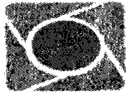

Baner Financial Interests

Pension Fund Overview, Risk management.

Pension Funds History

Pension funds were originated and then structured as multi-employer plans and were created during World War II. They originally were controlled by the then existing War Labor Board. The main motivation to initiate and promote the use of employee pension benefits was a trade-off in exchange for lowered salaries of scarce employees in our war factories which were running at capacity. Corporations as employers and contributors were the soul source of income to fund these new employee retirement plans.

When the war ended, many pension funding problems arose during the 1960s and early 1970s which prompted congress to enact the Employee Retirement Income Security Act (ERISA) of 1974 which laid the ground work for today's retirement plans such as:

a) Defined Benefit Plan/Profit Sharing/Money Purchase Plans
b) Defined Contribution Plans
c) Keough Plans
d) Investment Retirement Accounts (IRA's)
    1) Roth 401(K) Plans
    2) Standard 401(K) Plans
    3) 403(b) Plans
    4) Self-Directed IRA's

        Authority

    - IRS Publication 590
    - IRS Code 4975

In the late 1970s and 1980s, interest rates were 15%-20% and most pension funds were very successful and fully funded, if not, over funded. However, in the 1990s and 2000s, as interest rates and investment rates of return fell dramatically from the then 10% to the current 2%, it dramatically lowered the discount rate (pension's valuating bellwether) thus raising the companies' then current pension obligations while they were saddled with minimal investment returns to fully fund the plans (more on that later).

The Discount Rate

This is the main actuarial means of quantifying the companies paid-up annuity or alternatively, lump sum employee benefit obligation due the employee/retiree.

This discount rate serves as a proxy for the hypothetical interest rate that an insurance company would expect on a U.S. Bond today to fully fund a company's current and future payments and ultimate final obligation (about 3-5%) see formula that follows).

Pension liabilities in the U.S. total over $1.93 Trillion dollars (11% of GDP). The current and insipient rise in the shear number of future pension retirees as our "boomer" workforce ages coupled with, their increased life longevity, creates a huge future financing and legal burden on U.S. corporations. About 25% of all corporate income currently goes to pension costs leaving only 75 cents on the dollar left for corporate payroll, operations and profits!

To put the relevance of the discount rate in a quantified perspective, retiree life longevity alone will add 5% to all pension liability corporate funding obligations. We aren't dying fast enough like we used to. This fact alone adds $9,650,000,000 to corporate obligations in the U.S. The effect of this on valuating the discount rate is .25% (Quarter of 1%). Said another way, a ½% of change either way in that discount rate can change a corporate funding obligation by up to 10%. This is significant considering pensions are already 25% of corporate stock capitalization.

The realistic discount rate (Rate of Return per year in present value terms) should be ideally 3%. But the implementation of this low 3% discount rate at Present Value further increases the amount of dollars a corporation would then owe its employee at retirement time even though the investment rate of return target (3%) is achievable in the marketplace. *If the discount is less, the future amount due is more.* Most public companies currently use a discount rate of 7%-9% which is basically financially unachievable on a sustainable basis unless you tempt great risk in the corporate sponsor's selected investments. Actual rates of return as of July 2013 have been recently 5.6% overall, thus creating an automatic funding liability and shortfall.

Current Corporate Liability Funding Status

The Federal Accounting Standards Board (FASB) requires pension plans to be funded at least 80% of their actuarial liability due or be categorized as underfunded. This liability is quantified and is carried on their corporate balance sheet which they don't like.

Because of the increase in retiree longevity, falling interest rates that increase corporate liability, falling rates of return received from investments and market volatility, many plans are under the 80% FASB suitability threshold.

In fact, only 50% of all plans are funded up to 80% of their liabilities. At least that's up from 20% in 2008.

Here are examples of underfunded plans:

Sponsor Category	% Funded
• State Employee and School Pension Plans:	65% (Tax Payer Obligation)
• Teamsters-Central States-AFL-CIO:	60% (Critical Funding Status)
• Multi-Employer Plans (150 out of 1,450):	50% (Critical Funding Status)

In the year 2000, the median plan was 90% funded. In 2008 the funds were only 20% funded because of the financial collapse. In 2012 the funds were up to 74% funded. In 2013, the median fund is now 80% funded.

