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A. ARTICLES /CASES

1. INVESTMENT RETURNS AND CORPORATE STRATEGY

DR. PRASANNA CHANDRA

An investment is made on the expectation that it will earn a rate of return greater than its hurdle rate. The actual performance of an investment, however, is likely to differ significantly from its expected performance. Some investments do better and some worse in relation to expected performance.

Since investment decisions have the greatest bearing on value creation or destruction, they should be continually reviewed and reassessed. In this context, the following questions have to be answered:

- Whether the existing projects of the firm have earned a return greater than the hurdle rate?

- If the existing projects are earning return in excess of their hurdle rates; what are the sources of their competitive advantages? How can these advantages be protected?
- If the existing projects are earning less than the hurdle rate, what are the possible reasons?

1. ANALYZING A FIRM'S EXISTING PROJECTS

Cash Flow Analysis

You can consider a firm's entire portfolio of existing investments and compute the amount invested in them as well as the cash flows they produce. The problem with this approach is that it is not possible to aggregate different investments made at different points of time, given the time value of money. So, we have to find a way of computing a cash flow return, that takes into account the investments as well as their timing.

The cash flow return on investment (CFROI) seems to be a suitable measure. To calculate the CFROI, four inputs are required:

1. The *gross investment (GI)* that the firm has in place. To compute the GI, add depreciation back to the book value of the assets (net asset value) to arrive at the original cost of assets and then convert the original cost into a current rupee value to reflect the inflation factor.

Gross Investment (GI) = Net Asset Value + Accumulated Depreciation + Current

Rupee Adjustment

2. The *gross cash flow (GCF)* earned in the current year on that asset. GCF is usually defined as follows:

Gross Cash flow = Adjusted EBIT (1 - Tax Rate) + Current Year's Depreciation

and Amortization

Adjusted EBIT in the above expression is operating income adjusted for operating leases and one-time charges.

3. The *expected life of the assets (n)* in place, when the original investment was made. This tends to vary from business to business.
4. The *expected salvage value of the assets (SV)* at the end of the life measured in current rupees. This is usually attributed to the non-depreciable portion of the initial investment (such as land and building and net current assets).

Based on the above four inputs, the time line for cash flows on the assets can be defined as follows:

		SV
GCF	GCF	GCF

GI 1 2 n

The GI represents the initial investment, the GCF is an annuity for the life of the investment, the SV is the salvage value at the end of the investment life. The CFROI is the internal rate of return of the cash flows depicted on the above time line. CFROI may be viewed as the composite rate of return on the assets of the firm, expressed in real time (in terms of current rupees). So, it is compared with the real cost of capital to judge whether the assets-in-place are creating or destroy.

Example To illustrate the estimation of CFROI, let us consider an example. At the beginning of 20x1, the book value of X- Mart's assets was Rs. 10,000 crores, including Rs. 7,000 crore of fixed assets, Rs. 2000 crore of net current assets, and Rs. 1000 crore of capitalised operating leases. The accumulated depreciation on the fixed assets amounted to Rs. 1500 crore. During 20X0,X-Mart had an operating income of Rs. 2000 crore and its depreciation charge was Rs. 600 crore. The average life of the fixed assets (stores) of X- Mart was five years and the inflation during this five- year period was approximately 8%. The fixed assets (stores) are expected to have a residual life of 15 years. 50 % of the investment in fixed assets (stores) is the value of the land which is a non- depreciable asset. The marginal rate of tax for X-Mart is 30%.

Given the above information, we get the following estimates of gross investment, gross cash flow, and salvage value.

Gross investment = $(7000 + 1500) (1.08)^5 + 2000 + 1000 = \text{Rs. } 15489$ crore

Gross cash flow = $2,000 (1 - 0.3) + 600 = \text{Rs. } 2,000$ crore

Salvage value = $\text{Gross investment} (0.5) = 15,489 (0.5) = \text{Rs. } 7745$

To compute the CFROI, we take into account the entire life of the asset, obtained by adding together their present age and the residual life. The IRR based on these inputs is 12.23%. This represents the CFROI.

