Hi my name is priyaranjan pradhan.I got around 4+ years of exp. In data analytics domain.my highest qualification is b-tech. Currently I am working in Retail Marketing domain at Impact analytics & prior to this I was working in banking industry. Here at Impact my roles & responsibilities are managing the inventory the to mitigate the risk of stockout & overstock situation . And also make informed decision to maintain the inventory.

secured and unsecured loan portfolio and analysing risk and reporting during the customer journey starting from customer origination to customer performance, collection and recovery.

To do these tasks i mostly use programming language like sas sql python. To fetch data from datamart and perform data cleaning...,transformation....preparation and for reporting i use excel tableau.

ALONG WITH THAT recently i got some exposure on advanced analytics and machine learning techniques such as linear/logistic regression, decision tree.

2.Project:-

i start from loan files which we called cad(**captured application details**) consists that how many applications we received through various channel partners. then we have branch information file, bureau information file which consists of all tdi, mdi, cibil score etc. we have employment information file, education information file and there are so many files which we need to combine to design our final data model which we called origination master file.

from that origination master file we develop multiple kpi's like total application we received, total accepted application, declined application, booked application and total percentages of these category wise with each portfolio wise and other segments to prepare our origination reports.

different portfolio wise means credit card m itne application aaye, home loan m itne aaye , personal loan m itne aaye.we do all this reporting in excel sheet which is called account origination reports.

**Performance**-Now only the data or account which are approved for the loan will go for account performance tracking wherein we track the performance by making 7 delinquencies buckets namely X, X+1, X+2, X+3, X+4, X+5 and finally the CO(Charge off) which is just the number of days past to date(final date of payment).

Agr due date hone k baad, 30 days m customer pay nhi kar rha to hum use X m count krenge. Then 30-60 days comes in X+1 bucket.

After 6 months, we will declare them charge off(CO).

As this is a crucial part, we need to make a proper collection and recovery strategy based on this and our main motive is to increase the cure rate and reduce the roll rate to achieve our BCR(Balance control ratio) which is GLPA by BLPA .

I have to provide to the account recovery team, i have to provide list of customers by categorizing them into diff buckets say high, medium and low risk. So that recovery team can recover loan from high risk customer first.

My role in recovery is to calculate the pay rate and recovery rate on the level of aggregate number of accounts.

ex: out of 100 total accounts , 60 accounts have paid

partially or fully , then pay rate=60%

if internal team is able to recover 30m out of 100mcanadian dollar, recovery rate = 30%

I check overall pay rate, overall recovery rate, how much recovery has been done by primary, secondary and third party team.

**Q.WHY, ARE YOU LOOKING FOR CHANGES?**

**Reason for this job change is to explore new opportu nities and work in different business environments,I have gained enough knowledge from my current organisation but now I feel that growth is limited here.so I want** to make this transition to stay on the path of progress **and of course financial growth.**

**Challenges faced**

**When the merge rate goes down (below 30 percent)**

* **when there is MISSING INFORMATION**

1. WHEN MULTIPLE SOURCE FILES ARE TO BE MAPPED AND SOURCE FILE’S INFORMATION IS NOT IN STRUCTURED FORM. SO THIS OUTPUTS IN MANY TO MANY RELATIONSHIP VALUES AND IMPACT IN DUPLICATE RECORDS SO BEFORE DESIGNING THE DATA MODEL WE CHECK FOR DUPLICACY

* UNAVAILABILITY OF DATA DICTIONARY

1. Sometimes we deal with large dataset LIKE(-employment information file-

for each employee we have multiple columns and that multiplies when we make relationship between them, and makes a huge data) .

RESOLVE BY REMOVING DUPLICATES OR CONTACT IT TEAM

So sometime we contact data management team to build tables or views in such a way that it might save time

1. LACK OF TIME DURING AD HOC REQUESTS .

**AD-HOC REQUESTS**

**EXAMPLE**

Performance report of any portfolio (lets say HOME LOAN ) in the past few quarters/ years.

* How many accounts (good/bad)
* Roll rate/cured rate

Deep dive into certain situations and get insights where reason is not clear

EXAMPLE: lot of good customers were getting delinquent and we were given to analyse the situation . to find the reason.

Outcome :- the delinquent customers had one thing in common they belonged to a certain pincode/area where there has been some decrease in valuation of property due to govt policies(red zone area). So they were not willing to pay their EMI.

ad hoc reports can show how an event influences sales/revenue at a particular point in time or over a specific timeframe.

