Pensions & Post-Retirement Benefits

The Issues

- Separate set of pension books
- Defined contribution vs. defined benefit plans
  - » Problem exists with defined benefit plans
- Annual report's notes disclose essential info
  - – Over-funded & under-funded plans exist
    - » Segregated in notes
  - – Pay attention:
    - » Earning rates, inflation rates, discount rates.

Pension Books

- Compare assets to liabilities
  - There is no equity
  - Liabilities come in two forms
    - » Accumulated benefit obligation
    - » Projected benefit obligation
- Odd accounting concepts in place
  - FASB 87 supposedly solved off-balance-sheet pension liability of defined benefit plans
    - » Don’t believe it.

Pension Benefits

- Periodic (usually monthly) payments made pursuant to the terms of the pension plan to a person who has retired from employment or to that person's beneficiary
- Ordinarily, such benefits are periodic pension payments to past employees or their survivors
  - May also include benefits payable as a single lump sum and other types of benefits such as death benefits provided through a pension plan.

Pension Benefits

- An employer's arrangement to provide pension benefits may take a variety of forms and may be financed in different ways
- There are two types of pension plans:
  - Defined *contribution* plan
  - Defined *benefits* plan.

Defined Contribution Pension Plans

- A plan that provides an individual account for each participant
  - Specifies how contributions to the individual's account are to be determined instead of specifying the amount of benefits the individual is to receive.

Defined Contribution Pension Plans

- Under a defined contribution pension plan, the benefits a participant will receive depend solely on:
  - Amount contributed to the participant's account
  - Returns earned on investments of those contributions

Defined benefit Pension Plans

- Pension plan that defines an amount of pension benefit to be provided to the employee at retirement, usually as a function of one or more factors such as age, years of service, or compensation
- Generally, the amount of benefit to be paid depends on a number of future events that are incorporated in the plan's benefit formula:
  - How long the employee and any survivors live
  - How many years of service the employee renders
  - Employee's compensation in the years immediately before retirement or termination.

Defined Benefit Pension Plans

- In most cases, services are rendered over a number of years before an employee retires and begins collecting the pension
- Any pension plan that is not a defined contribution pension plan is, for accounting purposes, a defined benefit pension plan.

Benefit And Contribution Plans: A Comparison

	Defined Benefits	**Defined Contributions**
■ Plan defines	Benefits	Contributions
■ Plan beneficiary	Employer	Employee
■ Investment risk	Employer	Employee
■ Uncertainty of annual pension expense	None	High

Funded Pension Plans

- A pension plan is said to be funded when the employer sets funds aside for future pension benefits by making payments to a funding agency that is responsible for accumulating the assets of the pension fund and for making payment to the recipients as the benefits come due.

Accounting for Defined Contribution Pension Plans

- Employer's responsibility
  - Make a contribution each year based on the formula established in the plan
- Employer's annual cash cost
  - Amount of annual contribution to the pension trust.

Accounting for Defined Benefit Pension Plans

- Accounting for a defined benefit plan deals with two main problems:
  1. Estimates or assumptions must be made concerning the future events that will determine the amount and timing of the benefit payments
  2. An approach to attributing the cost of pension benefits to individual years of service must be selected
- Remember:
  - The plan is an accounting entity separate from the employer.

Basic questions

- What is employer's liability/asset (how should this be reported on the balance sheet?)
- What is the current year's expense associated with the plan?