$15,489 = 2,000 (\text{PV of Annuity, 20 years, CFROI}) + 7745 / (1 + \text{CFROI})^{20}$

The CFROI of 12.23% has to be compared with the real cost of capital to judge whether X-Mart's assets are creating value. X- Mart's nominal cost of capital is currently 14.5%. with an expected inflation of 8%, the real cost of capital would be:

Real Cost of Capital = $(1 + \text{Nominal Cost of Capital}) / (1 + \text{Expected Inflation Rate}) - 1$
 $= (1.45) / (1.08) - 1 = 0.602$ or 6.02%

Based on the above analysis, X-Mart is earning 6.21% (12.33% - 6.0%) more than its cost of capital on its existing investments.

Accounting Earnings Analysis

In our discussion of investment criteria, we argued the accounting- based measures (such as accounting rate of return) were inferior to cash flow based measures (such as net present value). Yet, accounting based measures are popular in practice for two reasons. One, earnings are readily available from financial statements, and their measurement is based on generally accepted accounting principles. Two, the earnings for a portfolio of projects can be a good proxy for the cash flow returns if certain conditions are satisfied.

Return on capital employed and return on equity are two widely used accounting measures of return. They are defined as follows:

Return on capital employed (ROCE) = $\text{PBIT} (1 - \text{Tax rate}) / \text{Average capital employed}$

Return on equity (ROE) = $\text{Net income} / \text{Average book Value of Equity}$

While these are accounting measures of return, they can be good proxies for cash flow return, if the following assumptions are satisfied.

- The income used (operating income and net income) is derived from existing investments and is not distorted by one-time gains or losses or expenditures (such as R&D expenses) meant for future growth.
- Depreciation and other non cash charges that diminish reported income are utilized to make capital expenditures that maintain the earnings power of existing assets.

When the above assumptions hold, a firm that has an ROCE greater than its weighted average cost of capital (WACC) may be considered as having good projects, on average, on its books. By the same token if $\text{ROCE} < \text{WACC}$, it means that, on average, the firm has bad projects on its books.

From the point of view of equity shareholders, if ROE is more than the cost of equity (COE), the firm is considered as having, on average, good projects which are creating shareholder value. Conversely; if $\text{ROE} < \text{COE}$, the firm is deemed as having, on average, bad project which are destroying shareholder value.

2. UNDERPERFORMING PROJECTS REASONS AND RESPONSE

At the time of its acceptance, almost every project looks good in terms of the criteria employed by the firm for project selection – otherwise the project would not be accepted. Yet, in reality, some projects don't live up to their expectations and deliver sub-par returns. It is even more disconcerting when collectively all the projects of a firm deliver inferior performance.

In this section we will explore *why* some projects fail to earn the expected return, *what* should be done with investment that have been identified as bad investments, and *how* a firm can mitigate the possibility of making bad investments.

Why Projects Fail

There are several possible reasons for project failure. The more important ones are:

- Loss of competitive advantage
- Unanticipated movement of interest rates and inflation rate
- Errors in initial investment analysis
- Biases in investment analysis.

Loss of Competitive Advantage In our previous discussion we learnt that positive net present value stems from a competitive advantage or barrier to entry. So, a project that has been

assessed as a positive net present value project is assumed to enjoy some competitive advantage when the investment decision is made. Over time, however things may change and competitive advantage may dissipate, leading to negative net present value.

Unanticipated Movement of Interest Rates and Inflation Rate The discount rate and cash flows used in investment analysis are based on the current level of interest rates and expected economic growth rate and inflation rate over the life of the project. Unanticipated movements in interest rate, growth rate, and inflation rate may cast a shadow over the performance of the investment.

Errors in Initial Investment Analysis The fundamentals of investment analysis are fairly simple. Costs and benefits have to be measured in terms of incremental, post-tax cash flows and the hurdle rate has to be consistent with the cash flows and the riskiness of the project. In practice, conceptual errors of the following kind tend to be committed.

