

IN THIS ISSUE : DOES SIGN MATTER MORE THAN SIZE? PROFESSOR SANKAR DE ON THE IRRATIONAL TRADING BEHAVIOUR OF INDIVIDUAL INVESTORS OF WEALTH CREATION AND DISTRIBUTION DR ROMESH WADHWANI ON HIS ENTREPRENEURIAL JOURNEY THE B-SCHOOL OF TOMORROW PROFESSOR ARUN PEREIRA ON THE CHANGING FACE OF MANAGEMENT EDUCATION



# INSIGHT

Volume 8 Issue 2

RS 250

The cover illustration features a blue bull, a symbol often associated with the stock market, set against a light blue grid background. A yellow line graph is overlaid on the bull's body, with a prominent yellow 'Y' symbol at its center. The text 'Insights from Behavioural Finance' is written in white on the right side of the bull's body.

Insights from  
Behavioural  
Finance



An architect's representation of the upcoming ISB campus at Mohali. The first class at the Mohali campus is scheduled to commence April 2012. Refer page 51 for more details.

# from the editor's desk

Dear Reader,

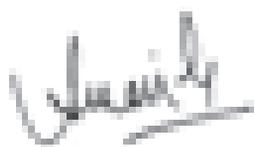
Economic theories traditionally have assumed that human beings always make 'rational' choices. An emerging stream of research, Behavioural Finance, views people as they really are - prone to making decisions based on emotions and gut feeling, than on reason alone. The cover stories in this issue are based on this area of research, which is still in its early stages of development. They provide some interesting insights into the investment decisions of both individuals and institutions, notwithstanding the contrary perspectives that the subject continues to draw.

In 'Leader Speak', we feature an interview with entrepreneur and philanthropist, Dr Romesh Wadhvani, who supported the creation of the ISB's first Centre of Excellence in the area of Entrepreneurship Development. Dr Wadhvani speaks about his journey of wealth creation and distribution, starting from the humble beginnings of a college canteen in IIT Mumbai. In other interviews, we caught up with Gowton Achaibar, MD of Ericsson India, and Professor Ariff Kachra of the Richard Ivey School of Business.

We recently organised a paper writing competition where we invited articles from the ISB student community on a few technology related themes. From a host of high quality entries, we are happy to present, the winning article on the Impact of Cloud Computing on the IT organisation structure within a business. In the feature article, 'The B-school of tomorrow', Professor Arun Pereira shares his perspective on the changing priorities in management education and how B-schools need to reinvent themselves for the future.

Finally, there is palpable excitement at the ISB as construction gets underway for our upcoming campus in Mohali, Punjab. The architect drawings of the Mohali campus show promise of recreating the splendour of the Hyderabad campus.

I hope you enjoy this issue as much as we enjoyed putting it together. As always, I look forward to your feedback. Please email me at [editor\\_insight@isb.edu](mailto:editor_insight@isb.edu)



Sriram Gopalakrishnan

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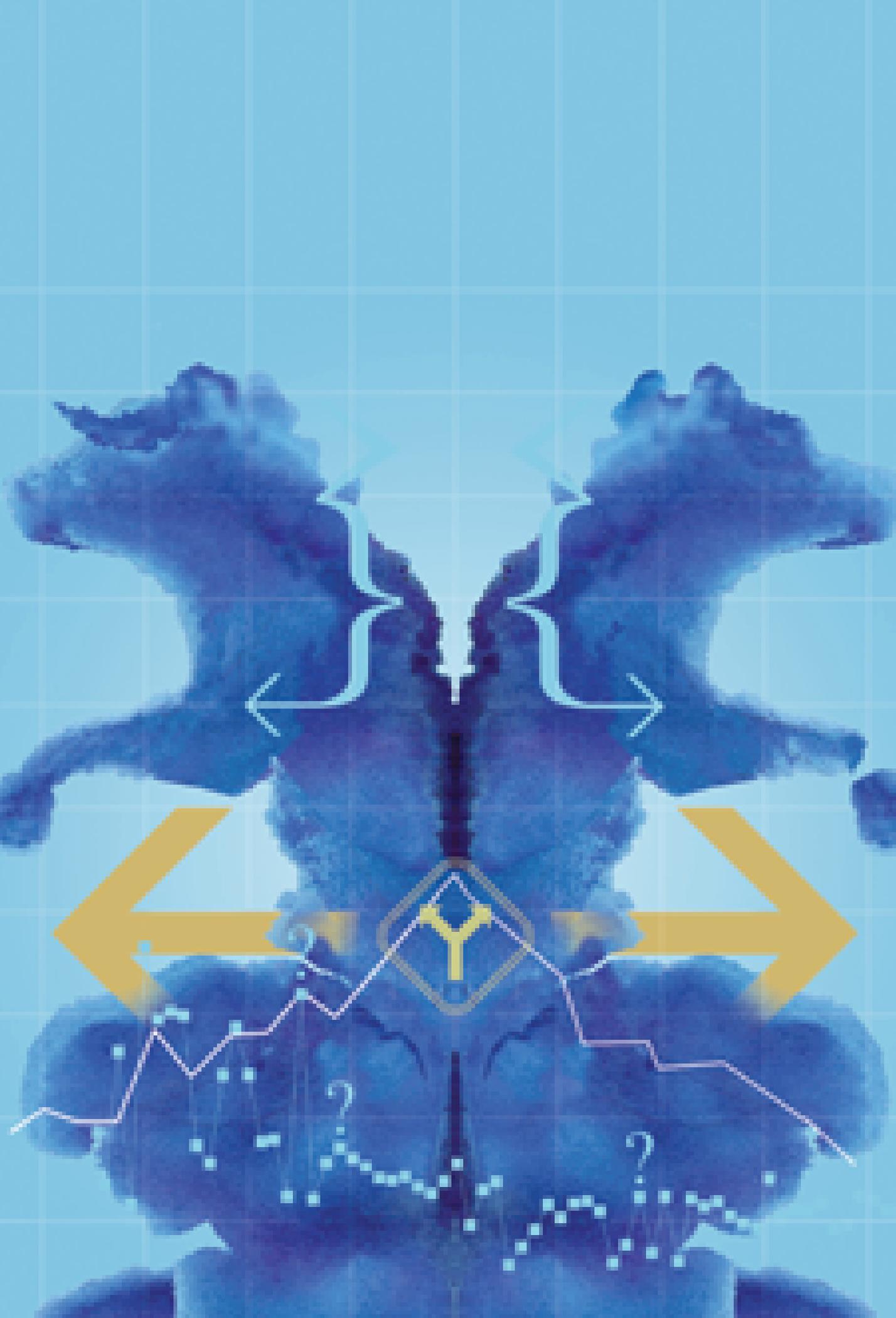
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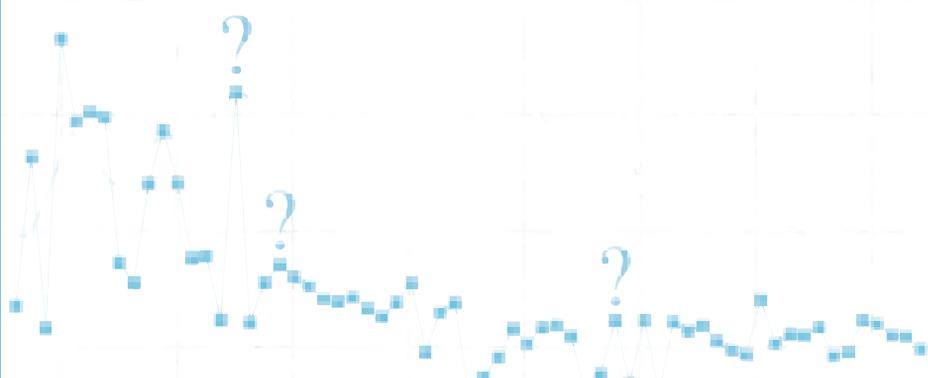
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# Explaining Individual Trading Behaviour

## Insights from Behavioural Finance

BY SUBRATA SARKAR

**By challenging the core assumptions of the efficient market hypothesis, behavioural finance explains individual trading behaviour through inherent “biases” in human beings. With its groundings in cognitive psychology, behavioural finance offers a fresh perspective; however, challenges remain before we accept it as an alternative paradigm.**

A remarkable feature of modern financial markets is the huge amount of trade that is carried out not only by institutions who have informational advantage in trading but also by individual investors who are likely to be less knowledgeable about financial markets. The efficient market hypothesis that has been the building block of traditional finance theory would suggest that there should be very little trade in financial markets as information gets quickly incorporated into prices leaving less opportunity for gainful trade among investors. Of course, a certain amount of trade is bound to happen for new information to get incorporated in stock prices. But with the recent developments in trading systems this process should be very quick. Judged in this context, both the intensity and the extensity of financial activity of individual investors seem to be far beyond what we expect from our traditional understanding of financial markets.

Behavioural finance offers insights and plausible explanations of why we can expect to see such behaviour on the part of investors. The efficient market hypothesis is built on the assumption that investors are fully rational, who quickly update their beliefs following the Bayes rule when they receive new information and that they maximise expected utility while making their choices with uncertain outcomes. Behavioural finance challenges both these building blocks of the efficient market hypothesis by arguing that investors often update their beliefs in a way which is influenced by various biases inherent

in human beings. Second, given such updating which often departs from the Bayes rule, investors may make choices which are inconsistent with the expected utility hypothesis. Both these ideas have their groundings in cognitive psychology which has documented certain traits of human behaviour when faced with choices with risky prospects or outcomes. Thus a new theory called the Prospect Theory and several documented biases in human behaviour forms the basis of behavioural finance (Barbaris and Thaler, 2003).

Both the intensity and the extensity of financial activity of individual investors seem to be far beyond what we expect from our traditional understanding of financial markets. Behavioural finance offers insights and plausible explanations of why we can expect to see such behaviour on the part of investors.

### The Prospect Theory

The prospect theory was proposed by two psychologists Kahneman and Tversky (1979) as an alternative to the expected utility theory for modelling decision making under risk. The expected utility theory that has its origin in the work of Von Neumann and Morgenstern (1944) is a normative theory of how individuals should behave while choosing between risky gambles assuming that their preferences satisfy a number of assumptions. In contrast, the prospect theory is a descriptive theory of how individuals actually behave while choosing between risky outcomes as documented in a large number of experiments in cognitive psychology.

There are four fundamental differences between the expected utility theory and the prospect theory. First, under prospect theory people, while assessing risky gambles, look not at the levels of final wealth they can attain but at the gains and losses emanating from such gambles. Second, gains and losses are measured with respect to a reference point which could be different for different individuals for the same risky gamble or different in different situations for the same individual. Third, probabilities are replaced by decision weights. And finally, decisions are made based on value of gains and losses and not on expected utility. The value function is normally concave for gains and convex for losses and is generally steeper for losses than for gains. Decision weights are generally lower than the corresponding probabilities, except in the range of low probabilities. A typical value function and a decision weights function under the prospect theory is given in the following figure:

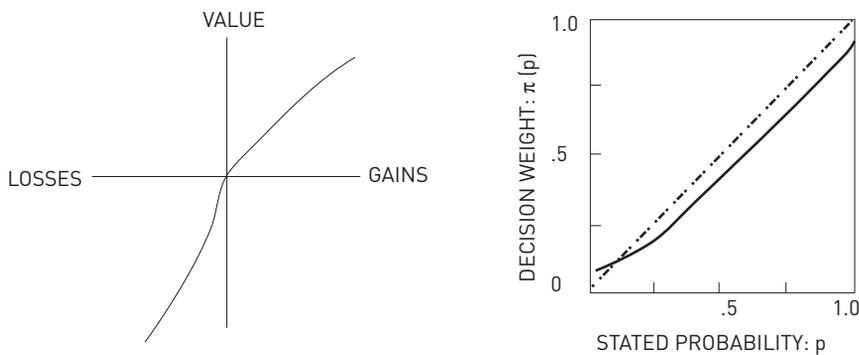
implies that equal-magnitude gains and losses have asymmetric impacts on the decision -- losses hurt more than gains give pleasure. Finally, the fact that the value function is derived based on gains and losses rather than on the final wealth position implies that investors will tend to view each gamble separately in a collection of gambles and end up making choices which might seem inconsistent in the aggregate.

### Influence of “Biases” on Trading Behaviour

While the prospect theory provides an analytical framework of understanding those behaviours of individuals that systematically deviate from the presumption of the expected utility hypothesis, there are other behaviours of investors that are driven by biases which do not yield themselves to easy analytical modelling. Nevertheless these biases influence human behaviour in risky situations. Some of the most important biases that have been documented in experimental settings and that have large implications on trading behaviour of investors are (i) overconfidence (ii) confirmatory bias (iii) conservatism, and (iv) representative heuristics.

Psychologists have convincingly demonstrated that people are often overconfident in their judgments which make them underestimate the risk of uncertain outcomes. Overconfidence comes partly from confirmatory bias where individuals tend to look for those characteristics in a risky outcome that confirms one’s existing beliefs and ignore those characteristics that contradict them. Closely related to confirmatory bias is conservatism where investors feel reluctant to update their current beliefs in the face of new

Figure 2: Kahneman and Tversky’s (1979) proposed value function  $v$  and probability weighting function  $\pi$



The shape and curvature of the value function under the prospect theory implies that people will be risk averse when choosing between gains and risk seeking when choosing between losses. The fact that the value function is steeper for losses than for gains

information. This leads to a much slower adjustment of their behaviour than warranted under the Bayes rule. Closely associated with overconfidence is representative heuristics which refers to the tendency of people to judge the probability of an uncertain

outcome by looking at patterns present in a sample without paying sufficient attention to probability of the pattern i.e. the sample, repeating itself. Such representative heuristics can explain why individual investors may give too much importance to the patterns observed in the current behaviour of stock prices while predicting future movements and then find their actions to be incorrect.

So how do the prospect theory and the documented biases help in explaining trading behaviour of individuals which seems otherwise inconsistent with the expected utility hypotheses? Empirical studies that analyse trading behaviour based on micro-level databases containing trading records of large number of investors in a wide variety of stocks provide convincing evidence that the prospect theory and the various biases are indeed at work. The first observation is that of excessive trading behaviour. As

who, using trading data for 1991-96 from a national discount brokerage firm in the US, show that people who trade more, as they are likely to do when they are overconfident, earn the lowest average return. In a subsequent paper, Barber and Odean (2001) using the same dataset and exploiting the evidence that men are more likely to be overconfident than women in areas such as finance, show that men on an average trade 45 percent more than women, which reduces their net return by 2.66 percentage points per year compared to 1.72 percentage points per year for women.

