



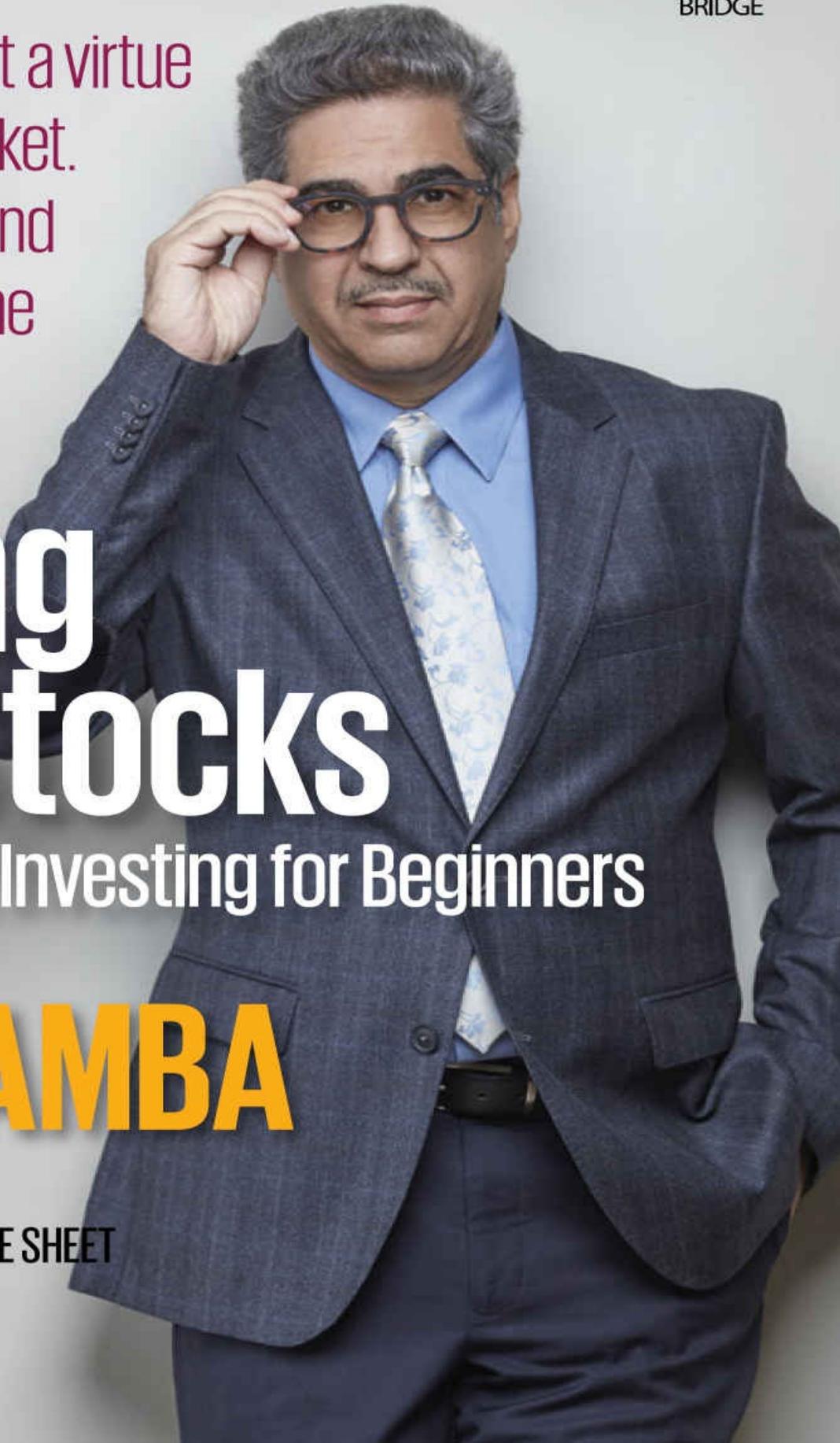
'Monogamy is not a virtue
in the stock market.
Flirt with many and
marry a few is the
mantra here!'

Flirting with Stocks

Stock Market Investing for Beginners

ANIL LAMBA

BESTSELLING AUTHOR OF
ROMANCING THE BALANCE SHEET



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Dedicated to
Mummy and Papaji (my parents)
to whom I owe everything

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Prologue

Many years ago, for a very brief stint, my company offered portfolio management services.

I had just passed out as a Chartered Accountant and developed a new-found interest in the stock market. The world was transitioning from mainframe computers to PCs (I was among the first in my town to own one). I had a friend who was a share market sub-broker with whom I often had engaging conversations regarding certain stocks that interested me.

This friend and I started a company offering subscription based portfolio management services.

When a member enrolled we would collect all the details of existing holdings and feed it into the PC. My friend regularly studied the market and came up with buy/sell recommendations. Each member was sent a weekly newsletter containing a list of stocks to buy. For the ‘sell’ recommendation, the database would throw up names of clients who held those shares, and only such clients were contacted by phone suggesting they exit. And I would take into account the tax implications of the resultant capital gains or losses before advising the client on the course of action to take.

It was a fully computerised, personalised portfolio management service, providing tax-linked advice. Definitely among the first of its kind then.

One of the stocks my friend was recommending for purchase in our weekly newsletters was Mazda Leasing (which was later rechristened as Mazda Industries and Leasing Ltd).

Mazda was then trading at around Rs 15 or so and was ‘tipped’ to touch Rs 100.

We not only preached but also practised, often buying for ourselves what we were suggesting to our clients. Mazda rose to 25.

The next newsletter was again bullish on Mazda. ‘It will touch 100’ was the prediction.

Mazda increased to around 40.

The newsletter continued to echo its optimistic opinion.

Then came the stock market crash of that time and the market collapsed.

One of the characteristics of a crash is that prices of shares fall across the board whether they deserve to or not. The reverse happens when markets are booming - even the shares that don't deserve to rise start climbing. A prudent investor gets rid of the junk collected along the way during boom times and starts to pick up under-valued gems during a crash.

Our darling Mazda came tumbling down too and settled at around Rs 6.

This marked the end of our first (and last) attempt at providing stock market related services.

For years thereafter Mazda remained stagnant at Rs 6.

One day, while doing a routine check of the performance of my personal portfolio of shares, I noticed a movement in the price of Mazda. After years of being a straight line on the graph, it had inched up a bit to 7 and then to 8. The following day it was 10, the next day the price had risen to 12 and soon it had gone up to 15.

Around this time a letter arrived from Mazda announcing a '1:1 rights offer'. And all at once the mystery behind the sudden rise in the price of Mazda became clear.

Putting two and two together one reasoned:

- The company wanted to raise more money;
- Going by the below-par price at which the scrip was trading, there was no possibility for the issue to succeed;
- Somebody from the inside was indulging in price-rigging, which explained the sudden upward movement;
- Now that the share was trading at 15, the rights being offered at a face value of Rs 10 appeared attractive.

My immediate reaction to the rights offer was a derisive laugh. The letter was torn into bits and thrown into the bin.

My friends who had received the same offer reacted in similar fashion.

However, the price of Mazda continued to rise.

It went up to 18, then 20, then 25.

At around 25, it plateaued for a while and fell a bit.



Foxed at this phenomenal rise in its price but also pleased, many who had invested when we were strongly recommending the share, sold and got out since they had managed to more or less recover the amount invested, and in some cases a little more.

I decided to wait for the second dip.

Mazda resumed its upward journey, crossing 30, going up to 40, then 42. It stabilised for a bit at 42, then fell to 40.

'Let me not get too greedy', I thought to myself, and decided to sell 50 percent of my holdings.

Mazda resumed its ascent once again - 50, 60, 70, 75. It hung around 75 for a while and then fell by a couple of rupees.

I decided that was enough. I had recovered the principal sum invested and the interest for the waiting period too, and sold the remaining shares left with me.

Mazda started to rise yet again. It went up to 100, then 150, then 200, 300, 500, 1,000. Very soon it touched 1,600.

I am recounting this anecdote here to highlight the price we pay when we go by assumptions rather than facts.

I had assumed that somebody connected to the promoters was rigging the price when I decided to ignore the rights offer received. What I didn't know was that Harshad Mehta had taken over the company which was causing the price to go up, a fact that a little research would have thrown up. (These were the heady days when the mere knowledge, or even a rumour, that Harshad Mehta was taking interest in a stock was enough to push the market up. In fact this was such a crazy phase that when it was revealed that Mr Mehta had invested in Mazda, the prices of some other companies that had 'Mazda' in their name went up too).

For the benefit of those who may not be aware, Harshad Mehta was an Indian stockbroker and the key accused in the Securities Market Scam of 1992 valued at almost Rs 5,000 crores. He engaged in a massive manipulation of stocks using money diverted from banks.

Around the time the price touched 1,600, I was speaking with a friend on the phone and since the market was booming, the conversation veered to the stocks he was holding. He said he did not invest any more and only had the shares that we had recommended many years back. He opened his cupboard and discovered 500 shares of Mazda.

The lesson again to be learned is that sometimes it pays to not monitor the market on a regular basis. If you do so, you may be tempted to sell in case you see an opportunity to make profit, as many of us did in the case of Mazda. And my friend, who was blissfully unaware of what was going on, managed to sell the same stock at around 1,600.



How to Invest in Stocks

Let me start at the very beginning for the benefit of those of you who have never invested before.

There are two ways to invest in shares: through the primary market and the secondary market. The first involves purchasing shares straight from the company when it makes a public issue and the second when shares are purchased from existing holders.

When a company raises money for the first time by issuing shares (or bonds), it does so in the primary capital market through an Initial Public Offering (IPO). Subsequent public issues by companies already listed on the exchange are called Follow-on Public Offers (FPOs). If one does not purchase at the time of the Public Issue, or is not allotted shares because the issue is over-subscribed, the other option is to buy in the secondary market from the existing owners of these shares.

Stock exchanges facilitate secondary market investing and trading. Markets, such as the New York Stock Exchange (NYSE), the NASDAQ Stock Market, the London Stock Exchange (LSE), the Tokyo Stock Exchange (TYO), the Bombay Stock Exchange (BSE), or the Singapore Exchange Ltd (SGX), are secondary markets.

What is the difference between a stock market and other markets?

Which other markets do we know of? The textile market, the vegetable market, the fish market and so on. What's the difference between these markets and the stock market?

The first difference lies in the level of order and discipline. Between the fish and the stock market, which one is more orderly? It is the fish market.

I am of course referring to the time, not too long ago, (and in certain places even today) when stock trading happened in the ‘ring’, which was an area of the trading floor (also referred to as ‘the pit’) on which securities were traded using the open outcry system. The boxing ring, in comparison, would probably be safer.

A newcomer visiting a stock exchange and witnessing trading going on would most likely think that a fight had erupted amongst the traders. There would be screaming and shouting, pulling and pushing, and communication between brokers taking place with the help of sign language. And in all that din, hundreds of millions worth of transactions would take place, usually without a hitch. There was a certain charm to the madness. Sadly, the days of the trading floor are all but over. With the advent of computerisation, electronic trading platforms have increasingly replaced floor-based trading.

The second difference is that in most other markets buyers and sellers meet face-to-face. In the stock exchange, this does not happen. Deals are done through brokers.

The third, and perhaps the most significant, difference is that in other markets the seller carries the goods to be sold, the buyer goes with money in the pocket, and a physical exchange of goods for money takes place. In the stock exchange, neither does the buyer pay money nor does the seller deliver the securities. Merely a deal is struck. The physical exchange of goods and money happens later.

How do you buy securities in the secondary market?

Let's say Karina has never purchased shares so far and wishes to begin investing. Let us also assume that I am narrating a case that happened several years ago, when stock market operations were not yet fully automated and the settlement took almost a week.

Early one morning, I receive a call from her saying she has kept aside a sum of 20,000 and wants to invest in shares, and if I could recommend a stock she

should invest in. I suggest the name of Reliable Industries.

Now how should she go about it?

The first thing she will have to do is look at the stock market page in the financial newspapers to find out the price at which Reliable is trading. She discovers Reliable is trading at a price of 20. She has to now find a broker with whom she can place an order to buy. Let's say, she identifies Broker A.

Broker A wants to know how many shares of Reliable Industries she wishes to buy. Karina has 20,000 to spare in her bank and the price of Reliable shares is 20, so she places an order for 1,000 shares. By evening, Broker A confirms the transaction. So far only the deal has been confirmed. Neither has she paid for the shares nor received delivery.

The stock market quotation page in the newspaper, which Karina regularly skipped so far, now holds a new fascination for her. The next morning, as soon as the newspaper arrives, Karina flips to the pages giving the stock quotes. She eagerly checks the price of Reliable Industries and finds that it has increased to 22. The following day's newspaper shows 25, and the next day she finds that Reliable has touched 30.

Karina is excited. She thinks that since this is the first time she has ever invested, she better not get too greedy. She picks up the phone, calls up Broker A and tells him she would like to sell her shares. Broker A confirms shortly that her 1,000 shares have been sold at 30 each.

Karina makes a quick calculation of her return on investment. She had purchased the shares for 20,000 and sold them for 30,000. So she made a profit of 10,000 on an investment of 20,000 which works out to 50 per cent. But this profit was over a period of one week, and there are 52 weeks in a year. So 50 per cent multiplied by 52 weeks translates into an annualised return on investment of 2,600 per cent.

She regrets not having invested in stocks earlier, and begins to think there is no investment like stock investment. Promptly, the next morning, I receive another call from her to ask what she should buy this time. Let's say, this time I recommend that she picks up stock in Associated Hotels. The same process commences again. She checks the price and finds that Associated Hotels is trading at 15. She calls Broker A. He wants to know how many shares she would like him to buy for her.

The money now available with her is 30,000 (the original 20,000 plus the 10,000

profit made on the Reliable deal) and the price of Associated Hotels is 15. She can purchase 2,000 shares.

She is about to tell Broker A to purchase 2,000 shares for her when suddenly she stops in her tracks. Why did she purchase just 1,000 shares of Reliable the previous time? The answer was obvious: the price of Reliable was 20 and the money available with her was 20,000. But, she asks herself, did she pay for the shares? Before she was asked to pay, she managed to sell the shares and make a profit of 10,000. It strikes her that if she didn't have to pay, she could have purchased 10,000 shares instead of a mere 1,000, and made a profit of 100,000. Or, she could have purchased even more.

She also modifies the calculation of her return on investment which had worked out at 2,600 per cent. But this was on the assumption that she had made a profit of 10,000 on an investment of 20,000 over a week. But she now realises that the profit of 10,000 was on zero investment and the return on investment actually worked out to infinity.

She snaps out of her stupor when she hears the broker asking her once again how many shares she would like him to buy.

'Buy 20,000 shares for me,' she says. With a bank balance of only 30,000, she has placed an order for shares worth 300,000.

The underlying logic applied by her is that like the previous time, in the coming days, the price of Associated Hotels would start rising. She would then sell the shares before the broker asks her to pay and would pocket the difference. Since she would not have to pay, she does not have to confine her purchases to the funds available. What she doesn't realise is that the previous time, my recommendation to buy Reliable Industries' shares turned out to be correct by a stroke of luck.

The next day, when she checks the price of Associated Hotels, it has dropped to 14, the following day it is down to 12 and the next day to 10. Soon the broker is going to ask her to pay up 300,000, which she does not have. The second option would be to sell the 20,000 shares at 10 for 200,000 and pay the difference of 100,000. Either way she stands to lose.

Investors and speculators

What I'm trying to tell you is that in the stock market you will encounter two types of players: investors and speculators.

Investors are people who purchase shares for which they have the money, pay for the shares and take delivery. They wait for an opportune time to sell, and when they sell, deliver the shares and collect the money. Speculators, on the other hand, buy shares which they may not possess the ability to pay for, and before the due date for payment, sell the stock. They pocket the difference if the price movement is favourable, or pay the difference if the price has moved adversely.

Investors will usually study the company, do some fundamental analysis and buy, provided the stock is available at or below its intrinsic value. Speculators are akin to gamblers. They often buy stock not on the basis of its fundamentals, but on the likelihood of its price going up on account of market sentiment.

I would urge all of you reading this book to become investors, but avoid speculation unless you have understood all the risks associated with it and have the ability to bear the loss.

When speculators, expecting prices to rise, purchase shares beyond their means, it is called ‘forward trading’ (also referred to as ‘going long’). Inversely, when prices are expected to fall, speculators sell shares they do not have. This is called ‘short selling’ (or ‘going short’).

In Indian equity markets, short selling is typically undertaken via the futures and options route and short selling in the cash market cannot be done for longer than an intra-day period i.e. single trading session.

CONCEPT OF MARGIN TRADING



In order to trade in shares, one must usually have the money to pay for what is purchased and shares to deliver what is sold.

However, if one does not have the entire amount to pay for purchases or the necessary shares to deliver for the sale, one has to square the transaction by a reverse transaction before the close of the settlement cycle.

During the course of the settlement cycle if the price has moved in one's favour (risen in case of purchase made earlier and fallen in case of a sale done earlier), one will make a profit and in case the price movement is adverse, one will make a loss.

A percentage of the value of the transaction is collected as a margin to safeguard against any adverse price movement.



BUYING ON MARGIN

Suppose a person has a bank balance of 500,000. This person can purchase 5,000 shares of a certain company at 100. In the normal course, the buyer would be expected to pay for the shares on the settlement day to the exchange and receive 5,000 shares from the exchange which will get credited in the buyer's demat account, an account investors use to hold their shares electronically.

Instead, this person can use the money available as a margin. Let us suppose the applicable margin rate is 20 per cent. This person can now buy up to 25,000 shares of the company at 100 each, worth 2,500,000, for which the margin money, at 20 per cent, would be 500,000.

Since the person does not have the money to take delivery of 25,000 shares, this buyer will now have to square off his purchase transaction by placing a sell order by the end of the settlement cycle.

Let us suppose the price of the share rises to 110 before the end of the settlement cycle. In this case the buyer would have made a profit of 250,000, which is substantially higher than what he stood to make on 5,000 shares that he would have purchased with the intention of taking delivery.

There is, of course, the risk that if the price movement had been

There is, of course, the risk that if the price movement had been adverse during the settlement cycle, the buyer would still be forced to square off the transaction and the loss would be adjusted against the margin amount.



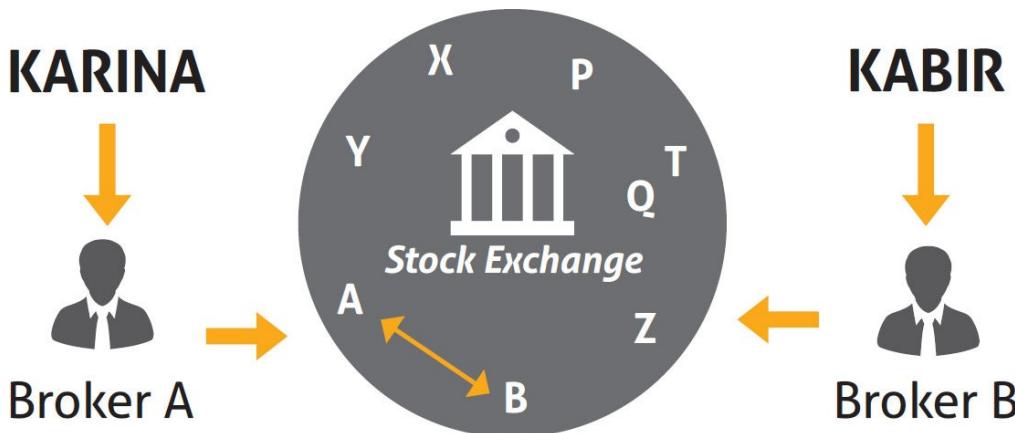
SELLING ON MARGIN

A person expects the price of a certain scrip to go down and now wants to sell shares that he does not possess to take advantage of the expected drop in price. He can do so by giving the margin to his broker at the applicable rate. As he does not have the shares to deliver, he will have to square off the sell transaction by placing a buy order before the end of the settlement cycle. Just as in the case of buying on margin, if the price movement is favourable (in this case, if it falls) he will make a profit. In case price goes up, he will make a loss which will get adjusted against the margin amount.

How Does the Transaction Take Place?

When Karina approaches Broker A to purchase shares for her, it will not be possible for him to do so unless there is someone who wants to sell those shares. Let's say on the same day, Kabir calls up Broker B to sell 1,000 shares of Reliable Industries.

When Broker A and B meet (either physically, as in the days of floor-based trading, or virtually), a deal takes place.



Broker A will now send Karina a contract note which will essentially state that he has purchased 1,000 shares of Reliable Industries on her behalf for which she owes him 20,000 and he owes her the delivery of 1,000 shares, both of which will happen in due course.

On or before the scheduled date, Karina will pay 20,000 to Broker A, who in turn will pay this money to the stock exchange. The stock exchange will pay 20,000 to Broker B, who will then give it to Kabir.

The delivery of shares will take the reverse route. Kabir will give 1,000 shares of Reliable Industries to Broker B, which he will give to the stock exchange. The stock exchange will give these shares to Broker A, who will then pass them on to Karina. In these days of dematerialised securities and electronic payments, all this happens automatically

A person wishing to buy shares in the market places an order with a broker who routes the order through his system to the exchange. The order stays in the queue in the exchange's system and gets executed when the order logs on to the system within the buy limit that has been specified. The shares purchased are then sent to the buyer by the broker either in physical or dematerialised format



TYPES OF ORDERS:

There are different types of orders that can be placed in a stock exchange:

Limit Order: This is an order to buy or sell with a price limit. If Reliable Industries is quoting at 101, you place a buy order for it with a limit price of Rs 100. This puts a cap on your purchase price. The order will remain pending since the current market price is higher than the limit price and will get executed as soon as the price falls to 100 or below. In case the actual price of Reliable Industries on the exchange was 98, the order will be executed at the best price offered on the exchange, say 99. Your order may thus get executed below your limit price but in no case will exceed the limit buy price. Similarly for a limit sell order the execution price will in no case be below the limit sell price.

Market Order: This kind of an order is placed by investors who are keen to buy/sell the shares regardless of the price. If Reliable Industries shares were quoting at 101 and you place a market buy order, it will get executed at the best offer price on the exchange, which could be higher or lower than 101.

Stop Loss Order: A stop loss order is one that gets activated only when the price reaches or crosses a threshold price called the ‘trigger price’ chosen by the trader. This helps those who engage in short-selling/forward-trading to limit their losses in case the market moves adversely to their interests.

What is the role of the stock exchange ?

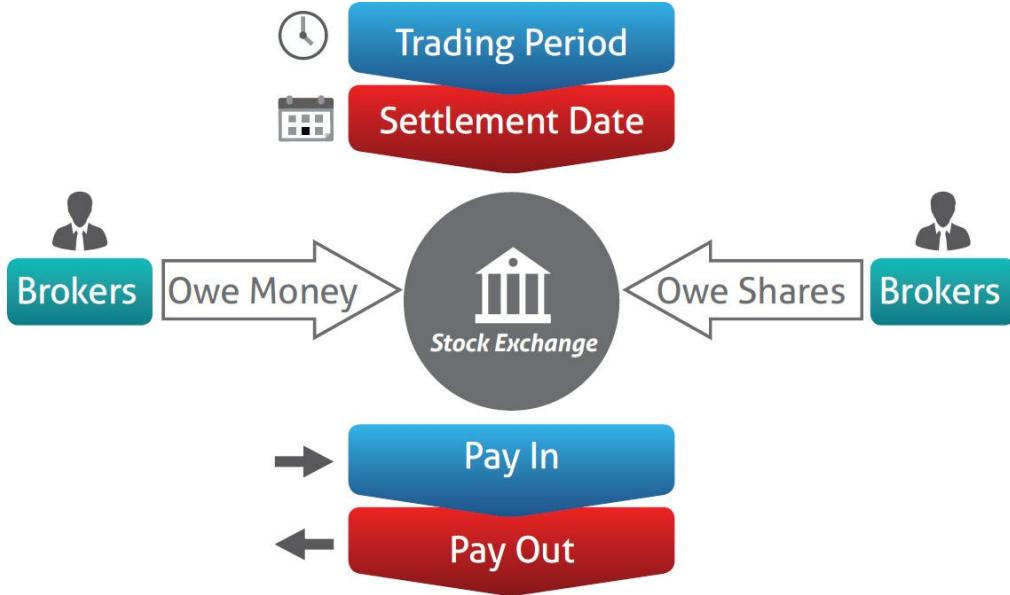
The stock exchange acts as an authority that facilitates buying and selling of securities and ensures that each party honours its commitments.

In our example, Broker A had purchased 1,000 shares of Reliable Industries for Karina from Broker B, who in turn was selling on behalf of Kabir. However, the stock exchange does not recognise Karina and Kabir. In the books of the stock exchange, Broker A has purchased and Broker B has sold the shares. Broker A now owes the stock exchange 20,000 and the stock exchange owes Broker A delivery of 1,000 shares of Reliable Industries. Similarly, Broker B owes the stock exchange delivery of 1,000 shares of Reliable Industries, and the stock exchange owes Broker B 20,000. A little later, if Broker A sells shares worth 30,000 for another client, now the stock exchange owes Broker A 10,000 (30,000 for shares sold less 20,000 for shares purchased by Broker A). And let's say, Broker A sells 1,000 shares of Reliable Industries for someone else. He had purchased 1,000 shares of Reliable Industries for Karina, and now has sold the same quantity of shares of the same company for another client. The stock exchange moves out of the picture here. Broker A will collect shares from the client who has sold them and deliver the same to Karina.