When the funds get above 90% funded, the corporation has the pleasant dilemma of overfunding at 100%. Remember, this can work both ways. For every quarter percent rise in interest rates unfunded liabilities would shrink by 5%, so a one-half point interest rate hike increases the discount rate via inflation which then reduces corporate pension liabilities. However, if the company is over-funded, they can't take money back out of the plan. It becomes unused and unproductive capital.

Nomenclature of a Discount Rate

The expected rate of return (formula) for the discount rate is:

- Inflation Rate
  (Plus/Minus)
- Workforce Productivity
  (Plus/Minus)
- Price-Earnings/Cap Rate Yearly Expansion over previous year.
  (Increase/Decrease)

Using this model, the past and present discount rate has and currently should look like this:

	Past	Present
Inflation (Annualized)	3%	2%
Productivity (Annualized)	2%	2%
Price/Earnings "Real" Expansion	3%	-1%
Discount	***8%***	***3%***

Pension Plans today are currently targeting discount rates of 7-9%.

Many Pension Plans have invested in very risky assets to makeup for liability shortfalls (see 8% vs. 3% above). To do this they invested in venture capital schemes or Hedge Fund sponsored pig farms in the hopes of 14-16% returns so an investment at 8% would grow 10 times over 30 years versus an investment at 16% would grow 85 times. NOT!

"You can't wish this stuff away"

Pension Liability Risk Management

Pension liabilities of employers to employees can average up to 25% of a public companies' capitalization (more if private).

Since 2003, most pension plans have lost 35% of their targeted funding status. (Funding Status means a pension's already funded assets set aside less their actuarially projected benefit obligations). Declining interest rates were the biggest contributor to this funding deficit over the past decade. As an example of the magnitude of this negative funding status, of the top 100 pensions, in the U.S., 23% are short of their funding requirement. This dilemma of pension fund shortfalls is distracting the mother company from its daily business operations and thus, constraining it's growth.

This, necessities "De-Risking" of these pension liabilities to the extent possible.

There are two primary approaches that can be utilized to de-risk the Pension Liability of Sponsoring companies to its employees.

First: "Lump Sum" Buyout:

This serves to directly reduce the corporate pension liability payout in the future. This allows a vested (entitled) employee, not yet retired from the company, to take the value of their cumulated benefits in cash now versus later overtime as an annuity.

It used to cost the company 130% of cash benefits accumulated to date to prepay the pension. The 30% being the equivalent of a prepayment penalty to the sponsor. That's now been reduced to zero (PAR) so it's a pretty attractive deal for the company in order to help it get out from under future pension liability.

If the employee doesn't take the cash, it can alternatively be rolled into an other qualified pension arrangement such as an Individual Retirement Account (IRA) which could be Self-Directed if desired by the retiree.

Second: Employer "Annuity Purchases" from Third Parties Payers

This scheme can be for both retired employees and vested participants who have not yet started to draw their pensions. In other words, they are still on the job.

This action gives the employee the security of an alternate large and safe insurance company making annuity payments upon retirement. It also fulfills and transfers the sponsor-company's obligation to the insurance company or annuity payer company to provide a guaranteed retirement income to the recipient forever forward.

Companies have two (2) options in which to transfer their pension liability:

1. **Buy-Out**

The company transfers its risk over to an insurance company by purchasing an annuity from them that dovetails in with the actuarial age profile of the retiree-recipient. The insurance company then takes on all the risk to pay from hereon as mentioned earlier.

This plan relieves the sponsoring company of all administrative, actuarial, investment management, and Pension Benefit Guaranty costs and premiums. See "second annuity purchase" just above for more detail.

2. **Buy-In**

The company purchases an annuity just like above however it doesn't transfer the risk obligation to the insurance company who still issues the corporation purchased annuity. Instead, the risk remains with the company as an asset of the plan. This annuity (asset) then provides a cash flow annuity to the employer that offsets the company obligation to pay the retiree based on their actuarial lives.

The method above allows for a "partial" reduction of corporate liability and avoids triggering the settlement accounting issues and costs inherent in a buy-out or lump sum scheme mentioned above. Not only that, the buy-in can be a cashless swap because the annuity remains an asset of the plan. Which many funded corporation want to show as there is no reduction in funded assets even though there is some pension liability relief. Nonetheless, Pension Guaranty Federal Premium must still be paid, unlike a buy-out where that premium liability is transferred to the new annuity payer.

