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[1] Source: Business Standard Friday 30th August 2002 'Mastering Investment' Part One . Cover feature on 'Learning to live with the uncertainty of markets' by Peter Bernstein
[2] Mastering Investment Part Five 27th September 2002

UNCERTAINTY OF MARKETS [3]

'The heart of the matter' by Peter Bernstein

By their very nature financial markets are uncertain. Uncertainty creates opportunity that is fundamental to markets. This article covers Uncertainty, Risk and the fallibility of human psyche. It also cautions against relying on previous data future decision making.

1. The essence of good investment is that 'you pay for your money, and you take your choices'. Investors are confronted with a dizzy array of financial instruments, strategies, goals, controls, and a mountain of statistics and a deluge of expert advice. Yet, most of these have short lives and 'yesterdays answers turn out to be tomorrow's wrong numbers'.

a) Inflation looms or subsides;
b) growth waxes or wanes;
c) policies shift;
d) new instruments appear;
e) market evolves;
f) return spreads break precedence;
g) new information floods in.

[3] Source: Business Standard Friday 30th August 2002 'Mastering Investment' Part One . Cover feature on 'Learning to live with the uncertainty of markets' by Peter Bernstein

2. Beneath these factors creating the uncertainty are the essence of investment and the hidden future. The key to certainty is not available and at best fleeting shadows are discerned. Distinguishing the light from the shadows is not easy and surprise in investments is inevitable. If the road ahead was clear the price could be adjusted and it would be the same for all days. But markets are assailed by the unexpected and volatility.
3. Uncertainty is a two edged weapon. With it comes opportunity, yet the certainty in tomorrow is a hypothetical world. Simple answers however, can be drawn from the past in the real world.
4. When times are calm, investors 'recognize their inability to know what the future holds.' In volatile markets they become remarkably bold in their predictions and act as though uncertainty has vanished and the outcome is beyond doubt. Here, the reality of uncertainty is abruptly transformed into a hypothetical certainty in outcome. All the major tops and bottoms of markets have been defined by this 'switch from doubt to certainty'. If expectations are exaggerated by panic or euphoria asset prices will go into reverse. 'If expectations are wrong, investing against the majority will pay off in a big way.' (page 2)
5. Opportunity lies where the majority opinion is wrong, but it is naïve to believe that the majority is always wrong. (page 2)
6. The other side of the uncertainty coin is that one's decision whether with or against the majority, could be wrong. Therefore,

uncertainty needs to be managed by providing a cushion for surprises as a part of the process of investment. The need for cushions creates the variety of instruments and strategies, as well as the mountains of information. This is because the goal of investment has always been 'wealth creation'.

7. One view is that direct control can be exercised by giving up liquidity by owning the majority share of business. But the majority of investors is powerless to control or influence the performance of the businesses in which they invest. Therefore, they have valid exit strategy (page 2) by having paper assets with ready and a more reliable market / or where their decisions can be reversible. (page 4)

8. The choice of such exit strategies offers two paths to wealth creation:

   (a) The cash flow that would accrue.

   (b) A unique path of basing 'their hope on the prices other investors will pay for these assets'.

   OR

   'the willingness and ability of debtors to live up to their contracts to repay principal. Thus, cash flow + resources + whims of others to repay = total payoff in 'safe' securities. Both components of total return are outside the control of the investor and so the future value for money is risky.

9. The inflation of 1960s and 1970s built up theories for calming the volatility of the markets. In the process techniques for managing portfolios; analyzing risk returns trade-off;

distinguishing between portfolio and individual holdings; diversification; evaluating the consequences of loss, principles of selection of securities and bonds; hedging; and what makes the markets volatile have been evolved. Yet uncertainty remains at the core around which these instruments are arranged. And therefore, no portfolio can ever be optimal.

10. The key element of financial theory is the 'efficient market' that is itself based of several assumptions and a hypothetical world of certainty and perfection, and no single investor can know more than the market as a whole. The known information is constantly incorporated into asset prices, and therefore, the prices always reflect the best possible interpretation of everything that is known, but this is only for that given moment or day. The new information is always around the corner to bring in the uncertainty.

11. 'The most perilous element is the belief that somehow time will eliminate uncertainty'. This is resignation and is more dangerous than procrastination 'until the uncertainty diminishes'. Uncertainty is a constant and not a variable.

12. The data base of singular events caused by the element of surprise imbedded in uncertainty is a most dubious basis. Mastering investment begins and ends with this single fact that uncertainty is a constant. Safety nets and the ability to see the ways of survival when disappointment arrives is the key to successful investment. Uncertainty is lodged in the heart of

investment and 'victories are to the tortoises, not the hares'. (page 4)

13. As the French poet Paul Valry has put it – "Once destiny was an honest game of cards which followed certain conventions, with a limited number of cards and values. Now the player realizes in amazement that the hand of his future contains cards never seen before, and that the rules of the game are modified by each play.'