The second observation documented in the financial markets is the disposition effect, the tendency of the investors to sell the winning stocks too early and to hang on to the losing stocks for much longer (Shefrin and Statman, 1985). Barber et al. (2009) using the dataset from Taiwan referred to above, find that investors are twice as likely to sell a

Empirical studies that analyse trading behaviour based on micro-level databases containing trading records of large number of investors in a wide variety of stocks provide convincing evidence that the prospect theory and the various biases are indeed at work.

noted earlier, the efficient market hypothesis would tend to predict very little trading to happen which seems inconsistent with observed facts. However, overconfidence provides an immediate explanation of such excessive trading as investors tend to overestimate their ability of forecasting uncertain events and trade much more than otherwise warranted.

That these trades are driven by overconfidence rather than by rational motives comes from the fact that investors lose money on these trades, sometimes even before transaction costs. In one such study, Barber et al. (2009) who examine the trading activity in Taiwan from 1995-99 using the complete transaction records of the Taiwan Exchange find that the aggregate portfolio of individuals suffers an annual performance penalty of 3.8 percentage points which amounts, in aggregate, to 2.8 percentage points loss of their total personal income. Using data on the order book, they find that the losses incurred by individuals can be traced to their aggressive orders. In contrast, portfolios of institutional investors show an annual gain of 1.5 percentage points. Similar evidence of overconfidence comes from the study by Barber and Odean (2000)

winning stock compared to a stock that has lost value in reference to its purchase price. They find that 84 percent of all investors sell winners at a faster rate than losers. In contrast to individuals who are reluctant to realise their losses, they find that mutual funds and foreign investors do not display any disposition effect. The disposition effect has been found by many other studies using datasets from different countries (Odean, 1998; Grinblatt and Keloharju, 2001) and is one of the most convincingly demonstrated phenomena relating to individual trading behaviour in financial markets. An explanation of the disposition effect comes from the prospect theory which documents the tendency of investors to gamble with losses and be conservative with respect to their gains. Confirmation bias which shows reluctance of investors to update their prior held beliefs can also contribute to the disposition effect. This tendency of investors to postpone the realisation of their losses is aptly



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One criticism against behavioural finance is that it allows too much degree of freedom to the modeller as he can explain almost everything by resorting to new “biases” from psychology to justify any new empirical results.

summarised by Barber et al. (2009) who observe that “investors who buy and sell individual securities have little or no ability to distinguish future winners and losers. They do, however, have the ability to put off the day of reckoning. The typical and the aggregate investor postpone selling losing investments because they, like the rest of us, hate to admit their mistakes.”

Apart from overconfidence and the disposition effect, empirical studies have documented many other biases in individual trading behaviour. Using a comprehensive dataset of all Finnish investors between December 1994 and January 1997, Grinblatt and Keloharju (2001) demonstrate that past returns and historical price patterns such as being at a monthly high or low influence individual trading behaviour. Their study also discovers that foreign investors and mutual funds that are likely to be more sophisticated are much less likely to use past returns to determine their trading behaviour compared to individual investors who are likely to be less sophisticated. They also find that individual investors tend to be contrarian compared to foreign investors who are momentum. Such predictable patterns in investor trading behaviour are inconsistent with the efficient market hypothesis. In general, empirical studies tend to support the finding that individual investors as a category seem to suffer losses from trading activities while institutional investors seem to gain on an average. By implication then, there is wealth transfer from individuals to institutional investors. However, direct and convincing evidence of such transfers is yet to be obtained in empirical studies largely due to the lack of appropriate details on counterparties in trading data used by most empirical studies.

## Empirics to Theory: Some Challenges

Notwithstanding the progress made by behavioural finance in explaining individual trading behaviour, many challenges remain. Behavioural finance is built mostly around empirical work. To be accepted as an alternative framework of explaining human behaviour with resulting implications on the workings of financial markets, the various biases and their transmission into asset prices have to be modelled theoretically with definitive predictions that are consistent with the observed empirical regularities. One criticism against behavioural finance is that it allows too much degree of freedom to the modeller as he can explain almost everything by resorting to new “biases” from psychology to justify any new empirical results. Also, till date, empirical documentation of trading behaviour has come mostly from developed financial markets where investors may be more sophisticated with higher learning abilities. There is a need to get evidence from other countries, notably emerging economies, especially because financial integration suggests that there could be important contagion effects from these economies to the workings of financial markets in developed economies. The efficient market hypothesis has proceeded from theory to empirics. Behavioural finance on the other hand, is proceeding from empirics to theory. At the end perhaps the true model lies somewhere between a normative theory of human actions suitably modified by a descriptive theory of human rationality.

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# Does Sign Matter More than Size?

## A Behavioural Explanation for Individual Investor Performance

BY SANKAR DE

This article looks at the motivations behind the trading activities of individual investors. The author's research documents trading patterns that conflict with the "rationality" assumption in conventional economic models, and draws on experimental psychology to explain the findings.

Individual investors are those who trade in stocks and other securities for their personal portfolios, as opposed to institutional investors, such as mutual funds, insurance companies, and pension funds who trade through their corporate portfolios. In all the stock markets in the world that the researchers have the data to analyse trading behaviour of different categories of investors, individual investors as a category exhibit certain strong patterns in their trading activities. First, they are typically the biggest players in the market. In India, for example, based on authenticated data, individual investors account for not only a larger number of investors (account-holders) and a larger number of trades, but also a larger volume of trades in rupees (or dollars) than all other categories of investors, including institutional investors. Second, ironically, they almost consistently lose to other categories of investors, especially the institutional investors. Why do they not learn from their poor records and slow down their trading activities, if not stop them altogether? "Rational" reasons cannot explain their trading behaviour. However, this behaviour has tremendous implications for the brokerage houses who execute the trades placed by individual investors, the stock exchanges where the trades happen and which are, consequently, responsible for keeping the markets smooth and orderly, and the regulatory authorities who are

charged with the task of protecting the investors from stock price manipulations and frauds.

To get a feel for the size of trading activities of individual investors, let us consider the following table.

Category	Percentage of investors	Percentage of trades	Percentage of volume
Individual investors	98.48	55.56	37.99
Non-financial Corporations	0.96	32.22	30.54
Domestic financial institutions	0.42	3.65	8.78
Foreign institutional investors	0.13	8.44	22.50
Others	0.004	0.14	0.19
<b>Total Percentage</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Total in absolute value</b>	<b>1,338,139</b>	<b>199,771,151</b>	<b>\$223.61 Billion</b>

Source: National Stock Exchange, India

The table includes all transactions during January-June 2006 in the 50 stocks that constitute the S&P CNX Nifty index. S&P CNX Nifty is a well-diversified stock index covering a broad spectrum of the Indian economy. Nifty stocks represent about 60

percent of the total market capitalisation of all stocks registered with the National Stock Exchange (NSE). The individual investors accounted for 98 percent of all account-holders, 56 percent of all transactions, and 38 percent of the total value of the trades, far eclipsing all other investor groups in each of the three dimensions. At the same time, our data also indicates that individual investors as a category lost \$2.31 billion to other investor groups during this period. About 70 percent of them lost individually.

### What Influences Trading Decisions?

Recently, a growing field of research in finance has been examining actual market behaviour of individual investors with a view to documenting and understanding how cognitive biases of various kinds influence their portfolio decisions (see the article by Subrata Sarkar in this issue of ISBInsight). Currently, I am working with researchers at the Centre for

a \$500 profit and another a \$5,000 profit, the next trade of an individual investor is influenced more by the fact that the outcome in each case was profitable than by the fact that the outcome was considerably larger in the second case. We find a similar result for unprofitable trades with different magnitudes of loss.

We also find that, on an average, trading under the influence of the sign of past trades consistently reduces profits for the investors. This result is not surprising. If the traders do not pay much attention to the size of their monetary gains and losses, they are not likely to do very well financially.

The trading decisions that we consider include not only volume but also frequency of trades by individual investors. We find that both decisions reflect the behavioural pattern in question. The individual investors with successful past trades not only want to place larger trades the next time, but also trade more frequently, regardless of the size of gains.

Individual investors almost consistently lose to other categories of investors, especially the institutional investors. Why do they not learn from their poor records and slow down their trading activities, if not stop them altogether? “Rational” reasons cannot explain their trading behaviour.

Analytical Finance (CAF) at ISB on several projects in this area. The objective of one of the projects is to determine what motivates individual investors to trade. In this project, we use data supplied by the NSE.

The NSE has become one of the biggest exchanges in the world. It generated the third largest number of trades among all exchanges in the world, and the largest number among all electronic order-book markets in 2006 and in 2008, the last year for which this information is available. By volume, its position was 18th among all exchanges in both years. The preliminary results of our research contribute interesting insights to this area of research. We find that the sign of the outcomes of recent stock trades, where a positive sign indicates a profitable trade and a negative sign an unprofitable trade, strongly influences the current trading decisions of investors. Further, the influence of the sign of past trades is significantly stronger than the size of the gains or losses from the same trades. For example, following a trade yielding

We observe an opposite pattern for the investors who have experienced losses.

The effects of the sign of the past outcomes on current trading decisions are not only statistically significant but also economically large. The current trading volume is 7.7 percent more for the winners in recent past trades than for the losers, after controlling for the size of the respective gains and losses. Further, the frequency of trading is 6.3 percent more for a winner than for a loser. On the other hand, profit from current trades is almost 60 percent less for the past winners than for the losers. We verify our results by employing a variety of econometric techniques. As a final verification, we use a procedure suggested by an eminent econometrician, W. Kruskal, in a study published in *The American Statistician* in 1987. The procedure estimates the relative importance of different explanatory variables in a regression model. We find that, while outcomes of past trades on an average explain about 23 percent of the variation in the current trading volume of the individual investors

after controlling for all other relevant variables, the sign of the past outcomes accounts for about three-fourths of this variation while size accounts for less than one-fourth. Our results for the trading frequency of the individual investors are even stronger. The sign of the past outcomes explains about 89 percent of the variation in the trading frequency.

If maximisation of personal gains is a rational objective for all economic agents, as is commonly assumed in conventional economic models, the trading behaviour that our research has documented does not appear to be rational. We go outside the ambit of conventional economics and look for a plausible non-rational explanation. Indeed, our results are consistent with the findings of a stream of recent research in experimental psychology pioneered by Christopher Hsee (University of Chicago) and Yuval Rottenstreich (Duke University). Their research examines the relationship between the magnitude of a stimulus and its value to the subjects receiving the stimulus, and considers two distinct processes to arrive at the relationship (see Hsee and Rottenstreich, 2004; Hsee, Rottenstreich and Xiao, 2005). One of them is deliberate, rule-based, and can be even algorithmic. In its deliberateness, it can approach rational decision-making behaviour in traditional economic models. The other process is associative and affect-based. It is an essentially subjective process. Hsee and Rottenstreich characterise the two processes as value by calculation and value by feeling. The two processes are not necessarily mutually exclusive. In a given case, the two can be combined to yield a concave value function of the kind common in economic analysis where constant increments of the size of an outcome yield successively smaller increments of value of the outcome for the subjects. When feeling predominates, it can induce extreme concavity of the value function, implying extreme size-insensitivity. This theory accounts for an amply documented finding in experimental psychology that people become less sensitive to the magnitude of a stimulus as the magnitude increases.

In our study, our findings, based on actual trading data rather than experimental evidence, lead to a similar conclusion. In our setting, sign of the outcome of a trade induces feeling in the investor. A positive outcome generates euphoria, while a negative outcome generates dejection. As size of the outcome increases, the feeling becomes stronger and the size less important in the investor's evaluation of the outcome.

We also consider several alternative rational explanations for our findings, including trading by investors who are learning about their true investing skills and private information of investors. We find that they do not explain our results. Suppose that individual investors who have had profitable trades in the past (sign positive) think that they have greater skill at stock-picking than others who have experienced losses. Therefore, in their thinking, it is rational for them to increase their trading volume. Those who have experienced losses may behave in an exactly opposite manner. In other words, the observed positive association between past outcomes and current trading decisions may be driven by the investors' learning about their respective investment skills. However, if profitability of past trades is an indicator of superior investing skills, and if losses indicate inferior skills, then we should expect to see persistence in portfolio returns of investors over time. In other words, high (low) portfolio performance in the past should predict high (low) performance in the current trades. However, our results indicate an exactly opposite pattern. Past outcomes as well as

We find that the sign of the outcomes of recent stock trades, where a positive sign indicates a profitable trade and a negative sign an unprofitable trade, influences the current trading decisions of investors strongly.

the sign of past outcomes are associated negatively with current profits. Hence, investors' learning about their investment skills cannot be an explanation for the observed investor behaviour.

The investors who have private information are likely to have better investment performance and trade more actively than others. Unlike institutional investors, the number of informed individual investors is likely to be quite small. Nevertheless, we investigate this possibility. As a measure of the investment



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A positive outcome generates euphoria, while a negative outcome generates dejection. As size of the outcome increases, the feeling becomes stronger and the size less important in the investor's evaluation of the outcome.

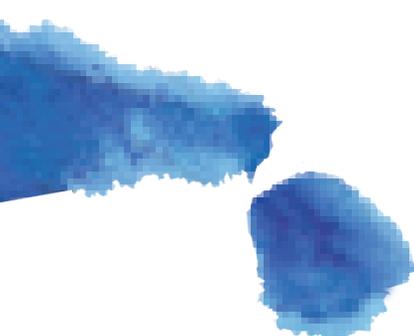
performance of an investor in our sample, we aggregate the profits on all the trades made by the investor over the entire sample period. Private information hypothesis suggests that the most successful investors will exhibit the strongest association between past

returns and current trading, while the least successful investors will show the weakest association. However, our tests indicate a precisely opposite pattern, refuting the hypothesis.

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# Irrational Minds and Corporate Decision Making

BY SUDIP GUPTA

This article looks at how decision making in an uncertain world is influenced by the “biases” of individual investors, which can lead to stock mispricing. Rational corporate managers exploit this by timing their financial and investment decisions. Sometimes the managers are also affected by such ‘irrational’ biases which lead to ‘hubris’

The task of a corporate manager in this complex globalised world is cut out: he has to decide about the capital structure of the firm, manage the cash flow and announce dividends, decide the pricing policy and look out for new avenues of growth through mergers and acquisitions (M&As). He has to form beliefs about how the real world uncertainty is going to pan out and how that is going to affect his and other people’s payoff. He carries a complex workbook which instructs him what to do and when to act in the face of such uncertainties. Alas, little does he know that the people he is going to face in the real world behave much differently than what is mandated in the workbook. There is a devil in the “minds” of the people he is dealing with, and that devil sometimes lies within himself -- which may make the prescribed textbook policies ineffective.

All major textbooks in corporate finance prescribe policies which are based on a major assumption: the economic agents in the world are “rational”; they update their belief about the uncertain future in a very special “Bayesian” way; they treat profit and loss similarly. However, it has been long documented in psychology literature that human beings behave a little differently in the real world and have some “biases” while making decisions under uncertain conditions. Such biases can be categorised into two broad groups: one that affects the belief formation, and the other that affects the expected payoff function. Both of these would in turn impact decision making in an uncertain world.

