ALL THE VERY BEST FOR YOUR EXAMS

SHORT NOTES FOR

CAIIB

BANK FINANCIAL MANAGEMENT

Though we had taken enough care to go through the notes provided here, we shall not be responsible for any loss or damage, resulting from any action taken on the basis of the contents. Creation of these short notes is the efforts of so many persons. First of all we thank all of them for their valuable contribution. We request everyone to go through the Macmillan book and update yourself with the latest information through RBI website and other authenticated sources. In case you find any incorrect/doubtful information, kindly update us also (along with the source link/reference for the correct information).

K Murugan, MCA MBA CAIIB

CAIIB – GENERAL INFORMATION

Consists of 3 papers :

I. Compulsory Paper

1. Advanced BankManagement
2. Bank FinancialManagement

II. Elective Papers (Candidates to choose any one of their Choice)

1. Corporate Banking
2. Rural Banking
3. International Banking
4. Retail Banking
5. Co-operative Banking
6. Financial advising
7. Human ResourcesManagement
8. Information Technology
9. RiskManagement
10. Central Banking
11. TreasuryManagement

- Only existing employees of banks and cleared JAIIB can appear for CAIIB Exam.
- CAIIB exams are conducted in on-line mode only.
- The examination will be conducted normally twice a year in May / June and November / December on Sundays.
- The duration of the examination will be of 2 hours.
- **Examination Pattern** : (i) Question Paper will contain 100 objective type multiple choice questions for 100 marks including questions based on case studies. The Institute may however vary the number of questions to be asked for a subject. Generally 60-65% theory based and 35-40% case study / problem solving/Analytical /Logical exposition. There is no negative marking for wrong answers.
- **Passing Criteria** - Minimum 150 in total and minimum 45 in each subject in any single attempt (not required to be the 1st attempt) is considered as pass. Else 50 in each subject. Passed subject gets carried forward to 4 continuous attempts (whether you appear for the exam or not) from the 1st attempt. If not passed in 4 continuous attempts, you need to appear in all 3 papers.
  - **First Class :** 60% or more marks in aggregate and pass in all the subjects in the FIRST PHYSICAL ATTEMPT.
  - **First Class with Distinction :** 70% or more marks in aggregate and 60% or more marks in each subject in the FIRST PHYSICAL ATTEMPT.
  - Candidate who have been granted exemption in the subject/s will be given **"Pass Class"** only.

- **Cut-off Date of Guidelines /Important Developments for Examinations** - The Institute has a practice of asking some questions in each exam about the recent developments/ guidelines issued by the regulator(s) in order to test if the candidates keep themselves abreast of the current developments. But, there could be changes in the developments / guidelines from the date the question papers are prepared and the dates of the actual examinations. In order to address these issues effectively, it has been decided that:

  - In respect of the exams to be conducted by the Institute for the Period from February 2018 to July 2018, instructions/guidelines issued by the regulator(s) and important developments in banking and finance up to 31st December, 2017 will only be considered for the purpose of inclusion in the question papers.

  - In respect of the exams to be conducted by the Institute for the period from August 2018 to January 2019, instructions/guidelines issued by the regulator(s) and important developments in banking and finance up to 30th June, 2018 will only be considered for the purpose of inclusion in the question papers.

- **Exam Fees**

JAIIB
First attempt fee - 2,400*
Second attempt fee - 1,000*
Third attempt fee - 1,000*
Fourth attempt fee - 1,000*

DBF
First attempt fee - 3,200*
Second attempt fee - 1,000*
Third attempt fee - 1,000*
Fourth attempt fee - 1,000*

CAIIB
First attempt fee - 2,700*
Second attempt fee - 1,000*
Third attempt fee - 1,000*
Fourth attempt fee - 1,000*

* Plus convenience charges and Taxes as applicable

SYLLABUS

The details of the prescribed syllabus which is indicative are furnished below. However, keeping in view the professional nature of examinations, all matters falling within the realm of the subject concerned will have to be studied by the candidate as questions can be asked on all relevant matters under the subject. Candidates should particularly prepare themselves for answering questions that may be asked on the latest developments taking place under the various subject/s although those topics may not have been specifically included in the syllabus. Any alterations made will be notified from time to time. Further, questions based on current developments in banking and finance may be asked.

Candidates are advised to refer to financial news papers / periodicals more particularly "IIBF VISION" and "BANK QUEST" published by IIBF.

MODULE - A: International Banking

Forex Business; factors determining exchange rates, Direct and indirect quotations, spot / forward rates, premium and discount, cross rates.

Basics of forex derivatives; forward exchange rate contracts, Options, Swaps. Correspondent banking, NRI accounts.

Documentary letters of Credit - UCPDC 600, various facilities to exporters and importers. Risks in foreign trade, role of ECGC, types of insurance and guarantee covers or ECGC. Role of Exim Bank - Role of RBI and exchange control - Regulations in India, Role and rules of FEDAI - Role of FEMA and its rules.

MODULE - B : Risk Management

Risk-Concept - Risk in Banks - Risk Management Framework - Organisational Structure - Risk Identification - Risk Measurement / - Sensitivity - Basis Point Value (BPV) - Duration - Downside Potential - Value at Risk, Back Testing - Stress Testing - Risk Monitoring and Control - Risk Reporting - Market Risk identification, Measurement and management / credit risk - rating methodology, risk weights, eligible collateral for mitigation, guarantees; credit ratings, transition matrices, default probabilities, Credit risk spreads, risk migration and credit metrics, Counterparty risk. Credit exposures, recovery rates, risk mitigation techniques, - / Operational and integrated Risk Management - Risk management and capital Management – 'Basel Norms - Current guidelines on risk management

MODULE - C : Treasury Management

Concepts and function; instruments in the treasury market, development of new financial products, control and supervision of treasury management, linkage of domestic operations with foreign operations.

Interest rate risk, interest rate futures

Mix / Pricing of Assets, Liabilities - On-Balance Sheet Investment and Funding Strategies - Stock options, debt instruments, bond portfolio strategy, risk control and hedging instruments. Investments - Treasury bills, money market instruments such as CDs, CPs, IBPs Securitisation and Forfaiting; refinance and rediscounting facilities.

Derivatives - Credit Default Swaps / Options

MODULE - D : Balance Sheet Management

Prudential norms-Capital Adequacy. Implementation of 'Basel Norms guidelines : RBI guidelines. Banks Balance Sheet - Components of assets / Liabilities / ALM Implementation - RBI Guidelines - Gap Analysis - Mechanics, Assumptions, and Limitations - Illustrations of Actual Gap Reports - The Relationship Between Gap and Income Statement - Funding Liquidity - Trading / Managing Liquidity - Contingency Funding - Business Strategies : Profit and profitability analysis, Asset Classification - provisioning - effect of NPA on profitability, Shareholder value maximization & EVA- profit planning-measures to improve profitability. Disclosure guidelines.

MODULE – A
INTERNATIONAL BANKING:

UNIT – 1: EXCHANGE RATES AND FOREX BUSINESS

1. Foreign Exchange: Conversion of currencies from the currency of invoice to the home currency of the exporters is called as **Foreign Exchange.**

2. Foreign Exchange Management Act **(FEMA),1999** defines Foreign Exchange as o " All deposits, credits and balances payable in foreign currency and any drafts, traveler's Cheques, LCs and Bills of Exchange, expressed or drawn in Indian Currency and payable in any foreign currency."

> Any instrument payable at the option of the drawee or holder, thereof or any other party thereto, either in Indian Currency or in foreign currency, or partly in one and partly in the other.

3. A **Foreign Exchange transaction** is a contract to exchange funds in one currency for funds in another currency at an agreed rate and arranged basis.

4. **Exchange Rate** means the price or the ratio or the value at which one currency is exchanged for another currency.

5. **Foreign Exchange markets participants** are
Central Banks
Commercial Banks
Investment Funds/Banks
Forex Brokers
Corporations
Individuals

6. The Forex Markets are highly dynamic, that on an average the exchange rates of major currencies fluctuate **every 4 Seconds**, which effectively means it registers **21,600 changes** in a day (15X60X24)

7. Forex markets usually operate from **"Monday to Friday"** globally, except for the Middle East or other Islamic Countries which function on Saturday and Sunday with restrictions, to cater to the local needs, but are closed on Friday.

8. The bulk of the Forex markets are **OTC (Over the Counter).**

9. Factors Determining Exchange Rates:

a) Fundamental Reasons
Balance of Payment
Economic Growth rate
Fiscal policy
Monetary Policy
Interest Rates
Political Issues

b) Technical Reasons
- Government Control can lead to unrealistic value.
- Free flow of Capital from lower interest rate to higher interest rates

c) **Speculative** - **higher the speculation higher the volatility in rates**

10. Due to vastness of the market, operating in different time zones, most of the Forex deals in general are done on **SPOT basis.**

11. The delivery of **FX deals can be settled** in one or more of the following ways:
Ready or Cash
TOM
Spot
Forward
Spot and Forward

12. **Ready or Cash**: Settlement of funds takes place on the same day (date of Deal)

13. **TOM:** Settlement of funds takes place on the next working day of the deal. If the settlement day Is holiday in any of the 2 countries, the settlement date will be next working day in both the countries.

14. **Spot** : Settlement of funds takes place on the second working day after/following the date of Contract/deal. If the settlement day is holiday in any of the 2 countries, the settlement date will be next working day in both the countries.

15. **Forward:** Delivery of funds takes place on any day after SPOT date.

16. **Spot and Forward Rates**: On the other hand, when the delivery of the currencies is to take place at a date beyond the Spot date, it is Forward Transaction and rate applied is called Forward Rate.

17. Forward Rates are **derived from Spot Rates** and are function of the spot rates and forward premium or discount of the currency, being quoted.

18. Forward Rate = **Spot Rte + Premium or – Discount**

19. If the value of the currency is more than being quoted for Spot, then it is said to be **at a premium.**

20. If the currency is cheaper at a later date than Spot, then it is called **at a Discount.**

21. The forward premium and discount are generally based on the **interest rate differentials** of the two currencies involved.

22. In a perfect market, with no restriction on finance and trade, the **interest factor** is the basic factor in arriving at the forward rate.

23. The Forward price of a currency against another can be worked out with the following **factors:**

Spot price of the currencies involved
The Interest rate differentials for the currencies.
The term i.e. the future period for which the price is worked out.

24. The price of currency can be expressed in two ways i.e. **Direct Quote, Indirect Quote.**

25. Under **Direct Quote, the local currency is variable** E.g.: 1 USD = `48.10

26. Direct Quote rates are also called **Home Currency or Price Quotations.**

27. Under **indirect Quote, the local currency remains fixed**, while the number of units of foreign currency varies. E.g. `100 = 2.05 USD

28. Globally all currencies (Except a few) are quoted **as Direct Quotes**, in terms of USD = So many units of another currency)

29. Only in case of **GBP (Great Britain Pound) £, €, AU$ and NZ$, the currencies are quoted as indirect rates.**

30. Japanese Yen being quoted **per 100 Units.**

31. **Cross Currency Rates**: When dealing in a market where rates for a particular currency pair are not directly available, the price for the said currency pair is then obtained indirectly with the help of Cross rate mechanism.

32. **How to calculate Cross Rate?:**
The math is simple algebra: **[a/b] x [b/c] = a/c**
Substitute currency pairs for the fractions shown above, and you get, for instance,
GBP/AUD x AUD/JPY = GBP/JPY.
This is the **implied** (or theoretical) value of the GBP/JPY, based on the value of the other two pairs.
The actual value of the GBP/JPY will vary around this implied value,as the following calculation shows.

Here are Friday's actual closing BID prices for the 3 currency pairs in this example (taken from FXCM's Trading Station platform): GBP/AUD = 1.73449, AUD/JPY = 0.85535 and GBP/JPY = **1.48417**.
Now, let's do the math:
GBP/AUD x AUD/JPY = GBP/JPY
1.73449 x 0.85535 = **1.4836**, which is not exactly the same as the actual market price
Here's why. During market hours (Sunday afternoon to Friday afternoon, EST), all prices are LIVE, and small departures from the mathematical relationships can exist momentarily.

33. **Fixed Vs Floating Rates:**
The fixed exchange rate is the official rate set by the monetary authorities for one or more currencies. It is usually pegged to one or more currencies.
Under floating exchange rate, the value of the currency is decided by supply and demand factors for a particular currency.

34. Since **1973,** the world economies have adopted **floating exchange** rate system.

35. India switched to a **floating exchange rate regime** in **1993.**

36. **Bid & Offered Rates:** The buying rates and selling rates are referred to as Bid & Offered rate.
37. **Exchange Arithmetic** – Theoretical Overview:
Chain Rule: It is used in attaining a comparison or ratio between two quantities linked together through another or other quantities and consists of a series of equations.
Per Cent or Per mille: A percentage (%) is a proportion per hundred. Per Mille means per thousand.

38. **Value Date:** The date on which a payment of funds or an entry to an account becomes actually effective and/or subjected to interest, if any. In the case of TT, the value date is usually the same in both centers.

39. The payments made in same day, so that no gain or loss of interest accrues to either party is called as **Valuer Compense**, or simply here and there.

40. **Arbitrage in Exchange:** Arbitrage consist in the simultaneous buying and selling of a commodity in two or more markets to take advantage of temporary discrepancies in prices.

41. A transaction conducted between two centers only is known as **simple or direct arbitrage.**

42. Where additional centers are involved, the operation is known as **compound or Three (or more) point arbitrage.**

43. Forex Operations are divided into 3:
1) Forex Dealer
2) Back Office
3) Mid Office

44. The **Forex dealing room** operation functions:
a service branch to meet the requirement of customers of other branches/divisions to buy or sell foreign currency,
Manage foreign currency assets and liabilities,
Fund and manger Nostro Accounts as also undertake proprietary trading in currencies.
It is a separate profit center for the Bank/FI

45. A Forex Dealer has to maintain two positions – **Funds position and Currency Position**

46. Funds position reflects the **inflow and out flow of funds.**
47. Back office takes care of processing of **Deals, Account, reconciliation etc. It has both a supportive as well as a checking role over the dealers.**

48. Mid Office deals with **risk management and parameterization of risks for forex dealing operations.** Mid Office is also supposed to look after the compliance of various guidelines/instructions and is an independent function.

49. The major **risks associated with the dealing operations** are :
Operational Risk
Exchange Risk
Credit Risk
Settlement Risk
Liquidity Risk
Gap Risk/ Interest/ Rate Risk

Market Risk
Legal Risk
Systemic Risk
Country Risk
Sovereign Risk

50. The **Operation Risk** is arising on account of human errors, technical faults, infrastructure breakdown, faulty systems and procedures or lack of internal controls.

51. The **Exchange Risk** is the most common and obvious risk in foreign exchange dealing operations and arise mainly on account of fluctuations in exchange rates and/ or when mismatches occur in assets/ liabilities and receivables/ payables.

52. **Credit risk** arises due to inability or unwillingness of the counterpart to meet the obligations at maturity of the underlying transactions.

53. Credit Risk is classified into
Pre- Settlement Risk
Settlement Risk

54. **Pre Settlement Risk** is the risk of failure of the counter party before maturity of the contract thereby exposing the other party to cover the transaction at the ongoing market rates.

55. **Settlement Risk** is Failure of the counter party during the course of settlement, due to the time zone differences, between the two currencies to be exchanged.

56. **Liquidity Risk** is the potential for liabilities to drain from the bank at a faster rate than assets. The mismatches in the maturity patterns of assets and liabilities give rise to liquidity risk.

57. **Gap Risk/ Interest Rate Risk** are the risk arising out of adverse movements in implied interest rates or actual interest rate differentials.

58. **Market Risk:** This is arises out of adverse movement of market variables when the players are unable to exit the positions quickly.

59. **Legal Risk** is arising on account of non-enforceability of contract against a counter party.

60. **Systemic Risk** is the possibility of a major bank failing and the resultant losses to counter parties reverberating into a banking crisis.

61. **Country Risk** is risk of counter party situated in a different country unable to perform its part of the contractual obligations despite its willingness to do so due to local government regularizations or political or economic instability in that country.

62. **Sovereign Risk** is over all country risk

63. **RBI** has prescribed guidelines for authorized dealers, permitted by it, to deal in foreign exchange and handle foreign currency transactions.

64. **FEMA 1999** also prescribes rules for persons, corporate etc in handing foreign currencies, as also transactions denominated therein.

65. The **RBI** is issued **licenses** to Authorized Dealers to undertake foreign exchange transactions in India.

66. The RBI has also issued **Money Changer License** to a large number of established firms, companies, hotels, shops etc. to deal in foreign currency notes, coins and TCs

67. **Full Fledged Money Changers (FFMC)** : Entities authorized to buy and sell foreign currency notes, coins and TCs
68. **Restricted Money Changers (RMCs):** Entities authorized to buy foreign currency.

69. Categories of Authorized Dealers; in the year 2005, the categorization of dealers authorized to deal in foreign exchange has been changed.

Category	Entities
AD - Category I	Banks, FIs and other entities allowed to handle all types of Forex
AD - Category II	Money Changers (FFMCs)
AD - Category III	Money Changers (RMCs)

70. **Foreign Exchange Dealers Association of India, FEDAI (ESTD 1958)** prescribes guidelines and rules of the game for market operations, merchant rates, quotations, delivery dates, holiday, interest on defaults , Handling of export – Import Bills, Transit period, crystallization of Bills and other related issues.

71. Export bills drawn in foreign currency, purchased/ Discounted/ negotiated, must be crystallized into rupee liability. The same would be done at **TT selling rate.**

72. The crystallization period can vary from Bank to bank, (For Export Bills Generally on **the 30th Day**) customers to customer but **cannot exceed 60 days.**

73. Sight Bills drawn under ILC would be crystallized on the **10th day after the due date of receipt** if not yet paid.

74. All forward contracts must be for a **definite amount with specified delivery dates.**

75. All contracts, which have matured and have not been picked up, shall be automatically cancelled on the **7th working day, after the maturity date.**

76. All cancellations shall be at **Bank's opposite TT rates**. **TT Selling = purchase contracts; TT buying = Sale contracts.**

77. All currencies to be quoted per unit Foreign **Currency = `**, JPY, Indonesian Rupiah, Kenyan Schilling quoted as **100 Units of Foreign currency = `.**

UNIT –2: Basics of Forex Derivates

1. **Derivatives** are the instruments to the exposure for neutralize or alter to acceptable levels, the uncertainty profile of the exposure. E.g: Forward contracts, options, swaps, forward rate agreements and futures.

2. A **risk** can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings.

3. Some of the very **common risks** faced in forex operations
i. Exchange Risk
ii. Settlement Risk/ Temporal Risk/ Herstatt Risk (Named after the 1974 failure of the Bankhaus Herstatt in Germany)
iii. Liquidity Risk
iv. Country Risk
v. Sovereign risk
vi. Intrest Rate Risk
vii. Operational Risk

4. Movement in exchange rates may result in **loss** for the dealer's **open position.**

5. In case of **excess of assets over the liabilities**, the dealer will have **long position**

6. **Country risk** is a **dynamic risk** and can be **controlled by fixing country limit**.

7. Sovereign risk can be managed by suitable disclaimer clauses in the documentation and also by subjecting such sovereign entities to third jurisdiction.

