

Roll No.....

Membership No.....



**The Institute of Chartered Accountants of India
Certificate Course Forex & Treasury Management
Evaluation Test Booklet**

Test 1

24th November, 2018

Duration- 3 Hours

Total Marks- 100

INSTRUCTIONS:

1. Please read the instructions carefully given in the question paper and solve it in the space provided.
2. The candidates are not allowed to carry the evaluation test booklet with them. This should be tied up with sheets provided to answer the question Paper.
3. Use Blue/Black pen only.
4. Do not write your Roll No. or Name or other identification other than in the space (perforated) provided on this sheet.
5. Please show Identity Card to the invigilator for verification of your identity, when asked.
6. The candidates may use the simple calculator.
7. In order to get full credit on the problems, the candidates must show all their rough work/ other workings.

(Participant Signature)

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Date : 24th November, 2018

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CERTIFICATION COURSE ON FOREX AND TREASURY MANAGEMENT

Paper -1

S. No.	Total Number of Questions	Questions to be answered	Total Marks	Marks Obtained
Multiple Choice - Section A	65	65	65	
Short Notes – Section B	7	5	25	
Case Study – Section C	2	1	10	
Total	74	71	100	

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Disclaimer

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Section A
Number of questions: 65
Marks: 65

Multiple choices: Please [✓] mark for the correct answer.

Part A: Answer all questions.

(1 mark each)

1. A corporate has approached you [as its financial advisor] and sought your guidance on setting up a treasury carving it out of the existing finance department. Which of the following is likely to be your advice as the first step?
- a) First obtain permission from RBI before proceeding to set up the treasury
 - b) Examine whether the size & complexity of financial operations justify such initiative
 - c) Pass a board resolution for setting up the treasury defining the scope and limitations of activities proposed
 - d) It is viable to do so only if the company has surplus funds over Rs 1000 crores
2. There is a concept of an integrated treasury in banks in India. Following is a good explanation of that concept.
- a) The treasury of the bank is deeply integrated with the bank's other operations
 - b) The banking books and trading books of the bank are accounted together
 - c) The treasury handles both domestic and forex transactions holistically
 - d) The CBS [core banking solution] software of the bank takes care of both branch and treasury accounting
3. In its notification dt. 2nd April 2018, RBI stated as under: "*With a view to addressing the systemic impact of sharp increase in the yields on Government Securities, it has been decided to grant banks the option to spread provisioning for mark to market losses on investments held in AFS and HFT for the quarters ended December 31, 2017 and March 31, 2018... spread equally over up to four quarters*". The underlying of this statement is a typical example of the following type of risk faced by banks:
- a) Market risk
 - b) Government securities risk
 - c) Investment risk
 - d) Operational risk

4. The treasury of an organisation is handling credit functions i.e. arranging credit limits on best terms. Hence it can be concluded that the organisation is

- a) A Small Finance Bank
- b) A bank
- c) A corporate
- d) An insurance company

5. You are the concurrent auditor of the treasury of a bank. Hence the following statement is true.

- a) The dealer has to necessarily obtain your concurrence before putting through transactions
- b) You are likely to sit in the back office where the audit trail is available
- c) You will concentrate on the mid office overseeing the risks
- d) You will track movement of deal slips from mid to front office on live basis

6. A customer has booked a forward contract for the proposed export. The export order unfortunately stands cancelled before the due date. The customer informs this to the bank.

- a) Bank can cancel the contract and there is no risk to the bank
- b) There is a possibility of risk to the bank and it is called pre-settlement risk
- c) There is a risk to the bank on the due date called settlement risk or Herstatt risk
- d) Depending on the exchange rate movement, there may be risk or no risk to the bank

7. Syndicate bank has USD one million balance in its Nostro account with Citibank NY at the end of today.

- a) We can surely say that Syndicate bank has a cash balance of USD one million today
- b) We can surely say that Syndicate bank has an overbought position in USD of USD one million
- c) We cannot comment on the cash balance or position in USD since in a computerised environment, debits and credits will take place continuously
- d) Syndicate bank cannot maintain such large interest free balance

8. SBI Mumbai is maintaining GBP account with Barclays bank London. Barclays bank London is maintaining an INR account with SBI Mumbai. You are assigned to audit the Nostro account reconciliation of SBI.

a) The two basic documents for this work are the SWIFT statement received from Barclays and the SWIFT statement SBI sends to Barclays for the same period

b) RBI rules do not permit such mutual maintenance of accounts

c) You are more worried about the reconciliation of INR account which is in the books of SBI, considering the recent incidents of frauds

d) SWIFT statement sent by Barclays and the corresponding mirror statement generated in SBI books are important for you