Either with a buy-in or buy-out, the cost of annuitizing is about 110% of liability value (not 130% as previous thought). Call this a 10% liability transfer penalty. If however, the employee is not yet retired, the "lump sum" payout is the best route to go if possible.

De-risking can mean different things to different companies. For example: To one, the main risk is the amount of cost. To another, it may be the volatility of interest rates that increase or decrease the actuarial cost liabilities to the company over time.

It is wise to develop an overall strategy (Process Map). Then get a private letter of ruling from the IRS in advance to strategic execution of the de-risking plan to be sure you can perform as anticipated.

Pension Planning in the Future

It is most relevant for sponsors to always keep in mind that pension plan assets and their liability obligation can go down just as quick as they go up depending on inflation, productivity and corporate earnings growth.

Planning strategy as to plan type, buy-ins, buy-outs, lump sums are currently very much in play. One way is converting from Defined Benefit to Defined Contribution thus freezing future benefit accruals and payments to the DB plan. Plan liabilities versus asset allocation balancing is also critical in corporate Pension Risk Assessment. Liability Driven Investments (LDI's) caused by lowering exposure to equities or reducing interest rate risk via bonds, and synthetics (effected via derivative overlay hedges) are prevalent strategies today. It all comes down to risk tolerance of the sponsor to achieve full funding.

Alternative investments are again also in play. Real Estate being prime among them. Indexing of rents and thus increasing Net Operating Income, lower capitalization rates enjoyed during inflationary times via this investment product will create high growth prospects in heady times and is a timely strategy to consider. Annual real estate returns of 10-15% are not unusual in high growth communities. This can generate rates of return for in excess of liabilities regardless of the discount rate d'jour.

On the administrative front, mortality tables will be updated which will increase pension lump sum amounts due retirees. Also, significant increases in the Pension Benefit Guaranty Corporation (PBGC) Federal insurance premium is coming up in 2013 very importantly as a result off all this, alternative or Self-Directed employee high benefit retirement programs may be necessary to attract and retain corporate employee talent.

Defined Benefit Plan

This plan format is the most common plan type in the U.S. in both the private and public sectors. They compose over 88% of public employees plans.

Private plans are governed by the Employee Retirement Income Security Act (ERISA) of 1974-Title I (Federal Law). It governs all fiduciary conduct and reporting requirements of private sector benefits. ERISA is administered by the Department of Labor.

Public plans however are governed by the Federal Tax Code and State (versus Federal) law. This difference in governance can materially alter how the plans are funded, benefits calculated, solvency requirements, participation rights and obligations.

A defined benefit plan is designed to accomplish just that… define a specific and ultimate benefit. As of late, that benefit cannot exceed $195,000.

These are not "contributions" limits to accomplish this.

These contributions are the responsibility of the employer not the employee in a private company. In a publically traded company they are usually joint contributions. The benefit to the employee is "defined" at the outset and is then predetermined by a formula based on employee's earnings (past and present) and age.

If an employee quits, he can carry the plan with him to another employer or, take a lump sum if the accrued contributions are less than $5,000 if vested or negotiate a lump sum if over $5,000 (officially in the plan). If a participant has been employed for 10 years or have left their for employer 10 years, or is 70 ½ years old, he is entitled to his benefits within 2 months.

Benefits are mostly paid as a retirement annuity for life up to the amount vested.

Because of the nature of the pre-set benefit at retirement, accruals of contributions are more gradual when the employee is younger but gets much more expensive and may require much greater contribution when the employee gets older and hasn't met the required benefit threshold. Therefore, defined benefit plans tend to be less portable and a new employer may not want to get saddled with this outsized obligation thus motivating the employer to switch plan types.

This a defined benefit plan is better suited to large employers with a <u>less</u> mobile workforce (i.e. Public Sector) which has open ended support from taxpayers.

Employees like defined benefit plans because employers tent to pay higher contributions and these contributions when paid out in retirement are annuitized (based on an average of all the companies employees) which reduces the risk of outlining their specific annuity under the plan.

The main disadvantage is:

The Benefit is known but the contribution amount is not.