8. Operational risk can be controlled by putting in place state of art system, specified contingencies.

9. RBI has issued Internal Control Guidelines (ICG) for Foreign Exchange Business.

10. Various Dealing Limits are as follows:
a. **Overnight Limit**: Maximum amount of open position or exposure, a bank can keep overnight, when markets in its time zone are closed.
b. **Daylight Limit**: Maximum amount of open position or exposure, the bank can expose itself at any time during the day, to meet customers' needs or
for its trading operations
c. **Gap Limits**: Maximum inter period/month exposures which a bank can keep, are called gap limits
d. **Counter Party Limit**: Maximum amount that a bank can expose itself to a particular counter party.
e. **Country Risk:** Maximum exposure on a single country
f. **Dealer Limits:** Maximum amount a dealer can keep exposure during the operating hours.
g. **Stop-Loss Limit**: Maximum movement of rate against the position held, so as to trigger the limit or say maximum loss limit for adverse movement of rates.
h. **Settlement Loss Limit:** Maximum amount of exposure to any entity, maturing on a single day.
i. **Deal Size Limit:** Highest amount for which a deal can be entered. The limits are fixed to restrict the operational risk on large deals.

11. **CCIL** (Clearing Corporation of India Ltd) **takes over the Settlement Risk,** for which it creates a large pool of resources, called settlement Guarantee Fund, which is used to cover outstanding of any participant.

12. **The Clearing Corporation of India Ltd. (CCIL) was set up in April, 2001** for providing exclusive clearing and settlement for transactions in Money, GSecs and Foreign Exchange.
February 15, 2002 Negotiated Dealing System (NDS)
November 2002 settlement of Forex transactions
January 2003 Collateralized Borrowing and Lending Obligation (CBLO), a money market product based on Gilts as collaterals
August 7, 2003. Forex trading platform "FX-CLEAR"
April 6, 2005. settlement of cross-currency deals through the CLS Bank

13. **Six** 'core **promoters' for CCIL** - State Bank of India (SBI), Industrial Development Bank of India (IDBI), ICICI Ltd., LIC (Life Insurance Corporation of India), Bank of Baroda, and HDFC Bank.

14. **Derivatives:** A security whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indexes. Most derivatives are characterized by high leverage.

15. **In early 1970s, the Chicago Mercantile Exchange introduced** world's first Exchange traded currency future contract.

UNIT 3 – Correspondent Banking and NRI Accounts

1. **Corresponding Banking** is the relationship between two banks which have mutual accounts with each other, r one of them having account with the other.

2. **Functions** of Corresponding Banks:
A. Account Services
i. Clearing House Functions
ii. Collections
iii. Payments
iv. Overdraft and loan facility
v. Investment Services
B. Other Services
i. Letter of Credit Advising
ii. LC confirmation
iii. Bankers Acceptance
iv. Issuance of Guarantees – Bid-bond, Performance
v. Foreign Exchange services, including derivative products
vi. Custodial Services etc.

3. **Types of Bank Accounts:** The foreign account maintained by a Bank, with another bank is classified as Nostro, Vostro, and Loro Accounts.

4. **Nostro Account:** "Our Account with you". DLB maintains an US $ account with Bank of Wachovia, New York is Nostro Account in the books of DLB, Mumbai.

5. **Vostro Account:** "Your account with us". Say American Express Bank maintain a Indian Rupee account with SBI is Vostro Account in the books of American Express bank

6. **Loro Account:** It refers to accounts of other banks i.e. His account with them. E.g. Citi Bank referring to Rupee account of American Express Bank, with SBI Mumbai or some other bank referring to the USD account of SBI, Mumbai with Citi Bank, New York.

7. **Mirror Account:** While a Bank maintains Nostro Account with a foreign Bank, (Mostly in foreign currency), it has to keep an account of the same in its books. The mirror account is maintained in two currencies, one in foreign currency and one in Home currency.

8. **Electronic Modes of transmission/ payment gateways**

SWIFT, CHIPS, CHAPPS, RTGS, NEFT

9. **SWIFT:** Society for Worldwide Interbank Financial Telecommunications.

10. **SWIFT** has introduced new system of authentication of messages between banks by use of Relationship Management Application (RMA) also called as **SWIFT BIC i.e.Bank Identification Code.**

11. **CHIPS: (Clearing House Interbank Payment System)** is a major payment system in USA since 1970. It is established by New York Clearing House. Present membership is 48. CHIPS are operative only in New York.

12. **FEDWIRE:** This is payment system of Federal Reserve Bank, operated all over the US since 1918. Used for domestic payments.

13. All US banks maintain accounts with **Federal Reserve Bank** and are allotted an **"ABA number"** to identify senders and receivers of payment

What Does *ABA Transit Number* Mean?

A unique number assigned by the American Bankers Association (ABA) that identifies a specific federal or state chartered bank or savings institution. In order to qualify for an ABA transit number, the financial institution must be eligible to hold an account at a Federal Reserve Bank. ABA transit numbers are also known as ABA routing numbers, and are used to identify which bank will facilitate the payment of the check.

14. **CHAPS:** Clearing House Automated Payments system is British Equivalent to CHIPS, handling receipts and payments in LONDON

15. **TARGET:** Trans-European Automated Real Time Gross Settlement Express Transfer System is a EURO payment system working in Europe. And facilitates fund transfers in Euro Zone.

16. **RTGS + and EBA:** RTGS+ is Euro German Based hybrid Clearing System. RTGS+ has 60 participants.

17. **EBA-Euro 1** is a cross Border Euro Payments

18. **RTGS/NEFT in India:** The RTGS system is managed by IDRBT- Hyderabad. Real Time Gross Settlement takes place in RTGS. NEFT settlement takes place in batches.

19. **NRI: (Non- resident Indian) definition**: **As per FEMA 1999**
A person resident outside India who is a citizen of India i.e.
a) Indian Citizen who proceed abroad for employment or for carrying on any business or vocation or for any other purpose in cirucumstances indicating indefinite period of stay outside India.
b) Indian Citizens working abroad on assignment with Foreign government, government agencies or International MNC
c) Officials of Central and State Governments and Public Sector Undertaking deputed abroad on assignments with Foreign Govt Agencies/ organization or posted to their own offices including Indian Diplomatic Missions abroad.

20. **NRI** is a Person of Indian **Nationality or Origin,** who resides abroad for business or vocation or employment, or intention of employment or vocation, and the period of stay abroad is indefinite. And a person is of Indian origin if he has held an Indian passport, or he/she or any of his/hers parents or grandparents was a citizen of India.

21. **A spouse , who is a foreign citizen**, of an India citizen or PIO, is also treated **at a PIO,** for the purpose of opening of Bank Account, and other facilities granted for investments into India, provided such accounts or investments are in the joint names of spouse.

22. NRE Accounts – Rupee and Foreign Currency Accounts

23. NRI has provided with various schemes to open Bank A/cs an invest in India.
1) Non Resident (External) Rupee Account (NRE);
2) Non- Resident (Ordinary) Rupee Account (NRO);
3)Foreign Currency (Non-Resident) Account (Banks) {FCNR(B)}

When resident becomes NRI, **his/her domestic rupee account, has to be re-designated as an NRO account.**
For NRE – Rupee A/cs , w.e.f 15-3-2005 an attorney can withdraw for **local payments or remittance to the account holder himself through normal banking channels.**

Unit 4. Documentary Letters of Credit

1. In international trade, where buyers and sellers are far apart in two different countries, or even continents, the **Letter of Credit acts** as a most convenient instrument, giving assurance to the sellers of goods for payment and to the buyers for shipping documents, as called for under the Credit.

2. In order to bring an uniformity in matters pertains to LC Documents and Transactions, International Chamber of Commerce formed rules and procedures. Those are called as **Uniform Customs and Practices for Documentary Credits (UCPDC).**

3. The **International Chamber of Commerce** (ICC)was established in **1919 headquartered at Paris.**

4. The first UCPDC published in **1933** and has been revised from time to time in 1951, 1962,1974,1983,1993 and **recently in 2007.**

5. The updated UCPDC in 2007 is called as **UCPDC 600.** And it has been implemented **w.e.f 1-7-2007.**

6. **Documentary Credit/Letter of Credit**: LC/DC cane be defined as a signed or an authenticated instrument issued by the buyer's Banker, embodying an undertaking to pay to the seller a certain amount of money, upon presentation of documents, evidencing shipment of goods, as specified, and compliance of other terms and conditions..

7. IN **an LC Parties are as follows:**
a. **The buyers/**Importers or the applicant – on whose behalf LC is opened.
b. The Sellers/Exporters or the **Beneficary** of the LC
c. The **opening Bank (Buyer's Bank),** who establishes the LC
d. The advising **bank (Bank in sellers country),** who acts as an agent of the issuing bank and authenticates the LC.
e. The **confirming Bank-** Who undertakes to pay on behalf of the issuing bank.
f. The **negotiating Bank (Seller's** bank or Bank nominated by the opening Bank)
g. **Reimbursing Bank** – Who reimburses the negotiating or confirming bank.

For example, in a hypothetical Situation given below:
Mr Ram, (Banking with Dhanlaxmi Bank) an agriculture entrepreneur growing vegetables in green house technology in Khammam wants to update his farm house with modern machinery. He is importing the same from a Chinese manufacturer M/s Zuanch LLC, Beijing who are banking with China Development Bank for total cost of US$ 4500. M/s Zaunch LLC has issued an invoice stating the sale transaction must be backed by LC. As such, Mr Ram approaches Dhanlaxmi Bank for opening of Letter of Credit (Foreign) in FCY USD. Dhanlaxmi Bank's China Foreign Correspondent Bank is Bank of China, Beijing.

Applicant of LC - Mr Ram, Khammam
Beneficiary of LC - M/s Zaunch LLC
LC Opening/ Issuing Bank - Dhanlaxmi Bank
Advising Bank /Confirming Bank - Bank of China
Negotiating bank China - Development Bank
Reimbursing Bank - Bank of China in China

8**. Types of Letters of Credit**
a. Revocable LC
b. Irrevocable LC
c. Irrevocable Confirmed LC
d. Transferable LC
e. Red Clause LC
f. Sight/Acceptance, Deferred Payment, or Negotiation LC
g. Back to Back LC

9. **Revocable LC** can be amended or cancelled at any moment by the issuing bank without the consent of any other party, as long as the LC has not been drawn or documents taken up.

10. In case the Negotiating Bank has taken up the documents under revocable LC, prior to receipt of cancellation notice, the issuing bank is liable to compensate/reimburse the same to the negotiating bank.

11. **Irrevocable LC** which holds a commitment by the issuing bank to pay or reimburse the negotiating bank, provided conditions of the LC are complied with.

12. **Irrevocable LC** cannot be amended or cancelled without the consent of all parties concerned.

13. The **irrevocable LC** is an unconditional undertaking by the issuing bank to make payment on submission of documents conforming to the terms and conditions of the LC

14. All LCs issued, unless and otherwise specified, are **irrevocable Letter of Credits.**

15. **Irrevocable confirmed LC** is an L/c which has been confirmed by a bank, other than the issuing a bank, usually situated in the country of the exporter, thereby taking an additional undertaking to pay on receipt of documents conforming to the terms & conditions of the LC

16. The **Conforming Bank** can be **advising Bank**, which on receipt of request from the issuing bank takes this additional responsibility.

17. The conforming bank steps into the shoes of **the issuing bank** and performs all functions of the issuing bank.

18. **Transferrable LC** is available for transfer in full or in part, in favour of any party other than beneficiary, by the advising bank at the request of the issuing bank.

19. **Red Clause LC** enables the beneficiary to avail pre-shipment credit from the nominated/advising bank. The LC bears a clause in "RED Letter" authorizing the nominated bank to grant advance to the beneficiary, prior to shipment of goods, payment of which is guaranteed by the Opening Bank, in case of nay default or failure of the beneficiary to submit shipment documents.

20. **Under a Sight LC,** the beneficiary is able to get the payment on presentation of documents conforming to the terms and conditions of the LC at the nominated bank's countries.

21. **Under the Acceptance Credit**, the bill of exchange or drafts are drawn with certain Usance period and are payable upon acceptance, at a future date, subject to receipt of documents conforming to the terms and condition of the LC.

22. **A Deferred Payment Credit** is similar to Acceptance Credit, except that there is no bill of exchange or draft drawn and is payable on certain future date, subject to submission of credit confirmed documents. The due date is generally mentioned in the LC

23. A **Negotiation Credit,** the issuing Bank undertakes to make payment to the Bank, which has negotiated the documents.

24. **In a Negotiation LC,** LC may be freely negotiable or may be restricted to any bank nominated by the LC issuing Bank.

25. **Back to Back LC**: when an exporter arranges to issue an LC in favour of Local supplier to procure goods on the strength of export LC received in his favour, it is known as Back to Back LC.

26. UCP 600 come into **force w.e.f. 01/07/2007.**

27. Important Changes in the Articles of UCP 600 and their implication for the Banks:-
A reduction in the number of articles from **49 to 39**
New articles **on "Definitions" and "Interpretations"** providing more clarity and precision in the rules
A definitive description of negotiation as "purchase" of drafts of documents

The replacement of the **phrase "reasonable time" for acceptance o**r refusal of documents by a maximum **period of five banking days**
New provisions allow for the discounting of deferred payment credits
Banks can now accept an insurance document that contains **reference to any exclusion clause**

28. **UCP 600 does not apply by default** to letters of credit issued after July 1st 2007. **A statement needs to be incorporated** into the credit (LC), and preferably also into the sales contract that expressly states it is subject to these rules.

29. **Revocable Credits (Article 2):** One of the most important changes in UCP 600 is the exclusion of any verbiage regarding revocable letters of credit, which can be amended or canceled at any time without notice to the seller. .Actually, **Article 2** explicitly defines a credit as "any arrangement, however named or described, that is irrevocable and thereby constitutes a definite undertaking of the issuing bank to honour a complying presentation."

30. **Article 3** states that "**A credit is irrevocable even if there is no indication to that effect."** and **Article 10** makes it clear that "**a credit can neither be amended nor cancelled without the agreement of the issuing bank, the confirming bank, if any, and the beneficiary**" (seller).Therefore, it is prudent for the seller to stipulate in the sales contract that the "buyer will open an irrevocable letter of credit", and to check that the buyer's credit does, in fact, either describe itself as "irrevocable" or state that it incorporates UCP 600 (without exclusion).

31. **Definitions and Interpretations (Articles 2 and 3)**: A new section of Definitions and Interpretations has been introduced in the UCP 600. This includes definitions of "Advising bank", "Applicant", "Banking day", "Beneficiary", "Complying presentation", "Confirmation", "Confirming bank", "Credit", "Honour", "Issuing bank", "Negotiation", "Nominated bank", "Presentation", "Presenter". In addition to that, the following terms are now clearly defined : "singular/plural", "irrevocable", "signatures", "legalizations", "Branches of a bank", "Terms describing issuer of a document", "Prompt etc", "on or about", "to", "until", "till", "from", "between", "before", "from", "after", "first half", "second half", "beginning", "middle", "end".

32. **Deferred payment undertakings - Articles 7 and 8** :. Articles 7 and 8 establish a definite undertaking by issuing and confirming banks to reimburse on maturity whether or not the nominated bank prepaid or purchased its own acceptance or deferred payment undertaking before maturity.

33. Article 12(b) expressly provides authority from an issuing bank to a nominated bank to discount prepay or purchase) a draft that it has accepted or a deferred payment undertaking that it has given.

34. **Advising of credits - Article 9**: At present an advising bank only has to verify the apparent authenticity of the credit that it has advised. Under art 9(b) it has to certify that the document that it

advises to the beneficiary is the same document that it received. **The obligation is also extended to any second advising ban**k.

35. **Amendments - Article 10**:- The position under article 9(d)(iii) of UCP 500 has been maintained in Article 10 under UCP 600. Article 10 now deals exclusively with amendments and article 10(c) provides: '… **The beneficiary should give notification of acceptance or rejection of an amendment**. If the beneficiary fails to give such notification, a presentation that complies with the credit and to any not yet accepted amendment will be deemed **to be notification of acceptance by the beneficiary of such amendment**.

36. **Time Allowed Banks for Document Review (Article 14)** :- Under UCP 500, banks have a **"reasonable time … not to exceed seven banking days**" in which to honor or dishonor documents. **UCP 600** shortens the period to a **maximum of five "banking days".**

37. Article 2 defines a **banking day as** "a day on which a bank is regularly open at the place at **which an act subject to these rules is to be performed**."

38. **Non-Matching Documents (Article 14):-** Article 14(d) provides the standard for examination of documents generally. It seeks to resolve the problem of inconsistency in data by clarifying that there is no need for a mirror image but rather

39. **Regarding addresses on the various documents, Article 14** indicates that they do not have to exactly match as long as the country is the same. The only exception is when addresses appear as part of the consignee or notify party details on a transport document, in which case they must be the same as stated in the credit.

40. **Examination of documents:** The standard for examining documents is reflected in article 14. **Banks now only have 5 banking days to accept or refuse documents.** This replaces the "Reasonable time not exceeding 7 banking days".

41. **The period for presentation (usually 21 days) only applies to original transport documents.**

42. Addresses of beneficiaries and applicants need no longer be as mentioned in the documentary credit. They must however be within the same country.

43. **Non-Documentary Requirements**: - Under UCP 600, Banks should disregard all non-documentary requirements. This means that any requirement in the credit that is not specifically part of a required document will be ignored by the bank in determining conformity.

44. **Complying presentation - article 15**:- Under UCP 600 it is clear that this begins when the bank determines that a presentation is compliant.

45. **Discrepant documents, waiver and notice - Article 16**:- Under UCP 500 a bank which refuses documents has the option of holding them at the presenter's disposal or handling them in accordance with the presenter's prior instructions, such as to return them. Article 16 now encompasses additional options designed to avoid banks sitting on discrepant documents and issues relating to forced waivers.

The options (which are alternatives) are as follows:
Hold documents pending further instructions from the presenter; or
Hold documents until it receives a waiver from the applicant and agrees to accept it, or receives further instructions from the presenter prior to agreeing to accept a waiver; or return the documents; or act in accordance with instructions previously received from the presenter. There is no provision for payment under reserve or indemnity.

46. **Original Documents (Article 17)**:- Article 17 of the new rules attempts to define original documents with more precision.

47. **Transport documents: Articles 19-24**:- The transport articles have been redrafted under advice of a group of "transport experts". The requirement that a bill of lading must show that goods are shipped on board a named vessel has been made much simpler which will hopefully lead to less confusion.

48. It is now acceptable that a "**Charterer"** (or a named agent on behalf of the charterer) can sign a **Charter Party Bill of Lading**. If an agent signs on behalf of a "**Master" on a Charter Party Bill of Lading t**hen the name of **the master need not appear from the document**.

49. Under UCP 600 a generic set of rules generally applies to all transport documents (other than charter party bills of lading). These include the following:
The document must indicate the name of the carrier and be signed by: (a) the carrier or named agent for or on behalf of the carrier; or (b) the master or named agent for or on behalf of the master.
Any signature by the carrier, master or agent must be identified as that of the carrier, master or agent.
Any signature of an agent must indicate whether the agent has signed for or on behalf of the carrier for or on behalf of the master.
There is no need to name the master.
In the case of charter party bills of lading :
These no longer need to indicate the name of the carrier.

They may now also be signed by the charterer, although it is difficult to envisage a situation where an FOB buyer/ applicant would wish to rely on a bill of lading signed by the seller/beneficiary and vice versa in the case of a CIF sale.
Transport documents also no longer need to bear the clause 'clean' in order to comply with any credits that require a document to be 'clean on board'.

50. **Insurance documents - article 28**:- Documents providing for wider coverage than stipulated in a credit will be acceptable. Banks will also be able to accept an insurance document that **contains reference to any exclusion clause**.

