# Post Graduate Diploma in Management / PGDM (International Business)

Term III Term End Examination -March 2017
Retail Banking and Financial Inclusion
Course Code: ( DM 315 / IB 315 )

Time allowed: 2. 5 hours

**Total 5 pages** 

Maximum marks: 50

**Instructions:** Students are required to write **Roll No.** on each page of the question Paper. Writing anything other than roll no. will be treated as **Unfair Means**. In case of rough work, please use the answer sheet.

Section A:

15 marks

Attempt any 3 questions. Each question carries 5 marks . Word limit : around 100

1. KYC norms are prescribed by which authority for banks? What are the major objectives of such norms? What are the consequences for the bank if the KYC norms are not observed for a customer?

- 2. What is the impact of monetary policy on retail banks?
- 3. a) Tejas had an ordinary fixed deposit of Rs.20,000 with the Noida branch of a bank. He issued a cheque on his savings bank account for Rs.50,000 that had a balance of Rs.49000 at the same branch. The cheque was dishonored by the bank for want of funds in SB account. Tejas filed a suit against bank for wrongful dishonor of cheque when sufficient funds were available with the same branch. Discuss rights and liabilities of both the parties.
  - b) In account of A and B, operated by either or survivor, Bank receives instructions from B to revoke the authority of A to operate the account. A issues a cheque next day. Will Bank pay this cheque issued by A?

2.5\*2

4. a) A has following account balances with Modern Bank.

|   | Bank and Branch     | Account Name | Account       | Balance<br>(Rs.) |
|---|---------------------|--------------|---------------|------------------|
| 1 | Modern Bank, Delhi  | A and B      | Savings       | 1,26,000         |
| 2 | Modern Bank, Mumbai | A and B      | Fixed Deposit | 50,000           |
| 3 | Modern Bank, Noida  | Α            | Savings       | 98,000           |
| 4 | Modern Bank, Mumbai | A and C      | Fixed Deposit | 1,00,000         |

If Modern Bank is liquidated, what amount will be paid by DICGC to A, B and C.

- b) Suppose you require Rs. 200,000 after 3 years at an interest rate of 12 % p.a under Deposit Certificate /Cash Certificate scheme of Bank of India. Calculate the issue price for this Deposit Certificate
  - i. if the bank compounds interest quarterly
  - ii. if the bank compounds the interest yearly

2.5\*2

5. How a banker and a customer as per banking law are defined (in general words). Elaborate on banker's two main obligations towards a customer?

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### Section B:

20 marks

Attempt any 2 questions. Each question carries 10 marks. Word limit: around 200

- 6. a) Detail out the factors that influence the pricing of a bank product? Give two examples each for Overt and Covert pricing.
  - b) Rohit's monthly gross salary is Rs.100,000. He has to pay another EMI of Rs.5000 for auto loan for 5 years till March, 2018. He is to retire in December 2038. At an interest rate of 10 percent p.a , the EMI of a Rs.1 lakh loan for a 10/15/20-year loan is Rs. 1378 / 1137 / 1032 respectively. He applied for a loan of Rs.40 lakh.

Bank X considers minimum repayment capacity at 40% of gross income and insists on 80% LTV (Loan to Value ratio). How much home loan repayment period bank will allow to Ravi. Calculate A's home loan eligibility for a flat costing Rs.30 lakh. How much EMI he will have to pay for the loan approved for the repayment period fixed.

2x 5

- 7. Differentiate between the following (within 2-3 pertinent sentences each)
  - i. Credit Card & Charge Card
  - TAD and MAD
  - iii. De-dupe and Negative Credit Profile
  - iv. Proprietary card and co-branded credit card
  - v. Home Purchase Loan and Loan Against Property (LAP)

2x 5

- 8. a) What steps the Government of India has taken through banks in India for Financial Inclusion?
  - b) Name major types of Priority sector loans given by Indian banks?
  - c) Briefly list the types of loans given by banks in rural areas.
  - d) Mention the use of CIBIL report in granting a person loan.

2.5 x 4

Section C:

15 marks

Compulsory case, carries 15 marks. Word limit: around 500

# 9. GLOBAL BANK - RETAIL LIABILITY PRODUCTS

GLOBAL BANK has become a major bank and financial services organization in the world. Its strategy of 'managing for value' emphasizes the group's unique balance of business and earnings between older, mature economies and faster-growing emerging markets.

# SOME LIABILITY PRODUCTS

### SAVINGS ACCOUNT

The GLOBAL BANK savings account offers interest at the rate of 4% p.a . As it is

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targeted at primarily the upper classes, a minimum quarterly average balance of Rs 25,000 is required.

## **Benefits Offered To Savings Account Holders**

- A joining fee waiver on the credit card.
- Special rates on home loans, personal loans and Asset Link (overdraft against shares).
- Automatic transfer of extra savings from savings account to a fixed deposit to enable to earn a higher interest.
- 0.5 per cent off on the up front processing fee for home loans and personal/professional loans and on the annual service charges for Asset Link.
- · Demat account services with no account opening charges.
- · Insurance and mutual fund services.
- Debit card /Credit cards accepted at 13 million merchant establishments across the world.

**FIXED DEPOSIT (FD)** 

GLOBAL BANK offers. a fixed deposit option that provides a fixed rate of return on an amount deposited with the bank for a fixed tenure. The salient features of this deposit scheme are:

- 90 per cent overdraft facility on the amount in fixed deposit.
- · Internationally valid debit card.

