MARGINS

Objective

This content majorly explains the margins that are required to trade in futures market. The various types of margins that need to be collected as well as concepts like ‘marking to market’ have been explained.

Margins

- Two types of margins:
  - **Trading margin** collected by a member from a trader
  - **Clearing margin** collected by the Exchange Clearing house from a member

Trading Margins

- A margin is **cash or marketable securities** deposited by an investor with his or her broker
- The balance in the margin account is adjusted to reflect daily settlement
- Margins **minimize** the possibility of a loss through a default on a contract

Trading Margin operation

- Margin account
- Initial margin
- Marking to market
- Maintenance margin
- Margin Call
- Variation margin

Trading Margin operation

- Consider an investor who contacts his or her broker/member on **Monday, May 7, 2007,** to **buy two July 2007 Infosys futures** contracts on the NSE
- Current futures price is **Rs.1750** per share
- Since the contract size is **150 shares**, the investor has contracted to buy a **total** of **300 shares** at this price.
- The broker will require the investor to deposit funds in what is termed a **margin account**

Trading Margin operation

- The amount that must be deposited at the time the contract is first entered into is known as the **initial margin**
  - This is determined by the broker.
  - Suppose, for previous example this is **Rs.20,000** per contract, or **Rs.40,000** in total
- At the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss
  - This is known as **marking** the account **to market**

Trading Margin operation

- The investor is entitled to withdraw any balance in the margin account in excess of the initial margin
- To ensure that the balance in the margin account is above a minimum level, a **maintenance margin** is set
  - This is somewhat lower than the initial margin

Trading Margin operation

- If the balance in the margin account falls below the maintenance margin, the investor receives a **margin call**
  - Investor is requested to top up the margin account to the initial margin level within a very short period of time
- The extra funds deposited are known as a **variation margin**
  - If the investor **does not provide** the variation margin, the broker closes out the position by selling the contract

Trading Margin operation: Example

- Consider an investor who contacts his or her broker on Monday, May 7 to buy **two July Infosys futures contracts** on the National Stock Exchange (NSE). We suppose that the current futures price is Rs.1750 per share
- Because the contract size is 150 shares, the investor has contracted to buy a total of 300 Infosys shares at this price
- The initial margin is Rs.20,000 per contract, or Rs.40,000 in total, and the maintenance margin is Rs.15,000 per contract, or Rs.30,000 in total
- The contract is entered into on May 7 at Rs.1750 and closed out on May 30 at Rs.1680

Trading Margin operation: Example

- If by the end of June 5 the futures price dropped from Rs.1750 to Rs.1740
  - The investor has a **loss of Rs.3000** (= 300 * Rs.10), because the 300 shares of September, which the investor contracted to buy at Rs.1750, can now be sold for only Rs1740
  - The balance in the margin account would therefore be reduced by Rs.3000 to Rs.37,000

- Similarly, if the price of September shares rose to Rs.1755 by the end of the first day
  - The balance in the margin account would be increased by Rs.1500 to Rs.41,500

- When there is a decrease in the futures price so that the margin account of an investor with a long position is reduced by Rs.3,000, the investor's broker has to pay the exchange Rs.3,000 and the exchange passes the money on to the broker of an investor with a short position

Numbers have been assumed

Trading Margin operation: Example

Date	Futures Price	Daily Gain (loss)	Cumulative Gain (Loss)	Margin Account Balance	Margin Call	Cumulative Margin Call
7-May	1,750.00			40,000.00		
8-May	1,740.00	(3,000.00)	(3,000.00)	37,000.00	0.00	0.00
9-May	1,735.00	(1,500.00)	(4,500.00)	35,500.00	0.00	0.00
10-May	1,728.00	(2,100.00)	(6,600.00)	33,400.00	0.00	0.00
11-May	1,709.00	(5,700.00)	(12,300.00)	27,700.00	12,300.00	12,300.00
14-May	1,697.00	(3,600.00)	(15,900.00)	36,400.00	0.00	12,300.00
15-May	1,724.00	8,100.00	(7,800.00)	44,500.00	0.00	12,300.00
17-May	1,741.00	2,400.00	(2,700.00)	49,600.00	0.00	12,300.00
18-May	1,746.00	1,500.00	(1,200.00)	51,100.00	0.00	12,300.00
21-May	1,698.00	(14,400.00)	(15,600.00)	36,700.00	0.00	12,300.00
23-May	1,714.00	2,700.00	(10,800.00)	41,500.00	0.00	12,300.00
24-May	1,703.00	(3,300.00)	(14,100.00)	38,200.00	0.00	12,300.00
25-May	1,722.00	5,700.00	(8,400.00)	43,900.00	0.00	12,300.00
28-May	1,662.00	(18,000.00)	(26,400.00)	25,900.00	14,100.00	26,400.00
29-May	1,671.00	2,700.00	(23,700.00)	42,700.00	0.00	26,400.00
30-May	1,680.00	2,700.00	(21,000.00)	45,400.00	0.00	26,400.00

Numbers have been assumed

Trading Margin operation: Example

- On **May 11** the balance in the margin account falls Rs.2300 below the maintenance margin level
  - This drop triggers a margin call from the broker for additional Rs.12,300.
  - It is assumed that the investor does in fact provide this margin by the close of trading on May 11

- On **May 28** the balance in the margin account again falls below the maintenance margin level
  - A margin call for Rs.14,100 is sent out
  - The investor provides this margin by the close of trading on May 28

- On **May 30** the investor decides to close out the position by selling two contracts
  - The futures price on that day is Rs.1680, and the investor has a cumulative loss of Rs.21000

- The investor has excess margin on May 15-18, 23, 25, 29-30

Numbers have been assumed

Trader Type and Margin Requirement

- **Bona fide hedger**: A bona fide hedger, such as a company that produces the commodity on which the futures contract is written
- Bona fide hedger is often subject to **lower margin requirements than a speculator**
  - This is because there is deemed to be less risk of default
- **Day traders**: A day trade is a trade where the trader announces to the broker that he or she plans to close out the position in the same day

Trader Type and Margin Requirement

- **Spread Transactions**: A spread transaction is one where the Trader simultaneously takes a long position in the contract with one delivery month and a short position in a contract with another delivery month
- Day Trades and Spread Transactions often give rise to **lower margin requirements** than hedge transactions

Some more terms

- **Exchange clearinghouse**: The exchange clearinghouse is an adjunct of the exchange and acts as an intermediary or middleman in futures transactions
- **Features:**
  - It guarantees the performance of the parties to each transaction.
  - The clearinghouse has a number of members all of which have offices close to the clearinghouse
  - Brokers who are not clearinghouse members themselves must channel their business through a member
  - The main task of the clearinghouse is to keep track of all the transactions that take place during a day so that it can calculate the net position of each of its members

Clearing Margin

- **Clearing margin**: Just as an investor is required to maintain a margin account with his or her broker, a clearinghouse member is required to maintain a margin account with the clearinghouse, known as a clearing margin
- In the **calculation of clearing margins**, the exchange clearinghouse calculates the number of contracts outstanding on either a gross or a net basis
  - The **gross basis** adds the total of all long positions entered into by clients to the total of all the short positions entered into by clients
  - The **net basis** allows these to be offset against each other for proprietary trading