The stock exchange is completely in the know of each transaction that has taken place and the money and shares due from and to every broker.

The net position of all the transactions that take place over a 'trading period' are settled on the 'settlement date'.

This is followed by the 'pay-in' day, when brokers who owe money (because their purchases are greater than their sales) make the payments, and those who owe shares (because their sales have exceeded their purchases), deliver the shares.



The following day is called the ‘pay-out’ day, when the stock exchange pays money to brokers to whom it owes money, and delivers shares to those it owes shares.

‘Badla’ trading or carry forward of transactions

For a moment imagine that Karina did not purchase the shares of Associated Hotels on my advice, and had actually done some research—studied its balance sheet, its profitability track record, the future projections, the sector’s prospects—and had concluded that Associated Hotels at a price of 15 was a steal. She strongly felt that this scrip actually deserved a far higher price and it was a matter of time for the price to move northward.

But in the stock market, it doesn’t matter how intelligent you are. You may be right in thinking that the scrip deserves a higher price, but unless a majority of the investors think likewise, it will not happen. If the market perceives the scrip to be overpriced at 15, the price will actually fall.

Now when the price falls, and Karina being unable to pay is asked to sell the shares at 10, she is obviously reluctant to do so. If she had found the scrip attractive at 15, she finds it even more appealing at 10. She, in fact, wishes she could purchase some more.

Is it possible for her to not pay and also not sell? A few years back, when the trading period was almost a week, that was possible. Karina could request her

transaction to be carried forward to the next settlement.

How could she do that? On the pay-in date, the brokers that owe money to the stock exchange are expected to pay for their purchases. And here is Broker A, whose client, Karina, has purchased shares worth 300,000 and is requesting a carry-forward of her transaction. But there is another broker, Broker B, whose client has sold shares to Karina and is waiting to receive money on the pay-out date. There is now a bit of a discrepancy between the amount the stock exchange is to receive, and the amount it is expected to pay-out.

At such times, some opportunists sitting on the sidelines, waiting for this type of a situation to arise, would offer to lend the amount required to tide over the shortfall. They were called ‘badla’ financiers, who in return would be paid an interest by Karina.

On the other hand, let’s say Karina is expecting the price of a certain scrip to crash. In such a case, she could sell shares at today’s prices even if she did not own any in the expectation that by the time the broker asks her for delivery, the price would have fallen. She would then ask the broker to buy back those shares at the reduced prices and pocket the difference.

But what if instead of falling, the price actually went up?

If Karina is confident that the price will eventually fall, she could request the broker to carry forward this transaction to the next settlement. Now a different kind of discrepancy has arisen. The buyer is ready with the payment, but the seller is unable to deliver. This time, a lender of securities steps forward to lend the shares for delivery on behalf of Karina in exchange for money. This was called ‘undha badla’ or reverse badla. With the introduction of futures and options exchange in 2000, the Securities and Exchange Board of India (SEBI) banned ‘badla’ with effect from 2001. Since then, in Indian equity markets, short selling is undertaken via the futures and options route and short selling in the cash market cannot be done for longer than ‘intra-day period’ (i.e. single trading session). Which means, that you can take a short position anytime during the

day, but will have to buy back the shares before the market closes and can no longer carry it forward for multiple days.



Badla was an indigenous carry-forward system invented on the Bombay Stock Exchange and was in vogue in India prior to the introduction of the futures contracts in the year 2000.

It involved buying stocks with borrowed money with the stock exchange acting as an intermediary. The interest rate was determined by the demand for the underlying stock. Like a traditional futures contract, badla was a form of leverage.

Let's suppose Jose is convinced that shares of a particular company are worth more than the current market price at which they are being quoted on the stock exchange. Jose wants to buy these shares but does not possess the money to do so. In such a case, he can do a badla transaction. Jose approaches Robin, a badla financier who has enough money to purchase the shares. Robin gives the money to his broker to purchase the shares. The broker gives the money to exchange and the shares are transferred to Robin. But the exchange keeps the shares with itself on behalf of Robin. Some time later, when Jose has enough money, he gives this money to Robin and takes the shares. The money that Jose gives Robin is slightly higher than the total value of the shares. This difference between the two values is the interest as badla finance is treated as a loan from Robin to Jose. The rate of interest is decided by the exchange and it changes from time to time.



BAN ON BADLA TRADES:

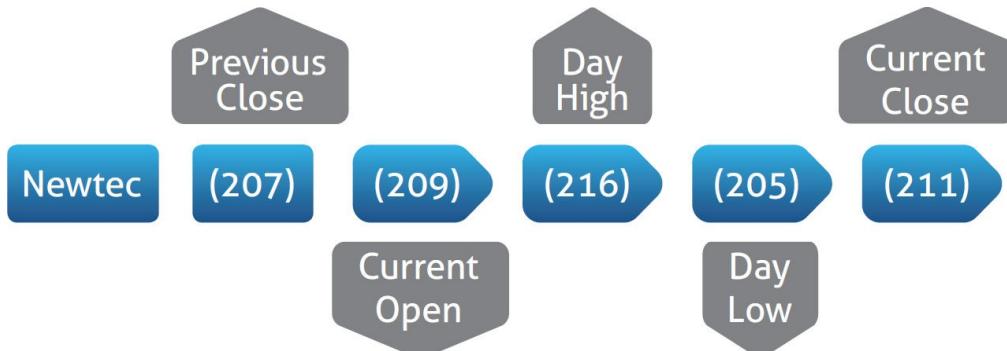
Badla trading was banned by SEBI in 1993 effective from March 1994. It was again permitted in 1996 with some restrictions and finally banned from July 2001 after introduction of Futures Contracts on the National Stock Exchange in the year 2000.

Who Decides Share Prices?

When Karina wanted to purchase Reliable Industries' shares, she first looked up the stock market quotation pages and found that the scrip was trading at 20. Who decided that the price should be 20? How was this price arrived at?

The prices appearing in the newspapers are those at which the stock was actually traded in the stock exchange. If you look up the stock quotations appearing in any financial newspaper, against each company's name you will often discover one price appearing in brackets and up to four prices outside the brackets.

Now let's see what these indicate. If you are reading today's newspaper, the quotations will obviously be for yesterday's trading. The price in brackets in the diagram is the closing price of the day before yesterday.



Let's say today is December 15. The quotations will pertain to trading that took place on the 14th, and the price in brackets is the closing price at which the last transaction took place on the 13th (assuming the stock exchange was functioning on all the three days). The first price after brackets as shown in the diagram is yesterday's opening price, or the price at which the first transaction took place on the 14th. The last price is the closing price of the 14th. And the other two reflect the highest and lowest prices of the day. Hundreds of transactions involving millions of shares could have been transacted, but all at prices ranging between the highest and the lowest.

Earlier on in this book, I have indicated that the stock market, in the days when floor-trading was the norm, was a crazy place giving the impression of a brawl

taking place to the untrained eye. Trading was permitted for a certain number of hours between the opening and closing bell. Can you imagine, in all that chaos, someone ringing a bell or announcing that trading hours have come to an end, and the traders meekly folding their tents and fading away into the sunset?

Not likely at all. They often had to be physically pushed out of the room. These traders would then go out of the stock exchange building and continue trading on the kerbside. The trades that took place outside the mainstream stock exchange, literally on the kerb, came to be called ‘kerb trading’. Today, kerb trading, or curb trading, indicates trade taking place outside the general market regulations, privately, through computers or telephones.

If today’s opening price is higher than yesterday’s closing one, and today’s closing price is higher than today’s opening price, chances are tomorrow’s opening will be somewhat higher.

Kerb trading, though unofficial, has come to occupy an important place, so much so that the stock market closing prices influence kerb opening prices and kerb closing prices influence the next day’s stock market opening prices.

Who decides these prices?

Who decides that Reliable Industries should trade at 20?

These prices are not fixed by any individual but are decided, as in the case of any market, by the forces of demand and supply.

Kris is at work when he receives a phone call from his wife asking him to pick up a kilogram of tomatoes on the way home. The price at which tomatoes would be available would depend upon their production and supply. If there is scanty rainfall and a consequent shortage of tomatoes, the price will be high; and if there has been ample rainfall and tomatoes are available in abundance, the price will be lower. Kris finds the market flooded with tomatoes and the price is 10 per kg. He picks up one kilo as instructed.

The following day, his wife asks for something else to be brought from the vegetable market. When Kris reaches the market, he finds tomatoes are being

~~Kris reaches the market, he finds tomatoes are being~~
sold at the price of 8 per kg. Even though he was not asked to bring tomatoes, he is tempted to do so. It's a cool evening, and tomato soup would be a good idea, he reasons. The following day, Kris is at the market again looking for some lettuce leaves, and finds tomatoes being sold at 6 per kg. Another kg reaches the Kris household. On the fourth day (he's been given a stiff warning by his wife that if he buys tomatoes again, she will not open the door for him), Kris, on a completely different errand at the market, trying not to even look at the tomato vendor while hurrying past, hears the vendor shout, 'Tomatoes for 1.50 per kg.' He can't help but give in.

Why does this happen?

When the supply of a commodity exceeds its demand, the price will tend to fall to a level where it will attract a buyer.

On the fourth day, if tomatoes were being sold at the rate of 5, or 4, or 3 per kg, Kris would not have purchased them. The price had to come down to a ridiculously low level of something like 1.50 for him to be attracted.

The same thing happens in the stock market. If a stock is perceived to be overpriced and is being traded at say, 150, those holding the stock would be tempted to off-load and book a profit. But it may be difficult to find buyers who too may think that 150 is very high a price to pay for it. Since there are not enough buyers, the holders of the stock (many of whom had purchased it at far lower prices anyway) may feel that even if they get 140, they would be willing to sell. If there are still no buyers, the offered price may be reduced further to 130 or 120. It may then reach a level where there are investors who think that at 150 the stock is overpriced but at 120 it is attractive.

On the flip side, if a stock is trading at say, 100, and is considered a bargain at that price, there would be plenty of buyers. But the holders of the stock may think it is underpriced and will be reluctant to sell, expecting the price to move up further.

The buyers, keen to get in, offer 120. If there are still no sellers, the offered price

could increase to 140 or 150. When it reaches, let's say 150, some holders would be tempted to book a profit, not knowing how much further it can go up and wanting to exit before the price starts falling again.

When the demand for a commodity exceeds its supply, the price will tend to rise to a level where it will eventually induce a holder of that commodity to part with it.

The stock pages give much more information which can help you take informed decisions.

EQUITY TRADING									
BSE Code	Co.,(Prev.Cl.), Open, High, Low, Close [Vol., Val.Rs'Lakhs. Trades]	P/E	MCap	52-Wk H/L					
[500002]	ABB (1558.75) 1545,1561,1545,1551.10 [2387,37,14,76] (1563.95) 1530,10,1564,90,1530,10,1555,55 [9091,141,66,474]	36.9	.6574	1585/691					
[500488]	Abbott (I) (643.75) 646,660,641,10,649,35 [14427,94,08,113]	37.1	.6592	1589/671					
[500410]	ACC (434.95) 439,442,90,432,439,80 [302025,1320,61,1838] (434.90) 435,444,431,50,440,05 [714169,3125,49,6239]	11.3	.992	768/436					
(11)*[512599]	Adani Export (65.20) 65,70,65,85,64,50,64,70 [491382,319,80,316] (64.95) 65,70,65,70,64,50,64,95 [463732,302,16,627]	18.1	.7897	452/245					
(11)*[512599]	Adani Export (65.20) 65,70,65,85,64,50,64,70 [491382,319,80,316] (64.95) 65,70,65,70,64,50,64,95 [463732,302,16,627]	13.7	.1460	.86/53					
[505885]	Alfa Laval (766.75) 775,10,800,770,774,95 [3689,29,10,114] (769.95) 794,95,800,776,25,781,65 [4977,39,34,162]	18.7	.1407	862/481					
[532480]	Allahabad Bk (92.75) 93,94,70,92,75,93,25 [220403,206,11,964] (92.80) 93,80,94,80,92,50,93,35 [798917,747,57,6552]	7.3	.4165	107/33					
[521070]	Alok Inds. (71.60) 72,40,75,10,72,10,74,70+ [1714097,1268,75,5929] (71.55) 72,20,75,20,71,75,74,70 [6082292,4503,54,28806]	7.4	.4170	107/33					
[532309]	Alstom Proj. (209.55) 211,80,211,90,207,208,80 [66970,140,29,591] (209.40) 211,90,212,40,207,208,50 [91686,192,17,893]	10.5	.1021	.76/51					
[532418]	Andhra Bank (99.75) 102,102,98,98,20 [476160,473,32,910] (99.75) 100,40,100,60,98,98,70 [2032269,2020,62,6953]	10.5	.1021	.78/55					
[508869]	Apollo Hosp. (378.15) 379,70,379,70,372,375,10 [7594,28,59,122] (377.70) 380,85,380,85,372,50,374,20 [41186,154,67,512]	29.6	.1560	410/202					
[500877]	Apollo Tyres (262.65) 265,30,284,95,265,30,274,35+ [108847,300,94,1153] (263.35) 269,286,20,268,273,45 [308806,852,88,3238]	15.3	.1052	330/192					
[500101]	Arvind Mills (132.50) 134,135,50,132,55,133,40 [176685,236,36,1110] (132.65) 133,40,135,50,132,50,133,85 [699984,958,39,5514]	18.1	.2793	.144/73					
(11)*[515030]	Asahi (I) GI (173.75) 175,176,35,174,175,30 [26275,46,00,261] (174) 175,90,176,25,174,175,75 [38942,68,08,423]	18.2	.2803	.144/73					
(11)*[515030]	Asahi (I) GI (173.75) 175,176,35,174,175,30 [26275,46,00,261] (174) 175,90,176,25,174,175,75 [38942,68,08,423]	17.3	.1402	212/113					
(11)*[500477]	Ashok Leylan (28.55) 29,29,60,28,60,29,20 [2051101,598,53,2867] (28.55) 29,29,55,28,65,29,20 [4992492,1455,08,1227]	11.5	.3473	.32/17					
[500820]	Asian Paints (460.10) 462,467,458,70,462,25 [15269,70,59,133] (460,10) 458,60,465,458,60,462,75 [8944,41,38,167]	24.1	.4434	472/289					
(15)*[524804]	Aurobindo Ph (347.45) 349,25,354,95,346,10,348,75 (53168,186,34,327)	24.1	.4439	472/288					
(15)*[524804]	Aurobindo Ph (347.45) 349,25,354,95,346,10,348,75 (53168,186,34,327)	94.8	.1806	386/261					
	(348,60) 351,354,346,15,348,65 [106731,374,31,1169]	94.7	.1805	385/262					

The above image is a sample of the information that is provided by one financial newspaper. In addition to the prices, the quantity of shares traded, the number of deals that took place, the price to earnings ratio, the market capitalisation value of the scrips, the highest and lowest price of the scrip over the last 52-weeks is also provided

The Battle of Waterloo

The year was 1815. The Battle of Waterloo was being fought between the Duke of Wellington, representing the then superpower Great Britain, and Napoleonic Bonaparte of France. It was a decisive battle in that it could tilt the global power balance in favour of France in case Britain lost.

Also on its outcome hinged the fortunes of the London Stock Exchange. If England regained supremacy by winning the battle, the stock market would expectedly shoot up and, without a doubt, crash if it lost. Investors in London were eagerly awaiting news from the battlefield.

But it was the early 19th century. There was no BBC, no satellite TV, no internet. The battle was being fought at Waterloo, far away from London. News of what happened in one part of the world reached another perhaps 24 or 48 hours later.

The Rothschilds were then, and continue to remain even now, a prominent family, with diverse business interests across Europe, including in Germany, Austria and the UK. They possessed a personal communication network, including carrier pigeons, which enabled them to obtain news from different parts of the world at the earliest. The advent of the internet and the worldwide web has created a level playing field today. But before that, information was power. Much of the wealth of the Rothschild family could be attributed to their ability to learn of important world events before others.

The head of the family in England at that time was Nathan Rothschild. Londoners were aware that Nathan would get to know the result of the battle before them. So the strategy was to watch Nathan. If Nathan started to buy in the stock market, it would signal England's victory, and if he began selling, it would indicate an English defeat. Nathan was also aware that everyone was watching him.

The battle was fought on Sunday, June 18, 1815. Nathan did get to know of the English victory one full day before the rest of the country. On Monday, June 19, 1815, when the stock market opened, instead of buying Nathan started selling. The London stock market collapsed. There was a favourite phrase used by Nathan himself, 'The time to buy is when blood is flowing in the streets.' On this Black Monday, blood was indeed flowing down the streets.

When the markets reached rock-bottom, Nathan started buying. In one day,
Nathan had made a profit of £ million pounds

Travelling may mean a break or a return journey.

What Is an Index?

Whenever you hear people talking about stocks and shares, there is bound to be some reference to the Stock Exchange Index. There is a lot of excitement when the index moves up, and anxiety when it comes down.

But does an increase in the index necessarily mean that the prices of shares you are holding have gone up? Can the value of investments increase with a fall in the index and vice versa?

One often hears people say that the market has gone up, but the prices of the shares they hold have gone down. Or the market may have fallen and the value of their investment may have actually increased. So what does the market having gone up or down mean?

This is with reference to the index.

What does the ‘index’ really indicate?

An index is a statistical aggregate that measures change. It takes a certain number of representative stocks and indicates the price-weighted movement of those stocks with reference to a base year. So when the market goes up, the prices of several scrips could also have gone up while the prices of others could have fallen too. Or it could be the other way round.

An index is a quantity indicating the relative level of prices on a particular date compared to those on a date taken as standard. The Stock Exchange Index is a representative measure of stock prices based on the prices of a select few active stocks from different industries.

Suppose the index is composed of 50 scrips and the year 1980–81 is taken as the ‘standard’ or, as is more commonly referred to, the ‘base’ year. If you had purchased one share in each of the 50 companies comprising the index and these 50 shares had cost you 50,000, this sum of 50,000 will be treated as 100. If at a later date, you had again purchased 1 share each of the 50 companies, and this time it cost you 55,000, that is 10 per cent more than the previous time, we will say that the index has increased to 110.

Thus when the Stock Exchange Index stands at 33,000, it would indicate that the average price of the selected shares, which in the base year was 100, is 33,000 today.

The Stock Exchange Index is a very good indicator of the market trend. But as it takes into consideration the average prices, it means that the shares of all companies listed on the exchange haven't appreciated in the same proportion. It is possible that some have appreciated more than the others, while the prices of certain scrips may, in fact, have fallen.

When the index moves up by say 5 per cent, and the value of a particular mutual fund's portfolio has gone up by more than 5 per cent, say by 8 per cent, it will probably advertise the fact, taking credit for its sterling performance since it was able to 'out-perform' the market.

The important indices

The Dow

The Dow Jones Industrial Average, also called DJIA, or simply the Dow, is a stock market index created by the Wall Street Journal editor and Dow Jones and Company co-founder, Charles Dow. The industrial average, first calculated on May 26, 1896, is one of the oldest indices in the world. It is also the most well known and includes the stocks of 30 of the largest and most influential companies in the US. The DJIA is what is known as a price-weighted index.

Standard & Poor's 500 Index

Popularly called the S&P 500, this index is made up of 500 of the most widely traded stocks in the US.

It represents about 80 per cent of the total value of US stock markets and thus

gives a good indication of movement in the US marketplace as a whole.

The Nasdaq Composite Index

Most investors know that the National Association of Securities Dealers Automated Quotations (Nasdaq) is the exchange on which technology stocks are traded. The Nasdaq Composite Index is a market-capitalisation-weighted index of all stocks traded on the Nasdaq stock exchange. (Market capitalisation is the total number of shares of a company multiplied by its market price). This index includes some companies that are not based in the US.

Popular indices in India

India has two major stock exchanges—the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). There are other regional stock exchanges too, but these are mostly irrelevant now. Even though the BSE is a regional stock exchange, it enjoys the status of a national-level exchange post the automation of its functioning and by virtue of it being India's oldest exchange.

And the benchmark indices in India are the BSE Sensex and the National Stock Exchange Fifty (NIFTY), the former being the index of the BSE and the latter of the NSE. Both of these are large-cap indices. Companies are categorised as large cap, mid-cap and small cap, based on their relative market capitalisations.

‘Cap’ is short for market capitalisation. According to US market cap definitions, ‘large cap’ refers to a company with a market capitalisation value of more than \$10 billion.

The SENSEX

The S&P BSE Sensitive Index or the SENSEX comprises 30 companies which are some of the largest and most actively traded stocks, and are representative of various industrial sectors of the Indian economy.

The SENSEX is calculated using the free-float market capitalisation method. Free-float stands for the shares that are open for trading. Some shares are subject to a lock-in period before they can be sold and are not considered free floating. Free float

~~to a lock-in or may be pledged and are not considered free-floating. Free-float~~
market capitalisation is the combined worth of such shares.

In this method, the index reflects the free-float market value of the 30 selected stocks relative to a base period. This index is regarded as the pulse of the domestic stock market in India. The base value of the S&P BSE SENSEX is taken as 100 on April 1, 1979, and its base year as 1978–79.

The index has become a very useful tool for investors, the newspapers and all others concerned with the securities market, and has been widely accepted as a fair reflector of the trend of prices on the Bombay stock market. Being a ‘sensitive index’, it consists of practically all the market leaders. Weights are assigned in favour of highly capitalised companies.

Subsequently, the need was felt for a more broad-based index which could cover a large number of scrips and also reflect the movements of stock prices on a national scale. The BSE, therefore, compiled a new series in January 1989 called the BSE National Index with the year 1983–84 as the base year. This index, while including the 30 scrips of the BSE Sensitive Index, has another 70 scrips selected on an all-India basis depending on their market activity.

The BSE National Index was renamed as the BSE-100 Index from October 14, 1996 and, since then, its calculations take into consideration only the prices of stocks listed on BSE.

The NIFTY

Just like the BSE introduced the Sensex, NIFTY is a major stock index introduced by the National Stock Exchange.

The Nifty 50 (National Stock Exchange Fifty), as the name suggests, consists of 50 actively traded stocks from various sectors. NIFTY is calculated using the same methodology adopted by the BSE in calculating the SENSEX except that the base year is taken as 1995, and the base value is set at 1,000. The top 50 stocks are selected from 24 sectors.

What Are Derivatives?

‘Derivatives trading’ is a term frequently bandied about in financial market-related discussions. You too must have come across it often while watching business news or while reading financial newspapers and publications. The term is not fully understood by many and often arouses curiosity.

Even though this book is about investing in stocks and not derivatives, it may not be inappropriate to have a brief discussion here about the meaning and relevance of this term.

Similar to shares, a derivative is another kind of trading instrument.

The standard definition of a derivative is a security that derives its value from one or more underlying assets. A derivative is a contract between at least two parties based upon the assets. The buyer agrees to purchase the asset on a certain date at a certain price.

The value of the underlying assets, which could include precious metals, commodities, interest rates, currencies, bonds, stocks and stock indices, may be subject to fluctuations. Stock prices do not remain steady, currencies undergo fluctuations, indices change. It provides an opportunity to make profit and could also lead to losses. Derivatives provide a way to mitigate the risk.

These instruments run the entire spectrum from the simplest ‘put option’ (an option to sell assets at an agreed price on or before a particular date) designed to hedge one’s personal stock position to the most sophisticated, financially engineered ‘credit default swaps’ that helped exacerbate the 2008 global financial crisis.

Size of the derivatives market

The derivatives market is estimated at over a quadrillion dollars in value and it is often said that the amount of derivatives contracts done globally is in excess of the total amount of money there is in the world. According to some analysts, the size of the derivatives market is 10 times the size of the world’s gross domestic product (GDP).

This is possible since in derivatives trading neither does the seller have to own the underlying asset, nor does the buyer have to possess the money to buy it (since it can be done on payment of margin money). It is most commonly used to gain the advantage of leverage. Other analysts are of the opinion that the size of the derivatives market is vastly overstated.

Notwithstanding these differing estimates, there is no doubt the derivatives market is quite significant in the overall context of global investments.

Derivatives trading

More than 90 per cent of the world's 500 largest companies use derivatives to lower any risk. A futures contract can be entered into to get delivery of raw materials at a pre-agreed price or to protect one from interest rate fluctuations.

A futures contract is a contract that assures, at a fixed price determined today, some commodity may be exchanged at a future date.

It is a hedging tool (that is, a risk management strategy) since the price is determined today for a transaction that is to take place, say, a month from now. It protects the buyer against price fluctuation, as a month later the price could be higher or lower.

The derivatives markets provide a vast range of options to the buyers and sellers of such contracts. It is possible today to buy a derivative on anything and not only assets like commodities, stocks and currencies.

The market can be divided into two: that for exchange-traded derivatives and that for over-the-counter derivatives. The legal nature of these products is very different, as is the way they are traded, though the same market participants may operate in both.