**END TO END MANIPULATION**

**ORIGINATION**

* GET DATA FROM MULTIPLE SOURCES ( CAD, bureau info, branch info, educational, employment)

* MAKE DATA MODEL BY JOINING THEM BY A COMMON KEY AND USING RELATIONSHIP CONCEPTS
* STRUCTURE DATE VARIABLES, REMOVE UNWANTED SPACES AND CHARACTERS
* DERIVE MEANINGFUL FEATURES FROM EXISTING FEATURES

LIKE [ YEAR, MONTH, **MOB** from a/c open date), YEAR() , MONTH() , DATEDIFF () ]

* ANALYSE THEIR PAST PAYMENT RECORDS BASED ON WHICH WE TERM THEM AS DEFAULT OR NON-DEFAULT

[CASE WHEN ]

* GET DELIQUENCY DAYS FROM THEIR LAST PAYMENT DATE

[Date diff]

**PERFORMANCE**

* SEGMENT THEM INTO DELIQUENCY BUCKET BASED ON THEIR DAYS PAST DUE DATE [ CASE WHEN ]
* DEVELOP RISK SEGMENT BASED ON THEIR OUTSTANDING BALANCE AND DAYS PAST DUE DATE[ CASE WHEN]
* GET NO. OF ACCOUNTS IN EACH DELINQUENCY BUCKET [COUNT]

