ZERODHA

Introduction to Stock Markets

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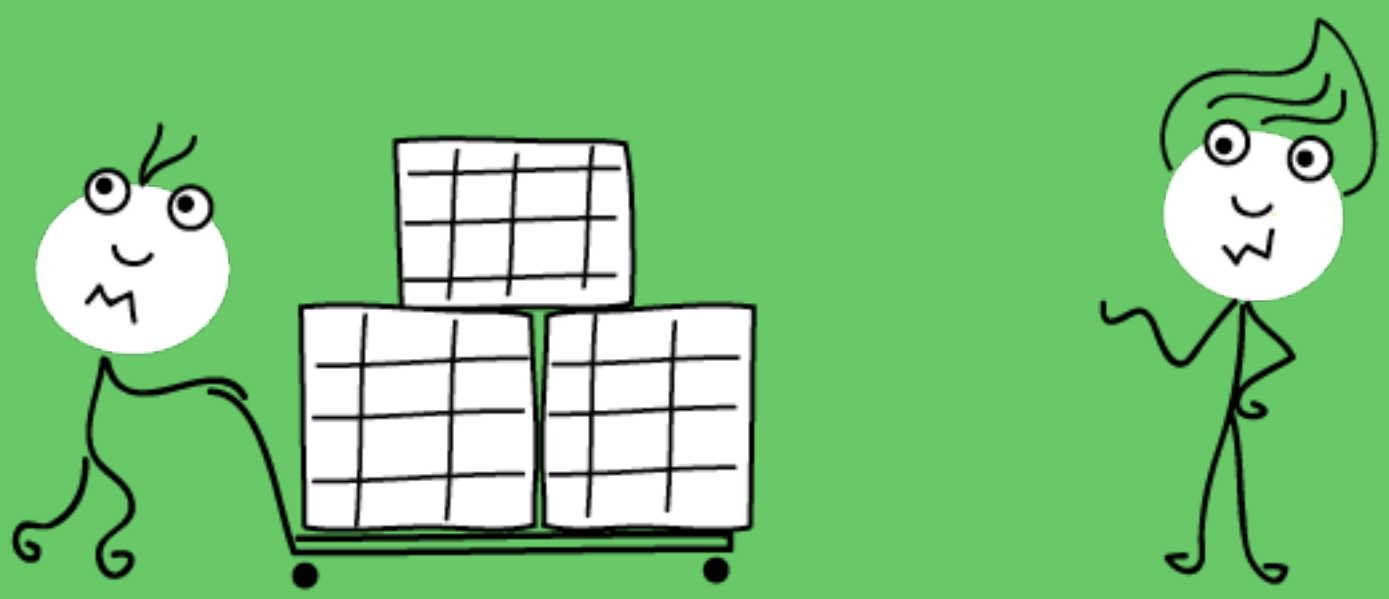

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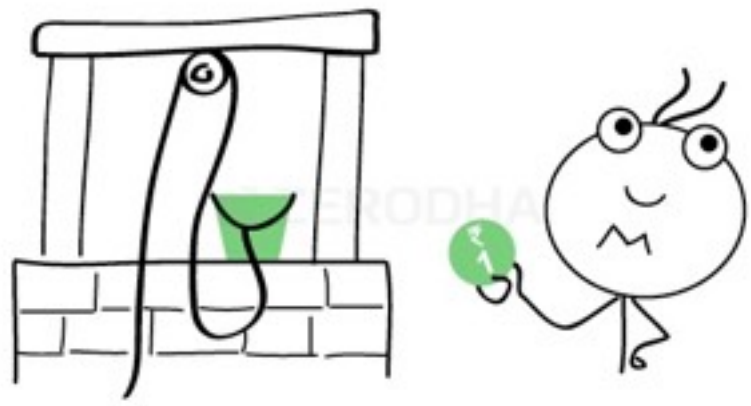
CHAPTER 1

The Need to Invest



1.1 - Why should one Invest?

Before we address the above question, let us understand what would happen if one choose not to invest. Let us assume you earn Rs.50,000/- per month and you spend Rs.30,000/- towards your cost of living which includes housing, food, transport, shopping, medical etc. The balance of Rs.20,000/- is your monthly surplus. For the sake of simplicity, let us just ignore the effect of personal income tax in this discussion.

1. To drive the point across, let us make few simple assumptions.
2. The employer is kind enough to give you a 10% salary hike every year
3. The cost of living is likely to go up by 8% year on year
4. You are 30 years old and plan to retire at 50. This leaves you with 20 more years to earn
5. You don't intend to work after you retire
6. Your expenses are fixed and don't foresee any other expense
7. The balance cash of Rs.20,000/- per month is retained in the form of hard cash

Going by these assumptions, here is how the cash balance will look like in 20 years as per Table 1.1

Table 1.1 - Total cash balance in twenty years

If one were to analyze these numbers, you would soon realize this is a scary situation to be in.

Years	Yearly income	Yearly expense	Cash retained
1	600,000	360,000	240,000
2	6,60,000	3,88,800	2,71,200
3	7,26,000	4,19,904	3,06,096
4	7,98,600	4,53,496	3,45,104
5	8,78,460	4,89,776	3,88,684
6	9,66,306	5,28,958	4,37,348
7	10,62,937	5,71,275	4,91,662
8	11,69,230	6,16,977	5,52,254
9	12,86,153	6,66,335	6,19,818
10	14,14,769	7,19,642	6,95,127
11	15,56,245	7,77,213	7,79,032
12	17,11,870	8,39,390	8,72,480
13	18,83,057	9,06,541	9,76,516
14	20,71,363	9,79,065	10,92,298
15	22,78,499	10,57,390	12,21,109
16	25,06,349	11,41,981	13,64,368
17	27,56,984	12,33,339	15,23,644
18	30,32,682	13,32,006	17,00,676
19	33,35,950	14,38,567	18,97,383
20	36,69,545	15,53,652	21,15,893
		Total Income	17,890,693

Few things are quite startling from the above calculations:

1. After 20 years of hard work you have accumulated Rs.1.7 Crs.
2. Since your expenses are fixed, your lifestyle has not changed over the years, you probably even suppressed your lifelong aspirations – better home, better car, vacations etc
3. After you retire, assuming the expenses will continue to grow at 8%, Rs.1.7 Crs is good enough to sail you through roughly for about 8 years of post retirement life. 8th year onwards you will be in a very tight spot with literally no savings left to back you up.

What would you do after you run out of all the money in 8 years time? How do you fund your life? Is there a way to ensure that you collect a larger sum at the end of 20 years?

Let's consider another scenario as per Table 1.2 in the following page where instead of keeping the cash idle, you choose to invest the cash in an investment option that grows at let's say 12% per annum. For example – in the first year you retained Rs.240,000/- which when invested at 12% per annum for 20 years yields Rs.2,067,063/- at the end of 20th year.

With the decision to invest the surplus cash, your cash balance has increased significantly. The cash balance has grown to Rs.4.26 Crs from Rs.1.7 Crs. This is a staggering 2.4x times the regular amount. This translates to you being in a much better situation to deal with your post retirement life.

Now, going back to the initial question of why invest? There are few compelling reasons for one to invest..

1. Fight Inflation – By investing one can deal better with the inevitable – growing cost of living – **generally referred to as Inflation**
2. Create Wealth – By investing one can aim to have a better corpus **by the end of the defined time period**. In the above example the time period was upto retirement but it can be anything – children's education, marriage, house purchase, retirement holidays etc
3. To meet life's financial aspiration

1.2 - Where to invest?

Having figured out the reasons to invest, the next obvious question would be – Where would one invest, and what are the returns one could expect by investing.

When it comes to investing one has to choose an **asset class** that suits the individual's risk and return temperament.

Table 1.2 - Cash invested at 12% per annum

Years	Yearly income	Yearly expense	Cash retained	Retained Cash Invested @12%
1	600,000	360,000	240,000	20,67,063
2	6,60,000	3,88,800	2,71,200	20,85,519
3	7,26,000	4,19,904	3,06,096	21,01,668
4	7,98,600	4,53,496	3,45,104	21,15,621
5	8,78,460	4,89,776	3,88,684	21,27,487
6	9,66,306	5,28,958	4,37,348	21,37,368
7	10,62,937	5,71,275	4,91,662	21,45,363
8	11,69,230	6,16,977	5,52,254	21,51,566
9	12,86,153	6,66,335	6,19,818	21,56,069
10	14,14,769	7,19,642	6,95,127	21,58,959
11	15,56,245	7,77,213	7,79,032	21,60,318
12	17,11,870	8,39,390	8,72,480	21,60,228
13	18,83,057	9,06,541	9,76,516	21,58,765
14	20,71,363	9,79,065	10,92,298	21,56,003
15	22,78,499	10,57,390	12,21,109	21,52,012
16	25,06,349	11,41,981	13,64,368	21,46,859
17	27,56,984	12,33,339	15,23,644	21,40,611
18	30,32,682	13,32,006	17,00,676	21,33,328
19	33,35,950	14,38,567	18,97,383	21,25,069
20	36,69,545	15,53,652	21,15,893	21,15,893
TOTAL CASH AFTER 20 YEARS				**4,26,95,771**

An asset class is a category of investment with particular risk and return characteristics. The following are some of the popular assets class…

1. Fixed income instruments
2. Equity
3. Real estate
4. Commodities (precious metals)

Fixed Income Instruments

These are investable instruments with very limited risk to the principle and the return is paid as an interest to the investor based on the particular fixed income instrument. The interest paid, could be quarterly, semi-annual or annual intervals. At the end of the term of deposit, (also known as maturity period) the capital is returned to the investor.

Typical fixed income investment includes:

1. Fixed deposits offered by banks
2. Bonds issued by the Government of India
3. Bonds issued by Government related agencies such as HUDCO, NHAI etc
4. Bonds issued by corporates

As of June 2014, the typical return from a fixed income instrument varies between 8% and 11%.

Equity

Investment in Equities involves buying shares of publicly listed companies. The shares are traded both on the Bombay Stock Exchange (BSE), and the National Stock Exchange (NSE).

When an investor invests in equity, unlike a fixed income instrument there is no capital guarantee. However as a trade off, the returns from equity investment can be extremely attractive. Indian Equities have generated returns close to 14% – 15% CAGR (compound annual growth rate) over the past 15 years.

Investing in some of the best and well run Indian companies has yielded over 20% CAGR in the long term. Identifying such investments opportunities requires skill, hard work and patience.

You may also be interested to know that the returns generated over a long term period (above 365 days, also called long term capital gain) are completely exempted from personal income tax. This is an added attraction to investing in equities.

Real Estate

Real Estate investment involves transacting (buying and selling) commercial and non commercial land. Typical examples would include transacting in sites, apartments and commercial buildings. There are two sources of income from real estate investments namely – Rental income, and Capital appreciation of the investment amount.

The transaction procedure can be quite complex involving legal verification of documents. The cash outlay in real estate investment is usually quite large. There is no official metric to measure the returns generated by real estate, hence it would be hard to comment on this.

Commodity – Bullion

Investments in gold and silver are considered one of the most popular investment avenues. Gold and silver over a long-term period has appreciated in value. Investments in these metals have yielded a CAGR return of approximately 8% over the last 20 years. There are several ways to invest in gold and silver. One can choose to invest in the form of jewelry or Exchange Traded Funds (ETF).

Going back to our initial example of investing the surplus cash it would be interesting to see how much one would have saved by the end of 20 years considering he has the option of investing in any one – fixed income, equity or bullion.By investing in fixed income at an average rate of 9% per annum, the corpus would have grown to Rs.3.3 Crs

1. By investing in fixed income at an average rate of 9% per annum, the corpus would have grown to Rs.3.3 Crs
2. **Investing in equities at an average rate of 15% per annum, the corpus would have grown to Rs.5.4 Crs**
3. Investing in bullion at an average rate of 8% per annum, the corpus would have grown to Rs. 3.09 Crs

Clearly, equities tend to give you the best returns especially when you have a multi – year investment perspective.

A note on investments

Investments optimally should have a strong mix of all asset classes. It is smart to diversify your investment among the various asset classes. The technique of allocating money across assets classes is termed as 'Asset Allocation'.

For instance, a young professional may be able take a higher amount of risk given his age and years of investment available to him. Typically investor should allocate around 70% of his investable amount in Equity, 20% in Precious metals, and the rest in Fixed income investments.

Alongside the same rationale, a retired person could invest 80 percent of his saving in fixed income, 10 percent in equity markets and a 10 percent in precious metals. The ratio in which one allocates investments across asset classes is dependent on the risk appetite of the investor.

Young => 7:2:1 (E:F:C)
Old => 1:8:1 (E:F:C)

1.3 - What are the things to know before investing

Investing is a great option, but before you venture into investments it is good to be aware of the following…

1. Risk and Return go hand in hand. Higher the risk, higher the return. Lower the risk, lower is the return.
2. Investment in fixed income is a good option if you want to protect your principal amount. It is relatively less risky. However you have the risk of losing money when you adjust the return for inflation. Example – A fixed deposit which gives you 9% when the inflation is 10% means you are net net losing 1% per annum. Fixed income investment is best suited for ultra risk averse investors
3. Investment in Equities is a great option. It is known to beat the inflation over long period of times. Historically equity investment has generated returns close to 14-15%. However, equity investments can be risky
4. Real Estate investment requires a large outlay of cash and cannot be done with smaller amounts. Liquidity is another issue with real estate investment – you cannot buy or sell whenever you want. You always have to wait for the right time and the right buyer or seller to transact with you.
5. Gold and silver are known to be a relatively safer but the historical return on such investment has not been very encouraging.

Key takeaways from this chapter

1. Invest to secure your future
2. The corpus that you intend to build at the end of the defined period is sensitive to the rate of return the investment generates. A small variation to rate can have a big impact on the corpus
3. Choose an instrument that best suits your risk and return appetite
4. Equity should be a part of your investment if you want to beat the inflation in the long run

CHAPTER 2

Regulators

2.1 - What is a stock market?

- Investing in equities is an important investment that we make in order to generate inflation beating returns. This was the conclusion we drew from the previous chapter. Having said that, how do we go about investing in equities? Clearly before we dwell further into this topic, it is extremely important to understand the ecosystem in which equities operate.

Just like the way we go to the neighborhood kirana store or a super market to shop for our daily needs, similarly we go to the stock market to shop (read as transact) for equity investments. Stock market is where everyone who wants to transact in shares go to. Transact in simple terms means buying and selling. For all practical purposes, you can't buy/sell shares of a public company like Infosys without transacting through the stock markets.

The main purpose of the stock market is to help you facilitate your transactions. So if you are a buyer of a share, the stock market helps you meet the seller and vice versa.

Now unlike a super market, the stock market does not exist in a brick and mortar form. It exists in electronic form. You access the market electronically from your computer and go about conducting your transactions (buying and selling of shares).

Also, it is important to note that you can access the stock market via a registered intermediary called the stock broker. We will discuss more about the stock brokers at a later point.

There are two main stock exchanges in India that make up the stock markets. They are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Besides these two exchanges there are a bunch of other regional stock exchanges like Bangalore Stock Exchange, Madras Stock Exchange that are more or less getting phased out and don't really play any meaningful role anymore.

2.2 - Stock Market Participants and the need to regulate them

The stock market attracts individuals and corporations from diverse backgrounds. Anyone who transacts in the stock market is called a market participant. The market participant can be classified into various categories. Some of the categories of market participants are as follows:

1. **Domestic Retail Participants** – These are people like you and me transacting in markets
2. **NRI's and OCI** – These are people of Indian origin but based outside India
3. **Domestic Institutions** – These are large corporate entities based in India. Classic example would be the LIC of India.
4. **Domestic Asset Management Companies (AMC)** – Typical participants in this category would be the mutual fund companies such as SBI Mutual Fund, DSP Black Rock, Fidelity Investments, HDFC AMC etc.
5. **Foreign Institutional Investors** – Non Indian corporate entities. These could be foreign asset management companies, hedge funds and other investors

Now, irrespective of the category of market participant the agenda for everyone is the same – to make profitable transactions. More bluntly put – to make money.

When money is involved, human emotions in the form of greed and fear run high. One can easily fall prey to these emotions and get involved in unfair practices. India has its fair share of such twisted practices, thanks the operations of Harshad Mehta and the like.

Given this, the stock markets need someone who can set the rules of the game (commonly referred to as regulation and compliance) and ensure that people adhere to these regulations and compliance thereby making the markets a level playing field for everyone.

2.3 - The Regulator

In India the stock market regulator is called **The Securities and Exchange board of India** often referred to as SEBI. The objective of SEBI is to promote the development of stock exchanges, protect the interest of retail investors, regulate the activities of market participants and financial intermediaries. In general SEBI ensures…

1. The stock exchanges (BSE and NSE) conducts its business fairly
2. Stock brokers and sub brokers conduct their business fairly
3. Participants don't get involved in unfair practices
4. Corporate's don't use the markets to unduly benefit themselves (Example – Satyam Computers)
5. Small retail investors interest are protected
6. Large investors with huge cash pile should not manipulate the markets
7. Overall development of markets

Given the above objectives it becomes imperative for SEBI to regulate the following entities. All the entities mentioned below in Table 2.1 are directly involved in the stock markets. A malpractice by anyone of the following entities can disrupt what is otherwise a harmonious market in India.

SEBI has prescribed a set of rules and regulation to each one of these entities. The entity should operate within the legal framework as prescribed by SEBI. The specific rules applicable to a specific entity are made available by SEBI on their website. They are published under the 'Legal Framework' section of their site.