2. CREATIVE FUNDS THAT HAVE COME IN TO THEIR OWN[4]

Vikas Agarwal and Narayan Naik

Antecedent:

1. Hedge funds have existed for the last 50 years as the first was started in 1949 by Alfred Wilsow Jones, a journalist, sociologist and fund manager. He used a long-short strategy to hedge market risk. In this he took a long term position in undervalued securities and a short term position in overvalued ones.
2. His strategy got public recognition only in 1966 through an article in Harvard magazine and thereafter hedge funds grew rapidly for two years but suffered losses from 1969 to 1973. Thereafter till 1986 they remained unpopular and recovered only

[4] Mastering Investment Part Five 27th September 2002

after 43 % gains were recorded by Julian Robertson's Tiger Fund founded in 1980 with 8 million dollars.

Definition:

3. The investment style of hedge funds has changed significantly since 1949 and hedge in fact has become a misnomer. There is no definition for a hedge fund. Broadly speaking, it is a private investment vehicle where the manager has a significant personal stake in the fund and can flexibly employ a broad spectrum of strategies involving derivatives, short selling and leverage to enhance returns and better the manager risk.

Industry size:

4. Size of industry in India is not known as advertising of US hedge funds is restricted by SEBI. International estimates place the number at about 1400 in 1988 to more than 5500 in 1998 for both domestic and offshore funds. The volume of assets managed has also grown from $42 billion to $300 billion. The estimate of Hedge Fund Research is $39billion in 1990 to $487 billion in 2000.

These figures only represent the capital account balances of investors and not the amounts deployed in the markets. A third estimate is $1,000 billion given certain strategies for investing in highly levered ways. Goldman Sachs project a growth rate of 60 percent in 2002 with estimated assets under management at $73 billion in USA, Europe and offshore.

5. Wealthy individuals are the largest group of investors in Hedge Funds and contribute 80 per cents of assets under management while the remaining 20 per cent are from institutional investors. A study of KPMG and RR Capital Management Corporation projected an annual growth of 26 per cent on $500 billion assets in 2001 to 10 fold increase to $1700 billion by 2011.

Changed strategies : Onshore and Offshore funds

6. The initial long and short strategies of hedge funds have changed to many different strategies. Also there is no accepted classification for hedge funds. The onshore hedge funds in the USA are usually limited partnerships where the manager is the general partner and the investors are the limited partners. The earlier limit of 99 partners was raised to 500 partners in 1996 including the general partner, with out any registration and disclosure requirements. In 2002 this limit has also has been removed and 'qualified investors' may be partners in a hedge fund.
7. Offshore funds are in tax-neutral island countries such as Bahamas, Bermuda, Luxembourg and Dublin for allowing investors to minimize their tax liabilities.
8. One strategic innovation has been the banding together of onshore and offshore investors in to a passive foreign investment company. In this offshore investors have to have at least half the asset holdings in a single portfolio.

9. On basis of strategies hedge funds can be directional and non-directional depending on their dependency or otherwise on a single market movement. Non-directional funds are 'market neutral' only on the first movement of 'expected returns', but are not neutral to the second movement of 'standard deviation'. In a volatile market liquidity dries up quickly, convergence of return of asset process to equilibrium level is not obtained and arbitrage based strategies can make losses. Non-directional strategies general exploit short term market inefficiencies and price discrepancies between related securities while hedging as much exposure as possible. Due to shortage of liquidity in such periods of volatility they often run smaller pools of capital as compared to the directional funds. In contrast the directional strategies depend on benefits from broad movements in the market. Table 1 lists the strategies

Hedge Funds and Mutual Funds:

10. Differ in nature of their strategies, their return objectives, correlation of returns, co-investment opportunities, compensation structures, liquidity and transparency. Most Mutual Funds are in their options. In contrast Hedge Funds have more flexibility in where and how they can invest. They can use leverage, sell securities short and invest across different asset classes. They can use leverage explicitly or implicitly. Explicit leverage can be seen from the balance sheet and refers to the ratio of their assets to net worth. Implicit leverage is achieved by buying securities

on margin through the use of short position and derivatives and /or using collateralized borrowing in re-purchase markets. Due to flexibility of leverage hedge funds can also multiply their returns and risk on arbitrage opportunities in the market. The negative side of this flexibility is that it can reduce the ability of investors to monitor their fund manager. Some trade so frequently that direct oversight may be ineffective and it may be impossible to monitor whether the manager is diverging from his strategy.

Non-directional strategies

1.1	Fixed income arbitrage	Having long and short bond positions via cash or derivatives markets in government, corporate and /or asset backed securities. The risk varies with duration, credit exposure and the degree of leverage
1.2	Event driven	A strategy that hopes to benefit from mispricing arising from different events such as merger arbitrage or restructuring. Managers take a position in an under valued security that is anticipated to rise in value because of events such as mergers, re-organization or takeovers. The main risk is that the predicted event may not happen.
1.3	Equity hedge	Investment in equity or equity like instruments where the net exposure is generally low. The manager may invest globally or have a more defined geographic industry or capitalization focus.

		The risk relates primarily to the risk or specific long and short positions.
1.4	Distressed securities	Buying and occasionally shorting securities of companies which have filed for creditor protection and /or are undergoing reorganization. The securities range from senior secured debt to common stock. Liquidation of a financially distressed company is the main source or risk.
1.5	Merger arbitrage	Buying the securities of a company that is being acquired and shorting that of the acquiring company. The risk here is more of a 'deal risk' than a 'market risk'
1.6	Convertible arbitrage	Buying and selling different securities of the same issuer (such as convertibles or common stocks) and seeking to obtain low volatility returns by arbitraging the relative mispricing of these securities.