**PREPARE SUMMARY REPORTS USING AGGREGATE FUNCTIONS LIKE**

**SUM(), COUNT(), MIN(), MAX(), AVG()**

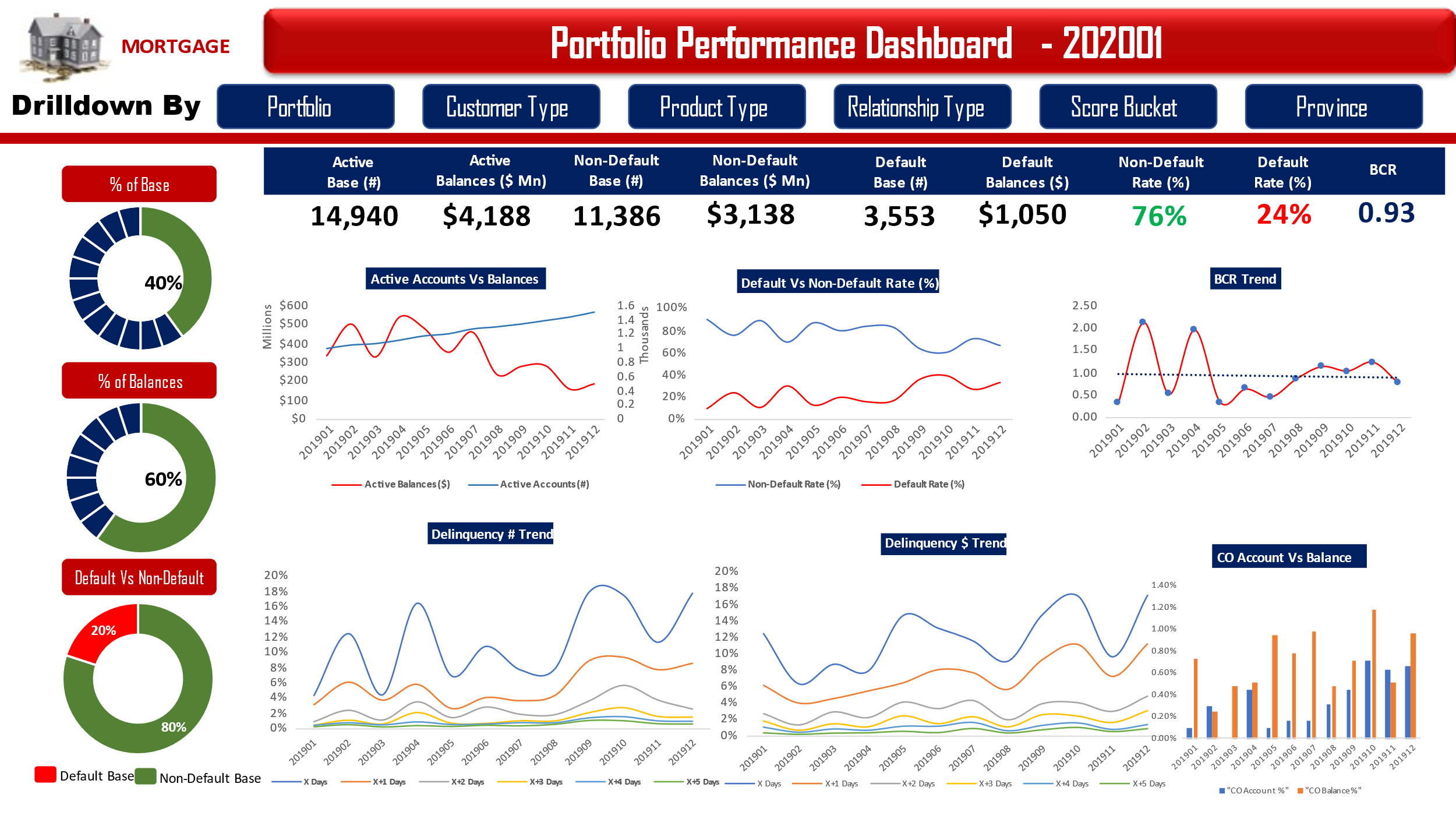
**- GLPA**

**- BLPA**

**- COUNT OF DELINQUENT A/C**

**- BALANCE OF DELINQUENT A/C (PORTFOLIO WISE).**

**THESE SUMMARY REPORTS THAT WE CREATED CAN BE PRESENTED IN A TABLEAU DASHBOARD**



**PORTFOLIO PERFORMANCE DASHBOARD FOR A FISCAL YEAR CONTAINS**

* **(MORTGAGE) ACTIVE ACCOUNTS AND THEIR BALANCE**
* **DEFAULT RATE VS NON-DEFAULT RATE**
* **DELINQUENCY A/C TRENDS**
* **CHARGE OFF A/C AND BALANCE**
* **BCR TREND**
* **TOTAL CUSTOMER BASE**

**COLLECTION STATEGY**

**Our key objectives in collection stage is to**

* **Increase recoveries** :- maximize revenue through collection efforts
* **Improve customer satisfaction:-** minimize customer churn due to dissatisfaction with product or services
* **Minimizing operational costs :**- improve efficiency and minimize expense of achieving these goals

TO ACHIEVE THESE GOALS WE HAVE MADE A STRATEGY:-

1st : look at the **Debtor/Customer Type** (early payer/late payer)

2nd : **what stage the debtor is in** . A debtor is more likely to pay when he is in early stages

3rd : **what is the outstanding balance:**  how much does he owe

4th : **Appropriate mode of contact** (Call/ SMS/ Letter)

By what mode of contact the debtor is more likely to respond. Some take letters seriously, some ignore texts.

Then we let our collectors with good pay rate and recovery rate handle risky customers

**Q. Crossquestion: What all you show in your Performance Report?**

Ans: In Performance Report, we show by portfolio-wise number of Customer Base, Delinquent Account and Balance, Non-Delinquent Account and balance, Good Loan and Bad Loan per account, BCR, Delinquent Rate and Non-Delinquent Rate in terms of accounts and balance, all the delinquency-bucket from X to CO (Charged Off) in terms of number of accounts and percentage, current balance and delinquent balance in terms of amount and percentage etc.

**Q. Cross question: How do you categorize/segment customers based on risk factor?**

Ans: We look for inputs such as CREDIT score, MDI, TDI. In CREDIT score, if the customer is having score between 300 to 500, then we keep that customer in 'Higher-Risk-Category'. 550-700 under 'Medium-Risk' and above 700, we keep that customer/account at Lower Risk. These inputs are provided by our LOSS FORECASTING team.

This data or you can say report is then sent to Collection team. The collection team starts targeting the accounts which are at Higher Risk Category followed by Mid-Risk and Low-Risk category.

**Q. What is the role of calling team in your organization?**

Ans: The calling team now starts targeting and calling the accountholders which are at Higher-Risk category. How many times they called? Who received the call- The accountholder or someone else? Reason for not paying the dues e.g., current financial condition or sickness. Customer's willingness to pay is also to be noted here.

The data collected from our calling team is used by our LOSS FORECASTING TEAM to calculate PROBABILITY OF DEFAULT (PD), EXPOSURE AT DEFAULT(EAD), LOSS GIVEN DEFAULT(LGD) etc. I used to observe these things during cross-functional activity.

The data of our Loss Forecasting Team is used further to maintain BASEL norms such as Risk Weightage Asset (RWA), CRR, SLR etc. I am not part of this activity but I have bird's-eye knowledge as I was engaged in cross-functional activity.