What are the different types of derivatives?

Derivative contracts are of several types. The most common types are forwards, futures, swaps and options. In a derivative contract, an essential feature is the actual trade taking place at a future date.

Both forward and futures contracts are agreements between two parties for the purchase or sale of an asset at an agreed upon price at a future date with the principal difference being that forward contracts, unlike futures, are not traded on organised exchanges, but only traded over-the-counter.

Futures contracts are among the more common types of derivatives.

In futures trading, a trader enters into a contract to buy or sell a commodity at a certain price at a future date. During the period of the contract, if the price moves in the trader's favour (that it, rises in case of a 'buy' position or falls in case of a 'sell' position), the trader makes a profit. In case the price movement is adverse, the trader incurs a loss.

One would generally use a futures contract to hedge against risk during a particular period of time. Hedging is to reduce one's loss on a bet or on an investment by counterbalancing the loss in some way. For example, suppose that Sam owns 15,000 shares of Dempo Brakes, which are today valued at 171 per share. Sam, worried that the price may decline, decides to enter into a futures contract to protect himself against the fall. On the other hand, Sheila, a speculator, is convinced that the price of Dempo Brakes will rise. She agrees to a futures contract with Sam, which stipulates that in one year's time Sheila will buy Sam's 15,000 shares at their current value of 171.

The futures contract, in a way, is like a wager between two parties. If at the future date, as Sam expected, the value of the Dempo stock declines, his investment is protected because Sheila has agreed to buy them at today's price and if the value of the stock increases, Sheila stands to make a profit, as she is paying today's lower price for the stock next year.

A year later, let's say Dempo Brakes is valued at 159 per share. Sam has benefited from the futures contract, making 180,000 more ($12 \times 15,000$) than he would have if he had simply waited until now to sell his stock. Sheila, on the other hand, with her prediction proven wrong, would have lost a sizeable sum.

Swaps are the third type of derivatives which are usually a contract between two parties agreeing to trade loan terms. If someone has taken a variable interest loan and now wants to switch over to a fixed interest loan, the person can use an interest rate swap to do so. The variable interest rate loan can be swapped with someone else, who has a similar loan with a fixed interest rate. The loans continue to remain in the original holders' names. The contract stipulates that each party will make payments towards the other's loan at a mutually agreed upon rate.

This is a risky proposition because if one party defaults, the other will be forced to revert to their original loan. Swaps can be made using interest rates, currencies or commodities.

Options are another type of derivative of security. They are a derivative because the price of an option is intrinsically linked to the price of something else. Similar to a futures contract, an options contract is an agreement between two parties granting the right to buy or sell an underlying asset from or to the other party at a predetermined price on or before a future date. The key difference is that with an option, the buyer or seller is not obligated to make the transaction if he or she decides not to. It gives an option—that is, a right, but not an obligation—to complete the contract.

For instance, let's say a contract is entered into between a company and a merchant wherein the company has the option to purchase some commodity from the merchant at a future date for 100 (and for which a certain premium has been paid). The company now has an option to either follow through with the transaction or not. If the price of the commodity at the future date is higher than 100, it will exercise the option. And if the price in the market has fallen below 100, it will not. The merchant, however, would have no option in such a case but to honour the obligation. In such contracts, both parties cannot hold options.

An option can be a 'call' or 'put'. A put is a right to sell and a call is a right to buy. A put option gives the owner the right, but not the obligation, to sell a

certain amount or an underlying security at a fixed price within a specified time. The opposite of a put is a call option, which gives the holder the right to buy.

Investors buy calls when they think the share price of the underlying security will rise or sell a call if they think it will fall.

Put options give the holder the right to sell an underlying asset at a specified price and are purchased by investors when the price of the underlying security is expected to fall.

Options can also be ‘long’ or ‘short’. Whenever you buy and own something, you are ‘long’. You want the security you have bought to increase in price, so you can sell it later for a higher price and make a profit. Whenever you sell something and hope you will later buy it back for a lower price, you are ‘short’. An investor expecting the price to fall will go long on a put option, and an investor that expects price to go up will be long on a call option.

Mixed opinions

The emergence of derivatives has evoked mixed opinions

The legendary American investor Warren Buffett has more than once expressed his dislike for derivatives, calling the instruments ‘financial weapons of mass destruction’ and a ‘potential time bomb’ on the balance sheets of banks that are vulnerable to economic shocks.

In his March 2007 Condé Nast Portfolio article, Jesse Eisinger poses the question, ‘If Warren Buffett can’t figure out derivatives, can anybody?’

However, in 1988, Alan Greenspan, the then chairman of the Federal Reserve of the US, said, ‘What many critics of equity derivatives fail to realise is that the markets for these instruments have become so large not because of slick sales campaigns, but because they are providing economic value to their users.’

A balanced view was taken by former American Securities and Exchange Commission chairman Arthur Levitt who said that, ‘Derivatives are something like electricity; dangerous if mishandled, but bearing the potential to do good.’

What Are Mutual Funds?

Many people shy away from investing in stocks and bonds despite wanting to because they don't understand how to go about it or may not have the time required to study the market and the fundamentals of the companies or some other reasons.

For such persons an ideal way would be to invest through mutual funds.

If a large number of individuals, who do not possess the expertise or are too busy to invest individually, pool in their money into a fund and the fund invests in stocks, bonds, money market instruments and other assets on their behalf, it becomes a mutually beneficial exercise. Since the amount becomes reasonably large, the fund can afford to hire professional money managers on a full-time basis who take investment decisions for the fund and allocate its investments with a view to earn capital gains and/or regular income for the investors.

The fund charges the investors a small fee for managing the money.

The expenses incurred by the mutual fund are collectively called expense ratio which generally vary between 1.5-2.5 per cent of the average weekly net assets of the schemes.

Just as there are shares in companies, in a mutual fund one purchases units.

If you divide the market value of the portfolio of assets that the fund has invested in less its liabilities by the number of units, you arrive at the per unit **NAV** or the **Net Asset Value**.

The NAV represents a fund's per unit market value. This is the price at which investors buy fund units from a fund company or sell it back to the fund house. The NAV of a fund is calculated by the mutual fund house itself or by an accounting firm hired by the mutual fund.

NAV is calculated at the end of every market day, after taking into account the closing market prices of the portfolio's securities. For example, if a fund has assets of 60 million and liabilities of 10 million, it would have a net asset value of 50 million. If you divide the NAV of a fund by the number of outstanding units, you get the price per unit. In our example, if the fund had 5 million shares outstanding, the price-per-unit value would be 10 (that is 50 million divided by 5 million).

Different schemes having higher or lower NAVs do not in any way reflect on the fund's current performance nor the profit that can be made by investing in them. So a unit of a certain scheme available at an NAV of 10 may not be less profitable than another one which is being sold at 100. It would simply indicate that for a certain amount of investment to be made you would be able to acquire a larger number of units of the former as compared to the latter. If the NAV of the units purchased at 10 increases to 12 and of the other one to 110, the value of the investment has appreciated by twenty per cent in the first case and by 10 per cent in the second case.

Daily changes in the NAV of mutual fund schemes do not matter. It would be better to look at the annualised return of a fund over different time frames to judge its performance.

Types of Mutual Funds

In India, the Securities and Exchange Board of India has categorised mutual funds broadly into four categories:

1. Equity mutual funds:

These funds invest directly in stocks. Since equity markets are prone to fluctuations, these are high-risk, high-return schemes. These are useful for investors having a longer-term investment horizon of over five years.

2. Debt mutual funds:

These schemes invest in debt securities. Since debt is not subject to the vagaries of market fluctuations, these schemes are stable and substantially safe, but also provide mediocre returns. These funds would appeal to those looking to invest for short periods of less than five years.

3. Hybrid mutual funds:

These funds invest their money in a combination of equity and debt. The schemes of such funds provide returns which are higher than pure debt funds.

4. Solution-oriented mutual funds:

These mutual funds offer schemes for specific needs or purposes like children's education or for post-retirement. These schemes usually have a lock-in period of five years.

What is a Systematic Investment Plan?

A smart way of investing in mutual funds is through a Systematic Investment Plan or SIP.

SIPs allow you to invest a certain fixed amount at regular intervals of your choice - weekly, monthly, quarterly, etc.

It helps investors inculcate the habit of saving in a planned manner.

In case of a SIP the money gets debited from your bank account on a standing instruction and gets invested into mutual fund schemes. The number of units that get allocated depends on the NAV on that day.

For each instalment of investment, additional units of the scheme are purchased at the market rate and added to your account. Over a period of time, since units are purchased at different rates, the investors get the benefit of Rupee-Cost Averaging and also the Power of Compounding works to their advantage.

Cost Averaging

Most people understand that one should buy a commodity when the price comes down and sell when the price goes up. But end up doing the opposite when it comes to investing in assets.

comes to investing in equity.

In the absence of a Systematic Investment Plan, one would have to apply one's mind to time one's entry and exit from the market. In volatile markets this becomes difficult. Cost averaging allows you to eliminate this uncertainty. A SIP investor, while investing every month, would end up buying more units when markets go down and buying less units when the market goes up. It would help in achieving a lower average cost per unit.

Power of Compounding

If you start investing 1,000 per month at age 40 and earn an annual rate of interest of 8 percent, at age 65 you will have accumulated 957,367 (on a total investment of 300,000 over a period of 25 years).

If you had begun investing 1,000 per month at age 25, earning 8 percent per annum and deposit for only 15 years till the age of 40, you would have a balance in your account at age 65 of 2,557,000 (on a total investment of 180,000).

In the first case the money was invested for 25 years and in the second for merely 15 years. And yet in case II, at the age of retirement, the money available is almost three times of case I.

Albert Einstein is said to have called the power of compound interest the most powerful force in the universe.

You can make compounding work for you by:

1. Beginning the saving habit as early as possible and
2. Saving regularly.

If the power of compound interest is understood at a young age, the youth would have a great incentive for starting to save early. Those who grasp the implications, enjoy huge financial benefits.

Systematic Investment Plans help you develop the habit of regular saving.

What Is Insider Trading?

One of the fundamental assumptions when investing in stocks is that all investors are in possession of, or have access to, the same information, qualitatively and quantitatively. The profit made by some and losses by others should essentially be the result of differences in perception or interpretation of the information so received.

But when some persons, in possession of confidential, price-sensitive information, use it to deal in the shares of the company, thereby giving them an unfair advantage, to the detriment of innocent, not-so-informed investors, such trading is termed as ‘insider trading’.

This information could have been obtained by them by virtue of being at the helm of the company to which the information pertains, or by working in close proximity to the promoters, say in the capacity of employees or auditors or bankers.

Insider trading thus denotes the use of price-sensitive information by vested interests to make private gains or to avoid losses. It involves trading in a company's stock by those in possession of non-public information. This malpractice is perhaps as old as the stock market itself and is a global phenomenon.

It is harmful to the investing public in general, and is morally and ethically wrong as a few persons make money unfairly at the cost of a larger number of innocent investors acting in good faith. It constitutes an abuse for personal monetary gain of an office of trust and confidence reposed in the persons who are expected to be faithful to the company.

Legislation: Global perspective

Earlier on, legislation to curb this practice either did not exist (as was the case in India till 1992) and where it did, was fairly impotent due to the difficulty in gathering evidence to prove that profits made were a result of inside information.

Conscious efforts have been made by several countries to give more teeth to these laws. In the UK, the Financial Services Authority (FSA) regulates securities trading. The FSA aims to ensure that the stock markets are orderly and fair. Insider trading was considered illegal in 1980, but the FSA has struggled to convict people of insider trading and lags behind the US when it comes to enforcement.

In 1987, Geoffrey Collier became the first person convicted under Britain's insider trading law. The former securities chief of Morgan Grenfell Merchant Bank, UK, pleaded guilty to two charges of using inside information to purchase shares of Cadbury-Schweppes and the AE Engineering group. Collier asked a stock broking firm to buy 60,000 shares of the AE Engineering Group, which was being taken over by media tycoon Robert Maxwell. Morgan Grenfell was the corporate advisor for this deal and Collier possessed full knowledge of the proposed bid.

When the Maxwell bid was announced 15 minutes later, the shares had shot up and Collier had made a £15,000 profit in less than an hour. After his fraud was discovered, he was given a 12-month suspended sentence and was fined £25,000 with £7,000 costs at the High Court in London.

In the Financial Services and Markets Act of 2000, stricter and more specific guidelines were laid out by the FSA. Anti-insider-trading laws are also enacted by Switzerland, the Netherlands, Hong Kong and the European Community. Switzerland has declared insider trading a criminal offence, while in the Netherlands the law prohibits insider trading and prescribes a minimum penalty of two years' imprisonment in addition to a fine.

However, Germany follows a voluntary code of conduct to check the menace of insider trading, which is to be followed by companies, stock exchange dealers and bankers in order to prevent misuse of information by the concerned persons. Surprisingly, there has been no major scandal of insider trading in West Germany despite its booming market.

In 1988, Japan passed its first insider trading law with the Financial Markets Abuse Act prescribing a maximum of three years in prison and a Japanese Yen (JPY) 3 million fine for insider trading convictions. Japan is working to strengthen its insider trading laws.

In the US, statutory insider trading laws were first passed in the early 1930s. Congress passed the Securities Act of 1933 and the Securities and Exchange Act of 1934. The latter created the Securities and Exchange Commission (SEC) to regulate the secondary trading of securities. The SEC of the US was empowered to impose penalties up to three times the profit gained or loss avoided on those convicted of insider trading under the provisions of the Insider Trading Sanctions Act of 1984.

Ivan F. Boesky, who made illicit profits by insider trading, was convicted and sentenced to three and a half years' imprisonment in addition to a fine of \$100 million in 1987.

The penalties for insider trading in the US are a maximum of twenty years in prison and a fine of \$5 million. These fines were increased by the Sarbanes–Oxley Act of 2002. The US has intensified its efforts to discourage insider trading under the over-zealous leadership of Preet Bharara, the US Attorney for the Southern District of New York from 2009 to 2017. US authorities have begun adopting aggressive tactics like wiretapping to prosecute cases which might otherwise be difficult to prove.

Take the case involving Raj Rajaratnam and Rajat Gupta.

Raj Rajaratnam, a Sri Lankan, was manager of the hedge fund Galleon Group which at its peak managed over \$6 billion. He was charged with fourteen counts of securities fraud and conspiracy in October 2009, and found guilty on all. Rajaratnam was convicted of insider trading in May 2011 and sentenced in October to eleven years in prison, the longest term ever for this crime. While exchanging secrets, Rajaratnam was unaware that the US Federal Bureau of Investigation was tapping his cell phone in 2008. The prosecutors alleged that he had cultivated a network of insiders at Intel, McKinsey, Goldman Sachs, IBM and others who provided him with material non-public information. Using that information Raj Rajaratnam made a profit of approximately \$60 million.

Rajat Gupta's life reads like a fairy tale. An orphan, he studied at the Indian Institute of Technology (IIT) Delhi and the Harvard Business School. He was former director at Goldman Sachs and the first non-American managing director of McKinsey and Co. Gupta also served on the board of Procter & Gamble and various other companies. He was also the founder of the Indian Business School and involved in various charities and trusts. He was a personal advisor to both Presidents Bill Clinton and Barack Obama. Gupta was charged with conspiracy and securities fraud. He had made just three phone calls that finished his career.

The first call: On September 23, 2008, Warren Buffett (through Berkshire Hathaway, the American multinational conglomerate holding company) agreed to invest \$5 billion in preferred shares of Goldman Sachs. Gupta attended a board meeting via a conference call with Goldman Sachs and got this news at 3.45 in the afternoon. The New York Stock Exchange closes at 4 pm. About 16 seconds after he put the phone down, Gupta called Raj Rajaratnam and spoke for less than a minute. It was 2 minutes before 4 pm that Raj Rajaratnam bought shares worth nearly \$25 million in Goldman Sachs stock. Goldman Sachs made the announcement at 6 pm that the legendary investor Warren Buffett was going to put \$5 billion into their company. The share price went up overnight. The next morning Raj Rajaratnam sold the entire lot of shares and made a profit of over \$800,000.

The second phone call: It was October 23 2008. An audit committee conference call was to take place. Gupta in his capacity as a director was told that Goldman would be posting a loss in the fourth quarter, contrary to market expectations. About 23 seconds later, Gupta called up Rajaratnam, and they spoke for 12 minutes and 30 seconds. The next morning Rajaratnam sold 150,000 shares that he had purchased three days earlier. The next day, when the announcement was made that Goldman Sachs was going to have a quarterly loss, the share prices dropped. This time Rajaratnam did not make a profit, but he avoided a huge loss by selling these shares presumably on the basis of this information.

The final call: The third call was in January 2009 when Rajat Gupta, like so many industry leaders, was attending the World Economic Forum at Davos. This time there was a conference call with the Procter & Gamble board of directors.

He received news that P&G had done badly in that quarter. The market was expecting the company to post a huge profit. Gupta called up Rajaratnam four hours after the conference call ended. Rajaratnam did not hold stock in P&G. He sold ‘short’, that is, sold shares that he did not own. When the announcement about the disappointing results was made the next day, prices expectedly crashed and Rajaratnam made a profit of \$570,000.

Gupta was convicted in June 2012 on insider trading charges of four criminal felony counts of conspiracy and securities fraud. He was sentenced in October 2012 to two years in prison, an additional year on supervised release and ordered to pay \$5 million in fines.

The Samuel Waksal and Martha Stewart case

This case shows it is not only the directors of companies who are liable to be prosecuted for insider trading. In 2003, the SEC of the US filed charges against Martha Stewart for securities fraud and insider trading for her part in the 2001 case involving ImClone, the biopharmaceutical company.

ImClone was awaiting a decision from the Food and Drug Administration (FDA) on its cancer treatment product, Erbitux. Based on information received from Peter Bacanovic, a broker at Merrill Lynch, Martha Stewart sold almost 4,000 shares of ImClone Systems soon after its chief executive officer (CEO), Samuel Waksal, sold all his shares in the company worth \$5 million, which was not public information. Two days later it was made public that the FDA had rejected ImClone’s drug, causing shares to fall 16 per cent in one day. Stewart’s early action saved her a loss of \$45,673.

Samuel Waksal was sentenced to just over seven years in prison and ordered to pay \$4.3 million and became the first CEO to be sentenced on insider trading charges. Martha Stewart was sentenced to five months of prison time for obstruction of justice and conspiracy after the insider trading charges were dropped and securities fraud charges dismissed. In addition to the prison sentence, she paid a fine of four times the amount of the loss she avoided plus interest, which came to a whopping total of \$195,000. She was also forced to step down as CEO from her company, Martha Stewart Living Omnimedia, for a duration of five years.

Legislation in India

In India, the Securities and Exchange Board of India (SEBI) brought out the SEBI (Insider Trading) Regulations, 1992 on November 19, 1992. These

regulations recognised insider trading as an offence for the first time in India. As laid down by Section 3 of the regulations, it is an offence to deal in securities of a company on the basis of unpublished price-sensitive information, communicating any price-sensitive information or counselling another person to deal in securities on the basis of unpublished price-sensitive information.

These were replaced by the SEBI (Prohibition of Insider Trading) Regulations 2015 on January 15, 2015. The regulations define who is an ‘insider’, who a ‘connected person’ is, and what constitutes ‘unpublished price-sensitive information’:

‘Insider’ is any person who is

- (i) a connected person; or
- (ii) in possession of, or having access to, unpublished price-sensitive information.

‘Connected person’ is defined as any person who is or has during the six months prior to the concerned act been associated with a company, directly or indirectly, in any capacity including by reason of frequent communication with its officers or by being in any contractual, fiduciary or employment relationship or by being a director, officer or an employee of the company or holds any position including a professional or business relationship between himself and the company whether temporary or permanent, that allows such person, directly or indirectly, access to unpublished price-sensitive information or is reasonably expected to allow such access.

‘Unpublished price-sensitive information’ refers to any information, relating to a company or its securities, directly or indirectly, that is not generally available which upon becoming generally available, is likely to materially affect the price of the securities and shall, ordinarily including but not restricted to, information relating to the following:

- (i) financial results;
- (ii) dividends;
- (iii) change in capital structure;
- (iv) mergers, de-mergers, acquisitions, de-listings, disposals and expansion of business and such other transactions;
- (v) changes in key managerial personnel; and
- (vi) material events in accordance with the listing agreement.

Isaac Newton and the South Sea Bubble

The South Sea Company was founded in 1711 in Great Britain. It was created as a public–private partnership to consolidate and reduce the cost of national debt.

The genesis of the name—South Sea Company—was owed to the fact that the company was granted monopolistic rights to trade with the Spanish South American colonies by the British government in exchange for taking over the national debt raised by the War of Spanish Succession. This was the last of the series of wars, precipitated by the death of the Spanish King Charles II without an heir, fought by European coalitions to contain the expansion of France under the monarch Louis XIV.

The trade concessions turned out to be less valuable than hoped. At that time, Spain controlled South America and it was unrealistic to expect much trade would take place and nor did the company realise any significant profit from its monopoly.

In January 1720, the company's shares stood at 128. The directors began to circulate false claims of success and exaggerated tales of South Sea riches, which is why the shares rose to 175 in February.

The following month, the company convinced the government to allow it to take over more of the national debt in exchange for its shares, beating a rival proposal from the Bank of England. As the company expanded its operations, investor confidence mounted, taking the share price to about 330 by the end of March.

At that time there was a flurry of speculative activity in the stock market and newly floated firms were viewed as bubbles. In fact, the year 1720 was sometimes known as the ‘bubble year’. In June, Parliament passed the Bubble Act, which required all shareholder-owned companies to receive a royal charter.

When the South Sea Company received its charter, it was perceived as a vote of confidence in the company, and at the end of June its share price reached 1,050. By early July, investors had begun to lose confidence and by September 1720, the shares had crashed to 175.

Sir Isaac Newton, English mathematician, astronomer, theologian and physicist and arguably one of the most influential scientists of all time was also a victim of the South Sea Bubble.

In the spring of 1720, Sir Isaac Newton owned shares in the South Sea

Company. When the stock prices rose, Newton, fearing that the market was

Company. When the stock prices rose, Newton, sensing that the market was perhaps overheated, sold his South Sea shares, and made a 100 per cent profit totalling £7,000.

But as the stock price continued to rise, Newton regretted his decision to have sold his shares very early. Months later, Newton, like any other gullible investor re-entered the stock at a much higher price when the market was almost at its peak. He stayed invested even after the bubble had burst, and sold his shares only once the price had collapsed to well below his buying price. Newton reportedly lost £20,000, equivalent to several million pounds in today's value.

He is famously said to have uttered, I can calculate the motion of heavenly bodies, but not the madness of people.' For the rest of his life, he forbade anyone to speak the words 'South Sea' in his presence.

What to Buy

What should you understand to be a successful investor?

You need to understand just two things:

1. What to buy.
2. When to buy and when to sell.

Which of the two is more important?

Is ‘What’ more important or ‘When’?

Is it more important to buy a good share or is it more important to buy it at the right time?

Or, put differently, is it more important to buy a good share at any time or any share at a good time?

Well, ideally you must try and do both—buy a good share at a good time—but if you have to choose one, I would go for the latter, that is the timing.

There are scores of examples of excellent companies that have in earlier boom times reached price levels which, had you bought them at their peak, may not ever be reached again. (Maybe that’s an exaggeration, but there are many cases where the prices haven’t reached the old levels in 10, 15 or more years after scaling those heights).

What’s the use of buying a good share at a bad time?

You may, on the other hand, pick up a terrible share, but if you purchase it at the right time and sell it at the right time, you may still make money.

However, our attempt should always be to first identify a good company and then time the entry and exit well.

'What' to buy depends on your ability to do what is called 'fundamental analysis' and 'when' depends upon 'technical analysis'.

The advantage of buying a 'good' share is that you are not unduly worried even if the market crashes after you have invested, since you may be able to recover your money even through the sale of its assets.

The problem of making an investment in a company that is not fundamentally sound is that in case the market falls, the share may not even be worth the paper on which it is printed

In the next few chapters, let me try and guide you through how to identify companies that have strong fundamentals and then discuss ways to time your purchases and sales.

The Two Most Important Financial Statements

When would a company be called fundamentally strong? What are the characteristics of such a company?

To understand this you must have a working knowledge of the ‘balance sheet’ and the ‘profit and loss account’. Let me introduce these two very important financial statements to you.

Profit and Loss Account

As its name suggests, this financial statement is prepared to understand whether an organisation has made a profit or a loss. When the income of an organisation exceeds its expenses, it makes a profit. If expenses exceed income, it results in a loss.

Let’s look at some typical examples of expenses that organisations incur. Materials consumed are expenses. Salaries and wages are expenses. There are various kinds of selling expenses and administrative expenses too. If an organisation borrows money to run its business, the interest will be shown as an expense.

What would appear as the ‘income’ on a profit and loss account?

Income has two components:

- i) that generated through its core activities, and
- ii) the income from doing things that are incidental, or even unconnected, to the core business (for example, sale of scrap, interest earned on deposits in a bank, dividends received on investments, or profit on sale of certain assets). The former is shown as ‘sales’ (of goods or services) and the latter appears under a heading called ‘other income’.

