PENSIONS

There are two aspects of the pension cost problem upon which management can have a significant impact: (1) maintaining rational control over pension plan promises to employees and (2) increasing investment returns on pension plan assets.

The Irreversible Nature of Pension Promises

To control promises rationally, it is necessary to understand the basic arithmetic and practical rules governing pension plans.

The first thing to recognize, with every pension benefit decision, is that you almost certainly are playing for keeps and won't be able to reverse your decision subsequently if it produces subnormal profitability.

As a practical matter, it is next to impossible to decrease pension benefits in a large profitable company - or even a large marginal one. The plan may embody language unequivocally declaring the company's right to terminate at any time and providing that contributions shall be solely at the option of the company. But the law has eroded much of the significance such "out" clauses were presumed to have, and operating practicalities render any residual rights to terminate moot.

So, rule number one regarding pension costs has to be to know what you are getting into before signing up. Look before you leap. There probably is more managerial ignorance on pension costs than any other cost item of remotely similar magnitude. And, as will become so expensively clear to citizens in future decades, there has been even greater electorate ignorance of governmental pension costs. Actuarial thinking simply is not intuitive to most minds. The lexicon is arcane, the numbers seem unreal, and making promises never quite triggers the visceral response evoked by writing a check.

In no other managerial area can such huge aggregate liabilities - which will be reflected in progressively increasing annual costs and cash requirements - be created so quickly and with so little immediate financial pain. Like pressroom labor practices, small errors will compound. Care and caution are in order.

Deceptive Arithmetic of "Promise Now - Pay Later"

If you promise to pay me $500 per month for life, you have just expended - actuarially but, nevertheless, in a totally tangible sense - about $65,000. If you are financially good for such a lifetime promise, you would be better off (if I have an average expectancy regarding longevity for one my age) handing me a check for $50,000. But it wouldn't feel the same.

And, if you promise to pay me 1,000 hamburgers a month for life which, superficially, may sound equivalent to the previous proposition (assuming a present hamburger price of 50¢), you have created an obligation which, in an inflationary world, becomes most difficult to evaluate. This creates a risk we talk of later as an "earthquake risk". One thing is certain. You won't find an insurance company willing to take the 1,000-hamburgers-a-month obligation off your hands for $65,000 - or even $130,000. While hamburgers equate to 50¢ now, the promise to pay hamburgers in the future does not equate to the promise to pay fifty-cent pieces in the future.

So, before plans are introduced or amended, the financial consequences (particularly in a world of significant inflation which I believe to be close to a certainty)* should be clearly understood by you. Consulting actuaries are very good at making calculations. They are frequently terrible at making the assumptions upon which the calculations are based. In fact, they well may be peculiarly ill-equipped to make the most important assumptions if the world is one of economic discontinuities. They are trained to be conventional. Their self-interest in obtaining and retaining business would be ill-served if they were to become more than mildly unconventional. And being conventional on the crucial assumptions basically means accepting historical experience adjusted by a moderate nudge from current events. This works fine in forecasting such factors as mortality and morbidity, works reasonably well on items such as employee turnover, and can be a disaster in estimating the two most important elements of the pension cost equation, which are fund earnings and salary escalation.

Illustrated Elemental Actuarial Principles

To illustrate a few actuarial principles worth understanding, but without employing the technical jargon and the asterisks, let's use the example of your household. Assume that you, personally, make irrevocable promises to pay pensions of $300 per month for life after they reach 65 to, say, four household employees. To make it easy, let's say that they each are 55 years of age at present. If you make that promise today, you have reduced your net worth today by about

* My views regarding inflationary possibilities are more extreme than those of most respected observers. It is difficult to substantiate a dogmatic view, since conclusions rest more upon social and political judgments than upon economic training and analysis. You should recognize the subjective nature of the reasoning leading to my pessimistic conclusions regarding inflation over the longer term - and not be reluctant to correct accordingly.

$70,000. (For simplicity's sake, I am ignoring some variables such as sex of employees - women live longer and therefore cost more - death before 65, etc. In calculating such factors the actuaries shine.)