51. For the insurance documents the following has been changed: **"Proxies" can now sign** on behalf of the **insurance company** or **underwriter.**

52. **Force majeure - Article 36**:-Despite suggestions for an option to allow a grace period of five banking days after a bank reopens for the presentation of documents, the position remains as it was under UCP 500 -i.e. **banks will not honour or negotiate under a credit that expired during the force majeure event.**

53. It is the responsibility of the **Negotiating bank** to examine the documents, before making payment.

54. In case the advising bank does not advise the LC, it must inform of its decision to the **Opening Bank** immediately.

55. The **advising bank** must ensure the authenticity of LC before advising the same to the beneficiary.

56. In case the reimbursing bank does not pay to the negotiating bank, the ultimate **liability** lies with the **opening bank.**

57. **Important documents** called for under the **Letter of Credit :**
a. Bill of Exchange
b. Invoice
c. Bill of Lading
d. Insurance Policy/Certificate
e. Certificate of Origin
f. Packing List, Weight List and other Documents

58. **Bill of exchange** is drawn by the Beneficiary on the LC issuing Bank.

59. **Invoice** is a commercial Document and is a basic necessity of trade documents. It is being prepared by the Beneficiary

60. If invoice is issued for an amount in excess of the amount permitted by credit (when not specifically prohibited by the terms of LC), as per Article 18 B of UCPDC, **the drawing should not exceed the amount of credit.**

61. **Bill of Lading** is a transport document evidencing movement of goods from the port of acceptance to port of destination. It is a receipt issued by the ship owner or its authorized agent.

Unit - 5. Facilities for Exporters and Importers

Exports

RBI and DGFT RBI controls Foreign Exchange and DGFT (Directorate General of Foreign Trade) controls Foreign Trade. Exim Policy as framed in accordance with FEMA is implemented by DGFT. DGFT functions under direct control of Ministry of Commerce and Industry. It regulates Imports and Exports through EXIM Policy.

On the other hand, RBI keeps Forex Reserves, Finances Export trade and Regulates exchange control. Receipts and Payments of Forex are also handled by RBI.

IEC – Importer Exporter Code

One has to apply for IEC to become eligible for Imports and Exports. DGFT allots IEC to Exporters and Importers in accordance with RBI guidelines and FEMA regulations. EXIM Policy is also considered before allotting IEC.

Export Declaration Form

All exports (physically or otherwise) shall be declared in the following Form.

GR form--- meant for exports made otherwise than by post.

PP Form---meant for exports by post parcel.

Softex form---meant for export of software.

SDF (Statutory Declaration Form)----replaced GR form in order to submit declaration electronically.

SDF is submitted in duplicate with Custom Commissioned who puts its stamp and hands over the same to exporter marked “Exchange Control Copy” for submission thereof to AD.

Exceptions

Trade Samples, Personal effects and Central Govt. goods.

Up to USD 25000 (value) – Goods or services as declared by exporter.

Gift items having value up to Rs. 5.00 lac.
Goods with value not exceeding USD 1000 value to Mynmar.
Goods imported free of cost for re-export.
Goods sent for testing.

Prescribed Time limits

The time norms for export trade are as under:
Submission of documents with "Exchange Control Copy" to AD within 21 days from date of shipment.
Time period for realisation of Export proceeds is 12 M or 365 days from date of shipment.
No time limit for SEZ (Special economic zones) and SHE(Status Holder Exporters) and 100 EOUs.
After expiry of time lime limit, extension is sought by Exporter on ETX Form.
The AD can extend the period by 6M. However, reporting will be made to RBI on XOS Form on half yearly basis in respect of all overdue bills.

Direct Dispatch of Shipping Documents
AD banks may handle direct dispatch of shipping documents provided export proceeds are up to USD 1 Million and the exporter is regular customer of at least 6 months.

Prescribed Method of payment and Reduction in export proceeds
Exporter will receive payment though any of the following mode:
Bank Drafts, TC, Currency, FCNR/NRE deposits, International Credit Card. But the proceeds can be in Indian Rupees from Nepal.
Export proceeds from ACU countries (Bangladesh, Burma, Mynmar, Iran, Pak, Srilanka, Nepal and Maldivis can be settled in ACUEURO or USD. A separate Dollar/Euro account is maintained.

Exports may be allowed to reduce the export proceeds with the following:
Reduction in Invoice value on account of discount for pre-payment of Usance bills (maximum 25%)
Agency commission on exports.
Claims against exports.
Write off the unrecoverable export dues up to maximum limit of 10% of export value.
The proceeds of exports can be got deposited by exporter in any of the following account:
Overseas Foreign Currency account.
Diamond Dollar account.
EEFC (Exchange Earners Foreign Currency account)

DDA _ diamond Dollar accounts
Diamond Dollar account can be opened by traders dealing in Rough and Polished diamond or Diamond studded Jewellary with the following conditions:
With track record of 2 years.

Average Export turnover of 3 crore or above during preceding 3 licensing years.
DDA account can be opened by the exporter for transacting business in Foreign Exchange. An exporter can have maximum 5 Diamond Dollar accounts.

EEFC Exchange Earners Foreign Currency accounts can be opened by exporters. 100% export proceeds can be credited in the account which do not earn interest but this amount is repatriable outside India for imports (Current Account transactions).

Pre-shipment Finance or Packing Credit
Packing credit has the following features:
Calculation of FOB value of order/LC amount or Domestic cost of production (whichever is lower).
IEC allotted by DGFT.
Exporter should not be on the "Caution List" of RBI.
He should not be under "Specific Approval list" of ECGC.
There must be valid Export order or LC.
Account should be KYC compliance.
Liquidation of Pre-shipment credit
Out of proceeds of the bill.
Out of negotiation of export documents.
Out of balances held in EEFC account
Out of proceeds of Post Shipment credit.
Concessional rate of interest is allowed on Packing Credit up to 270 days. Previously, the period was 180 days. Running facility can also be allowed to good customers.

Post Shipment Finance
Post shipment finance is made available to exporters on the following conditions:
IEC accompanied by prescribed declaration on GR/PP/Softex/SDF form must be submitted.
Documents must be submitted by exporter within 21 days of shipment.
Payment must be made in approved manner within 6 months.
Normal Transit Period is 25 days.
The margin is NIL normally. But in any case, it should not exceed 10% if LC is there otherwise it can be up to 25%.

Types of Post Shipment Finance:
Export Bills Purchased for sights bills and Discounting for Usance bills.
Export bills negotiation.

Discrepancies of Documents
Late Shipment, LC expired, Late presentation of shipping documents, Bill of Lading not signed properly, Incomplete Bill of Lading, Clause Bill of Lading , Short Bill of Lading or Inadequate Insurance.

Advance against Un-drawn Balance

Undrawn balance is the amount less received from Importers. Bank can finance up to 10% undrawn amount.

Advance against Duty Drawback

Duty drawback is the support by Government by way of refund of Excise/Custom duty in case the domestic cost of the product is higher than the Price charged from the importer. This is done to boost exports despite international competition. Bank can make loan to exporter against Duty Drawback.

Crystallization of Overdue Bills

Consequent upon non-realization, Conversion of Foreign Exchange liability into Rupees is called crystallization. It is done on 30th day after notional due date at prevailing TT selling rate or Original Bill Buying Rate (Whichever is higher).

DA Bills

Notional due date is calculated in DA Bill by adding normal period of transit say 25 days in the Usance period. 30th day is taken from notional due date.

DP Bills

30th day after Normal Transit Period. If 30th day happens to be holiday or Saturday, liability will be crystallized on the following working day.
Policy has been liberalized and crystallization period will be decided.

Export of services

Credit can be provided to exporters of all 161 tradable services covered under GATS (General Agreement on Trade in services) where payment for such services is received in Forex. The provisions applicable to export of goods apply to export of services.

Gold Card Scheme

All exporters in Small and Medium Sector with good track record are eligible to avail Gold Card Scheme. The conditions are :
Account should be classified as Standard assets for the last 3 years.
Limit is sanctioned for 3 years and thereafter automatic renewal.
There is provision of 20% Standby limit.
Packing Credit is allowed in Foreign currency.
Concessional rate is allowed for 90 days initially which can be extended for 360 days.
Bank may waive collateral and provide exemption from ECGC Guarantee schemes.

Factoring and Forfaiting

Factoring is financing and collection of Export Receivables. The client sells Receivables at discount to Factor in order to raise finance for Working Capital. It may be with or without recourse. Factor finances about 80% and balance of 20% is paid after collection from the borrower. Bill should carry LR/RR. Maximum Debt period permitted is 150 days inclusive of grace period of 60 days. Debts are assigned in favour of Factor. There are 2 factors in International Factoring. One is Export Factor and the other is Import Factor. Importer pays to Import factor who remits the same to Export Factor.

Forfaiting is Finance of Export Receivables to exporter by the Forfaitor. It is also called discounting of Trade Receivables such as drafts drawn under LC, B/E or PN. It is always No Recourse asis (i.e. without recourse to exporter). Forfaitor after sending documents to Exporters' Bank , makes 100% payment to exporter after deducting applicable discount.

Pre-shipment & Post-shipment Finance

Q. 1. Received order of USD 50000(CIF) to Australia on 1.1.2015 when USD/INR Bill Buying Rate is 43.50. How much preshipment finance will be released considering profit margin of 10% and Insurance and freight cost@ 12%.

Solution

FOB Value = CIF – Insurance and Freight – Profit (Calculation at Bill Buying Rate on 1.1.2015)
= 50000X43.5 = 2175000 – 216000(12%) – 191400(10% of 1914000) = 1722600
Pre-shipment Finance = FOB value -25%(Margin) = 1722600-430650=1291950.

Q. 2. What will be amount of Post-shipment Finance under Foreign Bill Purchased for USD 45000 when Bill Buying rate on 31.3.2015 (date of submission of Export documents) is 43.85

Solution

45000X43.85 = 1973250 Ans.

Q. 3. Period for which concessional Rate of Interest is charged on DP bills from date of purchase.

Ans - 25 days

Q. 4. If the above said bill remains overdue for 2 months, what will be date of crystallization?

Due Date of Bill will be 31.3.11 + 25 days = 25.4.2011
The bill will be crystallized on 24.5.2011 i.e. on 30th day from due date.

Q. 5. On 8th Sep, an exporter tenders a demand bill for USD 100000 drawn on New York. The USD/INR quote is as under:

Spot---------USD 1 =34.3000/3500
Spot Sep----------6000/7000
Spot Oct----------8000/9000
Spot Nov----------10000/11000
Transit Period is 20 days and Exchange margin 0.15%
Calculate Rupee payable to the customer. Customer wants to retain 15% in Dollars

Solution
Since, the currency is at premium, the transit period will be rounded off to the lower month (i.e. NIL). And the rate to the customer will be based on Spot Rate. If interest rate is 13%, how much interest will be recovered from the exporter.

Spot Buying rate = 34.3000
Less Exchange Margin = 0.0515
34.2485 or 34.25 per dollar.
Amount in Indian Rupee = 85000(85% of 100000) x 34.25 = 2911250/-
Interest will be charged on 2911250/- @ 13% for 20 days = 20738/-.

Q. 6. On 26th Aug, an exporter tenders for purchase a bill payable 60 days from sight and drawn on New York for USD 25650. The dollar rupee rate is as under:

Spot----------1USD = 34.6525/6850
Spot Sep----------1500/1400
Spot Oct----------2800/2700
Spot Nov----------4200/4100
Spot Dec----------5600/5500

Exchange Margin is 0.15%, Transit Period is 20 days. Rate of Interest is 13%.
What will be the exchange rate payable to the customer and Rupee amount payable?

Solution
Notional due Date = 20+60 days from 26th Aug i.e. 14th Nov. Since, the currency is at discount, the period will be rounded off to the same month (higher of Oct or Nov). Obviously, the discount of Nov will be more and it will make the Buy Rate Lower.

Dollar/Rupee market spot Buying Rate = 34.6525
Less Discount for August to November = 0.4200 = 34.2325
Less Exchange Margin @.15% .0513 = 34.1812
Rupee Amount payable to exporter = 25650 X 34.18 = 876717.00
Less Interest for 80 days @ 13% = 24980.00

Less out of pocket expenses = 500.00 = 851237.00

Imports

Imports – Prerequisites

AD1 banks are to ensure that Imports are in accordance with:
Exim Policy
RBI Guidelines
FERA Rules
Goods are as per OGL (Open General list).
Importer is having IEC (Import Export Code) issued by DGFT.

Imports Formalities & Time limit for import payment

The following are essential elements of Imports:
An importer before remitting proceeds exceeding USD 500 must submit application on Form A-1 to the Authorized Dealer.
AD banks can issue LC on the basis of License and Exchange Control Copy.
Remittance against exports should be completed within 6 months from date of shipment.
Any delay beyond 6 months will be treated as Deferred Payment arrangement and the same will be treated as Trade Credit up to the period less than 3 years.

Advance Remittances

AD Banks may remit advance payment of Imports subject to following conditions:
Up to USD 2,00,000 or equivalent after satisfying about nature of transaction, trade and standing of Supplier.
In excess of 2,00,000 USD, an irrevocable Standby LC or Guarantee from a bank of international repute or a guarantee from bank in India, if such guarantee is issued against Counter guarantee of International bank outside India.
The requirement of guarantee may not be insisted upon in case of remittances above USD200000 up to USD 50,00,000 (5 million) subject to suitable policy framed by BOD of bank.
The AD should be satisfied with track record of the exporter.
Approval of RBI is required only if Advance remittance exceeds USD 50,00,000 or equivalent.
Advance remittance will be made direct to Overseas supplier or his bank.
Physical imports must be made within 6 months from date of Remittance. For Capital goods, the period is 3 years.

Evidence of Imports

Importer must submit Evidence of Imports i.e. Exchange control copy of “Bill Of Entry”. The AD will ensure receipt of Bill Of Entry in all cases where Value of Forex exceeds USD 100000, within 3 months

from date of remittance. Otherwise, one months' notice will be served. If there is still default of 21 days after serving notice, Ad will forward Statement to RBI on Half yearly basis on BEF Form.

Import Finance Importer can avail finance from banks/FIs in the shape of :
Letter of Credit
Import Loans against Pledge/Hypothecation of stocks.
Trade Credit – Supplier Credit or Buyer Credit

Trade Credit If the Import proceeds are not remitted, within 6 months, it is treated as Trade Credit up to the period less than 3 years. For period 3 years and above, the credit is called ECB (External Commercial Borrowings).

Suppliers' Credit
It is credit extended by Overseas suppliers to Importer normally beyond 6 months up to period of 3 years.
Up to 1 year for Current Account Transactions
Up to 3 years for Capital Account Transactions
Monetary Limit is USD 20 million per transaction.

Buyers' Credit
It is credit arranged by Importer from Banks/Fis outside countries. Banks can approve proposals of Buyers' Credit with period of Maturity:
Up to 1 year for Current Account Transactions
Up to 3 years for Capital Account Transactions
Monetary Limit is USD 20 million per transaction.

Crystallization of Foreign Currency Liability into INR

In case the importer fails to make payment,
crystallization of Foreign Exchange liability into Indian Rupees is done on 10th day at TT selling Rate.

In case of Retirement of Import Bill
The crystallization is done at current Bill Selling Rate or Contracted Bill Selling Rate (Whichever is higher).
DP Bill: On 10th Day from date of receipt of Import Bill.
DA Bill: On Actual Due Date.

All-in Cost Ceiling
The present Ceilings for all-in-cost, including interest for buyers'/suppliers' credit, as fixed by

RBI is as under:
Up to 365 days –---------- LIBOR + 350 bps
Above 1 year up to 3 years --------LIBOR + 350 bps
These ceilings include management fees, arrangement fees etc.
Example On 12th Feb, a customer has received an Import bill for USD 10000/-. He asks you to retire the bill to the debit of the account. Considering Exchange margin 0.15% for TT sales and 0.20% on Bill Selling Rate. What amount will be debited to the account. Spot rate is 34.6500/34.7200

Spot march = 5000/4500
Rate applied will be Bill Selling Rate
Spot Rate = 34.7200
Add Margin for TT selling (0.15%) = 0.0520
TT selling Rate = 34.7720
Add margin for Bill selling@ 0.20% = 0.0695
Bill Selling Rate = 34.8415

Customers' account will be debited with Rs. 348400/- (10000X 34.84)

Unit – 6 : Risks in Foreign Trade - Role of ECGC

Risks in International Trade
Foreign trade risk may be defined as Uncertainty or Unplanned events with financial consequences resulting into loss. Types of Risks are as under:
Buyers' Risk: Non-Acceptance or non-payment
Sellers' Risk: Non- shipping or Shipping of poor quality goods or delay.
Shipping Risk: Mishandling, Goods siphoned off, Strike by potters or wrong delivery.

Other Risks:
Credit Risk
Legal Risk
Country Risk
Operational Risk
Exchange Risk
Country Risk

Provision of risk is made if Exposure to one country is 1% or more of total assets. ECGC has the list of Country Risk Ratings which can be referred to by the Banks and the banks can make their own country risk policy.

Risk Classification of Countries

Export Credit and Guarantee Corporation provides guarantee cover for risks which can be availed by the banks after making payment of Premium. ECGC adopts 7 fold classification covering 204 countries. The list is updated and published on quarterly basis. The latest classification is as under:

Insignificant Risks A1
Low Risk A2
Moderately Low Risk B1
Moderate Risk B2
Moderately High Risk C1
High Risk C2
Very High Risk D

Besides above, 20 countries have been placed in "Restricted Cover Group-1" where revolving limits are approved by ECGC and these are valid for 1 year. The other 13 countries are placed in "Restricted Cover Group-2" where specific approval is given on case to case basis by ECGC.

ECGC ECGC was established in 1964. Export Credit and Guarantee Corporation provides guarantee cover for risks which can be availed by the banks after making payment of Premium. Its activities are governed by IRDA. The functions of ECGC are 3 fold:

It rates the different countries.
It issues Insurance Policies.
It guarantees proceeds of Exports.

Types of Policies:

Standard Policies

It provides cover for exporters for short term exports. These cover Commercial and Political Risks.

The different types of Policies are:
Shipment (Comprehensive Risk) Policy – to cover commercial and political risks from date of shipment. Default of 4 months.
Shipment (Political Risks) Policy.
Contracts (Comprehensive Risk) Policy for both commercial and Political risks.
Contracts (Political Risks) Policy

Small Exporters' policy

A small exporter is defined whose anticipated total export turnover for the period of 12 M is not more than 50 lac. The policy is issued to cover shipments 24 M ahead.

The policy provides cover against Commercial risks and Political risks covering insolvency of the buyer, failure of the borrower to make payment due within 2 months from due date, borrower's failure to accept the goods due to no fault of exporter.

Specific Shipment Policy
Commercial risks – Failure to pay within 4M. It covers short term credit not exceeding 180 days Exports Specific Buyer Policy
Commercial risks – Failure to pay within 4M and Political Risks

The other Policies are Exports (specific buyers' Policy), Buyers' Exposure Policy, Export Turnover Policy (exporters who pay minimum 10 lac premium to ECGC are eligible) and Consignment export Policy.