Defined Contribution Plan

This retirement contribution program, along with the defined benefit plan, are the two headline tax-deferred plans offered to the corporate employee. This all was a result of pension benefit creation to attract new hires under the War Board in 1943 and the subsequent enactment of the Employer Retirement Income Security Act (ERISA) in 1974.

In 1978, 72% of all plans were defined benefit and Defined Contribution was only 28%. Today, 83% of all plans are defined contributions and 17% are defined benefit… at total flip-over. Also, today about one in four plans (25%) of employee benefit plans are a combination of both defined benefit and defined contribution plans. Clearly, defined contribution plans are the dominant plan of choice in today's retirement benefits industry.

There is a reason for this plan popularity and preference for Defined Contribution over Defined Benefit Plan.

- **First:** There is less financial and actuarial risk to the employer
- **Second:** It costs the employer less
- **Third:** The employee

  Can self-direct and have control over all investment decisions for his individual account.

  The one disadvantage which is already spelled out in the very definition of a defined contribution plan:

"The Contribution is known but the benefit is unknown"

The plan is based upon the retirement benefit being based solely on the amount contributed to the account plus (or minus) income or losses allocated so there is uncertainty here.

The sponsor still retains a significant degree of fiduciary responsibility over investment plan assets which will also include the selection of options. Overall through, investment risk and investment rewards are assumed by the <u>employee</u> and not the sponsor or employer.

During the plan life, the employee contributes a predetermined portion of his salary (pretax) to the individual account and all (or part) is matched by the employer. This is the most common plan and is called a Savings and Thrift Plan.

Retirement and Self-Directed Plans

A. Types of Participating Retirement Plans
Self directed IRAs have been permitted over 38 years, since 1975 as part of Employee Retirement Security Act of 1974 (ERISA)
Today's plans are:
   a) IRAs existing or to be newly created.
   b) Roth 401(K)
   c) Standard 401(K) Plans
   d) Keough Plans
   e) 403 (b) Plans

B. IRS Governing Rules and Clarifications of Self-Directed Plans

Rules:

- Publication 590 (www.irs.gov/pub/irs-pd/p590.pdf)
- IRS Code 4975 (www.irsgov/pub/irs-drop/rr-06-38pdf)
- In 1975 and ensuing years these plans were known as "Defined Benefit", "Profit Sharing", and "Money Purchase Plans" and were then considered the self-directed IRA's.
- Real Estate was a prime target of investment for all these plans.

C. "Custodian" Defined: who oversees Retirement Plans
   1) Usually a financial institution but can be an IRS certified bank or stock broker
   2) All custodians must be approved and certified by the IRS
   3) An IRA custodian usually executes transactions on behalf of client
   4) Custodian keeps and maintains all reports and transaction records
   5) Custodian is not required to give investment or legal advice although custodian is required to maintain client reporting compliance with IRS codes.
   6) A custodian cannot restrict clients choice in investment strategies if client is IRS compliant with use of funds.
   7) Trustees generally only offer their own products to invest in
   8) Custodians/Trustees will charge a small fee for non self directed plans however a self-directed plan chosen by client will cost a lot more because of all the oversight and paper compliance involved

D. Self-Directed Retirement Plans Defined
   a) Self-Directed means owner (client) or his legal designee, makes all the investment choices and decisions for his IRA.

b) Self-Directed allows client to invest in "Alternative Assets" which differ from standard assets

E. Transactional

a) Standard Assets: are publically traded investments such as stocks, bonds, mutual funds, annuities (loaded and unloaded), corporate notes or bonds

b) Alternative Assets: are private LLC's or REITs; Real Estate; Mortgages, Franchises; Partnerships; Precious Metals; Tax Liens and Private Equity-Tenants in common. (Assets not bought or sold through Public Exchanges)

c) Prohibited Investments: include collectibles (i.e. art, antiques, stamps, gems, rugs); stock in sub-Chapter "S" Corp or General partnership; Auction transactions
(Anything that can benefit the client either directly or indirectly via relatives, partners, related businesses or lenders is prohibited)

d) Early withdrawals before age 59 ½ are penalized at 10% plus taxed as ordinary income-State and Federal

F. Caveats

1) Be aware of and understand "Unrelated Business Income" as these distributions will be disqualified and subject to fine and penalty.
2) Make sure the Custodian/Trustee has adequate client loss insurance or bonding for illegal acts or omissions that could damage or wipe out your investment.
3) Be sensitive to any form of self-dealing.