#### CERTIFICATE OF DEPOSIT

- It works just like a fixed deposit, with one feature being that interest is received in advance. The minimum marketable lot for a certificate of deposit is Rs 1 lakh.
- Certificates of deposit held in a physical form are freely transferable by endorsement and delivery. Those in Demat form can be transferred as per the procedure applicable to other Demat securities.

#### SMART MONEY ACCOUNT

Smart Money account is a unique fixed deposit linked to a savings/current account where the customer can enjoy the higher returns of a fixed deposit and yet retain the flexibility of using money through the linked account. A Smart Money account can be opened with a minimum of Rs 25,000 arid 'customers also get high returns and a free savings or current account. Access to funds is anytime through ATMs, Phone Banking, Internet banking or personalized cheque-books. The salient features of a Smart Money account are:

- Withdrawal up to 90 per cent through an overdraft facility yet continues to earn interest on 100 per cent of your fixed deposit.
- Debit card with a withdrawal limit of Rs 25,000 per day (higher limits for Power Vantage and GLOBAL BANK Premier accounts).

#### **CURRENT ACCOUNTS**

There are three types of current accounts offered by GLOBAL BANK

#### Business Select

 This is a premium service designed to look after business and personal needs, financial services, wealth management solutions, personalized banking. Recognition that a Business Select customer deserves GLOBAL BANK provides the customer a personal relationship manager, dedicated to understanding his financial needs.

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- An average quarterly balance of Rs 200,000 is required.
- GLOBAL BANK offers local expertise and global reach in handling the account, including services in export and import.
- Preferential pricing of foreign exchange rates + Business centre facilities
- Free cashier's orders payable at any GLOBAL BANK branch in the country.
- Cheques up to Rs 2,00,000 honoured irrespective of the balance in the account.
- E banking and Phone Banking ensures that access to bank balances can be made 24 hours a day, 7 days a week, without actually stepping into the bank.
- · Cash, cheques and drafts can be picked up from or delivered to office free of cost.
- .Withdraw up to Rs 2,00,000 per day with the special Business Select ATM card.
- Preferential foreign exchange rates for all Business Select customers, preferential rates on large volume trade services requirements.

### Business Vantage

Business vantage is a current account that gives businessmen a superior service advantage. In the business vantage account, an average quarterly balance of Rs 100,000 is required. Business Phone Banking and Business Doorstep Banking and more are available too. A business vantage account holder is eligible for the following facilities:

- E-banking
- Complete range of services through Phone Banking
- · Free business doorstep banking
- No bounce cheque protection
- Free cheques payable at par
- Special ATM withdrawal limit of Rs 100,000 per day
- Free personalized cheque-book
- Preferential pricing on trade services
- · Expertise and global reach in handling trade business
- Preferential pricing of foreign exchange rates
- Make payments to any part of the country with free telegraphic transfers,
- Free auto sweeps to transfer excess cash to a fixed deposit, free standing instructions.

## • 'Business Account

A business account is' a cost-effective current account. An average quarterly balance of Rs 25,000 is required in a business account. A business account' holder is eligible for the following facilities:

- Free Internet banking for businesses, Free business Phone Banking
- Business Doorstep banking, Multi-branch banking
- Free special ATM card for cash withdrawal of up to Rs 75,000 per day
- · Fast and efficient collection services
- Upcountry cheques drawn on any location across the country can be collected through the payments and cash management set-up
- Savings accounts for employees, AUTOPAY to credit salaries to employees' accounts
- Business banking customers can also invest in mutual funds, enjoy up to 48 days' interest free credit on an internationally valid credit card and convert shares into electronic form with HSBC's depository services.

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## Required:

 Make a comparative table for above retail liability products taking only three most important features of each of the above products of GLOBAL BANK with those similar products of any one other existing Indian bank of your choice. Also write the target segment intended for each product of both banks as indicated in the table below.

|     | GL              | <b>OBAL BANK</b>          |                | An  | other Bar             | nk ( Store                | Burk of mayo   |
|-----|-----------------|---------------------------|----------------|-----|-----------------------|---------------------------|----------------|
| Sr. | Name of product | 3 Most important features | Target segment | Sr. | Name<br>of<br>product | 3 Most important features | Target segment |
| 1   |                 | 1)                        | (= 1×2         | 1   |                       | 1)                        |                |
|     |                 | 2)                        |                |     |                       | 2)                        |                |
|     |                 | 3)                        |                |     |                       | 3)                        |                |
| 2   |                 | 1)                        |                | 2   |                       | 1)                        |                |
|     |                 | 2)                        | a 11/1 [32]=   |     |                       | 2)                        |                |
|     |                 | 3)                        |                |     |                       | 3)                        |                |
| 3   | New York        | 1)                        |                | 3   |                       | 1)                        |                |
|     |                 | 2)                        |                |     |                       | 2)                        |                |
|     |                 | 3)                        |                |     |                       | 3)                        |                |

- 2. Which one of the two banks has more customized products?
- 3. How does the customization of products give competitive edge to a bank? Give some affirmative examples?
- 4. Which bank shows the innovativeness in its products. Justify your answer with examples from case material.
- 5. What kind of products both banks are cross selling?