Profit & Loss Account

Expenses	Income
----------	--------

Materials	Sales
Wages & Salaries	Other Income
Selling Expenses	
Administrative Expenses	
Interest	

While the essence of running a business enterprise is to make a profit, it is equally important that businesses generate profits by doing what they are supposed to be doing (sales) and not what they are not supposed to be doing (other income).

Therefore, even if an organisation makes a profit, you must still get very worried about that organisation if you find that the bulk of its income has come from other income.

Profit & Loss Account

Expenses	Income	
Materials	Sales	Top Line
Wages & Salaries	Other Income	
Selling Expenses		
Admin Expenses		
Interest		
Profit		Bottom Line

The sales figure, which appears on the top, is called the ‘top line’ and the profit, which appears at the bottom is called the ‘bottom line’.

Balance Sheet

A ‘balance sheet’ reveals an organisation’s ‘liabilities’ and ‘assets’.

What are Liabilities?

‘Liabilities’ constitute what the organisation owes. It owes this money because it has borrowed it.

It borrows from the owners of the business, in which case it is called ‘capital’.

It also borrows from outsiders, which is called a ‘loan’.

Other liabilities are ‘current liabilities’, which include creditors, chiefly comprising the amounts payable to suppliers and vendors, short-term loans from banks, customer advances and so on.

Balance Sheet

Liabilities	Assets
Capital	Fixed Assets
	Land, Building, Plant, Machinery
Loan	
Current Liabilities	Current Assets
Creditors, Bank Overdraft	Debtors, Bank Balance, Inventory

What are Assets?

‘Assets’, on the other hand, represent what the organisation owns, or the things it has purchased by spending the money that it borrowed (as reflected on the ‘liabilities’ side).

In other words, assets tell us where the money was spent.

Typically, assets are classified into ‘fixed assets’ (which include items like land, buildings, machinery, vehicles, computers, tools) and ‘current assets’ (that include items like debtors, cash and bank balances as well as inventory).

Looked at in this way, the liabilities represent ‘sources’ and the ‘assets’ represent ‘uses’ of money.

The Source and Use of Funds

Let us first examine the sources.

When an organisation needs money, it has just one option, and that is to borrow it. It borrows from owners as well as from outsiders. However, the terms on which the owners and outsiders lend differ.

Outsiders (for example, banks) lend money on the condition that they must be paid a fixed return on their investment (interest), irrespective of whether the organisation makes a profit or not. They also expect that the loan amount be repaid over a pre-agreed time frame.

Owners impose no such condition. They neither expect a fixed return, nor do they usually expect to be repaid the principal amount of their contribution in the lifetime of the organisation. If the organisation earns nothing, they get nothing. To compensate for this risk that owners take, the entire profit that remains after rewarding all the other constituents, belongs to the owners.

Outside lenders, who do not take higher risks, get reasonable but guaranteed returns. The owners, who bear all the risks (of getting no rewards in bad years as well as the risk of losing their entire capital if things go wrong), get no guarantees but also have no limits imposed on the returns that can be paid to them.

Let's understand this with the help of an example.

Imagine that a new business has been set up. It needs a total capital investment of 5,000, of which 2,000 is the owners' contribution and 3,000 is taken on loan from a bank, carrying a rate of interest of 10 per cent per annum.

Balance Sheet

Liabilities Assets

Share Capital	2,000
10 % Loan	3,000

Both these items appear on the liabilities' side as shown in the table. The money raised will be used to acquire various assets.

Let us assume that the assets, when put to use, help generate a total sales turnover of 15,000. There will now be several claimants asking for a share of this 15,000.

How many groups of such claimants can you visualise? One group will comprise the employees, the vendors, the landlord, the utility suppliers, the printer and stationers, the travel agent and so on. This group represents 'operating expenses'.

Another group is made up of the 'shareholders' or owners who are also expecting a reward.

Yet another group is the 'lenders' who need to be paid interest.

And the government expects to collect income tax.

The total revenue generated by any organisation will get shared among these four groups.

Groups of Claimants

Operating Expenses

Shareholders

Lenders

Government

Let's now decide the order of payment.

The first claim on the turnover of 15,000 will be that of operating expenses.

Let's assume the operating expenses work out to 8,000.

That leaves us with 7,000.

This amount is the 'operating profit'.

Since this is the stage of profit at which the operating expenses have been

recovered, and the organisation has yet to pay taxes to the government, interest to the lenders and dividends to the shareholders, this figure is also called ‘Profit Before Interest and Tax’ (PBIT) or ‘Earnings Before Interest and Tax’ (EBIT).

Sales	15,000
(-) Operating Expenses	8,000
Operating Profit/PBIT/EBIT	7,000

Whose turn is it to be rewarded now?

The next in order of payment would be the lenders. The business has taken a loan of 3,000 at the rate of 10 per cent. So the interest will work out to 300.

The PBIT of 7,000 less interest of 300 leaves 6,700.

This is called the PBT (Profit Before Tax). PBT is the amount on which income tax will be paid.

Sales	15,000
(-) Operating Expenses	8,000
Operating Profit/PBIT/EBIT	7,000
(-) Interest	300
PBT	6,700

Let’s say the income tax works out to 1,700.

The resultant figure of 5,000 is now called Profit After Tax (PAT).

Sales	15,000
(-) Operating Expenses	8,000
Operating Profit/PBIT/EBIT	7,000
(-) Interest	300
PBT	6,700
(-) Tax (say)	1,700
PAT	5,000

Last in the queue are the owners, waiting for the 5,000 to be distributed amongst them.

The owners had agreed that if the organisation does not make a profit they will get nothing. And when it does, the entire profit that remains after everybody else has been paid will be paid to them.

However, rarely do organisations distribute the entire profit amongst the owners. The reasons for this could be many. But among the more important ones is the fact that profits do not represent money.

For an organisation to pay dividends, it is not sufficient that a profit has been made. It must have the requisite amount of liquid cash too. And even if the organisation did have the money, in all likelihood the entire profit would still not be distributed amongst the owners. It would get reinvested in the business to take advantage of growth opportunities and for further expansion.

Let's say the organisation decides to pay dividends at the rate of 50 per cent of the capital invested.

The capital invested by the owners is 2,000.

Dividends, thus, will work out to 1,000.

Sales	15,000
(-) Operating Expenses	8,000
Operating Profit/PBIT/EBIT	7,000
(-) Interest	300
PBT	6,700
(-) Tax (say)	1,700
PAT	5,000
(-) Dividend	1,000
	4,000

Out of a PAT of 5,000 if dividends of 1,000 are paid, that leaves us with a balance of 4,000. Who does this 4,000 belong to?

Contrary to the common perception that it belongs to the organisation, this amount continues to belong to the owners.

By accepting 1,000 out of the PAT of 5,000, the owners have not waived their right over the remaining 4,000. They have merely agreed, for the time being, to leave it behind with the organisation. If the organisation does not pay this amount to the shareholders, it continues to owe it to them.

These retained profits, which the organisation continues to owe its shareholders, will be shown as a liability on the balance sheet, under the heading ‘reserves and surplus’.

Balance Sheet

Liabilities	Assets
Share Capital	2,000
(-) Reserves	4,000
= Net Worth	6,000
10% Loan	3,000

The direct contribution made by the owners (share capital) as well as their indirect contribution retained by the organisation in the form of undistributed

profits (reserves) together represent the shareholders' net worth. (Net worth also represents the difference between the book value of assets and external liabilities).

A while ago we saw that liabilities represent sources. And till now we have seen three:

The first, capital, is a direct contribution received from the owners.

The second, reserves, is an indirect contribution, also from the owners.

They may not have physically invested this money. But they have left behind what they could have legitimately withdrawn, making it effectively an additional source.

The third item is loans. This contribution comes from outsiders.

There is yet another, a fourth, important source of funds.

In addition to borrowing money, organisations also often borrow in kind. When goods are purchased from vendors on credit, it effectively amounts to a loan, and is shown on the liabilities' side as creditors.

The sources side of the balance sheet will now appear like this:

Balance Sheet

	Liabilities	Assets
	Share Capital	2,000
(+)	Reserves	4,000
=	Net Worth	6,000
10%	Loan	3,000
	Creditors	1,000

Let's now look at the 'Uses' side of the Balance Sheet. Where will a typical organisation spend the funds it collects?

A substantial portion of the funds collected will be invested in the creation of infrastructure. Every organisation needs to invest in various kinds of assets required to run its business. A manufacturing company will need to invest in land, building and equipment. A trader needs to invest in showrooms, warehouses and offices. A software company will invest in equipment, licences and furniture.

Such investments appear in the balance sheet under the head 'fixed assets'.

Even if a substantial portion of the total resources are so spent, businesses must ensure that all the funds do not get exhausted in the creation of infrastructure alone. There should be money left after purchasing fixed assets, since to put the infrastructure to use, a business needs a continuous supply of 'working capital'.

Balance Sheet

Liabilities Assets

Share Capital	2,000	Fixed Assets
(+) Reserves	4,000	Working Capital
= Net Worth	6,000	
10% Loan	3,000	
Creditors	1,000	

What are the components of working capital?

Let's take the case of a manufacturing organisation. Having created excellent infrastructure, it will need to buy and maintain an inventory of raw material, in anticipation of orders that may be received.

It will also need to maintain a sufficient amount of cash and bank balances so that day-to-day expenses can be met without dependence on in-flows from operations. Further, circumstances demand that organisations sell goods on credit, to produce which substantial amounts have been invested. Debtors become the third component of working capital.

Balance Sheet

Liabilities | Assets

Share Capital	2,000	Fixed Assets
(+) Reserves	4,000	Working Capital
= Net Worth	6,000	Inventory
10% Loan	3,000	Cash & Bank Bal
Creditors	1,000	Debtors

To sum up:

There are two principal sources, owners and outsiders, each of whom invests in two ways. Owners make a direct contribution when they invest their money (capital) and an indirect contribution when they leave behind the profit which they were entitled to take home (reserves). Outsiders invest by either lending money (loans) or by lending goods (suppliers' credit).

The resources so raised are deployed in two ways:

1. Towards creation of infrastructure (purchase of fixed assets).
2. Towards working capital.

Working capital has three components: inventory, cash and bank balances, and debtors or receivables.

With this background, in the next chapter let me tell you how to read a balance sheet to understand if an organisation is fundamentally healthy or not.

How to Read a Balance Sheet

As we have seen, in a typical balance sheet there are four items on the liabilities side and two on the assets as shown in the table.

Balance Sheet

Liabilities	Assets
Share Capital	Fixed Assets
Reserves & Surplus	
Long-Term Loans	Current Assets
Current Liabilities	

(Instead of current assets on one side and current liabilities on the other, you will often see ‘net current assets’, that is, current assets less current liabilities, appearing on the assets’ side of the balance sheet. Net current assets represent the ‘net working capital’.)

Balance Sheet

Liabilities	Assets
Share Capital	Fixed Assets
Reserves & Surplus	
Long-Term Loans	Net Working Capital:
	Current Assets
	(-) Current Liabilities

Balance sheets are actually made up of far more numbers than you see here. But to make balance sheets easier to read and more meaningful, many items are clubbed together and reduced to 6 headings, 4 on one side and 2 on the other.

It is possible that you will on occasion come across a balance sheet with numerous items on each side. Don’t get confused. If you study each of them, you will find that they can all be classified under 1 of these headings. An example of a balance sheet detailing the different items under the 6 heads is shown here.

Balance Sheet

Liabilities	Assets
SHARE CAPITAL	FIXED ASSETS
Authorized Share Capital	Buildings
Issued Share Capital	Plant & Machinery
Subscribed Share Capital	Furniture & Fixtures
Paid-up Share Capital	Vehicles
RESERVES & SURPLUS	
General Reserve	
Capital Reserve	
Asset Replacement Reserve	
LONG-TERM LOANS	
SECURED	
Debentures	
Loan from Financial Institutions	
Bank Borrowings	
UNSECURED	
Public Deposits	
Inter-Corporation Deposits	
CURRENT LIABILITIES	CURRENT ASSETS
Bills Payables	Inventories
Deposits from Dealers	Debtors
Interest Accrued	Cash & Bank Balances
PROVISIONS	
Proposed Dividends	
Provision for Retirement Benefits	

If you wish to read a balance sheet, make sure it has not more than 4 items on the liabilities side and not more than 2 on the assets. (Of late, long-term liabilities are classified as non-current liabilities and fixed assets as non-current assets.)

Now reduce the left-hand side to 2 numbers.

Let's try and reduce the number of items on the liabilities side also to 2. How do we do that?

Club the first 3 items—share capital, reserves and surplus, as well as long-term loans. All of these represent ‘long-term sources’ (LTS) of money.

Balance Sheet

Liabilities	Assets
Share Capital	Fixed Assets
Reserves & Surplus	LTS
Long-Term Loans	Current Assets
Current Liabilities	

Let us see if this is correct.

Is share capital a long-term source? Share capital is for the longest term. It does not have to be repaid in the lifetime of the company.

What about reserves?

Reserves are often as long-term as share capital. Even though reserves can be distributed as dividends in the years when the company makes losses, this provision is rarely used. If reserves are used at all, it is often to distribute bonus shares—that is, shares which are issued free of cost—amongst the existing shareholders. When this is done, the amount gets transferred from the head reserves to the head share capital.

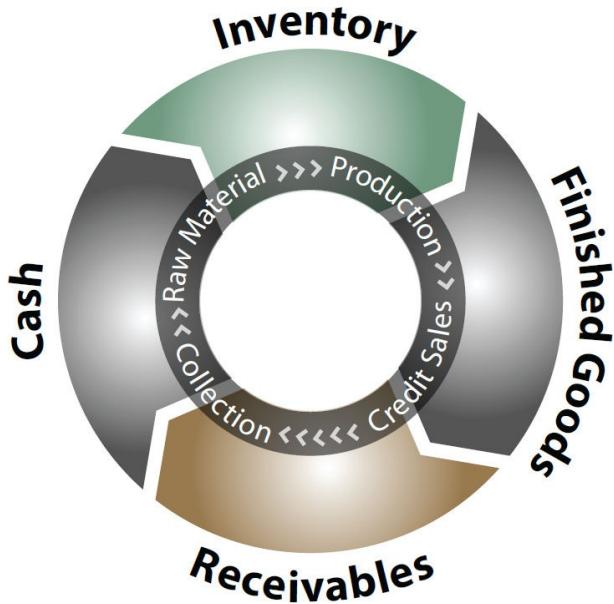
Finally, the long-term loans are obviously long-term in nature.

We can safely say that current liabilities are short-term sources (STS), since an item is classified as a current liability only if it has to be repaid within 1 year from the date of the balance sheet.

Similarly, on the assets side, we would not be wrong in saying that fixed assets represent long-term uses of funds (LTU), being made up of items such as land, building, machinery and equipment, all of which are purchased for use over the long term.

The current assets, which represent the gross working capital, can likewise be called a short-term use of money (STU). In fact, the movement of items under current assets (comprising cash, inventory and debtors) can be depicted in the form of a cycle, which is either called the working capital cycle or the cash-to-

cash cycle.



The new look of the balance sheet which has been brought down to 2 items on the left and 2 on the right will be as shown here.

Balance Sheet

Liabilities	Assets
Long-Term Sources (LTS) (comprising Share Capital, Reserves & Surplus And Long Term Loans)	Long-Term Uses (LTU) (made up of Fixed Assets)
Short-Term Sources (STS) (comprising Current Liabilities)	Short-Term Uses (STU) (represented by Current Assets)

You are now ready to read balance sheets.

There are only three types of balance sheets. If you now take a large number of balance sheets and present them as shown in the Table, you will discover that all balance sheets must fit into 1 of only 3 types, A, B or C, as shown below.

* For this discussion, we will call a liability repayable within 1 year as a short-term source. If the liability is to be paid back later than 1 year it will be classified as long-term. Similarly, assets which can be liquidated or reconverted into cash

within 1 year will be considered to be short-term uses. Those which cannot be liquidated or reconverted into cash within 1 year are long-term.

Take a close look at the 3 statements.

Balance Sheet A

Liabilities		Assets	
LTS	80	LTU	80
STS	20	STU	20
	100		100

Balance Sheet B

Liabilities		Assets	
LTS	90	LTU	80
STS	10	STU	20
	100		100

Balance Sheet C

Liabilities		Assets	
LTS	70	LTU	80
STS	30	STU	20
	100		100

What do I mean when I say that these are the only 3 types of balance sheets possible?

You might think there surely is any number of combinations besides those shown here. To understand this classification, it is essential that you read the statements horizontally and not vertically. You will then realise that the actual numbers don't matter.

A balance sheet is Type A when the long-term sources and the long-term uses match, and when the short-term sources and short-term uses also match.

A balance sheet is Type B when the long-term sources are more than the long-term uses, in which case the short-term sources will be less than the short-term

uses.

Finally, when the long-term sources are less than the long-term uses, and consequently, the short-term sources are more than the short-term uses, the balance sheet will be called Type C.

How would we describe these 3 balance sheets?

Balance Sheet A

Liabilities		Assets	
LTS	80	LTU	80
STS	20	STU	20
	100		100

A has 80 long-term sources and 80 long-term uses.

A's short-term sources are 20 and so are its short-term uses. *A appears to have used its long-term funds to acquire long-term assets and short-term funds to finance short-term assets.*

Balance Sheet B

Liabilities		Assets	
LTS	90	LTU	80
STS	10	STU	20
	100		100

B, on the other hand, has 90 long-term sources but only 80 long-term uses. It appears that B has used long-term funds for long-term purposes and having done so, still has a surplus of long-term funds to the extent of 10. However, on the short-term front, the funds available are 10, but the utilisation in short-term investments is to the tune of 20. This deficit has apparently been bridged through diversion of long-term funds. *B, therefore, can be described as having used a part of its long-term funds for short-term purposes.*

Balance Sheet C

Liabilities		Assets	
LTS	70	LTU	80
STS	30	STU	20
	100		100

C has long-term sources of 70 and long-term uses of 80, showing a deficit. Even if all long-term funds have been used for long-term purposes, C is still running short of 10. However, since short-term sources are 30 but short-term uses only 20, there is a surplus. In this case, short-term funds with the value of 10 have been diverted for long-term purposes. *C appears to have used some short-term funds for long-term purposes.*

All this is just a factual description of what these balance sheets reveal.

Which balance sheet is the healthiest?

The question now is, which of the 3 follows sound financial management policies?

It is critical for an organisation to always remember that all sources of funds are eventually liabilities. Those who have lent money are going to expect it back. It's merely a matter of time. Prudence must, therefore, be exercised at all times while deploying those resources to ensure that the assets can generate an inflow before the liabilities demand an outflow.

At the same time, it's essential to recognise that some liabilities have to be paid back earlier than others. Those liabilities which we have classified as short-term sources will have to be repaid in the immediate future—over the next few weeks or months, but not later than 1 year.

Let's examine the three balance sheets again from this perspective.

Let us begin with Balance Sheet C.

Who is going to come knocking at C's doors in the near future asking for the money back?

The short-term lenders, of course, which amount to 30.

To repay these, which assets on the right-hand side can be liquidated at short notice?

It is not difficult to appreciate that the long-term uses, which are represented by fixed assets, must never be liquidated. No healthy organisation will ever purchase machinery or buildings to sell! These are purchased for use in the business.

The only assets which will bring in cash in the short run are the short-term assets. This happens through the movement of the working-capital cycle, where cash will become cash each time the cycle goes round.

C is expected to repay 30 in the near future, but only has 20 in short-term assets. In order to meet its short-term liabilities, C will now be forced to sell some long-term assets. If a business has to sell its buildings, machinery and equipment, it would jeopardise its very existence.

When an organisation is forced to sell its long-term assets in order to meet its short-term liabilities, to me it represents the beginning of the end of that organisation.

C is in serious trouble.

And why is C in trouble? This is because it is guilty of using short-term funds for long-term purposes.

That leaves us with A and B.

Let me now give you the rule for a healthy organisation. Healthy organisations will ensure that they use their long-term funds for long-term purposes and short-term funds for short-term purposes.

In accordance with this rule, A should be the healthiest. But that is not so. And I am not saying this because A seems to have the exact value of short-term assets as its short-term liabilities, and could just be cutting it a bit fine. There is a different reason for which I believe that A is not the healthiest.

A is definitely better than C, but B is even better than A.

In Balance Sheet A, who is expecting to get paid over a short period of time? The short-term liabilities, which amount to 20.

And how much does A have in the form of short-term assets?

Also 20.

However, do you recall the break-up of short-term assets, which are also known as current assets? Current assets are made up of cash and bank balances, debtors and inventory.

Balance Sheet A

Liabilities	Assets
STS	20
STU	20

Cash
Debtors
Inventory

When it is time to pay the short term liabilities, cash is readily available. Collections made from debtors can also be used to pay creditors. But inventory cannot be used since it cannot be liquidated on demand.

So, since inventory cannot be used to pay creditors, it is obvious that A is not going to have sufficient funds to meet its short-term liabilities.

This brings me to a key accounting ratio called the ‘current ratio’. The short-term uses on the assets side are current assets.

The short-term sources on the liabilities side are ‘current liabilities’. The ratio of the two is called the current ratio.

Healthy companies must try and maintain a current ratio in the region of 2:1.

The problem with A is that its current ratio is 1:1.

The problem with C is that its current ratio is ...

Balance Sheet C

Liabilities	Assets
CL	10 CA 20

Current Ratio

CA:CL = 1:1.5

The current ratio of C is 1:1.5.

The current ratio in the case of B is exactly what it should be, namely, 2:1.

Balance Sheet C

Liabilities	Assets
CL	10 CA 20

Current Ratio

CA:CL = 2:1

Is it possible for B to get into trouble despite having the perfect current ratio?

B's current ratio is according to the norm of healthy companies. However, in certain situations B can also develop cash-flow problems. B's short-term liabilities are 10 and its short-term assets are 20.

As we have seen, short-term assets consist of cash, debtors and inventory.

In accounting language, cash and debtors are called 'liquid current assets' (or 'quick assets'). Inventory is called a 'non-liquid current asset'.

Balance Sheet B

Liabilities	Assets
STS 10	STU 20

Cash
Debtors
Inventory

Quick Assets or
Liquid CA

Non Liquid CA

For B to be able to meet its current liabilities on time, you can see that it should possess an equal amount or more of liquid current assets.

խառնա առ շպառ առաջարկ, ու լուր, ու լզար շահելու ձևեր.

This brings me to another key ratio, the ‘quick ratio’ (also called the ‘acid-test ratio’).

If you break up current assets into those that are liquid and those that are not, the ratio of liquid current assets (LCA) to current liabilities (CL) is called the ‘quick ratio’ or the ‘liquidity ratio’. Healthy companies will ensure that the liquidity ratio is always maintained at a minimum of 1:1.

So B, in order to remain in a position that meets all of its current commitments, must ensure that it possesses a minimum of 10 in the form of liquid current assets, that is, in the form of cash plus debtors. This also means that it can maintain a maximum inventory of 10. If B’s inventory is higher than 10, it will mean that though it has a good current ratio, it is still incapable of meeting its short-term commitments.

To sum up:

Healthy organisations must maintain a current ratio of about 2:1 and a liquidity ratio of a minimum of 1:1. If the current ratio falls below 2:1, it may not be an immediate cause for alarm. But for the liquid ratio to fall below 1:1 is a very serious matter, and if corrective measures are not urgently taken, it can lead to situations of financial insolvency.

The lessons gleaned from the above discussion can be summed up as follows:
Long-term funds should be used for long-term purposes and short-term funds for short-term purposes.

Healthy organisations may use, or rather should use, some long-term funds for short-term purposes as done by B. But no organisation should EVER use short-term funds for long- term purposes as C did.

Healthy companies must maintain a Current Ratio in the region of 2:1 and Liquid Ratio at a minimum of 1:1.

Investors must be wary of investing in Type C companies and companies where the current and quick ratios are not in accordance with norms.

Understanding the Concept of Earnings Per Share (EPS)

The Concept

Another important concept you must understand is that of Earnings Per Share (EPS).

A company making a public issue approaches you with an invitation to invest in its shares. To decide whether or not to invest, you would usually like a number of questions answered.

You would like to know the business the company is engaged in, its future prospects and the profitability projections. You would also like to peep into the company's past—what the sales have been, its profitability track record as well as its dividend track record. Another important aspect to look into would be the promoters' background and how well they have performed in earlier ventures. You would like to seek information surrounding all these matters and some more.

But what if there are two companies going for public issues, and you have to choose one of them, and in response to all the above questions, you receive identical answers?

Both companies are similar in their nature of work, their past performance, their future projections and the credibility of their respective promoters. The amount of money both are seeking to raise is the same. They intend to invest the money raised in an identical fashion, make the same product and sell the same quantity—even the projected profit is identical.

Both companies are alike in all respects but one. The only area of difference is in their approach towards the source from which they plan to raise the money.

Typically, businesses are funded through a combination of equity and debt. One of these organisations plans to take a larger quantum of funds from equity, while the other prefers to borrow more.

This is the only difference.

Once the funds are raised, both companies will make identical investments. They will purchase similar infrastructure, hire an identical number of people, make the same product, sell the same quantity and make the same amount of profit.