**Q. What is my role in Account Recovery process?**

Our role in recovery phase is to analyse the PAY RATE (Suppose out of 100 accounts, 60 have paid partially or wholly, then my pay rate is 60%), RECOVERY RATE (Suppose an amount of 1 million CAD is in Charged off, but we manage to recover only 300,000 CAD, then my recovery rate would be 30%).

Here, our role is to analyse the performance of Internal Team which comprises of different agents and companies. How good they are to achieve pay rate and recovery rate. We need to present to business that which companies/agents are performing well and which are not performing well.

**S Q L**

**ORDER OF OPERATION IN SQL** :- FROM/JOIN, WHERE, GROUP BY, HAVING, SELECT, ORDER BY, LIMIT

**TRANSACTIONS:** transactions are a group of tasks put into a single execution unit. Each transaction begins with a set of tasks and ends when all the tasks in that group ends.

If any of the tasks fails, the transaction also fails.

**Syntax:**

**BEGIN TRANSACTION**

**DELETE FROM table\_name**

**WHERE age=20**

**Commit;**

**STORED PROCEDURE**: Stored procedures are simply the queries that are saved. when we have a situation where we have to write same query again and again, we can save the query as a stored procedure and call it just by its name.

🡪We can perfom tasks like ALTER, UPDATE,DELETE inside a stored procedure

🡪stored procedure cannot be utilised inside a select statement

2 types

**System defined :** predefined, available with a prefix as sp\_

**User defined :**

**Ex:** CREATE PROCEDURE name

@firstname varchar (50)

AS

UPDATE tablename

SET Firstname= @firstname

Where Firstname= ’KTTPRO’

THIS TAKES NAME AS INPUT AND UPDATE THE NAME WHERE CONDITION MEETS

**FUNCTIONS :** Functions are a set of SQL statements that accepts only input parameters perform specified actions and returns a value

🡪we cant use functions to INSERT/ DELETE/ UPDATE

🡪it can be used In a SELECT statement

2 types

**TABLE VALUED** (returns a table) and

**SCALAR VALUED** (returns a single value)

**INDEXES**

We use index to speed up retrieval of rows by using a pointer.

Allows us to locate the exact data without scanning the whole table

**TRIGGERS**

It is a special type of stored procedure that automatically runs when a event occurs

DML TRIGGERS : INSERT UPDATE DELETE

DDL TRIGGERS : CREATE ALTER DROP

**Sql performance tuning**

* Using a schema name before objects will help sql server to find the object and will speed up stored procedure’s performance.

Select emp\_name from dbo.table\_name

* Avoid using functions in the where clause
* Create proper index
* Specify column names instead of \* wherever not neccesary
* Use NO LOCK
* Use joins instead of sub queries

YOU ARE GIVEN TO APPROVE/REJECT LOANS, WHAT ALL DATA WOULD YOU REQUEST THE CLIENT.

* I will need to know if the customer is existing or new customer
* For existing customers I can get past payment records from bureau files itself
* Examine their past behaviour and on the basis of that make decision
* If it is a new customer I will ask for their AGE, CREDIT SCORE, MOTHLY INCOME, DEBT RATIO, EDUCATIONAL DETAILS, EMPLOYMENT DETAILS, NO OF DEPENDENTS, OPEN CREDIT LINES, SERIOUSLY DELINQUENT IN THE PAST

CUSTOMER BASE AND BOOK

HOMELOAN

This qtr loan book 4950 crores

15-16K customer base

PERSONAL LOAN

This qtr loan BOOK 550 crore

40000 customer base

**JP MORGAN**

Strategic Business Analyst—

Root cause analysis : RCA is **a process for identifying the causes of problems in order to prevent them from recurring**.

### **Credit Risk**

Credit risk is the biggest risk for banks. It occurs when borrowers or counterparties fail to meet contractual obligations. An example is when borrowers default on a [principal](https://corporatefinanceinstitute.com/resources/knowledge/finance/principal-payment/) or interest payment of a loan. Defaults can occur on [mortgages](https://corporatefinanceinstitute.com/resources/knowledge/finance/mortgage/), credit cards, and [fixed income](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/fixed-income-glossary/) securities. Failure to meet obligational contracts can also occur in areas such as [derivatives](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/derivatives/) and [guarantees](https://corporatefinanceinstitute.com/resources/knowledge/finance/guarantee/) provided.