| Г         | Т         | Т       | Т        | T      | Т      | Т      | Г      | Г      | Г      | Т      | Г      |        | Т     |       |       |       | T     | _     |       |       | Г     | _     |       | Г     |     |  |
|-----------|-----------|---------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|--|
| 50        | 40        | 35      | 30       | 25     | 20     | 19     | 18     | 17     | 16     | 15     | 14     | 13     | 12    |       | 10    | 9     | 00    | 7 1   | 6     | 5     | 4 1   | 3     | 2 1   | 1     |     |  |
| 1.645     | 1.489     | 1.417   | 1.348    | 1.282  | 1.220  | 1.208  | 1.196  | 1.184  | 1.173  | 1.161  | 1.149  | 1.138  | 1.127 | 1.116 | 1.105 | 1.094 | 1.083 | 1.072 | 1.062 | 1.051 | 1.041 | 1.030 | 1.020 | 1.010 | 1%  |  |
| 2.692     | 2.208     | 2.000   | 1.811    | 1.641  | 1.486  | 1.457  | 1.428  | 1.400  | 1.373  | 1.346  | 1.319  | 1.294  | 1.268 | 1.243 | 1.219 | 1.195 | 1.172 | 1.149 | 1.126 | 1.104 | 1.082 | 1.061 | 1.040 | 1.020 | 2%  |  |
| 4.384     | 3,262     | 2.814   | 2.427    | 2.094  | 1.806  | 1.754  | 1.702  | 1.653  | 1.605  | 1.558  | 1.513  | 1.469  | 1.426 | 1.384 | 1.344 | 1.305 | 1.267 | 1.230 | 1.194 | 1.159 | 1.126 | 1.093 | 1.061 | 1.030 | 3%  |  |
| 7.107     | 4.801     | 3.946   | 3,243    | 2.666  | 2.191  | 2.107  | 2.026  | 1.948  | 1.873  | 1.801  | 1.732  | 1.665  | 1.601 | 1.539 | 1.480 | 1.423 | 1.369 | 1.316 | 1.265 | 1.217 | 1.170 | 1.125 | 1.082 | 1.040 | 4%  |  |
| 11.467    | 7.040     | 5.516   | 4.322    | 3.386  | 2.653  | 2.527  | 2.407  | 2.292  | 2.183  | 2.079  | 1.980  | 1.886  | 1.796 | 1.710 | 1.629 | 1.551 | 1.477 | 1.407 | 1.340 | 1.276 | 1.216 | 1.158 | 1.103 | 1.050 | 5%  |  |
| 18.420    | 10.286    | 7.686   | 5.743    | 4.292  | 3.207  | 3.026  | 2.854  | 2.693  | 2.540  | 2.397  | 2.261  | 2.133  | 2.012 | 1.898 | 1.791 | 1.689 | 1.594 | 1.504 | 1.419 | 1.338 | 1.262 | 1.191 | 1.124 | 1.060 | 6%  |  |
| 29.457    | 14.974    | 10.677  | 7.612    | 5.427  | 3.870  | 3.617  | 3.380  | 3.159  | 2.952  | 2.759  | 2.579  | 2.410  | 2.252 | 2.105 | 1.967 | 1.838 | 1.718 | 1.606 | 1.501 | 1.403 | 1.311 | 1.225 | 1.145 | 1.070 | 7%  |  |
| 46.902    | 21.725    | 14.785  | 10.063   | 6.848  | 4.661  | 4.316  | 3.996  | 3.700  | 3.426  | 3.172  | 2.937  | 2.720  | 2.518 | 2.332 | 2.159 | 1.999 | 1.851 | 1.714 | 1.587 | 1.469 | 1.360 | 1.260 | 1.166 | 1.080 | 8%  | Futu   |
| 74.358    | 31.409    | 20.414  | 13.268   | 8.623  | 5.604  | 5.142  | 4.717  | 4.328  | 3.970  | 3.642  | 3.342  | 3.066  | 2.813 | 2.580 | 2.367 | 2.172 | 1.993 | 1.828 | 1.677 | 1.539 | 1.412 | 1.295 | 1.188 | 1.090 | 9%  | re value i   |
| 117.391   | 45.259    | 28.102  | 17.449   | 10.835 | 6.727  | 6.116  | 5.560  | 5.054  | 4.595  | 4.177  | 3.797  | 3.452  | 3.138 | 2.853 | 2.594 | 2.358 | 2.144 | 1.949 | 1.772 | 1.611 | 1.464 | 1.331 | 1.210 | 1.100 | 10% | nterest fact   |