Financial Guarantees
ECGC issues following types of Guarantees for the benefit of Exporters:
Packing Credit Insurance

ECIB (WT-PC) – Exporters Credit Insurance for Banks (whole Turnover Packing Credit)
This policy is issued to banks to guarantee export risks:
For all exporters
Minimum 25 accounts should be there.
Minimum assured premium is Rs. 5.00 lac.
Period of cover is 12M.
The claim is payable if there is default of 4 Months.
Premium for fresh covers is 8 paisa per month and for others is 6-9.5 paisa percent. It is calculated on average outstanding.
Percentage of cover ranges from 50-75%
If due date of export proceeds is extended beyond 360 days, approval of ECGC is required.
Claim is to be filed within 6M of report of default to ECGC.

ECIB – PC – for individual exporters. The advance should be categorized as Standard Asset. The period of coverage is 12M and %age of cover is 66-2/3 %. The premium is 12 paisa% on highest outstanding.
Monthly declaration by banks before 10th.
Approval of Corporation beyond 360 days PC.
Report of default within 4M from due date.
Filing of claim within 6M of the report.

ECIB –(WT- PS) – Whole Turnover Post Shipment Credit Policy
It is a common policy for all exporters.

Advances against export bills are covered.
Premium is 5-9 paisa % per month.
Over is usually 60-75%.
If the cover is taken by exporter individually, the cover increases to 75-90%.

Export Finance Guarantee
When banks make advance to exporters against export incentives receivables like Duty Drawback etc. The cover available is 75% and the premium ranges from 7 paisa onwards.

Exchange Fluctuation Risk Cover Scheme
The cover is available for payment schedule over 12 months up to maximum period of 15 years. Cover is available for payments specified in USD, GBP, EURO, JPY, SWF, AUD and it can be extended for other convertible currencies.

The contract cover provided a franchise of 2% Loss or gain within range of 2% of reference rate will go to the account of the exporter. If the loss exceeds 2% , the ECGC will make good the portion of loss in excess of 2% but not exceeding 35%.

The other guarantees are:
Export Performance Guarantee
Export Finance (Overseas Lending) Guarantee.
Transfer guarantee – cover to the confirming bank in India.

Maturity Factoring
ECGC provides full fledged Factoring Insurance services. It facilitates purchase of account receivables. It provides up to 90% finance against approved transactions. It follows up collection of sales proceeds. Exporters of good track record and dealing on DA terms having unexpected bulk orders are eligible to apply.

Common Guidelines
Notice of Default
Notice of default must be served within a period of 4 months from due date or 1 month from date of recall.

Lodging of Claim
The claim should be filed with ECGC within maximum period of 6 months date of lodging of Default Notice.

Unit – 7 : Role of Exim Bank, Reserve Bank of India, Exchange Control in India - FEMA and FEDAI and Others

Exim Bank – its functions

Exim Bank (Export/Import Bank) was established in 1981 with the objective of financing Import Export Trade specially on Long term basis. The functions of Exim bank are as under:

Offering Finance for Exports at competitive rates.
Developing alternate financial solution
Data and Information about new export opportunities.
Respond to export problems and pursue Policy solutions.

The finance activities of Exim bank consist of :
Arranging Suppliers' credit and Buyers' credit
Consultancy and Technical services for exporters
Pre-shipment credit – over 6 months
Setting up of EOU in EPZ (Export Processing Zones)
Finance for DTA (Domestic Tariff Area) units exporting minimum 25% of annual sales.
Finance for Import of Computer System and Development of Software. Plant and Machinery and Technical up-gradations etc.
Services for Overseas Investments.
Line of Credit to exporters on the basis of which they receive export orders.
EXIM Bank performs following functions for Commercial Banks:
Export Bills Rediscounting – Usance period should not exceed 180 days.
SSI Export Bills Rediscounting.
Refinance of Export credit
Refinance of TL to EOU, Software Capital goods up to 100%
Participates with banks in Issuance of Guarantees.

Besides above, the EXIM bank arranges Relending facilities for Overseas Banks, sanctions direct credit to foreign importers and arranges line of credit for foreign importers.

DPG (Deferred Payment Guarantees)
It is normally beyond 6M and meant for SHE (Status Holder Exporters) only.
Banks can approve proposals up to 25 crore.
Above 25 crore up to 100 crore are referred to EXIM bank.
Above 100 crore proposals will be considered by Inter institutional Working Group consisting of members from RBI, FEDAI, ECGC and EXIM.

Other services of EXIM bank

Besides above, the EXIM bank provides assistance for :
Project Exports – export of Engineering goods on Deferred Payment terms
Turnkey Projects- supply of equipment along with related services like design, detailed engineering etc.
Construction Projects
Funded facilities.
EXIM Bank is nodal agency designated by GOI to manage Export Marketing Fund (EMF) which consists of loan made available to India by World bank to promote International Trade.

Reserve Bank of India

RBI controls Foreign Exchange

RBI is empowered to
Control and regulate Foreign Exchange Reserves
Supervise Foreign Exchange dealings
Maintain external value of Rupee
FERA was replaced by FEMA in the year 1999.

FEMA provisions The important FEMA guidelines with regard to Foreign exchange are as under:
No drawl of exchange for Nepal and Bhutan
If Rupee equivalent exceeds Rs. 50000/-, payment by way of crossed cheque.
During visit abroad, one can carry Foreign currency notes up to USD 3000 or equivalent. For Libya and Iraq, the limit is USD5000 and the entire amount for Iran and Russian states.
Indian citizens can retain and possess Foreign currency up to USD 2000 or its equivalent.
Unspent currency must be surrendered within a period of 180 days after arrival in India.
Basic Travel Quota (BTQ)
Purpose of Visit Up to USD or equivalent

Personal/Tourism	- 10000 per Financial year
Business Purpose	- 25000 per visit
Seminars/conferences	- 25000 per visit
Employment/Immigration	- 100000
Studies	- 100000 per academic year
Donations/Gifts	- 5000 per donor per year
Consultancy services	- 100000 per project
Debit Credit/Credit Card	- As per BTQ as above

*AD can release Foreign Exchange 60 days ahead of journey
LRS (Liberalized Remittance Scheme

The scheme is meant for Resident Indians individuals. They can freely remit up to USD 200000 per financial year in respect of any current or capital account transaction (e.g. to acquire property outside India) without prior approval of RBI. The precondition is that the remitter should have been a customer of the bank for the last 1 year. PAN is mandatory.

Not Applicable

The scheme is not applicable for remittance to Nepal, Bhutan, Pak, Mauritius or other counties identified by FATF.
The scheme is not meant for remittance by Corporate.
Import and Export of Indian Rupees
Limit is Rs. 7500/- while leaving India and while coming to India.

RETURNS TO BE SUBMITTED TO RBI

Following important returns are submitted to RBI

R- Returns - Forex Operations (Fortnightly)
BAL statement - Balance in Nostro/Vostro account
STAT 5 - Transactions in FCNR B accounts
STAT 8 - Transactions in NRE/NRO accounts
LRS Statement - UP to USD 200000 (monthly)
Trade Credit Statement - Buyers' and Suppliers' Credit
XOS O/S - Overdue Export bills
BEF - Import Remittance effected but Bill of Entry not submitted for >3M.
ETX Form - Seeking relaxation from RBI after expiry of 12M when export proceeds are not received.

RFC accounts Resident Foreign Currency account is opened by Indian residents who were earlier NRIs and forex is received by them from their overseas dues:
The accounts can be opened as SB/CA/FD type.
Proceeds are received from overseas.
Out of Monetary benefits accruing abroad
The funds are freely repatriable.
Minimum amount is USD 5000.

RFC- D accounts Resident Foreign Currency (Domestic) accounts are opened:
By Indian residents who visit abroad: and
Bring with them Foreign Exchange;
As honorarium, gift etc.
Unspent money can also be deposited.
These are CA nature accounts and no interest is paid.

FEDAI Foreign Exchange association of India is a non-profit body established in 1958 by RBI. All public sector banks, Private Banks, Foreign Banks and Cooperative banks are its members. The functions of FEDAI are:
Forming uniform rules
Providing training to bankers; and
Providing guidance and information from time to time.

The important rules are:
Export Transactions : Forex liability must be crystallized into Indian rupees on 30th day after expiry of NTP (Notional Transit Period) in case of Sight bills and on 30th day after notional due date in case of Usance bills. The rule has since been relaxed and bank can frame its own rule for nos. of days for crystallization.
Concessional rate of interest is applied up to Notional due date or up to value date of realization of export dues (whichever is earlier)
Import Transactions: For retirement of Import bills whether under LC or otherwise, banks Bill selling rate on date of retirement or the Forward rate will be applied.
DP Bills (sight) are retired after crystallization on 10th day after receipt.
DA Bills are retired (crystallized) on Due Date.
All Foreign Currency bills under LC, if not retired on receipt, shall be crystallized into Rupee liability on 10th day after date of receipt of documents at TT Selling Rate.

Normal Transit Period is:
- 25 days for export bills,
- 3 days for Rupee bills drawn under LC and payable locally
- 7 days for rupee bills drawn under LC and payable at other centers
- 20 days for Rupee bills not drawn under LC.
- For exports to Iraq, normal transit period is 60 days.

Compensation on Delayed payment:
All Foreign Inward remittances up to Rs.1.00 lac should be converted into Indian Rupees immediately
The proceeds of any Inward remittance should be credited to the account within 10 days and advice of receipt is to be sent within 3 days, failing which, compensation @2% above SB rate will be paid to the beneficiary.

Forward Contracts
Exchange contracts will be for definite amount and period.
Contracts must state first and last date of contracts e.g. from 1-31 Jan or from 17th Jan to 16th Feb.
For contracts up to 1 month, option period for delivery may be specified.
In case of extension of contract, previous contract will be cancelled at TT Buying rate or TT selling rate as the case may be.

Overdue contracts are liable to be cancelled on 7th working day after maturity date if no instructions are received. The contracts must state first and last date of the contract.
Banks are now free to fix their own rates of commission and margin etc.

ECBs External Commercial Borrowings are medium and long term loans as permitted by RBI for the purpose of :
Fresh investments
Expansion of existing facilities
Trade Credit (Buyers' Credit and Sellers' Credit) for 3 years ar more.
Automatic Rout
ECB for investment in Real Estate sector , Industrial sector and Infrastructure do not require RBI approval
It can be availed by Companies registered under Indian Company Act.
Funds to be raised from Internationally recognized sources such as banks, Capital markets etc.
Maximum amount is USD 20 million with minimum average maturity of 3 years and USD 50 million with average maturity of 5 years.
All in cost ceiling is LIBOR+350 bps for ECB up to 5 years and LIBOR+500 bps for ECBs above 5 years.

Approval Route
Under this route, funds are borrowed after seeking approval from RBI.
The ECBs not falling under Automatic route are covered under Approval Route.
Under this route, Issuance of guarantees and Standby LC are not allowed.
Funds are to be raised from recognized lenders with similar caps of all-in-cost ceiling.

ADRs American Depository Receipts are Receipts or Certificates issued by US Bank representing specified number of shares of non-US Companies. defined as under:
These are issued in capital market of USA alone.
These represent securities of companies of other countries.
These securities are traded in US market.
The US Bank is depository in this case.
ADR is the evidence of ownership of the underlying shares.

Unsponsored ADRs
It is the arrangement initiated by US brokers. US Depository banks create such ADRs. The depository has to Register ADRs with SEC (Security Exchange Commission).

Sponsored ADRs
Issuing Company initiates the process. It promotes the company's ADRs in the USA. It chooses single Depository bank. Registration with SEC is not compulsory. However, unregistered ADRs are not listed in US exchanges.

GDRs Global Depository Receipt is a Dollar dominated instrument with following features:
Traded in Stock exchanges of Europe.
Represents shares of other countries.
Depository bank in Europe acquires these shares and issues "Receipts" to investors.
GDRs do-not carry voting rights.
Dividend is paid in local currency and there is no exchange risk for the issuing company.
Issuing Co. collects proceeds in foreign currency which can be used locally for meeting Foreign exchange requirements of Import.
GDRS are normally listed on "Luxembourg Exchange " and traded in OTC market London and private placement in USA.
It can be converted in underlying shares.
IDRs Indian Depository Receipts are traded in local exchanges and represent security of Overseas Companies.

CDF (Currency Declaration Form)
CDF is required to be submitted by the person on his arrival to India at the Airport to the custom Authorities in the following cases:
If aggregate of Foreign Exchange including Foreign currency/TCs exceeds USD 10000 or its equivalent.
If aggregate value of currency notes (cash portion) exceeds USD 5000 or its equivalent.

Interest Subvention on Export Credit @2%
Reserve Bank of India has now decided to extend the interest subvention of 2% on rupee export credit for the period 1.4.2012 to 31.3.2013 on the same terms and conditions to the following sectors:
i. Handicrafts
ii. Carpet
iii. Handlooms
iv. Small and Medium Enterprises (SMEs) (as defined in Annexure-I)
v. Readymade Garments
vi. Processed Agriculture Products
vii. Sport Goods
viii. Toys

Interest subvention of up to 2% may be allowed on pre-shipment credit up to 270 days and post-shipment credit up to 180 days on the outstanding amount for the period 1.4.2012 to 31.3.2013 to the above mentioned sectors subject to the condition that the rate of interest shall not fall below 7% after allowing the aforesaid subvention. Further, it should be ensured that the benefit of interest subvention is passed on completely to the eligible exporters.

Unit – 8 : Risk and Basic Risk Management Framework

Risk Management

Risk and Capital

Risk is possible unfavorable impact on net cash flow in future due to uncertainty of happening or non-happening of events. Capital is a cushion or shock observer required to absorb potential losses in future. Higher the Risks, high will be the requirement of Capital and there will be rise in RAROC (Risk Adjusted Return on Capital).

Types of Risks

Risk is anticipated at Transaction level as well as at Portfolio level.

Transaction Level

Credit Risk, Market Risk and Operational Risk are transaction level risk and are managed at Unit level.

Portfolio Level

Liquidity Risk and Interest Rate Risk are also transaction level risks but are managed at Portfolio level.

Risk Measurement

Based on Sensitivity

It is change in Market Value due to 1% change in interest rates. The interest rate gap is sensitivity of the interest rate margin of Banking book. Duration is sensitivity of Investment portfolio or Trading book.

Based on Volatility:

It is common statistical measure of dispersion around the average of any random variable such as earnings, Markto market values, losses due to default etc.

Statistically Volatility is Standard deviation of Value of Variables

Calculation

Example 1 : We have to find volatility of Given Stock price over a given period. Volatility may be weekly or monthly. Suppose we want to calculate weekly volatility. We will note down Stock price of nos. of weeks.

Mean Price = 123.62 and

Variance (sum of Squared deviation from mean) is 82.70

(extracted from weekly Stock prices)

Volatility i.e. sd = ∫Variance = ∫82.70 = 9.09

Volatility over Time Horizon T = Daily Volatility X ∫T

Example 2
Daily Volatility =1.5%
Monthly Volatility = 1.5 X ∫30 = 1.5 X 5.48 = 8.22
Volatility will be more if Time horizon is more.

Downside Potential
It captures only possible losses ignoring profits and risk calculation is done keeping in view two components:
1. Potential losses
2. Probability of Occurrence.

The measure is more relied upon by banks/FIs/RBI. VaR (Value at Risk is a downside Risk Measure.)

Risk Pricing Risk Premium is added in the interest rate because of the following:
• Necessary Capital is to be maintained as per regulatory requirements.
• Capital is raised with cost.

For example there are 100 loan accounts with Level 2 Risk. It means there can be average loss of 2% on such type of loan accounts: Risk Premium of 2% will be added in Rate of Interest.

Pricing includes the following:
1. Cost of Deploying funds
2. Operating Expenses
3. Loss Probabilities
4. Capital Charge

Risk Mitigation

Credit Risk can be mitigated by accepting Collaterals, 3rd party guarantees, Diversification of Advances and Credit Derivatives.
Interest rate Risk can be reduced by Derivatives of Interest Rate Swaps.
Forex Risk can be reduced by entering into Forward Contracts and Futures etc.

If we make advances to different types of business with different Risk percentage, the overall risk will be reduced through diversification of Portfolio.

Banking Book, Trading Book and Off Balance Sheet Items

Banking Book

It includes all advances, deposits and borrowings which arise from Commercial and Retail Banking. These are Held till maturity and Accrual system of accounting is applied. The Risks involved are: Liquidity Risk, Interest Rate Risk, Credit Default Risk, Market Risk and Operational Risk.

Trading Book

It includes Assets which are traded in market.

- These are not held till maturity.
- The positions are liquidated from time to time.
- These are Mark- to–market i.e. Difference between market price and book value is taken as profit.
- Trading Book comprises of Equities, Foreign Exchange Holdings and Commodities etc.
- These also include Derivatives

The Risks involved are Market Risks. However Credit Risks and Liquidity Risks can also be there.

Off Balance Sheet Exposures

The Off Balance sheet exposures are Contingent Liabilities, Guarantees, LC and other obligations. It includes Derivatives also. These may form part of Trading Book or Banking Book after they become Fund based exposure.

Types of Risks

1. Liquidity Risk

It is inability to obtain funds at reasonable rates for meeting Cash flow obligations. Liquidity Risk is of following types:

Funding Risk: It is risk of unanticipated withdrawals and non-renewal of FDs which are raw material for Fund based facilities.

Time Risk: It is risk of non-receipt of expected inflows from loans in time due to high rate NPAs which will create liquidity crisis.

Call Risk: It is risk of crystallization of contingent liabilities.

2. Interest Rate Risk

Risk of loss due to adverse movement of interest rates. Interest rate risk is of following types:

Gap or Mismatch Risk: The risk of Gap between maturities of Assets and Liabilities. Sometimes, Long term loans are funded by short term deposits. After maturity of deposits, these liabilities are get

repriced and Gap of Interest rates between Assets and Liabilities may become narrowed thereby reduction of profits.

Basis Risks: Change of Interest rates on Assets and Liabilities may change in different magnitudes thus creating variation in Net Interest Income.
Yield Curve Risk: Yield is Internal Rate of Return on Securities. Higher Interest Rate scenario will reduce Yield and thereby reduction in the value of assets. Adverse movement of yield will certainly affect NII (Net Interest Income).

Embedded Option Risk : Adverse movement of Interest Rate may result into pre-payment of CC/DL and TL. It may also result into pre-mature withdrawal of TDs/RDs. This will also result into reduced NII. This is called Embedded Risk.

Re-investment Risk: It is uncertainty with regard to interest rate at which future cash flows could be reinvested.

3. Market Risk
Market Risk is Risk of Reduction in Mark-to-Market value of Trading portfolio i.e. equities, commodities and currencies etc. due to adverse market sensex. Market Risk comprises of:

- Price Risk occurs when assets are sold before maturity. Bond prices and Yield are inversely related.
- IRR affects the price of the instruments.
- Price of Other commodities like Gold etc,. is also affected by the market trends.
- Forex Risks are also Market Risks.
- Liquidity Risk or Settlement Risk is also present in the market.

4. Credit Risk or Default Risk
Credit Risk is the risk of default by a borrower to meet commitment as per agreed terms and conditions. There are two types of credit Risks:

Counter party Risk: This includes non-performance by the borrower due to his refusal or inability.

Country Risk : When non-performance of the borrower arises due to constrains or restrictions imposed by a country.

5. Operational Risk
Operation Risk is the risk of loss due to inadequate or Failed Internal procedures, people and the system. The external factors like dacoity, floods, fire etc. may also cause operational loss. It includes Frauds Risk, Communication Risk, Documentation Risk, Regulatory Risk, Compliance Risk and legal risks but excludes strategic /reputation risks.

Two of these risks are frequently occurred.