Directional strategies

2.1	Macro	Seeking to capitalize on country, region, or economic change affecting securities, commodities, interest rate and currency rates,. Asset allocation can be aggressive and leverage and derivatives may be used. The method and degree of hedging can vary significantly.
2.2	Emerging markets	A strategy that employs a "growth' or 'value' method to invest in security shorting or hedging to minimize inherent market risk. These funds mainly invest in the emerging market where there may be restrictions on short sales.
2.3	Equity non-hedge	Similar to equity hedging with significant net long exposure
2.4	Short- selling	Short selling over valued securities with the hope of buying them back at a lower price.

11. Mutual Funds

are regulated by the regulators, but Hedge Funds are

largely exempt from disclosure and regulation as they cater to private placements. Moreover, minimum investment is usually from one million dollar to $20million. However, this minimum can be much lower if investment is made through a fund of funds, meaning a fund that is investing in several hedge funds. The industry has also lowered its minimum amount to widen its investor base.

12. Mutual funds require a lock-up period of 12 months or more. This enables them to invest in relatively illiquid securities.
13. Hedge fund managers prefer to be evaluated on absolute performance as opposed to relative performance over benchmarks. Manager fee also carries a higher and a stronger incentive in the case of hedge funds ranging from 5 to 25 per cent of yearly profits that is over and above the annual management fee.
14. Long term capital management went nearly bankrupt in 1998 causing the Asian crisis. The regulators now view hedge funds differently. Investors are attracted by a combination of equity style returns and bond like volatility of some hedge fund strategies.

Table 1 Classification of Hedge funds as per strategies

			Compound Annual return	Sharpe Ratio per cent	Hedge Fund returns are net of fees. The Sharpe ratio, named after
1.	VAN	Global	17.9	1.4%	

Hedge Fund Index			the Nobel
2. MSCI World Equity Index	9.1	0.3	laureate Prof. William F.
3. Standard & Poor 500	16.7	0.9	Sharpe, is the return risk free
4. Lehman Brothers Aggregate Bond Index	8.5	0.8	rate divided by the standard deviation of returns. The higher the ratio, better the quality of returns.

15. The statistical methods on which investment decisions are based give the picture of the past. Yet investments are made for gains in future. This fact needs to be kept in view in all investment decisions.

a) OPTIMISING RETURNS IN A RISK CONSCIOUS WORLD[5] by Kaveh Alamouti

1. In the year 2000 hedge funds attracted about $6.9billion out of the total of $ 8 billion invested by institutional investors during the year. Volatile and falling equity markets, low bond yields, volatile emerging markets had led the movement towards hedge funds. Factors used for assessing fund manager's for the purpose

[5] Mastering Investment Part Five 27th September 2002 page 10

were experience and length of time they had been together, the management structure of the firm, audited public track record of managers, and statistical analysis of risk and returns. The common factor is the manager's competence in managing operational and market risk.

2. Operational risk of hedge funds is the potential losses resulting from inadequate systems, management failure, faulty controls, fraud or human error. The assessment criteria are expressed as risk adjusted returns. For example premium returns of 12 to 20 percent with acceptable risk of 8 to 15 per cent with low correlations with other asset classes. This does not imply a risk averse scenario but as investors are more risk conscious this has implications for the fund managers. As the hedge fund industry is becoming more competitive it has altered the risk return character of trade and the attractiveness of market opportunities. The question facing the hedge funds is how to optimize returns in a competitive environment where the fund managers have lesser flexibility in taking risks.
3. For this, the hedge fund manager has be give as much importance to consistency as he gives to returns. Overtime consistency is rewarded enormously and institutional investors prefer consistent low returns to volatile high returns. Consistency and Predictability should be the keys to trade selection and trade decisions. The quality of returns of a hedge fund can be assessed and compared by estimating how much excess return they generate per unit of risk they take. Hedge Funds are expected to

shor higher quality returns are they can hedge general market risks and focus on specific risks and trading opportunities on which they have an expertise.

4. Capital preservation: along with consistency preservation of fund's capital is also a central concern. The risk / return trade off for a hedge fund is not linear. This means that the long term rewards for achieving a 30 per cent return is not as great as the damage inflicted on the business by a 30 per cent loss. This factor impacts the trade selection strategies and the fund's risk profile as this is the prime objective of hedge funds.
5. Diversification: shapes the framework of management of assets. As most opportunities are in the zone of probability, diversification is the only sensible route to optimal returns even for narrowly focused funds. Efficient use of diversification significantly increases the rate of return. Sophisticated analytical tools are increasingly being used to build diversified portfolios as well as to monitor their risks. Value-at-Risk methodology uses historic data and projected correlations to estimate the size and profitability of future change in a portfolio. But they do not supplant the individual judgment and trading knowledge as the main inputs of portfolio management. Diversification reduces variability and can help through timing of entry and exit.
6. Timing diversification on entry and exit can improve gains and reduce the effect of random market fluctuations.