| 184.565   | 65.001    | 38.575  | 22.892   | 13.585 | 8.062  | 7.263  | 6.544  | 5.895  | 5.311  | 4.785  | 4.310  | 3.883  | 3.498 | 3.152 | 2.839 | 2.558 | 2.305 | 2.076 | 1.870 | 1.685 | 1.518 | 1.368 | 1.232 | 1.110 | 11% | or of \$1 pe   |
| 289.002   | 93.051    | 52.800  | . 29.960 | 17.000 | 9.646  | 8.613  | 7.690  | 6.866  | 6.130  | 5.474  | 4.887  | 4.363  | 3.896 | 3.479 | 3.106 | 2.773 | 2.476 | 2.211 | 1.974 | 1.762 | 1.574 | 1.405 | 1.254 | 1.120 | 12% | r period at i  |
| 450.736   | 132.782   | 72.069  | 39.116   | 21.231 | 11.523 | 10.197 | 9.024  | 7.986  | 7.067  | 6.254  | 5.535  | 4.898  | 4.335 | 3.836 | 3.395 | 3.004 | 2.658 | 2.353 | 2.082 | 1.842 | 1.630 | 1.443 | 1.277 | 1.130 | 13% | % for n peri   |
| H         |           |         | 50.950   | 26.462 |        | 12.056 | 10.575 | 9.276  | 8.137  | 7.138  | 6.261  | 5.492  | 4.818 | 4.226 | 3.707 | 3.252 | 2.853 | 2.502 | 2.195 | 1.925 | 1.689 | 1.482 | 1.300 | 1.140 | 14% | Future value interest factor of \$1 per period at i% for n periods, FVIF(i,n). |
| H         |           |         | 66.212   | 4      |        |        |        | 10.761 | 9.358  | 8.137  | 7.076  | 6.153  | 5.350 | 4.652 | 4.046 | 3.518 | 3.059 | 2.660 | 2.313 | 2.011 | 1.749 | 1.521 | 1.323 | 1.150 | 15% | n).  |
|           |           |         |          |        |        |        |        |        |        |        |        |        |       |       |       |       |       |       |       |       |       |       |       |       | 1   |  |
| 1,670.704 | 378,721   | 180.314 | 85.850   | 40.874 | 19.461 | 16.777 | 14.463 | 12.468 | 10.748 | 9.266  | 7.988  | 6.886  | 5.936 | 5.117 | 4.411 | 3.803 | 3.278 | 2.826 | 2.436 | 2.100 | 1.811 | 1.561 | 1.346 | 1.160 | 16% |  |
| 2,566.215 | 533,869   | 243.503 | 111.065  | 50.658 | 23.106 | 19.748 | 16.879 | 14.426 | 12.330 | 10.539 | 9.007  | 7.699  | 6.580 | 5.624 | 4.807 | 4.108 | 3.511 | 3.001 | 2.565 | 2.192 | 1.874 | 1.602 | 1.369 | 1.170 | 17% |  |
| 3,927.357 | 750.378   | 327.997 | 143.371  | 62.669 | 27.393 | 23.214 | 19.673 | 16.672 | 14.129 | 11.974 | 10.147 | 8.599  | 7.288 | 6.176 | 5.234 | 4.435 | 3.759 | 3.185 | 2.700 | 2.288 | 1.939 | 1.643 | 1.392 | 1.180 | 18% |  |
|           | 1.051.668 | 440.701 | 184.675  | 77.388 | 32.429 | 27.252 | 22.901 | 19.244 | 16.172 | 13.590 | 11.420 | 9.596  | 8.064 | 6.777 | 5.695 | 4.785 | 4.021 | 3.379 | 2.840 | 2.386 | 2.005 | 1.685 | 1.416 | 1.190 | 19% |  |
| 9,100.438 | 1,469,772 | 590.668 | 237,376  | 95.396 | 38.338 | 31.948 | 26.623 | 22.186 | 18.488 | 15.407 | 12.839 | 10.699 | 8.916 | 7.430 | 6.192 | 5.160 | 4.300 | 3.583 | 2.986 | 2.488 | 2.074 | 1.728 | 1.440 | 1.200 | 20% |  |

