Please add the following text before the para 4.3.1.1:

This analysis broadly can take following two forms:

(a) Determine the extent to which each variable could be changed to make NPV equal to zero.

(b) Another form is to determine the impact on NPV of a specific percentage change in the selected variable keeping other variable static.

Further since we know that if NPV of a project is zero or positive the project is approved and if negative it is rejected. Therefore, a decision maker might also be interested in knowing the how sensitive the advice is to changes in the estimations made for the project under consideration.

This can be computed by using the formula of ‘Margin of Error’ as follows:

\[
\text{Margin of Error or Sensitivity Margin} = \frac{\text{NPV of Project}}{\text{PV of Cash Flows relating to particular variable}}
\]

Thus, it can be said that Margin of Error is % change required in variable to take NPV to zero and a zero NPV becomes the Decision Pivot Point. Lower the Margin of Error the more sensitive the decision to the variable under consideration.

**Example:** A project has NPV of ₹ 85,400 at discounting rate of 12%. The manager has some uncertainty about a cost of ₹ 1,000,000 at year 2. You are required to determine % increase in this cost which would make the NPV negative i.e. project as non viable.

**Solution**

The PV at 12% rate of Cost after 2 years = \(\frac{1,000,000}{(1.12)^2}\) = ₹ 7,97,194

\[
\% \text{ increase in Cost to make NPV negative} = \frac{85,400}{7,97,194} = 0.10713 \text{ say 11%}
\]
Page No. 3.16 (Chapter 3)

Please ignore the line ‘PVF for salvage value: 0.452’ given in the end of Illustration 5.

Page No. 5.53 (Chapter 5)

Please add the following text before the Introduction of Commodity Derivatives:

As defined by the Chicago Board of Trade commodity is something that has an economic value and can be used for commerce. This can be sold or purchased and is also movable. Broadly commodities can be classified in following two categories:

(i) Hard Commodities
(ii) Soft Commodities

While hard commodities are mined from the ground i.e. extracted from the ground or natural reserve, soft commodities are mainly agricultural commodities.

Examples of hard commodities are precious metals e.g. gold, silver etc. as well as base metals i.e. copper, nickel, steel etc. Every product such as crude oil, natural gas, heating gas and coal all fall in this category.

Example of soft commodities are cereals, pulses, spices, cotton, oil seeds, rubber etc.

Page No. 6.35 (Chapter 6)

In the formula of Modified duration please read ‘n = Number of compounding period per year or number of period i.e. 2 for semi-annual and 4 for quarter etc.’ instead of ‘n = Number of compounding period per year’

Page No. 9.15 (Chapter 9)

Please read the last line of the question of Illustration 1 as follows:

Current realizable value of fixed income securities of F.V. of ₹ 100

Page No. 10.27 (Chapter 10)

Please replace the answer of part (a) of the Illustration ‘109.7333’ with ‘109.1533’.

Page No. 12.5 (Chapter 12)

Please read the first line of sentence of the Illustration 1 as follows:

Suppose you are a dealer of ABC Bank and on 20.10.2014 you found that balance in your Nostro account with XYZ Bank in London is £65000 and you had overbought £35000.
Please replace the text of Extension, Cancellation and Early Delivery of Forward Contract with following text.

Whenever any forward contract is entered into normally it meets any of the following three fates.
(A) Delivery under the Contract
(B) Cancellation of the Contract
(C) Extension of the Contract

Further above of fates of forward contract can further classified into following sub-categories.
(A) Delivery under the Contract
   (i) Delivery on Due Date
   (ii) Early Delivery
   (iii) Late Delivery
(B) Cancellation of the Contract
   (i) Cancellation on Due Date
   (ii) Early Cancellation
   (iii) Late Cancellation
(C) Extension of the Contract
   (i) Extension on Due Date
   (ii) Early Extension
   (iii) Late Extension

Let us discuss each of above executions one by one.

**Delivery on Due Date**
This situation does not pose any problem as rate applied for the transaction would be rate originally agreed upon. Exchange shall take place at this rate irrespective of the spot rate prevailing.