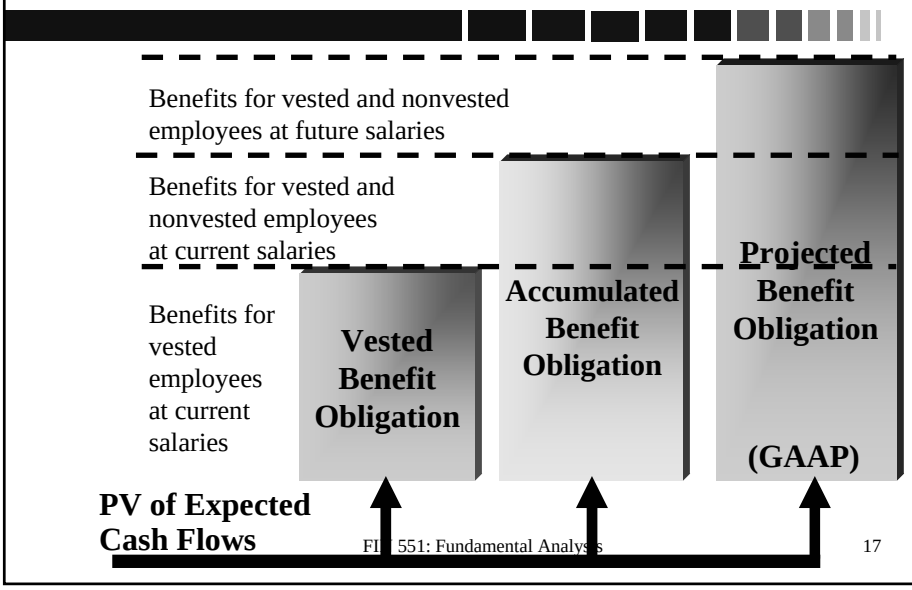
Measuring the Pension Liability

- Employer's pension obligation is the deferred compensation obligation it has to its employees under the terms of the pension plan
- There are three ways to measure this liability.
  - ***Vested benefits pension obligation (VBO)***
    - » Calculated based on the current salary levels and includes only vested benefits.

Measuring the Pension Liability

  - ***Accumulated benefit obligation (ABO)***
    - » Calculated based on all years of service performed by employees under the plan - both vested and nonvested -using current salary levels
  - ***Projected benefit obligation (PBO)***
    - » Calculated based on both vested and nonvested service using future salaries and not current ones
      - Note that measuring the PBO requires many actuarial assumptions (mortality rates, employee turnover, interest rate, early retirement frequencies, future salaries, etc.).

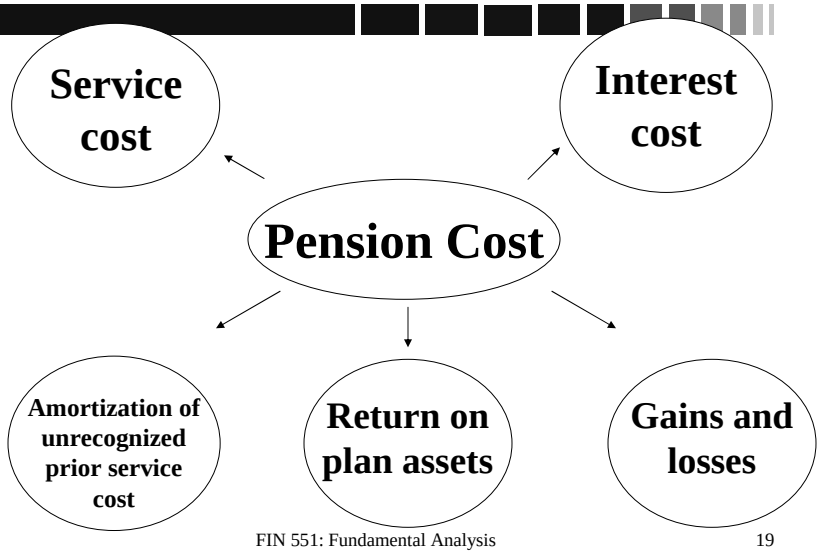
Measuring the Pension Liability



Measuring the Pension Liability

- *FASB Statement No.* 87 adopted a ***capitalization approach***
  - Employer has a liability for pension benefits that it has promised to pay for employee services already performed
  - As pension expense is incurred--as the employees work--the employer's liability increases
  - Pension liability is reduced through the payment of benefits to retired employees.

