

**CENTRE FOR FINANCIAL MANAGEMENT**

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## A. ARTICLES AND CASES

### 1. THE SUCCESS EQUATION: UNTANGLING SKILL AND LUCK IN BUSINESS<sup>1</sup>

Dr. Prasanna Chandra

A combination of skill and luck influences much of what we experience in life. You earn a windfall if you buy the stock of a company just before it is acquired at a huge premium. A pharmaceutical company develops a drug for cholesterol that turns out to be blockbuster drug for diabetes.

To understand the performance of a firm, we must learn to untangle the role of skill and luck. In this context, bear in mind the following.

1. While different levels of skill and luck shape our lives, we are not good at distinguishing between the two. This is partly because most of us are not well versed with statistics. More important, psychological factors hinder our ability to distinguish between skill and luck. Our intuitive judgments are often unreliable because we base predictions on how well an event seems to fit a story, rather than consider how reliable the story, is or what happened before in similar situations. (Humans love stories because they are one of the most powerful ways of communicating.) Once something has happened, we are inclined to come up with a cause to explain the event. As Michael Mauboussin says, “The problem is that we commonly twist, distort, or ignore the role that luck plays in our successes and failures. Thinking explicitly about how luck influences our lives can help offset that cognitive bias.”
2. As a first step toward untangling skill and luck, let us define these terms. A dictionary defines luck as “events or circumstances that work for or against an individual.” More specifically, luck is a chance occurrence that affects a person or group, favourably or unfavorably, and luck is beyond one’s control. It is useful to distinguish between randomness and luck. While randomness operates at the level of a system, luck operates at the level of an individual.

The above definition suggests that one should develop an attitude of equanimity toward luck. As Michael Mauboussin says, “If you’ve benefited from good luck, be happy about it and prepare for the day when your luck runs out. And don’t feel affronted when you suffer from bad luck.” He adds, “Provided that you have approached the activity in the correct fashion, you want to shrug off the poor results and go about your business in the same fashion in the future.”

3. What is skill? According to a dictionary, skill is defined as the “ability to use one’s knowledge effectively and readily in execution or performance.” It is practically not possible to discuss skill in a particular activity without considering the role of luck.

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1. This section draws heavily on Michael J. Mauboussin’s *The Success Equation*, Boston: Harvard Business Review Press, 2012

4. Some activities such as playing chess or running a race depend almost wholly on skill. Other activities like betting on a roulette wheel depend almost wholly on luck. In between lie most of the activities which depend on skill and luck in varying proportions.
5. When skill exerts more influence, there is an intimate connection between cause and effect. On the other hand, when luck exerts more influence, there is a loose connection between cause and effect in the short run. An activity may be deemed to involve skill, if you can lose on purpose.
6. Michael Raynor, a Deloitte consultant, defines what he calls the *strategy paradox*. This means “the same behaviors and characteristics that maximize a firm’s probability of notable success also maximize its probability of failure. “He illustrates this paradox with the story of Sony Betamax and Minidiscs. When these products were launched, Sony was on the top with a long string of winning products such as the transistor radio, the Walkman, and the compact disc (CD) player. However, when it came to Betamax and MiniDiscs, argues Raynor, “the company’s strategies failed not because they were bad strategies but because they were great strategies.”
7. When luck dominates, a large sample is necessary to understand, what’s going on. But when skill dominates, a small sample is sufficient to figure out what is happening.
8. With improvement in skill, performance becomes more consistent. Hence, luck becomes more important. Mauboussin calls this the *paradox of skill*. When everyone in a certain sphere of activity is uniformly more skillful, the vagaries of luck matter more. As Mauboussin says, “When everyone in business, sports, and investing copies the best practices of others, luck plays a greater role in how well they do.” In a somewhat similar vein, Jay Gould says, “Long streaks are, and must be, a matter of extraordinary luck imposed on great skill.” The paradox of skill explains why it is hard to consistently beat the market. As Charles Ellis says, “Gifted, determined, ambitious professionals have come into investment management in such large numbers during the past 30 years that it may no longer be feasible for any of them to profit from the errors of all the others sufficiently often and by sufficient magnitude to beat the market averages.”
9. When we talk about success, we tend to over- emphasise skill and under-emphasise luck. A closer examination, however, would reveal the substantial role played by luck. As Mauboussin says, “If history is written *about* the winners, because we like to see clear cause and effect. Luck is boring as the driving force in a story.”
10. Reversion to the mean implies that an outcome that is far from the average will be followed by an outcome that is closer to the average. The position of an activity on the luck-skill continuum determines the *rate* of reversion to the mean. If an activity depends solely on luck, there is complete reversion to the mean. ON the other hand, if an activity relies entirely on skill, there is no reversion to the mean.