Why are you immediately $70,000 poorer? Well, if you set aside a $70,000 fund now and invest it at 7% interest - and let all such interest remain in the fund to be compounded - the principal value of the fund will grow to about $140,000 in ten years when your employees reach 65. And to buy them a lifetime annuity of $3,600 per year will then cost about $35,000 each, utilizing the entire accumulated capital of the fund. So if you make the promise and it is binding - legally or morally - figure you have spent today $70,000, even though you don't have to pay out a dime of cash for ten years.

Now take it one step further and assume that your employees each are earning $600 per month but, instead of promising them $300 per month upon retirement, you promise them 50% of their salary at the time they retire. If their increases run 7.2% per year - and they probably will in the world I foresee - they will be earning $1,200 per month by the time they reach 65. And it will now cost you $70,000 each to purchase annuities for them to fulfill your promise. The actual cost, today, of modifying your promise from 50% of present pay to 50% of terminal pay was to exactly double the fund that needed to be set aside now from $70,000 to $140,000.

Many pension plans use final average pay (usually the average of the last five years, or the highest consecutive five years in the last ten years employed) and some use career average pay. I am not arguing here which should be used, but am illustrating the dramatic difference in costs that can occur because of rather minor-appearing changes in wording.

Pension costs in a labor intensive business clearly can be of major size and an important variable in the cost picture, particularly in a world characterized by high rates of inflation. I emphasize the latter factor to the point of redundancy because most managements I know - and virtually all elected officials in the case of governmental plans - simply never fully grasp the magnitude of liabilities they are incurring by relatively painless current promises. In many cases in the public area the bill in large part will be handed to the next generation, to be paid by increased taxes or by accelerated use of the printing press. But in a corporation the bill will have to be paid out of current and future revenues - with interest - and frequently with what is, in effect, a cost-of-living escalator.

The "Earthquake Risk"

In Germany, in the great inflation of the early 1920s, the entire Daimler Benz (Mercedes) Automobile Company was selling in the market for the price of 300 motor cars. Almost all past investments were nearly worthless, and current salary levels were astronomical in relation to past history. Under such conditions, or conditions far short of such an extreme, the burden of any pension benefits owed by a business, which are based on current salary levels though related to much earlier service in employment, must be backed almost exclusively by the current value (earning power) of the business. Advance funding simply evaporates.

For example, assume that salaries (and the cost of living) are moving upward at 25% per year and the pension fund is earning 10% per year - a set of assumptions not ridiculously different from what exists in England at the moment. Under such conditions, funds put aside for retirement immediately begin to shrink in relation to promised benefits. Every month fewer hamburgers can be purchased from the funds contributed to the pension plan - even after accumulating dividends and interest on the funds.

Almost no one chooses to think about this sort of "earthquake risk" in dealing with pension plans, any more than people choose to spend much time thinking about nuclear war. It may be my earlier-mentioned bias, or my mathematical bent, but I believe some "unthinkable" inflation-related calculations should be made - and even considered - before any company assumes open-ended pension obligations guaranteeing a large number of persons absolute protection against inflation by gearing benefits without limit to final pay or escalating benefits to persons already retired, based on changes in the cost of living.

Thus, the really devastating possibility regarding private pension plans is sustained double-digit inflation. When salaries move ahead at a substantially higher rate than investment returns and benefits are tied to final salaries (or, even more expensively, cost-of-living increases after retirement as in recent rubber and aluminum contracts), it is virtually impossible to pre-fund obligations. Like it or not, you become much like the Social Security Fund, absent the power to tax. Should that occur, future purchasers of the products of the company must be willing to do so at prices that reflect not only the wages of current workers, but the promises to past workers. Some businesses will have economic characteristics allowing them to pass along these costs, but others will have major troubles. On balance, I believe we are in relatively favorable businesses under

such circumstances. I do not believe this problem can be solved by the investment process. I mention it for completeness, not because I have answers - and to urge caution in making pension benefit promises subject to dramatic escalation through substantial attrition in the purchasing power of money.

Now let's look at funding and investment behavior appropriate to an economic world at least reasonably similar to the past, recognizing that such a world is far from a certainty.