9. While describing the treasury structure, which of the following sentences is more appropriate?

a) Deal slip flows from front office to back office via mid office

b) The number of persons in front office and that in back office have to naturally match

c) There has to be functional separation between front and back office

d) On a day, if there are hypothetically no deals put through by front office, back office will have no work

10. The following best describes the risk management in a bank from treasury structure perspective:

a) Back office is the clearing house for risk and has the responsibility to manage the treasury risks taken in all areas of the bank

b) Mid-office is responsible for onsite risk measurement, monitoring and management reporting

c) The head of treasury acts as the bank's interface to international and domestic financial markets

d) Interacting with the bank's Risk Management Department on liquidity and market risk is done by the front office

11. The banking terminologies here have the same meaning as commonly used. With that understanding, the activities of a treasury of a bank will increase when

- a) SLR is increased
- b) CRR is increased
- c) PLR is changed
- d) CRR is reduced

12. Daylight open position [as applicable to a treasury] refers to

- a) Exposure that prevails at the end of the trading day
- b) Exposure that is opened in the course of trading day
- c) Exposure that exists at least for five minutes during the trading day
- d) Exposure that is the maximum during the day

13. What is the percentage of risk weightage on the overnight open position in forex as per RBI guidelines?

- a) 2.5
- b) 50%
- c) 100%
- d) 125%

14. For a bank treasury, if the spot and forward positions in individual currencies are balanced

- a) The bank does not suffer any loss due to exchange fluctuation
- b) There is no possibility of mismatch of foreign currency positions
- c) There may be mismatch in maturity pattern of forward transactions
- d) The intraday and overnight exposures in these currencies are nil and it is called square or near square position

15. Which of the following is more appropriate for a bank?

- a) Credit risk is the primary challenge for a treasury of a bank
- b) In banking books, market risk is the most challenging variable to manage
- c) Liberalisation increases the market risk faced by treasury of a bank
- d) Growth in NPA is due to increased operational risks faced by any bank

16. Following is true in respect of a credit risk faced by treasury of a bank
- a) Default in repayment by a borrower is considered as treasury credit risk
 - b) Counterparty risk, a variant of credit risk, arises from non-performance of the trading partner
 - c) Inability of the importer's country to repatriate foreign exchange to Indian exporter is considered as operational risk
 - d) Treasury controls credit risk by dealing only with banks larger than itself
17. Which of the following statements is more appropriate from the treasury perspective?
- a) When market and price volatility is high, 'stop loss limits' are relaxed
 - b) Stop loss limit triggers specified action if the loss exceeds a threshold amount
 - c) Stop loss limit triggers specified action if the gain is lower than a threshold amount
 - d) Stop loss limit ensures a minimum profit or gain in a trading transaction
18. There can be an overlap in the functioning of the following units of the dealing department, which is tolerated marginally
- a) Front office and back office
 - b) Back office and mid office
 - c) Mid office and front office
 - d) Front, back and mid office
19. In the foreign exchange interbank market,
- a) There are no brokers since all transactions are put through electronically
 - b) There are brokers who should act as temporary principals for all trades done
 - c) Accreditation of such brokers, if any, is done by RBI on annual basis
 - d) There can be brokers who bring together the counterparties for a fee
20. Banking is a regulated business. In that context, which of the following statements is true?
- a) FEDAI is the regulator of Authorised dealers
 - b) RBI is the regulator of banks of all categories
 - c) SEBI is the regulator of banks partially
 - d) Government is the regulator for the newly opened India Post Payments Bank

21. Concepts of float funds, lock boxes etc., have evolved over a period of time to facilitate funds management by treasuries. Mark the appropriate statement below in that context

- a) Technology has helped in growth of these concepts
- b) Technology is making these irrelevant over time
- c) These concepts are technology neutral
- d) Treasury does not depend on these for funds management

22. In clearing of funds between banks, following is true

- a) CTS stands for Cheque Transfer System to facilitate faster cheque clearance
- b) CTS has been implemented in limited centres and runs parallel to MICR clearing in remaining centres in the country
- c) Presently the traditional MICR-based cheque processing has been discontinued across the country
- d) Under CTS the physical cheque continues to be available at the paying banks if the customer wishes to have a look at it

23. Treasurer of a bank can depend on the following deposit as available foreign currency resource for extending foreign currency lending to customers in general

- a) EEFC account balance
- b) NRE account balance
- c) NRO account balance
- d) FCNR account balance but only to those depositors