A good example of timing diversification was the ECU basket of convergence trade. ECU was to be replaced with Euro

from 1st January 1999. As investors increased their exposure to the ECU in anticipation of the strengthening of the single currency, the ECI value rose in relation to the basket of its 15 constituent currencies. Currency arbitrageurs had been trading for many years on the difference between the 15 currencies, and now a definite date was known. So it was an irresistible opportunity for arbitrageurs. Traders shorted the ECU and bought the theoretical basket benefiting from almost guaranteed benefit from convergence profit plus windfall profit in case Euro was delayed beyond 1st January 1999. In mid-1998 ECU was trading 0.40 per cent higher than the theoretical basket. This significantly large spread widened further to 1.8 per cent towards December 1998 as the turmoil from imbalance of demand and supply and distress sale among many hedge funds that had committed all their risk capital in mid 1998 to such a 'sure' trade. They had to unwind the trade before convergence to cut their losses. Therefore trade became progressively more attractive towards the end of the year. If timing diversification had been used, greater profits could have resulted from the eventual convergence on the eve of Euro as a single currency. As such a combination of portfolio and timing diversification can increase the staying power which is the ability to with stand temporary adverse market movements by a factor of three to five times.

7. Diversified portfolios need to be actively traded for best profits through responses to market events. The correlation between different classes of assets and trading opportunities may

change over time requiring associated changes in the diversified portfolio. A well diversified portfolio at the beginning of a quarter may become highly risky towards the end of that very quarter due to market specific shocks and macro global events. Most instances of increased correlation risks and anticipation of change in correlation structure are opportunities for a fund manager.

8. Leverage: is the capacity of a fund to increase its position by borrowing from market intermediaries such as banks, using the fund's assets as collateral. Leverage magnifies profits and losses. Hedge fund managers must make a conscious decision about the size of leverage a fund requires. The higher the volatility the lower is the leverage requirement. As such leverage is inversely proportional to risk of the portfolio strategy.
9. Directional future trading and emerging mart investments do not requires any leverage as they are already volatile activities. Fixed income arbitrage and relative value trading benefit from leverage as it hedges the general market movements and these trades are based on relatively small market movements. Thus, judicious use of leverage can enhance performance. Its excessive use can result in losses and disasters.

   The LTCM hedge fund disaster in 1998 and the bond market collapse of 1994 resulted directly from excessive use of leverage.

10. Size matters: For most investment styles and hedge fund strategie, there is an optimal fund size. If a fund grows beyond

the optimal size performance deteriorates. The reasons for this include that

a) there are only a finite number of opportunities
b) managers lose mobility and flexibility as the fund grows,
c) declining costs result in rise of larger transactions, and
d) the fund may lose its focus.

11. Thus, the long term profitability of a hedge fund is maximized by operating optimally sized funds as opposed to maximizing the capital under the management in each fund.
12. This is in contrast to the objective of the traditional fund manager who seeks to maximize the size of assets under management.
13. Hedge funds aim to generate consistent long run results. Having too much capital to manage can be as damaging to long run performance as high leveraging. Once the optimal size is reached all flows of capital in to the fund should be closed. This is because there may not be sufficient opportunities in the market, to accommodate all the fund's capital. The excess capital should be returned to the investors. Moore hedge fund follows this principle and has enhanced its reputation in the process.
14. The single most important attraction of the hedge fund is the expectation of positive absolute returns in any market environment. The risk management principles used, namely, diversification, preservation of capital, control of leverage and

optimal size , matter only if consistent returns are provided by the hedge fund on a long term basis. One needs to develop the talent to identify the shifts in the centre of gravity of a fund through the market changes.

15. In sum, the transaction cost of the fund is the key.

TOO MUCH BEING LEFT TO CHANCE BY PERSONAL INVESTORS[6]

By Greg Elmiger

1. Information on most aspects of investing is just a click away but better awareness and professional tools for assessing risk are needed by individuals
2. The individual investor could not have had it better than the increasing transparency and openness in information availability as at present. Even access to financial markets is a mere click away. High speed transmission of information drives the personal finance world today. As such, a modern investor has vast information at disposal - from prosaic to profound.
3. The earlier guarded and opaque financial flow of information had skewed the playing field. Today it is level and investment services today cater to every level of net worth and every imaginable interest. The divide separating the high end and the low end of individual investors is at its narrowest today.

[6] Mastering Investment Part Five 27th September 2002 - a retail risk product specialist in RiskMetrics a company that specializes n risk measurement in New York

Retirement and tax planning are ubiquitous services offered on the internet at a fraction of their customary costs. The individuals therefore have tremendous financial opportunities to access information and build their own portfolios, but they also face new responsibilities. The availability of excessive information has created confusion rather than clarity. Rather than making investment choices easier, the information has made investment decision making more complex. This is due to no change in the fundamental relationship between risk and returns. This has placed a premium on understanding and controlling risks. The simplicity of making an investment for a trade as made available by the internet should not be confused with the seriousness of prudent investing

4. Markets matter: because they are more intimately tied to the individual blueprints of future. In addition financial portfolios are replacing traditional means of primary saving for retirement. With increased longevity these saving will impact post retirement life. Rate of return on portfolio and the rate of inflation have now become more significant for every individual along with the principles of risk management.
5. Making sense of the market requires a significant depth of research and reflection and an ability to synthesize not just one aspect of investment, an entire picture of risk and return.
6. The need is for a systematic and rational strategy that balances risk and return in an optimal way. The first step to the building of a personal portfolio is finding of this optimal and

systematic strategy. For this attention is required to be paid to risk and not just to performance of a mutual fund for example. Investment should not be made on basis of a mutual fund's performance in the last few months or a year alone. It is well documented that above average stocks and Mutual Funds are likely to be among the underperformers in the next year.