Components of the Pension Cost



Service Cost Component

- The actuarial present value of benefits attributed by the pension benefit formula to services rendered by employees during that period
  - Service cost component is a portion of the projected benefit obligation and is unaffected by the funded status of the plan.

Interest Cost Component

- The increase in the projected benefit obligation due to passage of time.

Actual Return on Plan Assets Component

- Difference between fair value of plan assets at the end of the period and the fair value at the beginning of the period, adjusted for contributions and payments of benefits during the period
- Actual return *not* used in finding pension expense!

Example: Pension Expense

Benefits earned during the year		$ 714
Interest accrued on prior year benefits		3,389
Return on assets:		
Actual loss	$2,117	
Plus deferred loss	(6,154)	(4,037)
Net amortization		93
Net periodic pension cost		$ 159

Prior Service Cost

- Plan amendments often include provisions that grant increased benefits based on services rendered in prior periods
- Cost of retroactive benefits (including benefits that are granted to retirees) is the increase in the projected benefit obligation at the date of the amendment
  - SFAS 87 does not require the cost of providing such retroactive benefits (that is, prior service cost) to be included in net periodic pension cost entirely in the year of the amendment
    - » Provides for recognition during the future service periods of those employees active at the date of the amendment who are expected to receive benefits under the plan.

Gains and Losses

- Changes in the amount of either the projected benefit obligation or plan assets resulting from experience being different from that assumed, and from changes in assumptions
- SFAS 87 does not distinguish between sources of gains and losses
  - Gains and losses include amounts that have been realized, for example by sale of a security, as well as amounts that are unrealized.

Asset and Liability Calculation

- A liability (unfunded accrued pension cost) is recognized on company's books if net periodic pension cost recognized exceeds amounts the employer has contributed to the plan
- An asset (prepaid pension cost) is recognized on company's books if net periodic pension cost is less than amounts the employer has contributed to the plan.

Projected Benefit Obligation

Beginning balance PV of obligations
+ Service cost during the period
+ Interest cost during the period
± Change in promised benefits
± Actuarial gains or losses during the period
- Pension payments to retirees
= Ending balance PV of obligations.

Plan Assets

Beginning balance of assets @ market value
± Actual return on plan assets during the period
+ Contributions of additional plan assets during the period
- Distributions of plan assets
= Ending balance of assets at market value.

ABO vs. PBO

- Projected benefit obligation includes all expected discounted payments
- Accumulated benefit obligation backs out increases in wages
- FASB uses ABO to determine funding status of plan
  - Compare plan assets against ABO
    - » May need to establish a minimum liability.

Over-Funding of Plan

- Why would management over-fund a defined benefit pension plan?
  - Tax advantages
- 1997 new tax law
  - Increased allowable contributions from 150% of plan's current liabilities to 170% of same
  - Speculation that this change may revive greater use of defined benefit pension plans.

Over-funded Plan

- Plan assets > plan liabilities
  - Terminated plan incurs 50% excise tax on surplus
- Circumvent the problem:
  - Put 25% of surplus into replacement plan
  - Pay 20% excise tax * 75% of surplus
  - Take the balance
- Example:
  - Montgomery Ward captured $173 million
    - » Surplus = $288, Excise tax = $43, New plan = $72.

Under-funded Plan

- Compare ABO vs. plan assets
  - Deficit of assets
    - » Under-funded plan
      - Note: Ignores future wage increases
- Accounting
  - » Debit: Intangible asset
  - » Credit: Pension liability
- Firm probably has cash flow problems.

Unfunded Pension Liability

- FASB 87 approach fails to reflect economic reality in the financial statements
- See the Harvard Business Review article:
  - Pension Roulette: Have You Bet Too Much On Equities
- Minimum liability
  - Difference between ABO and assets.

Makeup of Pension Expense in Defined Benefit Plan

- Service cost (+)
- Interest cost (+)
- Expected return on assets (-)
- Recognized gains or losses (-/+)
- Amortization of unrecognized transition asset or obligation (-/+)
- Recognized prior service cost (-).