Transaction Risk: Risk arising from fraud, failed business processes and inability to maintain Business Continuity.
Compliance Risk: Failure to comply with applicable laws, regulations, Code of Conduct may attract penalties and compensation.

Other Risks are:
1. Strategic Risk: Adverse Business Decisions, Lack of Responsiveness to business changes and no strategy to achieve business goals.
2. Reputation Risk ; Negative public opinions, Decline in Customer base and litigations etc.
3. Systemic Risks ; Single bank failure may cause collapse of whole Banking System and result into large scale failure of banks.
In 1974, closure of HERSTATT Bank in Germany posed a threat for the entire Banking system

BASEL–I

Bank for International Settlements (BIS) is situated at Basel (name of the city in Switzerland). Moved by collapse of HERSTATT bank, BCBS – Basel Committee on Banking Supervision consisting of 13 members of G10 met at Basel and released guidelines on Capital Adequacy in July 1988. These guidelines were implemented in India by RBI w.e.f. 1.4.1992 on the recommendations of Narsimham Committee. The basic objective was to strengthen soundness and stability of Banking system in India in order to win confidence of investors, to create healthy environment and meet international standards.

BCBS meets 4 times in a year. Presently, there are 27 members.
BCBS does not possess any formal supervisory authority.

1996 Amendment
- Allowed banks to use Internal Risk Rating Model.
- Computation of VaR daily using 99th percentile.
- Use of back-testing
- Allowing banks to issue short term subordinate debts with lock-in clause.

Calculation of CRAR (Capital to Risk Weighted Asset Ratio)

Basel – I requires measurement of Capital Adequacy in respect of **Credit risks and Market Risks** only as per the following method:
Capital funds(Tier I & Tier II)/(Credit Risk Weighted Assets + Market RWAs + Operational RWAs) X 100

Minimum requirement of CRAR is as under:
As per BASEL-II recommendations 8%
As per RBI guidelines 9%
Banks undertaking Insurance business 10%
New Private Sector Banks 10%
Local Area banks 15%
For dividend declaration by the banks (during previous 2 years and current year) 9%

Tier I & Tier II Capital

Tier –I Capital
Tier –I Capital includes:
• Paid up capital, Statutory reserves, Other disclosed free reserves, Capital Reserve representing surplus out of sale proceeds of assets.
• Investment fluctuation reserve without ceiling.
• Innovative perpetual Debt instruments (Max. 15% of Tier I capital)
• Perpetual non-cumulative Preference shares
Less Intangible assets & Losses.
• Sum total of Innovative Perpetual Instruments and Preference shares as stated above should not exceed 40% of Tier I capital. Rest amount will be treated as Tier II capital.

Tier –II Capital
It includes:
• Redeemable Cumulative Preference shares, Redeemable non-cumulative Preference shares & Perpetual cumulative Preference shares,
• Revaluation reserves at a discount of 55%,
• General Provisions & Loss reserves up to 1.25 % of RWAs
• Hybrid debts (say bonds) & Subordinate debts (Long term Unsecured loans) limited to 50% of Tier –I Capital.

Tier – III Capital
Banks may at the discretion of the National Authority, employ 3rd tier of Capital consisting of short term subordinate debts for the sole purpose of meeting a proportion of capital requirements for

market risks. Tier III capital will be limited to 250% of bank's Tier –I Capital (Minimum of 28.5%) that is required to support market risks.

Tier – II capital should not be more than 50% of Total Capital.

Capital adequacy in RRBs

The committee on financial sector assessment has suggested introducing CRAR in RRBs also in a phased manner.

Two ways to improve CRAR

1. By raising more capital. Raising Tier I capital will dilute the equity stake of existing investors including Govt. Raising Tier II Capital is definitely a costly affair and it will affect our profits.

2. Reduction of risk weighted assets by implementing Risk mitigation Policy.

Risk Weights on different Assets

Cash and Bank Balance 0%
Advances against NSC/KVC/FDs/LIC 0%
Govt. guaranteed Advances 0%
Central Govt. Guarantees 0%
State Govt. Guarantees 20%
Govt. approved securities 2.5%
Balance with other scheduled banks having CRR at least 9% 20%
Other banks having CRR at least 9% 100%
Secured loan to staff 20%
Other Staff loans -not covered by retirement dues 75%
Loans upto 1.00 lac against Gold/Silver 50%
Residential Housing Loans O/S above 30 lac 75%
Residential Housing loans O/S upto 30 lac 50%
Residential property if LTV ratio is above 75% 100%
Residential Housing Loans O/S above 75 lac 125%
Mortgage based securitization of assets 77.5%
Consumer Credit / Credit Cards/Shares loan 125%
Claims secured by NBFC-non-deposit taking (other than AFCs) 100%
Venture Capital 150%
Commercial Real Estates 100%
Education Loans (Basel –II -75%) 100%
Other loans (Agriculture, Exports) 100%

Indian Banks having overseas presence and Foreign banks will be on parallel run (Basel -I) and Basel-II for 3 years commencing from 31.3.2010 up to 31.3.2013. These banks will ensure that :
Basel-II minimum capital requirement continues to be higher than **80% of Basel-I** minimum capital requirement for credit Risk and Market Risk."
Further, Tier –I CRAR should be at-least 6% up to 31.3.2010 and **8% up to 31.3.2011**

BASEL II
The Committee on Banking Regulations and Supervisory Practices released revised version in the year 2004. These guidelines have been got implemented by RBI in all the banks of India. Parallel run was started from 1.4.2006. In banks having overseas presence and foreign banks (except RRBs and local area banks. **Complete switchover has taken place w.e.f. 31.3.2008.** In banks with no foreign branch, switchover will took place w.e.f. 31.3.2009.

Distinction between Basel I and Basel II
Basel – I measures credit risks and market risks only whereas Basel II measures 3 types of risks i.e. **Credit Risk, Operational Risk and Market Risk.** Risk weights are allocated on the basis of rating of the borrower i.e. AAA, AA, A, BBB, BB and B etc. Basel –II also recognized CRM such as Derivatives, Collaterals etc.

Three Pillars of BASEL-II

Pillar –I Minimum Capital Requirement
Pillar – II Supervisory Review Process
Pillar –III Market Discipline

Pillar - I – Minimum Capital Requirement
CRAR will be calculated by adopting same method as discussed above under Basel – I with the only difference that Denominator will be arrived at by adding 3 types of risks i.e. Credit Risks, Market Risks and Operational Risks.

Credit Risk
Credit Risk is the risk of default by a borrower to meet commitment as per agreed terms and conditions. In terms of extant guidelines contained in BASEL-II, there are three approaches to measure Credit Risk given as under:

1. Standardized approach
2. IRB (Internal Rating Based) Foundation approach
3. IRB (Internal Rating Based) Advanced approach

1. Standardized Approach

RBI has directed all banks to adopt Standardized approach in respect of Credit Risks**.**
Under standardized approach**,** risk rating will be done by credit agencies. Four Agencies are approved for external rating:

1. CARE 2. FITCH India 3.CRISIL 4. ICRA

Risk weights prescribed by RBI are as under:
Rated Corporate

Rating & Risk Percentage
AAA 20%
AA 30%
A 50%
BBB 100%
BB & below 150%
Education Loans 75%
Retail portfolio and SME portfolio 75%
Housing loans secured by mortgage 50 to 75%
Commercial Real Estates 100%
Unrated Exposure 100%

2. IRBA – Internal rating Based Approach

At present all advances of Rs. 5.00 crore and above are being rated from external agencies in our bank**.** IRBA is based on bank's internal assessment. It has two variants (Foundation and advanced). Bank will do its own assessment of risk rating and requirement of Capital will be calculated on

- Probability of default (PD)
- Loss given default (LD)
- Exposure of default (ED)
- Effective maturity. (M)

Bank has developed its own rating module system to rate the undertaking internally. The internal rating is being used for the following purposes:
1. Credit decisions
2. Determination of Powers
3. Price fixing

Rating by Outside Agencies

The risk weights corresponding to the newly assigned rating symbols are as under:

Table : PART A – Long term Claims on Corporate – Risk Weights

Long Term Ratings				
CARE	**CRISIL**	**Fitch**	**ICRA**	**Risk Weights (%)**
CARE AAA	CRISIL AAA	Fitch AAA	ICRA AAA	20
CARE AA	CRISIL AA	Fitch AA	ICRA AA	30
CARE A	CRISIL A	Fitch A	ICRA A	50
CARE BBB	CRISIL BBB	Fitch BBB	ICRA BBB	100
CARE BB & below	CRISIL BB & below	Fitch BB & below	ICRA BB & below	150
Unrated	Unrated	Unrated	Unrated	100

How to Calculate RWAs and Capital Charge in respect of Credit risk

Ist Step : Calculate Fund Based and Non Fund Based Exposure
2nd Step: Allowable Reduction
3rd Step : Apply Risk Weights as per Ratings
4th Step: Calculate Risk Weighted Assets
5th Step : Calculate Capital Charge

Ist Step: **Calculate Fund Based and Non Fund Based Exposure**:

Example:

Fund Based Exposure (Amount in '000)

Nature of loan	Limit	Outstanding	Undrawn portion
CC	200	100	100
Bills Purchased	60	30	30
Packing Credit	40	30	10
Term Loan	200	40	160
Total Outstanding		**200**	

Out of Undrawn portion of TL, 60 is to drawn in a year and balance beyond 1 year.

Adjusted Exposure:

100% Outstanding(Unrated) = 200
20% of Undrawn CC, BP & PC (140*20/100) = 28
20% of Undrawn TL (1 yr) (60*20/100) = 12
50% of Undrawn TL (>1Yr) (100*50/100) = 50
Total Adjusted Exposure FB limits 290

Non Fund Based Exposure (Amount in '000)

Type of NBF Exposure	**CCF**	**Adjusted Exposure**
Financial Guarantees	100%	90
Acceptances	100%	80

Standby LC 50 100% 50
Clean LC 50 100% 50
Unconditional Take out finance 100 100% 100
Performance Guarantee 80 50% 40
Bid Bonds 20 50% 10
Conditional Take out finance 50 50% 25
Documentary LC 40 20% 8
Total Adjusted Exposure FB limits = 453
Total Adjusted Exposure = 290000+453000 = 7,43,000
2nd Step: **Allowable Reduction** after adjusting CRMs (**Credit Risk Mitigates**)
Reduction from adjusted exposure is made on account of following eligible financial collaterals:

Eligible Financial Collaterals .
• Deposits being maintained by a borrower under lien.
• Cash (including CDs or FDs), Gold, Govt Securities, KVP, NSC, LIC Policy, Debt Securities, Mutual Funds'
• **Equity and convertible bonds are no more eligible CRMs**.

Formula for Deposits under lien: C*(1-Hfx) X Mf
(C=Amount of Deposit; Hfx =0 (if same currency), Hfx = 0.08 (if diff currency) Mf = Maturity factor).
Formula for Approved Financial collaterals: C*(1-Hc-Hfx) *Mf) - E*He

Haircuts(He–Haircut for Exposure & Hc-Haircut for Collateral)
Haircut refers to the adjustments made to the amount of exposures to the counter party and also the value of collateral received to take account of possible future fluctuations in the value of either, on account of market movements. Standardized Supervisory Haircuts for collateral /Exposure have been prescribed by RBI and given in the said circular.

Capital Requirement for collateralized transaction
E* = max { 0, [E X (1+He) – C X (1-Hc- Hfx) }]
E* - exposure value alter risk mitigation
E – Current value of exposure for which coll. Qualifies
C = current value of collateral received
Hfx = Haircut appropriate for currency mismatch between collateral and exposure.
E* will be multiplied by the risk weight of the counter party to obtain RWA amount.

Illustrations clarifying CRM
In the case of exposure of Rs 100 (denominated in USD) having a maturity of 6 years to a BBB rated (rating by external credit rating agency) corporate borrower secured by collateral of Rs 100 by way of A+ rated corporate bond with a maturity of 6 years, the exposure amount after the applicable haircut

@ 12%, will be Rs 112 and the volatility adjusted collateral value would be Rs 80, (after applying haircut @ 12% as per issue rating and 8% for currency mismatch) for the purpose of arriving at the value of risk weighted asset & calculating charge on capital.

There is an exposure of Rs 100 to an unrated Corporate (having no rating from any external agency) having a maturity of 3 years, which is secured by Equity shares outside the main index having a market value of Rs 100.

The haircut for exposure as well as collateral will be 25%. There is no currency mismatch in this case. The volatility adjusted exposure and collateral after application of haircuts works out to Rs 125 and Rs 75 respectively. Therefore, the net exposure for calculating RWA works out to Rs 50.

There is a demand loan of Rs 100 secured by bank's own deposit of Rs 125. The haircuts for exposure and collateral would be zero. There is no maturity mismatch. Adjusted exposure and collateral after application of haircuts would be Rs 100 and Rs 125 respectively. Net exposure for the purpose of RWA would be zero

Other Examples

No. 1:
1. Exposure---------- 100 lac with tenure 3 years
2. Eligible Collateral in A+ Debt Security -----30 lac with Residual maturity 2 years
3. Hair cut on Collateral is 6%
4. Table of Maturity factor shows hair cut as 25% for remaining maturity of 2 years/
Calculate Value of Exposure after Risk Mitigation:

Solution:
Value of Exposure after Risk Mitigation =
Current Value of Exposure – Value of adjusted collateral for Hair cut and maturity mismatch
Value of Adjusted Collateral for Hair cut = C*(1-Hc) = 30(1-6%) = 30*94% = 28.20
Value of Adjusted Collateral for Hair cut and Maturity Mismatch = C*(t-0.25) / (T-0.25)
= 28.20*(2-.25)/(3-.25) = 17.95
(Where t = Remaining maturity of Collateral T= Tenure of loan)
Value of Exposure after Risk Mitigation = 100-17.95= 82.05 lac.

No. 2
An exposure of Rs. 100 lac is backed by lien on FD of 30 lac. There is no mismatch of maturity.

Solution:
Hair Cut for CRM i.e. FDR is zero.
Hence Value of Exposure after Risk Mitigation is 100 lac – 30 lac = 70 lac
Computation of CRAR
In a bank ; Tier 1 Capital = 1000 crore
Tier II Capital = 1200 crore
RWAs for Credit Risk = 10000 crore
Capital Charge for Market Risk = 500 crore
Capital Charge for Op Risk = 300 crore
Find Tier I CRAR and Total CRAR.

Solution:
RWAs for Credit Risk = 10000 crore
RWAs for Market Risk = 500/.09 = 5556 crore
RWAs for Op Risk = 300/.09 = 3333 crore
Total RWS = 10000+5556+3333 = 18889 crore
Tier I Capital = 1000 crore
Tier II Capital can be up to maximum 1000 crore
Total Capital = 2000 crore
Tier I CRAR = Eligible Tier I Capital /Total RWAs = 1000/18889=5.29%
Total CRAR = Eligible Total Capital /Total RWAs = 2000/18889 = 10.59%
We may conclude that Tier I Capital is less than the required level.

Credit Risk Mitigates

It is a process through which credit Risk is reduced or transferred to counter party. CRM techniques are adopted at Transaction level as well as at Portfolio level as under:

At Transaction level:
• Obtaining Cash Collaterals
• Obtaining guarantees

At portfolio level
• Securitization
• Collateral Loan Obligations and Collateral Loan Notes
• Credit Derivatives

1. Securitization

It is process/transactions in which financial securities are issued against cash flow generated from pool of assets.
Cash flow arising from receipt of Interest and Principal of loans are used to pay interest and repayment of securities. **SPV (Special Purpose Vehicle)** is created for the said purpose. Originating bank transfers assets to SPV and it issues financial securities.

2. Collateral Loan Obligations (CLO) and Credit Linked Notes (CLN)
It is also a form of securitization. Through CLO, bank removes assets from Balance Sheet and issues tradable securities. They become free from Regulatory Capital.

CLO differs from CLN (Credit link notes in the following manner.
• CLO provide credit Exposure to diverse pool of credit where CLN relates to single credit.
• CLO result in transfer of ownership whereas CLN do not provide such transfer.
• CLO may enjoy higher credit rating than that of originating bank.

3. Credit Derivatives
It is managing risks without affecting portfolio size. Risk is transferred without transfer of assets from the Balance Sheet though OTC bilateral contract. These are Off Balance Sheet Financial Instruments. Credit Insurance and LC are similar to Credit derivatives. Under a Credit Derivative PB (Prospective buyer) enter into an agreement with PS (Prospective seller) for transfer of risks at notional value by making of Premium payments. In case of delinquencies, default, Foreclosure, prepayments, PS compensates PB for the losses. Settlement can be Physical or Cash. Under physical settlement, asset is transferred whereas under Cash settlement, only loss is compensated.

Credit Derivatives are generally OTC instruments. ISDA (International Swaps and Derivatives Association) has come out with documentation evidencing such transaction. Credit Derivatives are:
1. Credit Default Swaps
2. Total Return Swaps
3. Credit Linked Notes
4. Credit Spread Options

Operational Risk

Operational Risk is the risk of loss resulting from
• Inadequate or failed internal processes, people and system.
• External events such as dacoity, burglary, fire etc.
It includes legal risks but excludes strategic /reputation risks.

Identification
- Actual Loss Data Base
- RBIA reports
- Risk Control & Self Assessment Survey
- Key Risk indicators
- Scenario analysis

Four ways to manage Risk
- Prevent
- Reduce
- Transfer
- Carry/Accept

Operational Risk – Measurement
Three approaches have been defined to measure Operational Risk at the bank:

1. Basic Indicator approach
2. Standardized approach
3. AMA i.e. Advanced measurement approach

Basic Indicator Approach
15% of Average positive gross annual income of previous 3 years will be requirement of capital.
To start with banks will have to adopt this approach and huge capital is required to be maintained. In our bank, estimated requirement of capital will be about Rs. 1000 crore.

The Standardized Approach
All banking activities are to be divided in 8 business lines. 1) Corporate finance 2) Trading & Sales 3) Retail Banking 4) Commercial Banking 5) Asset Management 6) Retail brokerage 7) Agency service 8) Payment settlement
Within each business line, Capital requirement will be calculated as under:

By multiplying the average gross income generated by a business over previous 3 years by a factor β ranging from 12 % to 18 % depending upon industry-wise relationships as under:
Retail Banking, Retail Brokerage and Asset Management----------12%
Commercial Banking and Agency Services----------15%
Corporate, Trading and Payment Settlement----------18%

Advanced Measurement Approach
Capital requirement is calculated by the actual risk measurement system devised by bank's own internal Operational Risk Measurement methods using quantitative and qualitative criteria. Our bank

has started measuring actual losses and estimating future losses by introducing statement of Operational Risk Loss data w.e.f. 1.4.2005. Minimum 5 year data is required for a bank to switch over to AMA.

How to calculate RWAs for Operational Risk?
RWAs for Operational Risk = Capital Charge / 0.09% (If required CAR is 9%)

Operational Risk – Scenario Analysis
It is a term used in measurement of Operational Risk on the basis of scenario estimates.
Banks use scenario analysis based on expert opinion in conjunction with external data to evaluate its exposure to high severity events.
In addition, scenario analysis is used to assess impact of deviations from correlation assumptions in the bank's Operational Risk measurement framework to evaluate potential losses arising from operational risk loss events.

Operational Risk Mitigation
Insurance cover, if available can reduce the operational risk only when AMA is adopted for estimating capital requirements. The recognition of insurance mitigation is limited to **20% of total Operational Risk Capital Charge** calculated under AMA.