11. The luck-skill continuum is a simple but powerful concept. It helps us to understand when luck makes the level of skill irrelevant.
12. To place activities on the luck-skill continuum, you have to understand the nature of the activity and the outcomes it produces. In this context, answering some basic questions is helpful. First, can you easily assign a cause to the effect you see? If yes, the activity is most likely to lie on the skill side of the continuum. Second, what is the rate of reversion to the mean? If the reversion to the mean is slow skill plays a dominant role; if it is rapid, luck plays a dominant role. Third, how useful are expert predictions? When the predictions of experts are similar and accurate, skill plays a dominant role. When experts differ widely and predict poorly, luck plays a dominant role.
13. Experts are notoriously fallible in predicting the outcomes of economic, social, and political systems. This is because these systems are complex adaptive systems where the outcomes depend on the interaction of lots of individual agents. Such systems obscure cause and effect. What is surprising is not the poor record of experts, but people's faith in experts.
14. The most common way to understand the determinants of business success is to find successful companies and identify the common practices of these companies. Jim Collin's immensely popular book *Good to Great* exemplifies this approach. Such an approach works if causality were clear. The problem with this approach is that the performance of a company depends on skill as well as luck, implying that a given strategy will succeed only part of the time. So attributing success to a given strategy may be naïve because you're looking at the sample of only the winners. Jerker Denrell refers to this as the under sampling of failure. The question that needs to be asked is : How many companies that tried a given strategy succeeded or failed? As Mauboussin says, "Since we draw our sample from the outcome, not the strategy, we observe the successful company and assume that the strategy was good. In other words, we assume that the favourable outcome was the result of a skillful strategy and overlook the influence of luck."
15. A careful study by Andy Henderson, Michael Raynor, and Muntaz Ahmed examined tens of thousands of companies over a period of four decades, using over 23,000 return on assets (ROA) observations, to distinguish between luck and skill in explaining corporate success. The principal finding of their study is that "the results consistently indicate that there are many more sustained superior performers than we would expect through the occurrence of lucky random walks." The authors however caution that it is fairly easy to confuse superior performance with the results from luck. As they write, "Our results show that it is easy to be fooled by randomness, and we suspect that a number of the firms that are identified as sustained superior performers based on 5-year or 10- year windows may be random walkers rather than the possessors of exceptional resources."
16. Like athletes, companies tend to follow a lifecycle. As the industry matures, all competitors tend to move toward optimal efficiency and, as a result, excess

returns are dissipated. As Bruce Greenwald said, “in the long run everything is a toaster.” The toaster symbolizes a mature business, with no entry barriers and no excess returns.

17. Based on their research, Robert Wiggins and Timothy Ruefle argue that there is clear evidence of reversion to the mean in the corporate world. Further, returns seem to be converging at a faster rate today than they did in the past.

## 2. MANAGING RISKS IN PRIVATE SECTOR PROJECTS

Dr. Prasanna Chandra

While all projects are risky, private infrastructure projects in developing countries seem to be characterised by a higher degree of risk. Investors perceive greater risk in these projects partly because these projects are undertaken by special purpose companies and not by established utility companies with strong balance sheets.

To ensure that such projects are financeable, the sponsors must carefully assess various risks and take appropriate risk mitigation measures. The major risks involved and the methods for managing them are described below:

**Construction Risk** Due to unexpected developments during the construction period, there may be time and cost overruns or the completed project may have shortfall in performance parameters. Construction risk tends to be more in sectors such as transportation and power and less in sectors such as telecommunications and urban services.

Construction risk can be shifted to a certain extent to the EPC (engineering, procurement, and construction) contractor who is given turnkey responsibility with suitable penalties for delays and performance shortfall. However, since the penalties for non-performance are typically capped, the construction risk cannot be eliminated completely. The residual risk has to be borne by investors.

**Operating risk** The performance of the project may be below the projected level of performance. Operating risk tends to be lower when the project uses a tested technology (as in the case of a power project or a road project) and higher when the technology is changing rapidly (as in the case of a telecom project).

Operating risk can be mitigated by entrusting the operations to an experienced and competent O & M (operations and maintenance) contractor with provisions for liquidated damages and taking appropriate insurance covers.

**Market risk** The actual market and demand conditions may turn out to be very different from what was assumed in determining the viability of the project.