Table 2.1 - Regulators in India

Entity	Example of companies	What do they do?	In simpler words
Credit Rating Agency (CRA)	CRISIL, ICRA, CARE	They rate the credit worthiness of corporate and governments	If a corporate or Govt entity wants to avail loan, CRA checks if the entity is worthy of giving a loan
Debenture Trustees	Almost all banks in India	Act as a trustee to corporate debenture	When companies want to raise a loan they can issue debenture against which they promise to pay an interest. These debentures can be subscribed by public. A Debenture Trustee ensures that the debenture obligation is honored
Depositories	NSDL and CDSL National Securities Depository Limited - NSDL -> NSE Central Depository Services Limited - CDSL -> BSE	Safekeeping, reporting and settlement of clients securities	Acts like a vault for the shares that you buy. The depositories hold your shares and facilitate exchange of your securities. When you buy shares these shares sit in your Depositary account usually referred to as the DEMAT account. This is maintained electronically by only two companies in India
Depositary Participant (DP)	Most of the banks and few stock brokers	Act as an agent to the two depositories	You cannot directly interact with NSDL or CDSL. You need to liaison with a DP to open and maintain you DEMAT account
Foreign Institutional Investors	Foreign corporate, funds and individuals	Make investments in India	These are foreign entities with an interest to invest in India. They usually transact in large amounts of money, and hence their activity in the markets have an impact in terms of market sentiment

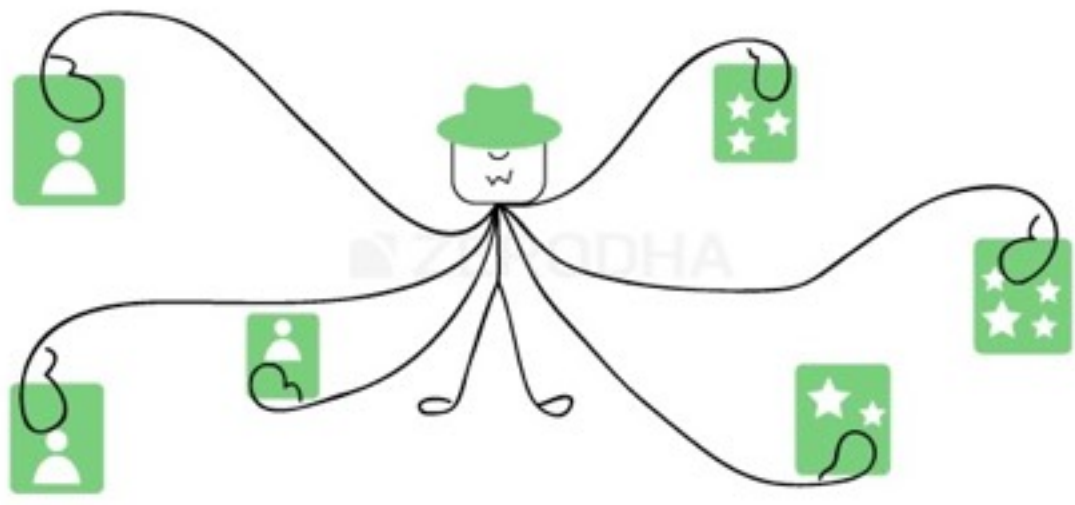
Entity	Example of companies	What do they do?	In simpler words
Merchant Bankers	Karvy, Axis Bank, Edelweiss Capital	Help companies raise money in the primary markets	If a company plans to raise money by floating an IPO, then merchant bankers are the ones who help companies with the IPO process
Asset Management Companies(AMC)	HDFC AMC, Reliance Capital, SBI Capital	Offer Mutual Fund Schemes	An AMC collects money from the public, puts that money in a single account and then invest that money in markets with an objective of making the investments grow and thereby generate wealth to its investors.
Portfolio Managers/ Portfolio Management System (PMS)	Religare Wealth Management, Parag Parikh PMS	Offer PMS schemes	They work similar to a mutual fund except in a PMS you have to invest a minimum of Rs. 25,00,000 however there is no such cap in a mutual fund
Stock Brokers and Sub Brokers	Zerodha, Sharekhan, ICICI Direct	Act as a intermediary between an investor and the stock exchange	Whenever you want to buy or sell shares from the stock exchange you have to do so through registered stock brokers. A sub broker is like an agent to a stock broker

Key takeaways from this chapter

1. Stock market is the place to go to if you want to transact in equities
2. Stock markets exists electronically and can be accessed through a stock broker
3. There are many different kinds of market participants operating in the stock markets
4. Every entity operating in the market has to be regulated and they can operate only within the framework as prescribed by the regulator
5. SEBI is the regulator of the securities market in India. They set the legal frame work and regulate all entities interested in operating in the market.
6. Most importantly you need to remember that SEBI is aware of what you are doing and they can flag you down if you are up to something fishy in the markets!

CHAPTER 3

Financial Intermediaries



3.1 - Overview

From the time you access the market – let's just say, to buy a stock till the time the stocks comes and hits your DEMAT account, a bunch of corporate entities are actively involved in making this work for you. These entities play their role quietly behind the scene, always complying with the rules laid out by SEBI and ensure an effortless and smooth experience for your transactions in the stock market. These entities are generally referred to as the Financial Intermediaries.

Together, these financial intermediaries, interdependent of one another, create an ecosystem in which the financial markets exists. This chapter will help you get an overview of who these financial intermediaries are and the services they offer.

3.2 - The Stock Broker

The stock broker is probably one of the most important financial intermediaries that you need to know. A stock broker is a corporate entity, registered as a trading member with the stock exchange and holds a stock broking license. They operate under the guidelines prescribed by SEBI.

A stock broker is your gateway to stock exchanges. To begin with, you need to open something called as a 'Trading Account' with a broker who meets your requirement. Your requirement could be as simple as the proximity between the broker's office and your house. At the same time it can be as complicated as identifying a broker who can provide you a single platform using which you can transact across multiple exchanges across the world. At a later point we will discuss what these requirements could be and how to choose the right broker.

A trading account lets you carry financial transactions in the market. A trading account is an account with the broker which lets the investor to buy/sell securities.

So assuming you have a trading account - whenever you want to transact in the markets you need to interact with your broker. There are few standard ways through which you can interact with your broker.

1. You can go to the broker's office and meet the dealer in the broker's office and tell him what you wish to do. A dealer is an executive at the stock broker's office who carries out these transactions on your behalf.
2. You can make a telephone call to your broker, identify yourself with your client code (account code) and place an order for your transaction. The dealer at the other end will execute the order for you and confirm the status of the same while you are still on the call.
3. Do it yourself – this is perhaps the most popular way of transacting in the markets. The broker gives you access to the market through software called 'Trading Terminal'. After you login in to the trading terminal, you can view live price quotes from the market, and can also place orders yourself.

The basic services provided by the brokers includes..

1. Give you access to markets and letting you transact
2. Give you margins for trading – We will discuss this point at a later stage
3. Provide support – Dealing support if you have to call and trade. Software support if you have issues with the trading terminal

4. Issue contract notes for the transactions – A contract note is a written confirmation detailing the transactions you have carried out during the day
5. Facilitate the fund transfer between your trading and bank account
6. Provide you with a back office login – using which you can see the summary of your account
7. The broker charges a fee for the services that he provides called the 'brokerage charge' or just brokerage. The brokerage rates vary, and its up to you to find a broker who strikes a balance between the fee he collects versus the services he provides.

3.3 - Depository and Depository Participants

When you buy a property the only way to identify and claim that you actually own the property is by producing the property papers. Hence it becomes extremely important to store the property papers in a safe and secure place.

Likewise when you buy a share (a share represents a part ownership in a company) the only way to claim your ownership is by producing your share certificate. A share certificate is nothing but a piece of document entitling you as the owner of the shares in a company.

Before 1996 the share certificate was in paper format however post 1996, the share certificates were converted to digital form. The process of converting paper format share certificate into digital format share certificate is called "Dematerialization" often abbreviated as DEMAT.

The share certificate in DEMAT format has to be stored digitally. The storage place for the digital share certificate is the 'DEMAT Account'. A Depository is a financial intermediary which offers the service of Demat account. A DEMAT account in your name will have all the shares in electronic format you have bought. Think of DEMAT account as a digital vault for your shares.

As you may have guessed, the trading account from your broker and the DEMAT account from the Depository are interlinked.

So for example if your idea is to buy Infosys shares then all you need to do is open your trading account, look for the prices of Infosys and buy it. Once the transaction is complete, the role of your trading account is done. After you buy, the shares of Infosys will automatically come and sit in your DEMAT account.

Likewise when you wish to sell Infosys shares, all you have to do is open your trading account and sell the stock. This takes care of the transaction part…however in the backend, the shares which

are sitting in your DEMAT account will get debited, and the shares move out of your DEMAT account.

At present there are only two depositaries offering you DEMAT account services. They are The National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited. There is virtually no difference between the two and both of them operate under strict SEBI regulations.

Just like the way you cannot walk into National Stock Exchange's office to open a trading account, you cannot walk into a Depository to open a DEMAT account. To open a DEMAT account you need to liaison with a Depository Participant (DP). A DP helps you set up your DEMAT account with a Depository. A DP acts as an agent to the Depository. Needless to say, even the DP is governed by the regulations laid out by the SEBI.

3.4 - Banks

Banks play a very straight forward role in the market ecosystem. They help in facilitating the fund transfer from your bank account to your trading account. You may be interested to note that for a given trading account only one bank account can be interlinked. You cannot transfer money from a bank account that is not in your name.

If you have multiple bank accounts, you need to specify which particular bank account that will be linked to your trading account. Of course you can remove the bank account and link it with another bank account of yours, but that requires some amount of paper work. However, for the money to come in and go out of your trading account, it has to happen only via the bank account that has been specified and linked.

Also, at this stage, you must have realized that the three financial intermediaries operate via three different accounts - trading account, DEMAT account and Bank account. All the three accounts operate electronically and are interlinked giving you a very seamless experience.

3.5 NSCCL and ICCL

NSCCL -> National Security Clearing Corporation
ICCL -> Indian Clearing Corporation

NSCCL – National Security Clearing Corporation Ltd and Indian Clearing Corporation are wholly owned subsidiaries of National Stock Exchange and Bombay Stock Exchange respectively.

The job of the clearing corporation is to ensure guaranteed settlement of your trades/ transactions. For example if you were to buy 1 share of Biocon at Rs.446 per share there must be someone who has sold that 1 share to you at Rs.446 . For this transaction, you will be debited

Rs.446 from your trading account and someone must be credited that Rs.446 toward the sale of Biocon. In a typical transaction like this the clearing corporation's role is to ensure the following:

a) Identify the buyer and seller and match the debit and credit process

b) Ensure no defaults – The clearing corporation also ensures there are no defaults by either party. For instance the seller after selling the shares should not be in a position to back out thereby defaulting in his transaction.

For all practical purposes, its ok not to know much about NSCCL or ICCL simply because, you as a trader or investor would not be interacting with these agencies directly. You just need to be aware that there are certain professional institutions which are heavily regulated and they work towards smooth settlement, and efficient clearing activity.

Key takeaways from this chapter

1. The market ecosystem is built by a cluster of financial intermediaries, each offering services that are unique to the functioning of markets
2. A stock broker is your access to markets, so make sure you choose a broker that matches your requirements, and services well.
3. A stock broker provides you a trading account which is used for all market related transactions (buying and selling of financial instruments like shares)
4. A Depository Participant (DP) is a corporate entity that holds the shares in electronic form against your name in your account. Your account with the DP is called the 'DEMAT' account
5. There are only two depositories in India – NSDL and CDSL
6. To open a DEMAT account with one of the depositaries you need to liaison with a Depository Participant (DP). A DP functions as an agent to the Depository
7. A clearing corporation works towards clearing and settling of trades executed by you.

CHAPTER 4

The IPO Markets - Part 1

4.1 - Overview

The initial three chapters has set the background on some of the basic market concepts that you need to know. At this stage it becomes imperative to address a very basic question – Why do companies go public?

A good understanding of this topic lays down a sound foundation for all future topics. We will learn new financial concepts during the course of this chapter.

4.2 - Origin of a Business

Before we jump ahead to seek an answer as to why companies go public, let us spend some time figuring out a more basic concept - the origins of a typical business. To understand this concept better, we will build a tangible story around it. Let us split this story into several scenes just so that we get a clear understanding of how the business and the funding environment evolves.

SCENE 1 – THE ANGELS

Let us imagine a budding entrepreneur with a brilliant business idea – to manufacture highly fashionable, organic cotton t-shirts. The designs are unique, has attractive price points and the best quality cotton is used to make these t-shirts. He is confident that the business will be successful, and is all enthusiastic to launch the idea into a business.

As a typical entrepreneur he is likely to be hit by the typical problem – where would he get the money to fund the idea? Assuming the entrepreneur has no business background he will not attract any serious investor at the initial stage. Chances are, he would approach his family and friends to pitch the idea and raise some money. He could approach the bank for a loan as well but this would not be the best option.

Let us assume that he pools in his own money and also convinces two of his good friends to invest in his business. Because these two friends are investing at the pre revenue stage and taking a blind bet on the entrepreneur they would be called the **Angel investors.** Please note, the money from the angels is not a loan, it is actually an investment made by them.

So let us imagine that the promoter along with the angels raise INR 5 Crore in capital. This initial money that he gets to kick start his business is called **'The Seed Fund'**. It is important to note that the seed fund will not sit in the entrepreneur's (also called the promoter) personal bank account but instead sits in the company's bank account. Once the seed capital hits the company's bank account, the money will be referred to as the initial **share capital** of the company.

In return of the initial seed investment, the original three (promoter plus 2 angels) will be issued share certificates of the company which entitles them an ownership in the company.

The only asset that the company has at this stage is cash of INR 5 Crs, hence the value of the company is also INR 5 Crs. This is called the company's **valuation.**

Issuing shares is quite simple, the company assumes that each share is worth Rs.10 and because there is Rs.5 crore as share capital, there has to be 50 lakh shares with each share worth Rs.10. In

this context, Rs.10 is called the 'Face value' (FV) of the share. The face value could be any number. If the FV is Rs.5, then the number of shares would be 1 crore, so on and so forth.

The total of 50 lakh shares is called the **Authorized shares** of the company. These shares have to be allotted amongst the promoter and two angels plus the company has to retain some amount of shares with itself to be issued in the future.

So let us assume the promoter retains 40% of the shares and the two angels get 5% each and the company retains 50% of the shares. Since the promoter and two angels own 50% of the shares, this allotted portion is called **Issued shares.**

Table 4.1 - Initial Shareholding Pattern

Sl No	Name of Share Holder	No of Shares	%Holding
1	Promoter	2,000,000	40%
2	Angel 1	250,000	5%
3	Angel 2	250,000	5%
	Total	**2,500,000**	**50%**

The share holding pattern of this company would look something like this..

Please note the balance 50% of the shares totaling 2,500,000 equity shares are retained by the company. These shares are authorized **but not allotted**.

Now backed by a good company structure and a healthy seed fund the promoter kick starts his business operations. He wants to move cautiously, hence he decides to open just one small manufacturing unit and one store to retail his product.

SCENE 2 – THE VENTURE CAPITALIST

His hard work pays off and the business starts to pick up. At the end of the first two years of operations, the company starts to break even. The promoter is now no longer a rookie business owner, instead he is more knowledgeable about his own business and of course more confident.

Backed by his confidence, the promoter now wants to expand his business by adding 1 more manufacturing unit and few additional retail stores in the city. He chalks out the plan and figures out that the fresh investment needed for his business expansion is INR 7 Crs.

He is now in a better situation when compared to where he was two years ago. The big difference is the fact that his business is generating revenues. Healthy inflow of revenue validates the business and its offerings. He is now in a situation where he can access reasonably savvy investors for investing in his business. Let us assume he meets one such professional investor who agrees to give him 7 Crs for a 14% stake in his company.

The investor who typically invests in such early stage of business is called a **Venture Capitalist** (VC) and the money that the business gets at this stage is called **Series A** funding.

After the company agrees to allot 14% to the VC from the authorized capital the shareholding pattern looks like this:

Table 4.2 - Second stage shareholding pattern

Sl No	Name of Share Holder	No of Shares	%Holding
1	Promoter	2,000,000	40%
2	Angel 1	250,000	5%
3	Angel 2	250,000	5%
4	Venture Capitalist	700,000	14%
	Total	**3,200,000**	**64%**

Note, the balance 36% of shares is still retained within the company and has not been issued.

Now, with the VC's money coming into the business, a very interesting development has taken place. **The VC is valuing the entire business at INR 50 Crs by valuing his 14% stake in the company at INR 7Crs**. With the initial valuation of 5Crs, there is a 10 fold increase in the company's valuation. This is what a good business plan, validated by a healthy revenue stream can do to businesses. It works as a perfect recipe for wealth creation.

With the valuations going up, the investments made by the initial investors will have an impact. The following table summarizes the same…

Table 4.3 - Third stage shareholding pattern

Sl No	Name of Share Holder	Initial Shareholding	Initial Valuation	Shareholding after 2 Yrs	Valuation after 2 Yrs	Wealth Created
1	Promoter	40%	2 Crs	40%	20 Crs	10 times
2	Angel 1	5%	25 Lakhs	5%	2.5 Crs	10 times
3	Angel 2	5%	25 Lakhs	5%	2.5 Crs	10 times
4	Venture Capitalist	0%	-NA-	14%	07 Crs	-NA-
	Total	**50%**	**2.5 Crs**	**64%**	**32 Crs**	

Going forward with our story, the promoter now has the additional capital he requires for the business. The company gets an additional manufacturing unit and few more retail outlets in the city as planned. Things are going great; popularity of the product grows, translating into higher revenues, management team gets more professional thereby increasing the operational efficiency and all this translates to better profits.

SCENE 3 – THE BANKER

Three more years pass by and the company is phenomenally successful. The company decides to have a retail presence in at least 3 more cities. To back the retail presence across three cities, the company also plans to increase the production capacity and hire more resources. Whenever a company plans such expenditure to improve the overall business, the expenditure is called 'Capital Expenditure' or simply '**CAPEX**'.

The management estimates 40Crs towards their Capex requirements. How does the company get this money or in other words, how can the company fund its Capex requirements?

There are few options with the company to raise the required funds for their Capex…

1. The company has made some profits over the last few years; a part of the Capex requirement can be funded through the profits. This is also called funding through **internal accruals**
2. The company can approach another VC and raise another round of VC funding by allotting shares from the authorized capital – this is called **Series B funding**

3. The company can approach a bank and seek a loan. The bank would be happy to tender this loan as the company has been doing fairly well. The loan is also called **'Debt'**

The company decides to exercise all the three options at its disposal to raise the funds for Capex. It ploughs 15Crs from internal accruals, plans a series B - divests 5% equity for a consideration of 10Crs from another VC and raise 15Crs debt from the banker.

Note, with 10Crs coming in for 5%, the valuation of the company now stands at 200 Crs. Of course, this may seem a bit exaggerated, but then the whole purpose of this story is drive across the concept!