## Biases, Mispricing and Limits to Correction

Belief formation biases are broadly the following: overconfidence, where an individual places too much weight on his abilities and it grows with more experience; representativeness and sample size neglect biases treat recent past performances as a general phenomenon. Loss aversion is a major bias related to payoff function of people about how they think different possibilities would affect them. When faced with similar win-loss situations, people would prefer to avoid losses and uncertainties more than what is prescribed by a “rational” framework of decision making. All of these would affect decision making and hence risk-taking in an uncertain world. For example, if individual investors look at recent past performances in their buying and selling decisions of stocks and/or are overconfident in their deduction abilities then they may mistakenly attribute certain luck factors

It has been long documented in psychology literature that human beings behave a little differently in the real world and have some “biases” while making decisions under uncertain conditions.

to the stock's fundamental value and either over or undervalue a stock relative to its correct price. Their buying and selling decision would in turn make the stock's current price different from its fundamentals and result in mispricing. If investors prefer familiar stocks in their buying decisions to avoid being in unfamiliar situations then they would neglect certain stocks which may be equally good or even better than the ones they choose. These types of decisions would also create mispricing where one set of stocks would be undervalued relative to their fundamentals just because they are not "familiar".

But can't the so called "rational" people correct the mispricing resulting from the irrational behaviour in the market by arbitraging? They surely do in a textbook. For example, if a group of people mistakenly believes that the price of stock of company A is lower than its fundamental price and brings down the price by excessive selling, then rational arbitrageurs would jump in. They would buy the shares of company A at

their position before they can realize the profits. All of these lead to additional risks, which may deter the correction process and the mispricing would persist. Thus in the real world the limits to arbitraging may make mispricing persist even for a reasonably long period. A rational corporate manager thus may have to take a decision knowing well that he is taking a decision when there is persistent mispricing and his decision may very well add to the mispricing.

## Benefiting from Mispricing: Timing Decisions

But what if the manager can identify a mispricing? After all he is in charge and may have a better idea of what a fundamental value should be. Should he sit idle when he notices persistent mispricing and wait for the market to correct itself or should he act to take advantage of this mispricing? If the manager is rational and acts on behalf of the shareholders, then he should time his financial and real investment decisions well to

The more experienced one is in his own domain, the more he starts believing in his abilities, and after a threshold that belief turns out to be misplaced - prompting him to take a wrong decision.

a bargain price; hedge the relevant risk of going long on stock A by shorting shares of a similar company which are not experiencing this pressure. This would eventually push up the demand for stock A and hence bring the price back to the fundamental. The rational arbitrageur would make a riskless profit from this buy-sell and correct the market. So the managers of a firm need not worry about the irrational people, at least in the textbook.

However, in the real world this correction process is limited in several ways: first, the mispricing opportunity is very difficult to identify; and second, even if it can be identified there may not be enough shares of other related companies available to hedge and hence some risk of going long on stock A remains. Further, if the mispricing worsens even in the short run due to more selling pressure of irrational people, the arbitrageurs would need to put in additional collateral due to the presence of all the margin and regulatory requirements to stay put in

take advantage of the situation. But how? In a recent anonymous survey<sup>1</sup> of CFOs of public companies, two-thirds of the CFOs state that "the amount by which our stock is undervalued or overvalued was an important or very important consideration" in issuing equity. Thus rational managers would issue new equity when there is a higher chance that the market is overvalued as that would fetch higher proceeds from equity issuance. But how can one test the hypothesis that a rational manager "times" the market to take advantage of mispricing? One measure of overvaluation is the market to book ratio of seasoned firms. It has been found<sup>2</sup> that this is the most important determinant of IPO decisions and IPO volumes, which is suggestive that rational managers do act to "time" their decisions better to take advantage of mispricing opportunities. If the manager is timing the IPO decision to take advantage of the overvaluation then it should also be true that since the issues were bought (and sold) at an overvalued price, it should lead to lower long-term return relative to its size matched control firm. This figure turned out to be about 30 percent<sup>3</sup> for US IPOs. The flip side of the above argument should



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A rational corporate manager thus may have to take a decision knowing well that he is taking a decision when there is persistent mispricing and his decision may very well add to the mispricing.

work for undervalued security when managers “time” their repurchases. It has been found that the average repurchaser earned about 12 percent more than firms of similar size and book to market ratios<sup>4</sup>.

Mispricing also affects the real investment decisions of buying capital goods. If the market overestimates the value of any particular investment the rational manager may want to take it up despite the fact that it may lead to overinvestment and result in a bubble. Evidence is consistent with this prediction as it has been found that besides the marginal productivity of capital, real investment decision is also sensitive to stock prices.

On the other hand, a financially constrained firm may be forced to pass on investment opportunities if it is undervalued. Thus an equity-dependent firm would be even more sensitive to stock prices when making real investment decisions<sup>5</sup>.

Mispricing would affect the decision to undertake M&As too. Managers of an overvalued firm would like to acquire a less overvalued firm with overpriced stocks so that the long term shareholders have more hard assets per stock<sup>6</sup>.

### Irrational Managers: Hubris

But what happens if the manager himself is affected by such irrational biases? One bias prominently stands out: managerial overconfidence. The more experienced one is in his own domain, the more he starts believing in his abilities, and after a threshold that belief turns out to be misplaced - prompting him to take a wrong decision. An overconfident manager would put more weight than the actual marginal value

creation of a specific investment project beyond what would be deemed necessary based on his level of overconfidence. Of course, it is difficult to identify who is affected by managerial overconfidence. A proxy for managerial optimism would be the in-the-money stock options that managers hold in their own firm. Note that since the manager is employed in his own venture, his human capital is highly associated with the risk associated with the firm. So given a chance, the manager should try to disown in-the-money options in the firm to diversify that risk. Higher the optimism that he has in his own abilities, more the likelihood that he is going to hold these options. But when such a manager sets out to make an M&A deal, it is more likely that he is attaching too much weight to his own abilities to make the merger work. It would be more likely that he would set out to complete more merger deals and rational investors in the market would be more skeptical about such announcements<sup>7</sup>.

It therefore appears that the ‘irrational minds’ may have a long lasting impact on the market which may be hard for the arbitrageurs to correct due to the presence of various limits to arbitraging. The rational minds of the market are aware of such inherent frictions and make corporate decisions accordingly.

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# Consumer Behaviour in Financial Markets: Financial Crisis and Policy Implications

BY SUMIT AGARWAL

**Are some consumers particularly likely to make financial mistakes? Do they learn from this experience? What role do financial education and counselling programmes play in improving consumers' ability to make sound financial decisions? The author presents some interesting findings from his research on these issues.**

In light of the recent meltdown in the subprime mortgage market and the subsequent financial crisis of 2007-2008, there is a growing concern that consumers are ill-prepared to make sound decisions in an increasingly complex financial environment. Numerous examples come to mind – social security privatisation, under-participation in the 401K plans (a defined contribution employee benefits plan that allows tax-deferred retirement savings), lack of sufficient portfolio diversification, choosing the right mortgage (Adjustable Rate Mortgage/Fixed Rate Mortgage),

40 percent of consumers made a mistake in choosing the optimal credit contract. For a small minority of the consumers, these mistakes cost them hundreds of dollars in excess interest payments. The good news is that over time consumers learn from their mistakes and the larger the costs, the more likely consumers will correct their mistakes.

subprime mortgages, and optimal refinancing timing. Let me focus on one particular example. Bank One advertised that it had 3000 different types of credit cards with varying interest rates, fee rates, and reward options - travel, auto, gas, and hotel rewards. To choose the right card that best suits a consumer's needs seems like a daunting task.

Hence, some people argue that in this complex environment, consumers make incorrect financial decisions that ultimately lead them to incur high interest and fee payments. Others, however, argue that financial intermediaries are extracting excess rents from their customers. Most agree that consumers need education in financial planning and financial literacy. To provide further insights on these issues, this article will summarise some of my research on consumer behaviour in financial markets, and provide policy recommendations for the future, especially in light of the financial crisis.

Specifically, I will investigate questions such as: (i) Do consumers make mistakes in choosing credit contracts? (ii) If yes, do they learn from their mistakes? (iii) Do financial mistakes vary by age? Is financial decision making related to cognitive abilities? Does financial counselling and education help them make better financial decisions?

## Financial Mistakes: Consumer Profile

Looking at consumers' choice between two credit contracts, one with an annual fee but a lower interest

rate and the other with no annual fee but a higher interest rate, Agarwal, Chomsisengphet, Liu and Souleles (2006) find that 40 percent of consumers made a mistake in choosing the optimal credit contract. For a small minority of the consumers, these mistakes cost them hundreds of dollars in excess interest payments. The good news is that over time consumers learn from their mistakes and the larger the costs, the more likely consumers will correct their mistakes.

Next, studying late payments, credit limit payments, and cash advance fees of credit card borrowers, Agarwal, Driscoll, Gabaix, and Laibson (2008) show that over a four-year period, credit card fees payments dropped by 75 percent. However, we also find that consumers' hard-earned knowledge does not persist, and overtime consumers tend to forget about the fee payments. These results suggest that experience produces learning, but only when the feedback is recent.

In an attempt to understand as to who makes these mistakes, Agarwal, Driscoll, Gabaix, and Laibson (2009) find that younger and older borrowers are more prone to making financial mistakes. We find that the age at which consumers are least likely to make financial mistakes (which we describe as the

higher math and verbal language scores are less likely to make balance transfer and home prices estimation mistakes.

### Impact of Counselling: Mixed Evidence

If financial illiteracy drives suboptimal (or welfare-reducing) financial behaviour, then improving literacy could increase consumer welfare. A growing literature investigates whether financial education programmes are effective in improving financial literacy and financial behaviour. Though the evidence is mixed, it appears that some financial education programmes do improve the behaviour and outcomes of their graduates. The effects appear to be strongest for the most financially vulnerable, especially those with low incomes and levels of education. However, the relationships among financial education, financial literacy, and financial behaviour and outcomes are not straightforward. Some financial education programmes improve financial literacy, but not financial behaviour; others lead to improved behaviour and outcomes without improving financial literacy; and still others do not appear to be effective at all.

Agarwal, Amromin, Ben-David, Chomsisengphet and Evanoff (2009) find little evidence that a state-mandated pre-mortgage counselling programme for

We find that the age at which consumers are least likely to make financial mistakes [which we describe as the “Age of Reason”] is around their 53rd birthday. The findings were consistent across an array of credit instruments.

“Age of Reason”) is around their 53rd birthday. The findings were consistent across an array of credit instruments - three kinds of credit card fee payments, credit card interest payments, and interest rates on credit cards, mortgages, auto loans, home equity loans and credit lines, and small business. We hypothesised that this may be a consequence of the trade-off between “experiential capital” and “analytical capital” (cognitive ability). The young have high analytical capital, but little experience. The old have substantial experience, but declining analytical capital. To further study this issue in detail, Agarwal and Mazumder (2010) directly link the cognitive ability measures as represented in the Armed Forces Qualification Test (AFQT) scores and consumers' ability to make financial decisions. We find that consumers who have

high-risk borrowers in select Chicago zip codes led to better mortgage choices. However, their study shows how a financial education programme can affect outcomes without necessarily improving literacy. The authors find a significant drop in default rates of mortgages originating in the treated zip codes during the period of mandatory counselling. However, this drop appears to occur because the riskiest lenders and borrowers left the market, not because the remaining borrowers chose better mortgage products. The threat to lenders of increased oversight and potential fraud detection, as well as the perceived cost to borrowers of attending counselling sessions, dramatically reduced both the supply and demand for credit. Borrowers who were able to choose less risky products to avoid counselling did so, and lenders rejected far more loan

applications and originated fewer low-documentation loans during the treatment period (activity resumed to normal levels when the programme ended). While some borrowers followed the advice provided by counsellors, many modified their loans in ways that were contrary to counsellor recommendations, and others took out loans they had been told they could not afford. In aggregate, the counselling programme did not appear to materially improve loan outcomes for individuals who stayed in the market.

Mortgage and credit counselling programmes often include services apart from financial education, such as client advocacy and proactive intervention, which make the effects of financial education difficult to disentangle. One such programme is the Indianapolis Neighbourhood Housing Partnership (INHP), a voluntary mortgage counselling programme evaluated by Agarwal, Amromin, Ben-David, Chomsisengphet and Evanoff (2010a). The study finds that, controlling for loan characteristics, borrowers who participated in INHP, some of whom had mortgages originated and serviced by INHP itself, had significantly lower default rates 12 and 18 months after origination. This result is robust to several econometric specifications and to a matched propensity score model. However, while it is clear that INHP's services improved outcomes, it is not clear how much of the effect was due to better

level is the same as in Netherlands but 20 percent higher compared to the USA. Indians use about 38 percent of monthly income to cover monthly expenses –they save or invest 62 percent of their salary on average.

### Risk Preferences among Consumers

We also observe that there are significant variations across demographic groups. Looking at risk tolerance by gender we see that men tend to be more oriented toward risk than females with 30 percent of males being categorised as aggressive growth compared to only 8.7 percent of females. This is mirrored on the conservative returns side with 17 percent of males being conservative compared to 38 percent of females. The women in the sample also appear to have more education, with 68 percent of women having more than a graduate education and only 50 percent of men having a similar degree. Contrasting salary with risk and education levels, we see that higher income individuals tend to be more educated and seek aggressive growth portfolios. Looking at family size, there does not appear to be a strong correlation between education and number of dependents. However, looking at risk profiles we see that lower risk planners tend to have smaller families. The average number of dependents for low risk planners is 1.45 as

A vast majority of the respondents in India appear to be financially literate – they answer the numeracy, inflation, and diversification questions correctly. The Indian financial literacy level is the same as in Netherlands but 20 percent higher compared to the USA.



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loan terms, how much due to INHP's proactive interventions when loans became delinquent, and how much due to improved financial management on the part of borrowers.

Finally, Agarwal, Amromin, Ben-David, Chomsisengphet and Evanoff (2010b) look at financial literacy in India and find that a vast majority of the respondents appear to be financially literate – they answer the numeracy, inflation, and diversification questions correctly. The Indian financial literacy

opposed to 1.27 for aggressive planners. Combining information about goals, investments, liabilities and insurance policies we can discern some patterns in the data. As the number of goals increases, we find an increase in the number of financial instruments, i.e., an increase in the number of investments, liabilities and insurance policies, with investments showing the largest increase as the number of goals increase. Looking at the distribution of products as a function of the number of investments also yields interesting results. We find that aggressive growth individuals tend to have more insurance policies. This increase seems to be correlated with the increase in the number of

investments, suggesting that the insurance policies may not be as conservative as they initially appear.

The research has enormous implications for consumers' selection of mortgage products (e.g., adjustable rate versus fixed rate mortgages), mortgage refinancing, no-need-to-decide-anything pension and retiree health care plans, and 401K retirement-savings plans that require financial sophistication.