1. *The incremental, post-tax cash flow principle is violated in several ways:* Non-cash charges may not be added back; changes in non-cash working capital may be overlooked; sunk cost and fixed allocated expenses may be treated as cash flows; opportunity costs of using resources already owned by the firm may be ignored; the average tax rate, rather than the marginal tax rate, may be used; the tax consequences of asset disposal may not be properly considered.
2. *The consistent discount rate principle may be violated* The incremental post-tax cash flows have to be matched up with discount rates that are consistent with them. Two errors are commonly committed in this respect. First, cash flows to equity may be discounted with the cost of capital of the firm or the cash flows to the firm may be discounted at the cost of equity. Second, cash flows may be defined in real terms whereas the discount rate may be expressed in nominal terms or the cash flows may be defined in nominal terms whereas the discount rate may be expressed in real terms.
3. *The project risk may not be considered correctly* The discount rate for a project should reflect its risk- higher the risk, higher the discount rate. However, this principle is often violated in practice. First, some firms apply the same discount rate (usually the firm's overall cost of capital) to all the projects, despite differences in their risk characteristics. As a consequence, safer projects are penalized and riskier projects are treated favourably. Second, while the CAPM suggests that only the systematic risk (market risk) matters, firms often consider unsystematic risk (firm specific risk) in determining the discount rate. Third, sometimes risk is wrongly counted twice. Cash flows are adjusted downward to reflect their risk and the discount rate is adjusted upward to reflect the same risk. As a result, risky projects are unfairly penalized.

Bias in Investment Analysis Apart from conceptual errors, investment analysis is often affected by estimation biases. There is substantial empirical evidence that cash flows are optimistically estimated.

The optimistic bias may arise because the project advocate is often asked to prepare the project cash flows and there may be no countervailing force to check the inherent optimism of the project advocate. Such a bias is clearly more pronounced when the person preparing the forecast is also responsible for investment decision making. It is not uncommon for an analyst or decision maker to start with a presumption that the project is a gold investment and then back it up analysis that confirms this preconception.

What Should Be Done

If an existing project has been identified as a bad investment, what should be done? A knee-jerk response may be to liquidate the investment because it is not earning the required rate of return. Such a response may not be appropriate because what really matters is the incremental cash flows expected from the project in future and not the sunk costs of the project.

For example, if you are evaluating a nine year project three years into its life, you will have to consider the new forecast of incremental cash flows as shown in Exhibit 1.

Exhibit 1: Analysis of an Existing Project

Cash flows

based on

Initial

analysis $C_0 \quad C_1 \quad C_2 \quad C_3 \quad C_4 \quad C_5 \quad C_6 \quad C_7 \quad C_8 \quad C_9$

New

analysis $A_0 \quad A_1 \quad A_2 \quad A_3 \quad NC_1 \quad NC_2 \quad NC_3 \quad NC_4 \quad NC_5 \quad NC_6$

Sunk

Future cash flows

Project analysis at this stage

C_n = forecast of cash flow for period n in initial analysis ($n= 1$ to 9)

A_n = actual cash flow for period n ($n=1$ to 3)

NC_t = new cash flow for period t ($t=1, \dots, n-3$)

When an existing project is being evaluated, there are three options: *liquidation*, *divestiture*, and *continuation*. Liquidation means the assets of the project are sold separately. Divestiture means that the project is sold in its entirety to a third party. Continuation means that the project is continued by the firm.

Based on the current assessment, the present value (PV) of the expected future cash flows may be calculated as follows:

$$PV = \sum_{t=1}^{n-3} \frac{NC_t}{(1+r)^t}$$

where r is the discount rate applicable to the project based on the perceived risk of the project at the time of current assessment.

To decide whether to liquidate or divest or continue the project, we have to compare the following:

- Present value- as calculated above.
- Liquidation value- this is the value realised from disposing the assets of the project individually.
- Divestiture value- this is the value realised from selling the project in its entirety to a third party.

The decision rule is fairly simple: Choose the option, liquidation, divestiture, or continuation, that has the highest value.

How to Avoid Bad Projects

Given the uncertainties of the business world, it is almost impossible to avoid bad projects. However, firms can mitigate the chances of investing in bad projects by taking the following measures:

- Improve the quality of information used for analysing projects.
- Separate the roles of project analysis and decision making as it helps in diminishing the bias in the process.
- Conduct post-completion audits and hold managers accountable for their forecasts.
- Use derivative products to mitigate financial risks.

Since competitive advantage is the most potent defence against project failures, firms that maintain and strength this advantage are less likely to experience bad projects.

In their attempt to avoid bad projects, firms sometimes impose additional constraints in the decision making process. Projects may be subject to multiple reviews, decision making may be highly centralized, stiff payback period requirements may be imposed, a high hurdle rate may be employed, and so on.

While such constraints provide some protection against bad projects, they may have some dysfunctional consequences. Good projects may be rejected because they do not fulfill arbitrary constraints; managers may spend considerable time and effort in gaming the system; and the investment process may become dilatory.