Standard 401(K)

This is the original employee benefit plan introduced by Congress in 1978 and authorized by the IRS to allow salary benefits to accrue tax free. The contributors plus earnings, however, are fully taxable upon withdrawal and/or retirement to the employee.

The maximum an participants can contribute is $17,500 ($23,000 for older, late employee entrants) per year which contribution is deducted from his gross pay. The employer participation dollar limit is 25% of $49,500 or $12,250 for a total contribution cap of $29,750 per year. These contributions are pre-tax salary debits.

For a small business this plan has the following attributes:

1. Employees can contribute more to their plan than typical IRA plans
2. There is good employer/sponsor contribution flexibility (No preset amounts) so it offers relief to a small business employer who may have cash flow problems from time to time.
3. Participation loans and hardship withdrawals for employees is allowed without costly fines and penalties.

A potential disadvantage is the higher administrative costs and also the non-discrimination of benefit distributions to other highly compensated employees. Everyone is treated the same.

IRS Form 5500 must be filed annually and there is a 10% early unauthorized withdrawal penalty as with all plans.

Roth 401(K)

The "Roth" add-on feature for special tax treatment amending of the Standard 401(K) first enacted in 1998. It then formally arose as an amended provision of the Economic Growth and Tax Relief Reconciliation Act of 2001, as authorized by Congress and the IRS which was then effective as of January 2006.

There are two major differences between the Roth 401K and the Standard 401(K)

- The Standard 401K invests from pre-tax salary contributions, re-invests tax deferred with ordinary income tax paid upon distribution time.
- The Roth 401(K) invests from post-tax salary contributions reinvests tax deferred with no tax paid upon distribution time or ever.

These type of plans are advantageous to younger workers who are now taxed in a lower bracket but expect to be taxed in a higher bracket upon reaching retirement age. Alternatively, higher income workers who wish to save the maximum amount allowed ($5,500 per year under this plan) may favor the Roth 401(K) because it allows additional contributions in tandem with the Standard 401(K) and with its post tax dollars to accumulate tax free.

Once a participant invests into a Roth, the contributions are irrevocable and cannot be moved into a Standard 401(K). Also, once the employee earns a modified adjusted gross income of over $110,000 ($160,000 married filing jointly) the furtherance of Roth contributions are prohibited but can then be rolled over into a Roth IRA account upon this event of fund saturation or alternatively, termination of employment.

It is the employer's discretion as to whether a Roth 401(K) is additionally offered to the employee or not. Administrative cost burdens are a big factor.

Money Purchase Plan

The money purchase plan, if elected, is a mandatory employee contribution plan made to each participant's individual account the contribution is a negotiated fixed and pre-negotiated percentage of their monthly payroll.

This differs from a profit sharing plan in that the profit sharing amount contributed is variable, not fixed, and based solely on corporate profits, not a fixed percentage variable.

With Money Purchase there can be other accounts in tandem without such as a Roth 401(K). Contributions by the employer can go up to $51,000 per year or 25% of salary, whichever is less so the money purchase plan is fairly generous.

Early employee withdrawals are not permitted and an IRS Form 5500 must be filed annually.

403(b) Retirement Plan

A 403(b) plan is one that is only available as a tax advantaged saving plan to:

- Public Education Organizations
- Selected Non-Profit 501(c) (3) corporations
- Cooperative Hospital Service Companies
- Self-Employed Ministers

It was created out of the Economic Growth and Tax Relief Reconciliation Act of 2001, just like the Roth 401(K) was.

Employee contributions are withheld out of their respective salaries on a pre-tax basis just like the standard 401(K). Participants are no longer restricted to annuities and can also invest in mutual funds as well.

This plan is mostly non-qualified (Versus ERISA 74 qualified) and is therefore not subject to distribution discrimination tests like a Roth plan is.

Also, as 403(b) is an annuity plan, a participant cannot withdraw from the plan unless he can prove hardship, disability, or job separation. The 10% penalty exists as well, just like the other plan.

Very importantly, like 401(K), a 403(b) plan <u>can</u> also include after-tax Roth contributors.