*Illustration 1*
On 1st June 2015 the bank enters into a forward contract for 2 months for selling US$ 1,00,000 at ₹ 65.5000. On 1st July 2015 the spot rate was ₹ 65.7500/65.2500. Calculate the amount to be debited in the customer's account.

*Answer*
The bank will apply rate originally agreed upon i.e. ₹ 65.5000 and will debit the account of the customer with ₹ 65,50,000.
Early Delivery

The bank may accept the request of the customer for delivery at the before due date of forward contract provided the customer is ready to bear the loss if any that may accrue to the bank as a result of this. In addition to some prescribed fixed charges the bank may also charge additional charges comprising of:

(a) **Swap Difference**: This difference can be loss/gain to the bank. This arises on account of offsetting its position earlier created by early delivery as bank normally covers itself against the position taken in the original forward contract.

(b) **Interest on Outlay of Funds**: It might be possible early delivery request of the customer may result in outlay of funds. In such a case, the bank shall charge from the customer at a rate not less than prime lending rate for the period of early delivery to the original due date. However, if there is an inflow of funds the bank at its discretion may pass on interest to the customer at the rate applicable to term deposits for the same period.

*Illustration 2*

On 1 October 2015 Mr. X an exporter enters into a forward contract with a BNP Bank to sell US$ 1,00,000 on 31 December 2015 at ₹ 65.40/$. However, due to the request of the importer, Mr. X received amount on 28 November 2015. Mr. X requested the bank the take delivery of the remittance on 30 November 2015 i.e. before due date. The inter-banking rates on 28 November 2015 was as follows:

<table>
<thead>
<tr>
<th>Spot</th>
<th>₹ 65.22/65.27</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Month Premium</td>
<td>10/15</td>
</tr>
</tbody>
</table>

If bank agrees to take early delivery then what will be net inflow to Mr. X assuming that the prevailing prime lending rate is 18%.

**Answer**

Bank will buy from customer at the agreed rate of ₹ 65.40. In addition to the same if bank will charge/pay swap difference and interest on outlay funds.

(a) **Swap Difference**

- Bank Sells at Spot Rate on 28 November 2015 ₹ 65.22
- Bank Buys at Forward Rate of 31 December 2015 (65.27 + 0.15) ₹ 65.42
- Swap Loss for US$ 20,000

(b) **Interest on Outlay Funds**

- On 28th November Bank sells at ₹ 65.22
- It buys from customer at ₹ 65.40
- Outlay of Funds per US$ ₹ 0.18
Interest on Outlay fund for US$ 1,00,000 for 31 days

(US$100000 x 0.18 x 31/365 x 18%)

(c) Charges for early delivery

Swap loss ₹ 20,000.00
Interest on Outlay fund for US$ 1,00,000 for 31 days ₹ 275.00

₹ 20,275.00

(d) Net Inflow to Mr. X

Amount received on sale (₹ 65.40 x 1,00,000) ₹ 65,40,000
Less: Charges for early delivery payable to bank (₹ 20,275)

₹ 65,19,725

Late Delivery

In case of late delivery current rate prevailing on such date of delivery shall be applied. However, before this delivery (execution) takes place the provisions of Automatic Cancellation (discussed later on) shall be applied.

Cancellation on Due Date

In case of cancellation on due date in addition of flat charges (if any) the difference between contracted rate and the cancellation rate (reverse action of original contract) is charged from/ paid to the customer.

Illustration 3

On 15th January 2015 you as a banker booked a forward contract for US$ 250000 for your import customer deliverable on 15th March 2015 at ₹ 65.3450. On due date customer request you to cancel the contract. On this date quotation for US$ in the inter-bank market is as follows:

<table>
<thead>
<tr>
<th></th>
<th>3000/ 3100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot</td>
<td>₹ 65.2900/2975 per US$</td>
</tr>
<tr>
<td>Spot/ April</td>
<td>6000/ 6100</td>
</tr>
</tbody>
</table>

Assuming that the flat charges for the cancellation is ₹ 100 and exchange margin is 0.10%, then determine the cancellation charges payable by the customer.