7. Risk Return tools for individuals: are from quantitative analysis that give 'benchmark targets' 'stop-loss levels' and 'value-at-risk limits' that provide a measure of the total risk facing a bank or a portfolio to fund managers. There is no historical data or experience on the use of these quantitative tools by individuals. However, for individual also portfolio diversification, finding the right securities or funds with highest returns can be as important as for fund managers. Similarly, tools such as Value-at-risk can be equally important for individuals as they are for fund managers. Stress testing , how much can I lose in a short space of time , is intuitive to most investors. One stop shopping online for wealth planning is already available. Investing is a growing up business.
8. In future, individual investment accounts will be updated instantly showing the latest personal statistics including income tax, and household adjustments. This will facilitate the factoring of each investment decision against the other thereby optimizing long term objectives. The four pillars of personal finance are multi-goal planning, asset selection, balancing risk with return, and tax impact awareness. These are factors for a full scale

solution for individuals to carefully plan, frugally preserve, and appropriately harvest their gains to reach their investment goals. In this process the tools of financial risk management will play an important role.

This article is from a book *'Risk grade your investment: Measure Risk and Create Wealth* (2002) Ethan Berman and Steve S. Kim John Wiley, New York.

e) A FORMAL STRATEGY IN A RISKY BUSINESS[7] - Christopher Culp

1. Experience of giving constant risk-adjusted returns is the criteria for selecting a fund manager. Risk management does not mean refusing new transactions all the time. The core of the task of risk management is not deciding how much risk to take but rather analyzing whether or not the risks the fund is taking corresponds to the risk preferences of the investors.
2. Traditional methods: combined expected returns with risk preference of the investor. No single risk return tradeoff is correct. A combination of risk return for one investor may not be correct for another. A three stage process adopted is asset allocation, security selection, and market timing.

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3. Asset allocation: in broad asset classes such as fixed income and domestic equity. Next, the target portfolio weighting are determined for these broad classes. Then securities are selected and finally market timing is determined. Market timing is the tactical decision to buy or sell the securities at the most advantageous future.

4. Asset allocation also uses portfolio optimization through mathematical techniques to determine asset class weighting for a set of 'efficient portfolio'. A minimum variance frontier is then determined for the portfolio. Then the minimum variance efficient frontier is determined. Under this a higher expected return cannot be achieved at a given volatility or for which the risk cannot be reduced to earn the same expected return.

5. Next the set of asset classes that hold the efficient frontier are selected. Then the hypothetical 'utility function' is created linking the different expected return and volatility combination s with the 'units of happiness' to generate the 'indifference curves' to represent the risk-return trade off for the investor. The optimal portfolio is found at the point where the indifference curves meet the minimum variance efficient frontier

6. Defining risk: Risk questionnaire can be designed to define the risk level and identify portfolio that most closely correspond to the investor preference for trade off risk and return.

The mean variance portfolio is used most often as it relates to the bell shaped normal distribution curve to indicate the relation between returns to the frequency with which those returns are expected to occur. As the normal distribution is symmetric a return in the minus is as likely to occur as a return in the positive. It can only make specific probabilistic statements about portfolio returns, a minus 1.65 standard deviation above the average of 5 percent returns.

7. In non-normal curve distribution return at variance can be a very imprecise measure of risk particularly when 'negatively skewed', in which the probability of large losses is more than gains.

   In such situations semi-variance can be useful for assessing downside risks. For this a minimum downside semi variance, efficient frontier is created. The optimal portfolio occurs at the tangency point between that frontier and indifference curves defined in the expected return / downside semi variance space. This is complex, but is possible.

8. Thus, in theory all risks concerning an investment can be addressed in the above manner. As long as the decision of an institutional investor achieves the desired risk / return, and risk is completely and exhaustively defined, there is no need for more formal risk management.

9. In practice, however, risk is not exhaustively defined in advance. In addition, optimization is undertaken at the level of

asset allocation and not at the level of security selection or market timing as assumed by the theory. Therefore the investment decisions may not achieve the target risk / reward optimum. Due to this risk management is merely a formal process.

10. THE PROCESS: Risk Management (RM) is the formal process that helps to indicate whether the risks to which portfolios are subject, are the risks to which the investor wants to be subjected. This involves specification of the investor tolerance limit for the risks. The process does not tell the investors when they are taking "too much" or "too little" risk in some absolute sense. It only tells the 'too much' or 'too little' risk points as relative to their own 'risk tolerance level'.

11. As a process RM includes several components such as identification of risks to which a fund is subject; measuring monitoring and reporting risk exposure relative to pre-defined risk tolerance, controlling deviations between actual and desired risk exposure, and the governance of the whole process.