In this article, I have summarised my research that shows that some consumers make financial

mistakes but they tend to learn from their mistakes. However, some consumers (old and the young) are more prone to making financial mistakes and these mistakes are also correlated with cognitive abilities. I have also looked at the role of financial counselling and education and find mixed evidence. We need continuing research in this extremely important area and specifically, look at Indian consumers and compare and contrast their behaviour to behaviour around the world.

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# Of Wealth Creation and Distribution: An Entrepreneurial Journey

Krishna Tanuku, Executive Director, Wadhvani Centre for Entrepreneurship Development (WCED) at the Indian School of Business (ISB) talks to Romesh Wadhvani, Founder and Managing Partner, Symphony Technology Group (STG) about his journey as an entrepreneur, challenges of entrepreneurship in India, and his initiatives to drive innovation. Wadhvani is also the Chairman of the Wadhvani Foundation, a not-for-profit organisation.

**Krishna Tanuku:** Let me start by asking you about your entrepreneurial journey - right from the canteen cooperative you started at IIT to your strategic private equity firm - Symphony. How has the journey been?

**Romesh Wadhvani:** I did not start life as an entrepreneur - I do not come from a business family.

When you think of entrepreneurship at its most fundamental level, it is about identifying a market need, coming up with a creative and differentiated way to serve that need, having a reasonable business model to translate that fulfilment into a successful business and then ensuring that the business sustains and grows over time. In this context, my journey as an entrepreneur started in 1965. At IIT Bombay, we had to walk a mile to reach our hostel after a long day in the main campus and then wait for hours without snacks

The canteen [that I started at IIT] turned out to be a gigantic success. But a few felt that unseemly profits were being made in the canteen corporation. The idea of a capitalistic economy was not widely accepted then.

or drinks before a rather mediocre dinner would be served. So it was no big stretch of the imagination to see the need for a canteen. I led a team of ten people. We had a markup and the canteen turned out to be a gigantic success. But a few felt that unseemly profits were being made in the canteen corporation. The idea of a capitalistic economy was not widely accepted then. We used to have student leadership elections in each hostel annually. One of the students who said he would nationalise the canteen won the elections. The canteen did get nationalised or socialised, and the end result was very poor quality. They did not know how to manage their money and selections. A few years later the canteen had to shut down under its “socialist management”.

**It is a good example of how much difference “entrepreneurial leadership” makes. Did that seed the concept of entrepreneurship as a career option in your mind?**

That experience reflected how bad things can get if you assume that socialism is the answer to everything. On the other side, I saw the potential for success. A small idea to fulfil an important need can be a seed or a foundation for success.

This led to the idea that maybe I did have some kind of future as an entrepreneur. I wanted to further my education. So I came to the US in 1969 and started work on my Masters at Carnegie Mellon University. I arrived in Pittsburgh with just \$3.50 (I



left India with \$ 300 but spent almost all of it in my two months of travel through Europe with three IIT friends, on the way to the US). After my Masters I completed a PhD in Bioengineering in 18 months. During that period as I was trying to decide whether I should get a job with GE, Westinghouse or Unilever, I came to the conclusion that the entrepreneurial experience at IIT was very rare and something that I should build upon. That led to the idea of starting my own company called Compuguard Corporation back in 1972. Because I had no track record, I did not know how difficult it would be for an unproven entrepreneur with no business experience to raise capital in the US or India.

**I understand you had to visit more than 130 people before you got your first nod.**

Yes, I visited about 130 venture capital funds all over the country. Finally, the hundred and thirtieth firm, Urban National Corporation in Boston said, “We are going to take a chance on you, but we will give you a very small amount of \$150,000 to do what you can. If you succeed, good luck; and if you fail we wouldn’t have lost too much money.” That became the venture capital on which I built the company. I was successful in coming up with ideas, getting government contracts and selling our solutions to industry. I was able to raise CompuGuard Corporation to a scale of almost \$10 million in revenue.

**Most people that I know get frustrated and give up after 10-15 visits. What kept you optimistic?**

Well, I think therein lies one of the key qualities of successful entrepreneurs. Obviously entrepreneurship involves willingness to take a risk, coming up with a

Being a successful entrepreneur involves honouring commitments whether to venture capitalists, customers or employees. Sometimes that also requires a personal sacrifice.

new business idea based on the market need and a model that will translate that idea into a successful and sustainable business. But within that the critical ingredients for success as an entrepreneur are raw tenacity, a very high level of optimism and the ability to improvise. Your idea may not be right initially -- you may have to tune it. Your business model may be a bad one because of your lack of experience. Your products may not work the first time around - you may have to redevelop them. You may not be able to raise capital and you may have to work ten times as hard. You may have competitors that you did not think about. Your pricing strategy may be completely off.

**Your second venture American Robot had a different set of challenges when the company was not really doing well. Instead of selling the company and moving on with some other idea you decided to transform it. It looks like you have continued that model of engagement and transformation in building companies even today. Can you elaborate on your learning from the experience?**

The Rockefeller family, which started American Robot, invited me to buy a significant portion of the company

and become the CEO. That was the time (back in 1982) when every business publication had robots on the cover and everyone thought that robots were going to be a market opportunity the many billions of dollars. I certainly got sucked in by that same hype. In the first 18 months of having come on board, I raised over \$40 million in venture capital. However, within the first two or three years, two things became obvious to me. First, the market opportunity would be much smaller than what everyone else had been predicting. Second, this was going to be a really tough grind in competing against Japanese manufacturers who had started dumping robots in the US at prices lower than their manufacturing cost. Some entrepreneurs might have wanted to call it quits since we were unlikely to make any money on this. I had a different philosophy: I was responsible for bringing these VCs on board and convincing them to put in more than \$40 million. I had an obligation to at least get them as much of their money back as possible.

**You stayed on for more than eight years there?**

Yes. Every morning I told myself that I would never gain much financially but that I was doing absolutely the right thing for the company, employees and customers. So during that eight-year period I transformed the company from a robotics manufacturer to a provider of computer integrated manufacturing software and



flexible automation systems. The moral of that story is that life as an entrepreneur is about more than money. Being a successful entrepreneur involves honouring commitments to venture capitalists, customers and employees. Sometimes that also requires a major personal sacrifice. This was also my first experience of a turnaround and a transformation. Even though I worked as hard as I did for as little financial reward as there was, the experience of transformation was absolutely invaluable.

**Often you have been quoted saying that the economic greatness of a country is fuelled by the strength and vitality of its entrepreneurs. What do you see as the major challenges in India?**

I think there are three main challenges. The foremost is encouragement of first-generation entrepreneurship, creating a passion and desire in college graduates to want to become entrepreneurs at that early age. The second is creating an infrastructure that enables the success of first-generation entrepreneurs. One example of this is the National Entrepreneurship Network (NEN), a major initiative of the Wadhvani Foundation, which has successfully launched entrepreneurship programmes at 500 colleges and universities, enabled ongoing engagement with 70,000 graduate students who are potential entrepreneurs, and has established a large network of resources to mentor and support these budding entrepreneurs. The third is really on the policy side. It is important for policy makers to recognise that first-generation entrepreneurship is the single most important factor that will drive accelerated growth in our economy and to make policy accordingly.

The critical ingredients for success as an entrepreneur are one, raw tenacity and two, a very high level of optimism.

Having said that, here is what our government can specifically do. The first is acknowledging entrepreneurship as an important economic driver and developing policies to accelerate first generation entrepreneurship. The second would be creating special programmes such as loan guarantees and incentives for venture capital funding, similar to the successful programs of the Small Business Administration in the US. The VC sector in India today has some of the world's best companies like Sequoia and NEA. But the investment criteria rules that they apply are very similar to what they do in the US and most entrepreneurs in India would not qualify. They look for the best and may make three or four investments a year. If you have ten good VCs making three or four good investments a year, that is great for making forty new companies. But where are all the other companies going to come from? How do you make sure venture capital is available across all key industry segments in most urban and rural areas? To do that you need to have VCs and sources of funding easily accessible in every town, city and group of villages, venture funding that goes beyond the obvious high-tech success stories in the IT or telecom sector. It has to be moved down to the middle and the bottom of the pyramid.

Third is the notion of development funding through innovation and product development grants, made available in phases, where success at each phase is the milestone for eligibility for the next phase - similar to the SBIR three-phase grant programme in which every US government agency participates. These grants are used for developing ideas into products, for enhancing first generation products and creating second generation products. So even though the amounts are individually small, many of these grants have had extraordinary impact in funding new ideas and companies. One gets a government grant as a result of a very thoughtful review process and not due to political reasons. The end result is that entrepreneurs getting the grants are considered credible, and they find it easier to get VC from private

It is important for policy makers to recognise that first-generation entrepreneurship is the single most important factor that will drive accelerated growth in our economy and to make policy accordingly.

sources. It also has a multiplier effect. So there is a strong business reason for Indian government ministries and agencies and public sector companies to encourage entrepreneurial development of new products with this kind of approach.

**Symphony Technology Group has clearly shown that one can create value and build growth companies by "reengineering" established companies. Do you see your foundation playing a similar "reengineering" role in shaping the entrepreneurial ecosystem?**

Yes, but I do want to separate the two. For me STG is a group of businesses and a combination of a holding company and a private equity firm. But on the flip side, the Wadhvani Foundation is absolutely pro-bono in everything it does. Typically anything that the Foundation touches is completely off-limits to any commercial activity relative to STG. But there are some common management approaches. You can apply the same principles of entrepreneurship in building the activities of a foundation as you would apply to building a company or a group of companies. The first is obviously risk taking. The Wadhvani Foundation is willing to take significant risks and fund creative new ideas for which there is no easy path to success but where the idea has the potential to have high impact at scale. The second is to serve a clearly-defined need. The Wadhvani Foundation is focussed on large

scale initiatives that have the potential to accelerate economic growth through entrepreneurship, innovation and targeted job creation.

**There is a lot of buzz around social venture capital. While organisations like Acumen Funds have created a new channel for philanthropic funds, are similar channels sourcing and investing enough? How one can leverage such models? Do you see any limitations in such models?**

My feeling is that this concept can cause confusion. Every for-profit business needs a clear business mission and then it needs to do what it takes to build a successful profit-making company. In contrast, a philanthropic organisation needs to have a mission of helping society in some way, without profit as a reward, whether through social entrepreneurship activities, relief programmes or other programmes such as the health-related initiatives of the Bill Gates Foundation. But I think combining the two missions confuses both. When entrepreneurial companies are formed they should not have any handcuffs on them other than making sure that they are run ethically and legally. Beyond that they should have the ability to pick their products, management teams, set their business agendas and go for it.

**You have seeded many entrepreneurial activities through NEN, WCED at ISB, WEL at IIT and others. What is your larger vision of knitting these isolated initiatives together for enhanced collective impact?**

First of all you start with the mission of the Wadhvani Foundation which is to accelerate economic growth. Our focus areas within this broader arena are entrepreneurship, innovation and creating targeted job opportunities. Let us take an example of each of these. The National Entrepreneurship Network (NEN), which was launched by Wadhvani Foundation

five years ago, is now a programme that runs at 500 universities and colleges, an example of scale. Taking the second example, one of the segments which is badly served in India in economic development is the community of the differently-enabled. I felt that an initiative focussed on creating targeted job opportunities for this community was within our mission. It is an area in which the government is not strongly focussed, so we can play a role as a catalyst. So have set up an initiative called the Opportunities Network for the Disabled to provide vocational training and placement services for the differently-enabled. The third example is innovation. There are the Tatas with the Nano, and specific areas in telecom where India is pioneering innovation. While these are extremely visible and important examples, they are truly few and far between. Very little innovation goes on in India. One of the reasons is that Indian universities and research institutes lack world-class research programmes. We provided a five million dollar grant to IIT Bombay to set up the Wadhvani Research Center in Biosciences and Biotech. And the idea here is really to drive innovation in biosciences and biotech through world class research. Hopefully this is the first of many such grants we will make over the years to accelerate innovation and therefore accelerate economic growth.

**From a personal perspective, what are your goals? Do you see yourself playing a full time role in the Wadhvani Foundation in the years to come?**

Probably not. I love business. I love building and transforming companies. That is one side of me. I also love coming up with new ideas for the Foundation where we can make a big difference in India. So at least for the foreseeable future my plan is to continue to build STG and increase the scale at which I am giving back through the Foundation.



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# The B-School of Tomorrow

BY ARUN PEREIRA

[This article looks at the changing face of management education and the agenda that the B-Schools of tomorrow need to pursue to meet the changing expectations of MBA graduates.](#)

The passing of C K Prahalad and the appointment of Nitin Nohria as the Dean of Harvard Business School bring to the fore their respective passions: the potential of emerging markets, and accountability in business leadership. Coincidentally, these are two key issues that presently shape the discussion on the changing priorities in management education. Tomorrow's business schools are expected to be different, from the content of the curriculum to the methods of instruction; from student learning to corporate expectations of MBA graduates. Are existing B-schools ready for the challenge? Or will we see a Schumpeterian form of creative destruction whereby new and more relevant B-schools emerge, crowding out the outmoded, established ones?

## Business Leadership Redefined: Integrity and Broadened Accountability

Warren Buffet once said that the characteristics that he seeks in a manager are intelligence, hard work, and integrity. "If you don't have the third," he said, "the first two will kill you."

Buffet's words ring true as we witness many a business leader crash to ignominy, seemingly bankrupt of any notion of integrity, be it Ramalinga Raju at Satyam, Jeff Skilling at Enron or the many others who have exchanged their pin striped suits for prison stripes. The parade of dishonest business leaders seems unending, and at last count, the US Department of Justice was investigating 150 companies on corruption charges. There is an uneasy calm in the corporate

Today the expectation is that business leaders are also stewards of society and its interests—particularly given the relevance of businesses as engines of growth and prosperity in the many emerging markets.

Whatever the outcome, it is unlikely to be "business as usual" for the B-schools of tomorrow. To excel, B-schools will need to redefine the restrictive walls within which they presently operate, with regard to cultivating business leaders, teaching priorities, management curricula and student expectations.

world, with an undercurrent of questions emerging about the roles and responsibilities of business leaders. Without doubt, the traditional view that business leaders are solely accountable to shareholders is passé. Today the expectation is that business leaders are also stewards of society and its interests—particularly given the relevance of businesses as engines of growth and

prosperity in the many emerging markets. As such, business leaders can expect to have their decisions scrutinised through a public lens that is coloured with societal and environmental issues.

The B-schools of tomorrow must focus on producing graduates who are equipped to meet the challenges of these re-defined expectations of business leadership. This requires efforts in MBA programmes that go far beyond cosmetic initiatives such as isolated courses on “business ethics” to a more substantive focus on facilitating the transformational role expected of tomorrow’s business leaders: the ability to motivate employees to look beyond themselves and the company, and embrace the well-being of various stakeholders tied to our communities, our society, and the environment. For such transformational leadership to work, various pre-requisites are necessary, starting with Buffet’s view of integrity, followed by an acute understanding of the role of business in society, the nature of business as an economic engine, the power of the free market, as well as its limitations.