When the private producer sells to a monopoly purchaser (as in the case of an independent power producer selling to a monopoly distributor), market risk may be mitigated by entering into an agreement that guarantees a minimum level of purchase. When the private producer sells directly to individual users who have multiple options (as in the case of roads), the project sponsors may ask the government to guarantee a certain minimum payment if the traffic falls below a certain level. To ensure symmetry, such a guarantee may be balanced by sharing a portion of revenue when the traffic exceeds a certain level.

**Interest rate risk** The project company often borrows money at a floating interest rate. Hence, the changes in interest rate during the life of the project causes interest rate risk. This risk is particularly pronounced for infrastructure projects because of high capital intensity, long payback periods, and high levels of gearing.

Interest rate risk may be mitigated by transferring it to consumers through a tariff formula that treats interest cost as a pass-through cost. Alternatively, interest rate risk may be hedged through devices like interest rate swaps and interest rate caps and collars.

**Foreign exchange risk** When a project relies on foreign currency debt, unfavorable variation in the exchange rate results in a higher debt servicing burden in terms of domestic currency.

Foreign exchange risk may be managed by shifting it to consumers through a tariff formula that automatically provides adjustment for exchange rate changes. Alternatively, the project company may resort to currency swaps.

**Payment risk** An infrastructure project may face the risk of not being paid for services provided. This risk is more pronounced when the project company sells to a monopoly buyer as in the case of an independent power producer (IPP) supplying power to a monopoly public sector distributor; it is less severe when the project company sells to a multitude of customers as in the case of a telecom operator or a toll road.

Payment risk may be mitigated by mechanism such as letter of credit, government guarantee, and escrow arrangement.

**Regulatory risk** Infrastructure projects are subject to regulation that covers, among other things, tariff determination. Arbitrary changes in the regulatory framework are a source of risk.

The onus of mitigating regulatory risk seems to lie with the government. As Montek Ahluwalia put it: "In general, regulatory risk is best handled by establishing strong and independent regulatory authorities that operate with maximum transparency of procedures within a legal framework that provides investors with credible recourse against arbitrary action."

**Political risk** Infrastructure projects are highly visible and touch the lives of public in basic areas. This makes them vulnerable to populist political action that can jeopardise their financial viability – in the extreme case, political action can lead to cancellation of license or nationalisation.

Political risk can be partially mitigated through political risk insurance offered by multilateral organisations, such as the Multilateral Investment Guarantee Agency, or bilateral investment protection agreements. It can also be reduced by incorporating into the project agreement a suitable provision for compensation against arbitrary action, subject to international arbitration. Yet another instrument is the World Bank's new partial risk guarantee instrument which covers debt service payments if they are interrupted because the government does not fulfill its specific obligations.

### 3. Narmada Bridge Project Dr. Prasanna Chandra

Narmada Infrastructure Limited was set up as a special Purpose Vehicle to build the Narmada bridge on a build, operate, transfer (BOT) basis. The construction period of the bridge was supposed to be three years, 1998 through 2000. The Special Purpose Vehicle would enjoy a Concession Period of 15 years 2001-2015 and after this period the bridge would be transferred to the government.

The project cost (including interest during the construction period) was estimated at Rs.144 crore. It would be financed by Rs.48 crore of equity and Rs.98 crore of debt.

For the first year of operation, viz., 2001, the projected revenue per day was as follows:

Cars : 3916 x Rs.11 = Rs.43,076

LCVs : 3578 x Rs.28 = Rs.100,184

Buses : 2565 x Rs.33 = Rs.84,645

Trucks : 21305 x Rs.33 = Rs.703,065

Rs.930,975

Keeping a margin of 10 percent for maintenance and other factors, the revenue for 2001 was estimated as:  $Rs. 930975 \times 365 \times 0.90 = Rs.30,58,25,288$  The operating and maintenance expenses for the year 2011 were estimated as Rs.2,75,24,276.

Hence, the projected operating surplus (PBDIT) for year 1 (2011) was :  $Rs.30,58,25,288 - Rs.2,75,24,276 = Rs.27,83,01,012$ . This may be approximated as = Rs.27.8 crores. It was assumed that this would grow at a rate of 12 percent per year over the Concession Period.

#### Required

Calculate the NPV and IRR of the project at the beginning of 2001 (that is year 1 of operation). For this calculation assume that the imputed cost of equity during the construction period is Rs.16 crore, the periodic cash flow is PBIDT, and the WACC is 18 percent.

## **B: SNIPPETS**

### **1. The Flaws of Our Financial Memory**

Although human cognitive ability is highly evolved, it is not necessarily well adapted to the challenges of modern life. Human memory tends to change as it is not always an accurate description of facts and autobiographical events. Two possible ways of addressing memory flaws are investment policy statements and investment diaries.