The shareholding and valuation look something like this

Table 4.4 - Fourth stage shareholding pattern

Sl No	Name of Share Holder	No of Shares	%Holding	Valuation
1	Promoter	2,000,000	40%	80 Crs
2	Angel 1	250,000	5%	10 Crs
3	Angel 2	250,000	5%	10 Crs
4	VC Series A	700,000	14%	28 Crs
5	VC Series B	250,000	**5%**	10 Crs

Note, the company still has 31% of shares not allotted to shareholders which are now being valued at 62 Crs. Also, I would encourage you to think about the wealth that has been created over the years. This is exactly what happens to entrepreneurs with great business ideas, and with a highly competent management team.

Classic real world examples of such wealth creation stories would be Infosys, Page Industries, Eicher Motors, Titan industries and in the international space one could think of Google, Facebook, Twitter, Whats app etc.

SCENE 4 – THE PRIVATE EQUITY

Few years pass by and the company's success continues to shine on. With the growing success of this 8 year old, 200 Cr Company, the ambitions are also growing. The company decides to raise the bar and branch out across the country. They also decide to diversify the company by manufacturing and retailing fashion accessories, designer cosmetics and perfumes.

The capex requirement for the new ambition is now pegged at 60 Crs. The company does not want to raise money through debt because of the interest rate burden, also called the **finance charges** which would eat away the profits the company generates.

They decide to allot shares from the authorized capital for a Series C funding. They cannot approach a typical VC because VC funding is usually small and runs into few crores. This is when a **Private Equity (PE)** investor comes into the picture.

PE investors are quite savvy. They are highly qualified, and have an excellent professional background. They invest large amounts of money with the objective of not only providing the capital for constructive use but also place their own people on the board of the investee company to ensure the company steers in the required direction.

Assuming they pick up 15% stake for a consideration of 60Crs, they are now valuing the company at 400Crs. Let's have a quick look at the share holding and valuations..

Table 4.5 - Fifth stage shareholding pattern

Sl No	Name of Share Holder	No of Shares	%Holding	Valuation (in Crs)
1	Promoter	2,000,000	40%	160
2	Angel 1	250,000	5%	20
3	Angel 2	250,000	5%	20
4	VC Series A	700,000	14%	56
5	VC Series B	250,000	5%	20
6	PE Series C	1,000,000	15%	60
	Total	**4,450,000**	**84%**	**336**

Please note, the company has retained back 16% stake which has not been allotted to any share-holder. This portion is valued at 64 Crs

Usually, when a PE invests, they invest with an objective to fund large capex requirements. Besides they do not invest in the early stage of a business instead they prefer to invest in companies that already has a revenue stream, and is in operation for a few years. The process of deploying the PE capital and utilizing the capital for the capex requirements takes up a few years.

SCENE 5 – THE IPO

5 years after the PE investment, the company has progressed really well. They have successfully diversified their product portfolio plus they have a presence across all the major cities in the country. Revenues are good, profitability is stable and the investors are happy. The promoter however does not want settle in for just this.

The promoter now aspires to go international! He wants his brand to be available across all the major international cities; he wants at least two outlets in each major city across the world.

This means, the company needs to invest in market research to understand what people like in other countries, they need to invest in people, and also work towards increasing the manufacturing capacities. Besides they also need to invest into real estate space across the world.

This time around the Capex requirement is huge and the management estimates this at 200 Crs. The company has few options to fund the Capex requirement.

1. Fund Capex from internal accruals
2. Raise Series D from another PE fund
3. Raise debt from bankers
4. Float a bond (this is another form of raising debt)
5. File for an Initial Public Offer (IPO) by allotting shares from authorized capital
6. A combination of all the above

For sake of convenience, let us assume the company decides to fund the capex partly through internal accruals and also file for an IPO. When a company files for an IPO, they have to offer their

shares to the general public. The general public will subscribe to the shares (i.e if they want to) by paying a certain price. Now, because the company is offering the shares for the first time to the public, it is called the **"Initial Public Offer'.**

We are now at a very crucial juncture, where a few questions needs to be answered..

1. Why did the company decide to file for an IPO? In general why do companies go public?
2. Why did they not file for the IPO when they were in Series A, B and C situation?
3. What would happen to the existing share holders after the IPO?
4. What do the general public look for before they subscribe to the IPO?
5. How does the IPO process evolve?
6. Who are the financial intermediaries involved in the IPO markets?
7. What happens after the company goes public?

In the following chapter we will address each of the above questions plus more, and we will also give you more insights to the IPO Market. For now, hopefully you should have developed a sense of how a successful company evolves before they come out to the public to offer their shares.

The purpose of this chapter is to just give you a sense of completeness when one thinks about an IPO.

Key takeaways from this chapter

1. Before understanding why companies go public, it is important to understand the origin of business
2. The people who invest in your business in the pre-revenue stage are called Angel Investors
3. Angel investors take maximum risk. They take in as much risk as the promoter
4. The money that angels give to start the business is called the seed fund
5. Angel's invest relatively a small amount of capital
6. Valuation of a company simply signifies how much the company is valued at. When one values the company they consider the company's assets and liabilities
7. A face value is simply a denominator to indicate how much one share is originally worth
8. Authorized shares of the company is the total number of shares that are available with the company
9. The shares distributed from the authorized shares are called the issued shares. Issued shares are always a subset of authorized shares.
10. The shareholding pattern of a company tells us who owns how much stake in the company
11. Venture Capitalists invest at an early stage in business; they do not take as much risk as Angel investors. The quantum of investments by a VC is usually somewhere in between an angel and private equity investment
12. The money the company spends on business expansion is called capital expenditure or capex
13. Series A, B, andC etc are all funding that the company seeks as they start evolving. Usually higher the series, higher is the investment required.
14. Beyond a certain size, VCs cannot invest, and hence the company seeking investments will have to approach Private Equity firms
15. PE firms invest large sums of money and they usually invest at a slightly more mature stage of the business
16. In terms of risk, PE's have a lower risk appetite as compared to VC or angels
17. Typical PE investors would like to deploy their own people on the board of the investee company to ensure business moves in the right direction

18.The valuation of the company increases as and when the business , revenues and profitability increases

19.An IPO is a process by means of which a company can raise fund. The funds raised can be for any valid reason – for CAPEX, restructuring debt, rewarding shareholders etc

CHAPTER 5

The IPO Markets - Part 2

5.1 - Overview

The previous chapter gave us an understanding on how a company evolved right from the idea generation stage to all the way till it decides to file for an IPO. The idea behind creating the fictional story in the previous chapter was to give you a sense of how a business matures over time. The emphasis obviously was on the different stages of business and funding options available at various stages of business. The previous chapter gives you a perspective of what a company would have gone through before it comes out to public to offer its shares.

This is extremely important to know because the IPO market, also called the **Primary market** sometimes attracts companies offering their shares to public without actually going through a healthy round of funding in the past. Few rounds of funding by credible VC, and PE firm validate the quality of the business and its promoters. Of course you need to treat this with a pinch of salt but nevertheless it acts as an indicator to identify well run companies.

5.2 - Why do companies go public?

We closed the previous chapter with few very critical questions. One of which – Why did the company decide to file for an IPO, and in general why do companies go public?

When a company decides to file for an IPO, invariably the main reason is to raise funds to fuel their Capex requirement. The promoter has 3 advantages by taking his company public..

1. He is raising funds to meet Capex requirement
2. He is avoiding the need to raise debt which means he does not have to pay finance charges which translates to better profitability
3. Whenever you buy a share of a company, you are in essence taking the same amount of risk as the promoter is taking. Needless to say, the proportion of the risk and its impact will depend on the quantity of shares you hold. Nonetheless, whether you like it or not, when you buy shares you also buy risk. So when the company goes public, the promoter is actually spreading his risk amongst a large group of people.

There are other advantages as well in going for an IPO…

1. **Provide an exit for early investors** - Once the company goes public, the shares of the company start trading publicly. Any existing shareholder of the company – could be promoters, angel investors, venture capitalist, PE funds; can use this opportunity to sell their shares in the open market. By selling their shares, they get an exit on their initial investment in the company. They can also choose to sell their shares in smaller chunks if they wish.
2. **Reward employees** –Employees working for the company would have shares allotted to them as an incentive. This sort of arrangement between the employee and the company is called the "Employee Stock Option". The shares are allotted at a discount to the employees. Once the company goes public, the employees stand a chance to see capital appreciation in the shares. Few examples where the employee benefited from ESOP would be Google, Infosys, Twitter, Facebook etc
3. **Improve visibility** - Going public definitely increases visibility as the company has a status of being publicly held and traded. There is a greater chance of people's interest in the company, consequently creating a positive impact on its growth.

So let's just build on our fictional business story from the previous chapter a little further and figure out the IPO details of this company.

If you recollect, the company requires 200 Crs to fund their capex and the management had decided to fund this partly by internal accrual and partly by filing for an IPO.

Do recollect that company still has 16% of authorized capital translating to 800,000 shares which are not allotted. The last valuation of these shares when the PE firm invested in Series B was 64Crs. The company has progressed really well ever since the PE firm has invested and naturally the valuation of these shares would have gone up.

For the sake of simplicity, let us assume the company is now valuing the 16% shares anywhere between 125 Crs to 150 Crs. This translates to a per share value, anywhere between Rs.1562 to Rs.1875/-…(125Crs/8lakh).

So if the company puts 16% on the block to the public, they are likely to raise anywhere between 125 to 150 Crs. The remainder has to come from internal accruals. So naturally, the more money they raise, better it is for the company.

5.3 - Merchant Bankers

Having decided to go public, the company must now do a series of things to ensure a successful initial public offering. The first and foremost step would be to appoint a **merchant banker**. Merchant bankers are also called **Book Running Lead Managers (BRLM)/Lead Manager (LM)**. The job of a merchant banker is to assist the company with various aspects of the IPO process including…

- Conduct a due diligence on the company filing for an IPO, ensure their legal compliance and also issue a due diligence certificate
- Should work closely with the company and prepare their listing documents including **Draft Red Herring Prospectus (DRHP)**. We will discuss this in a bit more detail at a later stage
- **Underwrite shares** – By underwriting shares, merchant bankers essentially agree to buy all or part of the IPO shares and resell the same to public
- Help company arrive at the price band for the IPO. A **price band** is the lower and upper limit of the share price within which the company will go public. In case of our example, the price band will be Rs.1562/- and Rs.1875/-
- Help the company with the road shows – This is like a promotional/marketing activity for the company's IPO

- Appointment of other intermediaries namely, registrars, bankers, advertising agencies etc. The Lead manager also makes various marketing strategies for the issue

Once the company partners with the merchant banker, they will work towards taking the company public.

5.4 - IPO sequence of events

Needless to say each and every step involved in the IPO sequence has to happen under the SEBI guidelines. In general, the following are the sequence of steps involved.

- **Appoint a merchant banker**. In case of a large public issue, the company can appoint more than 1 merchant banker

- **Apply to SEBI with a registration statement** – The registration statement contains details on what the company does, why the company plans to go public and the financial health of the company

- **Getting a nod from SEBI** – Once SEBI receives the registration statement, SEBI takes a call on whether to issue a go ahead or a 'no go' to the IPO

- **DRHP** – If the company gets the initial SEBI nod, then the company needs to prepare the DRHP. A DRHP is a document that gets circulated to the public. Along with a lot of information, DRHP should contain the following details..

    a. The estimated size of the IPO

    b. The estimated number of shares being offered to public

    c. Why the company wants to go public and how does the company plan to utilize the funds along with the timeline projection of fund utilization

    d. Business description including the revenue model, expenditure details

    e. Complete financial statements

    f. Management Discussion and Analysis – how the company perceives the future business operations to emerge

    g. Risks involved in the business

    h. Management details and their background

- **Market the IPO** – This would involve TV and print advertisements in order to build awareness about the company and its IPO offering. This process is also called the IPO road show

- **Fix the price band** – Decide the price band between which the company would like to go public. Of course this can't be way off the general perception. If it is, then the public will not subscribe for the IPO

- **Book Building** – Once the road show is done and price band fixed the company now has to officially open the window during which the public can subscribe for shares. For example, if the price band is between Rs.100 and Rs.120, then the public can actually choose a price they think is fair enough for the IPO issue. The process of collecting all these price points along with the respective quantities is called Book Building. Book building is perceived as an effective price discovery method

- **Closure** – After the book building window is closed (generally open for few days) then the price point at which the issue gets listed is decided. This price point is usually that price at which maximum bids have been received.

- **Listing Day** – This is the day when the company actually gets listed on the stock exchange. The listing price is the price discovered through the book building process.

5.5 - What happens after the IPO?

During the bidding process (also called the date of issue) investors can bid for shares at a particular price within the specified price band. This whole system around the date of issue where one bids for shares is referred to as the **Primary Market**. The moment the stock gets listed and debuts on the stock exchange, the stock starts to trade publicly. This is called the **secondary markets.**

Once the stock transitions from primary markets to secondary markets, the stock gets traded daily on the stock exchange. People start buying and selling the stocks regularly.

Why do people trade? Why does the stock price fluctuate? Well, we will answer all these questions and more in the subsequent chapters.

5.6 Few key IPO jargons

Before we wrap up the chapter on IPO's let us review few important IPO jargons.

📖 Under Subscription – Let's say the company wants to offer 100,000 shares to the public. During the book building process it is discovered that only 90,000 bids were received, then the issue

is said to be under subscribed. This is not a great situation to be in as it indicates negative public sentiment

📖 Over subscription – If there are 200,000 bids for 100,000 shares on offer then the issue is said to be oversubscribed 2 times (2x)

📖 Green Shoe Option - Part of the underwriting agreement which allows the issuer to authorize additional shares (typically 15 percent) to be distributed in the event of over subscription. This is also called the over allotment option

📖 Fixed Price IPO –Sometimes the companies fix the price of the IPO and do not opt for a price band. Such issues are called fixed price IPO

📖 Price Band and Cut off price –Price band is a price range between which the stock gets listed. For example if the price band is between Rs.100 and Rs.130, then the issue can list within the range. Let's says it gets listed at 125, then 125 is called the cut off price.

Recent IPO's in India*

Here is a look at few recent IPO's in India. With all the background information you now have, reading Table 5.1 in the following page should be easy

Table 5.1 - Recent IPO's in India

Sl No	Name of Issue	Issue Price (INR)	BRLM	Date of Issue	Issue Size (Lakh Shares)	Price Band (INR)
1	Wonderla Holidays Limited	125	Edelweiss Financial Services and ICICI Securities Limited	21/04/2014 to 23/04/2014	14,500,000	115 to 125
2	Power Grid Coporation of India Ltd	90	SBI, Citi, ICICI, Kotak, UBS	03/12/2013 to 06/12/2013	787,053,309	85 to 90
3	Just Dial Ltd	530	Citi, Morgan Stanley	20/05/2013 to 22/05/2013	17,493,458	470 to 543
4	Repco Homes Finance Limited	172	SBI, IDFC, JM Financials	13/03/2013 to 15/03/2013	1,57,20,262	165 to 172
5	V-Mart Retail Ltd	210	Anand Rathi	01/02/2013 to 05/02/2013	4,496,000	195 to 215

*Source : NSE India, as of June 2014

Key takeaways from this chapter

1. Companies go public to raise funds, provide an exit for early investors, reward employees and gain visibility
2. Merchant banker acts as a key partner with the company during the IPO process
3. SEBI regulates the IPO market and has the final word on whether a company can go public or not
4. As an investor in the IPO you should read through the DRHP to know everything about the company
5. Most of the IPOs in India follow a book building process

CHAPTER 6

The Stock Markets

6.1 - Overview

Having understood the IPO process and what really goes behind the company's transition from primary to secondary market we are now set to explore the stock markets a step further.

By virtue of being a public company, the company is now liable to disclose all information related to the company to the public. The shares of a public limited company are traded on the stock exchanges on a daily basis.

There are few reasons why market participants trade stocks. We will explore these reasons in this chapter.

6.2 - What really is the stock market?

Like we discussed in chapter 2, the stock market is an electronic market place. Buyers and sellers meet and trade their point of view.

For example, consider the current situation of Infosys. At the time of writing this, Infosys is facing a succession issue, and most of its senior level management personnel are quitting the company for internal reasons. It seems like the leadership vacuum is weighing down the company's reputation heavily. As a result, the stock price dropped to Rs.3,000 all the way from Rs.3,500. Whenever there are new reports regarding Infosys management change, the stock prices react to it.

Assume there are two traders – T1 and T2.

T1's point of view on Infosys - The stock price is likely to go down further because the company will find it challenging to find a new CEO.

If T1 trades as per his point of view, he should be a seller of the Infosys stock.

T2, however views the same situation in a different light and therefore has a different point of view – According to him, the stock price of Infosys has over reacted to the succession issue and soon the company will find a great leader, after whose appointment the stock price will move upwards.

If T2 trades as per his point of view, he should be a buyer of the Infosys stock.

So at, Rs.3, 000 T1 will be a seller, and T2 will be a buyer in Infosys.

Now both T1 and T2 will place orders to sell and buy the stocks respectively through their respective stock brokers. The stock broker, obviously routes it to the stock exchange.

The stock exchange has to ensure that these two orders are matched, and the trade gets executed. This is the primary job of the stock market – to create a market place for the buyer and seller.

The stock market is a place where market participants can access any publicly listed company and trade from their point of view, as long as there are other participants who have an opposing point of view. After all, different opinions are what make a market.

6.3 - What moves the stock?

Let us continue with the Infosys example to understand how stocks really move. Imagine you are a market participant tracking Infosys.

It is 10:00 AM on 11th June 2014 ,and the price of Infosys is 3000. The management makes a statement to the press that they have managed to find a new CEO who is expected to steer the company to greater heights. They are confident on his capabilities and they are sure that the new CEO will deliver much more than what is expected out of him.

Two questions –

a. How will the stock price of Infosys react to this news?
b. If you were to place a trade on Infosys, what would it be? Would be a buy or a sell?

The answer to the first question is quite simple, the stock price will move up.

Infosys had a leadership issue, and the company has fixed it. When positive announcements are made market participants tend to buy the stock at any given price and this cascades into a stock price rally.