An important outcome of leadership with such a broadened scope is that it can enable a collective level of “self-governance” in free markets – important to help pre-empt onerous governmental regulations that are likely to emerge to protect the environment, society, and its interests. Unchecked, such regulations can adversely impact the growth of free markets, which in turn can impede the power of businesses to transform societies. Bottom line, tomorrow’s B-schools must produce a different type of leader, one with a different set of priorities and abilities than seen in the past, if businesses are to continue to be powerful engines of growth in society.

### Business Teaching Redefined: Beyond the Sage on the Stage

The model of a “sage on the stage” imparting knowledge to students (described by researchers such as Alison King) will likely give way to the teacher as a “guide on the side” in the successful B-schools of tomorrow. Case discussions and lectures will have to compete with new and powerful learning tools that range from podcasts and simulations to immersion experiences (be it with customers in different cultures, or students partaking in real-world negotiations, or watching stressful team discussions), to new approaches, such as metaphoric learning.

A common pedagogical approach in today’s B-schools is the “case method” and this approach tends to reward decisive thinking during the

The model of a “sage on the stage” imparting knowledge to students will likely give way to the teacher as a “guide on the side” in the successful B-schools of tomorrow.

discussion of the case, as long as it is backed by a sound perspective, relevant analysis, and often, hard numbers. Such an approach may need to be modified, given the broadened expectations of tomorrow’s business leaders. Possibly, teachers will need to accommodate a more nuanced approach to decision-making that embraces intuition, creativity, empathy and even collaboration, underscoring the complexity of business decisions, and the need to embrace issues that are broader than the narrow problem at hand. This is of course, hugely challenging to implement in a classroom; it means more creative methods of teaching and managing classes. It may mean going beyond isolated classroom sessions to include mentoring and coaching outside the classroom. In all this, faculty in research intensive schools, who can bring cutting-edge thinking to their teaching will likely trump over schools whose faculty are less involved in research, and as such, are likely to rely on outdated material for their teaching.

In the future, it is likely that the student-teacher relationship developed during business programmes will morph into one of a manager-mentor after the programme, or an executive-coach, or even teacher-teaching partner. For example, alumni of B-schools can become powerful teaching resources who can be leveraged to advise, train, and mentor current students. In return, alums can be expected to seek state-of-the-art thinking, and as such, faculty involved in cutting edge research will more likely be sought out by these ex-students.

Given this broad mantle for teachers in B-schools, it would be myopic for administrators to continue using end-term student evaluations as the only measure of teaching effectiveness. Ideally, other measures should be included, such as a measure of the teachers’ impact in the long term, be it at the student level, the corporate level, or the societal level. Thus, for example, continuing feedback from alumni on the impact of a teacher or a class, over the years, can

be a useful supplement to student ratings. This can be incorporated in the reward structure for faculty to help incentivise them to take a broad, long term view of their responsibility in shaping future business leaders.

## Business Curriculum Redefined: Integrative and Interdisciplinary

The curriculum in B-schools continues to be silo-like, functionally focussed. As such, not surprisingly, the mantra echoing in the halls of B-Schools in the recent past has been “integrative thinking”. Although that is vital, tomorrow’s B-schools will fail in their mission if they are focused on facilitating integrative learning of only the business functions; these functions are obviously critical, they may not be sufficient for successful business leadership.

healthcare and design. Equally important, there will be a need to integrate these topics within traditional business courses; for example, students working on assignments should not simply measure the impact of a business decision on say, market share, but possibly, analyse its short term and long term impact on say, the environment.

Further, tomorrow’s curricula in B-schools will have to break free of the legacy of western business education and focus on the unique needs of the vast growth markets of tomorrow – that include Prahalad’s insights on the “bottom of the pyramid.” Success in these markets imply overcoming challenges in the context of consumer literacy, communication, and distribution, all of which call for content in curricula that will need to diverge from traditional, western approaches to

We can expect tomorrow’s MBA aspirants to seek out B-schools that offer flexible curricula to help them succeed in diverse industries, and to enable them to navigate through the fundamentally different cultures and processes seen in public institutions, private-public partnerships, multinational corporations and entrepreneurial ventures

To help produce the type of transformative leaders discussed above, B-schools will need to provide students access to non-traditional knowledge areas. For example, the training one needs to run a successful financial institution goes beyond knowledge of business functions and likely includes an understanding of public policy, law, and politics. The importance of New Delhi to Dalal Street or Washington to Wall Street is more critical than we think, and the distance between them is shorter than one would imagine, if you are trying to succeed in business.

We can expect tomorrow’s MBA aspirants to seek out B-schools that offer flexible curricula to help them succeed in diverse industries, and to enable them to navigate through the fundamentally different cultures and processes seen in public institutions, private-public partnerships, multinational corporations and entrepreneurial ventures. Students will expect variety in curricula that could range from subjects such as the environment, energy, and public policy to

business education. Thus, for example, tomorrow’s curricula must include a focus on enabling innovations in emerging markets and methods to tackle its associated challenges. These challenges include new financial instruments that cater to developing markets, be it methods to identify credit-worthy customers among unorganised labour or expanded microfinance products such a microlease, microinsurance, micropensions, and the like. Also, new methods of marketing research for the “bottom-of-the-pyramid” require creative approaches to survey and measure key issues such as customer needs, preference and choice because of hurdles of customer illiteracy or semi-literacy. These methods are presently being developed, and can be expected to become a part of mainstream curricula in the successful B-Schools of tomorrow.

## Placement Redefined: Careers, Not Simply Jobs

Jack Welch, the famed ex-CEO of General Electric

once said that MBA schools had become glorified placement agencies, rather than the place where great business leaders are born. Although that remark may have been made tongue-in-cheek, Welch was making an important point about the misplaced attention given by students, the media, and many B-schools to placement statistics of graduating students.

The B-schools of tomorrow must convey the relevance of the MBA as the starting point for life-long learning that goes hand-in-hand with a growing career. In this model, students who forego traditional placement for entrepreneurial activities will be valued as much and maybe, even more, than those choosing traditional placement. Thus, not-for-profit social entrepreneurs, as well as traditional entrepreneurs, who have the potential to make a far-reaching impact on society and the economy, should be celebrated as much as those who get the immediate rewards of a high-paying consulting job.

The often talked about notion of “it’s a marathon, not a sprint” with regard to post-MBA success should become an important priority for the B-schools of tomorrow. To do so, B-schools will have to provide resources to help guide such a “marathoner,” be it in the form of stipends and incubation facilities that reward, say a far-thinking social entrepreneur with a vision, or provide alumni access to mentoring and opportunities for continued education, so that “life-long” learning is not a hollow promise, but a real differentiator between excellent and mediocre B-schools.

## Conclusion

Today, management education is at a crossroads. There are unique opportunities emerging from the changes, challenges, and expectations shaped by technology, market needs, the public’s perception of business, and discerning MBA aspirants. The B-schools that

Today, management education is at a crossroads. There are unique opportunities emerging from the changes, challenges, and expectations shaped by technology, market needs, the public’s perception of business, and discerning MBA aspirants.

excel tomorrow will likely be those that grab these opportunities by modifying existing curricula to address the public’s expanded expectations of business leaders as well as cater to new priorities in emerging markets. Further, these schools will need to make available to their students areas of knowledge outside traditional business functions, and facilitate life-long learning for their alums by providing access to state-of-the-art knowledge from faculty involved in cutting-edge research, and offering incentives to these faculty to be involved in beyond-the-classroom teaching and mentorship. This is a high order; however, the B-schools that pursue such an agenda will likely emerge as true catalysts of change in the personal growth of budding business leaders, and through them, in the growth of corporations and communities of tomorrow.



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# Indian Premier League: Valuation and Auction

BY SUDIP GUPTA

**A perspective on the auction process of the Indian Premier League – the design of the auction, the valuation of the players and the important role played by the auctioneer.**

The drama surrounding the Indian Premier league may be finally simmering, but the excitement around it is still palpable. As an avid cricket buff, two things intrigued me as I watched the IPL drama unfold. I wondered how people could bid hundreds of millions of dollars to simply own a team or invest crores of rupees in getting a player, yet hardly make him play throughout the tournament. As I grappled with the answers, my thoughts narrowed down to two processes integral to this new cricket mania – valuation and auction.

The IPL team valuation process clearly wasn't just about a share of ticket sales or potential merchandise. It also involved the option to resell it in the future or take it public via IPO. This clearly added to the financial value of owning a team, apart from the glamour of being in the spotlight and its consequent impact on the owner's other professional pursuits.

The valuation of players forms a more complex proposition involving the potential marginal contribution of a player to a combination of other players. For instance, the value of a star player like Sachin Tendulkar wouldn't be as much for a team with a couple of high 'value' players in comparison to one sans any 'in form' star players.

Was the IPL auction process appropriate in finalising the 'right' price for the teams and the players? Broadly speaking, an auctioneer must keep in mind certain key criteria: revenue, level playing field and collusion. If the government is the auctioneer then there may be some added factors like social welfare, spillover effect to other sectors, post auction competition and pricing etc.

There are two popular auction formats –open and sealed high bid

auctions. The IPL auction followed a sequential open auction variant that enables open revelation of important information during the bidding process as compared to a sealed bid auction. The flip side of this information sharing is that it's particularly prone to the possibilities of collusion where bidders can signal or threaten their rivals during the auction process.

A case in example is the 1996-97 US Spectrum auctions, which were simultaneous open ascending in nature. The US West was competing with McLeod for lot number 378 in Minnesota. Bids in all previous rounds for almost all the lots were in round figures. US West suddenly started bidding on \$313,378 and \$62,378 for two lots in Iowa where McLeod had been otherwise winning and US West had never shown any interest before. McLeod got the 'signal' that US West wants it to move out from lot 378 (Minnesota), sensing a 'veiled' threat that if it doesn't, then US West would increase competition for the bidding in Iowa. McLeod subsequently dropped out of lot 378 to let US West win. US West let McLeod win in Iowa by not bidding there in subsequent rounds.

An open auction is particularly prone to such 'signaling' and veiled threats, facilitating collusion and bid rigging where apparently it would seem that the auction process was fair. A sealed high bid auction is relatively better in this aspect. Since both an open auction and a sealed bid format have their own limitations, a hybrid form of it involving an open auction in the beginning and a sealed bid format at the end may sometimes be a better option.

One critical question is - if the expectation from all players is the same, does the auction mechanism really matter? The marginal contribution of a player to a team makes each team different during the auction process. The auction process further adds to this difference. If a team has just splurged \$1.2 M on



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a star bowler, then its aggressiveness in the next bidding round to own a star batsman will be different since it doesn't have enough money left, from their stipulated \$ 5 M.

Auctioning of teams is a relatively straightforward task. Since the combination of players and budget limit isn't an issue, a sealed high bid auction is more 'collusion' proof and expected to generate higher revenues than an open auction where 'signaling' can facilitate collusion.

The auctioneer has to ensure transparency in the bidding process and also that there are sufficient numbers of bidders, and that no one gets any preferential treatment. The role and involvement of the auctioneer with any potential bidder can lend additional advantage to a bidder, deterring competition. Rupert Murdoch's BSKyB wanted to buy the Manchester United soccer club in 1999. BSKyB would otherwise be a competitor in the auction of the football TV rights. Seven percent of the premier league's TV revenue would go to Manchester United. If BSKyB succeeded in owning Manchester United, then during the auction process of TV rights, BSKyB would have an incentive to raise the price higher as it would get 7 percent of the TV revenue and bid more aggressively. Knowing this other bidders would be reluctant to raise their bids and would back off. The UK government blocked the acquisition.

The valuation of players forms a more complex proposition involving the potential marginal contribution of a player to a combination of other players.

Credibility and transparency of the rules and the entry barriers set by the auctioneer go a long way in encouraging enough competition and transparency. Auction design is a 'scientific' art and there is no 'one size fits all' formula. The context, the object(s) and the potential spillover to other markets should be kept in mind during the design process. The objective of the auctioneer also plays a crucial role. The presence of a strong and credible antitrust authority to enquire any potential violation and deter or punish, if found guilty afterwards is crucial when it comes to any kind of auctioning whether it's IPL or spectrum or any public enterprise. The BSKyB was a prominent example. The Competition Commission of India is the right authority in such contexts.

#### **Example: A hybrid auction may generate more revenue than an open auction.**

Since the combination of players matters and a combination of two players is expected to add synergy, one might wonder whether simultaneous combinational auction like the spectrum auction should be used. In such auctions you have to bid for a combination of players, Gambhir and Yousuf for instance, in each round and bidding continues until nobody tops the current high bids in two rounds and then the players are awarded to the last highest bidders. But a careful thought reveals that this is very prone to a collusive 'shady' bidding possibility. If there are only two bidders bidding for Gambhir and Yousuf they may decide to 'split' them with a 'shady' bid of (\$0.1k, 0) and (0, \$0.1k) respectively with a threat that if anybody changes their mind in the bidding room then the normal bidding war begins. To avoid such possibilities a hybrid combinatorial-sequential auction can be used. The auction continues until no player's bid rises for two successive rounds and then Gambhir is sold to the current highest bidder and then the auction for Yousuf continues.

In this case, 'shady' bidding is not possible as, once say A has won Gambhir by \$0.1k in the first round it can come back later to bid for Yousuf. B would figure out this possibility and would not get into any collusive agreement with A in the first place.

In such a hybrid auction B would bid upto (\$4k, \$1.99k) for the Gambhir-Yousuf pair and then A would respond (\$5.99k, \$2k). In the next round, B can top this bid by (\$6k, \$0) and exhaust his budget. In the next round A can let B win Gambhir for \$6k, and then go on to win Yousuf really cheap for \$2k. The total revenue is \$8k which is higher than the \$6k in the sequential open format. Note that it is in A's best interest to let B win Gambhir as if A does not let B win Gambhir for \$6k and tops this bid to (\$7k, \$3k) for the pair then B would come back with ((0, \$4k) and really keep bidding up for Yousuf up to B's maximum limit of \$6k (since now he cannot bid for Gambhir anymore) and lower A's overall value. It can be shown that this hybrid mechanism works better than sequential open format in most settings.

# Cloud Computing: Impact on Organisational Structure

BY NIKHIL GUPTA AND AKSHAY CHOPRA

Cloud computing is fast becoming a mainstream reality from the buzzword it was a couple of years ago. Given the current rate, five years from now, cloud computing would have firmly embedded itself into the corporate neuro-system. This will fundamentally revolutionise the corporate IT function, orchestrating changes paralleled only by milestones such as the advent of the Internet, and outsourcing. An extreme fallout may even be the demise of corporate IT. This article will discuss the top reasons and implications of this shift.