12. Risk Management can be:

    a) A pure compliance function and accountability towards policy parameters.
    b) A centralized risk management function can add value to individual portfolio.

c) In hedge funds, discretion exists whether or not to hedge exchange rate risks. Here a centralized formal risk management process can help in the form of an 'overlay FX' measure to cover all portfolios.

d) RM is a catalyst for discussion on strategies and tactical portfolio shifts during asset allocation, use of new financial products, creation of a risk management committee and / or post of a risk compliance officer.

13. Do's and don'ts: The many forms of measurement of market risk for control purposes can range from simple to complex.

a) Simple ones include basic summary risk measures such as average duration, static report of nominal exposure to changes in value when exchange rates move.

b) More forward looking measures are "value at risk"(VaR) based on statements such as " no losses of more than Rs 100 in more than one month out of 20 months."

c) For this, value is calculating assuming a normal distribution of all returns. In the Markowitz portfolio optimal model this allows managers to use volatility as the basis for all risk calculations.

14. Though Value at Risk is meant to capture extreme market movements, the classical measure is little more than a scaled version of variance. With out assuming the underlying distribution as symmetrical Value at Risk, can also use advanced statistical methods to accommodate most returns.

15. But for using more complex methods a more expensive system is required. In addition, it is difficult to model exotic financial and illiquid securities for private placements as they are complex and expensive.
16. As such, the use of value at risk measure depends on how the investor is measuring risk in its asset allocation decisions. If variance is being used as a base measure for allocation assets in asset classes, a volatility based Value-at- risk measure cannot be used. Here a Value at risk measure that captures the downside risk of a portfolio would be more useful.
17. Sometimes the value at risk measure is used as a basis of limits. The basis of limits could also be 'risk budgets' in which the VaR is the basis. In this a funds aggregate VAR is allocated to different managers who are then obliged to remain with their prescribed risk limits.
18. In this transactions, that push the manager beyond the risk budget limits are forbidden. Market movements that cause the value at risk to exceed a risk budget force security sales and hedging.
19. Risk budget obviates the need for discretionary approval of specific transactions by senior managers. It also allows the portfolio / fund manger to evaluate the risk adjusted value on a regular basis. But for successful use of risk budgets using the Value at Risk basis, the system should not make assumptions and should be able to process all financial instruments and asset classes. But this can also drive up the costs of a VaR system.

20. In conclusion, institutional investors need risk management system to monitor and ensure compliance. But this should complement and not replace or circumvent the classical investment process. Complex risk management system should be evaluated for their costs and benefits.

7. VALUE METRICS INTANGIBLES : NOT SEEN BUT MUST BE HEARD[8]

By - Chris Higson

1. In the last decade, value based management has been adopted by companies as a discipline by using 'value metrics' to assess the performance of their units.

   Value metrics is also used as a basis for manager's pay. A value metric is an accounting measure of return on capital that is compared with the most of capital to signal the creation and destruction of value.

   EVA and CFROI are two such measures though return on equity is also used. Value metric is used by investors also to rank companies when selecting stocks.

2. The internal rate of return is the yield of the expected cash flows on the invested capital. Value is created when the internal rate of return is greater than the cost of capital. Net present value measures the amount of value created as the difference

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between the present value of future cash flows and the invested capital. Quality of accounting data is crucial for using accounting return on capital to measure economic returns, and of the price-to-book ratio as a proxy for net present value. Often, reworking of accounting conventions are involved for using the data as value metric.

3. Some changes in the economic landscape radically alter the profile of business profitability and business risk. Investors need to understand the changes and adapt mental models and ways of working in response.
4. Investors can only use published accounting data for their grading. Balance sheets generally do not carry intangible assets. Accounting practices require the cost of intangible assets, such as reputation, human capital, intellectual property and research to be charged as incurred.
5. Intellectual Property assets are sometimes carried in the balance sheet. Internationally, goodwill is amortized over widely varying periods. This makes accounting returns look very different between companies that grow organically and those that grow through acquisition. Written off goodwill is also added back into capital employed when calculating value metrics, but this is rarely re-valued.
6. Sometimes a company has contracts to keep current assets "off balance sheet" by factoring the sales ledger or using consigned inventory. Therefore some adjustments by analysts do enhance the completeness of the balance sheet such as capitalization of

operating leases. The main divergence from current value is for tangible fixed assets, that are by default carried in the balance sheet at their historic value particularly land and building.

7. As the internet is increasing transparency on offline and online markets by reducing the buyer's search for costs. The reducing search costs may increase competition. In a frictionless world where there are no transaction costs, there can be no profits. Competitively superior rates of growth are needed as the key to the delivery of superior economic value by ensuring that return on capital remains above the cost of capital.

8. The world of intangibles: The value of intangible assets has been increasing in the last few decades. Intangibles are resources such as intellectual property, knowledge assets, goodwill, brand, alliance, human and organizational capital.

9. As a result the 'book' in price-to-book or the balance sheet is understated as it does not include the intangibles. But the impact of intangibles on 'price' of stocks of the company has become the critical factor in valuation, as they are seen to be holding the key to value creation. They enable the companies to earn and sustain a return much above the cost of capital that comes from their uniqueness and scalability.

10. Most of the tangible and financial assets are commodities as they can be supplied by others also in a competitive market. In

contrast the intangibles tend to be unique as they can be used anywhere and become more valuable with every use.

