Society of Actuaries Meeting

Some of you are managers of money; others supervise others who manage; others develop benchmarks, while many of you are responsible for assessing how different portfolio strategies will result, over time, in a given range of returns; others in asset and liability management. I cannot speak to all of you because of your differing responsibilities -- except, perhaps, by sharing with you some experiences about risk and bureaucracies which may enhance your own insights or specific environment. I have no magic ways to predict rates, or how to hedge interest or currency risk without cost, or show how to achieve a guaranteed return higher than anyone else. I will try to put in some context what has happened in the world of finance over the last decade. The subject of my remarks, in short, is uncertainty and vulnerability and our capacity to understand the outside world.

1. First, perhaps it will be most useful to describe the major developments which have increased the volatility of the markets in which we all operate.

2. Second, how we should respond to that volatility.

3. Third, how have CEO's, policymakers handled the vast array of complex financial products.

4. And finally, some brief personal comments on risk and performance.

To begin:

Volatility

I. What has the world's financial system experienced over the last decade or two? Let me just list:

   a. Volatile exchange rates. Yen 360, Yen 170, Yen 320, Yen 120.

   b. Volatile interest rates. 7%, 15%, 7%, 10% for long-term bonds and 5% to 20% for short-term paper. A market in which the movements over one week was greater than the movement over 10 years (1955-1965).

   c. Basic changes in world patterns and volumes of financial savings: OPEC; Japan; the lifting of restrictions on non-residents' activity in other nationals' currency.

   d. A great premium on liquidity -- caused in part by market volatility.

e. Recession; inflation; recession.

f. Increased competition amongst intermediaries for funds (banks, investment banks, non-banks, insurance companies, pension funds) -- all seeking to gather assets.

g. Deregulation -- across borders -- permitting individuals and institutions to sell their currency and buy another, and more, move their savings to support another country's infracture or private sector -- a remarkable development.

h. An LDC debt crisis; a real estate crisis -- all putting great pressures on banks and heightening their awareness of risk. A thrift crisis. Bad loans. Very little marked to market.

i. Increased communication links; securitization. The development of very complex products.

j. Very high material rewards or compensation for getting it right. Uncertain punishment for getting it wrong.

k. Tremendous competitive pressures to manage other people's money and out-perform. Want to maintain good will of major stockholders.

l. Intermediaries who service clients are faced with narrowing spreads and increased customer sophistication. You are more sophisticated than your bankers.

Certainly enough volatility to explain the reasons for most financial innovation and the need for risk management.

II. Given that environment, the code words were, and are, innovate, leverage, protect, hedge, insure -- all quite different approaches. But the human psyche, and certainly the bureaucratic setting, has not changed. There remains to cope with financial uncertainty in a competitive world. In my field, most principals handle risk and volatility in a highly uneven fashion. Though you are in a different setting, you may recognize some aspects from your own experiences.

a. First, most of us respond to peer pressure. We want to develop a new form of immunization or asset allocation; we spend time on developing new benchmarks and how to beat the benchmark rather than maximize performance. We focus on looking good, rather than being good.

b. We want to capture rewards quickly and, hopefully, visibly.

c. Share blame or responsibility. We seek not to be identified as the provider of unwisdom. We rarely, though, speak or act in probability terms. We have a pretense of certaintly, of suredness, yet we increasingly seek to hedge, balance or insure -- until the competitive pressures become too great.

d. We rarely measure opportunities lost. Only visible mistakes are punished. Bonds purchased at 8% when yields rise to 12% are considered a mistake. Those not made at 12% when yields decline to 8% are not considered a mistake. (Use 6 examples)

e. Most financial intermediaries rely on sympathetic accounting conventions. A rolling loan gathers no loss. We need not show losses until you sell. Performance measures sometimes are designed to cover up error. We seek instruments where the accounting conventions do not require marking to market. Banks keep LDC debt at par; we seek to maintain a fiction of maintenance of value. We are very concerned about admitting to failure, mistake or error, more concerned than we are being wrong. We do not mark to market unless we have to.

III. All of these matters inevitably cause us to perform with insufficient attention to credit or volatility. Let me share with you now a somewhat personal view on financial management.

a. I cannot predict with a reasonable degree of certainty either interest rates or exchange rates, one day, six months, one year, or five years from now. So. But that was my career for decades.

b. There is just as much risk in not investing as in investing; in taking positions as in not taking them.

c. Mistakes will always be made -- many times in executing an investment program or managing risk. A mistake is anything less than perfect.

d. External forces, outside one's control, will limit us and make returns highly unpredictable. Oil prices, recession, exchange rates, protectionism, politics, tax changes.

e. We have created an environment in which we can hide failure and maximize risk. The Banks, for example. It is very dangerous.

We do other things where we work:

1. We look for quantitative support -- for charting, for probabilities, for quantitative analysis, to justify, on an objective basis, our views.

2. How much is the loss -- the dread factor. Will we or our client be wiped out if we move too soon or too much.

3. Will we be found out. Discovered. Identified as the wrongdoer -- the recommender of unwisdom.

4. Will we be hassled? By peers, superiors, the bureaucracy.

5. The herd instinct. Is everyone else doing it.

6. The availability of rewards and punishment.

7. Present pleasure -- future pain: let someone else pick up the pieces.

8. Can I get away with hedging or matching, or will competitive pressure push for higher returns.

The bottom line is that our egos, fears of potential punishment or rewards, the extent to which conventions permit us to cover up or look better than we are, have nothing to do with interest rates, currency movements or the availability of resources.