## What is Cloud?

Cloud computing, which refers to the concepts of SaaS (software as a service), IaaS (infrastructure as a service), and PaaS (platform as a service) is fast gaining prominence in the enterprise. Three in four large organisations have already begun deploying some element of cloud computing within their enterprise. It is predicted that this percentage will only rise, and it is not without reason. Analysts estimate that cloud computing delivers 20 percent cost savings as compared to non-adopters.

## Cloud Benefits

It is not just cost savings, implementing a cloud can yield significant operational benefits too. For one, the cloud is always available on-demand; it can be accessed over the internet and consumed as the need arises. Secondly, the cloud is flexible, with infrastructure that expands and contracts depending on usage. This provides the huge benefit of quick scaling. Third, you only pay for what you consume- the subscription

Cloud computing is levelling the corporate playing field between SMEs and the big players, at least in terms of IT advantage.

based model ensures that you are not paying for capacity that you did not consume. Fourth, cloud software, platforms and infrastructures require and allow a low degree of customisation, which reduces the complexity of modification and troubleshooting. But above all, cloud services are built around a self-service model, meaning that a business user with limited technical knowledge can deploy cloud services with minimal involvement of IT. It is not surprising then that cloud computing is levelling the corporate playing field between SMEs and the big players, at least in terms of IT advantage. For example, a \$5M start-up can obtain the same level of IT features and scale as a \$5B monolith almost instantaneously through cloud.

## Cloud Inhibitors

Despite all the benefits, this shift to cloud computing would have been significantly faster if not for some key shortcomings and risks associated with the technology as of today. The most significant shortcoming is the lack of customisation. Each company has many corporate processes that are highly unique and not scalable, and which thus cannot be served by clouds as of now. Security is another big pain-point in adoption – your company’s critical data is not at a location owned by you but on a common cloud owned by an external vendor. Volatility in vendor space (with many cloud computing spaces being subject to M&As) and

immaturity of the technology is another big inhibitor to large-scale movement to the cloud. We believe however, that as cloud technologies stabilise and more companies make the shift to cloud, these shortcomings will be largely overcome. If they are, there is little reason why companies would want to retain their legacy systems and not move to the next generation of corporate computing. In fact, some companies may even leapfrog a generation of corporate computing all together.

### Cloudy Start

Virtualisation has facilitated the evolution of in-house infrastructure clouds within the enterprise. At the same time, large companies are experimenting with public infrastructure cloud services, offered by big players like Google, Amazon, and Oracle. On the software-side, SaaS is now being offered beyond non-core applications to core applications such as ERP and CRM. The adoption of cloud has not been easy for the CIOs. Successful cloud adopters seem to have figured out the answers to the following key questions before they took the leap of faith with cloud:

- » Governance and Support Implication: Moving to public clouds is a step forward from the traditional managed source services model. What would be IT's role in managing and supporting these services?
- » Skills Implication: Do companies have the internal technical and business skills to support advanced virtualisation and cloud technologies?
- » Interoperability Implication: How will cloud services interact with the in-house applications and with each other?
- » Security Implication: Who owns the data on the cloud?

### The Long-Term Scenario: Up in the Clouds

In the long term, cloud will be instrumental in changing the way corporate IT is structured and managed. While it is clear that technology will play an extremely crucial role in the company's strategic success, cloud computing may even make the role of the corporate IT function almost defunct. In fact, the trend has already started: Gartner, a leading information technology research and advisory company, predicts that by 2012, 20 percent of businesses will own no IT assets. We see two big drivers behind this shift:

First, infrastructure is moving primarily to the cloud, or an 'on-demand' state. On the applications side, it will not make sense to develop applications

While it is clear that technology will play an extremely crucial role in the company's strategic success, cloud computing may even make the role of the corporate IT function almost defunct.

in-house: those that require less customisation will be replaced by cloud alternatives, and most customised applications will be outsourced to low-cost destinations. In essence, the only applications that will be retained in-house are going to be a very small set of applications that are core to the competitive advantage of the firm, or the 'crown-jewels' of the firm.

Second, business demand for rapid and flexible delivery will only rise. At the same time, business partners will become increasingly comfortable with technology and associated decision-making. Both these factors, coupled with maturity and pervasiveness of cloud offerings, will make it easier for a business partner to take technology decisions on his own without the involvement of the office of CIO.

### The 2015 CIO

In a primarily 'cloud'-based company, the IT function may well be left with only three responsibilities: advising businesses on which cloud services to purchase, ensuring interoperability between various clouds deployed in the company, and managing the few remaining 'crown jewels' that cannot be cloud-sourced or outsourced.

It will not be a surprise then to find IT reduced to a fraction of its current size as most of the technology needs are sourced from outside the enterprise. Concomitantly, the CIO will break into two roles, first of which will be, 'Chief Technology Procurement Officer' whose main responsibility would be to inform business purchase decisions of cloud services. IT will no longer be able to take technology purchase decisions



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independently, these will now be taken by the business partner, and IT will only be in an advisory role. The second role will be that of a 'Chief Services Officer' whose primary responsibility will be to architect the corporate service strategy and manage integrations between cloud services sourced from outside.

In this enterprise of the future, the skills demanded from IT executives will also undergo a fundamental shift. Client relationship and vendor management skills will become critical, as IT will be called upon to advise on and manage a portfolio of external sourcing partners. Technical skills associated with interoperability and integration between various

a slice of the cloud pie. The threat of vendor lock-in and lack of interoperability standards are inhibiting the cloud shift. However, once the industry stabilises and technology matures, companies will find it much easier to move to the cloud. Cloud may also allow companies who have traditionally been laggards to leapfrog one whole generation of computing and move directly to the cloud. This may shake things up in their respective industries.

As cloud services become the gold standard for applications and infrastructure, providers of traditional IT services will no longer be able to rely on their current revenue streams. IT vendors

## Cloud may also allow companies who have traditionally been laggards to leapfrog one whole generation of computing and move directly to the cloud.

clouds will be much in demand. The most important technical skills, however, will be ones related to the management of the 'crown jewels'; i.e. knowledge of developing and operating the core IT assets that cannot be cloud-sourced or outsourced.

### Vendor Landscape

Currently the fast changing vendor landscape and technology immaturity is slowing down cloud computing adoption in the enterprise. The cloud computing space is seeing and will likely continue to see a large number of acquisitions of smaller firms that entered the space early, by IT giants who want

will have to either offer cloud versions of their key applications, or create entirely new cloud applications and infrastructures. If they choose not to venture into the cloud space, their only alternative will be to serve the niche but premium 'crown jewel' segment.

We also expect cloud vendors to remain large in size, but offer clear and precise interoperability standards. While customised technology development allows today's vendors to charge a premium for dedicated services, tomorrow's cloud vendors will likely have higher profitability because of the comparatively lower cost structure of the cloud.



# Face to Face

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# Navigating the Indian Telecom Space

Deepak Chandra, Deputy Dean, Indian School of Business (ISB) talks to Gowton Achaibar, Managing Director of Ericsson India about the changing competitive scenario and the challenges of doing business in India.

**Deepak Chandra: Can you talk a little bit about Ericsson services in India?**

**Gowton Achaibar:** Ericsson started in India a long time ago. We first sold switches in India in 1903. But the real business that we have today has taken off within the last 4-5 years. In 2008 India was the single largest country, in terms of Net Sales, in the Ericsson group.

Today, we mostly provide wireless products and services to mobile operators. We are also expanding into the multimedia space with products like Service Delivery Platforms, Mobile Advertising, Social Media Portals, Mobile Positioning Systems, etc. So it is a combination of traditional products and services with media and application.

**What is your outlook in terms of competition?**

Our competition has changed over the years. Our traditional competitors were all the telecom providers - Siemens, Alcatel, Lucent, Nokia, Motorola and more recently the Chinese vendors, Huawei and ZTE. But the telecom competitive landscape has changed significantly. Alcatel is now merged with Lucent creating Alcatel Lucent; Nokia is merged with Siemens creating Nokia Siemens and Nortel went bankrupt; Motorola is looking for buyers for its equipment divisions.

With our entry into the applications and media space, we now have a new set of competitors. So the whole competitive scenario has evolved over time and our competition today as we speak is different from

what it was three years ago and will be different three years from now.

**How do you manage this changing scenario?**

It is obviously quite challenging and our approach is to manage it at the local region level. Ericsson has 10 regions around the world (India, North America, Southeast Asia, etc.) and the competitive scenario is different in each region depending on the product mix and maturity of the market. To make a comparison, let me take the example of two regions -- India and the United States. In India, the networks are now being built so I have to manage very aggressive pricing models from the Chinese vendors looking to enter the market. In the United States, the networks are more mature, with established suppliers, and hence the competition from the Chinese vendors is less effective.

Ericsson has 10 regions around the world (India, North America, Southeast Asia, etc.) and the competitive scenario is different in each region depending on the product mix and maturity of the market.



In Conversation: Gowton Achaibar and Deepak Chandra

So the strategy depends on the region we are in and the issues that we have to deal with in that specific region. Globally we must continue driving our technology leadership, next generation platforms, software tools and operational efficiency. We also have a vision that there will be 50 billion connections globally by 2020, so we will be entering different vertical segments with different solutions. Once this happens, we will see another set of competitors different from today.

#### How is 3G going to impact this sector?

I think the concept of 2G, 3G, 4G is not that important. What is really important is the technology capability to enable higher speeds (in accessing the networks) and providing better spectral efficiency (which determines the number of users within the network). For example, WIMAX was touted as a 4G technology but it provides lower peak speeds and is less spectrally efficient than HSPA which is regarded as a 3G technology. Higher network speeds are extremely important because it will allow a user to access the Internet or other Intranet data applications at a faster rate. In India, where the wire line infrastructure is so limited, the advent of 3G and BWA spectrum is very important in providing alternatives to accessing the internet.

With a high speed network you have the ability to handle a lot of data, and hence vertical applications can be developed which make use of that speed and capacity. 3G is only an access technology that provides

3G is only an access technology that provides higher efficiency and more bandwidth. It is the applications and devices that are developed to utilise this technology capability that will become important.

higher efficiency and more bandwidth. It is the applications and devices that are developed to utilise this technology capability that will become important. For example, in the North American market we can see that the advent of the I-Phone and Apple App-store created a big change in the use of 3G technology. In India, we have done market trials that demonstrate that e-health, e-government and e-education are all applications that can benefit significantly from 3G technology capability.

#### Ericsson is doing well here in India. Are there other ways that Ericsson India is supporting Global operations?

The opportunity for Ericsson, and rather, the opportunity for any global company that has a huge presence in India, is to figure out how to leverage those assets globally. There are many examples where we are looking at leveraging the assets that we have

created in India. We have a factory in Jaipur, and we are now assessing how we can ship from there to other areas in the region - Middle East, Africa, and other parts of South East Asia. We have set up R&D centres in Chennai and Bangalore. We will leverage our large services organisation to deliver services to networks outside of India. So there are different areas where you will see Ericsson expanding its capabilities in India to support its operations globally.

**You are saying that the opportunity in developing economies, like India and China for instance, is to not only exploit the opportunities that are available in those particular markets but to then leverage those assets to gain more efficiency by taking it to other markets.**

Yes. The advantage of doing business in India, and to a large extent China, is that they are big enough to create a strong domestic business where the assets to support that business can be leveraged globally. As I mentioned above we have built economies of

**There are certain advantages that an organisation from India has in terms of exploiting opportunities in markets such as Africa and that comes from functioning in a similar market. But how does it help in more developed markets?**

I think it is the education system. Infosys is the best example of a company that took the structure that it created in India and actually competed extensively with the Accentures and IBMs of the world in North America. IBM and many other North American companies have since figured out this low cost model and now they have thousands of people in India.

**You recently signed an MOU with the Indira Gandhi National Open University (IGNOU) to start the application of 3G in education delivery. What is this initiative about?**

IGNOU has about two million users of their education services and the intent is to deliver to these users relevant information from IGNOU. The intent is

The advantage of doing business in India, and to a large extent China, is that they are big enough to create a strong domestic business where the assets to support that business can be leveraged globally.

scale in several areas that can be leveraged. The main reason being that the cost structure in these countries provides an economic advantage if the Product or Service developed in these countries can be sent to other more developed countries.

**So organisations from developing economies like India and China have an advantage when you are looking at the next level of markets?**

I cannot speak for China because I do not have the experience, but from what I have seen of India, it has the ability to compete aggressively in developed and developing countries. It has the education system, technical expertise, leadership and cost structure to be competitive. Many of the leaders in Indian companies have been to Harvard, Wharton, etc., so they have the capability to analyse and compete in a developed economy. So a company builds a model that can be globalised, it doesn't matter whether they go into a developed or a developing country. That model could work anywhere because they have the skill, the capabilities and resources to make it work.

for us to work with IGNOU to develop applications that can be wirelessly enabled. We will then ensure the applications are delivered across the wireless networks to users -- whether it is information, database applications, or student grades.

**You recently signed a pact with colleges to provide a telecom certification programme. What is it about?**

One of the problems that I faced in India is high attrition. We lose a lot of people at the bottom of the pyramid, who have less than three years experience, to customers and competitors. In addition, we need to build a larger employee base to deliver on our global Services ambition. The question then arises: How can we create a supply at the bottom of the pyramid? The telecom certification programme trains students and certifies them during college. They receive online and on-campus training during junior year. Some will also be selected for a work-study program. They then take a certification exam to get certified with Ericsson related capabilities. From our perspective, we have created value in a student that would otherwise have to be accomplished in six

to eight months after they join the Ericsson group.

So this solves the problem of attrition, as well as providing a qualified pool of students to hire for our Services organisation. We have a two-part organisation strategy - strong leadership training for top management (using programmes such as the one at the ISB) and college training to build the base of the pyramid.

**You have been in India for sometime now. When you came here, what did you think were your major challenges and how did you go about working on those challenges?**

The major challenge in India for Ericsson has been to create a good business overall (market share and margins). There are three major financial measures that we use globally- sales, margin and cash flow. Once these three things are on the right side of the equation, we have got a good business. Margins and cash flow are impacted by both customers willingness to pay as well as service delivery efficiency. Are we making the right value arguments to get the best market price?



Gowton Achaibar

Are we efficient enough in our delivery organisation? Do we have the right supply chain and partners? Do we have the right organisational structure given the portfolio that we sell? These are a few of the challenges that we had to address over the last eighteen months to get to where we are.

# Creating a Case Culture

**Meena Saxena**, Assistant Director of the Case Development Centre at the Indian School of Business (ISB) talks to **Ariff Kachra**, Strategy Professor and Director of India Development at the Richard Ivey School of Business about developing a case study culture in India.

**Meena Saxena:** You have been recently appointed as Ivey's Director of India Development. What are your immediate India initiatives?