|       |       |       |       |       |       |       |       |       |       |       |       |       |       | -     |       |       |       |       |       |       |       |       |       |        |        |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 50    | 40    | 35    | 30    | 25    | 20    | 19    | 18    | 17    | 16    | 15    | 14    | 13    | 12    | =     | 10    | 9     | 00    | 7     | 6     | S     | 4     | w     | 2     | Juin's | Period |
| 0.608 | 0.672 | 0.706 | 0.742 | 0.780 | 0.820 | 0.828 | 0.836 | 0.844 | 0.853 | 0.861 | 0.870 | 0.879 | 0.887 | 0.896 | 0.905 | 0.914 | 0.923 | 0.933 | 0.942 | 0.951 | 0.961 | 0.971 | 0.980 | 0.990  | 1%     |
| 0.372 | 0.453 | 0.500 | 0.552 | 0.610 | 0.673 | 0.686 | 0.700 | 0.714 | 0.728 | 0.743 | 0.758 | 0.773 | 0.788 | 0.804 | 0.820 | 0.837 | 0.853 | 0.871 | 0.888 | 0.906 | 0.924 | 0.942 | 0.961 | 0.980  | 270    |
| 0.228 | 0.307 | 0.355 | 0.412 | 0.478 | 0.554 | 0.570 | 0.587 | 0.605 | 0.623 | 0.642 | 0.661 | 0.681 | 0.701 | 0.722 | 0.744 | 0.766 | 0.789 | 0.813 | 0.837 | 0.863 | 0.888 | 0.915 | 0.943 | 0.971  | 2/0    |
| 0.141 | 0.208 | 0.253 | 0.308 | 0.375 | 0.456 | 0.475 | 0.494 | 0.513 | 0.534 | 0.555 | 0.577 | 0.601 | 0.625 | 0.650 | 0.676 | 0.703 | 0.731 | 0.760 | 0.790 | 0.822 | 0.855 | 0.889 | 0.925 | 0.962  | 7/0    |
| 0.087 | 0.142 | 0.181 | 0.231 | 0.295 | 0.377 | 0.396 | 0.416 | 0.436 | 0.458 | 0.481 | 0.505 | 0.530 | 0.557 | 0.585 | 0.614 | 0.645 | 0.677 | 0.711 | 0.746 | 0.784 | 0.823 | 0.864 | 0.907 | 0.952  | 0/0    |
| 0.054 | 0.097 | 0.130 | 0.174 | 0.233 | 0.312 | 0.331 | 0.350 | 0.371 | 0.394 | 0.417 | 0.442 | 0.469 | 0.497 | 0.527 | 0.558 | 0.592 | 0.627 | 0.665 | 0.705 | 0.747 | 0.792 | 0.840 | 0.890 | 0.943  | 0,0    |
| 0.034 | 0.067 | 0.094 | 0.131 | 0.184 | 0.258 | 0.277 | 0.296 | 0.317 | 0.339 | 0.362 | 0.388 | 0.415 | 0.444 | 0.475 | 0.508 | 0.544 | 0.582 | 0.623 | 0.666 | 0.713 | 0.763 | 0.816 | 0.873 | 0.935  |        |
| 0.021 | 0.046 | 0.068 | 0.099 | 0.146 | 0.215 | 0.232 | 0.250 | 0.270 | 0.292 | 0.315 | 0.340 | 0.368 | 0.397 | 0.429 | 0.463 | 0.500 | 0.540 | 0.583 | 0.630 | 0.681 | 0.735 | 0.794 | 0.857 | 0.926  | 0,0    |
| 0.013 | 0.032 | 0.049 | 0.075 | 0.116 | 0.178 | 0.194 | 0.212 | 0.231 | 0.252 | 0.275 | 0.299 | 0.326 | 0.356 | 0.388 | 0.422 | 0.460 | 0.502 | 0.547 | 0.596 | 0.650 | 0.708 | 0.772 | 0.842 | 0.917  | 1      |
| 0.009 | 0.022 | 0.036 | 0.057 | 0.092 | 0.149 | 0.164 | 0.180 | 0.198 | 0.218 | 0.239 | 0.263 | 0.290 | 0.319 | 0.350 | 0.386 | 0.424 | 0.467 | 0.513 | 0.564 | 0.621 | 0.683 | 0.751 | 0.826 | 0.909  | -      |
| 0.005 | 0.015 | 0.026 | 0.044 | 0.074 | 0.124 | 0.138 | 0.153 | 0.170 | 0.188 | 0.209 | 0.232 | 0.258 | 0.286 | 0.317 | 0.352 | 0.391 | 0.434 | 0.482 | 0.535 | 0.593 | 0.659 | 0.731 | 0.812 | 0.901  |        |
| 0.003 | 0.011 | 0.019 | 0.033 | 0.059 | 0.104 | 0.116 | 0.130 | 0.146 | 0.163 | 0.183 | 0.205 | 0.229 | 0.257 | 0.287 | 0.322 | 0.361 | 0.404 | 0.452 | 0.507 | 0.567 | 0.636 | 0.712 | 0.797 | 0.893  |        |
| 0.002 | 0.008 | 0.014 | 0.026 | 0.047 | 0.087 | 0.098 | 0.111 | 0.125 | 0.141 | 0.160 | 0.181 | 0.204 | 0.231 | 0.261 | 0.295 | 0.333 | 0.376 | 0.425 | 0.480 | 0.543 | 0.613 | 0.693 | 0.783 | 0.885  |        |
| 0.001 | 0.005 | 0.010 | 0.020 | 0.038 | 0.073 | 0.083 | 0.095 | 0.108 | 0.123 | 0.140 | 0.160 | 0.182 | 0.208 | 0.237 | 0.270 | 0.308 | 0.351 | 0.400 | 0.456 | 0.519 | 0.592 | 0.675 | 0.769 | 0.877  | 1      |
| 0.001 | 0.004 | 0.008 | 0.015 | 0.030 | 0.061 | 0.070 | 0.081 | 0.093 | 0.107 | 0.123 | 0.141 | 0.163 | 0.187 | 0.215 | 0.247 | 0.284 | 0.327 | 0.376 | 0.432 | 0.497 | 0.572 | 0.658 | 0.756 | 0.870  |        |
| 0.001 | 0.003 | 0.006 | 0.012 | 0.024 | 0.051 | 0.060 | 0.069 | 0.080 | 0.093 | 0.108 | 0.125 | 0.145 | 0.168 | 0.195 | 0.227 | 0.263 | 0.305 | 0.354 | 0.410 | 0.476 | 0.552 | 0.641 | 0.743 | 0.862  | 20,00  |
| 0.000 | 0.002 | 0.004 | 0.009 | 0.020 | 0.043 | 0.051 | 0.059 | 0.069 | 0.081 | 0.095 | 0.111 | 0.130 | 0.152 | 0.178 | 0.208 | 0.243 | 0.285 | 0.333 | 0.390 | 0.456 | 0.534 | 0.624 | 0.731 | 0.855  | 21.10  |
| 0.000 | 0.001 | 0.003 | 0.007 | 0.016 | 0.037 | 0.043 | 0.051 | 0.060 | 0.071 | 0.084 | 0.099 | 0.116 | 0.137 | 0.162 | 0.191 | 0.225 | 0.266 | 0.314 | 0.370 | 0.437 | 0.516 | 0.609 | 0.718 | 0.847  | 20,0   |
| 0.000 | 0.001 | 0.002 | 0.005 | 0.013 | 0.031 | 0.037 | 0.044 | 0.052 | 0.062 | 0.074 | 0.088 | 0.104 | 0.124 | 0.148 | 0.176 | 0.209 | 0.249 | 0.296 | 0.352 | 0.419 | 0.499 | 0.593 | 0.706 | 0.840  | 20,00  |
| 0.000 | 0.001 | 0.002 | 0.004 | 0.010 | 0.026 | 0.031 | 0.038 | 0.045 | 0.054 | 0.065 | 0.078 | 0.093 | 0.112 | 0.135 | 0.162 | 0.194 | 0.233 | 0.279 | 0.335 | 0.402 | 0.482 | 0.579 | 0.694 | 0.833  | 10000  |