Let me illustrate this further in Table 6.1

Table 6.1 - Trade Flow

Sl No	Time	Last Traded Price	What price the seller wants	What does the buyer do?	New Last Trade Price
1	10:00	3000	3002	He buys	3002
2	10:01	3002	3006	He buys	3006
3	10:03	3006	3011	He buys	3011
4	10:05	3011	3016	He buys	3016

Notice, whatever prices the seller wants the buyer is willing to pay for it. This buyer-seller reaction tends to push the share price higher.

So as you can see, the stock price jumped 16 Rupees in a matter of 5 minutes. Though this is a fictional situation, it is a very realistic, and typical behavior of stocks. The stocks price tends to go up when the news is good or expected to be good.

In this particular case, the stock moves up because of two reasons. One, the leadership issue has been fixed, and two, there is also an expectation that the new CEO will steer the company to greater heights.

The answer to the second question is now quite simple; you buy Infosys stocks considering the fact that there is good news surrounding the stock.

Now, moving forward in the same day, at 12:30 PM 'The National Association of Software & Services company', popularly abbreviated as NASSCOM makes a statement. For those who are not aware, NASSCOM is a trade association of Indian IT companies. NASSCOM is considered to be a very powerful organization and whatever they say has an impact on the IT industry.

The NASSCOM makes a statement stating that the customer's IT budget seems to have come down by 15%, and this could have an impact on the industry going forward.

By 12:30 PM let us assume Infosys is trading at 3030. Few questions for you..

a.How does this new information impact Infosys?

b.If you were to initiate a new trade with this information what would it be?

c.What would happen to the other IT stocks in the market?

The answers to the above questions are quite simple. Before we start answering these questions, let us analyze NASSCOM's statement in a bit more detail.

NASSCOM says that the customer's IT budget is likely to shrink by 15%. This means the revenues and the profits of IT companies are most likely to go down soon. This is not great news for the IT industry.

Let us now try and answer the above questions..

a.Infosys being a leading IT major in the country will react to this news. The reaction could be mixed one because earlier during the day there was good news specific to Infosys. However a 15% decline in revenue is a serious matter and hence Infosys stocks are likely to trade lower

b.At 3030, if one were to initiate a new trade based on the new information, it would be a sell on Infosys

c.The information released by NASSCOM is applicable to the entire IT stocks and not just Infosys. Hence all IT companies are likely to witness a selling pressure.

So as you notice, market participants react to news and events and their reaction translates to price movements! This is what makes the stocks move.

At this stage you may have a very practical and valid question brewing in your mind. You may be thinking what if there is no news today about a particular company? Will the stock price stay flat and not move at all?

Well, the answer is both yes and no, and it really depends on the company in focus.

For example let us assume there is absolutely no news concerning two different companies..

1. Reliance Industries Limited
2. Shree Lakshmi Sugar Mills

As we all know, Reliance is one the largest companies in the country and regardless of whether there is news or not, market participants would like to buy or sell the company's shares and therefore the price moves constantly.

The second company is a relatively unknown and therefore may not attract market participant's attention as there is no news or event surrounding this company. Under such circumstances, the stock price may not move or even if it does it may be very marginal.

To summarize, the price moves because of expectation of news and events. The news or events can be directly related to the company, industry or the economy as a whole. For instance the appointment of Narendra Modi as the Indian Prime Minister was perceived as positive news and therefore the whole stock market moved.

In some cases there would be no news but still the price could move due to the demand and supply situation.

6.4 - How does the stock get traded?

You have decided to buy 200 shares of Infosys at 3030, and hold on to it for 1 year. How does it actually work? What is the exact process to buy it? What happens after you buy it?

Luckily there are systems in place which are fairly well integrated.

With your decision to buy Infosys, you need to login to your trading account (provided by your stock broker) and place an order to buy Infosys. Once you place an order, an order ticket gets generated containing the following details:

a. Details of your trading account through which you intend to buy Infosys shares – therefore your identity is reveled.

b. The price at which you intend to buy Infosys

c.The number of shares you intend to buy

Before your broker transmits this order to the exchange he needs to ensure you have sufficient money to buy these shares. If yes, then this order ticket hits the stock exchange. Once the order hits the market the stock exchange (through their order matching algorithm) tries to find a seller who is willing to sell you 200 shares of Infosys at 3030.

Now the seller could be 1 person willing to sell the entire 200 shares at 3030 or it could be 10 people selling 20 shares each or it could be 2 people selling 1 and 199 shares respectively. The permutation and combination does not really matter. From your perspective, all you need is 200 shares of Infosys at 3030 and you have placed an order for the same. The stock exchange ensures the shares are available to you as long as there are sellers in the market.

Once the trade is executed, the shares will be electronically credited to your DEMAT account. Likewise the shares will be electronically debited from the sellers DEMAT account.

6.5 - What happens after you own a stock?

After you buy the shares, the shares will now reside in your DEMAT account. You are now a part owner of the company, to the extent of your share holding. To give you a perspective, if you own 200 shares of Infosys then you own 0.000035% of Infosys.

By virtue of owning the shares you are entitled to few corporate benefits like dividends, stock split, bonus, rights issue, voting rights etc. We will explore all these shareholder privileges at a later stage.

6.6 - A note on holding period

Holding period is defined as the period during which you intend to hold the stock. You may be surprised to know that the holding period could be as short as few minutes to as long as 'forever'. When the legendary investor Warren Buffet was asked what his favorite holding period was, he in fact replied 'forever'.

In the earlier example quoted in this chapter, we illustrated how Infosys stocks moved from 3000 to 3016 in a matter of 5 minutes. Well, this is not a bad return after all for a 5 Minute holding period! If you are satisfied with it you can very well close the trade and move on to find another op-

portunity. Just to remind you, this is very much possible in real markets. When things are hot, such moves are quite common.

6.7 - How to calculate returns?

Now, everything in markets boils down to one thing. Generating a reasonable rate of return!

If your trade generates a good return all your past stock market sins are forgiven. This is what really matters.

Returns are usually expressed in terms of annual yield. There are different kinds of returns that you need to be aware of. The following will give you a sense of what they are and how to calculate the same…

Absolute Return – This is return that your trade or investment has generated in absolute terms. It helps you answer this question – I bought Infosys at 3030 and sold it 3550. How much percentage return did I generate?

The formula to calculate the same is [Ending Period Value / Starting Period Value – 1]*100

i.e [3550/3030 -1] *100

= 0.1716 * 100

= 17.16%

A 17.6% is not a bad return at all!

Compounded Annual Growth Rate (CAGR) – An absolute return can be misleading if you want to compare two investments. CAGR helps you answer this question - I bought Infosys at 3030 and held the stock for 2 years and sold it 3550. At what rate did my investment grow over the last two years?

CAGR factors in the time component which we had ignored when we computed the absolute return.

The formula to calculate CAGR is ..

$$CAGR = \left(\frac{\text{Ending Value}}{\text{Beginning Value}}\right)^{\left(\frac{1}{\#\text{ of years}}\right)} - 1$$

Applying this to answer the question..

{[3550/3030]^(1/2) – 1} = 8.2%

This means the investment grew at a rate of 8.2% for 2 years. Considering the fact that Indian fixed deposit market offers a return of close to 8.5% return with capital protection an 8.2% return suddenly looks a bit unattractive.

So, always use CAGR when you want to check returns over multiple years. Use absolute return when your time frame is for a year or lesser.

What if you have bought Infosys at 3030 and sold it at 3550 within 6 months? In that case you have generated 17.16% in 6 months which translates to 34.32% (17.16% * 2) for the year.

So the point is, if you have to compare returns, its best done when the return is expressed on an annualized basis.

6.8 - Where do you fit in?

Each market participant has his or her own unique style to participate in the market. Their style evolves as and when they progress and witness market cycles. Their style is also defined by the kind of risk they are willing to take in the market. Irrespective of what they do, they can be categorized as either a trader or an investor.

A trader is a person who spots an opportunity and initiates the trade with an expectation of profitably exiting the trade at the earliest given opportunity. A trader usually has a short term view on markets. A trader is alert and on his toes during market hours constantly evaluating opportunities based on risk and reward. He is unbiased toward going long or going short. We will discuss what going long or short means at a later stage.

There are different types of traders :

a. **Day Trader** – A day trader initiates and closes the position during the day. He does not carry forward his positions. He is risk averse and does not like taking overnight risk. For example – He would buy 100 shares of TCS at 2212 at 9:15AM and sell it at 2220 at 3:20 PM making a profit of Rs.800/- in this trade. A day trader usually trades 5 to 6 stocks per day.

b. **Scalper** – A type of a day trader. He usually trades very large quantities of shares and holds the stock for very less time with an intention to make a small but quick profit. For example – He would buy 10,000 shares of TCS as 2212 at 9:15 and sell it 2212.1 at 9.16. He ends up making

1000/- profit in this trade. In a typical day, he would have placed many such trades. As you may have noticed a scalp trader is highly risk averse.

c. **Swing Trader** – A swing trader holds on to his trade for slightly longer time duration, the duration can run into anywhere between few days to weeks. He is typically more open to taking risks. For example – He would buy 100 shares of TCS at 2212 on 12th June 2014 and sell it 2214 on 19th June 2014.

Some of the really successful traders the world has seen are – George Soros, Ed Seykota, Paul Tudor, Micheal Steinhardt, Van K Tharp, Stanley Druckenmiller etc

An investor is a person who buys a stock expecting a significant appreciation in the stock. He is willing to wait for his investment to evolve. The typical holding period of investors usually runs into a few years. There are two popular types of investors..

a. **Growth Investors** – The objective here is to identify companies which are expected to grow significantly because of emerging industry and macro trends. A classic example in the Indian context would be buying Hindustan Unilever, Infosys, Gillette India back in 1990s. These companies witnessed huge growth because of the change in the industry landscape thereby creating massive wealth for its shareholders.

b. **Value Investors** – The objective here is to identify good companies irrespective of whether they are in growth phase or mature phase but beaten down significantly due to the short term market sentiment thereby making a great value buy. An example of this in recent times is L&T. Due to short term negative sentiment; L&T was beaten down significantly around August/ September of 2013. The stock price collapsed to 690 all the way from 1200. At 690 (given its fundamentals around Aug 2013), a company like L&T is perceived as cheap, and therefore a great value pick. Eventually it did pay off, as the stock price scaled back to 1440 around May 2014.

Some of the really famous investors the world has seen – Charlie Munger, Peter Lynch, Benjamin Graham, Thomas Rowe, Warren Buffett, John C Bogle, John Templeton etc.

So what kind of market participant would you like to be?

Key takeaways from this chapter

1. A stock market is a place where a trader or an investor can transact (buy, sell) in shares
2. A stock market is a place where the buyer and seller meet electronically
3. Different opinions makes a market
4. The stock exchange electronically facilitate the meeting of buyers, and sellers
5. News and events moves the stock prices on a daily basis
6. Demand supply mismatch also makes the stock prices move
7. When you own a stock you get corporate privileges like bonus, dividends, rights etc
8. Holding period is defined as the period during which you hold your shares
9. Use absolute returns when the holding period is 1 year or less. Use CAGR to identify the growth rate over multiple years
10. Traders, and investors differ on two counts – risk taking ability and the holding period.

CHAPTER 7

The Stock Markets Index

7.1 - Overview

If I were to ask you to give me a real time summary on the traffic situation, how would you possibly do it?

Your city may have 1000's of roads and junctions; it is unlikely you would check each and every road in the city to find the answer. The wiser thing for you to do would be to quickly check, a few important roads and junctions across the four directions of the city and observe how the traffic is moving. If you observe chaotic conditions across these roads then you would simply summarize the traffic situation as chaotic, else traffic can be considered normal.

The few important roads and junctions that you tracked to summarize the traffic situation served as a barometer for the traffic situation for the entire city!

Drawing parallels, if I were to ask you how the stock market is moving today, how would you answer my question? There are approximately 5,000 listed companies in the Bombay Stock Exchange and about 2,000 listed companies in the National Stock Exchange. It would be clumsy to check each and every company, figure out if they are up or down for the day and then give a detailed answer.

Instead you would just check few important companies across key industrial sectors. If majority of these companies are moving up you would say markets are up, if the majority is down, you would say markets are down, and if there is a mixed trend, you would say markets are sideways!

So essentially identify a few companies to represent the broader markets. So every time someone asks you how the markets are doing, you would just check the general trend of these selected stocks and then give an answer. These companies that you have identified collectively make up the stock market index!

7.2 - The Index

Luckily you need not actually track these selected companies individually to get a sense of how the markets are doing. The important companies are pre packaged, and continuously monitored to give you this information. This pre packaged market information tool is called the 'Market Index'.

There are two main market indices in India. The **S&P BSE** Sensex representing the Bombay stock exchange and **CNX Nifty** representing the National Stock exchange.

S&P stands for Standard and Poor's, a global credit rating agency. S&P has the technical expertise in constructing the index which they have licensed to the BSE. Hence the index also carries the S&P tag.

CNX Nifty consists of the largest and most frequently traded stocks within the National Stock Exchange. It is maintained by India Index Services & Products Limited (IISL) which is a joint venture of National Stock Exchange and CRISIL. In fact the term 'CNX' stands for CRISIL and NSE.

An ideal index gives us minute by minute reading about how the market participants perceive the future. The movements in the Index reflect the changing expectations of the market participants. When the index goes up, it is because the market participants think the future will be better. The index drops if the market participants perceive the future pessimistically.

7.3 - Practical uses of the Index

Some of the practical uses of Index are discussed below.

Information – The index reflects the general market trend for a period of time. The index is a broad representation of the country's state of economy. A stock market index that is up indicates people are optimistic about the future. Likewise when the stock market index is down it indicates that people are pessimistic about the fu-

ture.

For example the Nifty value on 1st of January 2014 was 6301 and the value as of 24th June 2014 was 7580. This represents a change of 1279 points in the index of 20.3% increase. This simply means that during the time period under consideration, the markets have gone up quite significantly indicating a strong optimistic economic future.

The time frame for calculating the index can be for any length of time.. For example, the Index at 9:30 AM on 25th June 2014 was at 7,583 but an hour later it moves to 7,565. A drop of 18 points during this period indicates that the market participants are not too enthusiastic.

Benchmarking – For all the trading or investing activity that one does, a yardstick to measure the performance is required. Assume over the last 1 year you invested Rs.100,000/- and generated Rs.20,000 return to make your total corpus Rs.120,000/-. How do you think you performed? Well on the face of it, a 20% return looks great. However what if during the same year Nifty moved to 7,800 points from 6,000 points generating a return on 30%?

Well suddenly it may seem to you, that you have underperformed the market! If not for the Index you can't really figure out how you performed in the stock market. You need the index to benchmark the performance of a trader or investor. Usually the objective of market participants is to outperform the Index.

Trading - Trading on the index is probably one of most popular uses of the index. Majority of the traders in the market trade the index. They take a broader call on the economy or general state of affairs, and translate that into a trade.

For example imagine this situation. At 10:30 AM the Finance Minister is expected to deliver his budget speech. An hour before the announcement Nifty index is at 6,600 points. You expect the budget to be favorable to the nation's economy. What do you think will happen to the index? Naturally the index will move up. So in order to trade your point of view, you may want to buy the index at 6,600. After all, the index is the representation of the broader economy.

So as per your expectation the budget is good and the index moves to 6,900. You can now book your profits, and exit the trade at a 300 points profit! Trades such as these are possible through what is known as 'Derivative' segment of the markets. We are probably a bit early to explore derivatives, but for now do remember that index trading is possible through the derivative markets.

Portfolio Hedging – Investors usually build a portfolio of securities. A typical portfolio contains 10 – 12 stocks which they would have bought from a long term perspective. While the stocks are held from a long term perspective they could foresee a prolonged adverse movement in the market (2008) which could potentially erode the capital in the portfolio. In such a situation, investors can use the index to hedge the portfolio. We will explore this topic in the risk management module.

7.4 - Index construction methodology

It is important to know how the index is constructed /calculated especially if one wants to advance as an index trader. As we discussed, the Index is a composition of many stocks from different sectors which collectively represents the state of the economy. To include a stock in the index it should qualify certain criteria. Once qualified as an index stock, it should continue to qualify on the stated criteria. If it fails to maintain the criteria, the stock gets replaced by another stock which qualifies the prerequisites.

Based on the selection procedure the list of stocks is populated. Each stock in the index should be assigned a certain weightage. Weightage in simpler terms define how much importance a certain stock in the index gets compared to the others. For example if ITC Limited has 7.6% weightage on Nifty 50 index, then it is as good as saying the that the 7.6% of Nifty's movement can be attributed to ITC.

The obvious question is - How do we assign weights to the stock that make up the Index?

There are many ways to assign weights but the Indian stock exchange follows a method called **free float market capitalization**. The weights are assigned based on the free float market capitalization of the company, larger the market capitalization, higher the weight.

Free float market capitalization is the product of total number of shares outstanding in the market, and the price of the stock.

For example company ABC has a total of 100 shares outstanding in the market, and the stock price is at 50 then the free float market cap of ABC is 100*50 = Rs.5,000.