**Ariff Kachra:** Ivey has made a conscious decision to work with partners in India. With the education market opening up in India, we are going to see a lot of schools entering the Indian market and a lot of mid-tier schools that are going to pursue rapid entries into the Indian market with the sense of exporting North American education to India. And, I think, at some level that is a mistake. The needs of the Indian market are similar in many ways, but there is also a tremendous amount of difference.

Ivey's strategy for India is to pursue sustainable partnerships. We have a partnership with the ISB for case writing. We don't see this partnership with the ISB as one where Ivey brings all the value and ISB just happens to be in India. ISB is introducing us to many case writers who have solid knowledge about Indian business and Indian business practices. A synergy is emerging between case writers and faculty, as we develop more case writers for the ISB, and even as faculty at the ISB become more adept at case writing. We have also partnered with IIM Bangalore for academic research. For Ivey, our development strategy is essentially developing partnerships with top business schools in India and investing in sustaining these partnership models. One of the things we are hoping to launch in India is a programme similar to one we do in Canada called Quantum Shift. The

programme targets entrepreneurs and currently involves a partnership between Ivey, KPMG and the Global Mail in Canada. It allows entrepreneurs that have built their businesses to achieve sales between ten million and the hundred million dollars to have a five-day executive education experience, tailored particularly to their specific needs. We are hoping to develop a similar partnership in India to launch comparable executive education programmes. And again, partnership is the cornerstone of our strategy. We are not really going at it alone.

**What has been your involvement in helping develop a case culture here in India, specifically at the ISB?**

We have the opportunity to work with some phenomenally talented people in terms of training case-writers. We have conducted workshops that are extremely in-depth, and have really tackled the craft

The notion of being able to take complex theoretical ideas, understand them and apply them to a practical context is as relevant in Canadian business, as it would be in Australia as it is in Indian business.



Ariff Kachra

of case writing. We have also done workshops that are much shorter and expand on the natural bridge between case writing with case teaching. Finally, we have done workshops that are tailored to the specific needs of faculty that are new to and/or use the case method. So I see our role as expert promoters; experts because we are global leaders in case teaching and case writing and promoters because we have worked diligently with ISB, using its infrastructure, to create a great deal of excitement about the case method. I would say that Indian business schools today are much more excited about the case method and its implementation thanks to the joint efforts of Ivey and the ISB.

**The case method is widely used in other parts of the world. Do you think it is going to get more relevant and popular in India?**

According to me, the power of the case method is applied learning. I don't think applied learning has a cultural context. The notion of being able to take complex theoretical ideas, understand them and apply them to a practical context is as relevant in Canadian business, as it would be in Australia as it is in Indian business. So, the idea of applied learning goes beyond any cultural context. That definitely makes the case method powerful, because every business school in every country could benefit from its graduates being more practice-oriented.

**What do you think are the stumbling blocks for introducing case teaching methodology in Indian B-schools?**

We have already seen that some of the cases that come out of India are simply stories or an assemblage of information about a given company that is then called

It is definitely a challenge to understand the complexity of a case and what it takes to publish a case and more importantly what it takes for a case to be successful in the classroom.

a case. My fear would be that schools would begin creating these information assemblages, calling them cases, and essentially creating documents that aren't teachable. It is definitely a challenge to understand the complexity of a case and what it takes to publish a case and more importantly what it takes for a case to be successful in the classroom.

The other risk is using the case method. In the workshops that I have done with faculty in India, it seems as though some faculty are very comfortable with the Socratic method, very comfortable with taking a case and viewing the class as a partnership between the students and faculty. These faculty are prepared to have a two-way discussion, where their role will be one of a guide and not one of absolute control. They believe that learning will occur through that facilitation process. But I think that for many faculty it is a very difficult thing to do. A lot of the faculty in North America have gone through the case method as students themselves. Faculty in India may not have gone through the case method as students but may want to implement it as faculty. And so I think the learning curve is even more steep, it is more difficult for an Indian faculty member who has never been the 'learner' in a case classroom to now be the 'teacher'. Across cultures, faculty members are often viewed as the people with answers and students are people with questions. The case method really counteracts that because it is all about questions and no one has the absolute right answer. There are some answers that are better thought-out than other answers but there isn't a right or wrong answer. I think for some students and some faculty that reality makes the case method very challenging.

**The Centre for Case Development at the ISB is engaged in developing cases about Indian businesses. What is the potential of Indian cases in classrooms abroad?**

I don't think you can teach business today and not talk about India. Programmes that teach strategy or



Meena Saxena

organisational behaviour or accounting or finance, and don't have cases that involve Indian companies, essentially don't have cases about some of the most important companies in the world. I don't see it as Indian content for Indian students as much as I see it as part of the global economy. You can't run a business today and not understand India. You can't be in an industry where you are not going to face an Indian competitor.

Across cultures, faculty members are often viewed as the people with answers and students are people with questions. The case method really counteracts that because it is all about questions and no one has the absolute right answer.

**So then there is a demand?**

There is tremendous demand and the demand is only going to grow around the globe from students and executives who want to get a better understanding of the Indian business context.

**There are several questions raised about the practice of case method teaching – it's either too broad so that specific problem areas are missed, or it is too narrow and may stifle creative problem-solving. How does one find the right balance while writing and teaching cases?**

When I think back to the first case I taught and compare it to the most recent case I taught, they are vastly different because my ability to teach with cases has improved drastically over time and therefore

my ability to find the balance of which you speak. I think the balance is very much found in the faculty member's ability to facilitate case discussions - which is one of the things that we have been talking with the ISB about. Being able to use cases, and use them well, entails finding the balance you talked about. Finding that balance comes from practice. You can only find the balance between teaching a case too broadly or focusing on too few overly-specific points if you practice teaching it. Teaching a case is like riding a bicycle – to find your balance you have to get on and peddle – you have to get into a classroom and start using the case method. I also strongly feel that to truly excel as a case teacher, you must have gone through the experience of writing a few cases.

**You have been a case teacher for a long time. How would you like the class to leave after a case is analysed? What do students look for in a case? What excites them?**

It is interesting to look at cases that the students like the most and those they like the least. It is very obvious when a class is excited about a case. I think that the excitement is contagious and comes from your own excitement as a faculty member. Drama and case teaching are strongly correlated. You have to be a bit

of an actor in front of the class to be able to generate enthusiasm and to be able to get the students to really care about the subject matter. It is very easy when you teach a case about the movie industry for example, something everyone can relate to. But when you teach a case about an electrical power utility or the box that exchanges signals for cable TV, as a faculty member you are responsible for making even that exciting.

I believe that the case method is a very personal learning experience. I am not really a big fan of telling students 'here is what we are going to do and this is how the discussion is going to unfurl', and here are the two or three learning points you must leave with at the end of the class. Instead, I prefer to let the quality of the discussion bring the key learning points to the forefront. And my job is to make sure

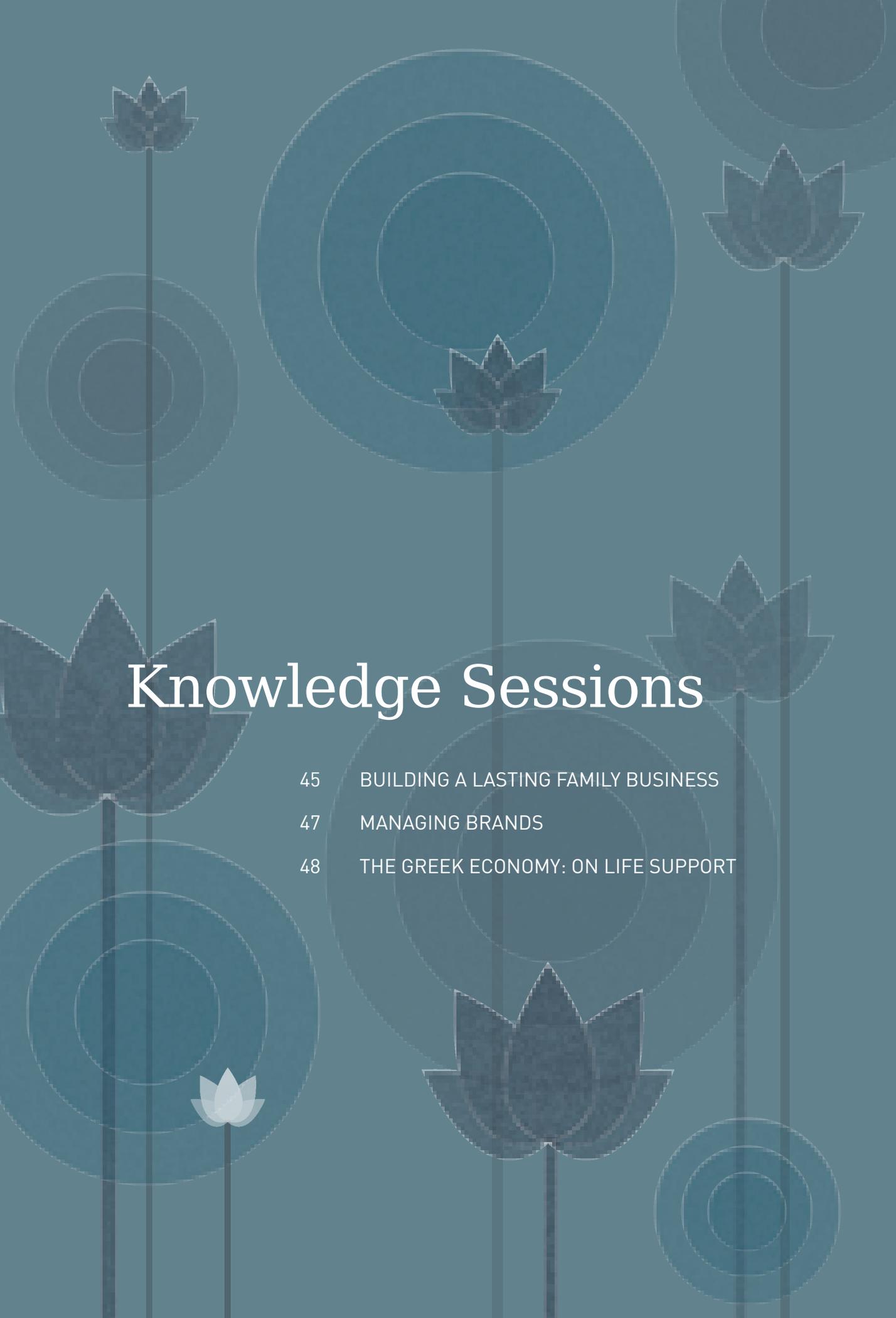
that happens. It is not that easy to teach cases. It is a lot simpler to walk into a classroom and lecture. And so the case method is much more volatile, it is much more living and breathing – it is also much more real. In a lecture class, one never has to determine if learning has occurred until the examination. In a case class, you can see in the eyes of the students and in their level of engagement, whether they are learning; it is thrilling!

**Do you think the price at which Ivey distributes its cases is going to be a constraint as far as India is concerned? Do you think a different distribution or pricing strategy would work better for India?**

I don't think that pricing is going to be an issue in India. The hope that most businesses have for whatever product or service that they offer in India, is what they lose out in price they will make up in volume. Maybe that is true for most commodities, but we will have to see how true that remains in terms of the adoption of cases and their relative price points. I also think that the product development curve for India is different. When you have a product

Teaching a case is like riding a bicycle – to find your balance you have to get on and peddle – you have to get into a classroom and start using the case method.

that is optional, the elasticity of prices is very high. I think once people begin to use the case method and see its value, they will become locked in. As a result they will be willing to pay more because they have a better understanding of the value of the product. And as more and more faculty understand the value of the case method and become better at teaching cases and also writing cases, they will be more open to paying higher prices. I don't think the prices will be equivalent to what schools pay in North America, but they may be higher than 50 cents to a dollar for example.



# Knowledge Sessions

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# Building a Lasting Family Business

Professor Kavil Ramachandran, Thomas Schmidheiny Chair Professor of Family Business and Wealth Management at the ISB recently delivered a talk on, 'How to Build Lasting Family Businesses', at a speaker session organised by the ISB and the Indus Entrepreneurs (TiE), Chandigarh. This article is based on thoughts presented during the session.

More than half of the fifty companies on the Nifty in India are family controlled businesses. If you look at the Economic Times (ET) 500, the number goes up to 67 percent. These numbers highlight the contribution of family businesses in India. It is a known fact that family businesses across the world and particularly in the Asian context play a significant role in the economic development of any country. Besides, on a long-term basis, family businesses are

they don't have enough funds, capabilities and facilities to share. The division also leads to a lack of collective thinking, actions and pooling of resources, with each business gradually becoming more independent. And often, the division is not amicable, with fights continuing to happen.

Yet another challenge is role clarity. Initially the family business is a subset of the family. So there is no difference between the wealth of the family and

On a long-term basis, family businesses are more profitable than non-family businesses because they have a long-term agenda, instead of focussing on quarter to quarter performances and therefore they try to seek long term wealth creation for the family and business.

more profitable than non-family businesses because they have a long-term agenda instead of focussing on quarter to quarter performances and therefore they try to seek long term wealth creation for the family and business.

Family businesses face multiple challenges. For instance, as the family expands, the business is usually divided between various members, like an amoeba that splits into two as it attains a certain size. But a lot of the businesses are too small to divide and there is nothing to share. They lose competitiveness because

the business. But as the business grows, the family has to be cognizant that there are non-family stakeholders who are involved in the business. The head of a family business has to play three roles: as a member of the family, as the CEO, and as a shareholder. So that creates a unique situation where the head has to juggle multiple objectives, in his various roles. All family decisions need not be good for the business and all good business decisions may not be the best for the family. There has to be a balance. A majority of the problems associated with family businesses

such as professionalization, succession, retirement, remuneration and wealth management can all be referred back to the complexity of maintaining a balance.

Succession can also be a challenge area, with many families postponing the decision to avoid conflict. Traditionally, the eldest son is expected to take over but what happens if the youngest is the most meritorious or if there are daughters who are more knowledgeable?

A basic solution to all these challenges is to anticipate and address them instead of postponing. Then there is time to think it over, look at options and prepare the ground for execution. The important

they don't want to get all the family members involved in business discussions. These forums usually meet informally.

Another option is a non-business family forum, comprising family members who are not involved in the business such as the women members. If the bonding among these members is good, they can help in sorting out a lot of issues.

Many businesses are also becoming interested in writing a family constitution. But more important than a written constitution is the process of writing it. Often, companies have not even discussed fundamental issues such as induction, retirement and succession. The process of writing a constitution initiates discussion

## All family decisions need not be good for the business and all good business decisions may not be the best for the family. There has to be a balance.

thing is to start a dialogue among all key stakeholders. One way to do this can be through an advisory council, comprising non-family members who are acceptable to everyone involved. The council can facilitate meetings to ensure better communication and smoother decision making.