24. The Clearing Corporation of India Ltd

- a) Acts as the sole clearing house for all the cheque clearance in the country
- b) Provides guaranteed settlement functions for transactions in foreign exchange markets
- c) Provides guaranteed settlement for cross currency transactions through the CLS Bank
- d) Is yet to be recognised as Qualified Central Counterparty

25. In the interbank market, for settlement of forex transactions through The Clearing Corporation of India Ltd [CCIL]
- a) The deals can be forex inter-bank cash, tom, Spot and forward USD/INR
 - b) Banks need to maintain INR current account with CCIL
 - c) Deals have to be necessarily done through CCIL's FX-Clear and Fx-Swap trading platforms
 - d) All deals will necessarily be done through CCIL
26. Market in India supports a variety of electronic payments and settlement system and one of the features is that
- a) NEFT is an electronic funds transfer system involving time lag in settlements
 - b) NEFT settlement takes place on real time basis
 - c) Credit to the beneficiary in NEFT takes place based on exact matching of the mentioned beneficiary name
 - d) NEFT is the Indian equivalent of international SWIFT system
27. What is unethical when the dealers handle confidential information?
- a) Not revealing the information to anybody
 - b) Destroying the information
 - c) Keeping and storing the information with themselves
 - d) Knowingly using the information for competitive advantage
28. In forex segment of the treasury
- a) Both the legs of the transactions are to be in foreign currency
 - b) Atleast one leg of the transactions is to be in foreign currency
 - c) All transactions are to be necessarily settled through INR
 - d) Atleast 51% of the transactions are to be in foreign currency
29. Following is the best description of 'money market' for a treasurer
- a) The segment of the financial market where currency conversion takes place
 - b) Market for short-term financial assets that are close substitutes of money
 - c) Where any commodity can be traded against money and not through barter
 - d) A place where borrowers and lenders swap their liquidity

30. Treasury bills

- a) Can be issued by Central and State Governments
- b) Can be issued only Central Government
- c) Can be issued only State Governments
- d) Are not considered as Government securities

31. In the context of Government securities, yield is different from interest rate. However, there are various terms used relating to yield. E.g.

- A. Nominal yield
- B. Real yield
- C. Net yield
- D. Current yield

Their possible explanations are:

- K. $(\text{Coupon rate} \times \text{face value}) / \text{Cost or market price}$
- L. Nominal yields deflated by the index of inflation rate
- M. $(\text{Coupon rate} / \text{purchase price}) \times 100$
- N. Nominal yields adjusted for the tax rate

Which of the following is a correct matching of the pair from A to D with K to N

- a) A & N
- b) B & L
- c) C & K
- d) D & M

32. Following is a feature of Yield to Maturity [YTM]

- a) It is different from redemption yield due to taxation implications
- b) It is current yield if the bond is purchased at a discount
- c) Yield which the holder gets per annum if held until maturity
- d) Yield in respect of less traded securities

33. Following is a feature in respect of Government securities
- a) Government securities may be held by investors either as physical stock or in dematerialized form
 - b) Government securities can be held by investors only in dematerialized form
 - c) An investor can hold the securities in dematerialized form with RBI in an account called SGL account held with RBI
 - d) T-Bills are Government borrowing for a maximum period of one year
34. What is NDS – OM in Government securities market?
- a) It is Non Disputable System for Online Market for G Sec
 - b) It is an electronic trading system for G sec
 - c) It enables recording deals and settlements for G Sec
 - d) It is owned and maintained by CCIL
35. If a Government security is described as *8.24% GOI 2018*, it means
- a) The security is issued in the year 2018
 - b) The holder gets an yield of 8.24% p.a.
 - c) It is issued by Government of India on behalf of RBI
 - d) It is issued by RBI on behalf of Government of India
36. In case of Government securities,
- a) There is no tax applicable on the interest
 - b) There is ample liquidity since the issuer buys it anytime on tap
 - c) There is no TDS applicable on the interest earned
 - d) The interest and yield are fixed at the time of issuance
37. When there is announcement of reduction in repo rate
- a) Banks who are in need funds become happier
 - b) Banks who have surplus funds become happy
 - c) Banks's earning on their credit portfolio declines
 - d) Reverse repo rate invariably moves in reverse direction

38. Following is one essential difference between Marginal Standing Facility [MSF] and Liquidity Adjustment Facility [LAF]

- a) The securities that can be used under both the facilities have the same features
- b) Interest rate on MSF is always higher than that for LAF
- c) The counterparties to RBI are the same under both
- d) The minimum bidding amount in MSF is higher than that in LAF