Answer

Bank will buy from customer at the agreed rate of ₹ 65.40.

Since this is sale contract the contract shall be cancelled at ready buying rate on the date of cancellation as follows:

Spot Buying Rate on 15 March 2015 ₹ 65.2900
Less: Exchange Margin ₹ 0.0653
C.6 Strategic Financial Management

Rounded to ₹ 65.2250

Dollar sold to customer at ₹ 65.3450
Dollar bought from customer ₹ 65.2250
Net amount payable by the customer per US$ ₹ 0.1200

Amount payable by the customer
Flat Charges ₹ 100.00
Cancellation Charges (₹ 0.12 x 250000) ₹ 30,000.00

₹ 30,100.00

Early Cancellation

If a forward is required to be cancelled earlier than the due date of forward contract same shall be cancelled at opposite rate of original contract of the date that synchronises with the date of original forward contract.

Illustration 4

You as a banker has entered into a 3 month’s forward contract with your customer to purchase AUD 1,00,000 at the rate of ₹ 47.2500. However after 2 months your customer comes to you and requests cancellation of the contract. On this date quotation for AUD in the market is as follows:

Spot ₹ 47.3000/3500 per AUD
1 month forward ₹ 47.4500/5200 per AUD

Determine the cancellation charges payable by the customer.

Answer

The contract shall be cancelled at the 1 month forward sale rate of ₹ 47.5200 as follows:

AUD bought from customer under original forward contract at ₹ 47.2500
On cancellation it is sold to him at ₹ 47.5200
Net amount payable by customer per AUD ₹ 00.2700

Thus total cancellation charges payable by the customer ₹ 27,000

Late Cancellation

In case of late cancellation of Forward Contract the provisions of Automatic Cancellation (discussed later on) shall be applied.

Extension on Due Date

It might also be possible that an exporter may not be able to export goods on the due date. Similarly it might also be possible that an importer may not to pay on due date. In both of these situations an extension of contract for selling and buying contract is warranted. Accordingly, if
earlier contract is extended first it shall be cancelled and rebooked for the new delivery period. In case extension is on due date it shall be cancelled at spot rate as like cancellation on due date (discussed earlier) and new contract shall be rebooked at the forward rate for the new delivery period.

Illustration 5

Suppose you are a banker and one of your export customer has booked a US$ 1,00,000 forward sale contract for 2 months with you at the rate of ₹ 62.5200 and simultaneously you covered yourself in the interbank market at ₹ 62.5900. However on due date, after 2 months your customer comes to you and requests for cancellation of the contract and also requests for extension of the contract by one month. On this date quotation for US$ in the market was as follows:

<table>
<thead>
<tr>
<th>Spot</th>
<th>₹ 62.7200/62.6800</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month forward</td>
<td>₹ 62.6400/62.7400</td>
</tr>
</tbody>
</table>

Determine the extension charges payable by the customer assuming exchange margin of 0.10% on buying as well as selling.

Answer

Cancellation

First the original contract shall be cancelled as follows:

<table>
<thead>
<tr>
<th>US$/₹ Spot Selling Rate</th>
<th>₹ 62.7200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add: Margin @ 0.10%</td>
<td>₹ 0.06272</td>
</tr>
<tr>
<td>Net amount payable by customer per US$</td>
<td>₹ 62.78272</td>
</tr>
<tr>
<td>Rounded off</td>
<td>₹ 62.7825</td>
</tr>
</tbody>
</table>

Bank buys US$ under original contract at ₹ 62.5200
Bank Sells at ₹ 62.7825

Thus total cancellation charges payable by the customer for US$ 1,00,000 is ₹ 26,750.

Rebooking

Forward US$/₹ Buying Rate ₹ 62.6400
Less: Margin @ 0.10% ₹ 0.06264
Net amount payable by customer per US$ ₹ 62.57736
Rounded off ₹ 62.5775

Extension before Due Date

In case any request to extend the contract is received before due date of maturity of forward contract, first the original contract would be cancelled at the relevant forward rate as in case of
cancellation of contract before due date and shall be rebooked at the current forward rate of the
forward period.