At the time of writing this chapter, the following as per Table 7.1 are the 50 stocks in Nifty as per their weightage…

Table 7.1 - Nifty stocks as per their weightage

Sl No	Name of the company	Industry	Weightage (%)
1	ITC Limited	Cigarettes	7.60
2	ICICI Bank Ltd	Banks	6.55
3	HDFC Ltd	Housing Finance	6.45
4	Reliance Industry Ltd	Refineries	6.37
5	Infosys Ltd	Computer Software	6.26
6	HDFC Bank Ltd	Banks	5.98
7	TCS Ltd	Computer Software	5.08
8	L&T Ltd	Engineering	4.72
9	Tata Motors Ltd	Automobile	3.09
10	SBI Ltd	Banks	2.90
11	ONGC Ltd	Oil Exploration	2.73
12	Axis Bank Ltd	Banks	2.50
13	Sun Pharma Ltd	Pharmaceuticals	2.29
14	M&M Ltd	Automobiles	2.13
15	HUL Ltd	FMCG	1.87
16	Bharti Airtel Ltd	Telecom Services	1.70
17	HCL Technologies Ltd	Computer software	1.61
18	Tata Steel Ltd	Metal -Steel	1.42
19	Kotak Mahindra Bank Ltd	Banks	1.40

Sl No	Name of the company	Industry	Weightage (%)
20	Sesa Sterlite Ltd	Mining	1.38
21	Dr.Reddy's Lab Ltd	Pharmaceuticals	1.37
22	Wipro Ltd	Computer Software	1.37
23	Maruti Suzuki India Ltd	Automobile	1.29
24	Tech Mahindra Ltd	Computer Software	1.24
25	Hero Motocorp Ltd	Automobile	1.20
26	NTPC Ltd	Power	1.15
27	Power Grid Corp Ltd	Power	1.13
28	Asian Paints Ltd	Paints	1.10
29	Lupin Ltd	Pharmaceuticals	1.09
30	Bajaj Auto Ltd	Automobile	1.07
31	Hindalco Industries Ltd	Metal – Aluminum	0.95
32	Ultratech Cements Ltd	Cements	0.95
33	Indusind Bank Ltd	Banks	0.94
34	Coal India Ltd	Mining	0.93
35	Cipla Ltd	Pharmaceuticals	0.89
36	BHEL Ltd	Electrical Equipment	0.79

Sl No	Name of the company	Industry	Weightage (%)
37	Grasim Industries Ltd	Cements	0.79
38	Gail (India) Ltd	Gas	0.78
39	IDFC Ltd	Financial Services	0.74
40	Cairn India Ltd	Oil Exploration	0.72
41	United Sprits Ltd	Distillery	0.70
42	Tata Power Co.Ltd	Power	0.68
43	Bank of Baroda	Banks	0.63
44	Ambuja Cements Ltd	Cements	0.61
45	BPCL	Refineries	0.58
46	Punjab National Bank	Banks	0.55
47	NMDC Ltd	Mining	0.52
48	ACC Ltd	Cements	0.50
49	Jindal Steel & Power	Steel	0.38
50	DLF Ltd	Construction	0.34

As you can see, ITC Ltd has the highest weightage. This means the Nifty index is most sensitive to price changes in ITC Ltd, and least sensitive to price changes in DLF Ltd.

7.5 - Sector specific indices

While the Sensex and Nifty represent the broader markets there are certain indices that represents specific sectors. These are called the sectoral indices. For example the Bank Nifty on NSE represents the mood specific to the banking industry. The CNX IT on NSE represents the behavior of all the IT stocks in the stock markets. Both BSE and NSE have sector specific indexes. The construction and maintenance of these indices is similar to the other major indices.

Key takeaways from this chapter

1. An index acts as a barometer of the whole economy
2. An index going up indicates that the market participants are optimistic
3. An index going down indicates that the market participants are pessimistic
4. There are two main indices in India – The BSE Sensex and NSE's Nifty
5. Index can be used for a variety of purposes – information, bench marking, trading and hedging.
6. Index trading is probably the most popular use of the index
7. India follows the free float market capitalization method to construct the index
8. There are sector specific indices which convey the sentiment of specific sectors

CHAPTER 8

Commonly Used Jargons

The objective of this chapter is to help you learn some of the common market terminologies, and concepts associated with it.

Bull Market (Bullish) – If you believe that the stock prices are likely to go up then you are said to be bullish on the stock price. From a broader perspective, if the stock market index is going up during a particular time period, then it is referred to as the bull market.

Bear Market (Bearish) – If you believe that the stock prices are likely to go down then you are said to be bearish on the stock price. From a broader perspective, if the stock market index is going down during a particular time period, then it is referred to as the bear market.

Trend - A term 'trend' usually refers to the general market direction, and its associated strength. For example, if the market is declining fast, the trend is said to be bearish. If the market is trading flat with no movement then the trend is said to be sideways.

Face value of a stock – Face value (FV) or par value of a stock indicates the fixed denomination of a share. The face value is important with regard to corporate action. Usually when dividends and stock split are announced they are issued keeping the face value in perspective. For example the FV of Infosys is 5, and if they announce an annual dividend of Rs.63 that means the dividend yield is 1260%s (63 divided by 5).


52 week high/low – 52 week high is the highest point at which a stock has traded during the last 52 weeks (which also marks a year) and likewise 52 week low marks the lowest point at which the stock has traded during the last 52 weeks. The 52 week high and low gives a sense of the range within which the stock has traded during the year. Many people believe that if a stock reaches 52 week high, then it indicates a bullish trend for the foreseeable future. Similarly if a stock has hits 52 week low, some traders believe that it indicates a bearish trend for a foreseeable future.


All time high/low – This is similar to the 52 week high and low, with the only difference being the all time high price is the highest price the stock has ever traded from the time it has been listed. Similarly, the all time low price is the lowest price at which the stock has ever traded from the time it has been listed.


Long Position – Long position or going long is simply a reference to the direction of your trade. For example if you have bought or intend to buy Biocon shares then you are said to be long on Biocon or planning to go long on Biocon respectively. If you have bought the Nifty Index with an expectation that the index will trade higher then essentially you have a long position on Nifty. If you are long on a stock or an index, you are said to be bullish.


Short Position – Going short or simply 'shorting' is a term used to describe a transaction carried out in a particular order. This is a slightly tricky concept. To help you understand the concept shorting, I'd like to narrate a recent incident that happened to me at work.

If you are a gadget enthusiast like me, you would probably know that Xiaomi (Chinese manufactures of Smartphone) recently entered into an exclusive partnership with Flipkart to sell their flagship smart phone model called Mi3 in India. The price of Mi3 was speculated to be around Rs.14,000/-. If one wished to buy Mi3, he had to be a registered Flipkart user, the phone was not available for a non registered user, and the registration was open only for a short time. I had promptly registered to buy the phone, but my colleague Rajesh had not. Though he wanted to buy the phone, he could not because he had not registered on time.

Out of sheer desperation, Rajesh walked up to me, and made an offer. He said, he is willing to buy the phone from me at Rs. 16,500/-. Being a trader at heart, I readily agreed to sell him the phone! In fact I even demanded him to pay me the money right away.

After I pocketed the money, I thought to myself, what have I done?? Look at the situation I've put myself into? I've sold a phone to Rajesh, which I don't own yet!!

But then, it was not a bad deal after all. I agree, I had sold a phone that I dint own. However I could always buy the phone on Flipkart, and pass on the new unopened box to Rajesh. My only fear in this transaction was, what if the price of the phone is above Rs.16,500?? In that case I'd make a loss, and I'd regret entering into this transaction with Rajesh. For example if the phone was priced at Rs.18,000 my loss would be Rs.1,500 (18,000 – 16,500).

However to my luck, the phone was priced at Rs.14,000/-, I promptly bought it on Flipkart, upon delivery, I handed over the phone to Rajesh, and in the whole process I made a clean profit of Rs.2,500/- (16500 – 14000)!

If you look at the sequence of transactions, first I sold the phone (that I dint own) to Rajesh, and then I bought it later on Flipkart, and delivered the same to Rajesh. Simply put I had sold first, and bought it later!

This type of transaction is called a 'Short Trade'.

The concept of shorting is very counter intuitive simply because we are not used to 'shorting' in our day to day activity, unless you have a trader mentality :)

Going back to stock markets, think about this very simple transaction – on day 1 you buy shares of Wipro at Rs.405, two days later (day 3) the stock moves and you sell your shares at Rs.425. You made a profit of Rs.20/- on this transaction.

In this transaction your first leg of the trade was to buy Wipro at Rs.405, and the second leg was to sell Wipro at Rs.425, and you were bullish on the stock.

Going forward, on day 4, the stock is still trading at Rs.425, and you are now bearish on the stock. You are convinced that the stock will trade lower at Rs.405 in few days time. Now, is there a way you can profit out of your bearish expectation? Well, you could, and it can be done so by shorting the stock.

You sell the stock at Rs.425, and 2 days later assuming the stock trades at Rs.405, you buy it back.

If you realize the first leg of the trade was to sell at Rs.425, and the second leg was to buy the stock at Rs.405. This is always the case with shorting – you first sell at a price you perceive as high with an intention of buying it back at a lower price at a later point in time.

You have actually executed the same trade as buying at Rs.405 and selling at Rs.425 but in reverse order.

An obvious question you may have – How can one sell Wipro shares without owning it. Well you can do so, just like the way I sold a phone that I did not own.

When you first sell, you are essentially borrowing it from someone else in the market, and when you buy it back, you actually return the shares back. All this happens in the backend, and the stock exchange facilitates the process of borrowing, and returning it back.

In fact when you short a stock, it works so seamlessly that you will not even realize that you are borrowing it from someone else. From your perspective, all you need to know is that when you are bearish on the stock, you can short the stock, and the exchange takes care of borrowing the stock on your behalf. When you buy the stocks back, the exchange will ensure the stocks are returned back.

To sum it all up...

a.When you short, you have a bearish view on the stock. You profit if the stock price goes down. After you short, if the stock price goes up, you will end up making a loss

b.When you short you essentially borrow from another market participant, and you will have to deliver these shares back. You need not worry about the mechanics of this. The system will ensure all this happens in the background

c.Shorting a stock is easy – either you call your broker and ask him to short the stock or you do it yourself by selecting the stock you wish to short, and click on sell

d.For all practical purposes, if you want to short a stock, and hold the position for few days, it is best done on the derivatives markets

e.When you are short, you make money when the stock price goes down. You will make a loss if the stock price goes up after you have shorted the stock.

To summarize long and short positions as per table 8.1 in the following page.....

Table 8.1- Long and short positions

Position	1st Leg	2nd Leg	Expectation	Make money when	You will lose money if
Long	Buy	Sell	Bullish	Stock goes up	Stock price drops
Short	Sell	Buy	Bearish	Stock goes down	Stock price goes up

Square off – Square off is a term used to indicate that you intend to close an existing position. If you are long on a stock squaring off the position means to sell the stock. Please remember, when you are selling the stock to close an existing long position you are not shorting the stock!

When you are short on the stock, squaring off position means to buy the stock back. Remember when you buy it back, you are just closing an existing position and you are not going long!

Table 8.2 - Square off positions

When you are	Square off position is
Long	Sell the stock
Short	Buy the stock

Intraday position – Is a trading position you initiate with an expectation to square off the position within the same day.

OHLC – OHLC stands for open, high, low and close. We will understand more about this in the technical analysis module. For now, open is the price at which the stock opens for the day, high is the highest price at which the stock trade during the day, low is the lowest price at which the stock trades during the day, and the close is the closing price of the stock. For example, the OHLC of ACC on 17th June 2014 was 1486, 1511, 1467 and 1499.

Volume – Volumes and its impact on the stock prices is an important concept that we will explore in greater detail in the technical analysis module. Volumes represent the total transactions (both buy and sell put together) for a particular stock on a particular day. For example, on 17th June 2014, the volume on ACC was 5, 33,819 shares.

Market Segment – A market segment is a division within which a certain type of financial instrument is traded. Each financial instrument is characterized by its risk and reward parameters. The exchange operates in three main segments.

a.Capital Market – Capital market segments offers a wide range of tradable securities such as equity, preference shares, warrants and exchange traded funds. Capital Market segment has sub segments under which instruments are further classified. For example, common shares of companies are traded under the equity segment abbreviated as EQ. So if you were to buy or sell shares of a company you are essentially operating in the capital market segment

b.Futures and Options – Futures and Option, generally referred to as equity derivative segment is where one would trade leveraged products. We will explore the derivative markets in greater depth in the derivatives module

c.Whole sale Debt Market – The whole sale debt market deals with fixed income securities. Debt instruments include government securities, treasury bills, bonds issued by a public sector undertaking, corporate bonds, corporate debentures etc.

CHAPTER 9

The Trading Terminal

9.1 – Overview

When a market participant wants to transact in the market, he can do so by opting one of the options:

1. Call the stock broker, and trade usually called "Call & Trade"
2. Use a web browser to access the markets
3. Use the trading software called the Trading Terminal

Each of the above method is a gateway to the exchanges. The gateway allows you to do multiple things such as transacting in shares, tracking your Profit & Loss, tracking market movements, following news, managing your funds, viewing stock charts, accessing trading tools etc. The purpose of this chapter is to familiarize you with the trading terminal (TT), and its interface.

A trading terminal is software which can be downloaded from your broker's website and is installed on your computer. The trading terminal is quite a user friendly

interface, as most of its functionalities are menu driven. To access the trading terminal, you need to have a trading account with your broker.

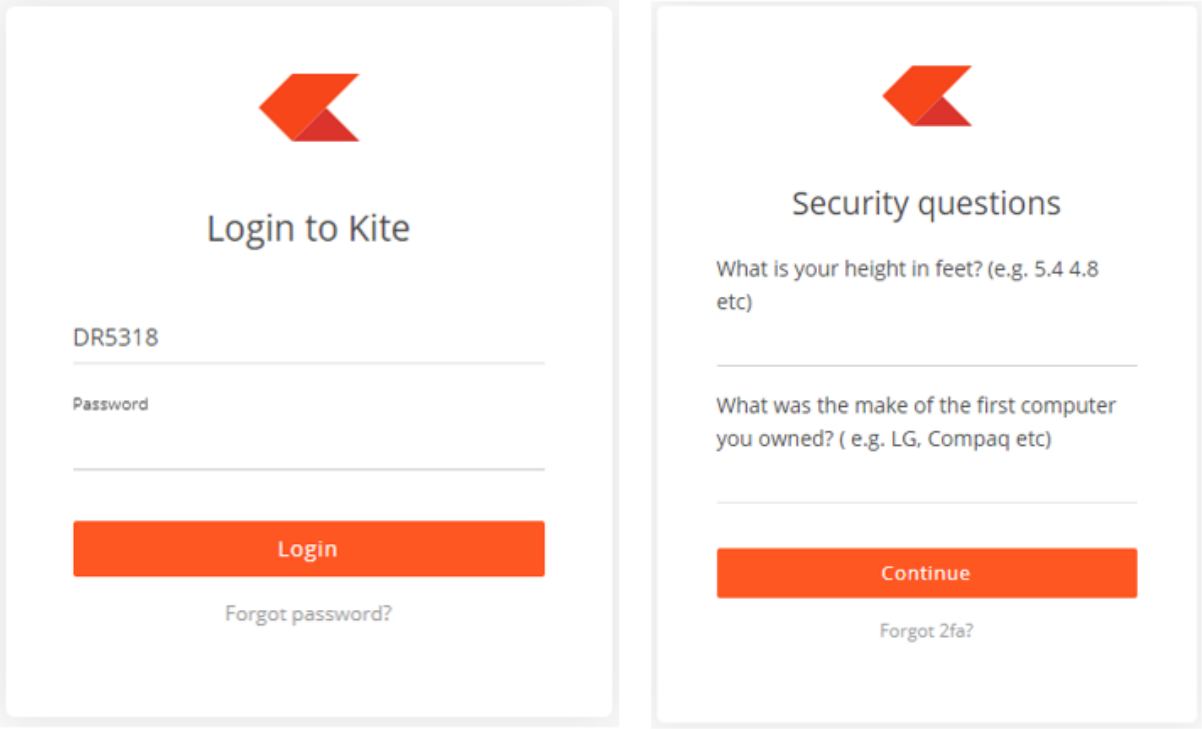
A good TT offers you numerous useful features. We will start by understanding a few basic features. To keep this chapter as practical as possible let us set two basic tasks to using the TT.

1. Buy 1 share of ITC, and
2. Track the price of Infosys

While we achieve the above two tasks, we will also learn about all the relevant concepts. For the purpose of this chapter, we will be using Zerodha's web platform '**Kite'**

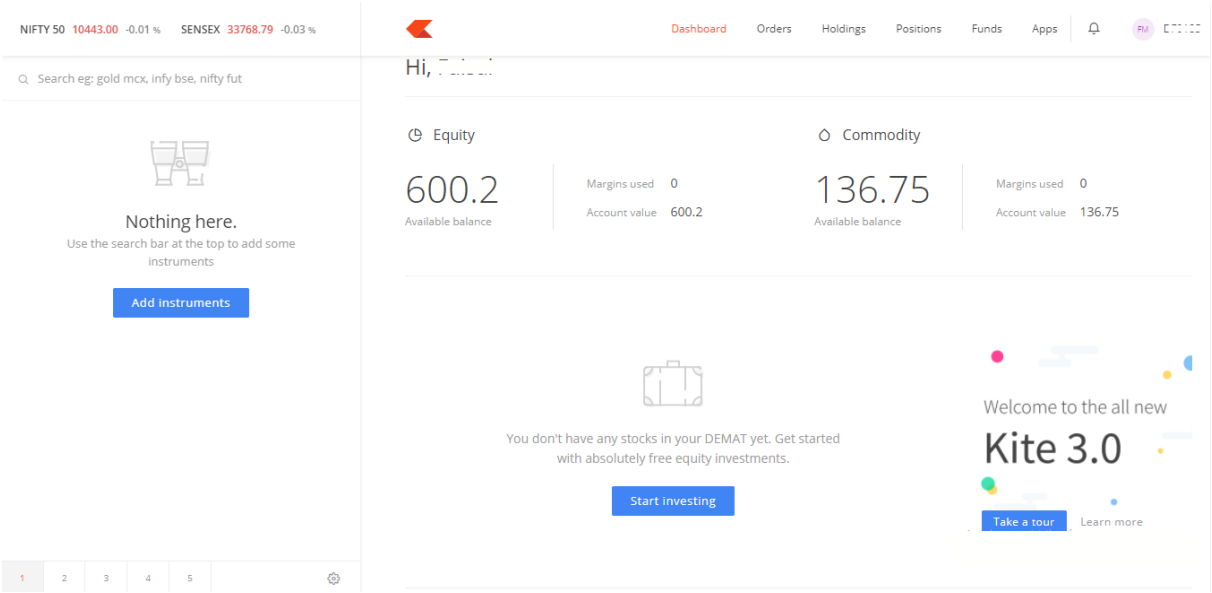
9.2 – The login process

The trading terminal is quite sensitive as it contains all your trading account information. In order to ensure adequate security, brokers usually follow a stringent login process. The process involves entering your password and answering two secret questions, the answers to which only you know. The snapshot below shows this process.