|        | 50         | 40        | 35          | 30        | 25     | 20      | 19       | 180    | 17       | 16     | 15       | 14       | 13        | 12     | =       | 10     | 9      | 000    | 7     | 6     | S      | 4      | w     | 2     | -     | Period                       |
|--------|------------|-----------|-------------|-----------|--------|---------|----------|--------|----------|--------|----------|----------|-----------|--------|---------|--------|--------|--------|-------|-------|--------|--------|-------|-------|-------|------------------------------|
|        | 64 463     | 48.886    | 41.660      | 34.785    | 28.243 | 22.019  | 20.811   | 19.615 | 18.430   | 17.258 | 16.097   | 14.947   | 13.809    | 12.683 | 11.567  | 10.462 | 9.369  | 8.286  | 7.214 | 6.152 | 5.101  | 4.060  | 3.030 | 2.010 | 1.000 | 1%                           |
|        | 84 570     | 66 402    | 49.994      | 40.568    | 32.030 | 24.297  | 22.841   | 21.412 | 20.012   | 18.639 | 17.293   | 15.974   | 14.680    | 13.412 | 12.169  | 10.950 | 9.755  | 8.583  | 7.434 | 6.308 | 5.204  | 4.122  | 3.060 | 2.020 | 1.000 | 2%                           |
| J.     | 113 60     | 75 401    | 60.462      | 47.575    | 36.459 | 26.870  | 25.117   | 23.414 | 21.762   | 20.157 | 18.599   | 17.086   | 15.618    | 14.192 | 12.808  | 11.464 | 10.159 | 8.892  | 7.662 | 6.468 | 5.309  | 4.184  | 3.091 | 2.030 | 1.000 | 3%                           |
| 100    | 070.06     | 200.00    | 73 652      | 56.085    | 41.646 | 29.778  | 27.671   | 25.645 | 23.698   | 21.825 | 20.024   | 18.292   | 16.627    | 15.026 | 13.486  | 12.006 | 10.583 | 9.214  | 7.898 | 6.633 | 5.416  | 4.246  | 3.122 | 2.040 | 1.000 | 4%                           |
| S. F.  | 120.00     | 10000     | 005.00      | 66 439    | 47.727 | 33.066  | 30.539   | 28.132 | 25.840   | 23.657 | 21.579   | 19.599   | 17.713    | 15.917 | 14.207  | 12.578 | 11.027 | 9.549  | 8.142 | 6.802 | 5.526  | 4.310  | 3.153 | 2.050 | 1.000 | 5%                           |
| 290 34 | 134./6     | CA.111    | 1111 43     | 79 058    | 54.865 | 36.786  | 33 760   | 30.906 | 28 213   | 25.673 | 23.276   | 21.015   | 18.882    | 16.870 | 14.972  | 13.181 | 11.491 | 9.897  | 8.394 | 6.975 | 5.637  | 4.375  | 3.184 | 2.060 | 1.000 | 6%                           |
| 6.53   | 1          | 47.001    | 107.701     | 04 461    | 63 249 | 40 995  | 37 370   | 33 999 | 30 840   | 27 888 | 25 129   | 055 66   | 20 141    | 17.888 | 15.784  | 13.816 | 11.978 | 10.260 | 8.654 | 7.153 | 5751   | 4.440  | 3.215 | 2.070 | 1.000 | 6% 7% 8% 9% 100% 110% 120% 1 |
| 573    | 259.06     | 1/2.32    | 07.011      | 112 30    | 73 106 | 45 763  | 41 446   | 37 450 | 33.750   | 30 334 | 27 153   | 24215    | 21 405    | 18.977 | 16.645  | 14.487 | 12.488 | 10.637 | 8 923 | 7 336 | 5 867  | 4 506  | 3.246 | 2 080 | 1.000 | 89%                          |
| 5.08   | 337.88     | 213./1    | 100.51      | 107.701   | 84 701 | 010.010 | 141.501  | 41 201 | 26,074   | 22 002 | 20.019   | 26.010   | 22 062    | 20 141 | 17.560  | 15 103 | 13 021 | 11 028 | 0000  | 7 573 | 2805   | 4 573  | 3 278 | 2000  | 1,000 | 700                          |
| 1,16   | 442.59     | 271.02    | 104.49      | 70.34     | 00247  | 37772   | 45.599   | C+C.04 | 30.930   | 711.11 | 21773    | 270.72   | 24 673    | 21 384 | 18 \$31 | 15 037 | 13 570 | 11 436 | 0 497 | 7716  | 10.5   | 4 641  | 3310  | 3 100 | 1000  | 100/                         |