Practical Example - AMA approach
Under AMA approach, Estimated level of Operational Risk is calculated on the basis of:
1. Estimated probability of occurrence
2. Estimated potential financial impact
3. Estimated impact of internal control.

Estimated Probability of Occurrence: This is based on historical frequency of occurrence & estimated likelihood of future occurrence. Probability is mapped on scale of 5 as under:

Negligible risk -----1
Low risk----------2
Medium Risk--------3
High Risk----------4
Very High Risk------5

For Calculation, following formula is used:

Estimated level of Operational Risk = {Estimated probability of occurrence x Estimated potential financial impact x Estimated impact of internal control} ^0.5
^0.5 implies Under root of whole

Example:
Probability of occurrence = 2 (medium)
Probability of Financial impact = 4 (very high)
Impact of Financial control = 50%

Solution
[2x4x(1-0.5)] ^0.5 = ∫4 = **2 (Low)**

Market Risk
It is simply risk of losses on Balance sheet and Off Balance sheet items basically in investments due to movement in market prices. It is risk of adverse deviation of **mark to Market** value of trading portfolio during the period. Any decline in the market value will result into loss.

Market Risk involves the following:
1. Risk Identification
2. Risk Measurement
3. Risk monitoring and control
4. Risk mitigation.

ALCO: Assets Liability Committee meets at frequent intervals and takes decisions in respect of Product pricing, Maturity profiles and mix of incremental assets and profiles, Interest rate, Funding policy, Transfer pricing and Balance Sheet Management.

Market Risk measurement
Measurement of Market Risk is based on:
1. Sensitivity
2. Downside potential

Sensitivity Measurement
Change in market rate of interest has inverse relation with Value of Bonds. Higher interest rates lower the value of bond whereas decline in interest rate would result into higher bond value. Also More liquidity in the market results into enhanced demand of securities and it will lead to higher price of market instrument. There are two methods of assessment of Market risk:
1. Basis Point Value
2. Duration method

1. Basis Point Value

This is change in value of security due to 1 basis point change in Market Yield. Higher the BPV higher will be the risk.

Example
Face Value of Bond = 100/- Bond maturity = 5 years
Coupon Rate = 6%
Market price of Rs. 92/- gives yield of 8%
With fall in yield from 8% to 7.95%, market price rises to Rs. 92.10
Difference Yield = 0.5%
Difference in Market price = 0.10
BPV = 0.10/0.05 = 2 i.e. 2 basis points.
Face value of the Bond is 1.00 crore, BPV of the bond is Rs. 2000/- (1,00,00,000*.02/100)
Now, if the yield on Bond with BPV 2000 declines by 8 bps, then it will result into profit of Rs. 16000/- (8x2000).
BPV declines as maturity reaches. It will become zero on the date of maturity.

2. Duration Approach

Duration is the time that a bond holder must wait till nos. of years (Duration) to receive Present Value of the bond. e.g. 5 year bond with Face Value of Rs. 100 @ 6% having McCauley Duration 3.7 years. It means Total Cash Flow of Rs. 130 to be received in 5 years would be discounted with Present Value which will be equivalent as amount received in 3.7 years. The Duration of the Bond is 3.7 Years.

Formula of Calculation of McCauley Duration = ΣPV*T / ΣPV
Modified Duration = Duration / 1+Yield
Approximate % change in price = Modified Duration X Change in Yield

Example

A bond with remaining maturity of 5 years is presently yielding 6%. Its modified duration is 5 years. What will be the McCauley Duration.
Modified Duration = Duration/ 1+YTM
Duration = Modified Duration x (1+YTM)
= 5 x 1.06 = **5.30**

3. Downside Potential

It captures only possible losses ignoring profit potentials. It integrates sensitivity and volatility with adverse affect of Uncertainty.

This is most reliable measure of Risk for Banks as well as Regulators. VaR is the method to calculate downside potential.

Value at Risk (VaR)

It means how much can we expect to lose? What is the potential loss?

Let VaR =x. It means we can lose up to maximum of x value over the next period say week (time horizon).

Confidence level of 99% is taken into consideration.

Example

A bank having 1 day VaR of Rs. 10 crore with 99% confidence level. It means that there is only one chance in 100 that daily loss will be more than 10 crore under normal conditions.

VaR in days in 1 year based on 250 working days = 1 x 250 / 100 == 2.5 days per year.

Back Testing

It is a process where model based VaR is compared with Actual performance. It tells us whether results fall within pre-specified confidence bonds as predicted by VaR models.

Stress Testing

It seeks to determine possible change in Market Value of portfolio that could arise due to non-normal movement in one or more market parameters (such as interest rate, liquidity, inflation, Exchange rate and Stock price etc.).

Four test are applied:

1. Simple sensitivity test;

If Risk factor is exchange rate, shocks may be exchange rate ±2%, 4%,6% etc.

2. Scenario test

It is leading stress testing technique. The scenario analysis specifies the shocks if possible events occur. It assesses potential consequences for a firm of an extreme. It is based on historical event or hypothetical event.

3. Maximum loss

The approach assesses the risks of portfolio by identifying most potential combination of moves of market risks

4. Extreme value theory

The theory is based on behavior of tails (i.e. very high and very low potential values) of probable distributions.

Risk Management and Control

Market risk is controlled by implementing the business policies and setting of market risk limits or controlling through economic measures with the objective of attaining higher RAROC. Risk is managed by the following:

1. Limits and Triggers
2. Risk Monitoring
3. Models of Analyses.

Calculation of Capital Charge of Market Risk

The Basel Committee has two approaches for calculation of Capital Charge on Market Risk as under:

1. Standardized approach
2. Internal Risk Management approach

Under Standardized approach, there are two methods: Maturity method and duration method. RBI has decided to adopt **Standardization duration** method to arrive at capital charge on the basis of investment rating as under:

Investment rating Capital Required

AAA to AA 0%

A+ to BBB (Residual term to maturity)
Less than 6 M 0.25%
Less than 24M 1.00%
More than 24 M 1.60%
Other Investments 8.00%

How to Calculate RWAs, if Capital Charge is given:

RWAs for Market Risk = Capital Charge / 0.09 (If required CAR is 9%)

Other Risks and Capital Requirement

Other Risks like Liquidity Risks, Interest Rate Risk, Strategic Risk, Reputational Risks and Systemic Risks are not taken care of while calculating Capital Adequacy in banks.

Pillar – II – Supervisory Review Process (SRP)

SRP has two issues:

1. To ensure that bank is having adequate capital.
2. To encourage banks to use better techniques to mitigate risks.

SRP concentrates on 3 main areas:

- Risks not fully captured under Pillar -1 i.e. Interest Rate Risks, Credit concentration Risks, Liquidity Risk, Settlement Risks, Reputational Risks and Strategic Risks.
- Risks not at all taken care of in Pillar -1.
- External Factors.

This pillar ensures that the banks have adequate capital. This process also ensures that the bank managements develop Internal risk capital assessment process and set capital targets commensurate with bank's risk profile and capital environment. Central Bank also ensures through supervisory measures that each bank maintains required CRAR and components of capital i.e. Tier –I & Tier –II are in accordance with BASEL-II norms. RBIA and other internal inspection processes are the important tools of bank's supervisory techniques.

Every Bank will prepare ICAAP (Internal Credit Adequacy Assessment Plan) on solo basis which will comprise of functions of measuring and identifying Risks, Maintaining appropriate level of Capital and Developing suitable Risk mitigation techniques.

Pillar – III – Market Discipline

Market discipline is complete disclosure and transparency in the balance sheet and all the financial statements of the bank. The disclosure is required in respect of the following:

- Capital structure.
- Components of Tier –I and Tier –II Capital
- Bank's approach to assess capital adequacy
- Assessment of Credit Risks, Market Risk and Operational Risk.
- Credit Aspects like Asset Classification, Net NPA ratios, Movement of NPAs and Provisioning.

Frequency of Disclosure

- Banks with Capital funds of Rs. 100 crore or more will make interim Disclosures on Quantitative aspects on standalone basis on their respective websites.
- Larger banks with Capital Funds of Rs. 500 crore or more will disclose Tier-I capital, Total Capital, CAR on Quarterly basis on website.

Risk Weight on NPAs

a) Risk weight on NPAs net of specific provision will be calculated as under:
When provision is less than 20% of NPA o/s ---- 150%
When provision is at least 20% of NPA o/s ---- 100%
When provision is at least 50% of NPA o/s ---- 50%

Category	Provision Rate	Risk Weight
Substandard (Secured)	15%	150%
Substandard (Unsecured)	25%	100%
Doubtful (DI) (Secured)	25%	100%
Doubtful (DI) (Un-Secured)	100%	50%
Doubtful (D2) (Secured)	40%	100%
Doubtful (D3) (Secured)	100%	50%
Doubtful (D2)(Un-Secured)	100%	50%

Off-balance sheet items

Off-balance sheet items have been bifurcated as follows:
i) Non-market related off-balance sheet items
ii) Market related off-balance sheet items

There is two-step process for the purpose of calculating risk weighted assets in respect of off-balance sheet items:
a) The notional amount of the transaction is converted into a credit equivalent factor by multiplying the amount by the specified Credit Conversion Factor (CCF)

b) The resulting credit equivalent amount is then multiplied by the risk weight applicable to the counter party or to the purpose for which the bank has extended finance or the type of asset whichever is higher.

Where the off-balance sheet item is secured by eligible collateral or guarantee, the credit risk mitigation guidelines will be applied.

Non-market related off-balance sheet items:

Off balance sheet items like direct credit substitutes, trade and performance related contingent items and commitments with certain draw downs are classified under Non-market related off-balance sheet items. The credit equivalent amount is determined by multiplying the contracted amount of that particular transaction by the relevant CCF.

Non-market related off-balance sheet items also include undrawn or partially undrawn fund based and non-fund based facilities, which are not unconditionally cancellable. The amount of undrawn

commitment is to be included in calculating the off-balance sheet items. Non-market related exposure is the maximum unused portion of the commitment that could be drawn during the remaining period of maturity. In case of term loan with respect to large project to be drawn in stages, undrawn portion shall be calculated with respect of the running stage only.

RBI guidelines on CCF (Credit Conversion Factor)

Direct Credit Substitutes CCF

General Guarantees (including Standby LCs), Acceptances	-	100%
Transaction related contingent items (Performance bonds, Bid bonds, Warranties, Indemnities, Standby LC relating to particular transaction	-	50%
Short Term LC (Documentary) for Issuing bank as well as confirming bank	-	20%

Capital Charge on Un-availed limit

Capital Charge on Undrawn limits is calculated as under:
- 20% on Undrawn CC limit
- 20% on Undrawn TL limit (which is to be drawn in a year)
- 50% on Undrawn TL limit (which is to be drawn beyond a year)

Example

In the case of a cash credit facility for Rs.100 lakh (which is not unconditionally cancelable) where the availed portion is Rs. 60 lakh, the un-availed portion of Rs.40 lakh will attract a Credit Conversion Factor (CCF) of 20% (since the cash credit facility is subject to review / renewal normally once a year). The credit equivalent amount of Rs.8 lakh (20% of Rs.40 lakh) will be assigned the appropriate risk weight as applicable to the counterparty / rating to arrive at the risk weighted asset for the unavailed portion. The availed portion (Rs.60 lakh) will attract a risk weight as applicable to the counterparty / rating.

In compliance of the new guidelines banks have advised all the branches for:
i) Insertion of Limit Cancellation Clause in loan documents
ii) Levying of Commitment Charges

Time frame for application of different approaches

	Application to RBI by	**Approval by RBI by**
IRB approach for Credit Risk	01.04.2012	31.3.2014
AMA approach for Operational Risk	01.04.2012	31.3.2014
Internal Model approach for Market Risk	01.04.2010	31.3.2011

BASEL -III Basel III covers Liquidity Risk in addition to Basel II.

It is planned to implement BASEL-III w.e.f. 1.1.2013. The propose reforms are as under:

Capital	**Common Equity**	**Tier –I**	**Total Capital**
Minimum	4.5%	6%	8%
+ Conservative Buffer	2.5%	2.5%	2.5%

Transition Arrangement
As on 1.1.2013, the banks will meet new minimum requirement in relation to Risk Weighted Assets as under:
3.5% of Common Equity + 4.5% of Tier –I Capital = .8% of Total Capital /Risk Weighted Assets.

VaR (Value at Risk)
Value at Risk is how much can we expect to lose? What is potential loss?
We can lose maximum up to VaR (value at Risk) over a given time at a given confidence level.

Calculation of VaR
Market Factor Sensitivity X Daily Volatility X Probability at given confidence level
Suppose impact of 1% change of interest rate (Price) = 6000/-
Daily Volatility = 3% : Confidence level is 99%
Probability of occurrence at 99% confidence level is 2.326
Defeasance period = 1 day
VaR = 6000x3x2.326 = 41874/-

Duration and Modified Duration
Duration is the time that Bondholder must wait for a number of years (duration) to receive Present Value of Cash Inflows i.e. PV of Cash Inflows equals Actual Cash Inflows.

Formula of calculating Duration (Macaulay's Duration)
Σ (PV*T) / ΣPV

For example:
5 years bond of Rs. 100 @ 6% gives Duration of 3.7 years. It means Total Cash flow of Rs. 130/- would be equivalent to receiving Rs. 130/- at the end of 3.7 years.
Modified Duration = Duration / 1 + Yield

CREDIT RISK
How to find Risk Weighted Assets?

Fixed Assets : 500 Crore
Govt. Securities : 5000 crore

Standard Assets
Retail ---3000 crore
HL -------2000 crore
Other loans—10000 cr

Sub-Standard Assets
Secured ----500 crore
Unsecured -----150 crore

Doubtful (DAI) -----800 crore

Solution:
Retail----------3000*75/100 = 2250 crore
HL----------2000*50/100=1000 crore
Other loans---------10000*100/100 = 10000 crore
Gsec----------5000*0/100=0
SS Secured----------500*150/100=750 crore
SS Unsecured ------150*100/100=150 crore
Doubtful D1 --------800*100/100=800 crore
Total RWAs = 2250+1000+750+150+800 = 4950 crore

OPERATIONAL RISK
How to find Risk Weighted Assets?

	Ist year	2nd year
Net Profit	120 crore	150 crore
Provisions	240 crore	290 crore
Staff Expenses	280 crore	320 crore
Other Oper. Expenses	160 crore	240 crore
Gross Income	800 crore	1000 crore

Average Income 1800/2=900 crore

Capital Charge 900*15/100=135 crore

RWAs (assuming BASEL rate of 8%)
Capital Charge/8% = 135*100/8 = 1687.50 crore

Tier-I and Tier II Capital
CRAR
RWAs --- Credit and Operational Risks = 10000 crore
RWAs ----Market Risk =4000 crore
Tier –I Capital
Paid up Capital---------- 100 crore
Free Reserves ---------- 300 crore
Perpetual non-Cumulative Preference Shares -----400 crore
Tier-II Capital
Provisions for contingencies ----------200 crore
Revaluation Reserve----------300 crore
Subordinate Debts----------300 crore

Solution
Tier –I Capital = 100+300+400 = 800 crore
Tier-II Capital = (300*45/100) + 300 + 1.25 % of RWAs (or Rs. 200 crore)
=135 + 300 + 175 = 610 crore
Total Capital = 800 + 610 = 1410 crore

Minimum Capital Required and Capital to Support Market Risks
In the above example:
CAR = 1410/14000*100 = 10.07%
Minimum Capital Required to support Credit and Operational Risks = 10000*9/100 = 900 crore
Minimum Tier –I Capital Required to support Credit and Operational Risks = 900*50=450 crore
Minimum Tier –I I Capital Required to support Credit and Operational Risks =900-450=450 crore
Amount of Tier –I Capital to support Market Risks = 800-450 = 350 crore
Amount of Tier –II Capital to support Market Risks = 610-450 = 160 crore

Volatility with time horizon & Bond Value

Ex.1

If daily volatility of a Security is 2%, how much will be monthly volatility?

Solution

Monthly volatility = Daily Volatility * ∫30 = 2*∫30 = 2*5.477 = **10.95%**

Ex.2

If per annum volatility is 30% and nos. of trading days per annum be 250, how much will be daily volatility?

Solution

Annual Volatility = Daily Volatility * ∫250 = Daily Volatility * 15.81

30 = Daily Volatility *15.81

Daily volatility = 30/15.81 = **1.90%**

Ex.3

If 1 day VaR of a portfolio is Rs. 50000/- with 97% confidence level. In a period of 1 year of 300 trading days, how many times the loss on the portfolio may exceed Rs. 50000/-.

Solution

97% confidence level means loss may exceed the given level (50000)on 3 days out of 100.

If out of 100 days loss exceeds the given level on days =3

Then out of 300 days, loss exceeds the given level = 3/100*300 =**9 days.**

Ex.4

A 5 year 5% Bond has a BPV of Rs. 50/-, how much the bond will gain or lose due to increase in the yield of bond by 2 bps

Solution

Increase in yield will affect the bond adversely and the bond will lose.

Since BPV of the bond is Rs. 50/-. Increase in yield by 2 bps will result into loss of value of Bond by 50*2=100.

Ex.5

1 day VaR of a portfolio is Rs. 50000/- with 90% confidence level. In a period of 1 year (250 days) how many times the loss on the portfolio may not exceed Rs.50000/-

Ans. 90% confidence level means on 10 days out of 100, the loss will be more than Rs. 50000/-.

Out of 250 days, loss will be more than 50000/- on **25 days Ans**.

Bond Value, Current Yield

	Bond-1	Bond-2
Face Value	100	100
Annual Coupon	8%	10%
Term to Maturity	3 yrs	4 yrs
Market Price	80	90

Ex. 1 Find Current Yield of Bond 2
Solution
Coupon amount X100 = 10/90*100 = 11.11%
Market Value

Ex. 2 Find YTM of Bond 1 & 2
YTM of Bond 1 = 17.07%
YTM of Bond 2 = 13.41%

Ex. 3 Find McCauley Duration of Bond 1
2.76 years

Ex. 4
Find Modified Duration of Bond 2
Solution
McCauley duration/1+yield
=3.46/(1+13.41%) = 3.46/1.1341 = 3.05 yrs.

Ex. 5 What is %age change in price of Bond 2 if YTM increases by 1%
Expected %age change in price
=Modified Duration x %age change in yield
=3.5 x 1 = -3.05% (Decrease in price of bond)

Ex. 5 What is %age change in price of Bond 2 if YTM decreases by 1%
=3.5 x 1 = 3.05% (Increase in price of bond)

Ex.6 As an investor, in which bond would you like to invest.
Bond 1 (YTM is more)

AMA – Estimated level of Operational Risk and Impact of Internal Control

Question: Probability of Occurrence : 4
Potential Financial impact =4
Impact of Internal controls = 0%
Solution:
{ Probability of occurrence x Potential financial impact x Impact of internal controls } ^0.5
=(4x4) ^0.5 = ∫16 = **4 Ans**.(**High Risk**)

UNIT – 14 : TREASURY MANAGEMENT

1. Fund management has been the primary activity of treasury, but treasury is also responsible for Risk Management & plays an active part in ALM.

2. D-mat accounts are maintained by depository participants to hold securities in electronic form.

3. In present scenario treasury function is liquidity management and it is considered as a service center.

4. From an organizational point of view treasury was considered as a service center but due to economic reforms & deregulation of markets treasury has evolved as a profit center.