Let's say, both A and B need a total investment of 1 million.

A raises 800,000 through an equity share issue and 200,000 through debt which carries an interest rate of 15 per cent per annum.

In the case of B, 200,000 comes from equity and the balance 800,000 from debt.

Have you picked the one you prefer? Is it A or B? Now let's try to find out who is going to be better off.

Statement Showing Capital Employed

	A	B
Equity shares of 100 each	800,000	200,000
15% Loan	200,000	800,000
	1,000,000	1,000,000

As I said earlier, both companies are identical, even to the extent of the profits they earn. But let me be sure that you are clear in your mind about what exactly profit is.

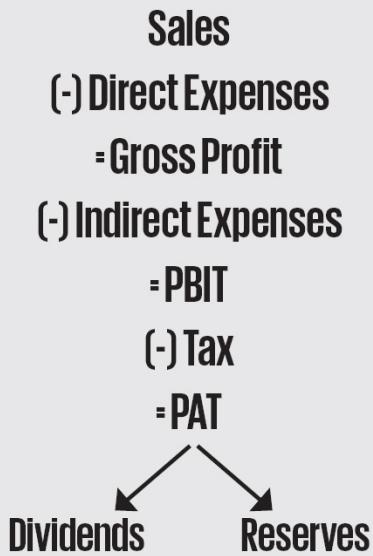
The process of earning profit begins with sales. From the sales figure, we deduct the direct expenses (the cost of sales), to arrive at the gross profit (GP).

We now deduct the indirect costs too, to get the 'operating profit' or Profit Before Interest and Tax (PBIT). From PBIT we first pay interest, and are left with the Profit Before Tax (PBT).

The government must now be paid income tax. After deducting income taxes from PBT we are left with Profit After Tax (PAT).

PAT belongs to the shareholders or the owners of the organisation.

As you know, the entire amount of PAT is usually not distributed among the shareholders. Only a portion of the profit gets distributed by way of dividends, and the remainder is retained within the organisation. This remainder appears on the liabilities side of the balance sheet under the heading 'Reserves and Surplus'.



Which of these figures do you think the shareholder is most interested in?

Though you might imagine that the shareholders' interest lies more in dividends, a prudent investor would actually be happier with a healthy PAT.

When an organisation earns an impressive PAT, the shareholders may either receive large dividends, which would naturally make them happy, or a bigger component may be transferred to reserves—and this could make them even happier.

This is because when reserves increase, the net worth of the shareholders goes up. Consequently, the book value of the shares also goes up, and this can result in stock-market appreciation of the value of the shares. Often, the gain through market appreciation is far more than the dividend the shareholder would have received. A and B are identical companies. But to what extent will they remain identical?

Their sales will be the same, and so will the direct expenses and, therefore, their gross profit. Their indirect expenses and their PBIT figures will also be the same.

But here the similarity must come to an end. The interest obligations will vary as they have borrowed differently.

Since the similarity between A and B ends at the PBIT, any comparison between the two can begin not later than the PBIT stage.

Let's assume that both are generating a PBIT on capital employed at the rate of 30 per cent.

Statement Showing Capital Employed

	A	B
Equity shares of 100 each	800,000	200,000
15% Loan	200,000	800,000
	1,000,000	1,000,000
PBIT @ 30%	300,000	300,000
Less Interest	30,000	120,000
PBT	270,000	180,000
Less Tax @ 40%	108,000	72,000
PAT	162,000	108,000

Take a look at this table.

On the face of it, it appears that even though A and B have invested identical sums in their businesses, are running businesses with identical turnovers and expenses, the PAT (the profit that belongs to the owners) in the case of A is higher than in the case of B.

Now look at the earnings per share. This is calculated as PAT divided by the total number of shares.

Statement Showing Calculation of EPS

	A	B
Profit After Tax		
Number of Shares		
EPS (Earnings Per Share)	20	54

You will see that A has an EPS of 20, but B's EPS is 54!

Whose shares would you like to buy? It now appears that investing in B is much more profitable than investing in A.

Even though B earns a lower PAT in absolute terms, you can see that it enjoys a substantially higher EPS.

In other words, the owners of A have invested 800,000 and earned 162,000, translating into a return on shareholders' capital of 20.25 per cent. In the case of B, the percentage return on an investment of 500,000 works out to 54.

The question that begs for an answer is: WHY?

Two organisations have launched identical businesses with similar investment outlays. They make and sell similar products, at the same selling prices. The costs of manufacturing and selling and administration are also the same. Why then are the owners of one taking home over 150 per cent higher return than the owners of the other business?

The focus of any business enterprise should be on maximising returns for the owners. Many believe that profit is the automatic result of the ability to make and sell. If this was true then shouldn't two organisations, with identical capabilities to make and sell, also have the same profits?

Let's now find some answers.

Let me give you 3 reasons why B earns so much more than A.

But before I do that, let me ask you a question.

Between A and B, which is a riskier investment?

Of course, B. There is an established co-relation between risk and profit.

Then why do I seem to be suggesting one should invest in B?

Why am I recommending a riskier investment?

I have a different take on this matter.

Which, between A and B, is a safer company?

It appears to be A.

But are you sure?

Had you asked the finest brains in the world in the year 2000 or even in mid-2001 their opinion about Enron, without exception the answer would have been, ‘It is a wonderful stock.’

The stock was praised by the top analysts and market gurus and was widely held in mutual funds of prominent money management firms. Few questioned its valuation.

In December 2001, the company had collapsed. Almost up to the brink of its bankruptcy, many sell-side analysts were putting a ‘buy’ recommendation on Enron.

Enron, once ranked the sixth-largest energy company in the world, was one of the most widely hyped stocks of 2000. The company grew revenues from \$10 billion to \$100 billion in 10 years. It was a Wall Street darling.

The share climbed 88.6 per cent in an otherwise brutal market.

Enron shares were worth \$90.75 at their peak in August 2000 and dropped to \$0.67 in January 2002.

Between A and B, the safer company appears to be A. But can you be sure of it, when in the case of Enron almost up to the eve of its bankruptcy, the best analysts of the world could not?

When you choose investments on grounds of safety rather than returns, safety is never guaranteed, but mediocrity of returns is.

Now let's try and understand three reasons why the EPS in the case of B is greater than that of A

Reason 1: Cost of capital.

It is scary to observe how many persons, including business owners themselves, suffer from the delusion that owners' money is free.

The truth is that not only is the owners' equity contribution not free but it is perhaps the most expensive source of money that an enterprise can raise. Borrowed funds, relatively speaking, are cheap.

In the case of A, 80 per cent of the funds have come from an expensive source and 20 per cent from a cheap source. The converse is the case of B, where just about 20 per cent of the money is from an expensive source and 80 per cent comes from a cheap source.

This takes B's average cost of capital substantially lower than A's. They both earn a similar PBIT of 30 per cent. B earns 30 per cent on the entire investment of one million, of which on 800,000 it needs to pay the lenders a mere 15 per cent. And the balance of 15 per cent goes to the pockets of B.

This means that B takes home 30 per cent on its own investment of 200,000 as well as 15 per cent on the borrowed capital of 800,000, taking B's return on investment substantially higher.

Reason 2: Tax deductibility of interest

The cost of loans is called interest and the cost of equity is dividend.

Look at the table carefully. In the hierarchy, where does interest appear and where is dividend paid from?

Statement Showing Capital Employed

	A	B
Equity shares of 100 each	800,000	200,000
15% Loan	200,000	800,000
	1,000,000	1,000,000
PBIT @ 30%	300,000	300,000
Less Interest	30,000	120,000
PBT	270,000	180,000

Less Tax @ 40%	108,000	72,000
PAT	162,000	108,000

Interest is deducted before arriving at Profit Before Tax (PBT) and dividend is paid out of after-tax profits.

In other words, interest is a tax-deductible item and dividend is not. What does this mean?

Through the exercise of stringent cost-cutting measures, if a business manages to spend 100 less on a head of expense that is permitted by the tax laws of the country as tax-deductible, will the profit of this business increase by 100?

The answer is, it will not.

The figure that will increase by 100 is that of the PBT. If the PBT goes up by 100, the tax liability will go up by 40 (assuming a tax rate of 40 per cent) and the take-home profit of this business will go up only by an additional 60.

So when this business did not spend 100, how much did its profit increase by? It increased by 60.

And had this business spent this money, how much will its take-home profit decrease by? It will decrease by 60. The government tax revenue will decrease to the extent of the balance of 40.

What I'm trying to tell you is that whenever the government permits any item to be tax-deductible, what it is really telling the tax payers is, 'Spend liberally. For every 100 you spend, you contribute 60 and we will contribute 40.'

Interest is tax-deductible, dividend is not.

I have already pointed out that compared to the cost of equity, even a loan carrying a rate of interest of 15 per cent is cheap. Now I'm telling you that a 15 per cent loan is not cheap, it's even cheaper.

When a business takes a loan of 100 and commits to pay an interest of 15, it doesn't really pay 15. It pays 60 per cent of 15, that is 9. The government pays the remaining 6.

B has raised 80 per cent of its requirement for funds from a source where the effective rate is 9 per cent, and the business earns a PBIT at the rate of 30 per cent. This means that it earns 30 per cent on the owners' contribution of 200,000 as well as on the borrowed funds of 800,000, on which it has to pay an after-tax effective rate of 9 per cent.

The owners take home 30 per cent on 200,000 plus another 21 per cent on 800,000 (30 per cent less 9 per cent), taking their return on investment shooting upward.

Reason 3: The leverage effect

Some costs by nature are variable while others are fixed.

Variable costs increase or decrease proportionately with an increase or decrease in the top line.

Fixed costs remain fixed (at least for a certain period). Neither do these costs increase with a rise in sales nor reduce with a drop in sales.

Consequently, when sales increase and fixed costs do not increase, profits increase at a faster pace. (There is a reverse impact when sales reduce)

This, in financial terms, is called the leverage effect.

The higher the percentage of fixed costs in an organisation's costing structure, the greater is the leverage effect.

In terms of the cost of financing, interest is a fixed cost while dividend is variable by nature.

The third reason why B's return on investment or EPS is so much higher is due to the substantially greater amount of interest commitment (30,000 in case of A against 120,000 for B).

Every Investor must understand the concept of earnings per share in order to take intelligent investment decisions.

In the next chapter I will give you more inputs on the leverage effect.

Dhirubhai Ambani

No discussion about stock markets in India is complete without a mention of Mr Dhirajlal Hirachand Ambani, or Dhirubhai Ambani as he was popularly called, who single-handedly ushered in an equity cult in India.

He brought glamour and glitz to an otherwise drab private club of stock brokers and yarn and bullion traders.

Where other companies would normally finance their businesses using loans from public financial institutions, Dhirubhai believed in mobilising funds from small investors.

Where other companies would take shareholders for granted, Dhirubhai treated them with the utmost respect, understood their needs and ensured they never regretted investing with him.

Where other companies had shareholders numbering thousands or tens of thousands, Dhirubhai's companies had many hundreds of thousands.

Where other companies held their AGMs, the Annual General Body meeting of shareholders, in auditoriums with a few hundreds in attendance, Dhirubhai held his in stadiums with thousands of shareholders attending (In 1986, the AGM held in Cross Maidan, Mumbai, was attended by more than 30,000 shareholders).

Where board members of other companies were all but inaccessible to shareholders, making the bare minimum communication with them during AGMs, Dhirubhai would come on the stage like a showman, hold a dialogue with the shareholders, ask them what they wanted from the company and would announce the dividends and bonuses demanded by the shareholders on-the-spot.

While many shareholders lost money after investing in stocks of companies that eventually became duds, Dhirubhai's investors, having purchased merely small quantities of shares, financed their children's education, and built houses out of the benefits received in the form of dividends and bonus shares.

The man, no doubt, had his share of controversies and his critics questioned the means he used to achieve success, but that in no way camouflages his stupendous achievements.

He was responsible for giving a shot-in-the-arm to the Indian capital market and took the equity culture to even the smaller towns and cities of India.

This yeoman service that he provided to the nation, the change in mindset that he engineered that investing in stocks is not akin to gambling and can actually be a profitable and respectable investment vehicle, has contributed tremendously to the growth story of India and is responsible in no small measure to where India stands today.

His skills were innate. Though largely uneducated in the traditional sense, he was able to outstrip his rivals who were in business for over a century, in less than a decade.

From selling PVC footwear on a hand cart to becoming the largest PVC manufacturer globally, from being a petrol pump attendant to owning one of the biggest petroleum companies in the world, his is a one-of-its-kind success story that is scripted perhaps once in several centuries and should be an inspiration to all.

How to Do Leverage Analysis

In the previous chapter I had referred to the term ‘leverage effect’.

Leverage denotes a disproportionate impact on the bottom line due to a certain change in the top line. This happens due to the presence of fixed costs in the costing structure.

If all costs are variable by nature, then there would be a proportionate increase in profit. If sales were to increase by 10 per cent, the costs would also increase by 10 per cent and consequently, there would merely be a 10 per cent increase in profit.

However, when costs are partially variable and partially fixed, with an increase in sales the variable costs increase in the same proportion but the fixed costs do not, resulting in a less-than-proportionate increase in total costs and consequently, a more-than-proportionate increase in profit.

When from sales the variable costs are subtracted the resultant figure is called ‘contribution’. If fixed costs are deducted from contribution, you arrive at the amount of profit.

Let’s take an example of a trading company.

This company sells its product for 100 each. It has a variable cost of 60 per piece and the business has to incur a fixed cost of 20,000. This company sells 1,000 pieces during the year. Let’s find out its profit.

Quantity	1,000
Sales @ 100	100,000
(-) Variable Cost @ 60	60,000
= Contribution @ 40	40,000
(-) Fixed Cost	20,000
= Profit	20,000

This company has made a profit of 20,000 on a sale of 1,000 pieces.

This company has made a profit of 20,000 on a sale of 1,000 pieces.

Let's work out the profit if it sells 2,000 pieces.

Quantity	1,000	2,000
Sales @ 100	100,000	200,000
(-) Variable Cost @ 60	60,000	120,000
= Contribution @ 40	40,000	80,000
(-) Fixed Cost	20,000	20,000
= Profit	20,000	60,000

As you can see, when its sales doubled from 100,000 to 200,000, its profit did not double from 20,000 to 40,000, but trebled to 60,000.

This is the leverage effect.

Leverage is a double-edged tool. If profits increase at a disproportionately fast pace due to a certain increase in sales, profits also decline at an equally fast pace if sales decrease.

Fixed costs are of two types:

- i) Operating fixed costs.
- ii) Non-operating fixed costs.

Operating fixed costs are those that are necessary to run your operations. These include salaries, rents and overheads.

Non-operating fixed costs are those on which operations do not depend, in the sense that the operations would continue regardless of whether these fixed costs were incurred or not.

These are the financial fixed costs or interest. Operations demand money. It does not matter to operations whether funds are procured from owners or from borrowed sources. It's only when the money comes from lenders that there will be an interest cost.

Operating fixed costs are dictated by the nature of business and are consequently, by and large, beyond one's control.

To borrow or not to borrow, on the other hand, is a choice. These fixed costs are within the control of the business owner.

The formula to arrive at profit can now be modified as follows:

Sales

(-) Variable Cost (VC)

= Contribution (C)

(-) Operating Fixed Cost (OFC)

= Profit Before Interest & Tax (PBIT)

(-) Interest

= Profit Before Tax (PBT)

The leverage multiple

You now understand that, due to the presence of fixed costs, profit will increase at an exponential pace.

So the question that arises is, if profit does not increase proportionately, is it possible to know the profit merely by observing the percentage growth in sales?

In the above case, would it have been possible for the business owner to know that if his sales had increased from 100,000 to 200,000, his profit would have increased from 20,000 to 60,000?

That would be possible if this business owner had known the leverage multiple applicable to him.

If he had known that the leverage multiple applicable to his business is 2, this owner would have known that with a 100 per cent increase in turnover from 100,000 to 200,000, there will be a 200 per cent increase in profit. The earlier profit was 20,000 plus 40,000 (that is 200 per cent of 20,000). So the new profit will be 60,000.

Knowing the leverage multiple can help in two ways:

1. It can help you predict profits. Since the leverage multiple indicates the

number of times the bottom line will be impacted on account of a certain change in the top line, you can look at the change in sales compared to a previous period and estimate the profit.

2. You may also want to understand the risk-profile of a certain organisation before you invest in it. Calculating the leverage multiple can help you do this.

How to calculate the leverage multiple

Since leverage is caused by the presence of fixed costs in the costing structure, and since, as we have now seen, there are two types of fixed costs, it follows that there are *two types of leverages*.

These are '*operating leverages*' and '*financial leverages*'. Let us now see how to work out the multiplier factor for each of these.

Consider the following profit statement:

Sales	200
(-) Variable Cost (VC)	40
= Contribution (C)	160
(-) Operating Fixed Cost (OFC)	120
= Profit Before Interest & Tax (PBIT)	40
(-) Interest	32
= Profit Before Tax (PBT)	8

As operating leverage is caused by the presence of 'operating fixed costs', the formula to calculate the 'operating leverage multiple' is very simple. Just take the figure appearing before operating fixed costs and divide it by the figure after:

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{PBIT}} = \frac{160}{40} = 4$$

Similarly, 'financial leverage' is caused by financial fixed costs and the formula is:

$$\text{Financial Leverage} = \frac{\text{PBIT}}{\text{PBT}} = \frac{40}{8} = 5$$

The ‘combined leverage’ can be calculated as either operating leverage x financial leverage, which is $4 \times 5 = 20$, or as:

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{PBT}} = \frac{160}{8} = 20$$

What do these multiples indicate?

How does it help knowing that the operating leverage of this organisation is 4, its financial leverage is 5, and its combined leverage is 20?

The operating leverage multiple tells us how a change in sales will impact the Profit Before Interest and Tax (PBIT).

The financial leverage indicates the impact of a change in PBIT on the Profit Before Tax (PBT).

And the combined leverage shows the impact of a change in sales on the PBT.

In this case, the operating leverage is 4. This means that if sales increase or decrease by 1 per cent, the PBIT will increase or decrease by 4 per cent.

Here the financial leverage happens to be 5. This tells us that if the PBIT changes by 1 per cent, the PBT will change by 5 per cent.

The combined leverage in this case is 20. This means that if the top line changes by 1 per cent, the bottom line will change by 20 per cent.

Let us take the above profit statement again and see how we can use the leverage multiples to gauge profit.

In our example, sales is 200, PBIT is 40 and PBT is 8. Now what will happen if sales grow by 10 per cent to 220?

As the operating leverage is 4, the PBIT will increase by 40 per cent.

The existing PBIT is 40. Now, 40 per cent of 40 is 16.
Therefore, the new PBIT will be 56.

The financial leverage is 5.

The PBIT has increased by 40 per cent. Therefore, the PBT will increase by 5 times of 40 per cent, that is, 200 per cent. The existing PBT is 8 and 200 per cent of 8 is 16. The new PBT will accordingly be 24.

The PBT can also be calculated by applying the combined leverage. The combined leverage is 20. Sales has increased by 10 per cent. The PBT will, therefore, increase by 20 times of 10 per cent, which is 200 per cent. The existing profit of 8 will grow by 200 per cent to 24.

Similarly, PBIT and PBT can be calculated for any increase or decrease in sales as shown here:

		If sales increase by 10%	If sales increase by 50%	If sales increase by 100%	If sales decrease by 10%
Sales	200	220	300	400	180
(-) VC					
= Contribution					
(-) Operating FC					
= PBIT	40	56	120	200	24
(-) Interest					
= PBT	8	24	88	168	(-) 8

This can easily be verified by completing the table according to the conventional method of calculating profit:

		If sales increase by 10%	If sales increase by 50%	If sales increase by 100%	If sales decrease by 10%
Sales	200	220	300	400	180
(-) VC	40	44	60	80	36
= Contribution	160	176	240	320	144
(-) Operating FC	120	120	120	120	120
= PBIT	40	56	120	200	24
(-) Interest	32	32	32	32	32
= PBT	8	24	88	168	(-) 8

Leverage Analysis to gauge how risky an organisation is.

Let us now see how we can use leverage analysis to gauge how safe or risky an organisation is.

Do you remember our discussion on balance sheets? We saw that all balance sheets have to be one of just three possible types.

I would now like to tell you that if you take a profit and loss account, reclassify the data as I've just explained, and calculate the operating and financial leverage multiples, you will discover that there are only *four types of organisations*.

Type of Organisation	Operating Leverage	Financial Leverage
I	High	High
II	Low	Low
III	High	Low
IV	Low	High

The first type is one in which both operating and financial leverages are high.

The second type would be one in which both operating and financial leverages are low.

The third type may have a high operating leverage and a low financial leverage.

The fourth type would have a low operating leverage and a high financial leverage.

These are relative terms and it may be difficult to put a precise number to what constitutes *high*.

I can, however, tell you what would be considered low. A leverage of 1 is low. A leverage of 1 would mean that if the turnover increases by 100 per cent, profit would also increase by 100 per cent.

Or a 10 per cent increase in sales would result in a 10 per cent increase in profit. There would be no leverage benefit at all.

In my opinion, a leverage of 3 is high. Consider the case of a business where the operating and financial leverage multiples are 3 in each case. This means that the combined leverage is 9.

This, in turn, would mean that a 10 per cent increase in sales will result in a 90 per cent increase in profit. Wonderful!

However, a reduction of only 10 per cent in turnover would bring about a 90 per cent drop in profit. Almost the entire profit could get wiped out with a relatively small drop in sales. This could cripple the organisation.

Let us now understand how to read and interpret leverages to analyse the health of an organisation.

Rating the Type I Organisation

The first type of organisation we are considering has a *high operating leverage*.

Type of Organisation	Operating Leverage	Financial Leverage
I	High	High

Now when is the operating leverage high? It is high only when the operating fixed costs are high.

As we saw a short while ago, operating fixed costs are, by and large, beyond the control of the organisation. They are dependent on the nature of its activities. The Type I organisation thus seems to be one that, by virtue of the nature of its business, must bear high operating fixed costs.

This gives us an inkling that the break-even point of this organisation will also be achieved relatively late since it has to generate a sufficient ‘contribution’ to recover a higher operating fixed cost.

Once the organisation breaks even, it will begin to enjoy the benefit of leverage by default.

Every small change in turnover, after breaking even, will lead to a substantial increase in profits.

We have gauged all this information just by looking at the word ‘High’ the column ‘Operating Leverage’.

Let’s now look at its financial leverage, which is also high.

A high financial leverage would indicate that the interest burden is high. This gives us a peek into the temperament of the management as regards borrowing. They seem to believe in liberally supplementing their own resources with borrowed capital.

This would push the company’s break-even point even further. It would now

have to work harder, make and sell more in order to recover the additional burden of interest cost.

But the combined leverage is so high that once the organisation breaks even (which would be achieved at a substantially high level of installed capacity), the slightest change in sales would take the profit zooming up. Of course, the scope for this is limited, since this organisation may soon reach the limit of its installed capacity.

However, even a small depression in sales will bring profits sliding down, and the organisation may even start making a loss.

How would you rate this organisation on a risk scale of 1 to 10 (1 being low-risk and 10 being high)?

I would put it in a range of 8 to 10. If this organisation approaches you with an offer of a large order, but demands a 6-month credit period, how comfortable would you be to take it on as a customer?

Not comfortable at all!

As an entrepreneur, knowing the leverage multiple will guide you on your borrowing strategy. When it approaches a bank for a loan, you will agree that the bank is going to be reluctant to entertain its proposal.

However, as long as it is making a profit, it may be worth investing in its shares as a short-term proposition—while recognising that it is a somewhat risky investment. If its sales continue to rise, there is scope for phenomenal gain.

Having invested, you would need to watch it carefully, and exit at the first sign of a downward trend.

Rating the Type II Organisation

Type of Organisation	Operating Leverage	Financial Leverage
II	Low	Low

The second type of organisation has a low operating leverage. This means that

its operating fixed costs are on the lower side. This appears to be a lucky organisation since the fixed costs that it must bear, over which it has no control, are less. This also means that on operations it has a quick break-even. The company is very likely to break even on a relatively lower level of its installed capacity.

It has a long way to go before it reaches full capacity utilisation.

We now turn our attention to the financial leverage, and find that this is also low. This tells us that the organisation has a low burden of interest. It appears to be conservative in its approach towards borrowing. Even though it achieves break-even relatively quickly, it does not believe in hastening its pace of growth with the help of borrowed resources.

Therefore, it appears to be an organisation which probably has a slow and sluggish, but continuous, growth.

If this kind of organisation approaches you with an offer of a large order, provided you extend it a long credit period, go right ahead.

However, it's very unlikely that this organisation will come to you with such a request because it clearly does not believe in borrowing. If this organisation goes to a bank for a loan (which in all likelihood it will not), the bank would be very happy to entertain its proposal.

If such an organisation is issuing shares, stay away. You will probably make more money keeping your investment as a fixed deposit on interest with this organisation than from investing in its stock.

Rating the Type III Organization

In this case the operating leverage is high.