39. Which of the following is *not* a true statement in relation to securities handled by treasury?

- a) Commercial paper is an unsecured promissory note with a fixed maturity
- b) Commercial Paper is a money market security issued by highly rated corporates, PDs and FIs
- c) Certificates of Deposits are securitized short term time deposits issued by banks
- d) Both CDs & CPs are issued by large corporates and banks to raise funds

40. There are alternatives to raise funds other than availing loans from banks. In that context,

- a) Factoring is one alternative way of raising pre-shipment finance for exports
- b) Essential difference between factoring and forfeiting is that in the former, it is always without recourse
- c) Forfeiting is resorted to in case of large value long term exports e.g. of capital goods
- d) Factoring and forfeiting in India require individual approval from RBI

41. Financial Benchmark India Private Ltd (FBIL)

- a) Is a wholly owned subsidiary of RBI
- b) Is jointly promoted by FIMMDA, FEDAI, IBA with banks
- c) Is the administrator of the Indian interest rate and foreign exchange benchmarks
- d) Is involved in fixing interest rate and foreign exchange rate in India under the guidance of RBI

42. A bread manufacturer bought five one-month wheat futures contracts at Rs.1155 per Quintal at the beginning of the day. The unit of trading is 10 MT and each contract is for delivery of 10 MT. The settlement price at the end of the day was Rs.1165 per Quintal. The trader's MTM account will show

- a) (-)2500
- b) (+)2500
- c) (+)5000
- d) (-)5000

43. Commodity exchanges enable producers and consumer to hedge their _____ given the uncertainty of the future

- a) Seasonal risk
- b) Profit risk
- c) Production risk
- d) Price risk

44. An example of an OTC contract in foreign exchange market is

- a) Booking forward contract by an exporter with the bank
- b) A transaction involving booking futures contract to hedge
- c) In the regulated foreign exchange market, there can't be OTC contract
- d) Establishing an import letter of credit by a bank on behalf of its importer customer

45. "Impossible trinity" or "trilemma" of international finance means a country may have any two but not all of the following three things [*mark the incorrect one*] viz.:

- a) A fixed exchange rate
- b) Free flow of capital across its borders
- c) Autonomy in its monetary policy
- d) Current account convertibility

46. What is pip in foreign currency quotations?

- a) It is the difference between bid and ask price
- b) It represents the profit margin of the trader for that currency quote
- c) It is the smallest amount a price can move in any currency quote
- d) It is the unit price for any exchange rate quotation

47. The USD is quoted at 73.46 / 73.48 in interbank market. A bank loads one rupee margin on the interbank rate for travel related remittances of customers. As a customer,

- a) You can buy travel card at Rs 72.46
- b) You can buy travel card at Rs 72.48
- c) You can buy travel card at Rs 74.46
- d) You can buy travel card at Rs 74.48

48. Non-deliverable Forward Contract

- a) Is always settled by delivery
- b) Is never cash settled
- c) Does not exist for a fully convertible currency
- d) Generally, a long term contract actively traded in Indian interbank market

49. As on date, Indian rupee is

- a) Fully convertible for current account transactions
- b) Fully convertible for capital account transactions
- c) Partly convertible for current account transactions
- d) Convertible for all RBI pre-authorized transactions

50. In case of rupee denominated bonds issued overseas [**generally referred as Masala bonds**]

- a) The forex risk is with the issuer of the bonds
- b) The forex risk is with the investor who can hedge it with a bank in India
- c) The forex risk can be hedged by the issuer with an appropriate derivative contract
- d) There is a prescribed average maximum maturity period

51. Following derivative product will be relevant to a project exporter who has submitted a bid in an international tender; not sure whether will secure the contract or not and the currency of the bid is meanwhile fluctuating against the home currency
- a) Futures contract
 - b) Forward contract
 - c) Options contract
 - d) Swap contract
52. An importer in India desires to avail a credit period for the import payment of USD 50,000 but the supplier wants immediate payment. Following is possible
- a) The importer can avail a supplier's credit and the bank can establish import LC to facilitate this
 - b) The importer can avail a buyers credit but the bank cannot establish import LC to facilitate this in view of recent RBI advice after a large fraud
 - c) The importer can avail a buyers credit and the bank can establish import LC to facilitate this but cannot issue letter of comfort
 - d) The importer can avail a buyer's credit and the bank can establish import LC and also letter of comfort to facilitate this
53. A currency 'A' carries a higher rate of interest compared to that of currency 'B'.
- a) In the forward market, A is always at discount against B
 - b) In the forward market, A is always at premium against B
 - c) We cannot say whether A will be at premium or discount against B
 - d) Forward margin depends on demand and supply and not on this interest rate differential
54. During a meeting with the dealer of your bank, she said that during the month of April of any year, the depreciation of INR against USD is highest compared to that in other months.
- a) This is an example of Alternative Hypothesis
 - b) The depreciation of INR against USD is highest in March compared to that in other months is an example of Alternative Hypothesis
 - c) Hypothesis testing starts by analysis of the data without stating and assuming the "Null Hypothesis"
 - d) Hypothesis testing starts by stating and assuming the "Alternative Hypothesis"