The Investment Management Problem Inherent in All Pension Plans

Once having committed to provide pensions, how do we pay? The law and prudent business practice mandate that we start putting aside funds on a fairly orderly and consistent basis from which we can fulfill our promises. In this manner we pay the employee currently while he is being productive for the company, and we simultaneously set up a savings account (collectively, not individually) which will accumulate at interest so as to purchase an annuity (not actually "purchased" in most plans, of course, just assured by the pension fund) for him at retirement which will discharge our promise to pay him throughout his non-productive years. Thus, our current cost and current cash requirements (if our estimates are accurate as to what we will earn on the savings account as well as other estimates regarding turnover, salary escalation, longevity, etc.) will reflect his total lifetime employment costs to us spread rather evenly over his productive years.

(This advance funding treatment, matching full current costs against current production, contrasts with the Social Security Plan's program which essentially taxes current producers to pay current non-producers. This simply means moving a portion of current national output of goods and services over from those who produced it to those who are non-producing, and to whom promises have been made. If such a system had been in effect for a very long time, the demographic profile remained fairly constant, the promises remained fairly constant, and there was no inflation, the net effect from such a pay-as-you-go approach would not substantially differ from an advance funding basis. However, these conditions do not exist which may make for various problems - including some that exacerbate inflation and thus have negative fall-out for the economics of private plans.)

Because a business corporation, unlike the Federal government, has to create a "savings account" - an investment accumulating and investment

management operation of some sort - to properly fund its pension plan, it must make investment management decisions with respect to pension plan assets.

The History of Corporate Pension Plan Management
Act One - The Awakening

A few decades ago pensions were a relatively new thing at most companies, so that the "savings accounts" were in their formative stages and therefore much smaller. Furthermore, promises were fractions of those presently made, so that the amount eventually required in the savings account to purchase the required annuity at retirement was correspondingly smaller.

Thus the amounts paid into pension funds ("savings accounts") were largely forgotten so far as managerial responsibility was concerned until the great awakening of the 1960s. At that time managements noticed:

(1) The funds had grown to the point where they sometimes were 25% to 50% of the net worth of the company - often making the assets employed in the savings account larger than those employed in the company's largest division. Here are a few figures which I have handy from year-end 1972:

	(In Millions)	
Company	Corporate Net Worth	Pension Fund Assets
A & P	$ 599	$ 236
DuPont	3,268	1,817
Firestone	1,251	423
IBM	7,565	1,023
U. S. Steel	3,577	2,239

So, while U. S. Steel had a visible $3.6 billion in net operating assets which management probably spent 99% plus of their business hours thinking about, they had $2.2 billion in the "bank", whose economic results would impact future values for the shareholders, dollar for dollar, with the economic results of the steel assets. There literally were years when the savings account earned more than was earned out of all operating assets of the steel business. (In fairness to U. S. Steel, it should be mentioned that they were one of the pioneers in recognizing the importance of pension assets - and have done a better-than-average job through in-house management.)

(2) The returns actually realized on the "savings account" had an enormous impact on costs. A sustained 1% change in earning rate could easily swing the annual cost to the contributing company by 15%.

(3) During a period when equities had produced fabulous returns, many of the plans had been invested largely in bonds - which not only bore low fixed rates of 3% to 5% in the earlier periods, but also had suffered significant shrinkages in market values as interest rates increased secularly. (If interest rates go up, bond prices must go down - and if the bonds are long-term and the rates rise sharply, prices go into a power dive.)

(4) Many managements thus saw their largest division earning dismal rates of return with substantial market value shrinkage in the bond component, while all around them high returns were being realized from stocks with little apparent effort or talent. If a company had $100 million invested in its engine division earning 12% by managerial zeal and ingenuity, why tolerate $100 million in its pension fund "division" poking along at only 4% because of inattention - particularly when increasing the $4 million to some larger figure would have the same impact in future earnings for owners as raising margins on engines. Intensive effort on production, research and sales might only produce an increase from 12% to 13% in the engine area, since decisions already had been so near to optimal, but it was easy to imagine 4% becoming 10% in the pension fund area if just average results were attained in equity investment. And, of course, who would settle for being just average?