Type of Organisation	Operating Leverage	Financial Leverage
III	High	Low

Which means its operating fixed costs are high. The organisation has no control over these. The fixed costs that it is forced to bear are on the higher side and the break-even point would be achieved at relatively higher levels of capacity

utilisation. The benefit of leverage would automatically accrue after the break-even point is reached, where a small increase in sales would lead to a disproportionately greater increase in profits.

However, the *financial leverage is low*, and this means that the borrowings are kept under check.

How would we describe the management's temperament? Conservative? I would not call it conservative. A more appropriate word is 'sensible'. This organisation recognises that it already has a high operating leverage. If it borrows, its financial leverage will also become high and it will then become like the Type I organisation.

Leverage analysis has guided this organisation not to borrow. Or, perhaps, it did attempt to borrow but the banker examined its leverage and refused to lend. It has offset the risk of high operating leverage by keeping its financial leverage under control.

Rating the Type IV Organisation

In this case the operating leverage is low. This type of organisation has low operating fixed costs. This, in turn, means that the fixed costs, over which there is no control, are less.

Type of Organisation	Operating Leverage	Financial Leverage
IV	Low	High

The break-even point on operations is quick. This organisation will probably break even on a lower capacity utilisation.

The *financial leverage is high*. It would appear that this organisation, recognising its fortunate situation whereby it breaks even relatively quickly on operations and has a long way to go before it reaches full-capacity utilisation, decided to accelerate its pace of growth with a generous dose of borrowed capital.

However, it has still not become a very risky proposition since the risk that borrowing entails has been largely offset by the safety of its operating leverage, which is on the lower side.

This is, therefore, the best combination to have.

Message for Investors

The Type I organisation is excessively risky. It should not have borrowed, but it has.

The Type II organisation is safe but conservative. It could have borrowed to its advantage, but did not.

The Type III organisation should not and does not borrow. Leverage analysis guided it to keep a check on its borrowings. Such organisations must fund expansions from their own resources or through a public issue of shares.

The Type IV organisation can afford to borrow and it does. Such organisations quicken their pace of growth without becoming unduly risky.

You can make the highest profit by investing in the Type I company, while recognising that it would be a risky investment. Having purchased shares, you must keep a close watch on the market and the company. This share will do phenomenally well while the market for its product continues to grow and its sales are on the ascendant. At the first sign of a downturn or a recession, you should call your broker to sell and exit.

Investment in Type II companies would be safe but not attractive at all. Do not expect to earn any dramatic returns, as the growth would be quite sluggish.

Type III and Type IV are both quite attractive and at the same time not very risky. But the investment would be relatively safer in the Type IV company since the low operating leverage ensures that even during times of recession, this company will be able to stay afloat. At the same time there are prospects of earning attractive returns since the company will be enjoying the benefit of leverage.

How to Do Ratio Analysis

Earlier in this book, I have explained the relevance of a few ratios while discussing how to read balance sheets. Let me now systematically take you through a few ratios which you must get familiar with in order to choose fundamentally strong companies and to take intelligent investment-related decisions.

While researching individual stocks and carrying out due diligence, you need to go beyond the basic information like share price, number of shares and market capitalisation. Intelligent investing requires careful analysis of financial data to find out the company's true worth. This data can be extracted from the profit and loss account, balance sheet and the cash flow statement. An insight can be obtained by taking a look at its financial ratios.

Ratio analysis is crucial when understanding a company's performance and making comparisons between companies within a peer group.

Here are some important financial ratios divided into six categories to help you gain a better understanding of the company before you invest in it. The stock market-related ratios help in anticipating the future market price of the shares and in reaching buying/selling decisions. The other groups of ratios will help in analysing the health of the company.

Desist from investing unless these other groups of ratios are healthy, even if the stock market ratios appear to be attractive.

Investment valuation ratios

Before we work out the ratios, you must understand a few terms like earnings,

Before we work out the ratios, you must understand a few terms like earnings per share, book value per share and cash earnings per share.

Earnings Per Share (EPS) =

$\text{Net profit} - \text{Dividend on preference shares} / \text{Number of equity shares}$

I have discussed this at great length earlier on in the book. EPS is the profit earned over the year divided by the number of equity shares. Since only equity shares are taken into account, the profit to be considered should be after rewarding the preference shareholders. This term is often used in investment discussions.

Book Value Per Share =

$\text{Equity capital} + \text{Shareholders' reserves} / \text{Number of equity shares}$

Book value per share indicates the worth of each share as recorded in the company's books of accounts.

If you deduct the total liabilities from the total assets of a company, what is left belongs to the shareholders and is called the shareholders' funds, the shareholders' equity or the net worth.

If you divide the net worth by the total number of equity shares issued by the company, the figure that you get is the book value per share.

Net worth can also be arrived at by adding shareholders' reserves to the equity capital. However revaluation reserves, if any, should not be added.

Book value does not reflect the current market value of the company's assets since it is a historical record based on the prices at which the assets of the company were originally purchased. It, therefore, has limited usage as a tool for evaluating the market value or price of a company's shares. The market prices of shares are usually much higher than what their book values indicate. Therefore, if you do come across a share that has a market price around its book value, the stock would appear to be underpriced.

$\text{Cash Earnings Per Share} = \text{Net profit} + \text{depreciation} / \text{Number of equity shares}$

To arrive at the cash earnings, we must add the non-cash items (like depreciation) deducted as expenses while arriving at a profit.

Let us take a look at some important financial ratios to help you better understand the company you are about to invest in.

A. Stock market-related ratios

1. Dividend payout ratio = Dividend per share/Earnings per share x 100

This ratio tells you what percentage of the profit gets paid out as dividends. It identifies the percentage of earnings (net income) per common share allocated to paying cash dividends to shareholders. This ratio also indicates how well the earnings support the dividend payment and whether the dividend payout is sustainable. If the percentage is too high (two thirds of the profit or higher), then the dividend could get reduced in the future. If, say 25 per cent of profit is paid as dividend, then the payment could continue into the future.

2. Dividend yield = Dividend per share/Market price per share x 100

This ratio indicates the yield a company pays out to its shareholders in the form of dividends. It is calculated by taking the amount of dividend paid per share over the course of a year and dividing by the stock's price.

There are investors whose primary objective in buying shares may be to make money through dividends, capital appreciation being a secondary consideration. For such investors, the dividend becomes important while making investment decisions.

It must be said here that investors should be concerned with the total returns on their investment—it should not really matter if these returns come from capital appreciation or dividends, or through a combination of both. In fact, investors in higher tax brackets would prefer to get most of their returns through long-term capital appreciation because of tax considerations.

High growth companies usually have a poor dividend record. This is because such companies plough back a significant portion of their earnings for expansion of their activities.

A word of caution—be wary of penny stocks (that lack quality but have high dividend yields) or freak situations where companies benefiting from one-time gains may use the excess cash to declare special dividends. Similarly, a low

dividend yield may not always imply a bad investment as companies at nascent or growth stages may choose to reinvest all their earnings in the interest of long-term prospects.

A high dividend yield, however, could signify a good long-term investment as companies' dividend policies are generally fixed in the long run.

3. Price to earnings ratio = Market price of the shares/ EPS

This is the most common way of measuring how expensive a stock is and the best known of the investment valuation indicators. It indicates the extent to which earnings of a share are covered by its price and shows if the market is overvaluing or undervaluing the company.

A price to earnings ratio of 15, for instance, would mean that the price of a share is 15 times its earnings or the earnings are 1/15th of the market price. Which in turn would mean that, other things being equal, it will take 15 years to recover the cost of buying the share.

Higher price to earnings ratios signify high expectations. A high price to earnings ratio means investors are paying more for today's earnings in anticipation of future earnings growth. Consequently, companies with high price to earnings ratios are considered riskier investments as compared to those with low price to earning ratios.

It is possible to gauge the ideal price to earnings ratio by comparing the current price to earnings ratio with the company's historical as well as the industry average price to earnings ratio. For instance, a company with a price to earnings ratio of 15 may seem expensive when compared to its historical price to earnings ratio, but may be a good buy if the industry price to earnings ratio is 18.

It may create the impression that companies with low price to earnings ratios would offer attractive investment opportunities. This may not always be the case. Companies with not very bright future prospects may have low price to earnings ratios even if current earnings are decent.

Such companies would not be good investments.

As an investor you would be more interested with the long-term future prospects of a company and not take a very short-term outlook. However price to earnings ratios should be used in combination with other financial ratios to make informed decisions

4. Price to earnings growth (PEG) ratio = Price to earning ratio/Earnings

growth rate

This ratio is calculated by dividing a stock's price/earnings ratio by its year-over-year earnings growth rate. It is used to determine the relationship between the price of a stock, EPS and the company's growth. It tells you whether the share that you are interested in buying or selling is underpriced, fully priced or overpriced.

In general, the lower the PEG, the better the value, because the investor would be paying less for each unit of earnings growth. A PEG ratio of less than one indicates that the stock is undervalued.

Usually companies growing fast have a higher price to earnings ratio giving the impression that the stocks are overvalued. The price to earnings ratio divided by the estimated growth rate shows whether the expected future growth rate justifies the high price to earnings ratio.

5. Enterprise value (EV) by Earnings before interest, tax, depreciation and amortization (EBITDA) ratio = EV/EBITDA

EV is market capitalisation plus debt minus cash.

EBITDA is earnings before interest, tax, depreciation and amortisation.

(Amortisation is similar to depreciation. Just as tangible assets are depreciated, intangible assets are amortised).

This ratio is used often in conjunction with the price to earnings ratio to value a company. Since it includes debt, it gives a more accurate takeover valuation. The price to earnings ratio can be skewed if a company has unusually large earnings driven by debt as compared to another that may be primarily funded through equity. This ratio is used to value companies that have taken a lot of debt since it is capital structure-neutral. A lower ratio indicates that a company is undervalued.

6. Price to book value (P/BV) ratio = Market price per share/Book value per

share (Book value per share = Shareholders' net worth / Total number of shares)

The price to book value (P/BV) ratio is used to compare a company's market price to its book value. It indicates how many times a company's stock is trading per share compared to the company's book value per share. It provides investors a way to compare the market value, or what they are paying for each share, to a conservative measure of the value of the firm.

Book value essentially is the amount that will remain if the company liquidates its assets (at the price equal to its value appearing on the books) and repays all its liabilities. P/BV ratio values shares of companies with large tangible assets on their balance sheets. A ratio of less than one indicates that the value of assets on the company's books is more than the value the market is assigning to the company, and shows the stock is undervalued.

B. Profitability ratios

You would, as a rule, want to invest in companies that are profitable.

Take a look at this profitability statement:

P & L Statement

Sales

(-) Cost of Sales

= Gross Profit

(-) Operating Expenses

= Operating Profit (or PBIT)

(-) Interest

= Profit Before Tax (or PBT)

(-) Income Tax

= Net Profit After Tax

Here are a few ratios to look at when measuring profitability:

Profit is a financial gain made after deducting expenses, costs and taxes through running the business activities of a company.

When considering investment in stocks, it is important to understand the difference between gross profit, operating profit and net profit, three commonly

used terms to describe a company's profitability.

1. Gross profit margin = Gross profit/Sales x 100

Gross profit is the difference between a company's total revenues (or sales) and its cost of sales which represent the direct costs associated with producing and selling a company's products and services. Gross profit is also referred to as gross margin or gross income.

'Cost of sales' or 'cost of goods sold' (COGS) include the costs of raw materials, fuel, transportation, shipping, and wages or salaries for employees or labourers directly involved in the manufacture or creation of a company's products or services.

Gross profit margin indicates how efficiently a company manages its resources and expenses directly associated with manufacturing or creating their products and services, particularly in comparison with the performance of its peers.

2. Operating profit margin (OPM) = Operating profit /Sales x 100

Operating income is also called earnings before interest and taxes (EBIT) or profit before interest and taxes (PBIT).

Operating income or EBIT is the income that is left on the income statement after all operating costs and overheads such as selling costs, administration expenses and cost of goods sold are subtracted.

Operating income (EBIT) = Gross income - (Operating expenses + Depreciation and amortisation)

The operating profit margin (OPM) shows operational efficiency and indicates how much profit a company makes after paying for all costs related to the running of its operations. It does not include unique incomes or income from one-time transactions.

The higher the margin, the better it is for investors. While carrying out an analysis, investors must check whether its OPM has been rising over a period and should also compare OPMs of other companies in the same industry.

3. Net profit margin = Net profit after taxes/Sales x 100

Net profit is determined by subtracting a company's COGS, selling, general and administrative expenses, or SG&A, depreciation costs and taxes from its revenues and any other income. Besides providing insight into a company's profitability, net profit is used by investors to calculate a company's earnings per share.

4. Return on net assets (RONA) = $PBIT/Net\ assets \times 100$

RONA measures a company's profitability expressed as a percentage of the net assets it possesses and indicates how efficiently it uses the assets available. This ratio is useful when making a comparison with its peers.

5. Return on capital employed (ROCE) = $PBIT/Capital\ employed \times 100$

While valuing the efficiency and worth of companies, we need to know the return that a company is able to earn on its capital, namely its equity plus debt. A company that earns a higher return on the capital it employs is more valuable than one which earns a lower return on its capital.

ROCE is a measure of the returns that a company is generating from its capital. It is calculated as profit before interest and tax divided by the difference between total assets and current liabilities. Thus capital employed includes shareholders' funds plus borrowed funds. And the figure of profit is the one arrived at before rewarding the shareholders as well as the lenders.

The ratio represents the efficiency with which capital is being utilised to generate revenue.

6. Return on equity (ROE) = $Net\ income/Shareholders'\ equity \times 100$. Also called as Return on net worth (RONW)

'Net income' is the profit after tax less dividends on preference shares but before dividends on equity shares.

Shareholders' equity includes share capital plus retained earnings represented by reserves. It is a basic ratio that tells a shareholder what he is getting out of his investment in the company. ROE measures the efficiency with which a company has used reinvested earnings to generate additional income. That is, how much profit it is able to generate given the resources provided by its stockholders.

Investors usually look for companies with returns on equity that are high and growing.

ROCE looks at profitability from a broader perspective of the company's operations, while ROE is a measure to judge the returns that a shareholder gets on his investment. Both these ratios together provide an insight into a company's efficiency and its ability to earn returns on funds employed.

C. Liquidity ratios

Liquidity measures the ability of a company to convert its assets quickly into

cash and is an important indicator of its health.

Here are a few ratios to look at when measuring liquidity:

1. Current ratio = Current assets/Current liabilities

The current ratio shows the liquidity position and measures a company's ability to meet short-term debt obligations with short-term assets. The rationale behind this ratio is to ascertain whether a company's short-term assets (cash and cash equivalents, receivables and inventory) are sufficient to pay off its short-term liabilities (instalments of term debts payable in this year, other creditors, accrued expenses and taxes).

The higher the ratio, the more liquid the company is. If the current assets of a company are more than twice the current liabilities, the company is generally considered to have good short-term financial strength. A current ratio of less than one (that is its current liabilities exceeding its current assets) is a matter of concern indicating the company may have problems meeting its short-term obligations.

The ratio can be calculated by dividing current assets with current liabilities.

2. Quick ratio = Quick assets/Current liabilities

This ratio measures a company's ability to meet its short-term commitments.

Current assets include inventories and receivables. Often it is not possible to convert inventory into sales immediately and there is an element of uncertainty involved in when these may be sold. This may hit a business's ability to meet obligations. In such a case, this ratio becomes useful.

Quick ratio, often referred to as liquidity ratio or even acid-test ratio, is obtained by subtracting inventories from current assets and then dividing by current liabilities.

Quick ratio is viewed as a sign of the company's financial strength or weakness (higher numbers denoting strength and lower numbers, weakness).

Another view of the liquidity ratio takes into account only the cash available (ignoring both receivables as well as inventories) and divides it with the current liabilities. This ratio then expresses a company's ability to repay short-term creditors out of its total cash. It shows the number of times short-term liabilities are covered by cash. If the value is greater than 1.00, it means the current liabilities are fully covered.

D. Debt ratios/Leverage ratios

Investors would like to be assured that companies are able to manage the debt well and use leverage to their advantage. Here are a few ratios:

1. Debt to assets ratio = Debt capital/Total assets.

This ratio reveals how much the company relies on debt to finance assets.

The debt to total assets ratio is an indicator of financial leverage. It tells you the percentage of total assets that were financed by creditors and external debt. The debt to total assets ratio is calculated by dividing a corporation's total liabilities by its total assets.

The ratio is used to determine the financial risk of a business. A ratio greater than 1 indicates higher risk since it shows that not only all the fixed assets, but a certain portion of current assets too, are being funded through debt. A low ratio indicates that a portion of asset funding has come from equity.

A higher ratio would also indicate that a company may not be able to pay back its debt if cash flows decline either due to market downturns or cyclical reasons.

The lower the company's reliance on debt for asset creation, the less risky the company is. However, relying mainly on equity as a source of funds would also be expensive as equity is the costliest of all the sources of funds. Besides, the company would also be giving up the tax reduction effect of interest payments.

Thus, companies should opt for a prudent mix of debt and equity to balance the cost and risk considerations.

2. Debt to equity ratio = Long-term debt/Net worth

The debt to equity ratio is a financial leverage ratio that compares a company's total liabilities to its total shareholders' equity. A lower ratio indicates moderate to low debt and a stronger equity position. Such companies would have greater scope for expansion due to their latent capacity to raise more funds.

If the ratio is higher than 1, it indicates that a bigger portion of assets are financed through debt. A ratio lesser than 1 shows that more of equity has been used to finance assets.

Investing in a company with a higher debt to equity ratio may be riskier, especially in times of rising interest rates or falling revenues on account of recessionary conditions.

But it must not be seen in isolation. Higher leverage leads to exponential growth

in profit during periods of growth. It is essential that the returns generated are sufficient to service the loan and the cash flows are sufficient to meet the repayment obligations.

3. Interest coverage ratio = PBIT/Interest

This ratio shows a company's ability to meet its interest payments on outstanding debt. It is calculated by dividing the earnings before interest and taxes for a year by interest payable for the same time period.

E. Productivity/Efficiency ratios

An investor would like to know how efficiently a company utilises its resources.

The following ratios can be used to gauge efficiency.

1. Fixed assets turnover ratio = Turnover/Average fixed assets available during the period

This ratio shows how efficiently the management is using assets to generate revenue. It compares the revenue generated from sales with the fixed assets used for the purpose. The higher the ratio, the better it is, as it indicates that the company is generating more revenue per rupee spent on the assets.

It is essential that the comparison is made between different companies from the same industry for a meaningful analysis. Certain sectors by virtue of their nature, being asset-heavy, will have a lower asset turnover ratio, while it may be the other way round in some other industries where the requirement of assets is not large (say service sector companies or those engaged in selling goods online).

2. Operating cycle

An 'operating cycle' is the average time taken from purchasing or acquiring the inventory and receiving cash proceeds from its sale.

3. Revenue per employee

The ratio of revenue per employee is computed by dividing the total earnings of a company by the number of current employees. It indicates the ratio of sales at a company in relation to the number of current employees.

F. Cash flow ratios

A healthy cash flow is the key to success and stability in a business. Investors prefer to buy stock in companies with good cash flows.

A few ratios that should be checked are:

~~11 new ratios that should be checked out.~~

1. Operating cash flow ratio = $\text{Operating cash flow}/\text{Net sales}$

The cash flow statement has three parts—cash flow from operations, cash flow from investing activities and cash flow from financing activities.

For this ratio, the operating cash flows are considered. The profit after tax is adjusted for non-cash charges to arrive at the operating cash flow.

The more the operating cash flow, the better. Investors prefer companies that can generate consistent cash flows. Most business failures take place due to an inability to manage cash flows.

2. Sales to cash flow ratio = $\text{Sales per share}/\text{Cash flow per share}$ (or $\text{Total sales}/\text{Total cash flow}$)

This ratio looks at sales in relation to cash flow and is indicative of the financial strength of a company.

The higher the value of this ratio, the stronger the company will be.

3. Price to cash flow ratio = $\text{Market price per share}/\text{Operating cash flow per share}$

To many, this ratio is a better indicator of a company's value than the price to earnings ratio. It compares the company's share price to the cash flow the company generates on a per share basis.

Some analysts use free cash flow instead of operating cash flow in the denominator.

However, price to earnings ratio is more popular among investors and analysts as compared to this ratio.

4. Free cash flow to Operating cash flow ratio = $\text{Free cash flow}/\text{Operating cash flow}$ **$\text{Free cash flow} = \text{Operating cash flow} - \text{Capital expenditure}$**

Every business, in the interest of maintaining its efficiency and competitive edge, must make a certain amount of capital expenditure each year.

Free cash flow is the cash flow left after making such an expenditure.

If all the cash flow generated is consumed by the essential capital expenditure, the company will not be able to spend on expansion.

It is essential to generate a free cash flow to use for diversification, acquisitions and to overcome difficult market conditions.

The higher the percentage of the free cash flow, the greater the financial strength of the company.

How to Choose a Fundamentally Strong Company

How to identify industries with a high growth potential. Let me now give you a short cut to choosing a financially healthy company, Or rather, I will tell you which company not to choose, so that by the process of elimination, you are able to zero in on the company to invest in.

Identifying a fundamentally strong company in three steps

Step 1

If you are interested in investing in stocks and wondering where to put your money, don't begin by choosing the company. First select the industry.

A reading of the business newspapers and publications, a glance at the government's annual budget or a quick search on the internet will give you an indication of the industries that have encouraging prospects in the coming years.

Study which sector the government is focusing its spending on (for example, infrastructure), which industries are being encouraged through endowments, grants, subsidies and incentives (energy, electric vehicles), which sectors are the flavour of the season (affordable housing) and on which sector the sun appears to be setting (coal, oil).

Industry analysis:

The following factors should be taken into consideration while assessing the industry:

1. Future prospects: The future prospects of the industry would depend upon the likely demand for products of the industry and the gap between demand and supply. In this regard, the investor will have to rely on the various demand forecasts made by agencies like the Planning Commission, chambers of commerce and institutions, such as the National Council of Applied Economic Research (NCAER). Broadly, an industry passes through six identifiable stages during its lifetime—introduction, development, rapid growth, maturity, saturation and decline. If an industry has already reached the saturation or decline stage, its future demand potential is not likely to be high.

2. Profitability: A vital factor is profitability since it is both a measure of

performance as well as a source of earning. The investors may, therefore, analyse the profitability ratios, specially the return on investment and the gross profit ratio of the existing companies in the industry. This would give investors an idea about the profitability of the industry as a whole.

3. Particular characteristics of the industry: Each industry has its own characteristics, which must be studied in depth in order to understand their impact on the working of the industry. For example, certain industries have a fast-changing technology. In such industries, technological obsolescence will take place at a fast rate. Similarly, many other industries are characterised by cyclical fluctuations in profits and losses, which must be carefully studied.

4. Labour management relations in the industry: The state of the labour management relationship in the industry also has a great deal of influence on the future profitability of the industry. The investor should, therefore, see whether the industry under analysis has been maintaining a cordial relationship between labour and the management.

Once you have chosen the right industry, you would have eliminated a fair percentage of the possibilities of losing money.

Let's say you decide to invest in the pharmaceutical sector.

Step 2

The next question to be answered is which company should you choose from within the pharmaceutical sector.

Company analysis:

A company's growth potential can be roughly judged by studying its past performance. However, one should keep in mind that past performance and information is relevant only to the extent that it extends the future trends.

An illustrative list of factors that an analyst should take into consideration are:

1. Size and ranking: A rough idea of the size and ranking of the company within the economy in general and the industry in particular would help the investor in assessing the risk associated with the company. In this regard, the net capital employed, the net profits, the return on investment and the sales figures of the company under consideration may be compared with similar data of the companies in the same industry group. It may also be useful to assess the position of the company in terms of technical knowhow as well as research and

development.

2. Growth record: The growth in sales, net income, net capital employed and earnings per share of the company in the past few years should be examined.

3. Financial analysis: An analysis of its financial statements for the past few years with the help of certain fundamental ratios, would help the investor in understanding the financial solvency and liquidity, the efficiency with which the funds are used, the profitability and the operating efficiency.

4. Quality of management: This intangible factor has a very important bearing on the value of the shares. Every investor knows that shares of certain business houses command a higher premium than those of similar companies managed by other business houses. This is because of the quality of management, the confidence that the investors have in a particular business house, the financial performance record of other companies in the same group, among other factors. The quality of management has to be seen with reference to the experience, skills and integrity of the persons at the helm of affairs of the company. The policy of the management regarding the relationship with the shareholders is an important factor since certain business houses believe in very generous dividend and bonus distributions while others are rather conservative.

My suggestion would be that, if you are a new investor, stick to the companies whose names come readily to mind when you think of the industry. Which names spring to mind when you think of the pharmaceutical sector? These would be the companies that have been regularly written about, whose brands are well-known and can be considered to be market leaders.

There will be many occasions when some friend may call you with a recommendation to pick up a particular stock, a stock whose name you have never heard of. You may be told that it is now being traded at 15 and is expected to go up to as high as 100. On being asked how this person is so sure that it will climb to 100, you may discover that your friend had received this ‘tip’ from another friend and being your well-wisher, had decided to pass it on to you.

On still further prodding, you may find that the friend's friend had received the information from another friend, who had heard about it from yet another person and at the beginning of the chain there probably would be someone with a vested interest trying to prop up the price of the scrip.