| 8.8    | 581.83     | 341.59    | 199.02      | 114.41    | 04.203 | 30.939  | 045.00   | 100.44 | 39.190   | 34.403 | 30.095   | 20.212   | 26.7.1    | 27 712 | 10.722  | 16 777 | 14 164 | 11 850 | 0.702 | 7012  | 4.7.10 | 4710   | 2 245 | 3110  | 1,000 | 110/                         |
| 2,40   | 767.09     | 431.66    | -           | +         | +      | +       | +        | +      | +        | +      | +        | +        | +         | +      | +       | +      | +      | +      | 0.113 | 0.333 | 4.117  | 4/ 5.5 | 2 274 | 1.000 | 1 000 | 100/                         |
| 59.5   | 1,1        | 5 546.68  | 3 293.20    | -         | +      | 2       | -        | 53     | 46       | 40     | -        | 29.985   | -         | -      | 210     | 1 1    |        | +      | 10    | +     | 1      |        | 1 6   | 1.000 | +     | 1707 DO                      |
|        | .7 1,342.0 | 8 693.57  | 0 356.79    | -         | -      | -       | +        | +      |          | +      | -        | +        | 1         | +      | +       | +      | +      | +      | +     | +     | +      | +      | +     | +     | 14%   | u perious, r vira(i,n).      |
|        |            | 57 881.17 | 79   434.75 | 87 212.79 | +      | -       | -        |        |          |        |          | -        | /1 29.002 | +      | +       | +      | +      | 1      | +     | +     | +      | +      | +     | +     | CI    | FA(1,11).                    |
|        | +          |           |             | -         | -      |         | -        | -      | -        | -      |          |          | -         | +      | -       | -      | +      | +      | +     | -     | -      | +      | +     | +     | +     | 1                            |
| 13     | 11         | 1.120.7   | 530.31 6    | 249.21 2  | -      | -       | 84.141 9 | -      | 60.925 6 | -      | 43.672 4 | 36.786 3 | 30.850 3  | -      | -       | -      | -      | +      | 8.977 | -     | -      | -      | -     | -     | 16%   |                              |
| -      | 1          | 1 426 5   | 647.44      | 292.10    | 130.03 | 110.28  | 93.406   | 78.979 | 66.649   | -      | 47.103   | 39.404   | 32.824    | -      | -       | -      | 14.773 | 1.772  | 9.207 | 7.014 | 5.141  | 3.539  | 2.170 | 1.000 | 17%   |                              |
| 21 3   | 4 163 3    | 18167     | 790.95      | 342.60    | 146.63 | 123.41  | 103.74   | 87.068 | 72.939   | 60.965 | 50.818   | 42.219   | 34.931    | 28.755 | 23.521  | 19.086 | 15.327 | 12.142 | 9.442 | 7.154 | 5.215  | 3.572  | 2.180 | 1.000 | 18%   |                              |
| 151    | 7.410.4    | 3 3 14 3  | 966 71      | 402.04    | 165.42 | 138.17  | 115.27   | 96.022 | 79.850   | 66.261 | 54.841   | 45.244   | 37.180    | 30.404 | 24.709  | 19.923 | 15.902 | 12.523 | 9.683 | 7.297 | 5.291  | 3.606  | 2.190 | 1.000 | 19%   |                              |
| 4      | 4,740.     | ,,,,      | 1 181 0     | 471 98    | 186.69 | 154.74  | 128.12   | 105.93 | 87.442   | 72.035 | 59.196   | 48.497   | 39.581    | 32.150 | 25.959  | 20.799 | 16.499 | 12.916 | 9.930 | 7.442 | 5.368  | 3.640  | 2.200 | 1.000 | 20%   |                              |