2. COMMON MISCONCEPTIONS ABOUT ENTERPRISE RISK MANAGEMENT

Dr. Prasanna Chandra

While most large companies talk about enterprise-wide risk management (ERM) programmes, very few have successfully implemented it. Why? John Fraser and Betty J. Simkins¹ believe that several misconceptions seem to hinder the successful implementation of ERM.

1. **Inherent Risk Can be Used as a Starting Point for ERM** Inherent risk, which may be

defined as a state that exists without any controls or mitigants, is often regarded as a useful starting point for implementing ERM. But as Todd Perkins said, “In many cases, the concept of ‘inherent risk’ is impossible to measure or even define. The idea of looking at risk absent all hard controls, soft controls, or mitigants, provides little or no useful information in most cases.”

A more sensible thing should be to start with “residual risk” – the risk that remains after management has instituted all operational measures to mitigate the business and financial risks of the firm. As Jason Toledono puts it: “ERM is really managing residual risk- that is, things that could happen. That’s what senior management needs to know.”

2. **Risk Management Is an End unto Itself, Regardless of Business Objectives** Often attempts are made to identify hundreds of risk, without defining the key business objectives and delineating how ERM will help in realising those objectives.

¹.John Fraser and Betty J. Simkins, *Enterprise Risk Management*, John Wiley & Sons, 2010

Effective ERM implementation calls for a clear understanding of how risk management redounds to business objectives. As COSO puts it: “Within the context of any entity’s established mission or vision, management establishes strategic objectives, selects strategy, and sets aligned objectives cascading through the enterprise. The enterprise risk management framework is geared to achieving an entity’s objectives.”

3. **Risks Can Be Managed on a Piecemeal Basis** Many companies continue to manage major risks in a piecemeal manner, independent of one another. As John Fraser and Betty Simkins put it: “In such cases, managers of credit risk, or market risk, or operational risk may be quite vigilant in monitoring their different risks; but often only within their limited sphere of influence, and with no real understanding of their effects on the total risk of the firm.”

An important factor that contributes to such a piecemeal approach is that professions are generally organised around a single skill set, such as insurance, accounting, portfolio management, or actuarial science. As John Fraser and Betty Simkins put it: “As risk management is practiced in many companies today, insurance specialists restrict their view of ERM to those risks that can be insured, market risk managers to portfolio risk of securities, actuaries to risks that require precise quantitative analysis, and so on.”

What is required is a wholistic approach to risk management. An effective ERM ensures that no one type of risk receives excessive attention and resources at the expense of other risks and risks are managed in an integrated fashion. It is necessary to draw on expertise in different areas.