If enough people take interest, it may well happen that the price will go up for some time, during which period all the tipsters will stand vindicated. But at the first sign of a downturn in the market, this scrip may crash and even fade away from the stock market quotation pages, never to be heard of again. At least for some time, till you become somewhat seasoned investors, I suggest that you stick to the known names.

Let's say you shortlist the following five scrips from the pharmaceutical industry:

1. Tabbot Labs | 2. Prizer | 3. Samson & Samson 4. Solvartis | 5. Noche

(All the names of companies used in this book are fictitious, and if any name does happen to be the same as an existing company somewhere in the world, it is only coincidental.)

Step 3

Now you need to choose which among these five companies you should invest in.

For this let me suggest certain criteria which the scrip must satisfy before you decide to invest in it. A huge amount of information is provided in financial publications and on investment-related websites.

Fundamental analysis	Company Name	Year Ending	Sales	GP	NP	EPS	PER
	Tabbot Labs						
	Prizer						
	Samson & Samson						
	Solvartis						
	Noche						

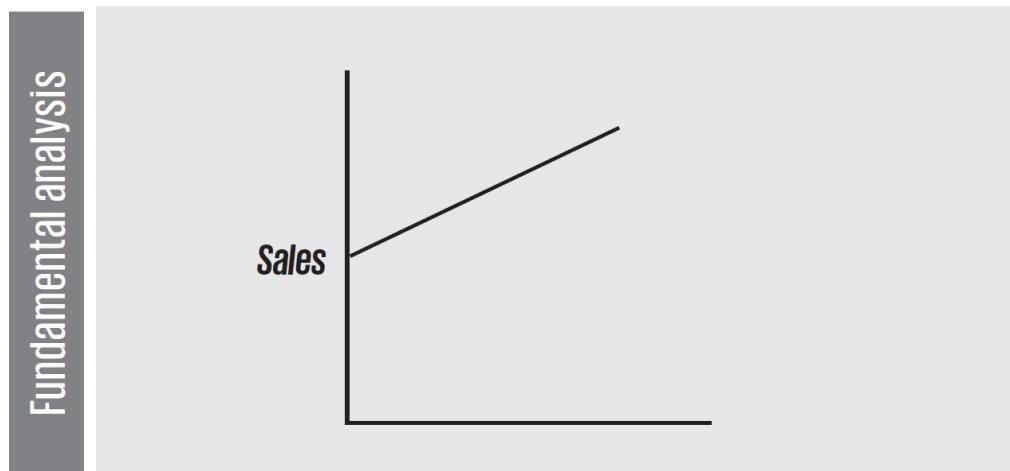
Most of the information will be classified industry-wise. From among the deluge

of data you will be able to glean for each company in the sector, its sales, its gross profit, the net profit, the earnings per share, the price earnings ratio and some more information.

Criterion 1: Sales

Fundamental analysis	Company Name	Year Ending	Sales	GP	NP	EPS	PER
	Tabbot Labs	✓	✓	—	—	—	—
	Prizer	✓	✓	—	—	—	—
	Samson & Samson	✓	✓	—	—	—	—
	Solvartis	✓	✓	—	—	—	—
	Noche	✓	✓	—	—	—	—

You can not only know the sales figure for the latest year-ending, but also the sales in the one or two quarters following (if the year had ended several months ago), and can go back a few years too. I'd suggest you collect the data for a few years and plot a sales graph.



Do not buy the shares unless the sales graph is looking towards the sky.

There are thousands of companies to choose from. Why would you want to go out of your way and pick up the shares of a company whose sales are either stagnating or have started to decline (unless you happen to be in possession of some inside information, in which case you must make a

provision for getting prosecuted and going to jail too).

Criterion 2: Gross profit

Now look at the gross profit.

Fundamental analysis	Company Name	Year Ending	Sales	GP	NP	EPS	PER
	Tabbot Labs	✓	✓	✓	—	—	—
	Prizer	✓	✓	✓	—	—	—
	Samson & Samson	✓	✓	✓	—	—	—
	Solvartis	✓	✓	✓	—	—	—
	Noche	✓	✓	✓	—	—	—

What should the gross profit graph look like?

Let's say, the sales in year 1 is 100 and the gross profit is 30. In year 2 if the sales figure doubles to 200, what should happen to the gross profit? Should the gross profit also double to 60? Or should it be less than 60? Or more than 60?

In case you think that the gross profit should be greater than 60, you are probably recalling the discussion we had in Chapter 11 on 'Leverage Analysis', which explains that there is a disproportionate increase in profits due to a certain increase in sales.

But you must remember that leverage is caused by the presence of fixed costs. And fixed costs have not come into the picture yet.

Gross profit is an accounting term which is quite (though not exactly) similar to the term 'contribution' used in marginal costing. Contribution is arrived at by deducting variable cost from the sales revenue. When sales increase, the variable cost and consequently, the contribution increases in the same proportion.

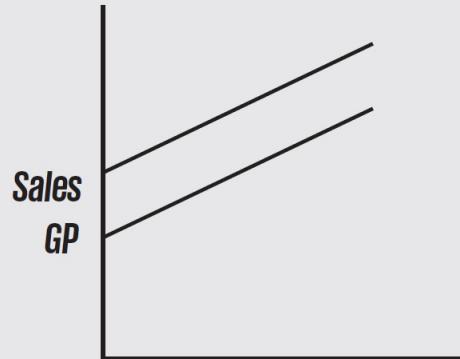
So if sales double, the gross profit will most likely also double.

Fundamental analysis

Sales	100	200
GP	30	60

If the gross profit more than doubles (however slightly) it is a great achievement, and if it less than doubles there is reason to worry.

Fundamental analysis



As Criterion 2, I would suggest that you do not buy the share unless the gross profit is growing at least at the same rate as the growth in sales.

Criterion 3: Net profit

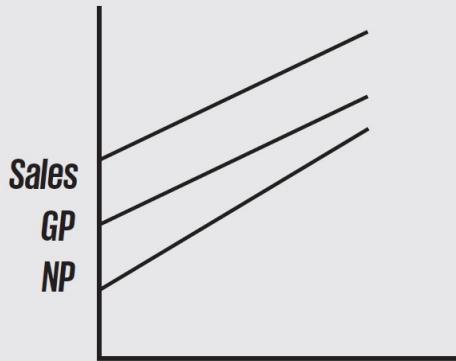
Fundamental analysis	Company Name	Year Ending	Sales	GP	NP	EPS	PER
	Tabbot Labs	✓	✓	✓	✓		
	Prizer	✓	✓	✓	✓		
	Samson & Samson	✓	✓	✓	✓		
	Solvartis	✓	✓	✓	✓		
	Noche	✓	✓	✓	✓		

Now look at the net profit.

By the time the net profit is calculated, the fixed costs have also been taken into account. Now leverages have come into play.



If the sales has doubled, the gross profit must also double and the net profit must more than double.



! So as Criterion 3, ensure that the net profit graph is converging towards the sales graph.

Criterion 4: Earnings Per Share

To calculate the Earnings Per Share (EPS), first take a look at the Profit & Loss Account. Let's say it reveals a Profit After Tax (PAT) of 600.

And the Balance Sheet shows a share capital of 1,000, which is made up of 100 shares, each carrying a face value of 10.

If you divide the PAT by the number of shares, you will get the EPS, which in this case works out to 6.

P&L A/C	B/S
	Share Capital 1000
PAT 600	100 shares of FV 10 each

PAT | No of shares = EPS = 6

Let's say the EPS of the five companies looks as shown in the chart below.

Fundamental analysis	Company Name	Year Ending	Sales	GP	NP	EPS	PER
	Tabbot Labs	✓	✓	✓	✓	5	
	Prizer	✓	✓	✓	✓	15	
	Samson & Samson	✓	✓	✓	✓	8	
	Solvartis	✓	✓	✓	✓	22	
	Noche	✓	✓	✓	✓	18	
	Industry Composite Average					14	

You can also find the composite average EPS for the industry given at the bottom of the chart, in this case of the pharmaceutical sector.

As Criterion 4, I suggest that you make up your mind not to buy the share unless the EPS is above the industry average.

If the industry average is 14, it would mean there must be companies that have an EPS of 3 or 4 or 5 and also companies with an EPS of 20, 25 or even more. We are trying to identify a fundamentally strong company. I would not consider it to be one unless its EPS is greater than the industry average.

By the process of elimination, from the five shortlisted companies, Tabbot Labs and Samson & Samson are out since they do not fit the bill.

Criterion 5: Price to earnings ratio

Now look at the price to earnings ratio (PE ratio).

Market price divided by the EPS gives you the PE ratio.

P&L A/C	B/S
PAT 600	Share Capital 1000 100 shares of FV 10 each
PAT No of shares = EPS = 6	Stock Market Price = 54
	Mkt Price EPS = PE Ratio = 9

If the market price of the shares of this company with an EPS of 6 is 54, the price (54) to earnings (6) ratio will work out to be 9 (54/6).

Let's say the PE ratios are as follows:

Company Name	Year Ending	Sales	GP	NP	EPS	PER
Tabbot Labs	✓	✓	✓	✓	5	6
Prizer	✓	✓	✓	✓	15	13
Samson & Samson	✓	✓	✓	✓	8	4
Solvartis	✓	✓	✓	✓	22	19
Noche	✓	✓	✓	✓	18	21
Industry Composite Average				14	16	

I would now suggest, as Criterion 5, not to invest unless the PE ratio is below the industry average.

By this criterion, Solvartis and Noche get eliminated too.

What are the first four criteria helping you with? These are helping you choose a fundamentally strong company—a company whose sales are on the ascendant, the gross profit is also increasing at least at the same pace as the increase in sales, the net profit is growing at a pace faster than the growth in sales and the EPS is above the industry average. This is indeed a good company! But do you necessarily want to invest in it? If it is such a good company, chances are its stock is also trading at a high value.

Do you want to buy a wonderful share or do you want to make a profit? If the share is already trading at a very high value, the scope for making a profit gets reduced.

If you focus merely on selecting a good scrip, it may be too expensive.

If you select a share which is available cheap, you may land up choosing a dud.

The first 4 criteria help you choose a strong, healthy, fundamentally sound company and the last criterion stops you from paying a very high price for it.

By the process of elimination we can now choose Prizer as it satisfies all the criteria.

In the next chapter let's discuss when to purchase this scrip.

Nick Leeson and the Collapse of the Barings Bank

Nick Leeson was born in North London in 1967. Coming from a relatively modest background, Leeson did not pursue a higher education. This was apparently not a requirement needed to find a job in a bank or to become a derivatives trader as he was.

After working for two years at Morgan Stanley, Leeson joined the Barings Bank in 1989. Founded in 1762 by the Dutch Johann Baring, who had immigrated to England, Barings was one of the most prestigious banks in the United Kingdom. Even the Queen of England was among its clients.

He quickly made a good impression within the respectable establishment and in 1990 was appointed manager at its Singapore branch where he had to operate on the 'futures' of the Singapore International Monetary Exchange (SIMEX).

From 1992, Leeson made unauthorised speculative trades that at first made large profits for Barings. But investing in these markets was a risky business and Leeson started to lose money. He hid these losses in a special account while at the same time demanding more money from Barings in London to support his continuing activities. He used the extra money to try and recover losses he had already made.

The management at Barings Bank allowed Leeson to remain a chief trader and at the same time also responsible for settling his own trades. As a matter of internal control, these jobs are usually done by two different people. This made it easier for him to hide his losses from the officials back at England.

Leeson also hid documents from statutory auditors of the bank, making the internal control of Barings seem completely inefficient and the auditors utterly incompetent.

By the end of 1992, the account's losses exceeded 2 million, and at the end of 1994, his total losses amounted to more than 208 million pounds, almost half the capital of Barings.

On 16 January 1995, in an attempt to recover his losses, Leeson placed a short straddle (which is a simultaneous purchase of options to buy and to sell a security at a fixed price) in the Singapore and Tokyo stock exchanges, essentially betting that the Japanese stock market would not move significantly

overnight.

But as luck would have it, the very next day there was a massive earthquake at Kobé. Nikkei (the Tokyo Stock Exchange index) lost 7 per cent in the week.

He tried to recoup his losses by taking riskier positions, betting that the Nikkei would make a rapid recovery; he believed he could move the market but he lost his bet, worsening his losses. The recovery failed to materialize. Leeson left a note reading 'I'm Sorry' and fled Singapore on 23 February.

Losses eventually reached £827 million (US\$1.4 billion), twice the bank's available trading capital. After a failed bailout attempt, Barings was declared insolvent on 27 February 1995.

What was most shocking was the fact that he had brought down one of the oldest, most well-respected financial institutions in Britain: the bank used by the Queen and members of her family.

Timing Your Entry and Exit

You have now done your homework, researched the sector, studied the industry and also zoomed in on the stock to buy.

What do you do now? Should you pick up the phone, call and ask your broker to buy the shares for you?

Not so soon. What you have done so far is taken a decision as to what to buy. Equally important is when to buy. So I would suggest that you now watch this stock for a while and track its price. If you plot a graph of its price movement, you may get a graph looking like the one shown here.



And you will start to think the stock market is a crazy place. One day the graph moves up, the following day it comes down and the next day it bounces upwards again, only to come down yet again on the following day.

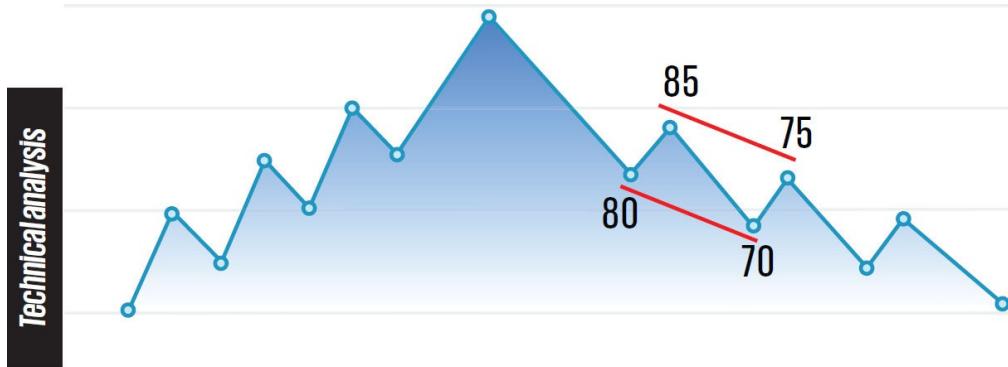
But if you watch it for a long enough time, you will start making some sense out of the nonsense.



You will notice that the price moved up from 20 to 30 and then came down to 25

and moved up to 40 and then fell to 35. The peak that it reached (40) was higher than the earlier peak (30), the bottom that it touched (35) was higher than the earlier bottom (25). This would indicate that the trend is upward.

When successive peaks and troughs are higher than before, the market is said to be in a *rising phase*.



And if you observe that the price has fallen to 80 and then increased to 85, and then fallen to 70 and risen to 75 before falling again taking it below 70. The new peak (75) is lower than the earlier peak (85), the bottom it has reached now (70) is lower than the bottom it had earlier touched (80). When successive peaks and troughs are lower than before, it indicates a falling market.

What I am trying to tell you is that in a rising market there will be intermittent downswings. In a falling market there will be periodic upswings. What you need to learn is to distinguish the daily movement from the trend.

Why do prices go up, retrace their steps backwards, and then move up again? And do the reverse in falling markets?

If you recall, we had discussed the difference between investors and speculators in the earlier part of this book. Investors purchase shares for which they have the money to pay, and sell shares that they possess. Speculators, on the other hand, make purchases worth, let's say, a million while possessing the ability to pay

only 100,000. They do this on the expectation that the price will rise by a few percentage points, and when it does so, they will sell what they have purchased (before they are asked to pay for it) and pocket the difference. On the other hand, contrary to their expectation, if the price moves downwards, they will still have to sell what they had purchased (since they don't have the money to pay for the shares which they have bought) and pay the difference. Since they will only need to pay for the difference, the 100,000 that they possess will probably suffice for the purpose.

It follows, therefore, that if speculators purchase something today, they will necessarily have to sell it tomorrow, irrespective of whether the price moves up or down.

Similarly, if today they sell shares that they do not possess (because they are expecting the price of that scrip to fall), they must essentially purchase it back tomorrow, notwithstanding whether the price has fallen or gone up.



The market goes up due to the combined buying pressure of both the investors as well as the speculators. But, to the extent that it is made up of the demand from the speculators, a buy order today will result in a sell order tomorrow, and the price retraces its steps. The net difference is indicative of the investors' sentiment.

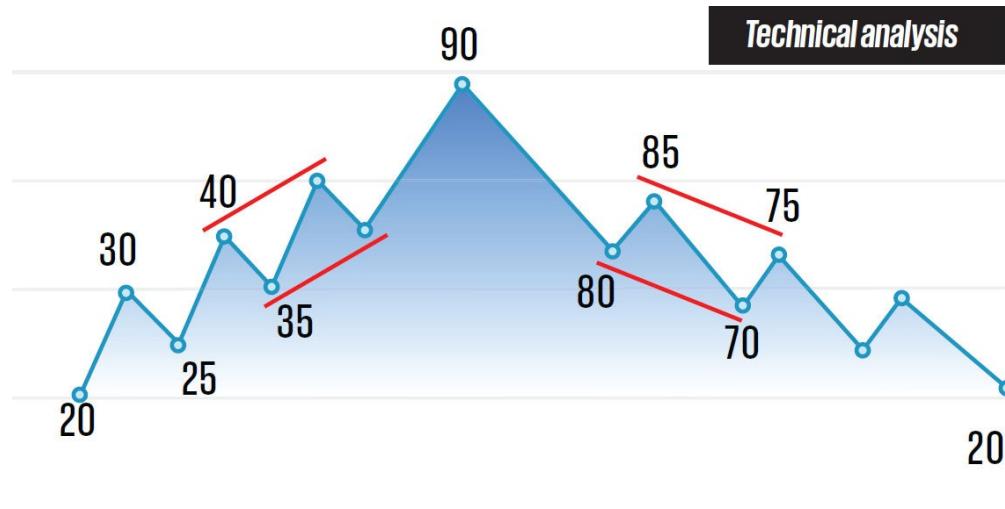
Let me ask you a hypothetical question:

There is a stock which is trading at 20. Its price moves up to 30. It then comes down to 25 and goes up to 40. The market appears to be in a rising phase and the price eventually reaches a peak of 90. Then the downward trend begins and the price comes down to 80, goes up a bit and falls to 70 and gradually settles back at 20.

—

Given a choice, at what price would you like to buy this share and at what price would you like to sell it?

I'm sure all of you will probably say that you would love to buy it at 20 and sell at 90.



Then why does it not happen?

In real life, there would be many of you who would have purchased this stock at 90 and sold it at 20.

How is it that in response to a theoretical question you give a very sensible answer, but when you actually go to invest you do the reverse?

To figure this out, we must understand the psychology of the average investor.

How does an average investor think?

What is the reaction of the average investor when she finds the share trading at a low price of 20?

She wonders, 'Why is the price of this share low? It must mean that more people are selling than buying it. So if everyone wants to sell, why would I want to buy?' And, in a way, she is right. I too am not suggesting that one should start buying every share that is low-priced. Even 'junk-rated' shares will be low-priced.

When the price moves up from 20 to 30, the average investor is unimpressed. She knows that the price moving up is not as significant as the price to which it will fall during the next downward movement. Will it fall to below 20 (as would happen in a falling trend) or will it stop at above 20 (a characteristic of a rising

trend)?

The price falls from 30 to 25 and the next jump takes it to 40.

The average investor now starts taking a mild interest. ‘Did I miss a bus here?’ she wonders. *A mental resolution to keep a watch on this share is made.*

The price then falls a bit and goes up to 50.

Now the average investor is wide awake. ‘I seem to have lost a wonderful opportunity. Had I picked it up at 20, it would now be worth 150 per cent more.’ *The mental resolution is modified to, ‘If this share ever touches 20 again, I will be the first in the queue to buy it.’* She, of course, cannot bring herself to buy at 50 what was available at 20 just a few days back.

The price, after a small dip, goes up to 60.

Each time the price goes up, she kicks herself for the mistake committed of not buying this stock when it was available at such a low price.

Then the price goes up to 70.

The average investor now starts thinking, ‘What is wrong with me? I could have bought this share at 30 or 40 and still have made a profit.’

The mental resolution number 3 is, ‘This share is so good that I will not wait for it to fall back to 20 to buy it. Even if it falls to 30 or 40, it will be worth picking up.’ A price of 70, of course, is too high.

Then it goes up to 80 and then to 90.

She says to herself, ‘Every day that I have delayed my buying decision, I have lost an opportunity to make profit. Let me learn my lesson some time.’

Somewhere around 90, she is convinced enough to pick up the phone to call her broker and say, ‘Please buy for me.’

What about this share did she get impressed by?

Did she get impressed by the shop floor performance of this company? No!

Did she get impressed by the marketplace performance of the products of this company? No!

She got impressed by its stock market performance.

If you are going to be impressed by the stock market performance of a stock, then the better it performs the more impressed you get. If it performs even better, you are impressed even more. And when the stock reaches its peak, you are impressed enough to call up your broker to place a buy order.

The next day the price falls to 80.

What is her reaction? She is thrilled. She was waiting for this fall, because she knows that the next jump will take it past 100.

Unfortunately, unbeknownst to her, the downward trend has begun.

What is the characteristic of a falling trend? The downward movements are stronger than the upswings. In a rising market, on the other hand, the downswings are weak and the upswings are stronger.

The price merely moves up to 85 and falls to 70.

What is her reaction?

My observation is that human beings are masters at self-deception. She will somehow convince herself that this is an aberration. She cannot bring herself to accept that just because she has purchased the shares, the market starts falling. The next jump will take it up, she thinks with a tinge of optimism.

The price then falls to 60.

Now she is scared. She says, ‘I knew all along this was a terrible share. Why did I not trust my instincts? I should never have touched it in the first place.’

Now that the mistake has been committed, she must get rid of this stock as soon as possible. ‘I don’t mind suffering a bit of a loss,’ she thinks. *The mental resolution is, ‘I will not wait for it to get back to 90. I will get out even if it touches 80.’* The price of 60 is too low. ‘I cannot sell at 60 what I purchased at 90 just a few days ago.’

The price then falls to 50.

The mental resolution number 5 is, ‘Even if it touches 70, I will sell.’ The price at 50 is ridiculously low.

The price then drops to 40, then 30 and then 20.

She now thinks, ‘The way the price is falling, before I lose the money entirely, I better sell and get out.’ When the price is around about 20, she picks up the phone, calls her broker and asks him to sell.

She is precisely the kind of investor that exits the stock market cursing it. ‘This is no place for respectable people.’ ‘This is a gamblers’ den.’ Such and other similar thoughts cross her mind.

What is the fault of the stock market?

It is not the stock market’s fault. Whose fault is it then? It is the investor’s fault, the way she behaved.

‘What is my fault?’ she asks. ‘Am I to blame for getting impressed when the market was rising and buying the shares? Should I not buy when the market is rising? Are you suggesting that I buy when the market is falling?’

The answer is: don’t ever buy when the market is falling. Always buy when the market is going up. But buy at the beginning of the rising phase, not at the end of it.

Never sell in a rising market. Always sell when the market is falling. But sell at the beginning of the falling phase and not at the end of it.

I completely agree that nobody could have bought this share at 20 and sold it at 90 unless it happened to be pure chance.

At 20, she couldn’t have known whether the price would go up or come down. Nor at 90 could she have guessed whether it would go up further or start falling.

When 20 increased to 30, she still could not be sure whether the downward pressure would be sustained and take the price below 20 or stop above it.

But when the price increased from 20 to 30, then fell to 25 and went up to 40, when she found the next trough was higher than the earlier trough and this peak was higher than the earlier peak, if not at 20 she could at least have picked it up at 40.

No one could have sold at 90, except by fluke. But when the price dropped to 80, and went up to 85 and fell again to 70, she could have sold at 70.

If not the maximum profit of 90 minus 20, she could surely have made the most practical profit of 70 minus 40.

Never buy in a falling market; a good strategy would be to buy at the second jump up. Never sell in a rising market; sell at the second fall.

It is not a fool-proof strategy, but do it consistently and more often than not it will hold you in good stead.

!Technical Analysis

What I have explained is an extremely oversimplified version of technical analysis.

Many techniques have evolved over time and the science behind technical analysis has been refined to a great extent.

The most important objective of technical analysis is to determine the trend. Technical analysis basically involves forecasting the direction of prices through the study of past market data, primarily price and volume.

The weak-form efficient-market hypothesis rubishes such forecasting methods since it is believed that prices follow a random path and are essentially unpredictable.

The principles of technical analysis emerge from the observation of financial markets over hundreds of years.

As early as the 17th century, in the Jewish merchant Joseph de la Vega's accounts of the Dutch markets in the 17th century, there were indications of technical analysis. *His book Confusion of Confusions is the oldest one on the subject of the stock exchange.*

Homma Munehisa, a Japanese trader in the futures market, developed a method of technical analysis in the early 18th century which evolved into a very popular charting tool today called the candlestick technique. He

discovered that the markets were strongly influenced by the emotions of traders and when emotions played into the equation, a vast difference between the value and the price occurred. The principles established by Homma are the basis for the candlestick chart analysis, which is used to measure market emotions surrounding a stock.