55. For a normal distribution, 95% of the values lie within 2 standard deviations of the population mean. This means

- a) We can arrive at 5% as the significance level
- b) 95% is the significance level
- c) There is more than a 5% probability of getting outliers that are beyond 2 standard deviations from the population mean
- d) We have a strong case of outliers to reject the null hypothesis

56. Which of the following statements is true in case of hypothesis testing?

- a) The p-value is a test of statistical significance that helps you decide whether or not to reject the null hypothesis.
- b) The Z score is the probability that you have falsely rejected the null hypothesis.
- c) The p-value is the probability that you have rightly rejected the null hypothesis.
- d) The Z score is a test of statistical significance that helps you decide whether or not to reject the null hypothesis.

57. The amount due from cheque deposited in banks, but not yet cleared is known as

- a) Disbursement float
- b) Collection float
- c) Net float
- d) Gross float

58. What is an yield curve?

- a) It is a line that plots interest rates, at different points in time, of bonds having equal credit quality, but same maturity dates
- b) It is a line that plots interest rates, at a set point in time, of bonds having different credit quality and different maturity dates
- c) It is a line that plots interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates
- d) It is a line that plots interest rates, at a set point in time, of bonds having equal credit quality, but same maturity dates

59. A bond with a face value of Rs. 1000, returns Rs. 80 in year 1, Rs. 80 in year 2 and Rs. 1080 in year 3. What is the duration of the bond in years?

- a) 2.6
- b) 2.8
- c) 2.4
- d) 2.2

60. The one-year *value at risk* of an investment portfolio is INR 10 million with a confidence level of 95%. This means

- a) There is a 5% chance of having losses that exceed INR 10 million at the end of the year.
- b) With 95% confidence, the worst expected portfolio loss over one trading year will exceed INR 10 million
- c) With 95% confidence, the maximum expected portfolio gain over one trading year will not exceed INR 10 million
- d) There is a 95% chance of having losses that exceed INR 10 million at the end of the year.

61. A statistical measure of the variability of a distribution around its mean is referred as under:

- a) A probability distribution
- b) The expected return
- c) The standard deviation
- d) Coefficient of variation

62. When is a portfolio said to be 'immunized'?

- a) When the duration gap is > 1
- b) When the duration gap is < 0
- c) When the duration gap is $= 0$
- d) When the duration gap is constant

63. An essential element of a disaster-recovery plan is a statement of the

- a) System development standards for the organization
- b) History of modifications to the operating system
- c) Applications planned for new development
- d) Responsibilities of each organizational unit in case of disaster

64. What is a modified duration?

- a) Modified duration is a measure of shift in interest rates for a unit change in prices of bonds
- b) Modified duration represents skewness of duration
- c) Modified duration is a measure of price sensitivity of a bond to interest rate movements
- d) Modified duration is an indicator of interest income

65. Contingency plans for computerized operations should include appropriate backup arrangements. Which of the following arrangements would be considered too vendor-dependent when vital operations require almost immediate availability of computer resources?

- a) A “hot site” arrangement
- b) A “cold site” arrangement
- c) A “cold and hot site” combination arrangement
- d) Using excess capacity at another data center within the organization

Answer (objective type 1-65)

1. B 2. C 3. A 4. C 5. B 6. B 7. A 8. D 9. C 10. B
11. A 12. B 13. C 14. C 15. C 16. B 17. B 18. B 19. D 20. B
21. B 22. C 23. A 24. B 25. A 26. A 27. D 28. B 29. B 30. B
31. B 32. C 33. A 34. B 35. D 36. C 37. A 38. B 39. D 40. C
41. C 42. C 43. D 44. A 45. D 46. C 47. D 48. C 49. A 50. B
51. C 52. C 53. A 54. B 55. A 56. D 57. B 58. C 59. B 60. A
61. C 62. C 63. D 64. C 65. B

Section B
Number of questions: 7
Marks: 25

Note: Answer any five questions. Each answer will carry 5 marks

1. The operational process developed to be used in treasury is meant for an orderly and controlled treasury activities. Make a list of five control measures applicable to a treasury and elaborate each by not more than three sentences. (5 Marks)

Answer: -

The answer should cover any five of the following with elaboration of the points mentioned thereagainst.