Let me now talk about the players in the world of finance:

The Trader in a Securities Firm:

1. Can't predict rates. If he could, would not need to work -- ever. The same goes for those who bring you research ideas (why are they so highly compensated).

2. Unwilling to hedge. Often keeps what he is doing from manager.

3. Compensation system. No symmetry.
   (a) firm's money
   (b) no downside risk
   (c) double bets if market deteriorates
   (d) sense of ego (I must be paid so much because I am worth it)

4. Difficult environment:
   (a) narrow spreads
   (b) low volume
   (c) low volatility
   (d) high volatility
   (e) bear market

   All this typically produces losses after cost allocation.

5. Will rarely talk to CFO or Treasurer. Far more sophisticated about markets. What they do not show or share speaks volumes.

The Salesmen:

Sell to you his positions. Spreads narrow. Sell now products. Hope he is further out on the curve than you are.

Senior/Middle Manager:

1. Stuff is technical -- probably no experience or training. Doesn't want to hear about convexity, basis risk, latest writings on efficient frontier are not where he is at in his life.

2. Afraid to ask. Embarrassed to ask. Financial engineering too complex for him. Fear and insecurity.

3. Can be fooled by accounting conventions which cover up mistakes. He also, soon though, will learn to use accounting conventions.

4. Hostile to quants or traders -- too young, too over-paid, too much control, too smart. Resentment. In my day...

5. Reports are inadequate. Difficult to capture risk. Sometimes, for some customers, it doesn't matter.

6. Rarely talks to trader or risk-taker. He is at the opera.

7. Later, if a CEO of a business, he will expect accounting miracles, then real miracles, then decide that if he can't sell cars, then "do finance" so makes up for the shortfalls.

8. On the other side, there will be pressures to hedge, protect, insure and stick to selling cars or textiles rather than taking unmatched exchange rate exposure.

9. For some of you, there will be the constant policy battles

whether to hedge, capture a spread, or go long or short to maximize a fast return, hopefully.

The Analyst:

The quant; the "techie" -- senior management attempts at control over the trader or active money manager, or portfolio strategist.

1. In the securities market, there is the co-opt problem.

2. The bullying problem. Mind your business.

3. The "ignore you" problem
   (a) you are too smart; too young
   (b) you don't understand it

4. The SPY problem. Who are you? Who do you represent? Don't you ever want to trade or manage? We don't like front office strategists.

Let me now talk about some basic biases about managing, trading and evaluating -- at least as applied to any risk taking:

1. All risk taking should be explicit. We must know how much we are taking -- no matter how complicated the instrument.

2. Everything should be marked to market, even if you do not have to.

3. All opportunities lost should be measured. The cost of not maximizing return should be known and failure never punished.

4. A compensation system which rewards for higher rates of return assumes that compensation -- material rewards -- correlates with being a better manager or being right. I believe it is neutral, at best, and possibly counter-productive to predicting rates or share prices.

5. But if one must pay for performance, managers should be compensated as much for avoiding loss when others lose as for making it when the market turns in his favor.

6. The only perfect hedge is in a Japanese garden.

7. Understanding that we are not as smart as we think we are -- despite bonuses -- is the beginning of wisdom.

8. Doubling our bets is a recipe for disaster in a system where there is no symmetry for compensation. Bonuses are not

symmetrical and, over time, will drive one to excessive risk.

9. A manager who avoids a loss of $50 million and earns nothing, while the rest of the market loses $50 million, is a gem.

10. Risk affects us all and in a market in which there is a lot of stress -- and it isn't a one-way street -- admitting to a sense of vulnerability or uncertainty or unsuredness by hedging, restructuring, insuring, guaranteeing, and <u>using</u> those who are familiar with the more arcane uses of futures, options, rate caps, floors, is not a sign of weakness. It is a sign that we are prepared to learn, use others -- some of whose work product we may not fully understand, even though they talk about stochastic modelling and Markowitz models -- and are more at ease with the numerate rather than the verbal world. Their work product has been of enormous use in evaluating risk.

11. Finally, I have suggested that many new instruments have developed because of peer pressure; peer pressure from issuers, from customers, from managers and overseers of wealth -- a desire to "keep up." Many are poorly priced with little academic or market rationale. Most innovations have uncertain economic benefit -- they typically involve a sharing of unknown risks for unknown benefit at a price which is simply market clearing. There is competitive pressure to simply sell the latest instrument to a client or to create the next one whether or not it makes sense, simply because it is market clearing at a cost which appears low compared to some other benchmark. A quality risk taker or risk advisor should not sell or buy what he or she does not fully understand.

Let me conclude by saying that most of you, directly or indirectly, are fiduciaries who are responsible for managing other people's money. Most of you, at the same time, report to others who may not, do not, know what you know about uncertainty and unsuredness. It takes courage to say "I am not sure" or "I don't know." Perhaps the best guideline is a report by Plutarch, who, writing about a dialogue between Aesop and Solon 2600 years ago, reported Aesop as saying to Solon that he must have survived by telling kings as little as possible, and when he had to, then tell them only what they want to know. Solon answered yes, that offered survival but for him, he would tell kings, also, as little as possible, but not what they want to know, but what they need to know.