A variation on this is a family council which is more like a general body of the shareholders, with certain eligibility criteria such as age. The council is briefed and consulted periodically on the business. The family council is not only about the family business, it is also about the families. The discussions are not limited to the business, but include family issues such as education and wealth management.

In some cases, some of the businesses have a family business forum which comprises only the members of the family who are involved in the business because

on the implications and ramifications of such issues.

From a governance perspective, it is important to have clarity on issues such as leadership roles and responsibilities, investment criteria and the decision making process. To achieve this clarity, it can be useful to have an effective board of directors. Even if the board is not a legally valid, public one, it can still provide a lot of support and ideas. And if the company is looking towards growth, it is essential to have high quality auditors, to maintain trust.

Professionalization seems like a simple solution to a lot of the problems but it can be a challenging process. It is more than just delegation, where you still retain control; it is a process of delegating substantially based on subsystems and norms. Having a roadmap outlining a gradual transition can develop understanding and simplify the process.

# Managing Brands

D Shivakumar, Managing Director of Nokia Mobile Phones and Vice President of Nokia, was at the Indian School of Business (ISB) recently to deliver a talk. He spoke about brands and their management, something he has extensive experience in. This article is based on thoughts expressed during his talk.

Brands are a time saving device. When consumers are shopping and they know what brands to pick off the shelves, it saves the time spent on shopping. Over the years, brands have evolved through a variety of stages. Branding started with bartering; countries that had excess goods marketed them to other countries in fair exchange for other goods. Scotch whisky was probably one of the earliest brands in the world because Scotland had a surplus of whisky. In Stage 2, brands were all about places of origin. Airlines, tea and newspapers are examples of products that are branded according to their place of origin. In Stage 3, colour was used as a product differentiator. In Stage 4, it was all about building a brand name and emotional values started playing an important role. Brands like Coke and Nestle are examples of this stage.

In the current stage, Stage 5, companies are looking at answering the question – What makes brands valuable? They are also trying to leverage brands across categories, product forms, etc. to ensure that there is significant return on the investment made in the brand.



D Shivakumar

Another question that companies have been debating over the last twenty years is – Can a brand be treated as an asset? A lot of companies put the brand and its value on the balance sheet because the real assets of companies in sectors such as FMCG are their brands and the total plant machinery is not very valuable. So that is why a lot of companies decided to put their brands on a balance sheet as a way of saying this is how valuable we are and if somebody wants to buy us, you need to pay significantly more than this.

A brand is a set of tangible and intangible values. The product functionality alone gets you a pricing premium only when you have a price or a feature which you uniquely own and nobody else has. Otherwise in the current scenario, the premium for the brand invariably comes from the emotional values attached to it.

So why do people buy brands? They buy a brand because it is an ally or because it is a crutch. Looking at Marlboro cigarettes for example, men who are macho will buy Marlboro because they think it reflects their personality i.e. it is their friend or ally. On the other hand, men who feel they lack machismo, buy it to feel better i.e. they use the brand as a crutch.

Today's consumers are more demanding, seek balance in their lives and look for condensed information capsules. Individual mobility is also growing rapidly. Successful brands in today's markets will be creative and idea centered. Brand premium will come from deeper trust and really strong brands will do the thinking for the customer.

Brand evaluation in the future will no longer be on traditional measures such as advertising. It will be much more about what the consumer thinks of the brand and the company that owns the brand.

# The Greek Economy: On Life Support

Dr Colin Sims, Head Global Development Operations, Novartis recently gave an enlightening talk about the effect of the global financial crisis and the Greek economic crisis in particular on Novartis and also the pharmaceutical industry as a whole, on a recent visit to the ISB. This article is based on thoughts presented during his talk.

The European Union (EU) is in the midst of a severe debt crisis, with many of its member countries defaulting on their payments. Although, currently Greece is in the news, the problem is endemic. At the forefront of this crisis is Greece - the 27th largest economy in the world. In 2009, the government of George Papandreou revised its deficit from an estimated 6 percent to 12.7 percent. In May 2010, the Greek government deficit was estimated to be 13.6 percent which is one of the highest in the world relative to GDP. Greek government debt was estimated at €16 billion in January 2010. Accumulated government debt is forecast, according to some estimates, to hit 120 percent of the GDP in 2010. To save Greece's default on payment, the country was recently financed €500 billion in bailout money. Furthermore, they don't have to start paying back this debt for the next 5 years. Despite this rebate they must still service their debt interest which is about 140 percent of their GDP each year.

Some macroeconomic analysis also indicates that Greece's National Healthcare Service will be unable to afford the medication costs of Novartis or any other Pharma major's products. To control costs they have slashed all prices by 25 percent mandatorily. In protest, two other Pharma majors – Leo Pharma and Novo Nordisk have suspended operations and pulled out from Greece.

Novartis has gross margins up to 30 percent for majority of their drugs in EU. Even if Greece is given special discounts due its current position, this will lead to a cascading chain with other countries across the EU and the world also asking for price cuts leading to complete erosion of profit from its \$50 billion annual sales revenues. Thus, the dilemma of choosing to stay in the Greek market and accepting the cuts

could lead to financial disaster in the overall world market for Novartis. Novartis' revenues will plunge downwards, so will their stock. More importantly the loss of revenue i.e. the "top-line" will affect the huge Research and Development ongoing at Novartis. Discounting this problem and various practicalities, is it fair for a business firm like Novartis bound by responsibility to shareholders to continue in Greece as a non-profit venture?

But the more important question is - Can Novartis afford to exit?

Novartis supplies key life-saving drugs in Greece, patients with organ transplants for example cannot survive more than a few weeks without these non-substitutable drugs. If Novartis does not accept the price cuts, it must exit the market. There is an ethical dilemma here: Is it right to deprive deserving patients of life-saving drugs? Can Novartis discount its moral responsibility? For purely business reasons also, the exit will have ramifications. Firstly, if Novartis exits Greece, they will take a huge public image beating at the global level. Secondly, even if the Greece Economy is in trouble for 5 years, why should Novartis exit from the 27th largest economy in the world? Spain, Portugal and other EU countries are on the brink. Should Novartis exit from them also later on?

There is no right answer to the dilemma currently, but various options are being discussed. Students at the ISB suggested a number of different approaches. Dr Sims highlighted the implicit problems in many of them. Some strategies vis a vis changing the game for the Greek market such as extending patent durations were discussed.

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Mohit Soni, PGP Class of 2011, ISB compiled this report for the ISBInsight.

# Faculty Close Up

## Innovation and the New Economy

**Krishnamurthy Subramanian, Assistant Professor of Finance at the Indian School of Business (ISB), says that contributing to research will always be his primary goal, with everything else taking a back seat.**

Professor Subramanian focuses on two areas of research: (i) the effect of country level laws and institutions on corporate governance, financing outcomes and country-level economic growth and (ii) the financing and corporate restructuring choices made by human-capital-intensive firms.

Professor Subramanian firmly believes that country-level economic growth is driven by the innovative investment choices of firms. Over the last three decades, the lion's share of innovative investment has been made by firms in the "new economy," which include sectors such as pharmaceuticals, IT, telecom, semi conductors, biotechnology and nanotechnology. Survival and growth in these industries is driven critically by the quality of a firm's human capital rather than by its brick and mortar assets. He says that these firms form the common thread linking his two diverse areas of research. Unlike traditional research published in the elite finance journals which remain limited to the US, Subramanian's research is international in nature and spans both developed and developing countries. His research therefore has important implications for law and policy making in developing countries in particular.

In his research on ways to spur innovation, he finds that laws and contracts that tolerate failure in the interim can be quite instrumental in motivating firms and their employees to take the risks involved in mould breaking innovative projects. In "Bankruptcy Codes and Innovation," he finds across 85 countries that debtor-friendly bankruptcy laws can encourage new economy firms to undertake greater innovation by providing them a second chance upon failure. In turn, debtor-friendly bankruptcy laws lead to greater

economic growth in a country. In "Labour Laws and Innovation," and "Wrongful Discharge Laws and Innovation," he finds that laws that impose hurdles upon dismissing white-collar employees can motivate them to undertake path-breaking innovative projects.

Professor Subramanian teaches a class on Corporate Control Mergers and Acquisitions at the ISB and says that the students at ISB are smart and keep him engaged with their insightful questions. He also writes a periodic column for the Financial Express on a wide variety of topics such as Financial Regulation, Central Banking policy, Innovation, Accounting and the IFRS. Prior to joining the ISB, he has worked as Assistant Professor of Finance at Emory University and with ICICI Treasury in their Derivatives Research Team.

Professor Subramanian has a PhD and an MBA in Finance from the University of Chicago, where noted economist Raghuram Rajan was his PhD advisor. Prior to that, he pursued an MBA from IIM Calcutta, where he topped the batch. He also has a BTech in Electrical Engineering from IIT Kanpur.

Contemplating on his future goals, Professor Subramanian says that he wants to collaborate with others to encourage careful and cutting edge research in India. He says that thus far, both public and corporate policy in India has tended to rely generally on gut feel and thumb rules. He believes that institutions such as the ISB can contribute to a culture where Corporate and Public Policy is driven by sound research that combine insightful theory with careful, data-driven research that goes beyond mere correlation to causality.



# In Brief



## Reverse Innovation and the Emerging Markets

‘Reverse Innovation’ is a term introduced in a landmark HBR article by Dartmouth professors Vijay Govindarajan and Chris Trimble and GE’s Jeff Immelt. It refers to an innovation seen first or likely to be used first, in the developing world before spreading to the industrialised world. On a recent visit to the ISB, Sudhakar Ramakrishna, Corporate Vice President and General Manager, Motorola, addressed the students on the subject. He said that reverse innovation is not only about cost reduction. “India is not only about low cost,” he said. “Cost is important, but, not critical.” Innovation has to be tangible and sustainable and being low cost is never sustainable. India needs to learn to build products to address local needs and then proliferate these innovations to the world. He also strongly encouraged young Indians to not be held back by the fear of failure, especially in the context of reverse innovation. “It is far simpler to believe in time tested concepts and ideas. Don’t hang on to ideas too long, he added. “Failure will teach

you many things but it’s important to fail fast and then get back up and try again.” The only caveat to this-Indian organisations still do not have a culture of encouraging failures

## Marketing to the Tribe

According to renowned author and entrepreneur Seth Godin, companies have worn out the branding strategies of using a mascot and spamming people. “Marketing should give people today what they really want,” he said. “Time has changed today where no one wants to do something boring and people would follow ideas which make their quest not boring.” Defining a tribe as a group of people who are bound together by a common desire, language and culture, he said the future belongs to people who are brave enough to work with a tribe, lead a tribe and connect a tribe because then the tribe markets to itself. “Post-recession, what people really want to spend money and time on is something they believe in and on respect, dignity and change,” he said, during a recent talk at the ISB.





## An Educated Economy

“In the history of mankind there has been no other nation that has brought that many people to the middle class in such a short period of time. So there are a lot of positive things that say that India is poised but at the same time we need to be cognizant about some of the challenges facing the country,” said Rajat Kumar Gupta, Chairman, ISB and the Senior Partner Emeritus, McKinsey & Company, addressing the ISB Class of 2011.

He opined that a robust education system is essential for a country to be able to go from an underdeveloped state to a developed economy. He added that it was important for the education system to be opened up to private enterprises as the government itself does not have the capacity or capability to scale up. “My personal belief is that these kinds of challenges are not the domain of the government only,” he said. “It can only be done if civil society, business and government come together.”

## Work Starts on the ISB Campus at Mohali

The ISB will soon start the construction of its second campus, at Mohali in Punjab. A progression of the ISB vision, the Mohali campus will further the School’s objective of providing world-class management education in the country. In addition to the Post Graduate and Executive Education programmes, the ISB campus at Mohali will set up specialist institutes for promoting research and offering specialisations in key verticals - the BML Munjal Hero Honda Institute of Manufacturing Excellence and Innovation, Punj Lloyd Institute of Physical Infrastructure Management, Max India Institute of Healthcare Management and the Bharti Institute of Public Policy. The first two institutes are being set up in association with the MIT Sloan School of Management. The ISB is also exploring partnerships for the other institutes. The first academic session at Mohali is scheduled to commence in the year 2012.

# Book Review

*“This was it, Blankfein thought. The big one. Paulson was going to have ‘the families’ meet to try to save Lehman.”*

Much has been written about the greatest financial crisis since the Great Depression. What sets *Too Big to Fail* apart is its attempt to relay the behind-the-scenes account of how the crisis unfolded and the unprecedented access to information that Andrew Sorkin seems to possess. The book, by an award winning New York Times journalist, is a product of more than five hundred hours of interviews with more than two hundred individuals who participated

directly in the events surrounding the financial crisis. It’s fast-paced and if somewhat exhausting in length, it recreates all the drama and the turmoil to the extent that the reader might feel like a fly on the wall of the corporate boardrooms when these historic decisions were being made. Starting with the collapse of Bear Sterns and ending shortly after the government instituted the Troubled Asset Relief Program, the book provides a thrilling narrative of the efforts, or rather the lack of them, of the Wall Street and Washington bigwigs to keep some of

the biggest financial firms, and in turn the American financial system, afloat. The book isn’t so much about the theoretical aspect of the toxic security instruments that led to the crisis as it is about the real people. Dick Fuld, Hank Paulson, Ben Bernanke, John Thain – Sorkin digs deep and finds out what led to the creation of legends out of these not so ordinary men and for some, their subsequent downfall.

Lehman was bleeding, Merill wasn’t any better and AIG seemed to take the entire world down with it. With this as the context, *Too Big to Fail* is a portrait

## *Too Big to Fail: Inside the Battle to Save the Wall Street*

By Andrew Ross Sorkin

Reviewed by Arnab Kumar & Akshay Rajagopalan,  
PGP Class of 2011, ISB

PUBLISHERS: Penguin Group

Pages: 600

of the dedicated and often baffled individuals who struggled – often at great personal sacrifice but often just for self-preservation – to spare the world and themselves an even more calamitous outcome. The survival strategies – the heavy hand of the Treasury, secret deal brokering meetings in Korea and Russia, the madness of the mergers and buyouts – the book details it all. Especially enthralling is the description of the weekend before Lehman’s bankruptcy – how Hank and Tim Geithner bulldozed the biggies in formulating a plan for Lehman’s bailout, and almost chalked out a deal with Barclays, and how everything eventually fell apart.

To add to the value, there is a generous sprinkling of quirky personal details and amusing anecdotes. Describing the cash injection that Morgan Stanley received from Mitsubishi, Andrew delves on the how the payment was arranged.

There it was: “Pay against this Check to the Order of Morgan Stanley. \$9,000,000,000.00.” Kindler held in his hands, somewhat in disbelief, clutching what had to be the largest amount of money a single individual had ever physically touched. Morgan had just been saved.



## YOU'VE COME A LONG WAY IN BUSINESS IT'S TIME FOR A REFRESHER



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\*Fee excludes mandatory taxes applicable

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