- **Systems control: separation of front and back office SW and access credentials, audit, RBI guidelines thereon, auto-generated deal slips etc.**
- **Policy document: articulating the risk and reward expectations and controls**
- **Delegation with accountability: limits & measuring efficiency**
- **Reporting requirements: internal [MIS] and to RBI**
- **Procedural control: maker checker concept, job rotation, clearly defined JDs, control over payment of funds**
- **RBI's guidelines on internal control: selection of dealers, reporting, using brokers, risk control, valuation**
- **FEDAI guidelines: business hours, late deals, interbank transaction guidelines**
- **Code of conduct [FEDAI & FIMMDA]: moral & ethical codes; a few points therefrom**

2. Why should one invest in Government securities? (5 Marks)

Answer: -

- **Besides providing a return in the form of coupons (interest), G-Secs offer the maximum safety as they carry the Sovereign's commitment for payment of interest and repayment of principal.**
- **They can be held in book entry, i.e., dematerialized/ scripless form, thus, obviating the need for safekeeping.**
- **G-Secs are available in a wide range of maturities from 91 days to as long as 40 years to suit the duration of varied liability structure of various institutions.**
- **G-Secs can be sold easily in the secondary market to meet cash requirements.**
- **G-Secs can also be used as collateral to borrow funds in the repo market.**
- **Securities such as State Development Loans (SDLs) and Special Securities (Oil bonds, UDAY bonds etc) provide attractive yields.**
- **The settlement system for trading in G-Secs, which is based on Delivery versus Payment (DvP), is a very simple, safe and efficient system of settlement. The DvP mechanism ensures transfer of securities by the seller of securities simultaneously**

with transfer of funds from the buyer of the securities, thereby mitigating the settlement risk.

- G-Sec prices are readily available due to a liquid and active secondary market and a transparent price dissemination mechanism.
- Besides banks, insurance companies and other large investors, smaller investors like Co-operative banks, Regional Rural Banks, Provident Funds are also required to hold G-Secs

3. Banks's financial risks are broadly classified as credit risk, market risk and operational risk. To demonstrate your understanding of these, fill up the following matrix covering all the features of these. Fill up mandatorily row 1 and any three others. (2+3= 5 Marks)

	Broad categories	Credit risk	Market risk	Operational risk
1	3 specific types			
2	Why this risk?			
3	How to measure?			
4	How to monitor?			
5	How to mitigate?			
6	Instance			

Answer: -

Banks' Financial risks. Any other right example also deserves marks.

	Broad categories	Credit risk	Market risk	Operational risk
1	3 specific types	Counterparty default	Interest rate risk	Staff dishonesty
		Country default [called country risk]	Exchange rate risk	System failure
		Sovereign risk	Equity price risk	Reputational risk
2	Why this risk?	Deliberately undertaken to earn	Have no control	Encountered unwittingly
3	How to measure?	Credit rating, standard models particularly for retail loans	Value at Risk and other mathematical models	No model available

4	How to monitor?	Post disbursement structured monitoring	Continuous M2M	Concurrent audit & other common sense tools
5	How to mitigate?	Credit enhancement	Scientific modelling	AI is likely to play an important role
6	Instance	NPAs	Genuine losses in Banks' treasury transactions; LTCM failure with loss over USD 4.6 b.	PNB fraud of around ₹14500 crores; USD 81m lost by Bangladesh Bank

4. Comment on the accuracy of a benchmark rate used in discounting cash flows.
What are the different types of discounts used in financial mathematics? (5 Marks)

Answer: -

A discount rate is the percentage by which the value of a cash flow in a discounted cash flow (DCF) valuation is reduced for each time period by which it is removed from the present. The estimation of a suitable discount rate is often the most difficult and uncertain part of a DCF. This is worsened by the fact that the final result is very sensitive to the choice of discount rate — a small change in the discount rate causes a large change in the value.

For listed securities the discount rate is most often calculated by using Capital Assets Pricing Model (CAPM). The availability of both data to calculate betas and of services that provide beta estimates, makes this convenient.

For unlisted securities and for other streams of cash flows it becomes even more difficult. If listed securities exist that are similar in terms of undiversifiable risk, then these can be used as benchmark to estimate what the appropriate discount rate should be.

A comparatively simple approach is to find a pure play company in as similar a business as possible and calculate its WACC (weighted average cost of capital). This may be the appropriate discount rate, or it may need further adjustment. If further adjustments are needed it is usually best to work from the WACC, using the CAPM, to calculate what the beta would be, given only equity funding, and adjust the beta. This is correct because of capital structure irrelevance.