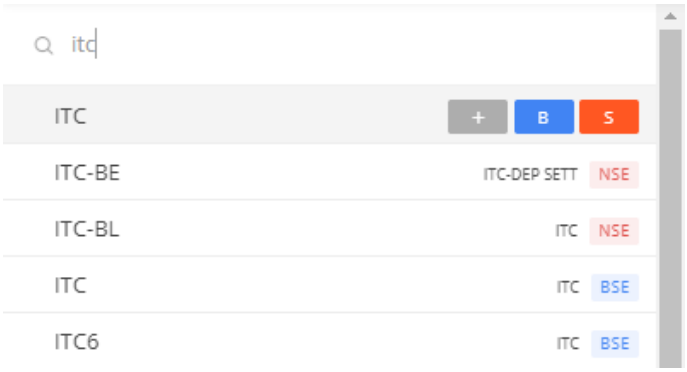


9.3 – The Market watch

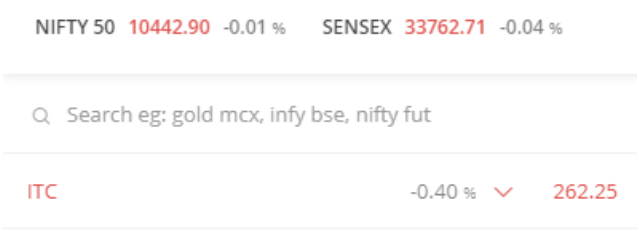
Once your login to the platform you will have to populate the 'market watch' with the stocks you are interested. Think about the market watch as a blank slate. Once the stock is loaded on the market watch you can easily transact and query information about it. A blank market watch looks like this (this is also the screen that you see once you log in)



Keeping the first task in mind we will load ITC Ltd onto the market watch. To do this we simply have to type in the stock symbol ITC in the search bar and the drop down will show the stock in different exchanges(NSE/BSE)



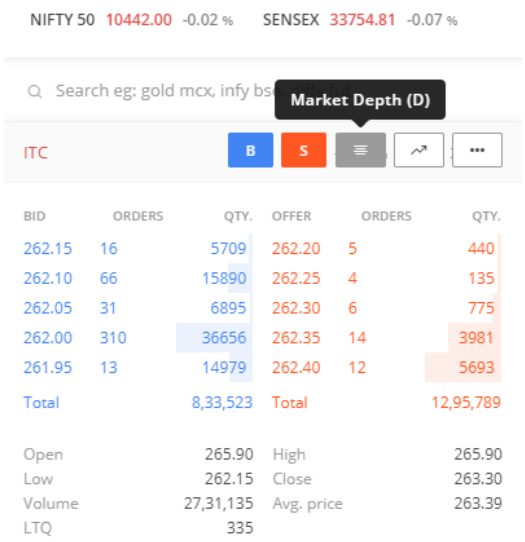
Click on the Add symbol to add the stock to the marketwatch



The marketwatch will display last traded price, percentage change of the stock

- The last traded price of the stock (LTP) – This gives us a sense of how much the stock is trading at the very moment
- Percentage change – This indicates the percentage points the LTP is varying with respect to the previous day close
- Some basic information that will be needed at this point would be:
- Previous day close – At what price did the stock close the previous day
- OHLC – Open, High, Low and Close gives us a sense of the range within which the stock is trading during the day
- Volumes – Gives a sense on how many shares are being traded at a particular point of time

You can find this information under Market Depth. If you hover over the stock name, you will find Buy, Sell, Market Depth and Stock Information. If you click on Marketdepth, you will find the above information along with the best bid and ask price ladder. We will be covering Bid and Ask price in the later part of the Chapter.



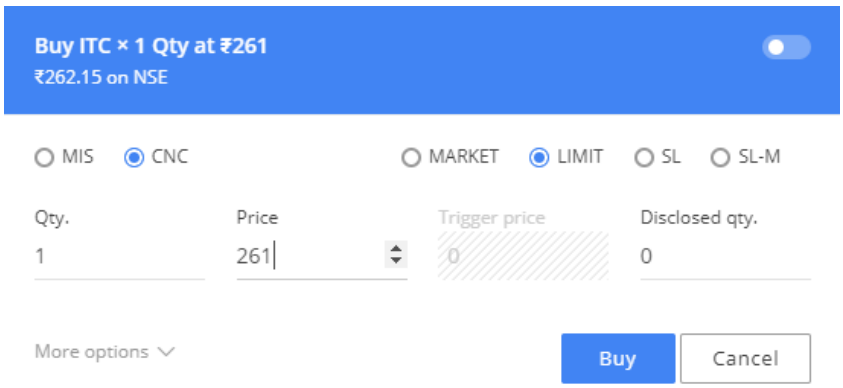
As you can see, the last traded price of ITC is Rs.262.25, it is trading -0.40% lower than the previous day close which is Rs.263.30. The open for the day was at Rs.265.90, the highest price and the lowest price at which the stock traded for the day was Rs.265.90 and Rs.262.15 respectively. The volume for the day is close to 27 lakh shares.

9.4 – Buying a stock through the trading terminal

Our goal is to buy 1 share of ITC. We now have ITC in our trading terminal, and we are convinced that buying ITC at Rs.261, which is roughly Rs.1.25 lesser than the last traded price is a great idea.

The first step for this process would be to invoke what is called a buy order form.

- Hover over the stock you want to Buy and click on the Buy Icon(B)
- This will invoke the Buy. When the buy order form is invoked, the following order form will appear on your screen.



The order form is pre populated with some information like the price and quantity. We need to modify this as per our requirement. Let us begin by the first drop down option on the top. By default, the exchange specified would be NSE.

The next entry is the 'order type'. By clicking on the drop down menu you will see the following four options:

- Limit
- Market
- SL
- SL-Market

Let us understand what these options actually mean.

You can opt for a '**Limit**' order when you are very particular about the price you want pay for a stock. In our case, the last traded price of ITC is Rs.262.25 but say we want to limit our buy price to Rs.261. In such a situation where we are particular about the price we want to transact in, we can opt for a limit order price. If the price does not fall to Rs.261, then you will not get the shares. This is one of the drawbacks of a limit order.

You can also opt for a **market order** when you intend to buy at market available prices instead of a very specific price that you have in mind. So if you were to place a market order, as long as there are sellers available, your order will go through and ITC will be bought in the vicinity of Rs.262.25. Suppose the price goes up to Rs.265 coinciding with your market order placement, then you will get ITC at Rs.265. This means when you place a market order, you will never be sure of the price at which you would transact, and this could be quite a dangerous situation if you are an active trader.

A stop loss order protects you from an adverse movement in the market after initiating a position. Suppose you buy ITC at Rs.262.25 with an expectation that ITC will hit Rs.275 in the near future. But instead, what if the price of ITC starts going down? We can protect ourselves firstly by defining what would be the worst possible loss you are willing to take. For instance, in the example let us assume you don't want to take a loss beyond Rs.255

This means you have gone long on ITC at Rs.262.25 and the maximum loss you are willing to take on this trade is Rs.6 (255). If the stock price drops down to Rs.255, the stop loss order gets active and hits the exchange and you will be out of the loss making position. As long as the price is above 255 the stop loss order will be dormant.

A stop loss order is a passive order. In order to activate it, we need to enter a trigger price. A trigger price, usually above the stop loss price acts as a price threshold and only after crossing this price the stop loss order transitions from a passive order to an active order.

Going with the above example:

We are long at Rs.261. In case the trade goes bad we would want to get rid of the position at Rs.255, therefore 255 is the stop loss price. The trigger price is specified so

that the stoploss order would transition from passive to active order. The trigger price has to be higher than the stop loss price. We can set this to Rs.256. If the price drops to Rs.256 from 255 the stop loss order gets active.

Going back to the main buy order entry form, once the order type is selected we now move directly to the quantity. Remember the task is to buy 1 share of ITC; hence we enter 1 in the quantity box. We ignore the trigger price and disclosed quantity for now. The next thing to select would be the product type.

Select CNC for delivery trades. Meaning if your intention is to buy and hold the shares for multiple days/months/years then you need to ensure the shares reside in your demat account. Selecting CNC is your way of communicating this to your broker.

Select NRML or MIS if you want to trade intraday. MIS is a margin product; we will understand more on this when we take up the module on derivatives.

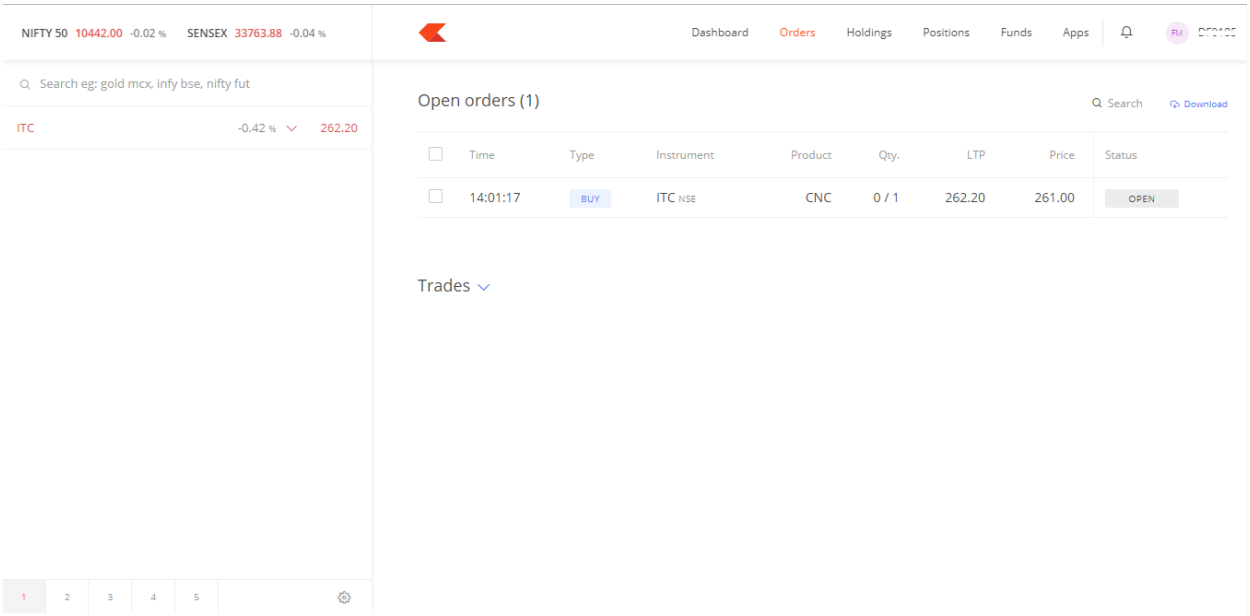
Once these details are filled in your order form, the order is good to hit the markets. The order gets transmitted to the exchange as soon as you press the submit button on the order form. A unique order ticket number is generated against your order.

Once the order is sent to the exchange it will not get executed unless the price hits Rs.261. As soon as the price drops to Rs.26 (and assuming there are sellers willing to sell 1 shares) you order gets through, and is eventually executed. As soon as your order is executed, you will own 1 shares of ITC.

9.5 – The order book and Trade book

The order book and trade book are two online registers within trading terminal. The order book keeps track of all the orders that you have sent to the exchange and the trade book tracks all the trades that you have transacted during the day.

The order book has all the details regarding your order. You can navigate to the orderbook by clicking the Orders tab

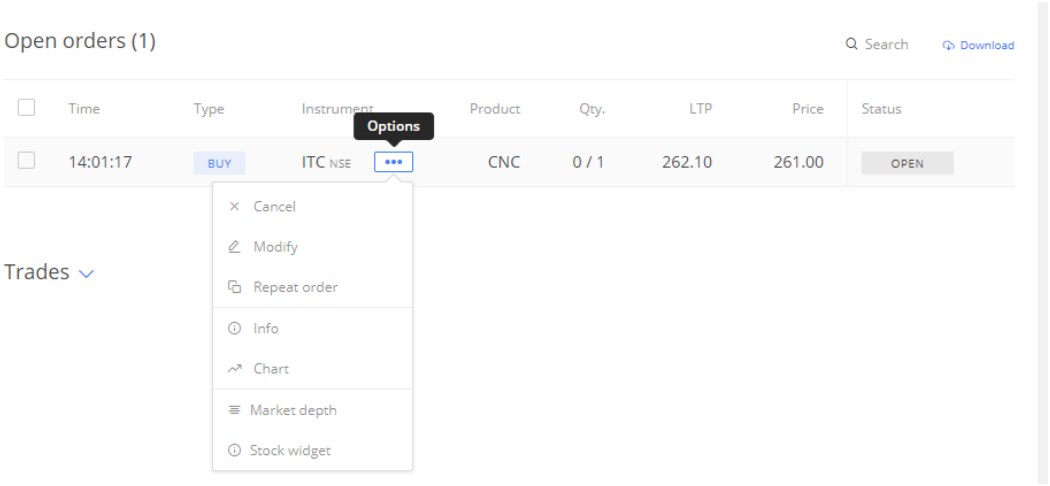


The order book provides the details of the orders you have placed. You should access the order book to:

- Double check the order details – quantity, price, order type, product type
- Modify the orders – For example if you want to modify the buy order from 332 to 333 you can do so from the order book
- Check Status – After you have placed the order you can check the status of the same. The status would state open if the order is completed partially, it would state completed if the order has been completed, and it would state rejected if your order has been rejected. You can also see the details of the rejection in the order book.

If you notice, there is an open order to buy 1 share of ITC at Rs.261.

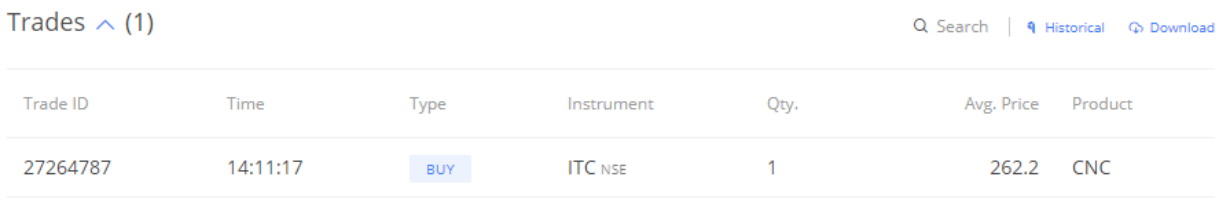
If you hover over the pending orders, you can find the option to modify or cancel the order



By clicking 'modify' the order form will be invoked and you can make the desired changes to the order.

Once the order has been processed and the trade has been executed, the trade details will be available in the trade book. You can find the trade book just below the orderbook

Here is a snapshot of the trade book

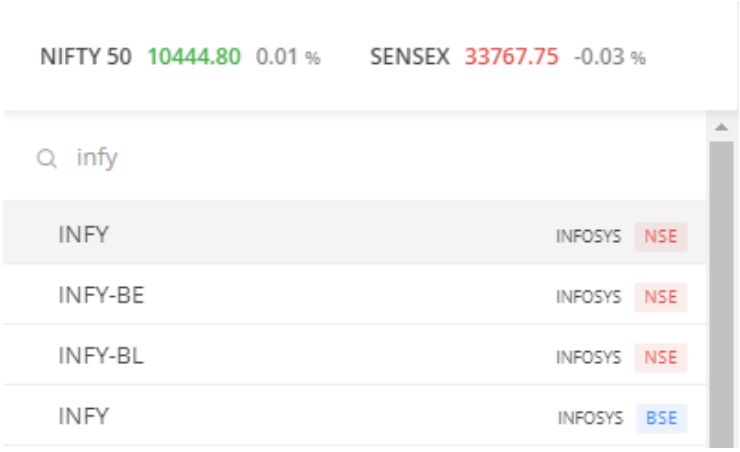


The trade book confirms that the user executed an order to buy 1 share of ITC at Rs 262.2. Also notice a unique exchange order number is generated for the trade.

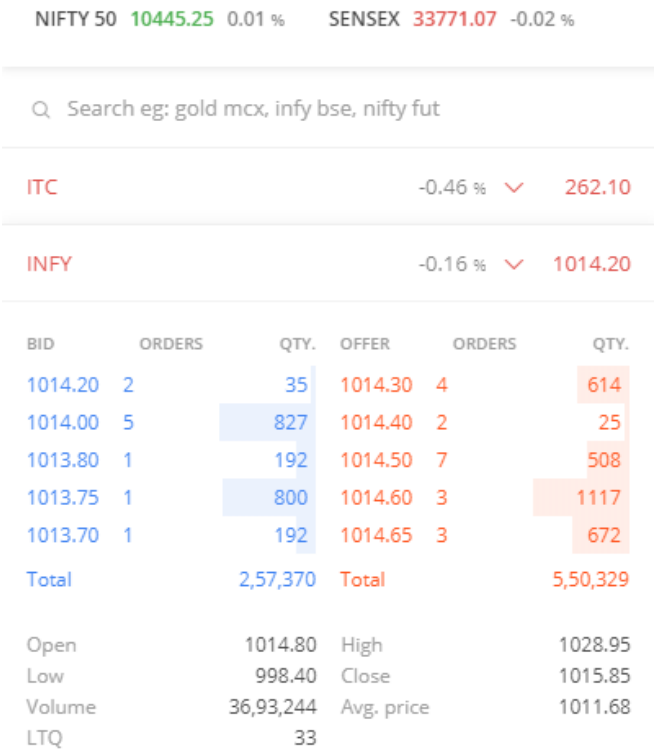
So with this our first task is complete!

You now officially own 1 share of ITC. This share will reside in our DEMAT account till you decide to sell it.

The next task is to track the price of Infosys. The first step would be to add Infosys to the market watch. We can do this by searching for Infosys in the search box.



The trading symbol for Infosys is Infy. Once we select Infy, we press Add to add it to the market watch.

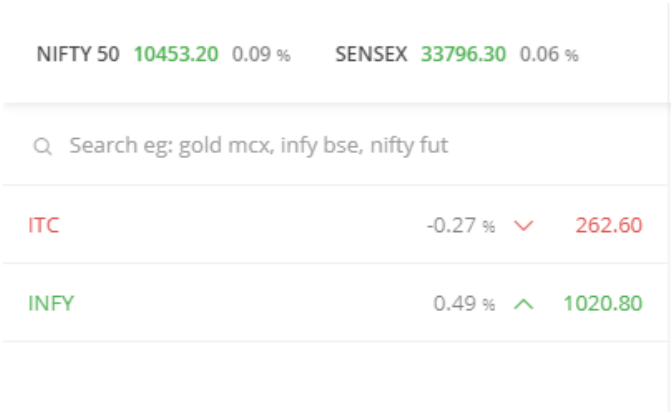


We can now track some live information about Infosys. The last trade price is Rs.1014.75; the stock is down -0.11% from its previous days close of Rs.1015.85. Infosys opened the day at Rs.1014.80 made a low of Rs.998.40 and a high of Rs.1028.95. The volumes were 3.6 million shares.