11. They are also scale-able for relatively low costs. The marginal costs of re-using knowledge assets over and over again, such as researches that produce products that are protected through patents, is small. The 'net work' effect is an extreme example of intangible asset.

12. SHIFTING TERRAIN: Since the 1990s de-regulation has been fundamentally changing the economic landscape and companies have been re-structuring. This will impact the risk and return on capital. They are moving away from growth restricting vertical integration in favour of specialization along resource lines of product development, infrastructure and logistics and customer-facing.

13. Each of these has a different tangible / intangible asset profile as product development is intellectual property, while brand equity is developed for customer, inter facing and resource control is increasingly extending beyond conventional ownership to include extended supply and networks of complementary business.

For example in Ford, the economics of scale in manufacturing is largely exhausted. Excellence manufacturing is widely replicated as manufacturing production has become commoditized. Due to this, technology allows Ford to manage these network relationships efficiently and tightly Therefore,Ford

is increasingly looking at innovation and development of brand equity to build competitive advantage.

14. CONTRACTING COMPANIES IN A CONTRACTING STATE: Modern economy is characterized by the shifting of asset ownership out of the corporation by using leasing factoring franchising and similar contractual devices.

These replace borrowing, a financial motive for off-Balance Sheet financing may be for a flatter debt ratio, leading to government requiring the companies to bring back the 'off balance sheet' assets in to the balance sheet. The practice of financial analysts of capitalizing operating leases have brought in the rules that limit the use of operating leases.

15. Another motive for off balance sheet financing is to shift out assets that are not strategic and are better managed by others. Outsourcing is not new, but the novelty is in the growing willingness to re-configure the resource system by applying outsourcing.

For example British Airways has long been mixing ownership with capital leasing and operation leasing of planes. In addition, it now uses franchised affiliates that operate on select routes with BA logo, but as independent airlines and their assets do not get reflected in the BA balance sheet.

The logic is that the planes are at the core of an airline but are not a strategic resource for it. All airlines use much the same

planes as they are in competitive supply. Resource list that confer competitive advantage on airlines include control of sites and slots, reputation for safety and service quality, membership of strategic alliances, code sharing arrangements, and reservation systems. None of these appear in the balance sheet. Similar to BA franchises are the bottlers for Coca-cola. Microsoft itself a software developer, has created platforms that support many other developers. They comprise a resource that adds value to Microsoft by leveraging the demand for Microsoft's own products.

16. PERFORMANCE ANALYSIS: A value creating business needs to earn a return on capital that is greater than the cost of capital. Since 1990s value management consultants have re-focused companies on this basic logic and investors have been refining investment processes along the same lines by even adopting some of the consultant's metrics. The use of some measure of return on capital is now central to equity analysis practice for ranking companies and modeling by using a return on capital that converges on the cost of capital. These changes are having a major effect on the return on capital profile of companies as today companies increasingly do not have a direct return on capital as they do not use capital directly. Strategic resources or intangibles are not reflected in the balance sheets while tangible assets that are or may be needed are held in another company with in a network or alliance.

17. Intangibles do offer a way to differentiate but also involve more risk as the intangibles create a winner-takes- it –all situations that have corresponding risks. In Dell Computers model the net operating assets are nil and capital is not the scarce resource. So accounting is not to be blamed for practical difficulties in implementing the return on capital model. In future the return on capital driven valuation model may not be immunized through accounting adjustments. These have profound implications for equity analysis as risks in even the successful intangibles are harder to control and therefore would be 'unsystematic' risk. An unsuccessful investment in intangibles has little value in alternate use. Such risks are not reflected in the balance sheet.

18. A NOTE ON VALUE METRICS: Value metrics measures accounting return on capital. Measures such as Economic Value Added (EVA) when related to traditional measures of return on capital such as return on operating assets and return on equity make this clear. Return on operating assets is equal to operating profits divided by operating assets. Return on equity is equal to 'Earnings' divided by shareholder's funds. The income that a company delivers to shareholders is subject to corporate tax. Investors' required return is set in terms of income after tax.

a) As 'Earnings' in the above equation are after tax return on equity can be benchmarked against the cost of equity capital.

b) However, an 'enterprise' measure of return on capital is benchmarked against the Weighted Average of Costs of the loan and equity Capital (WACC) that constitute the capital employed

c) Operating Profits and Return on Operating Profit are measured pre-tax. If tax charges are deducted from Operating Profits we get the Net Operating Profit after tax (NOPAT) adjusted for tax effects of interest paid and received. If corporate tax is T then NOPAT = Operating Profit (minus) (Tax + net interest paid x T)

d) This resulting measure of after tax operating return is called Return on Invested Capital (ROIC). So ROIC = NOPAT divided by Operating assets.

e) The difference between return on capital and cost of capital is called the 'spread'

f) If the cost of capital is charged against NOPAT it gives the Economic profit (EP) = NOPAT (-) Operating assets x WACC. Multiplying both sides by capital the question becomes whether NOPAT > OA x WACC or whether NOPAT – OA x WACC > 0? So saying that the EP is positive is the same as saying that the company is earning a return greater than its cost of capital. If NOPAT is 68 and asset is 500, WACC is 8% the EP = 68-500 x 8% = 28.

g) Economic Profit (EP) is also called Economic Value Added (EVA) but the term EP is also applied to the 'spread' between the cost and return on capital.