The History of Corporate Pension Plan Management
Act Two - The Great Leap

And so the hunt was on. Wall Street abhors a commercial vacuum. If the will to believe stirs within the customer, the merchandise will be supplied - without warranty. When franchise companies are wanted by investors, franchise companies will be found - and recommended by the underwriters. If there are none to be found, they will be created. Similarly, if above-average investment performance is sought, it will be promised in abundance - and at least the illusion will be produced.

Initially those who know better will resist promising the impossible. As the clientele first begins to drain away, advisors will argue the unsoundness of the new trend and the strengths of the old methods. But

when the trickle gives signs of turning into a flood, business Darwinism will prevail and most organizations will adapt. This is what happened in the money management field.

The banks had traditionally been the major money managers (leaving aside insured plans) and, by and large, their investing as well as their communication had been lackluster. They felt obliged to seek improvement, or at least the appearance of improvement, as corporate managers searched for yardsticks by which to make their decisions as to whom care of this newly discovered giant "division" should be granted. The corporate managers naturally looked for groups with impressive organizational charts, lots of young talent, hungry but appropriately conscious of responsibility, (heavy on MBAs from good schools), a capacity for speed in decision making and action - in short, organizations that looked something like they perceived themselves. And they looked for a record of recent performance.

Unfortunately, they found both.

A little thought, of course, would convince anyone that the composite area of professionally managed money can't perform above average. It simply is too large a portion of the entire investment universe. Estimates are that now about 70% of stock market trading is accounted for by professionally managed money. Any thought that 70% of the environment is going to substantially out-perform the total environment is analagous to the fellow sitting down with his friends at the poker table and announcing: "Well, fellows, if we all play carefully tonight, we all should be able to win a little."*

So, clearly the almost universal expectations of above-average performance in pension fund management were doomed to disappointment. These disappointments were certain to be amplified by a corollary affliction that frequently accompanies pressure for investment performance - higher turnover rates. It is difficult to measure turnover

* An interesting example of this line of thinking (sub-species: wishful) occurs in the April, 1975, Conference Board "Trends in Pension Fund Administration" article which Marty sent me the other day. In a carefully written "Investment Guidelines" statement by a manufacturing company, it is announced: "We believe it is reasonable to expect long-term results superior to the usual market indexes, and the S & P 500 in particular. Specifically, we look for performance better than this index in all types of market environments." And yes, Virginia, maybe every football team can have a winning season this year.

costs with precision, but they certainly must run at least 2% on average when applied to the round trip of purchase and sale. If an investment manager, striving for not only acceptable quarterly performance but also for the appearance of behaving as other highly-thought-of managers are known to be behaving,* moves aggressively to keep his portfolio in the "right" stocks, he easily can average turnover rates of 25% per year. When the performance rage peaked, drastically higher turnover figures were recorded with some managers.

In any event, a 25% turnover rate among professionals as a group, with 2% costs attached to such turnover, reduces group performance by 1/2 of 1% per annum ($1½ billion per year on $300 billion of assets). This means that, instead of chance dispersal of results causing half of all managers to fall above the unmanaged performance level (which has no transaction costs) and half to be below, the frictional drag of turnover costs causes well over half to perform worse than what "average" might be assumed to be.

For the reasons set forth above, almost all recent investment management performance by pension funds of large corporations has been fair to poor. Specifically, the Becker study (most comprehensive of all pension investment measuring services) reports the following:

	Overall Annual Return	
	S & P 500	Becker Median Result*
Last 3 market cycles, (6/30/62 to 12/31/74)	5.3%	4.1%
Last 2 market cycles, (9/30/66 to 12/31/74)	2.1%	0.4%
Last single market cycle, (6/30/70 to 12/31/74)	2.2%	(0.3%)

*Excludes bond segment of portfolios so that equity management only is measured against the equity yardstick.

* In the short term, it frequently is better to look smart than to be smart, particularly if your employment is to be decided by a rather brief interview. If the fans are going to decide your hiring status based on only a few swings, it is prudent to develop a batting style that will remind them of Joe DiMaggio or Ted Williams, even if long-range your percentage of solid hits with that style is small and you know you obtain better results batting cross-handed.