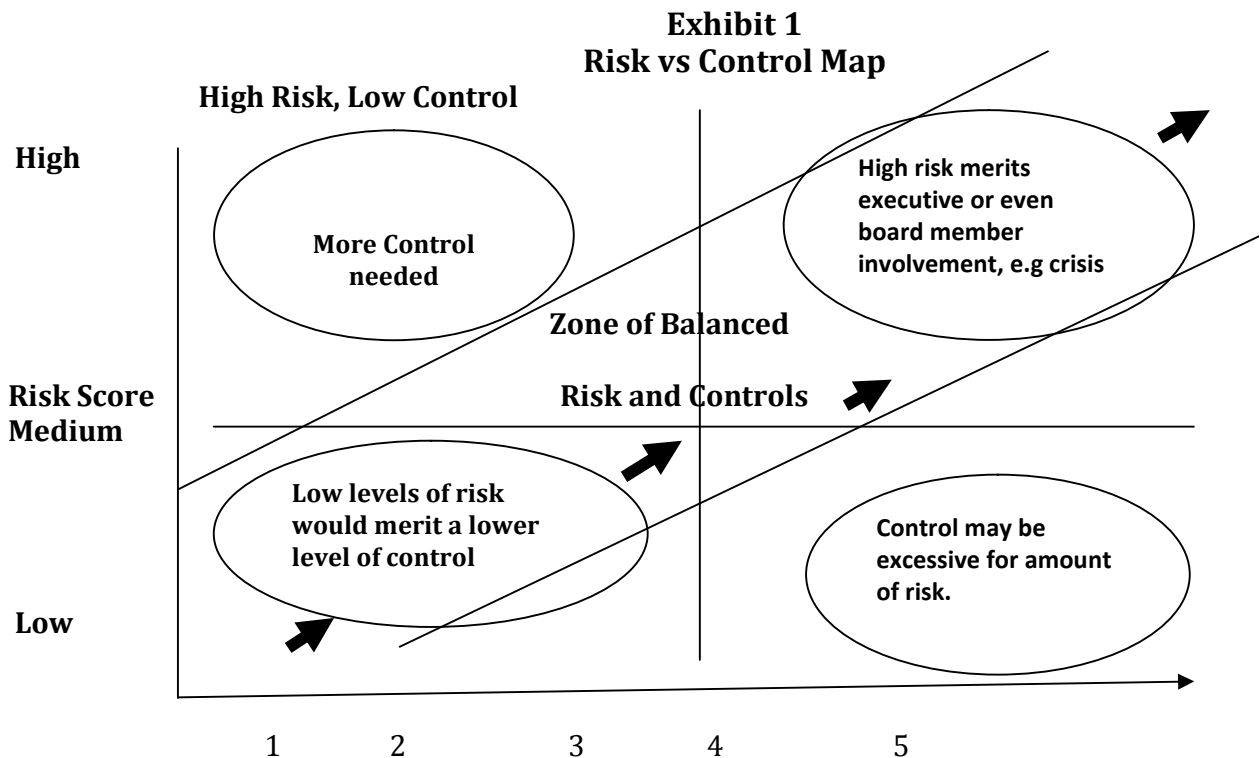
4. **ERM is a Low- Level Treasury Project** Many companies regard ERM as a low-level project to be handled by the treasury department.

An effective ERM must be a major top management initiative and an integral part of overall planning.

5. **All Risks Are Deemed Equally Important** Many companies fail to distinguish between lesser risks and bigger risks and hence pay undue attention to relatively unimportant risks.

An effective ERM requires that the control need must be consistent with the level of risk. This idea is illustrated by the practice of Hydro One, a successful practitioner of

ERM, shown in Exhibit 1. This exhibit is drawn from the article of John R.S. Fraser and Betty J. Simkins cited on footnote 1.



1. **ERM Should Routinely Focus on Managing Upside Risk** Much of the literature on strategic risk seems to suggest that managers should constantly think of upside opportunities as well as downside risk.

While a proper weighing of the upside potential and downside risk is necessary during the strategic planning phase, the thrust of ERM should be routinely on the downside risk. As Todd Perkin puts it: "At Southern Company, ERM is integrated in many ways with strategic planning, which considers both upside and downside. However, upside risks or opportunities must be considered in the context of strategic planning, at critical decision points, and when considering earnings guidance. Ongoing risk management activities clearly primarily focus on the downside risks."

2. **ERM Has no Discernible Impact on Firm Value** Many people believe that an ERM programme has no discernible impact on firm value. The beneficial effect of an ERM programme are felt only if and when the risks being managed actually materialise.

In reality, however, an effective ERM programme, that results in risk reduction, improves the credit rating of the firm and lowers its cost of capital. An Andrew Sunderman, Chief Risk Officer of The Williams Companies puts it: "for a company trying to continuously improve shareholder value and strengthen its credit standing, a continuing focus on managing our commodity price risk is critical for us to achieve these goals.. an effective risk management program can help a distressed company lower its cost of capital."

3. **ERM Is Mainly a Response to SOX Act** Many articles have argued that the Sarbanes-

Oxley (SOX) Act has provided the primary stimulus for implementing ERM.

In reality, however, ERM and SOX are fundamentally different in their impetus as well as approach. As John Fraser and Betty Simkins put it: “ERM is forward looking and concerned with major risks to corporate profitability and value, while SOX is backward looking and focused on compliance with financial reporting requirements. And because of these fundamental differences, attempts to link two processes appear to be misguided and destined to fail.”

B.SNIPPETS

1. Key Takeaways from Antii Ilmanen’s Work

Here are the key takeaways from Antii Ilmanen’s masterly work *Expected Returns: An Investor’s Guide to Harvesting Market Rewards*.