While banks cannot be fully protected from credit risk due to the nature of their business model, they can lower their exposure in several ways. Since deterioration in an industry or issuer is often unpredictable, banks lower their exposure through [diversification](https://corporatefinanceinstitute.com/resources/knowledge/strategy/diversification/).

By doing so, during a credit downturn, banks are less likely to be overexposed to a category with large losses. To lower their risk exposure, they can loan money to people with good credit histories, transact with high-quality counterparties, or own [collateral](https://corporatefinanceinstitute.com/resources/knowledge/finance/collateral/) to back up the loans.

### **Operational Risk**

Operational risk is the risk of loss due to errors, interruptions, or damages caused by people, systems, or processes. The operational type of risk is low for simple business operations such as retail banking and [asset management,](https://corporatefinanceinstitute.com/resources/knowledge/finance/asset-management/) and higher for operations such as sales and trading. Losses that occur due to human error include internal fraud or mistakes made during transactions. An example is when a teller accidentally gives an extra $50 bill to a customer.

On a larger scale, fraud can occur through breaching a bank’s cybersecurity. It allows hackers to steal customer information and money from the bank, and blackmail the institutions for additional money. In such a situation, banks lose capital and trust from customers. Damage to the bank’s reputation can make it more difficult to attract deposits or business in the future.

### Market Risk

Market risk mostly occurs from a bank’s activities in [capital markets](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/capital-markets/). It is due to the unpredictability of equity markets, commodity prices, interest rates, and credit spreads. Banks are more exposed if they are heavily involved in investing in capital markets or [sales and trading](https://corporatefinanceinstitute.com/resources/careers/jobs/sales-and-trading/).

Commodity prices also play a role because a bank may be invested in companies that produce commodities. As the value of the commodity changes, so does the value of the company and the value of the investment. Changes in commodity prices are caused by supply and demand shifts that are often hard to predict. So, to decrease market risk, diversification of investments is important. Other ways banks reduce their investment include [hedging](https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/hedging/) their investments with other, inversely related investments.

### Liquidity Risk

[Liquidity](https://corporatefinanceinstitute.com/resources/knowledge/finance/liquidity/) risk refers to the ability of a bank to access cash to meet funding obligations. Obligations include allowing customers to take out their deposits. The inability to provide cash in a timely manner to customers can result in a snowball effect. If a bank delays providing cash for a few of their customer for a day, other depositors may rush to take out their deposits as they lose confidence in the bank. This further lowers the bank’s ability to provide funds and leads to a [bank run](https://corporatefinanceinstitute.com/resources/knowledge/other/bank-run/).

Reasons that banks face liquidity problems include over-reliance on short-term sources of funds, having a [balance sheet](https://corporatefinanceinstitute.com/resources/knowledge/accounting/balance-sheet/) concentrated in illiquid assets, and loss of confidence in the bank on the part of customers. Mismanagement of asset-liability duration can also cause funding difficulties. This occurs when a bank has many short term liabilities and not enough short-term assets.

Short-term liabilities are customer deposits or short-term guaranteed investment contracts (GICs) that the bank needs to pay out to customers. If all or most of a bank’s assets are tied up in long-term loans or investments, the bank may face a mismatch in asset-liability duration.

Regulations exist to lessen liquidity problems. They include a requirement for banks to hold enough liquid assets to survive for a period of time even without the inflow of outside funds.

**CRISIL**

**Financial markets** are marketplaces where financial assets like stocks, bonds, currencies and commodities are bought and sold.

What are financial statements?

Financial statements are a set of documents that show your company’s financial status at a specific point in time. They include key data on what your company owns and owes and how much money it has made and spent.

**There are four main financial statements:** balance sheet, income statement, cash flow statement

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**SOCIETY GENERAL**

**HEDGE FUNDS**

A hedge fund is a investment fund of private investors usually with high networth /wealthy clients whose money is managed by professional fund managers who use a variety of strategies, investment products, such as derivatives (stocks, commodities), foreign exchange, securities to earn above-average investment returns.

**Counterparty credit risk (CCR)**

is the risk that the one of those involved in a transaction could default before the final settlement of the transaction.

. **VBA (VISUAL BASIC FOR APPLICATIONS)**

VBA is a programming language to create macros to automate repetative functions

**Location**: develop tab🡪visual basic

**Extension**- .xlsm (excel macro enabled workbook)

**Data types**: Byte, int, long (numeric) :::::string, date, boolean, object(non-numeric)

**VARIANT datatype** : if we don’t specify any type it takes as variant and It takes more space

Syntax:

Sub macro1( )

{code}

End sub