Makeup of Pension Expense in Defined Benefit Plan

- Service cost (+)
- Interest cost (+)
- Expected return on assets (-)
- Recognized gains or losses (-/+)
- Amortization of unrecognized transition asset or obligation (-/+)
- Recognized prior service cost (-).

Smoothing devices

Minimum Liability Calculation

- Calculate the difference between fair value of plan assets and ABO
- Compare this amount with the accrued/prepaid pension cost account on the balance sheet and adjust the difference using the following journal entry:

  Intangible asset – deferred pension cost XXX

  Additional pension liability XXX

Minimum Liability Calculation

- The account title *minimum liability* is not used on the balance sheet
- The intangible asset cannot exceed the unrecognized prior service cost
  - If it does, the excess is debited to "other comprehensive income" – an equity account.

Example 1

- Kramer Inc. sponsors a defined benefit pension plan. The company provides the following information:
  - On December 31, 2004 plan assets were $270,000 and the projected benefit obligation was $270,000
  - During 2005, service cost was $30,000; actual and expected return on plan assets were $25,000 and the settlement rate was 10% (use beginning PBO)
  - Benefits paid were $21,000 and contributions were $18,000.

Example 1 …

- Calculate the pension expense for 2005 and provide the journal entry to record it
- What is the balance of the projected benefit obligation and the plan assets at the end of the year? (these accounts are reported in *memo records*)

Pension Expense for 2005

Service cost	$30,000
Interest cost	27,000
Actual (and expected) return on plan assets	(25,000)
Pension expense for 2005	$32,000

The journal entry is:

Pension Expense	32,000	
Cash		18,000
Accrued pension cost		14,000
(To record the pension expense)		

Projected Benefit Obligation (PBO)

PBO, December 31, 2004	$270,000
Service cost	30,000
Interest cost	27,000
Benefits paid	(21,000)
PBO, December 31, 2005	306,000

Plan Assets

Fair value of plan assets December 31, 2004		$270,000
Add:	Actual return	25,000
	Contributions	18,000
Subtract:	Benefits paid	(21,000)
Fair value of plan assets December 31, 2005		292,000

Example 2

- Trey Inc. provides you with the following information regarding its defined benefit pension plan:

Projected benefit obligation, December 31, 2004	2,795
Plan assets (fair value), December 31,2004	1,620
Plan assets (fair value), December 31,2005	2,850
Settlement rate and expected rate of return	12%
Service cost for the year 2005	420
Contributions for the year 2005	750
Benefits paid in 2005	250

Example 2 …

- The amount of unrecognized prior service cost was $1,175 at the beginning of 2005
- The average remaining service life per employee is 12 years
- The amount of unrecognized net gain or loss amortization was zero

Required:

- Compute pension expense for 2005.

Pension Expense for 2005

Service cost	$420
Interest cost ($2,795 x 12%)	335
Actual return on plan assets (Schedule I)	(730)
Unexpected gain (Schedule II)	536
Amortization of prior service cost (1,175/12)	98
Pension expense for 2005	$659

Schedule I - Actual Return on the Plan Assets in 2005

Fair value of plan assets, December 31, 2005		$2,850
Deduct: Fair value of plan assets December 31, 2004		(1,620)
Increase in fair value of plan assets		1,230
Deduct: Contributions	$750	
Less benefits paid	(250)	(500)
Actual return on plan assets in 2005		$730

Schedule II – Pension Assets Gains and Losses

Actual fair value of plan assets December 31, 2005		$2,850
Expected fair value fair value of plan assets December 31, 2004	1,620	
Add expected return ($1,620 x 12%)	194	
Add contribution	750	
Less benefits paid	(250)	2,314
Asset gain		(536)

Post-retirement Benefits

- Computations parallel defined benefit plans
- Most companies accrue liability but haven't funded it
  - Fund as claims presented.

The End