- Investors can enhance long-run returns in many ways. The most important thing is to collect risk premia from different sources. Equity and illiquidity premia are important sources. However, they should not dominate the portfolio, particularly when ex ante rewards appear weak. Remember that entry and exit valuations matter.
- Investors can try to increase returns by resorting to value investing, momentum investing, market timing, and view- based alpha- seeking. Judicious use of leverage can be a source of return enhancement.
- Diversity in approaches helps. As Antii Ilmanen puts it, “The next generation of best practice for enhancing returns involves pursuing several of these paths in parallel instead of embracing one idea. It is up to every institution to decide-based on its objectives, constraints, natural edges and inclinations-what its priorities are. “He adds, “Diversity in approaches helps investors avoid overcrowded positions and reduces the danger that too homogeneous approaches across investors will lead to systemic problems.”

2. Just- in -time Budgeting for a Volatile Economy

Budgeting is a formidable challenge for most companies even under stable conditions. Managers often spend significant amounts of time on it, but derive very little value from it. Under volatile economic conditions, developing a reliable budget for an entire fiscal year is an enormously difficult task. The traditional budget process may even be unproductive.

While there are easy solutions, executives can take the following measures to improve the effectiveness of the budgetary process: scenario planning, zero-based budgeting, rolling forecasts, and quarterly budgeting.

Scenario Planning In a volatile environment, it makes sense to formally develop different business scenarios and model the implications of each scenario for the company. Although at the end of the process a single budget is adopted, it is supplemented with concrete business plans and projections for plausible future scenarios.

Zero-based Budgeting Most current budgets are anchored in the past, with marginal changes to reflect inflation and specific trends. In today's volatile environment where it is imperative to optimally manage discretionary expenditures, zero based budgeting which starts the process wholly from scratch is helpful. All expenditures, operating and capital must be carefully scrutinized and aligned with the company's strategy.

Rolling Forecasts Instead of preparing the annual budget once every year, it may be better to prepare a rolling 12 to 18 month budget. This enables the company to adapt itself to a fast-changing macroeconomic climate.

Quarterly Budgeting In times of extreme uncertainty, a company may abandon annual budgeting in favour of a more tactical quarterly budgeting. A company under stress should focus more on short-term cost reduction and working capital management and less on annual revenue or profit targets. As Mahmut Atkenet. al. said, "The quarterly approach allows companies to allocate their resources in real time, to make better forecasts, and to review their performance at the end of each quarter and therefore identify and address problems more quickly."

3. Three Sets of Dynamics

According to Saurabh Mukherjea, CEO- Institutional Equities, Ambit Capital, three sets of dynamics tend to determine the returns of the index.

Reversion to the mean The mean reversion phenomenon seems to work as a predictor of Sensex returns over five- year cycles.

The political – economic cycle in India The Sensex seems to be influenced by the political – economic cycle in India. It appears that the Indian economy moves in 8-10 year economic cycles, the beginning of these cycles coinciding with decisive election mandates (e.g. 1984, 1991, and 2004).

The US interest rate cycle The US monetary policy cycle and Sensex returns seem to be closely coupled. When the US Treasury bond yields start rising in the wake of monetary tightening by the Federal Reserve, money moves from the US bond market to the global equity market. This benefits emerging markets and the Sensex.

4. A New Performance Metric

Vishal Sikka, who became the CEO of Infosys, in August 2014, plans to make Infosys the next generation services company by embracing disruptive technologies including automation and artificial intelligence.

To track the progress of the company against, this plan, Infosys introduced the 'revenue per FTE (full time equivalent) metric' for measuring performance. This metric measures revenue generated by employees working on a project. It is different from 'revenue per employee', the traditionally used metric, which takes into account all employees including those who are on a bench or undergoing training. An Infosys spokesperson said, "We believe this is an important metric in tracking the success of our innovation related initiatives in renewing our existing services and branching into never areas. This is an important metric, but not all-encompassing."

PART C: WIT AND WISDOM

1. HUMOUR

- A doctor said to a politician, "Congratulations, your wife has delivered triplets." "Impossible," exclaimed the politician and told "I demand recounting."
- The science teacher asked her students "How would you measure the height of a building with the help of an aneroid barometer." One student, short on knowledge but long on ingenuity, replied, "I would lower the barometer on a string and measure the string."

2. Wise Saws

- Advances are made by answering questions. Discoveries are made by questioning answers *Bernard Haisch*
- Imagine how hard physics would be if particles could think! *Murray Gell- Man, Physics Nobel Laureate*