Please note, while the open price will be fixed at Rs. 1014.80 the high and low prices change as and when the price of Infosys changes. For example, if Infosys moves from Rs.1014.2 to Rs.1050, then the high price will reflect Rs. 1050 as the new high.

Notice that the LTP of Infosys is highlighted in green and ITC in red. If the current LTP is more than the previous LTP, the cell is highlighted in green else in red.

Have a look at the snapshot below:



The price of Infosys dropped from 1014.20 to 1020.80, and hence the colour changed to red from blue.

Besides the basic information about the LTP, OHLC, and volume we can also dig a bit deeper to understand the real time market participation. To see this, we need to invoke what is called a 'Market Depth' window also referred to as the snap quote window. As you can see, there is a lot of information in the snap quote window. I specifically want to draw your attention to the numbers in blue and red called the Bid and Ask prices.

You can use Kite by Zerodha more effectively by going through its **user manual**

9.6 – The Bid and Ask Price

If you want to buy a share, you obviously need to buy it from a seller. The seller will sell the shares at a price that he thinks is fair enough. The price that the sellers **ask you** is called the '**Ask Price'**. The ask price is highlighted in red. Let us analyse this in a bit more detail.

By default, the snap quote window displays the top 5 bid and asks prices. In the table above we have the top 5 ask prices.

The first ask price is Rs.3294.80. At this particular moment, this is the best price to buy Infosys and there are only 2 shares available at this price being offered by 2 different sellers (both of them are selling 1 share each). The next best price is Rs. 3294.85. At this price there are 4 shares available being offered by 2 different sellers. The third best price is Rs.3295 at which 8 shares are available, and this price is offered by two sellers. So on and so forth.

As you notice, the higher the ask price the lower is the priority. For example, at 5th position is an ask price of Rs.3296.25 for 5 shares. This is because the stock exchanges give priority to sellers willing to sell their shares at the least possible price.

Notice even if you want to buy 10 shares at Rs.3294.8 you can only buy 2 shares because there are only 2 sellers at Rs.3294.8. However, if you are not particular about the price (aka limit price) you can place a market order. When you place a market order at this stage, this is what happens:

- 2 shares are bought @ Rs.3294.8
- 4 shares are bought @ Rs.3294.85
- 4 shares are bought @ Rs.3295.00

The 10 shares will be bought at three different prices. Also in the process the LTP of Infosys will jump to Rs.3295 from Rs.3294.8

If you want to sell a share, you obviously need to sell it to a buyer willing to buy it from you. The buyer will buy the shares at a price that he thinks is fair enough. The price that the buyer demands is called the 'bid price'. The bid price is highlighted in blue. Let us analyse this part in a bit more detail:

Again by default the snap quote window displays the top five bid prices. Notice the best price at which you can sell shares is at Rs.3294.75, and at this price you can only sell 10 shares as there are only 5 buyers willing to buy from you.

If you were to sell 20 Infosys shares at market price the following would be the execution pattern:

- 10 shares sold @ Rs.3294.75
- 6 shares sold @ Rs.3294.20
- 1 share sold @ Rs.3294.15
- 3 shares sold @ Rs.3293.85

So in essence, the bid and ask prices gives you information about the top 5 prices at which the buyers and sellers are stacked up. It is extremely important for you to understand how the buyers and sellers are placing their trades especially if you are an intraday trader.

9.7 – Conclusion

The trading terminal is your gateway to markets. Trading terminal has many features that are useful to traders. We will explore these features as we progress through the various learning modules. For now, you should be in a position to understand how to set up a market watch, transact (buy and sell) in stocks, view the order and trade book, and understand the market depth window.

Key takeaways from this chapter

1. A trading terminal is your gateway to markets. You must know the operations of a trading terminal if you aspire to become an active trader
2. You can load the stock you are interested in on the market watch to track all the relevant information
3. Some of the basic information on market watch is – LTP, % change, OHLC and volumes
4. To buy a stock you need to invoke a buy order form by pressing 'B' key. Likewise, to sell a stock you need to invoke a sell order form by pressing 'S' key
5. You choose a limit order type when you are keen on transacting at a particular price, else you can opt for a market order
6. You choose CNC as product type if you want to buy and hold the stock across multiple days. If you want to trade intraday, you choose NRML or MIS

7. An order book lets you track orders that are both open and completed. You can modify the open orders by clicking on the modify button at the bottom of the order book
8. Once the order is completed you can view the trade details in the trade book. In case of a market order then you can view the exact trade price by accessing the trade book
9. You can press the F6 key to invoke the market depth or snap quote window. The market watch enables you to see bid and ask prices
10. The bid & ask prices refers to the price at which you can transact. By default, the top 5 bid and ask prices are displayed in the market depth window at all times.

CHAPTER 10

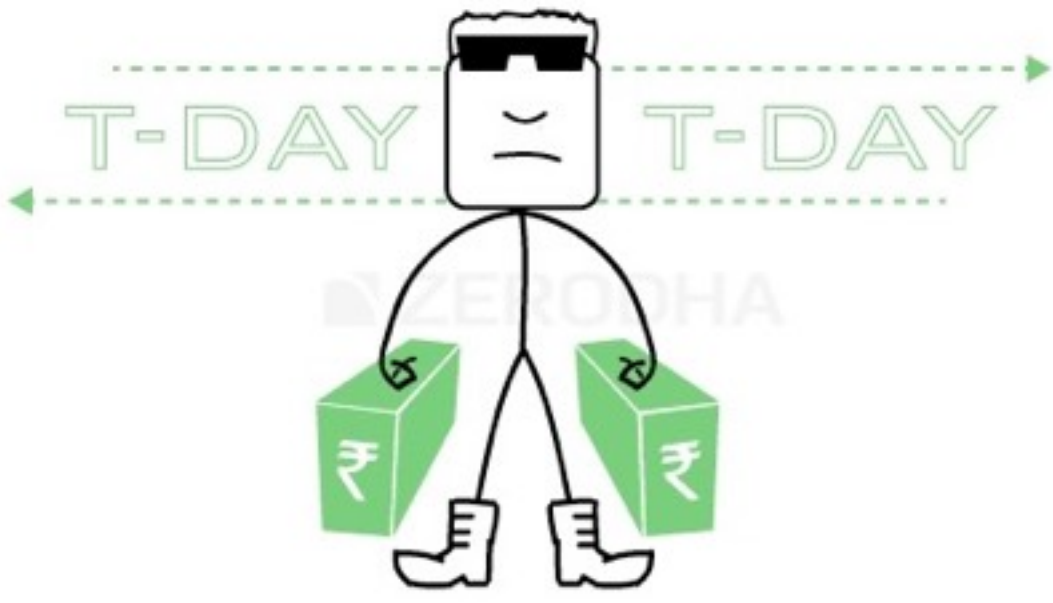
Clearing and Settlement

10.1 - Overview

While the topic on clearing and settlement is quite theoretical it is important to understand the mechanics behind it. As a trader or an investor you need not actually worry about how the trades are cleared and settled as there are professional intermediaries to carry out this function seamlessly for you.

However the lack of understanding of the clearing and settlement process could leave a void, and would not give a sense of completeness to the learning process. Hence for this reason we will explore what happens behind the scene from the time you buy a stock to the time it hits your DEMAT account.

We will keep this very practical with a clear emphasis on what you as a market participant should really know.



10.2 - What happens when you buy a stock?

Day 1 – The trade (T Day), Monday

Assume on 23rd June 2014 (Monday) you buy 100 shares of Reliance Industries at Rs.1,000/- per share. The total buy value is Rs.100,000/- (100 * 1000). The day you make the transaction is referred to as the trade date, represented as 'T Day'.

By the end of trade day your broker will debit Rs.100,000/- and the applicable charges towards your purchase. Assuming the trade is executed through Zerodha, the applicable charges would be as follows as per Table 10.1:

TABLE 10.1 - Charge List

Sl No	Chargeable Item	Applicable Charges	Amount
1	Brokerage	0.1% or Rs.20/- whichever is lower	20/-
2	Security Transaction Charges	0.1% of the turnover	100/-
3	Transaction Charges	0.00325% of the turnover	3.25/-
4	Service Tax	12% of Brokerage + Transaction charges	2.79/-
5	Education Cess	2% of service tax	0.0558/-
6	Higher education Cess	1% of service tax	0.0279/-
7	SEBI Charges	Rs.20 per crore of transaction	0.2/
	Total		**126.32/-**

So an amount of Rs.100,000/- plus Rs.126.32/- (which includes all the applicable charges) totaling Rs.100,126.32/- will be debited from your trading account the day you make the transaction. Do remember, the money goes out of your account but the stock has not come into your DEMAT account yet.

Also, on the same day the broker generates a 'contract note' and sends you a copy of the same. A contract note is like a bill generated detailing every transaction your made. This is an important document which is worth saving for future reference. A contract note typically shows a break up of all transactions done during the day along with the trade reference number. It also shows the breakup of charges charged by the broker.

Day 2 – Trade Day + 1 (T+ day, Tuesday)

The day after you made the transaction is called the T+1 day. On T+1 day you can sell the stock that you purchased the previous day. If you do so, you are basically doing a quick trade called "Buy Today, Sell Tomorrow" (BTST) or "Acquire Today, Sell Tomorrow" (ATST). Remember the stock is not in your DEMAT account yet. Hence, there is a risk involved, and you could be in trouble for selling a stock that you don't really own. This doesn't mean, every time you do a BTST trade you end up in trouble, but it does once in a way especially when you trade B group and illiquid stocks. The reason why this happens is a little convoluted, and we deliberately will not touch this topic now.

If you are starting fresh in the markets, I would suggest you do not do BTST trades unless you understand the risk involved.

From your perspective nothing happens on T+1 day. However in the background the money required to purchase the shares is collected by the exchange along with the exchange transaction charges and Security transaction tax.

Day 3 – Trade Day + 2 (T+2 day, Wednesday)

On day 3 or the T+2 day, around 11 AM shares are debited from the person who sold you the shares and credited to the brokerage with whom you are trading, who will in turn credit it to your DEMAT account by end of day. Similarly money which was debited from you is credited to the person who sold the shares.

The shares will now start reflecting in the DEMAT account indicating that you own 100 shares of Reliance.

So for all practical purposes if you buy a share on day T Day, you can expect to receive the shares in your DEMAT account only by end of T+2 day. The shares are available for transaction on T+3day.

10.3 - What happens when you sell a stock?

The day you sell the stocks is again called the trade day, represented as 'T Day'. The moment you sell the stock from your DEMAT account, the stock gets blocked .Before the T+2 day the blocked shares are given to the exchange. On T+2 day you would receive the funds from the sale which will be credited to your trading account after deduction of all applicable charges.

Key takeaways from this chapter

1. The day you make a transaction, it is called the trade date, represented as ‘T Day’
2. The broker is required to issue you a contract note for all the transactions carried out by end of T day
3. When you buy a share, the same will be reflected in your DEMAT account by end of T+2 day
4. All equity/stock settlements in India happen on a T+2 basis
5. When you sell shares, the shares are blocked immediately and the sale proceeds credited again on T +2 day

CHAPTER 11

Five Corporate Actions and its Impact on Stock Prices

11.1 - Overview

Corporate actions are initiatives taken up by a corporate entity that bring in a change to its stock. There are many types of corporate actions that an entity can choose to initiate. A good understanding of these corporate actions gives a clear picture of the company's financial health, and also to determine whether to buy or sell a particular stock.

In this chapter, we will be looking into the four most important corporate actions and their impact on stock prices.

A corporate action is initiated by the board of directors, and approved by the company's shareholders.

11.2 - Dividends

Dividends are paid by the company to its shareholders. Dividends are paid to distribute the profits made by the company during the year. Dividends are paid on a per share basis. For example, during the financial year 2012-13 Infosys had declared a dividend of Rs.42 per share. The dividend paid is also expressed as a percentage of the face value. In the above case, the face value of Infosys was Rs.5/- and the dividend paid was Rs.42/- hence the dividend payout is said to be 840% (42/5).

It is not mandatory to pay out the dividends every year. If the company feels that instead of paying dividends to shareholders they are better off utilizing the same cash to fund new project for a better future, then can do so.

Besides, the dividends need not be paid from the profits alone. If the company has made a loss during the year but it does hold a healthy cash reserve, then the company can still pay dividends from its cash reserves.

Sometimes distributing the dividends may be the best way forward for the company. When the growth opportunities for the company have exhausted and the company holds excess cash, it would make sense for the company to reward its shareholders thereby repaying the trust the shareholders hold in the company.

The decision to pay dividend is taken in the Annual General Meeting (AGM) during which the directors of the company meet. The dividends are not paid right after the announcement. This is because the shares are traded throughout the year and it would be difficult to identify who gets the dividend and who doesn't. The following timeline would help you understand the dividend cycle.

Dividend Declaration Date: This is the date on which the AGM takes place and the company's board approves the dividend issue

Record Date: This is the date on which the company decides to review the shareholders register to list down all the eligible shareholders for the dividend. Usually the time difference between the dividend declaration date and record date is at least 30 days

Ex Date/Ex Dividend date: The ex dividend date is normally set two business days before the record date. Only shareholders who own the shares before the ex dividend date are entitled to the dividend. This is because in India the normal settlement is on T+2 basis. So for all practical purposes if you want to be entitled for dividend you need to ensure you buy the shares before the ex dividend date.

Dividend Payout Date: This is the day on which the dividends are paid out to shareholders listed in the register of the company.

Cum Dividend: The shares are said to be cum dividend till the ex dividend date.

When the stock goes ex dividend, usually the stock drops to the extent of dividends paid. For example if ITC (trading at Rs. 335) has declared a dividend of Rs.5. On ex date the stock price will drop to the extent of dividend paid, and as in this case the price of ITC will drop down to Rs.330. The reason for this price drop is because the amount paid out no longer belongs to the company.

Dividends can be paid anytime during the financial year. If it's paid during the financial year it is called the interim dividend. If the dividend is paid at the end of the financial year it is called the final dividend.

11.3 - Bonus Issue

A bonus issue is a stock dividend, allotted by the company to reward the shareholders. The bonus shares are issued out of the reserves of the company. These are free shares that the shareholders receive against shares that they currently hold. These allotments typically come in a fixed ratio such as, 1:1, 2:1, 3:1 etc.

If the ratio is 2:1 ratio, the existing shareholders get 2 additional shares for every 1 share they hold at no additional cost. So if a shareholder owns 100 shares then he will be issued an additional 200 shares, so his total holding will become 300 shares. When the bonus shares are issued, the number of shares the shareholder holds will increase but the overall value of investment will remain the same.

To illustrate this kindly refer to Table 11.1 in the following page, let us assume a bonus issue on different ratios – 1:1, 3:1 and 5:1

Table 11.1 - Bonus Issue

Bonus Issue	No of shares held before bonus	Share price before Bonus issue	Value of Investment	Number of shares held after Bonus	Share price after Bonus issue	Value of Investment
1:1	100	75	7,500	200	37.5	7500
3:1	30	550	16,500	120	137.5	16,500
5:1	2000	15	30,000	12,000	2.5	30,000

Similar to the dividend issue there is a bonus announcement date, ex bonus date, and record date.

Companies issue bonus shares to encourage retail participation, especially when the price per share of a company is very high and it becomes tough for new investors to buy shares. By issuing bonus shares, the number of outstanding shares increases, but the value of each share reduces as shown in the example above.

11.4 - Stock Split

The word stock split- for the first time sounds weird but this happens on a regular basis in the markets. What this means is quite obvious – the stocks that you hold actually are split!

When a stock split is declared by the company the number of shares held increases but the investment value/market capitalization remains the same similar to bonus issue. The stock is split with reference to the face value. Suppose the stock's face value is Rs.10, and there is a 1:1 stock split then the face value will change to Rs.5. If you owned 1 share before split you would now own 2 shares after the split.

We will illustrate this with an example, refer to Table 11.2 in the following page:

Bonus -> 4:1 i.e 4 shares for every 1 share owned, (4+1)*[x]
Spilt -> 1:4 i.e every 1 share holded becomes 4 shares, (4)*[x]
Issue -> 1:4 i.e for every 4 shares we can subscribe for 1 shares, [x/4] at max can be subscribed

Table 11.2 - Stock Split

Split Ratio	Old FV	No of shares you own before split	Share Price before split	Investment Value before split	New FV	No of shares you own after split	Share Price after the split	Investment value after split
1:1	10	100	900	90,000	5	200	450	90,000
1:5	10	100	900	90,000	2	500	180	90,000

Similar to bonus issue, stock split is usually to encourage more retail participation by reducing the value per share.

11.5 - Rights Issue

The idea behind a rights issue is to raise fresh capital. However instead of going public, the company approaches their existing shareholders Think about the rights issue as a second IPO but for a select group of people (existing shareholders). The rights issue could be an indication of a promising new development in the company. The shareholders can subscribe to the rights issue in the proportion of their share holding. For example 1:4 rights issue means for every 4 shares a shareholder owns, he can subscribe to 1 additional share. Needless to say the new shares under the rights issue will be issued at a lower price than what prevails in the markets.

However, a word of caution – The investor should not be swayed by the discount offered by the company but they should look beyond that. Rights issue is different from bonus issue as one is paying money to acquire shares. Hence the shareholder should subscribe only if he or she is completely convinced about the future of the company. Also, if the market price is below the subscription price/right issue price it is obviously cheaper to buy it from the open market.

11.6 Buyback of shares

A buyback can be seen as a method for company to invest in itself by buying shares from other investors in the market. Buybacks reduce the number of shares outstanding in the market, however buyback of shares is an important method of corporate restructuring.

There could be many reasons why corporates choose to buy back shares..

1. Improve the profitability on a per share basis
2. To consolidate their stake in the company
3. To prevent other companies from taking over
4. To show the confidence of the promoters about their company
5. To support the share price from declining in the markets

When a company announces a buy back, it signals the company's confidence about itself. Hence this is usually a positive for the share price.