Charles Dow is credited with the Dow theory of chart analysis widely used by technical analysts today. It inspired the use and development of modern technical analysis from the end of the 19th century.

Technicians use various methods and tools, one of which is the study of price charts. With the help of charts, technical analysts try and identify price patterns and market trends in financial markets and attempt to predict price movements based on those patterns.

Four primary types of charts are used by investors and traders. These include line charts, bar charts, candlestick charts, and point and figure charts.

Investing Strategies

There are many investment strategies to choose from. Akin to food diets, the best ones are those that work well for the individual investor.

Value investing (looking for stocks selling at a discount), growth investing (buying shares with a growth potential), buy and hold ('time in the market' is better than 'timing the market') are a few examples of the various strategies to invest.

Value investing

Investors using this strategy prefer to pick up stocks that they believe are undervalued. Value investors look out for stocks that are trading at below their intrinsic value or are available at a discount. The underlying belief is that markets tend to overreact to both good and bad news, thus giving an opportunity to profit before the correction sets in.

Growth investing

Growth investors focus on the appreciation of the capital invested. Proponents of this strategy pick up stocks that have a growth potential, where earnings are expected to grow at a rate exceeding the average rate applicable to the industry. In contrast to value investors, growth investors may buy shares even if the price is expensive, considering the stock market ratios and other metrics.

As Warren Buffett says, '*It's far better to buy a wonderful company at a fair price than a fair company at a wonderful price.*'

Buy and hold strategy

Followers of this strategy buy stocks and hold them for long periods of time. They believe one should not be influenced by short-term price fluctuations and market volatility and that over the long run, the price of the stock will gradually increase in value and give attractive returns.

Which strategy to adopt will depend upon a number of factors, including the investors' age, financial background and the risk-temperament.

I will share with you one of the many strategies

Let me share with you one of the many strategies.

Let's suppose you had 500,000 to spare. You went through the rigours—studied the industry, identified promising sectors, shortlisted the names of desirable companies, did the basic fundamental analyses, chose the company, timed your entry and picked up 5,000 shares of a company at the rate of 100 each.

The first thing you must do is decide the loss you are willing to suffer and put a stop-loss limit.

You may decide that you do not want to lose more than 10 per share. That is, in case the price of this share falls to 90, you will sell and get out. And, no regrets if the price bounces back.

But since you have followed the recommended steps before investing in it, there are slimmer chances of the price falling. It probably will move up. Let's say a little later, the price increases to 120.

What should you do now?

I want you to remember that two phrases don't exist in the stock market lexicon: 1. Maximum profit. 2. Minimum loss.

If you wait to maximise your profit, you may keep waiting forever. And if you wait to minimise the losses, the losses may keep mounting for each day of delay.

The time to make a profit or a loss is NOW.

You had purchased this scrip at 100 and the price has now moved up to 120. What should you do?

Sell 1000 shares at 120.

Why only 1,000 and not the entire lot?

That is because if the price moves up further, you have more shares to sell. And in case it drops to below 100, you will lose less since the average cost of the

remaining 4,000 shares is now lower than 100. (Remember this is merely one of many strategies).

A little later, the price increases to 140.

Sell another 1,000.

The price goes up to 160.

Sell another 1,000.

The price now falls to 150.

What should you do?

Buy back what you sold at 160 (provided the original logic applied at the time of buying the initial lot still holds).

Why should you buy it back?

You have sold the stock at 160 and purchased it back at 150. The shares are back with you and you have pocketed a profit of 10,000. What more can you ask for?

At every rise you must sell, at every fall, buy back. Unless the price falls to 90, at which point you must sell the entire lot and get out, remember?

In fact, the stop-loss must also be revised once you see the price has gone up first to 120 and then to 140. Why should you now be willing to lose anything at all. Maybe you should decide that you will sell the entire lot and exit if the price falls to 110. Above 110, at every rise you must sell and at every fall, buy back.

Keep profits open-ended and put a stop-loss.

People often tend to do the reverse. They put a limit on the profit and keep their losses open-ended.

If the scrip that they have invested in appreciates to certain percentage points, they sell the entire lot, satisfied with the profit made. And if the price continues rising thereafter, they have no shares left to sell. However, if the price falls

below what they have paid for it, they keep hoping and praying that it will bounce back.

What is needed is action and not prayers while investing in stocks. If you follow this as a rule, it will serve you well.

Word of caution: Don't let your portfolio become too unwieldy. There are some who don't invest in stocks at all. Others go overboard, having 100 to 150 scrips in the portfolio. Nobody can be right every time. If you have such a large portfolio, at the best of times, half the scrips that you hold may be looking up and the other half, down. In my opinion, the number of scrips in the portfolio should be in single digit. This way relatively large sums of money can be invested in each and the amount of investment will justify spending more time on researching the stock well and also monitoring its price movements.

It may not be a bad idea to follow Mark Twain's advice: 'Put all your eggs in one basket and then watch that basket.'

Black Monday (1987)

The American economy was in terrible shape, when Ronald Reagan took over as its president in 1981. It had undergone fifteen years of decline, from 1967 to 1982, during which period the DJIA (the Dow Jones Industrial Average) fell by 23 per cent.

The combined impact of unsustainably high levels of government spending during and post the Vietnam War, the spike in oil prices in 1973 and 1979 due to the problems in the middle-eastern countries, as also the entry of the baby boomers to the labour force requiring the creation of several million jobs each year to accommodate the increasing workforce, resulted in double-digit inflation.

Paul Volcker the then Federal Reserve chairman, in an attempt to rein in inflation, pushed interest rates higher and resolved to “slay the inflation dragon” by sharply curtailing the growth of money supply.

The monetary contraction succeeded in its primary objective, bringing inflation down from a high of 13.5 per cent in 1980 to just 3.2 per cent by 1983.

The reduced inflation, in turn, caused the brutal recession of 1981 to 1982 due to a sharp jump in real interest rates. The national unemployment rate throughout 1982 remained above 10 per cent, and President Ronald Reagan’s public approval rating scraped the bottom at 35 per cent that year.

Despite that, Reagan resisted the temptation to expand the money supply to provide a short-term boost to the economy.

His patience paid off. Post-1983, with inflation under control at last, the economy began growing again. That growth continued through the rest of Reagan’s two-term presidency, marking the longest peacetime period of unbroken economic expansion yet seen in American history.

The Dow, which had closed at a low of just 776.92 on August 12, 1982, surged past 1,000 before the end of that year, and by 1987, it peaked at 2,722.42.

This dramatic growth in the stock market was the key driver of the overall prosperity of the Reagan years.

Reaganomics

Deficit is a result of government expenditure exceeding government receipts.

Reagan had a two pronged approach to tame the deficit.

Ronald Reagan planned on slashing government spending on the one hand and cutting tax rates to increase tax collection on the other. Yes, you read it right - *cutting tax rates to increase tax collection*.

Contrary to normal thinking that tax rates have to be hiked to raise more revenue, it has been proven that this is not the case.

The American economist Arthur Laffer had illustrated his theory that lowering taxes, in fact, increases economic activity with the help of a graph (now called the Laffer Curve) that he drew on a paper napkin following an afternoon meeting with Nixon/Ford Administration officials in 1974.

The theory suggests that if tax rates increase, for a while tax collection also increases. It then reaches an optimal level where the revenue collection is at its peak. Thereafter if taxes are increased further, it results in a reduction of the revenue. As per the theory, at 100 per cent tax rate, the collection would be the least as people would prefer not to work since everything will go to the government.

Reagan promised to restore prosperity by getting “the government off the backs of the American people” by cutting taxes, slashing spending, and deregulating the economy.

During his presidency, Reagan cut social programmes and worked to reduce or completely remove government regulations that affected the consumer, workplace and environment.

However, egged on by a strong defence lobby, Reagan actually increased the military defence expenditure. This was necessitated by the disastrous Vietnam War and the perception that the US had neglected its military.

Resulting Federal Deficit

Contrary to what Reagan desired, the reduction in taxes coupled with increased military spending far exceeded the spending reductions on domestic social programmes. This resulted in a federal budget deficit that significantly surpassed the deficit levels of the early 1980s.

The federal budget deficit, which was \$74 billion in 1980, rose to \$221 billion in 1986. In 1987 it fell back to \$150 billion but started growing again thereafter.

Impact on the Stock Market

The Dow had peaked in August 1987 at 2,722 points, 44 per cent over the previous year's closing of 1,895 points.

Despite the high levels of deficit, the Federal Reserve was wary of controlling price increases and raising interest rates any time.

Besides the ballooning deficit, the collapse of OPEC (the Organisation of Petroleum Exporting Countries) in early 1986, resulting in a crude oil price decrease of more than 50 per cent by mid-1986, was causing financial concern.

On October 14, the Dow dropped 3.8 per cent - a then record - to 2,412.70, and fell another 2.4% the next day, down over 12 per cent from the August 25 all-time high.

On Thursday, October 15, 1987, Iran hit the American-owned supertanker, the Sungari, with a Silkworm missile off Kuwait's main oil port. The next morning, Iran hit another ship, the U.S.-flagged MV Sea Isle City with another long-range Silkworm missile.

On Friday, October 16, the DJIA fell 108.35 points (4.6 per cent) to close at 2,246.74 on record volume.

Black Monday

On Monday, October 19, 1987, known as Black Monday, two US warships shelled an Iranian oil platform in the Persian Gulf in response to Iran's Silkworm missile attack.

The Dow fell by 508 points, crashing to 1738 from 2246. It fell by over 22 per cent, in a single day, the largest one-day percentage decline in the DJIA.

In three days the market loss exceeded 5 times India's then GDP.

This marked the beginning of a global stock market decline. By the end of October, stock markets had fallen in Hong Kong (45.5 per cent), Australia (41.8 per cent), Spain (31 per cent), the United Kingdom (26.45 per cent), the United States (22.68 per cent), Canada (22.5 per cent) and New Zealand (about 60 per cent).

Why did it happen

Much of the blame for the crash was attributed to programme trading. Computers were set up to quickly trade stocks when certain conditions were met, and on this day it led to automatic selling as the market fell.

The computer programmes began to liquidate stocks automatically as certain loss targets were hit. This pushed prices lower which triggered more stop-loss orders. The frantic selling activated yet another round of stop-loss orders, leading to a domino effect.

Many feared the crash would cause a recession. But the Federal Reserve started pumping money into banks. As a result, the market stabilised. By the end of October, the Dow had already risen 15 per cent higher.

Lessons from Black Monday and Other Market Crashes

Market crashes are usually temporary. Some of the steepest rallies have occurred immediately following a sudden crash. The lesson for investors therefore is to remain firm in their investment objectives and not to follow the herd during panic trading.

In fact, market crashes provide an excellent opportunity to pick up shares which form part of the investors' wish-list at attractive prices. Over the long term, market crashes such as Black Monday are no more than a small blip in the life of an investment portfolio.

Since short-term market crashes are impossible to predict, it is essential to stay focussed on one's long-term investment strategy.

Summing up

Let me reiterate some of the important points covered in this book:

1. Investing in stocks can not only be a profitable activity but is also in the nation's interest.
2. Do become investors but avoid becoming speculators, at least till you have understood the risks associated with the activity.
3. The stock market quotes appearing in the newspapers are the prices at which actual trading has taken place and reveal the opening and closing prices and the intra-day highest and lowest.
4. The same forces of demand and supply decide the price of securities that are responsible for the price of most other commodities. When the supply of a commodity exceeds its demand, the price will tend to fall to a level where you will attract a buyer. When the demand for a commodity exceeds its supply, the price will tend to rise to a level where you will eventually induce a holder of that commodity to part with it. This works in every market.
5. The stock market index takes a certain number of representative stocks and indicates the price-weighted movement of those stocks with reference to a base year. So when the 'market' goes up, the prices of several scrips could also have gone up while the prices of others could have fallen too. Or it could be the other way round.
6. Derivatives are instruments that derive their value from one or more underlying assets, which could include precious metals, commodities, interest rates, currencies, bonds, stocks and stock indices. The popular derivatives contracts are 'forwards', 'futures', 'swaps' and 'options'.
7. Insider trading is when an 'insider' in possession of price-sensitive privileged information uses it to trade and thereby makes a profit. It denotes the use of price-sensitive non-public information by vested interests to make private gains or avoid losses.
8. To be successful as an investor you need to understand just two things: i) What to buy and ii) When to buy and when to sell. 'What' depends on your ability to do fundamental analysis and 'when' on your technical analysis skills.
9. Read the balance sheet of the company before investing in it. Ensure the company is not violating the fundamental rules of good finance management.

Ensure it is not using short-term funds to acquire long-term assets and the current ratio is in the region of 2:1 and the liquidity ratio is at a minimum of 1:1

10. Do not be misled by the profit in absolute terms. Remember to look at the Earnings Per Share.

11. Do leverage analysis to understand the risk profile of the company before investing in it. High-risk investments can provide the highest returns. Learn to manage risks.

12. Understand the relevance of certain key investment and financial ratios and use them to anticipate future market prices and reach buying/selling decisions.

13. A quick guide to fundamental analysis:

First choose the industry which has promising prospects.

Then choose the company.

To decide which scrip to purchase ensure:

- i) The sales graph is rising.
- ii) The gross profit is rising at least at the same pace as the increase in sales.
- iii) The net profit is rising at a faster percentage.
- iv) The EPS is above the industry average.
- v) The PE ratio is below the industry average

14. Never buy in a rising market, never sell in a falling market. If you plot a graph of the price movement, you will be able to observe the trend. In a rising trend there will be intermittent downs and in a falling trend there will be periodic upswings. The trend is considered as rising if successive tops and bottoms are higher than earlier. The trend is considered as falling if each successive top and trough is lower than the previous one.

15. When you invest, first decide the loss you are willing to bear. Thereafter, at each rise sell some holdings and at every fall, buy back.

16. Use technical analysis to decide the timing of your trades. Buy at the second rise; sell on the second fall.

17. Keep profits open-ended and put a stop-loss, not the reverse, as many investors do.

18. Two phrases do not exist in the stock market lexicon: 1. Maximum profit. 2. Minimum loss. The time to make a profit or loss is NOW.

19. You must also remember that there is no place for monogamy in the stock market. ‘Flirt with many and marry several’ is the mantra for happiness here.

20. In the stock market you must not be too risk-averse. If you want your investment to be absolutely safe, invest elsewhere. When you choose investments on grounds of safety rather than returns, safety is never guaranteed, but mediocrity of returns is.
21. Don't spread your portfolio too thin. It should preferably have less than ten scrips.

Glossary of Stock Market Terms

All-or-None Order: An order that must be filled completely or the trade will not take place.

Arbitrage: The simultaneous purchase of a security on one stock market and the sale of the same security on another stock market at prices which yield a profit.

Ask/Offer: The lowest price at which an owner is willing to sell the security.

Averaging Down: Buying more of a security at a price that is lower than the price paid for the initial investment. The aim of averaging down is to reduce the average cost per unit of the investment.

Bear Market: A market in which stock prices are falling consistently.

Beta (Coefficient): A measurement of the relationship between the price of a stock and the movement of the whole market. It is a measure of the market risk associated with any given security in the market. A ratio of an individual's stock historical returns to the historical returns of the stock market. If a stock increases in value by 12% while the market increases by 10%, the stock's beta would be 1.2.

Bid: The highest price a buyer is willing to pay for a stock. It is the opposite of ask/offers.

Black-Scholes Model: A mathematical model used to calculate the theoretical price of an option.

Blue Chip Stocks: Stocks of well-established and financially sound companies that hold a record of continuous dividend payments and other strong investment qualities.

Bonds: Promissory notes issued by a corporation or government to its lenders, usually with a specified amount of interest for a specified length of time.

Broker or Brokerage Firm: A registered securities firm or an investment advisor affiliated with a firm. Brokers are a link between the buyer and the seller. They do not own the securities at any point of the time but act as agents. They charge a commission for their service.

Bull Market: A market in which stock prices are rising consistently.

Buy on margin: The process of buying a currency pair where a client pays cash

for part of the overall value of the position. The word margin refers to the portion the investor puts up rather than the portion that is borrowed.

Call Option: An option which gives the investor the right, but not the obligation, to buy a particular stock at a specified price within a specified time.

Cash Settlement: Settlement of an option contract not by delivery of the underlying shares, but by a cash payment of the difference between the strike or exercise price and the underlying settlement price.

Common Shares or Common Stock: Securities that represent part ownership in a company and generally carry voting privileges. Common shareholders may be paid dividends, but only after preferred shareholders are paid. Common shareholders are last in line after creditors, debt holders and preferred shareholders to claim any of a company's assets in the event of liquidation.

Day Order: An order that is valid only for the day it is entered. If the order is still outstanding when the market closes, it will be purged overnight.

Delist: The removal of a security's listing on a stock exchange. This is done when the security no longer exists, the company is bankrupt, the public distribution of the security has dropped to an unacceptably low level, or the company has failed to comply with the terms of its listing agreement.

Delivery: The tender and receipt of the underlying commodity or the payment or receipt of cash in the settlement of an open futures contract.

Diversification: Reducing of the investment risk by purchasing shares of different companies operating in different sectors.

Dividend: A portion of the company's earnings paid to its shareholders on their investment. It is usually declared as a percentage of current share price.

Dividend Stripping: When an investor invests with the idea of exiting from the fund immediately after the dividend is paid.

Dividend Yield: Total of 12-months' dividends paid (historical or forecast) divided by the latest share price.

Rupee Cost Averaging: Investing a fixed amount in a specific security at regular set intervals over a period of time. Rupee cost averaging results in a lower average cost per share, compared with purchasing a constant number of shares at set intervals. The investor buys more shares when the price is low and buys fewer shares when the price is high.

Equities: Common and preferred stocks, which represent a share in the ownership of a company.

Equity Option: An option contract that grants the holder the right to buy or sell a specific number of shares of stock at a specified price during a specific period of time.

Equity Price: The price per share traded.

Equity Volume: The total number of shares traded on one side of the transaction.

Exchange-Traded Fund (ETF): A special type of financial trust that allows an investor to buy an entire basket of stocks through a single security, which tracks and matches the returns of a stock market index. ETFs are considered to be a special type of index mutual fund, but they are listed on an exchange and trade like a stock.

Exercise: The act of an option holder who chooses to take delivery (calls) or make delivery (puts) of the underlying interest against payment of the exercise price.

Expiration Date: The date at which an option contract expires. This means that the option can't be exercised after that date.

Face Value: The cash denomination of the individual security. It is the amount of money that the holder of a security will receive back at the time of maturity. Face value is also referred to as par value.

Futures: Contracts to buy or sell securities at a future date.

Futures Exchange: A central marketplace with established rules and regulations where buyers and sellers meet to trade futures and options on futures contracts.

Growth Stock: The shares of companies that have consistent annual earnings and sales growth.

Hedge: A transaction that reduces the risk on an existing investment position.

Hedge Fund: A fund that may employ a variety of techniques to enhance returns.

Income Stock: A security with a solid record of dividend payments and which offers a dividend yield higher than the average common stock.

Index: A statistical measure of the state of the stock market, based on the performance of stocks. Indices have their own calculation methodology and are usually measured as a percentage change in the base value over time. Examples are the Sensex and Nifty.

Index Fund: A fund that specialises in the purchase of securities that match or represent a specific index. For example, BSE 30 index is a fund that seeks to mimic the returns represented by the BSE Sensex.

Initial Public Offering (IPO): A company's first issue of shares to the general public.

Inside Information: Non-public information pertaining to the business affairs of a corporation that could affect the company's share price should the information be made public.

Insider Trading: There are two types of insider trading. The first type occurs when insiders trade in the stock of their company. Insiders must report these transactions to the appropriate securities commissions. The other type of insider trading is when anyone trades securities based on material information that is not public knowledge. This type of insider trading is illegal.

Last Trading Day: The last day on which a futures or option contract may be traded.

Limit Order: An order to buy or sell stock at a specified price. The order can be executed only at the specified price or better. A limit order sets the maximum price the client is willing to pay as a buyer, and the minimum price they are willing to accept as a seller.

Liquidity: This refers to how easily securities can be bought or sold in the market. A security is liquid when there are enough units outstanding for large transactions to occur without a substantial change in price. Liquidity is one of the most important characteristics of a good market. Liquidity also refers to how easily investors can convert their securities into cash and to a corporation's cash position, which is how much the value of the corporation's current assets exceeds current liabilities.

Long: A term that refers to ownership of securities. For example, if you are long 100 shares of XYZ, this means that you own 100 shares of XYZ company.

Margin Account: A client account that uses credit from the investment dealer to buy a security. A client needs to deposit a margin amount with the balance

advanced by the investment dealer against collateral such as investments. The investment dealer can make a margin call, which means the client must deposit more money or securities if the value of the account falls below a certain level. If the client does not meet the margin call, the dealer can sell the securities in the margin account at a possible loss to cover the balance owed. The investment dealer also charges the client interest on the money borrowed to buy the securities.

Market: The place where buyers and sellers meet to exchange goods and services. It also represents the actual or potential demand for a product or service.

Market Capitalisation: It is the total value of the issued shares of a publicly traded company; it is arrived at by multiplying all the outstanding shares with the current market price.

Market Order: An order to buy or sell stock immediately at the best current price.

Mutual Fund: A pool of money managed by an expert who invests in stocks, bonds, options, money market instruments or other securities. Mutual fund units can be purchased through brokers or, in some cases, directly from the mutual fund company.

Naked Writer: A seller of an option contract who does not own a position in the underlying security.

Net Change: The difference between the previous day's closing price and the last traded price.

Option: Contracts that allow the right, but not the obligation, to buy or sell certain securities at a specified price within a specified time. A put option gives the holder the right to sell the security, and a call option gives the holder the right to buy the security.

Option Type: A call or put contract.

Option Writer: The seller of an option contract who may be required to deliver (call option) or to purchase (put option) the underlying interest covered by the option, before the contract expires.

Over-The-Counter (OTC) Market: The market maintained by securities dealers for issues not listed on a stock exchange. Almost all bonds and

debentures, as well as some stocks, are traded over-the-counter. An OTC market is also known as an unlisted market.

Par Value: A security's nominal face value.

Penny Stock: Low-priced speculative issues of stock selling at less than Re 1 a share.

Portfolio: Holdings of securities by an individual or institution. A portfolio may include various types of securities representing different companies from different sectors.

Premium: An option contract's price.

Price-Earnings (P/E) Ratio: A common stock's last closing market price per share divided by the latest reported 12-month earnings per share. For example, if the last traded share price of a company is 60 and earnings over last 12 months is 4, then the P/E ratio of that company is 15 ($60/4$) This ratio shows you how many times the actual or anticipated annual earnings a stock is trading at.

Prospectus: A legal document describing securities being offered for sale to the public. It must be prepared in accordance with provincial securities commission regulations. Prospectus documents usually disclose pertinent information concerning the company's operations, securities, management and purpose of the offering.

Put Option: A put option is a contract that gives the holder the right, but not the obligation, to sell a specified number of shares at a stated price within a fixed time period.

Rally: A brisk rise in the general price level of the market or price of a stock.

Red Herring: This is another name for the preliminary prospectus. This is the offering document printed by the issuer containing a description of the business, listing out risk-factors, discussion of strategy, presentation of historical financial statements, explanation of recent financial results, management and their backgrounds and ownership.

Securities: Transferable certificates of ownership of investment products such as notes, bonds, stocks, futures contracts and options.

Settlement: The process that follows a transaction when the seller delivers the security to the buyer and the buyer pays the seller for the security.

Settlement Date: The date when a securities buyer must pay for a purchase or a seller must deliver the securities sold. Settlement must be made on or before the third business day following the transaction date in most cases.

Short Position: An investor's position where the number of contracts sold exceeds the number of contracts bought. The person is a net seller.

Short Selling: The selling of a security that the seller does not own (naked or uncovered short) or has borrowed (covered short). Short selling is a trading strategy. Short sellers assume the risk that they will be able to buy the stock at a lower price

Stop-loss: A client's order to close an open position after a price reaches a certain level. It is used to minimize losses.

Stop Loss order: Order to buy or sell when a given price is reached or passed to liquidate part or all of an existing position.

Technical Analysis: The study and use of price and volume charts and other technical indicators to make trading decisions. Technical analysis attempts to use past stock price and volume information to predict future price movements.

Trailing Twelve Months (TTM): The last four reported quarters.

Yield: It is the measure of return on investments in terms of percentage. Stock yield is calculated by dividing the current price of the share by the annual dividend paid by the company for that share.

Zero Coupon Bond: A bond that has no coupon payments. It pays only a single cash flow at maturity.

Yield to Maturity (YTM): The rate of return the investor will earn if the bond is held to maturity.

Yield Curve: A chart in which the yield level is plotted on the vertical axis and the term to maturity of debt instruments of similar creditworthiness is plotted on the horizontal axis. The yield curve is positive when long-term rates are higher than short-term rates; however, the yield curve is sometimes negative or inverted.

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