| 50     | 40     | 33     | 30     | 200    | 20     | 300    | 10     | 10     | 10     | 17     | 14     | 13     | 12     | =      | 01    | 9        | 0     | 7     | 6     | 5     | 4     | u     | 2     | -     | POLISI                                     |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 39.196 | 32.835 | 29.409 | 208.62 | 25.000 | 10.040 | 10016  | 17776  | 700.01 | 14./18 | 13.865 | 13.004 | 12.134 | 10.12  | 10.368 | 9.471 | 8.566    | 7.652 | 6.728 | 5.795 | 4.853 | 3.902 | 2.941 | 1.970 | 0.990 | 1%   |
| 31.424 | 27.355 | 24.999 | 22.396 | 19.323 | 10.531 | 12070  | 14.992 | 14.292 | 13.5/8 | 12.849 | 12.106 | 11.348 | 10.5/5 | 9.787  | 8.983 | 8.162    | 7.325 | 6.472 | 5.601 | 4.713 | 3.808 | 2.884 | 1.942 | 0.980 | 2%   |
| 25.730 | 23.115 | 21.487 | 19.000 | 17.413 | 14.8// | 14.324 | 13./34 | 13.166 | 12.561 | 11.938 | 11.296 | 10.635 | 9.954  | 9.253  | 8.530 | 7.786    | 7.020 | 6.230 | 5 417 | 4.580 | 3.717 | 2.829 | 1.913 | 0.971 | 3%   |
| 21.482 | 19.793 | 18.665 | 17.292 | 15.622 | 13.390 | 13.134 | 12.639 | 12.166 | 11.652 | 11.118 | 10.563 | 9.986  | 9.385  | 8.760  | 8.111 | 7.435    | 6.733 | 6.002 | 5.242 | 4.452 | 3.630 | 2.775 | 1.886 | 0.962 | 4%   |
| 18.256 | 17.159 | 16.374 | 15.372 | 14.094 | 12.462 | 12.085 | 11.690 | 11.274 | 10.838 | 10.380 | 9.899  | 9.394  | 8.863  | 8.306  | 7.722 | 7.108    | 6.463 | 5.786 | 5.076 | 4.329 | 3.546 | 2.723 | 1.859 | 0.952 | 3%   |
| 15.762 | 15.046 | 14.498 | 13.765 | 12.783 | 11.470 | 851.11 | 10.828 | 10.477 | 10.106 | 9.712  | 9.295  | 8.853  | 8.384  | 7.887  | 7.360 | 6.802    | 6.210 | 5.582 | 4.917 | 4.212 | 3.465 | 2.673 | 1.833 | 0.943 | <u>5% 6% 7% 8% 9% 10% 11% 12% 13% 14% </u> |
| 13.801 | 13.332 | 12.948 | 12.409 | 11.654 | 10.594 | 10.336 | 10.059 | 9.763  | 9.447  | 9.108  | 8.745  | 8.358  | 7.943  | 7.499  | 7.024 | 6.515    | 5.971 | 5.389 | 4.767 | 4.100 | 3.387 | 2.624 | 1.808 | 0.935 | 7%   |
| 12.233 | 11.925 | 11.655 | 11.258 | 10.675 | 9.818  | 9.604  | 9.372  | 9.122  | 8.851  | 8.559  | 8.244  | 7.904  | 7.536  | 7.139  | 6.710 | 6.247    | 5.747 | 5.206 | 4.623 | 3.993 | 3.312 | 2.577 | 1.783 | 0.926 | 8%   |
| 10.962 | 10.757 | 10.567 | 10.274 | 9.823  | 9.129  | 8.950  | 8.756  | 8.544  | 8.313  | 8.061  | 7.786  | 7.487  | 7.161  | 6.805  | 6.418 | 5.995    | 5.535 | 5.033 | 4.486 | 3.890 | 3.240 | 2.531 | 1.759 | 0.917 | 9%   |
| 9.915  | 9.779  | 9.644  | 9.427  | 9.077  | 8.514  | 8.365  | 8.201  | 8.022  | 7.824  | 7.606  | 7.367  | 7.103  | 6.814  | 6.495  | 6.145 | 5.759    | 5.335 | 4.868 | 4.355 | 3.791 | 3.170 | 2.487 | 1.736 | 0.909 | 10%  |
| 9.042  | 8.951  | 8.855  | 8.694  | 8.422  | 7.963  | 7.839  | 7.702  | 7.549  | 7.379  | 7.191  | 6.982  | 6.750  | 6.492  | 6.207  | 5.889 | 5.537    | 5.146 | 4.712 | 4.231 | 3.696 | 3.102 | 2.444 | 1.713 | 0.901 | 11%  |
| 8 304  | 8.244  | 8.176  | 8.055  | 7.843  | 7.469  | 7.366  | 7.250  | 7.120  | 6.974  | 6.811  | 6.628  | 6.424  | 6.194  | 5.938  | 5.650 | 5.328    | 4.968 | 4.564 | 4.111 | 3.605 | 3.037 | 2.402 | 1.690 | 0.893 | 12%  |
| 7 675  | 7.634  | 7 586  | 7.496  | 7.330  | 7.025  | 6.938  | 6.840  | 6.729  | 6.604  | 6.462  | 6.302  | 6.122  | 5.918  | 5.687  | 5.426 | 5.132    | 4.799 | 4.423 | 3.998 | 3.517 | 2.974 | 2.361 | 1.668 | 0.885 | 13%  |
| 7 133  | 7 105  | 7 070  | 7.003  | 6.873  | 6.623  | 6.550  | 6.467  | 6.373  | 6.265  | 6.142  | 6.002  | 5.842  | 5.660  | 5.453  | 5.216 | 4.946    | 4.639 | 4.288 | 3.889 | 3.433 | 2.914 | 2.322 | 1.647 | 0.877 | 14%  |
| 1999   | 6 642  | 6617   | 6.566  | 6.464  | 6.259  | 6.198  | 6.128  | 6.047  | 5.954  | 5.847  | 5.724  | 5.583  | 5.421  | 5.234  | 5.019 | 4.772    | 4.487 | 4.160 | 3.784 | 3.352 | 2.855 | 2.283 | 1.626 | 0.870 | 15%  |
| 6246   | 6773   | +      | -      | 6.097  | 5.929  | 5.877  | 5.818  | -      | 5.668  | -      | -      | 5.342  | -      | _      | -     | $\dashv$ | -     | -     | -     | -     | -     | -     | 1.605 | 0.862 | 16%  |
| 1/0.0  | 1785   | 8585   | -      | -      | 5.628  | 5.584  | -      | -      |        | -      | -      |        | -      | -      | _     | -        | -     | _     | -     | -     | -     | -     | 1.585 | 0.855 | 17%  |
| 0+0.0  | 2000   | +      | -      | +      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | +     | -        | +     | +     | -     | -     | +     | +     | 1.566 | 0.847 | 18%  |
| 0.27.0 | +      | +      | +      | -      | -      | -      | -      | -      | -      | +      | -      | -      | -      | 1      | -     | +        | -     | +     | +     | 1     | +     | 1     | 1 547 | 0 840 | 19%  |
| 4.99/  | 4.992  | 4000   | 4 070  | 4.948  | 4.870  | 4.843  | 4.812  | 4.775  | 4.730  | 4.675  | 4.611  | 4.533  | 4.439  | 4.327  | 4.192 | 4.031    | 3.837 | 3 605 | 3 376 | 2 991 | 2 589 | 2.106 | 1 528 | 0.833 | 200%                                       |