Investment policy statements provide long-term guidance and can save investors from making investment decisions that are not aligned with their long-term goals. Clearly defined rules and limitations help in mitigating biases. Investment diaries protect investors against misattribution or suggestibility. For the investment diary to be effective, the investment goal, the risks involved, and the basic reasons for making the investment should be recorded. In addition, the outcome should be recorded and the investment diary must be reviewed annually.

### **2. Two Ways of Being an Intelligent Investor**

According to Benjamin Graham, there are two ways of being an intelligent investor.

The first approach involves continually researching, buying, selling, and monitoring a dynamic mix of stocks, bonds, mutual funds, alternative investments, and so on. Graham calls this approach *active* or *enterprising*. It is physically and intellectually very demanding; it consumes a lot of time and energy.

The second approach involves creating a more or less permanent portfolio that runs on autopilot, requires no additional effort, and generates very little excitement. Graham calls this approach *passive* or *defensive*. While the enterprising approach is physically and intellectually taxing, the defensive approach is emotionally demanding, as it requires an almost ascetic detachment from the enticing and captivating hullabaloo of the market.

### **3. The Mission Statement**

A mission statement expresses the fundamental, unique purpose that distinguishes a firm and identifies the scope of its operations. It defines the *raison d'être* of a firm. It may be presented under different labels such as "statement of purpose," "creed statement," "defining our business," and "statement of philosophy."

According to John A. Pearce II and Fred David, "An effective (mission) statement helps to satisfy people's needs to produce something worthwhile, to gain recognition, to help others, to beat opponents, and to earn respect. This, it is a general declaration of

attitude and outlook." A mission statement provides the basis for defining objectives and developing strategies. According to them mission statements reflect one or more of the following: target customers and markets; principal products/services; geographic domains; core technologies; commitment to survival, growth, and profitability; company's philosophy; company's self-concept; and company's desired public image.

#### **4.EVA at Coca Cola**

Robert Gouizeta, former CEO of Coca-Cola was one of the most enthusiastic proponents of EVA in America. He introduced EVA formally in Coca-Cola in 1987. To distill EVA he used simple metaphors. "When I played golf regularly, my average score was 90, so every hole was par 5. I look at EVA like I look at breaking par. At Coca-Cola, we are way under par and adding a lot of value." Gouizeta did several things. First, he concentrated capital in the hugely profitable soft drink business, while dumping a motley of low ROI businesses that made pasta, instant tea, plastic cutlery, desalinization equipment, and wine. Second, he coaxed his managers into doing more with the capital or using less capital. As a result, the company produced more concentrate with 40 plants than it produced with 52 in 1982. Further, it replaced expensive metal containers for concentrate with inexpensive plastic ones. Third, he used more debt to reduce the weighted average cost of capital. In the early 1980s Coca Cola was practically debt-free. To Coca Cola's costly equity - it was much costlier during the high inflation period of early 1980s - he added less costly borrowings; effectively lowering the weighted average cost of capital from 16 percent to 12 percent.

The results of these moves have been dramatic. Coca Cola's EVA soared and its stock rose for \$3 to \$43 within 12 years of Goizueta's leadership.

## C.WIT AND WISDOM

### 1. Humour

- A person went to a library and sat down with a bulky book. After reading it intensively for four hours he complained to the librarian, "Sir, this is a very uninteresting book. It has thousands of characters but has no story whatsoever." The librarian said, "Sir, you cannot expect anything more because what you have been reading is not a novel, but a telephone directory."
- It was dark and raining and a drunkard fell into a muddy pool. Just then, there was lightning. The drunkard looked at the sky and said, "God, it is unfair. First you pushed me into a muddy pool then you photographed me in that condition."

### 2. Wise Saws

- You can suffocate a thought by expressing with too many words. *F.A.Clark*
- The past is really almost as much as work of imagination as the future. *J.West*

### 3. Perspective

- Throughout history, countercultures have appeared irrational, at least in their outward manifestation. The prosperous young men and women who adopted a strictly cloistered life during the middle ages, the 19<sup>th</sup> century bohemians who engaged in antics to protest the pomposity of bourgeois life and art, certainly must have looked irrational to the majority of reasonable people of their times. But in fact countercultures have been commonly motivated by a higher kind of rationality than that of the Establishment. What they express is not ordinary political dissent but rather the first stirrings of a true revolution in thought. They represent a soul-searching quest of values which once gave zest to living and which are being lost such as direct experience of nature, intimacy, uniqueness, and even eccentricity.

From Rene' Dubos "*From a God Within* (one of the most distinguished teachers of our time).