5. Treasury connects core activity of the bank with the financial markets.

6. Investment in securities & Foreign Exchange business are part of integrated treasury.

7. Integrated treasury refers to integration of money market, Securities market and Foreign Exchange operations.

8. Banks have been allowed large limits in proportion of their net worth for overseas borrowings and investment.

9. Banks can also source funds in global markets and Swap the funds into domestic currency or vice versa.

10. The treasury's transactions with customers is known as merchant business.

11. The treasury encompasses funds management, Investment and Trading in a multy currency environment.

12. Globalization refers to integration between domestic and global markets.

13. RBI has been progressively relaxing the Exchange Controls.

14. The Exchange Control Department of RBI has been renamed as Foreign Exchange Department with effect from January 2004.

15. Though treasury trades with narrow spreads, the profits are generated due to high volume of business.

16. Foreign currency position at the end of the day is known as open position.

17. Open position is also called Proprietary position or Trading position.

18. Treasury sells Foreign Exchange services, various risk management products & structured loans to corporates.

19. Forward Rate Agreement (FRA) is entered to fix interest rates in future.

20. SWAP is offered to convert one currency into another currency.

21. Allocation of costs to various departments or branches of the bank on a rational basis is called transfer pricing.

22. The treasury functions with a degree of autonomy and headed by senior management person.

23. The treasury may be divided into three main divisions 1) Dealing room 2) Back office and 3) Middle office.

24. Securities market is divided into two parts, primary & secondary markets.

25. The security dealers deals only with secondary market.

26. The back office is responsible for verification & settlement of the deals concluded by the dealers.

27. Middle office monitors exposure limits and stop loss limits of treasury and reports to the management on key parameters of performance.

28. Minimum marketable investment is Rs. 5.00 Crores.

1. The driving force of integrated treasury are:

A) Integrated cash flow management B) Interest arbitrage C) Investment opportunities D) Risk Management..

2. The functions of Integrated Treasury are:

A) Meeting Reserve requirements B) Efficient Merchant services C) Global cash management D) Optimizing profit by exploiting market opportunities in Forex market, Money market and Securities market E) Risk management F) Assisting bank management in ALM.

3) The immediate impact of globalization is three fold A) Interest rate B) New institutional structure C) Derivatives were allowed.

4) RBI is allowing banks to borrow and invest through their overseas correspondents, in foreign currency upto 25% of their Tier – I capital or USD 10Million which amounts higher.

5) Treasury products have become more attractive for two reasons 1) Treasury operations are almost free of credit risk and require very little capital allocation and 2) Operation coats are low as compared to branching banking.

6. Treasury generates profits from under noted businesses.

1) Conventional A) Foreign exchange business and B) Money market deals.
2) Investment activities e.g. SLR, non – SLR & investment in Subsidiaries.
3) Interest Arbitrage.
4) Trading is a speculative activity, where profits arise out of favorable price movements during the interval between buying and selling.

7. ARBITRAGE: is the benefit accruing to traders, who play in different markets simultaneously.

8. DERIVATIVES are financial contracts to buy or sell or to exchange a cash flow in any manner at a future date, the price of which is based on market price of an underlying assets which may be financial or a real asset with or with out an obligation to exercise the contract.

9. EMERGING MARKET COUNTRIES are countries with a fast developing economy, which are largely market driven.

10. D-MAT ACCOUNTS are maintained by depository participants to hold securities in electronic form, so that transfer of securities can be affected by debit or credit to the respective account holders without any physical document.

UNIT – 15 : TREASURY PRODUCTS

1. In Foreign Exchange market free currencies can be bought and sold readily.

2. Free Currencies belong to those countries whose markets are highly developed and where exchange controls are practically dispensed with.

3. Foreign Exchange market is most transparent & it is virtual market.

4. Foreign Exchange market may be called near perfect with an efficient price discovery system.

5. Spot settlement takes place two working days from the trade date i.e. on third day.

6. Customers expecting Foreign Currency transactions cover their risk by entering forward contracts.

7. Treasury enters into Forward Contract for making profits out of price movements.

8. Forward exchange rates are arrived at on the basis of interest rates differentials of two currencies.
9. A combination of Spot and Forward transactions is called Swap.

10. The Swap route is used extensively to convert cash flows from one currency to another currency.

11. Inter bank loans, Short term investments and Nostro accounts are the avenues for investment of Forex surpluses.

12. Nostro accounts are current accounts maintained in Foreign Currency by the banks with their correspondent banks in the home currency of the country.

13. Balance held in Nostro accounts do not earn any interest.

14. Rediscounting of Foreign Bills is an inter bank advance.

15. RBI has allowed banks to include rediscounting of bills in their credit portfolio

16. Money market refers to raising and developing short term resources.

17. Inter bank market is subdivided into Call Money, Notice Money & Term Money.

18. Call Money refers to overnight placement.

19. Notice Money refers to placement beyond overnight for periods not exceeding 14 days.

20. Term Money refers placement beyond 14 days but not exceeding one year.

21. RBI pays interest on CRR balance in excess of 3% at Reverse Repo Rate.

22. Inter bank market carries lowest risk next to Sovereign risk.

23. The interest on treasury bills is by way of discount i.e. Bills are priced below face value, this is known as implicit yielding.

24. Each issue of 91 days T-bills is for Rs.500 Crores and auction is conducted on Weekly basis I.e. on every Wednesday.

25. Each issue of 364 days T-bills is Rs.1000 Crores and auction is conducted on Fortnightly basis i.e. on alternate Wednesday.

26. The payment of T-bills is made and received through Clearing Corporation of India Limited (CCIL)

27. Commercial paper is short term debt market paper.

28. The Commercial Paper issuing company should have minimum P2 credit rating.

29. Banks can invest in Commercial Paper only if it is issued in D-mat form.

30. Certificate of Deposit attracts stamp duty.

31. Repo is used for lending and borrowing money market funds.

32. Repo refers to sale of securities with a commitment to repurchase the same securities at a later date.

33. Presently only Govt. securities are being dealt with under Repo transaction.

34. Repo is used extensively by RBI as an instrument to control liquidity in the inter bank market.

35. Infusion of liquidity is effected through lending to banks under Repo transactions.

36. Absorption of liquidity is done by accepting deposits from banks known as Reverse Repo.

37. Banks may submit their bids to RBI either for Repo or for Reverse Repo.

38. The Repo would set upper rate of interest and Reverse Repo would set floor for the money market.

39. Investment business is composed of buying and selling products available in securities market.

40. To satisfy SLR banks can also invest in priority sector bonds of SDBI & NABARD.

41. State Government also issue State Development Bonds through RBI.

42. Corporate Debt papers includes medium and long term bonds & debentures issued by corporates and Financial Institutions.

43. Debentures and bonds are debt instruments issued by corporate bodies with or without security.

44. In India debentures are issued by corporates in private sector and bonds are issued by institutions in Public Sector.

45. Debentures are governed by relevant company law and transferable only by registration. But bonds are negotiable instruments governed by law of contracts.

46. If the bond holders are given an option to convert the debt into equity on a fixed date or during a fixed period , these bonds are called Convertible bonds.

47. Banks are permitted to invest in equities subject to a ceiling presently 5% of its total assets.

48. Foreign Institutional Investors are now allowed to invest in debt market subject to an overall ceiling currently USD 1.75 Billion.

49. Index Futures, Index Options, Stock futures and Stock Options etc. are the Derivative products recently introduce.

50. The Derivative Products are highly popular for Risk Management as well as for speculation.

51. Banks are also permitted to borrow or invest in overseas markets with in a ceiling subject to guidelines issued by RBI presently 25% of Tier – I capital or minimum USD 10 Million.

52. The treasury operates in exchange market, Money market and Securities market.

53. Foreign Exchange transaction includes Spot, Forward and Swap trades.

54. Money market is used for deployment of surplus funds and also to raise short term funds to bridge gaps in the cash flow of bank.

55. Money market products include T-bills, Commercial paper, Certificate of Deposit and Repo.

56. Under EEFC exporters are allowed to hold a portion of the export proceeds in current account with the bank.

57. GILTS are securities issued by Government which do not have any risk.

58. SGL accounts are maintained by Public Debt Office of RBI in electronic form.

59. FCNR deposit is denominated in four major currencies maintained by NRIs.

UNIT – 16 : FUNDING AND REGULATORY ASPECTS

1. Cheques and Credit Cards etc are near money and also add to money supply.

2. The money in circulation is indicated by Broad Money or M3.

3. The cash component is just 15% of money supply or M3.

4. The monetary policy of RBI is aimed at controlling the inflation and ensuring stability of financial markets.

5. Liquidity refers to surplus funds available with banks.

6. An excess of liquidity leads to inflation while shortage of liquidity may result in high interest rates and depreciation of rupee exchange rate.

7. CRR is to be calculated on the basis of DTL with a lag of one fortnight.

8. The interest on CRR is paid at the reverse repo rate of RBI (presently 6.25% P.A.)

9. SLR is to be maintained in the form of Cash, Gold and approved securities.

10. Liquidity adjustment facility (LAF) is the principal operating instrument of RBI's monetary policy.

11. LAF is used to day to day liquidity in the market.

12. LAF refers to RBI lending funds to banking sector through Repo instrument.

13. RBI also accepts deposits from banks under Reverse Repo.

14. RBI purchases securities from banks with an agreement to sell back the securities after a fixed period is called Repo.

15. The Repo rate is 7.25% on par with bank rate and Reverse Repo rate is 6.25%.

16. The objective of RBI policy is the money market rates should normally move with in the corridor of Repo rates and Reverse Repo rates.

17. Banks can borrow and lend overnight upto maximum of 100% and 25% respectively of their net worth.

18. The securities clearing against assured payment is handled by CCLI.

19. CCIL is a specialized institution promoted by major banks.

20. RTGS has been fully activated by RBI from Oct – 2004.

21. All inter bank payments and high value customer payments are settled instantly under RTGS.

22. Banks accounts with all the branch offices of RBI are also integrated under RTGS.

23. The INFINET has helped introduction of SFMS.

24. The SFMS facilitates domestic transfer of funds and authenticated messages similar to SWIFT used by banks for international messaging.

25. All security dealings are done through NDS and settled by CCIL.

UNIT – 17 : TREASURY RISK MANAGEMENT

1. The organizational controls refer to the checks and balanced within system.

2. In Treasury business front office is called Dealing Room.

3. Exposure limits protect the bank from Credit Risk.

4. The Counter party Risk is bankruptcy or inability of counter party to complete the transaction at their end.

5. The exposure limits are fixed on the basis of the counter party's net worth, market reputation and track record.

6. RBI has imposed a ceiling of 5% of total business in a year with individual branches.

7. Limits imposed are preventive measures to avoid or contain losses in adverse market conditions.

8. Trading limits are of three kinds, they are 1) Limits on deal size 2) Limits on open positions and 3) Stop loss limits.

9. Open position refers to the trading positions, where the buy / sell positions are not matched.

10. All the forward contracts are revalued periodically (Every month)

11. The stop loss limits prevent the dealer from waiting indefinitely and limit the losses to a level which is acceptable to the management.

12. The Stop loss limits are prescribed per deal, per day, per month as also an aggregate loss limit per year.

13. Two main components of market risk are Liquidity risk and Interest rate risk.

14. Liquidity risk implies cash flow gaps which could not be bridged.

15. Liquidity risk and Interest rate risk are like two sides of a coin.

16. The Interest rate risk refers to rise in interest costs eroding the business profits or resulting in fall in assets prices.

17. The interest rate risk is present where ever there is mismatch in assets and liabilities.

18. If the currency is convertible, the exchange rate and interest rate changes play greater role in attracting foreign investment inflows into the secondary market.

19. Marker Risk is a confluence of liquidity risk, interest rate risk, Exchange rate risk, Equity risk and Commodity risk.

20. BIS defines Market Risk as, " The Risk that the value of on- or – off Balance Sheet positions will be adversely affected by movements in equity and interest rate markets, Currency exchange rates and Commodity prices"

21. The Market Risk is closely connected with ALM.

22. The Market Risk is also known as Price Risk.

23. Two important measures of risk are Value at Risk and Duration method.

24. Value at Risk (VAR) at 95% confidence level implies a 5% probability of incurring the loss.

25. VAR is an estimate of potential loss always for a given period at a confidence level.

26. There are three approaches to calculate the AVR i.e. Parametric Approach, Monte Carlo Approach and Historical Data.

27. VAR is derived from a statistical formulae based on volatility of the market.

28. Parametric Approach is based on sensitivity of various Risk components.

29. Under Monte Carlo model a number of scenarios are generated at random and their impact on the subject is studied.

30. Duration is widely used in investment business.

31. The rate at which the present value equals the market price of a bond is known as YTM.

32. Yield & price of a bond moves in inverse proportion.

33. Duration is weighted average measure of life of a bond, where the time of receipt of a cash flow is weighted by the present value of the cash flow.

34. Duration method is also known as Mecalay Duration, its originator is Frederic Mecalay.

35. Longer the duration, greater is the sensitivity of bond price to changes in interest rate.

36. A proportionate change in prices corresponding to the change in yields is possible, only when the yield curve is linear.

37. Derivatives are used to protect treasury transactions from Market Risk.

38. Derivatives are also useful in managing Balance Sheet risk in ALM.

39. Treasury transactions are of high value & relatively need low capital.

40. Market movements are mainly due speculation.

41. VAR is the maximum loss that may take place with in a time horizon at a given confidence level.

42. Leverage is Capital Adequacy Ratio incase of companies it is expressed as Debt / Equity Ratio.

1. Treasury Risk is sensitive because 1) The Risk of loosing capital is much higher than the risk in the credit business 2) Large size of transactions done at the discretion of treasurer 3) Losses in treasury business materialize in very short term and the transactions once confirmed are irrevocable.

2. The conventional control and supervisory measures of treasury can be divided in to three parts 1) Organizational controls 2) Exposure ceiling and 3) Limits on trading portions and stop loss limits.

UNIT – 18: DERIVATIVE PRODUCTS

1. Treasury uses derivatives to manage risk including ATL, to cater needs of corporate customers and to trade.

2. The value of a Derivative is derived from on underlying market.

3. Derivatives always refer to future price.

4. The Derivatives that can be directly negotiated and obtained from banks and investment institutions are known as over the counter (OTC) products.

5. Derivatives are of two types OTC products and Exchange traded products.

6. The value of trade in OTC products is much larger than that of Exchange traded products.

7. Derivative products can be broadly categorized into Options, Futures & Swaps.

8. Options refer to contracts where the buyer of an Option has a right but no obligation to exercise the contract.

9. Put Option gives a right to the holder to sell an underlying product at a pre-fixed rate on a specified date.

10. Call option gives a right to the holder to buy the underlying product at a pre-fixed rate on a specified date or during a specified period.

11. The pre-fixed rate is known as Strike Rate.

12. Options are two types, an American type option can be executed at any time before expiry date and European type option can be exercised only on expiry date. In India we use only European type of Option.

13. A Dollar put Option gives right to the holder to sell Dollars.
14. If the strike price is same as the spot price, it is known as at the money.

15. The option is in the money (ITM), if the strike price is less than the forward rate in case of a Call Option or strike price is more than the forward rate in case of a put option.

16. The Option is out of Money (OTM) if the strike price is more than the forward rate in case of call option or if the strike price is less than forward rate in case of a put Option.

17. In the context of Options spot rate is the rate prevailing on the date of maturity.

18. The profit potential of buyer of an option is unlimited .

19. The option seller's potential loss is unlimited.

20. Payment of differences between strike price & market price on expiry is known as cash settlement.

21. The buyer of an option pays premium to the seller for purchase of Option.

22. The option premium is paid upfront.

23. A USD put Option on TJY is right to sell USD against JPY at 'X' price.

24. A stock option is the right to buy or sell equity of a company at the strike price.

25. Options are used to hedge against price fluctuations.

26. A convertible option may be the bond holder option of converting the debt into equity on specified terms.

27. A bond with call option gives right to the issuer to prepay the debt on specified date.

28. Futures are forward contracts.

29. Under Futures contract the seller agrees to deliver to the buyer specified security / Currency or commodity on a specified date.

30. Future Contracts are of standard size with prefixed settlement dates.

31. A distinct feature of Futures is the contracts are marked to market daily and members are required to pay margin equivalent to daily loss if any.

32. In case of Futures the exchange guarantees all trades roughted through its members and in case of default or insolvency of any member the exchange will meet the payment out of its trade protection fund.

33. Currency Futures serve the same purpose as Forward Contracts, conventionally issued by banks in foreign exchange business.

34. Futures are standardized and traded on exchanges but Forward Contracts are customized OTC Contracts.

35. The Futures can be bought only for fixed amounts and fixed periods.

36. A Swap is an exchange of cash flow.

37. An interest rate Swap is an exchange of interest flows on an underlying asset or liability.

38. The cash flows representing the interest payments during the Swap period are exchanged.

39. For USD the bench mark rates are generally LIBOR (London Inter Bank Offer Rate)

40. MIBOR is announced daily at 9.50 A.M by NSE.

41. MIBOR is used as a base rate for short term and Medium Term lending.

42. Interest rate Swap is shifting of interest rate calculation from fixed rate to floating or floating rate to fixed rate or floating rate to floating rate.

43. A Floating to Floating rate Swap involves change of bench mark.

44. Quanto Swaps refer to paying interest in home currency at rate s applicable to foreign currency.

45. Coupon Swaps refer to floating rate in one currency exchanged to fixed rate in another currency.

46. In Indian Rupee market only plain vanilla type Swaps are permitted.

47. A Currency Swap is an exchange of cash flow in one currency with that of another currency.

48. The need for Currency Swap arises when loan raised in one currency is actually required to be used in another currency.

49. The Interest rate Swaps (IRS) and Forward rate agreements (FRA) were first allowed by RBI in 1998.

50. Banks and counter parties need to execute ISDA master agreement before entering into any derivative contracts.

51. A right to buy is Call Option and a right to Sell is Put Option.

52. Swaps are used to minimize cost of borrowings and also to benefit from arbitrage in two currencies.

53. Currency and interest rate Swaps with basic structure without in built positions or knock-out levels are plain vanills type Swaps.

UNIT – 19 : TREASURY AND ASSET LIABILITY MANAGEMENT

1. The risks arise out of mismatch of Assets and Liabilities of the Bank.

2. ALM is defined as protection of net worth of the Bank.

3. Liquidity Risk translates into interest rate risk when the bank has to recycle the deposit funds or role over a credit on market determined terms.

4. Liquidity implies a positive cash flow.

5. The difference between sources and uses of funds in specific time band is known as Liquidity Gap which may be positive or negative.

6. Interest rate risk is measured by the gap between interest rate sensitive asset and interest rate sensitive liability in a given time band.

7. The Assets & Liabilities are rate sensitive when their value changes in reverse direction corresponding to a change in market rate of interest.

8. The Gap management is only way of monitoring ALM.

9. The Duration and Simulation methods are used to make ALM more effective.

10. Derivatives are useful in reducing the Liquidity & Interest rate Risk.

11. Derivatives replicate market movements.

12. Derivatives can be used to hedge high value individual transactions.

13. The Derivative transaction is independent of the banking transaction.
14. Treasury products such as Bonds & Commercial papers are subject to credit risk.

15. Credit Risk in a loan & bond are similar, unlike a loan bond is tradable and hence it is more liquid asset.

16. Now a days the conventional credit is converted into tradable treasury product through Securitisation process by issue of PTC.