19. Cash Flow Investment on Return = NOPAT + Da – Ds divided by Gross Operating Assets x I (where Da = straight line depreciation, Ds is 'sinking fund depreciation and I is interest paid) Sinking fund depreciation is the payment in each period that if invested in a fund earning the cost of capital will yield the initial investment by the end of the asset life.

7. Kamich M. Bruce ' The art and craft of reading the market'

1. Technical Analysis is "the study of data generated by the action of markets and by the behaviour and psychology of market participants and observers. Such study is usually applied to estimating the probab8ilities for the future course of prices for the market investment or speculation by interpreting the data in the context of precedent."
2. The results from trading data is grouped in to five categories
   a) a big gain
   b) a small gain
   c) a flat result
   d) a small loss
   e) a big loss.

The results from (ii) to (iv) will cancel each other leaving the two extremes of a big loss and a big gain.

Big losses can then be eliminated by fixing a key rising line and any closing below that line can signal major reversals. This line can be drawn by placing a ruler to join the peaks of the trough of a rising stock for the last 18 months. Eventually the prices begin to close below the significant upward trend. This will indicate a shift from upwards to sideways and down wards trend.

3. The technical analysis is not concerned with the reasons for change but its indication even if it turns out to be a false sell signal because the chance of success is greatly increased if there is a plan to limit losses and the discipline to execute it faithfully.

4. If the plan has a short list of investment stocks based on fundamental analysis, why commit money to a stock whose price is showing a downward trend. This is because studies have shown that concentrating on shares that show superior relative strength rankings will enhance performance.

5. Fundamental assumptions underlying the technical analysis are:

(a) Market action or prices discount the future. The discount covers day to day developments and unexpected events.

The stock market is a leading indicator of what the people believe will happen.

(b) The market has already discounted the news. "Buy the rumour and sell the news. History tends to repeat itself as people confronted with the same set of circumstances tend to react in similar ways. This may not happen in exactly the same way but human emotions swing from greed expressed at the peak to fear at the trough. Pattern of similar supply and demand in price action have been observed in 1901, 1951, and 2001.

Prices moves in trends revealed through casual examination of charts of securities, commodities, interest rates and currencies.

(c) Before rising trends appear charts go through a pattern of accumulation at the bottom and distribution at the top. During the accumulation pattern more informed and farsighted investors are accumulating by counting on better conditions nine to ten months ahead.

(d) Patterns also have relationships as indicated in sudden jump of prices due to a takeover bid or unanticipated change in commodity prices due to sharp moves.

(e) However, large price moves are normally preceded by large sideways consolidations trading ranges when the market trade with in a band as buyers reduce supply.

(f) Smaller sideways consolidations support only shorter rallies or falls and technicians have observed that the

market movements have a relationship to one another. This assumptions is important but is not a core belief.

6. Tools: The price chart converted to graph is central to technical analysis. It can be a bar chart or a swing chart or a figure. Finding a pattern and interpreting it is the critical factor. The price pattern should be accompanied by specific volume patterns for final decision. Prices, volumes, and other market data is to be manipulated in to various indicators that are mathematical constructs that are derivatives of price. Analysts should use indicators as a secondary tool to add value to basic chart analysis or to confirm price signals.

7. The indicators can be grouped in to three as :

   (i) Trend Following Indicators that trail the price action, smoothen out price fluctuations and are seen as a line. Moving average is an example and can be constructed be taking x number of days prices divided by the number of days. The deleting the first day and adding the last day's price gives the moving average for the next day

   (ii) Momentum oscillators that measure speed at which the price changes. They move above or below a mid point zero line. Some oscillators have upper or lower boundaries from 0 to 100 as +1 or -1 They are best applied to trading range

where prices are fluctuating in a band. The rate of change of a pricing advance tends to peak before the price itself. They are therefore leading or coincident indicators As the move gets underway the amount by which the price moves in each period will tend to increase driven by growing demand. As the move matures the amount by which the price will tend to increase will start decreasing

(iii) Indicators Dealing with Market Structure include tools such as

(a) Advance decline lines looks at the breadth and confidence of a market movement, at the bottom of the market investors tend to buy better known companies, but as the economy improves more companies participate in the rally. The longer a price advance extends, without broader market participation, the more fragile it is.

Here one needs to examine the number of advancing issues as compared to the number of declining issues. This method has been applied to stocks, bonds, and commodities sectors.

A strong market has many more advances than declines to continue the rally but before peaking the number of declines will tend to increase. This

is the advance decline line that peaks before the actual peak because the market discounts the business cycle.

Also certain leading sectors such as infrastructure and consumer goods will tend to peak out ahead of the market.

Also about 40 per cent of the stocks such as utilities and finance sectors are sensitive to interest rates because interest rates tend to rise late in the business cycle and therefore these stocks will be the first to start declining

Finally, the quality stocks will be the last to get sold in a bull market.

(b) Sentiment indicators

(c)contrary opinion,

(d) volume analysis cycles.

Hedge funds use complex technical analysis involving modeling and chaos theory.

Traditional commodity markets have used technical analysis for decades, and newer power and energy markets are now doing the same.

The golden age of technical analysis is ahead.