Key takeaways from this chapter

1. Corporate actions has an impact on stock prices
2. Dividends are means of rewarding the shareholders. Dividend is announced as a percentage of face value
3. If you aspire to get the dividend you need to own the stock before the ex dividend date
4. A bonus issue is a form of stock dividend. This is the company's way of rewarding the shareholders with additional shares
5. A stock spilt is done based on the face value. The face value and the stock price changes in proportion to the change in face value
6. Rights issue is way through which the company raises fresh capital from the existing shareholders. Subscribe to it only if you think it makes sense
7. Buy back signals a positive outlook of the promoters. This also conveys to the shareholders that the promoters are optimistic of the company's prospects.

CHAPTER 12

Key Events and Their Impact on Markets

https://mospi.gov.in/en/web/mospi/home

12.1 - Overview

For a market participant transacting just based on company specific information may not be sufficient. It is also important to understand the events that influence the markets. Various outside factors, economic and/or non-economic events have a key impact on the performance of stocks and markets in general.

In this chapter we will try to understand some of these events, and also how the stock market reacts to them.

12.2 - Monetary Policy

The monetary policy is a tool with which the Reserve Bank of India (RBI) controls the money supply by controlling the interest rates. They do this by tweaking the interest rates. RBI is India's central bank. World over every country's central bank is responsible for setting the interest rates.

While setting the interest rates the RBI has to strike a balance between growth and inflation. In a nutshell – if the interest rates are high that means the borrowing rates are high (particularly for corporations). If corporate can't borrow easily they cannot grow. If corporations don't grow, the economy slows down.

On the other hand when the interest rates are low, borrowing becomes easier. This translates to more money in the hands of the corporations and consumers. With more money there is increased spending which means the sellers tend to increase prices leading to inflation.

In order to strike a balance, the RBI has to consider all the factors and should carefully set a few key rates. Any imbalance in these rates can lead to an economic chaos. The key RBI rates that you need to track are as follows:

Repo Rate – Whenever banks want to borrow money they can borrow from the RBI. The rate at which RBI lends money to other banks is called the repo rate. If repo rate is high that means the cost of borrowing is high, leading to a slow growth in the economy. Currently, the repo rate in India is 8%. Markets don't like the RBI increasing the repo rates.

Reverse repo rate – Reverse Repo rate is the rate at which RBI borrows money from banks. When banks lend money to RBI they are certain that RBI will not default, and hence they are happier to lend their money to RBI as opposed to a corporate. However when banks choose to lend money to the RBI instead of the corporate entity, the supply of money in the banking system reduces. An increase in reverse repo rate is not great for the economy as it tightens the supply of money. The reverse repo rate is currently at 7%.

Cash reserve ratio (CRR) – Every bank is mandatorily required to maintain funds with RBI. The amount that they maintain is dependent on the CRR. If CRR increases then more money is removed from the system, which is again not good for the economy.

The RBI meets every quarter to review the rates. This is a key event that the market watches out for. The first to react to rate decisions would be interest rate sensitive stocks across various sectors such as – banks, automobile, housing finance, real estate, metals etc.

12.3 - Inflation

Inflation is a sustained increase in the general prices of goods and services. Increasing inflation erodes the purchasing power of money. All things being equal, if the cost of 1 KG of onion has increased from Rs.15 to Rs.20 then this price increase is attributed to inflation. Inflation is inevitable but a high inflation rate is not desirable as it could lead to economic uneasiness. A high level of inflation tends to send a bad signal to markets. Governments work towards cutting down the inflation to a manageable level. Inflation is generally measured using an index. If the index is going up by certain percentage points then it indicates rising inflation, likewise index falling indicates inflation cooling off.

There are two types of inflation indices – Wholesale Price Index (WPI) and Consumer Price Index (CPI).

Wholesale Price Index (WPI) – The WPI indicates the movement in prices at the wholesale level. It captures the price increase or decrease when they are sold between organizations as opposed to actual consumers. WPI is an easy and convenient method to calculate inflation. However the inflation measured here is at an institutional level and does not necessarily capture the inflation experienced by the consumer.

As I write this, the WPI inflation for the month of May 2014 stands at 6.01%.

Consumer Price Index (CPI)- The CPI on the other hand captures the effect of the change in prices at a retail level. As a consumer, CPI inflation is what really matters. The calculation of CPI is quite detailed as it involves classifying consumption into various categories and sub categories across urban and rural regions. Each of these categories is made into an index. This means the final CPI index is a composition of several internal indices.

The computation of CPI is quite rigorous and detailed. It is one of the most critical metrics for studying the economy. A national statistical agency called the Ministry of Statistics and Programme implementation (MOSPI) publishes the CPI numbers around the 2nd week of every month.

The CPI stands at 8.28% for the month of May 2014. Here is a chart for the inflation for the last one year in India.

As you can notice, the CPI inflation has kind of cooled off from the peak of 11.16% in November 2013. The RBI's challenge is to strike a balance between inflation and interest rates. Usually a low interest rate tends to increase the inflation and a high interest rate tends to arrest the inflation.

12.4 - Index of Industrial Production (IIP)

The Index of Industrial Production (IIP) is a short term indicator of how the industrial sector in the country is progressing. The data is released every month (along with inflation data) by Ministry of Statistics and Programme implementation (MOSPI). As the name suggests, the IIP measures the production in the Indian industrial sectors keeping a fixed reference point. As of today, India uses the reference point of 2004-05. The reference point is also called the base year.

Roughly about 15 different industries submit their production data to the ministry, which collates the data and releases it as an index number. If the IIP is increasing it indicates a vibrant industrial environment (as the production is going up) and hence a positive sign for the economy and markets. A decreasing IIP indicates a sluggish production environment, hence a negative sign for the economy and markets.

To sum up, an upswing in the industrial production is good for the economy and a downswing rings an alarm. As India is getting more industrialized, the relative importance of the Index of Industrial Production is increasing.

A lower IIP number puts pressure on the RBI to lower the interest rates. The following graph shows the change in IIP in percentage terms for the last 1 year.

12.5 - Purchasing Managers Index (PMI)

The Purchasing managers index (PMI) is an economic indicator which tries to capture the business activity across the manufacturing and service sectors in the country. This is a survey based indicator where the respondents – usually the purchasing managers indicate their change in business perception with respect to the previous month. A separate survey is conducted for the service and the manufacturing sectors. The data from the survey is consolidated on to a single index. Typical areas covered in the survey include factors such as new orders, output, business expectations and employment amongst others.

The PMI number usually oscillates around 50. A reading above 50 indicates expansion and below 50 indicates a contraction in the economy. And a reading at 50 indicates no change in the economy.

12.6 - Budget

The Budget is an event during which the Ministry of Finance discusses the country's finance in detail. The Finance Minister on behalf of the ministry makes a budget presentation to the entire country. During the budget, major policy announcements and economic reforms are announced which has an impact on various industries across the markets. Therefore the budget plays a very important role in the economy

To illustrate this further, one of the expectations for the budget (July 2014) was to increase the duties on cigarette. As expected, during the budget, the Finance Minister raised the duties on cigarette, and hence the prices of cigarettes were also increased. An increased cigarette price has a few implications:

1. Increased cigarette prices discourage smokers from buying cigarettes (needless to say this is a debatable) and hence the profitability of the cigarette manufacturing companies such as ITC decreases. If the profitability decreases then investors may want to sell shares of ITC.
2. If market participants start selling ITC, then the markets will come down because ITC is an index heavy weight.

In fact as a reaction to the budget announcement ITC traded 3.5% lower for this precise reason.

Budget is an annual event and it is announced during the last week of February. However under certain special circumstances such as a new government formation the budget announcement could be delayed.

12.7 - Corporate Earnings Announcement

This is perhaps one of the important events to which the stocks react. The listed companies (trading on stock exchange) are required to declare their earning numbers once in every quarter, also called the quarterly earning numbers. During an earnings announcement the corporate gives out details on various operational activities including..

1. How much revenue the company has generated?
2. How has the company managed its expense?
3. How much money the company paid in terms of taxes and interest charges?
4. What is the profitability during the quarter?

Besides some companies give an overview of what they expect from the upcoming quarters. This forecast is called the 'corporate guidance'.

Invariably every quarter the first blue chip company to make the quarterly announcement is Infosys Limited. They also give out guidance regularly. Market participants keenly follow what Infosys has to say in terms of guidance as it has an overall impact on the markets.

The table below gives you an overview of the earning season in India:

Table 12.1 - Quarterly Earnings

Sl No	Months	Quarter	Result Announcement
1	April to June	Quarter 1 (Q1)	1st week of July
2	July to September	Quarter 2 (Q2)	1st week of Oct
3	October to December	Quarter 3 (Q3)	1st Week of Jan
4	January to March	Quarter 4 (Q4)	1st Week of April

Every quarter when the company declares their earnings, the market participants match the earnings with their own expectation of how much the company should have earned. The market participant's expectation is called the 'street expectation'.

The stock price will react positively if the company's earnings are better than the street expectation. On a similar logic, the stock price will react negatively if the actual numbers are below the street expectation.

If the street expectation and actual numbers match, more often than not the stock price tends to trade flat with a negative bias. This is mainly owing to fact that the company could not give any positive surprises.

Key takeaways from this chapter

1. Markets and individual stocks react to events. Market participants should equip themselves to understand and decipher these events
2. Monetary policy is one of the most important economic event. During the monetary policy, review actions on repo, reverse repo, CRR etc are initiated
3. Interest rates and inflation are related. Increasing interest rates curbs inflation and vice versa
4. Inflation data is released every month by MOSPI. As a consumer, CPI inflation data is what you need to track
5. IIP measures the industrial production activity. Increase in IIP cheers the markets and lower IIP disappoints the market
6. PMI is a survey based business sentiment indicator. The PMI number oscillates around the 50 mark. Above 50 is good news to markets and PMI below 50 is not.
7. The Budget is an important market event where policy announcements and reform initiatives are taken. Markets and stocks react strongly to budget announcements
8. Corporate earnings are reported every quarter. Stocks react mainly due to the variance in actual number versus the street's expectation.

CHAPTER 13

Getting started!

Assuming you are done reading and understanding the entire 12 chapters in our very first module – **Introduction to stock markets**, you are now warmed up to dig deeper!

The objective of the first module is to give you quick hands on introduction to the stock markets. In our endeavor to introduce the stock markets to you, we have carefully selected concepts that you need to know, especially if you are absolutely new to markets. If you have many unanswered questions at this stage, it is a good sign. You will find your answers as we proceed to other modules.

At this stage, it is extremely important for you to understand why we have so many different learning modules, and how these modules are interrelated. To give you a head up, here are some of the modules that we will cover in Varsity.

1. Introduction to Stock Markets
2. Technical analysis
3. Fundamental Analysis
4. Futures Trading

5. Option Theory
6. Option Strategies
7. Quantitative Concepts
8. Commodity Markets
9. Risk Management & Trading Philosophy
10. Trading Strategies & Systems
11. Financial Modeling for Investment practice

13.1 - So many modules – how are they interrelated?

The idea of 'Varsity at Zerodha' is to put up a repository of high quality market related educational content. The content, will cover various aspects of fundamental analysis, technical analysis, derivatives, trading strategies, risk management, financial modeling etc. Each main topic is categorized as a module. If you are new to the markets, you could be wondering how each of these topics fit within the grand scheme of things.

To help you get a perspective, allow me to post a simple question to you.

In order to be successful in the markets, what according to you is the single most important factor? Success in markets is easily defined – if you make money consistently you are successful, and if you don't you are not!

So if you were to answer this question for me, chances are you will think about factors such as risk management, discipline, market timing, access to information etc as the key to be successful in markets.

While one cannot deny the importance of these factors what is even more compelling and primary is developing a **point of view (POV)**.

A point of view is an art of developing a sense of direction on a stock or the markets in general. If you think the stock is going up, your POV is bullish hence you would be a buyer of the stock. Likewise if you think a stock is going down your POV is bearish therefore you would be a seller of the stock.

Having said that, how do you actually develop a point of view? How do you figure out if the stock is going up or down?

To develop a point of view, one needs to develop a systematic approach to analyze the markets. There are a few methods using which you can figure out/ analyze what to buy or sell. They are:

1. Fundamental Analysis (FA)
2. Technical Analysis (TA)
3. Quantitative Analysis (QA)
4. Outside views

Just to give you a preview, here is a typical illustration of a trader's thought process while developing a POV (whether to buy or sell stocks) based on a particular method of analysis -

FA based POV – The quarterly numbers looks impressive. The company has reported a 25% top line and 15% bottom-line growth. The company's guidance also looks positive. With all the fundamentals factors aligned, the stock looks bullish hence the stock is a buy.

TA based POV – The MACD indicator has turned bullish along with a bullish engulfing candlestick pattern, with that study the stock's short term sentiment looks positive therefore the stocks is a buy.

QA based POV – With the recent up move, the stock's price to earnings (PE) touched the 3rd standard deviation. There is only 1% chance for the PE to breach the 3rd standard deviation. Hence it is prudent to expect a reversion to mean; therefore the stock is a sell.

Outside view – The analyst on TV is recommending a buy on the stock therefore the stock is a buy.

The POV you take should always be based on your own analysis rather than an outsider's view, as more often than not one ends up regretting taking an action based on anoutside view.

So after developing a POV what does one generally do? Does he straight away go and trade the point of view? Here is where the complexity of markets starts to kick in.

If the POV is bullish, you can choose to do one of the following:

1. Buy the stock in the spot market
2. Buy the stock in the derivatives markets.
    a. Within derivatives you can choose to buy the futures
    b. Or choose to trade via the option market

i) Within the option market there are call options and put options.

ii) You can also do a combination of call and put options to create a synthetic bullish trade

So what you choose to do after developing a POV is a totally a different ball game. Choosing the right instrument to trade which complements your POV is highly critical to profitable trading.

For example, if I'm extremely bullish on a stock from 1 year perspective then I'm better off doing a delivery trade. However if I'm out rightly bullish on the stock from a short tem perspective (say 1 week) then I'd rather choose a futures instrument to trade.

If I'm bullish with constraints attached (example - I'm expecting the markets to bounce because of a great budget announcement, but I don't want to risk much) then it would be prudent to choose an options instrument.

So the message here is – the market participant should develop a point of view and complement the POV with the right trading instrument. A well researched POV combined with the right instrument to trade is a perfect recipe for market success.

Also by now, hopefully you have got a sense of how all the different modules in "Varsity" play an important role in assimilating the market.

So keeping this in background, go ahead and explore the content on **Varsity at Zerodha.**

The next two modules will explore concepts that will help us develop POV based on Technical and Fundamental Analysis.

After reading through these two modules you will get a sense of developing a point of view on markets. The later modules we will discuss the different trading instruments that you can choose to complement your point of view. As we progress along, we will ramp up the flow to help you start calibrating your trades with effective risk management techniques.

CHAPTER 14

Supplementary Note

IPO, OFS, and FPO – How are they different?

IPO

Initial Public Offering is when a company is introduced in to the publicly traded stock markets for the very first time. In the IPO, the promoters of the company choose to offer a certain percentage of shares to the public. The reason for going public and the process of an IPO is explained in detail in Chapter 4 and 5.

The primary reason for going public is to raise capital which would be to fund expansion projects or cash out early investors. After the IPO is listed on the exchange and is traded in the secondary market, promoters of the company might still want additional capital for which there are three options available: Rights Issue, Offer for Sale and Follow-on Public Offer

Rights Issue

The promoters can choose to raise additional capital from its existing shareholders by offering them new shares at a discounted price (generally lower than Market Price). The company offers new shares in proportion of shares already held by the shareholders. For example, a 1:4 Rights Issue would mean that for every 4 shares held 1 additional share is offered. Although this option looks good, it limits the company to raise the capital from a small number of investors who are already holding shares of the company and might not want to invest more. A rights issue leads to creation of new shares that are offered to the shareholders, which in turn, dilutes the value of the previous held shares.

An example of a Rights issue is of South Indian Bank which announced a 1:3(One share for every 3 held) issue at a price of Rs 14 which is 30% lower than the Market Price the stock was trading (Rs 20 as on Record date 17 Feb 2017). The bank offered 45.07 lakh shares to the existing shareholders.

Rights issue is covered in detail in Chapter 11 covering key Corporate Actions

OFS

The promoters can choose to offer the secondary issue of shares to the whole market unlike a rights issue which is restricted to existing shareholders. The Exchange provides a separate window through the stock brokers for the Offer for Sale. The exchange allows company to route funds through OFS only if the Promoters want to sell out their holdings and/or to maintain minimum public shareholding requirement (For example, Govt. PSU have a public shareholding requirement of 25%).

There is a floor price set by the company, at or above which bids can be made by both Retail and Non-Retail investors. The shares are allotted, if bids are at cut-off price or above will be settled by the exchange into the investor Demat account in T+1 Days.

An example of an Offer for Sale is NTPC limited which offered a maximum of 46.35 million shares at a floor price of Rs 168 and was fully subscribed in the 2 day period. The OFS was held on 29th August 2017 for Non-Retail Investors and 30th August 2017.

FPO

A FPO also has the same intent of raising additional capital after it has been listed but follows a different mechanism for the application and allotment of shares. Shares can be diluted and fresh shares can be created and offered in an FPO. Just like an IPO, a FPO requires that Merchant Bankers be appointed to create a Draft Red Herring Prospectus which has to be approved by SEBI after which bidding is allowed in a 3-5 day period. Investors can place their bids through ASBA and shares are allotted based on the Cut-off Price decided after the book building process. Since the introduction of OFS in 2012, FPOs are seldom used due to the lengthy process of approvals.

The company decides on a Price Band and the FPO is publicly advertised. Prospective investors can bid for the issue using ASBA portal through Internet Banking or apply offline through a Bank Branch. After the bidding process is complete, the cut-off price is declared based on the demand and the additional shares allotted are listed on the exchange for trading in the secondary markets.

An example of an FPO is of Engineers India Ltd which underwent an issue in February 2014 with a price band of Rs 145-Rs 150. The issue was oversubscribed by 3 times. The shares on the day of starting date of the issue was trading at Rs 151.1. The lower price band was at a 4.2% discount from the market price.

Difference between OFS and FPO

- An OFS is used to offload the shares of Promoters while a FPO is used to fund new projects
- Dilution of shares is allowed in a FPO leading to change in Shareholding structure while OFS does not affect the number of authorized shares.
- Only the top 200 companies by Market Capitalisation are allowed to use the OFS route to raise funds while FPO option can be used by all listed companies
- Ever since OFS has been introduced by SEBI, FPO issues have come down and companies prefer to choose the OFS route to raise funds