Sometimes it is possible to make simple adjustments. For example, if the cash flows face a similar (undiversifiable component of) revenue volatility to the benchmark, but a different level of operational gearing, simply multiply the beta by the ratio of (1 + fixed costs as a percentage of revenues) for the cash flows being evaluated to the same for the benchmark.

In many cases it will be necessary to use detailed modelling to estimate the difference in the sensitivity to undiversifiable elements. In practice this means modelling the relationship between economic growth (the economy is the main undiversifiable risk) and both sets of cash flows. It may be simpler to use the market as the benchmark, in which case the ratio is the beta.

A last resort approach is to simply use what appears to be a sensible risk premium over the market or the risk free rate.

In all cases, especially the last, it is useful to calculate a DCF with several different discount rates, so that the sensitivity of the final result to this assumption can be clearly seen.

5. As a Trader you are expecting RBI to increase Repo Rates by 100 Bps in coming meeting and subsequently increase of 100 Bps in MSF (Marginal Standing Facility). How would you take a position in Interest Rate Markets using Interest Rate Futures: (1+2+2 = 5 Marks)

a) Define Interest Rate Futures – Long / Short Position

b) How would be take position if you are expecting II shift of 30 Bps in Yield Curve

Answer: -

As a Trader, understand that Interest Rates are rising henceforth Yields would also rise. In that sense Principal would fell down so would sell IRF today and wait for the Yields to bring down and then buy the same IRF. Using this would be able to have Gains on the deals. Any Trader sitting in India certainly does the same using Exchange Traded Interest Rate Derivatives traded at BSE, NSE.

Alternatively, if I am expecting II Shift in the Yield Curve then need to see whether Yields are rising or falling. In case of Rise would be short IRF while in case of fall would be rise would long IRF. In both the situations we would be using Exchange Traded Interest Rate Derivatives at BSE, NSE.

6. The closing price of a future is INR 99.80. The following securities are available for delivery under the contract. Select the cheapest to deliver security for the seller. (5 Marks)

Security	Market Price	Conversion Factor
8.24% 2018	INR 99.80	1.0750
5.69% 2018	INR87.65	0.9171

Answer: -

Security 8.24%: $INR\ 99.80 - (INR\ 98.00 \times 1.0750) = INR - 5.55$

Security 5.69%: $INR\ 87.65 - (INR\ 98.00 \times 0.9171) = INR - 2.2258$

The result is lowest for 8.24% security. It is the cheapest to delivery security.

7. Write short notes on the following, each not exceeding five lines (5 Marks)
- Certificate of Deposit
 - Negative list of investments
 - Lock boxes, as relevant to treasury

Answer:

- a) This is text book question. Answer e.g. available at page 83 of volume I of the reading material.
- b) Decided based on: Performance of yield, liquidity, trading turnover etc. Key factor: ROI Treasury to maintain negative list of investments based on these criteria. Similar to a NPA, NPI is Interest/ instalment (including maturity proceeds) remains unpaid > 90 days. Mutatis-mutandis to preference shares where the fixed dividend is not paid For equity shares, in the event the investment in the shares of any company is valued at Re.1 per company on account of the non-availability of the latest balance sheet in accordance with the instructions contained in paragraph 28 of the Annex to the circular DBOD.BP.BC.32/ 21.04.048/ 2000-01 dated October 16, 2000, those equity shares would also be reckoned as NPI.
- If any credit facility availed by the issuer is NPA in the books of the bank, investment in any of the securities, including preference shares issued by the same issuer would also be treated as NPI and vice versa. However, if only the preference shares are classified as NPI, the investment in any of the other performing securities issued by the same issuer may not be classified as NPI and any performing credit facilities granted to that borrower need not be treated as NPA.
- Investments in debentures / bonds, which are deemed to be in the nature of advance will also be subjected to NPI norms as applicable to investments.
- c) This is text book question. Answer e.g. available at page 250 [para 4.1.1] of volume I of the reading material.