Illustration 6

Suppose you as a banker entered into a forward purchase contract for US$ 50,000 on 5th March
with an export customer for 3 months at the rate of ₹ 59.6000. On the same day you also covered
yourself in the market at ₹ 60.6025. However on 5th May your customer comes to you and requests
extension of the contract to 5th July. On this date (5th May) quotation for US$ in the market is as
follows:

<table>
<thead>
<tr>
<th>Spot</th>
<th>₹ 59.1300/1400 per US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot/ 5th June</td>
<td>₹ 59.2300/2425 per US$</td>
</tr>
<tr>
<td>Spot/ 5th July</td>
<td>₹ 59.6300/6425 per US$</td>
</tr>
</tbody>
</table>

Assuming a margin 0.10% on buying and selling, determine the extension charges payable by the
customer and the new rate quoted to the customer.

Answer

(a) Cancellation of Original Contract

The forward purchase contract shall be cancelled at the for the forward sale rate for
delivery June.

| Interbank forward selling rate | ₹ 59.2425 |
| Add: Exchange Margin           | ₹ 0.0592  |
| Net amount payable by customer per US$ | ₹ 59.3017 |
| Rounded off, the rate applicable is ₹ 59.3000 |

Buying US$ under original contract at original rate: ₹ 59.6000
Selling rate to cancel the contract: ₹ 59.3000
Difference per US$: ₹ 00.3000
Exchange difference for US$ 50,000 payable to the customer is ₹ 15,000.

(b) Rate for booking new contract

The forward contract shall be rebooked with the delivery 15th July as follows:

| Forward buying rate (5th July) | ₹ 59.6300 |
| Less: Exchange Margin           | ₹ 0.0596  |
| Net amount payable by customer per US$ | ₹ 59.5704 |
| Rounded off to ₹ 59.5700        |
Late Extension

In case of late extension current rate prevailing on such date of delivery shall be applied. However, before this delivery the provisions of Automatic Cancellation (discussed later on) shall be applied.

Automatic Cancellation

As per FEDAI Rule 8 a forward contract which remains overdue without any instructions from the customers on or before due date shall stand automatically cancelled on 15th day from the date of maturity. Though customer is liable to pay the exchange difference arising there from but not entitled for the profit resulting from this cancellation.

For late delivery and extension after due date as mentioned above the contract shall be treated as fresh contract and appropriate rates prevailing on such date shall be applicable as mentioned below:

1. Late Delivery: In this case the relevant spot rate prevailing on the such date shall be applicable.
2. Extension after Due Date: In this case relevant forward rate for the period desired shall be applicable.

As mentioned earlier in both of above case cancellation charges shall be payable consisting of following:

(i) **Exchange Difference:** The difference between Spot Rate of offsetting position (cancellation rate) on the date of cancellation of contract after due date or 15 days (whichever is earlier) and original rate contracted for.

(ii) **Swap Loss:** The loss arises on account of offsetting its position created by early delivery as bank normally covers itself against the position taken in the original forward contract. This position is taken at the spot rate on the date of cancellation earliest forward rate of offsetting position.

(iii) **Interest on Outlay of Funds:** Interest on the difference between the rate entered by the bank in the interbank market and actual spot rate on the due date of contract of the opposite position multiplied by the amount of foreign currency amount involved. This interest shall be calculated for the period from the due date of maturity of the contract and the actual date of cancellation of the contract or 15 days whichever is later.

Please note in above in any case there is profit by the bank on any course of action same shall not be passed on the customer as normally passed cancellation and extension on or before due dates.

Question No. 54 of Chapter No. 12 of Section A of this Practice Manual shall be helpful to understand the process of Automatic Cancellation.

Page No. 12.29 (Chapter 12)

*In third point (c) of the table under the Futures column replace ‘buyer’ with ‘seller’.*
Suppose you are a dealer of ABC Bank and on 20.10.2014 you found that balance in your Nostro account with XYZ Bank in London is £65000 and you had overbought £35000.

In third point (c) of the table under the Futures column replace ‘buyer’ with ‘seller’.