly people are to be given special service. In our branch, the elderly were given special care. The elderly were given a seat and were asked about the work they are here for. If the work is on the ground floor and the person can do it themselves then no help is given apart from quick service. If the work is on the 1st floor, then it is advised that the person must be seated and he will be provided with the service on the same floor.

DASHBOARD

We were able to see Indian Bank's dashboard which was only accessible through Bancs software. Though many KPIs were covered, we in this project too have tried to make the whole dashboard better. We have given our inputs to make the existing dashboard better and designed it more interactively and creatively. The dashboard used by the Indian has no access to an advanced interactive interface. Here, we have designed the dashboard with advanced techniques using tableau to make an interactive modern dashboard that will give useful insights to the bank's senior management.