Section C
Number of questions: 2
Marks: 10

Note: Case Studies. Answer any one. Max 10 marks

1. What are financial benchmarks? What is Financial Benchmark India Pvt. Ltd (FBIL)?
How is it relevant to a treasurer? *(3+2+5 = 10 Marks)*

Answer: -

Financial benchmarks are indices, values or reference rates used for the purpose of pricing, settlement and valuation of financial contracts. Globally huge volumes of financial transactions are referenced to or valued using various such benchmarks. Financial benchmarks play a very critical role in promoting efficient and transparent financial markets and ensuring financial stability. Some common examples are LIBOR, EURIBOR, MIBOR, reference exchange rates published by FEDAI etc. All these are used by banks and other portfolio holders for valuation and hence any inaccuracy in these can hugely impact the valuation, profitability, market values and will have impact on the economic process itself. E.g. the manipulation and complicity involved in the method of computation of LIBOR and EURIBOR benchmarks in the recent period led to imposition of huge penalties on banks by regulators.

In order to overcome the possible conflicts of interest in the benchmark setting process arising out of the current governance structure as nudged by RBI, The FBIL, jointly owned by FIMMDA, FEDAI and IBA, was formed in December 2014 as a private limited company under the Companies Act 2013. Its aim is to develop and administer benchmarks relating to money market, government securities and foreign exchange in India. It is responsible for all the aspects relating to the benchmarks to be issued by it, namely, collection and submission of market data and information including polled data, formulation, adoption and periodic review of benchmark calculation methodologies, calculation, publication and administration of benchmarks conforming to the highest standards of integrity, transparency and precision. It is committed to providing financial benchmarks that are free from bias, backed by robust data driven research and compliant with global best practices.

Rates published are the relevant rates for variety of valuations for treasuries in banks and other user institutions. E.g. the notional value of FCNR deposit for the purpose of capturing its INR equivalent was earlier supplied by FEDAI but it is by FBIL. If a corporate's loan from a bank is linked to any market e.g. MIBOR, that will depend now on what is published by FBIL. Some of the benchmark rates published by FBIL are

- FBIL will make available prices for State Development Loans (SDLs), which will be valued with effect from September 30, 2018
- The reference rate for INR/USD for converting foreign currency assets / liabilities of banks for the purpose of maintenance of SLR/CRR will be published by FBIL. For other currencies, use cross rates
- FBIL assumes the responsibility for administering valuation of Government securities with effect from March 31, 2018
- FBIL publishes overnight MIBOR, term MIBOR [upto 3 months], USD INR forward premia upto 12 months, Mumbai Interbank Forward Outright Rate upto 12 months, benchmark rates for Treasury Bills, CDs, MIBOR-OIS [overnight swap

index swap rate from 6 months to 5 years, benchmark matrix of FC-Rupee Options Volatilities upto 12 months etc.

All these are essential inputs to a treasurer affecting both top and bottom lines.

2. Recent news indicates that three public sector banks will get merged. You have been appointed as the Officer on special duty in the largest of the three banks to oversee the merger of the treasuries of the three banks. You have a team to work on this.

Your first task is to identify the critical areas related to treasury in the merger process and list the steps to be taken for smooth post-merger treasury activities. Once this is done, you could put a person in charge of each such activity and you could oversee the same.

What are the various far-reaching areas in which you wish to have a broad-brush approach to start with and why do you think each is critical? *(10 Marks)*

Answer:

This is surely not a text book question and good answer depends on the understanding of the treasury processes as covered in the various modules of this course. Hence any good logically correct articulation should be rewarded with marks. It should include discussions on most of the following areas and the mentioned reasons for criticality for the smooth merger. Generic answers on treasury or answers dealing with challenges in other than treasury area to get negative marks.

- 1. The software system used in the three banks and the efforts needed in migrating data from the two banks into the main bank system. If the systems are different, this will be a nightmare because it is like repairing a running vehicle i.e. the banks' treasury functioning cannot be stopped even for a day to facilitate this.**
- 2. Staff and organisational structure issues are to be carefully handled. Obviously the number of persons required in all the three segments viz.: front, mid and back office will reduce and selecting the best among the lot, redeployment of the rest and human issues in these to be handled tactfully. The entire organisational structure will be rewritten. If one of the banks is having a dealing room in another city, its merger will result in movement of people resulting in resistance.**
- 3. Clients are to be taken care of. Who were once considered as premium clients may not be so from merged treasury perspective. Hence assuring them of continued privileged service essential.**
- 4. Revised treasury management policy to be developed since the size, philosophy and risk appetite will have changed.**
- 5. The control limits amalgamation. Each bank has its own position related and counterparty limits. Considering the size of merged entity and removing overlaps, the revised limit fixing is more than an arithmetical exercise.**
- 6. Outstanding deals on the date of merger are to be consolidated and counterparties notified. In particular, deals between the three banks should be squared off and accounted correctly.**
- 7. Nostro relations are to be reviewed. The number of Nostro accounts will reduce, reconciliation to be completed and outstanding entries quickly cleared.**