17. Securitisation infuses liquidity into the issuing bank & frees blocked capital.

18. Transfer pricing refers to fixing the cost of resources and return on Assets of the bank in a rational manner.

19. In a multi branch transfer pricing is particularly useful to assess the branch profitability.

20. ALM policy prescribes composition of ALCO & operational assets of ALM.

21. Liquidity policy prescribes minimum liquidity to be maintained.

22. Modern banking may be defined as Risk Intermediation.

23. Market Risk comprises of Liquidity and interest rate risk.

24. Banks are highly sensitive to liquidity risk as they can not afford to default or delay in meeting their obligations to depositors and other lenders.

25. Liquidity & interest rate sensitivity gap are measured in specified time bands.

26. Treasury connects core banking activity with financial markets.

27. Derivatives and Options are used in managing the mismatches in bank's Balance Sheet.
28. Treasury is also responsible for transfer pricing.

29. A situation where depositors of a bank lose confidence in the bank and withdraws their balances immediately is known as Run on the Bank.

30. Securities that can be readily sold for cash in secondary markets are Liquefiable securities.
31. Ratio of interest rate sensitive assets to rate sensitive liabilities is Sensitive Ratio.

32. Capacity and willingness to absorb losses on account of market risk is Risk Appetite.

UNIT 20-COMPONENTS OF ASSETS & LIABILITIES IN BANK'S BALANCE SHEET

- At macro-level. Asset Liability Management involves the formulation of critical business policies, efficient allocation of capital and designing of products with appropriate pricing strategies.

- At micro-level the Asset Liability Management aims at achieving profitability through price matching while ensuring liquidity by means of maturity matching.

- ALM is therefore, the management of the Net Interest Margin (NIM) to ensure that its level and riskiness are compatible with risk/return objectives of the bank.

- The strategy of actively managing the composition and mix of assets and liabilities portfolios is called balance sheet restructuring.

- The impact of volatility on the short-term profit is measured by Net Interest Income.Net Interest Income = Interest Income - Interest Expenses.

- Minimizing fluctuations in NII stabilizes the short term profits of the banks.

- Net Interest Margin is defined as net interest income divided by average total assets. Net Interest Margin (NIM) = Net Interest Income/Average total Assets.

- Net Interest Margin can be viewed as the 'Spread' on earning assets. The higher the spread the more will be the NIM

- The ratio of the shareholders funds to the total assets(Economic Equity Ratio) measures the shifts in the ratio of owned funds to total funds. This fact assesses the sustenance capacity of the bank.

- Price Matching basically aims to maintain spreads by ensuring that deployment of liabilities will be at a rate higher than the costs.

- Liquidity is ensured by grouping the assets/liabilities based on their maturing profiles. The gap is then assessed to identify future financing requirements

- Profit = Interest Income - Interest expense - provision for loan loss + non-interest revenue - non-interest expense – taxes

UNIT 21- Banking Regulation and Capital

- Systemic risk is the risk that a default by one financial institution will create a 'ripple effect' that leads to defaults by other financial instigations and threatens the stability of the financial system.

- In calculating the Cooke ratio both on-balance-sheet and off-balance-sheet items are considered. They are used to calculate bank's total risk-weighted assets. It is a measure of the bank's total credit exposure. CRAR = Capital/Risk Weighted Assets.

- Tier-I capital consists mainly of share capital and disclosed reserves and it is a bank's highest quality capital because it is fully available to cover losses.

- Tier-II capital on the other hand consists of certain reserves and certain types of subordinated debt. The loss absorption capacity of Tier-II capital is lower than that of Tier-I capital.

- The elements of Tier-I capital include Paid-up capital (ordinary shares), statutory reserves, and other disclosed free reserves.

UNIT 22 -Capital Adequacy - The Basel-II Overview

- The Basel Committee provided the framework for capital adequacy in 1988, which is known as the Basel-I accord.The Basel-I accord provided global standards for minimum capital requirements for banks.

- The Revised Framework consists of three-mutually reinforcing pillars, viz., minimum capital requirements, supervisory review of capital adequacy, and market discipline.

- The Framework offers three distinct options for computing capital requirement for credit risk and three other options for computing capital requirement for operational risk.

- The options available for computing capital for credit risk are Standardised Approach, Foundation Internal Rating Based Approach and Advanced Internal Rating Based Approach.

- The options available for computing Market risk is standardized approach (based on maturity ladder and duration baSed) and advanced approach, i.e., internal models such as VAR

- The options available for computing capital for operational risk are Basic Indicator Approach, Standardised Approach and Advanced Measurement Approach.
- The revised capital adequacy norms shall be applicable uniformly to all Commercial Banks (except Local Area Banks and Regional Rural Banks).

- A Consolidated bank is defined as a group of entities where a licensed bank is the controlling entity.

- All commercial banks in Indiashall adopt Standardised Approach (SA) for credit risk and Basic Indicator Approach (BIA) for operational risk.

- Banks shall continue to apply the Standardised Duration Approach (SDA) for computing capital requirement for market risks.

- The term capital would include Tier-I or core capital, Tier-II or supplemental capital, and Tier-Ill capital

- Core capital consists of paid up capital, free reserves and unallocated surpluses, less specified deductions.

- Supplementary capital comprises subordinated debt of more than five years' maturity, loan loss reserves, revaluation reserves, investment fluctuation reserves, and limited life preference shares.

- Tier-II capital is restricted to 100% of Tier-I capital as before and long-term subordinated debt may not exceed 50% of Tier-I capital.

- Tier-Ill capital will be limited to 250% of a bank's Tier-1 capital that is required to support market risk. This means that a minimum of about 28.5% of market risk needs to be supported by Tier-I capital. Any capital requirement arising in respect of credit and counter-party risk needs to be met by Tier-I and Tier-II capital.

- Capital adequacy ratio(C) = Regulatory capital(R)/Total risk weighted assets(T).

- Regulatory Capital 'R'=C*T and Total Risk weighted Assets 'T'= R/C

- Total Risk weighted assets =(Risk weighted assets for credit risk) +(12.5*Capital requirement for market risk)+(12.5*Capital requirement for operational risk)

UNIT 23- Supervisory Review

- Pillar I: Minimum Capital Requirements - which prescribes a risk-sensitive calculation of capital requirements that, for the first time, explicitly includes operational risk in addition to market and credit risk.

- Pillar 2: Supervisory Review Process (SRP) - which envisages the establishment of suitable risk management systems in banks and their review by the supervisory authority.

- Pillar 3: Market Discipline - which seeks to achieve increased transparency through expanded disclosure requirements for banks.

UNIT 24-Pillar 3-Market Discipline

- Market Discipline is to compliment the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2). Pillar 3 provides disclosure requirements for banks using Basel-II framework.

- Information would be regarded as material if its omission or misstatement could change or influence the assessment or decision of a user relying on that information for the purpose of making economic decisions.

UNIT 25 - Asset Classification and Provisioning Norms

- Banks should classify an account as NPA only if the interest charged during any quarter is not serviced fully within 90 days from the end of the quarter

- An account should be treated as 'out of order' if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power In cases where the outstanding balance in the principal operating account is less than the sanctioned limit/drawing power, but there are no credits continuously for 90 days as on the date of Balance Sheet or credits are not enough to cover the interest debited during the same period, these accounts should be treated as 'out of order'.

- Any amount due to the bank under any credit facility is 'overdue' if it is not paid on the due date fixed by the bank.

- Interest on advances against term deposits, NSCs, IVPs, KVPs and life policies may be taken to income account on the due date, provided adequate margin is available in the accounts.

- A substandard asset would be one, which has remained NPA for a period less than or equal to 12 months. a substandard asset would be one, which has remained NPA for a period less than or equal to 12 months.

- If arrears of interest and principal are paid by the borrower in the case of loan accounts classified as NPAs, the account should no longer be treated as nonperforming and may be classified as 'standard' accounts.

- Advances against Term Deposits, NSCs, KVP/IVP, etc, need not be treated as NPAs. Advances against gold ornaments, Government securities and all other securities are not covered by this exemption.

UNIT 26 - Liquidity Management

- Bank's liquidity management is the process of generating funds to meet contractual or relationship obligations at reasonable prices at all times.

- Good management information systems, central liquidity control, analysis of net funding requirements under alternative scenarios, diversification of funding sources, and contingency planning are crucial elements of strong liquidity management at a bank of any size or scope of operations.
- The residual maturity profile of assets and liabilities will be such that mismatch level for time bucket of 1-14 days and 15-88 days remains around 80% of cash outflows in each time bucket.

- Flow approach is the basic approach being followed by Indian banks. It is called gap method of measuring and managing liquidity

- Stock approach is based on the level of assets and liabilities as well as off-balance sheet exposures on a particular date.

- Ratio of Core Deposit to Total Assets: - Core Deposit/Total Assets: More the ratio, better it is.

- Net Loans to Totals Deposits Ratio:- Net Loans/Total Deposits: It reflects the ratio of loans to public deposits or core deposits. Loan is treated to be less liquid asset and therefore lower the ratio, better it is.

- Ratio of Time Deposits to Total Deposits:-Time deposits provide stable level of liquidity and negligible volatility. Therefore, higher the ratio better it is.

- Ratio of Volatile Liabilities to Total Assets:- Higher portion of volatile assets will pose higher problems of liquidity. Therefore, lower the ratio better it is.

- Ratio of Short-Term Liabilities to Liquid Assets:- Short-term liabilities are required to be redeemed at the earliest. It is expected to be lower in the interest of liquidity.
- Ratio of Liquid Assets to Total Assets:-Higher level of liquid assets in total assets will ensure better liquidity. Therefore, higher the ratio, better it is.

- Liquid assets may include bank balances, money at call and short notice, inter bank placements due within one month, securities held for trading and available for sale having ready market.

- Ratio of Short-Term Liabilities to Total Assets:-A lower ratio is desirable

- Short-term liabilities may include balances in current account, volatile portion of savings accounts leaving behind core portion of saving which is constantly maintained. Maturing deposits within a short period of one month.

- Ratio of Prime Asset to Total Asset - Prime Asset/Total Assets:-More or higher the, ratio better it is.

- Prime assets may include cash balances with the bank and balances with banks including central bank which can be withdrawn at any time without any notice.

- Ratio of Market Liabilities to Total Assets:-Lower the ratio, better it is.

- Market liabilities may include money market borrowings, inter-bank liabilities repayable within a short period.

- A maturity ladder should be used to compare a bank's future cash inflows to its future cash outflows over a series of specified time periods.
- The need to replace net outflows due to unanticipated withdrawal of deposits is known as Funding risk.
- The need to compensate for non-receipt of expected inflows of funds is classified as Time Risk
- Call risk arises due to crystallisation of Contingent liabilities
- Maturity ladders enables the bank to estimate the difference between Cash inflows and Cash Outflows in predetermined periods.
- Liquidity management methodology of evaluating whether a bank has sufficient liquid funds based on the behaviour of cash flows under the different 'what if scenarios is known as Alternative Scenarios
- The capability of bank to withstand a net funding requirement in a bank specific or general market liquidity crisis is denoted as Contingency planning

UNIT 27 - Interest Rate Risk Management

- Interest rate risk is the exposure of a bank's financial condition to adverse movements in interest rates.
- Gap: The gap is the difference between the amount of assets and liabilities on which the interest rates are reset during a given period.
- Interest rate risk refers to volatility in Net Interest Income (NiI) or in variations in Net Interest Margin (NIM)
- The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities.
- The risk that the interest rate of different assets and liabilities may change in different magnitudes is called basis risk.

- When assets and liabilities fall due to repricing in different periods, they can create a mismatch. Such a mismatch or gap may lead to gain or loss depending upon how interest rate in the market tend to move.

- The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities

- When the variation in market interest rate causes the Nil to expand, the banks have experienced a favourable basis shift and if the interest rate movement causes the Nil to contract, the basis has moved against the bank.

- An yield curve is a line on a graph plotting the yield of all maturities of a particular instrument

- Price risk occurs when assets are sold before their maturity dates.

- The price risk is closely associated with the trading book which is created for making profit out of short-term movements in interest rates.

- Uncertainty with regard to interest rate at which the future cash flows can be reinvested is called reinvestment risk.

- When the interest rate goes up, the bonds price decreases

- When the interest rate declines the bond price increases resulting in a capital gain but the realised compound yield decreases because of lower coupon reinvestment income.

- Duration is a measure of the percentage change in the economic value of a position that will occur, given a small change in the level of interest rates.

- Higher duration implies that a given change in the level of interest rates will have a larger impact on economic value.

- Interest Rate Sensitive Gap: Interest Rate Sensitive Assets(RSA) - Interest Rate Sensitive Liabilities (RSL).

- Positive Gap or Asset Sensitive Gap - RSA - RSL > 0 & Negative Gap or Liability Sensitive - RSA - RSL < 0

Important Formulas

Some of these Formulas may not be applicable for BFM, but I request all of you to go through all of them to understand the concepts clear for both ABM and BFM.

1. Raw material Turnover Ratio = Cost of RM used / Average stock of R M

2. SIP Turnover = Cost of Goods manufactured / Average stock of SIP

3. Debt Collection period = No. days or months or Weeks in a year/Debt Turnover Ratio.

4. Average Payment Period = No. days or months or Weeks in a year/Creditors Turnover Ratio.

5. Inventory Turnover Ratio = Cost of Goods Sold / Average Inventory.

6. Debtors Turnover Ratio = Net Credit Sales / Average Debtors.

7. Creditors Turnover Ratio = Net Credit Purchases / Average Credits.

8. Defensive Interval Ratio = Liquid Assets / Projected Daily Cash Requirement

9. Projected daily cash requirement = Projected operating cash expenses / 365.

10. Debt Equity Ratio = Long Term Debt / Equity.

11. Debt Equity Ratio = Total outside Liability / Tangible Net Worth.

12. Debt to Total Capital Ratio = Total Debts or Total Assets/(Permanent Capital + Current Liabilities)

13. Interest Coverage Ratio = EBIT / Interest.

14. Dividend Coverage Ratio = N. P. after Interest & Tax / Preferential dividend

15. Gross Profit Margin = Gross Profit / Net Sales * 100

16. Net Profit Margin = Net Profit / Net Sales * 100

17. Cost of Goods Sold Ratio = Cost of Goods Sold / Net Sales * 100.

18. Operating Profit Ratio = Earnings Before Interest Tax / Net Sales * 100

19. Expenses Ratio or Operating Ratio = Expenses / Net Sales * 100

20. Net Profit Ratio = Net Profit After interest and Tax / Net Sales * 100

21. Operating Expenses Ratio = (Administrative + Selling expenses) / Net Sales * 100

22. Administrative Expenses Ratio =(Administrative Expenses / Net Sales) * 100

23. Selling Expenses Ratio =(Selling Expenses / Net Sales) * 100

24. Financial Expenses Ratio = (Financial Expenses / Net Sales) * 100

25. Return on Assets = Net Profit After Tax / Total Assets.

26. Total Assets = Net Fixed Assets + Net Working Capital.

27. Net Fixed Assets = Total Fixed Assets – Accumulated Depreciation.

28. Net Working Capital = (CA –CL) – (Intangible Assets + Fictitious Assets + Idle Stock + Bad Debts)

29. Return on Capital Employed = Net Profit Before Interest and Tax / Average Capital Employed.

30. Average Capital employed = Equity Capital + Long Term Funds provided by Owners & Creditors at the beginning & at the end of the accounting period divided by two.

31. Return on Ordinary Share Holders Equity = (NPAT – Preferential Dividends) / Average Ordinary Share Holders Equity or Net Worth.

32. Earnings Per Share = Net Profit After Taxes and Preferential dividends / Number of Equity Share.

33. Dividend per Share = Net Profit After Taxes and distributable dividend / Number of Equity Shares.

34. Dividend Pay Out Ratio = Dividend per Equity Share / Earnings per Equity Share.

35. Dividend Pay Out Ratio = Dividend paid to Equity Share holders / Net Profit available for Equity Share Holders.

36. Price Earning Ratio = Market Price per equity Share / Earning per Share.

37. Total Asset Turnover = Cost of Goods Sold / Average Total Assets.

38. Fixed Asset Turnover = Cost of Goods Sold / Average Fixed Assets.

39. Capital Turnover = Cost of Goods Sold / Average Capital employed.

40. Current Asset Turnover = Cost of Goods Sold / Average Current Assets.

41. Working Capital Turnover = Cost of Goods Sold / Net Working Capital.

42. Return on Net Worth = (Net Profit / Net Worth) * 100

43. DSCR = Profit after Tax & Depreciation + Int. on T L & Differed Credit + Lease Rentals if any divided by Repayment of Interest & Installments on T L & Differed Credits + Lease Rentals if any.

44. Factory Cost = Prime cost + Production Overheads.

45. Cost of Goods Sold = Factory Cost + Selling, distribution & administrative overheads

46. Contribution = Sales – Marginal Costs.

47. Percentage of contribution to sales = (Contribution / Sales) * 100

48. Break Even Analysis = F / (1 – VC / S)
F = Fixed costs, VC = Total variable operating costs & S = Total sales revenue

49. Break Even Margin or Margin of Safety = Sales – Break Even Point / Sales.

50. Cash Break Even = F – N / P – R or F – N / 1 – (VC / S)

51. BEP = Fixed Costs / Contribution per unit.

52. Sales volume requires = Fixed cost + Required profit / Contribution per unit.

53. BEP in Sales = (Fixed Costs / Contribution per unit) * Price per unit.

54. Contribution Sales Ratio = (Contribution per unit / Sale price per unit) * 100

55. Level of sales to result in target profit after Tax = (Target Profit) / (1 – Tax rate / Contribution per unit)

56. Level of sales to result in target profit = (Fixed Cost + Target profit) * sales price per unit Contribution per unit.

57. Net Present Value = - Co + C1 / (1 + r)

58. Future expected value of a present cash flow = Cash Flow (1 + r) ^ t

59. Present value of a simple future cash flow = Cash Flow / (1 + r) ^ t

60. The Discount Factor = 1 / (1 + r) ^ t

61. Notation used internationally for PV of an annuity is PV (A, r, n)

62. Notation used internationally for FV of an annuity is FV (A, r, n)

63. The effective annual rate = (1 + r) ^ t – 1 or (1 + (r / N)) – 1)
N = Number of times compounding in a year

64. PV of end of period Annuity = A { (1- (1 / (1+r) ^ n) / r

65. CR = CA : CL

66. Net Worth = CA - CL

67. DER = TL/TNW or debt/equity or TL/equity

68. Price Elasticity of Supply = (% change in quantity supplied/(% change in price)

69. PV = P / R * [(1+R)^T - 1]/(1+R)^T

70. PV = P / (1+R)^T

71. FV = P * (1 + R)^T

72. FV = P*(1-R)^T

73. FV = P / R * [(1+R)^T - 1]

74. FV = P / R * [(1+R)^T - 1] * (1+R)

75. EMI = P * R * [(1+R)^T/(1+R)^T-1)]

76. FV of annuity = A/r ×{(1+r)^n-1}

77. Bond Price = (1/(1+R)^t)((coupon*((1+R)^t-1)/R)+Face Value)

ALL THE VERY BEST FOR YOUR EXAMS

SHORT NOTES FOR

CAIIB

BANK FINANCIAL MANAGEMENT

Though we had taken enough care to go through the notes provided here, we shall not be responsible for any loss or damage, resulting from any action taken on the basis of the contents. Creation of these short notes is the efforts of so many persons. First of all we thank all of them for their valuable contribution. We request everyone to go through the Macmillan book and update yourself with the latest information through RBI website and other authenticated sources. In case you find any incorrect/doubtful information, kindly update us also (along with the source link/reference for the correct information).

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