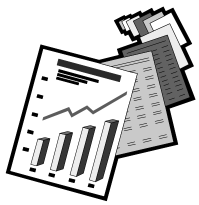
Accounting for Pensions

Chapter 20



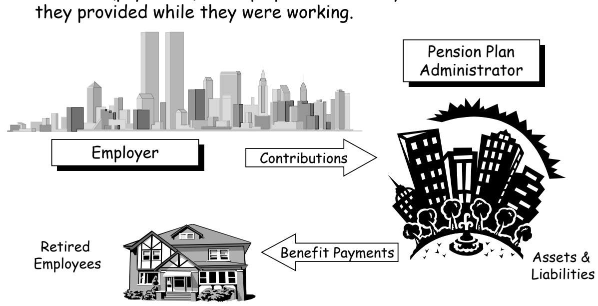
Pre-Lecture Homework

For class, you should be prepared to discuss the answers to the following questions:

1. Identify the five components that comprise pension expense and be able to explain the nature of each component.
2. What is meant by “prior service cost” and when are PSCs recognized in pension expense?
3. What is meant by “unexpected gains and losses” and when are these gains and losses recognized in pension expense?

Nature of Pension Plans

A Pension Plan is an arrangement whereby an employer provides benefits (payments) to employees after they retire for services they provided while they were working.



Types of Pension Plans

Defined Contribution Plan	Defined Benefit Plan
• Employer contribution determined by plan (fixed) • Risk borne by employees • Benefits based on plan value	• Benefit determined by plan • Employer contribution varies (determined by Actuaries) • Risk borne by employer
NO Actuaries required: Employer obligation limited to annual “matching” (if any). Once that “match” is paid, the employer is off the hook!	Actuaries estimate the employer contribution by considering mortality rates, employee turnover, interest and earning rates, early retirement frequency, future salaries, etc.

Statement of Financial Accounting Standard No. 158, VERY RECENT, and many changes from old.

DEFINED BENEFIT PLANS- ACCOUNTING:

The accounting for defined contribution plans are simple: Credit liability for matching requirement, Debit 401K expense each period.

THE BALANCE OF THESE SLIDES RELATES TO THE COMPLEX WORLD OF:

1. Understanding the components of a defined benefit plan.
2. Accounting for activity related to a defined benefit plan.

SEPARATION

The Company is also referred to as the "Sponsor", a key term as the plan is ***SEPARATE*** from the Company. The deal works like this:

- Each period, employees earn a piece of compensation which they will not receive until they one day retire;
- GAAP seeks to match that cost to NOW when the "benefit" is being derived (Matching);
- Companies seek to be investing into the plans "assets" so that there is an accumulation of funds to pay those benefits in the future.

HMMMMMMmmmmmmmm…

- How do we figure out what the cost of compensation related to the plan is each period?
  - Actuaries, and this primary ingredient is called "Service Cost";
- If the liability was $1 today, would it be $1 twenty years from now?
  - NO! Hence there is an "interest" component to the annual pension expense as well.
- What about the earnings on the assets held?
  - Reduction to the annual pension expense
- What if the PLAN's net assets are insufficient relative to the total estimated future liability?
  - Sponsor has a liability on their books
- What if the PLAN's net assets exceed the total estimated future liability?
  - Sponsor has an asset on their books.
- Is this a long-term or short term endeavor?
  - LONG term…
    - » Consequently there are "smoothing" techniques employed.

Components of Pension Expense

1	Service Costs	+
2	Interest on Liability	+
3	Estimated Return on Plan Assets	–
4	Amortization of Unamortized Prior Service Costs	+
5	Gain or Loss	+ –

Components of Change in Pension Asset/ Liability

1	Pension Expense	+
2	Cash Payments	–
3	Other Comprehensive Income/ Loss	+ –

Using a Pension Work Sheet

Important to accounting for pensions under *Statement No. 87* is the fact that **several significant items of the pension plan are unrecognized in the accounts and in the financial statements.** This includes:

- Projected benefit obligation (PBO)
- Pension plan assets

SITTING/ WAITING IN OCI

- Prior service costs
  - Amortize into Annual Pension expense
- Net gain or loss
  - IF they exceed a 10% threshold, then they amortize into Annual Pension Expense

BUT THE NET ASSET/ LIABILITY IS ON THE SPONSOR BOOKS!!

Illustration - Work Sheet & Journal Entry

E20-2 Rebekah Company provides the following information about its defined benefit pension plan for the year 2005:

Service cost	$90,000
Contribution to the plan	105,000
Prior service cost amortization	10,000
Actual and expected return on plan assets	64,000
Benefits paid	40,000
Accrued pension cost liability at Jan. 1, 2005	10,000
Plan assets at Jan. 1, 2005	640,000
Projected benefit obligation at Jan. 1, 2005	800,000
Unrecognized prior service cost at Jan. 1, 2005	150,000
Interest/discount (settlement rate)	10%

Instructions

Prepare the journal entry to record pension expense for the year ending December 31, 2005.

Reporting in F/S

Service cost		$90,000
Contribution to the plan		105,000
Prior service cost amortization		10,000
Actual and expected return on plan assets		64,000
Benefits paid		40,000
Accrued pension cost liability at Jan. 1, 2005		10,000
Plan assets at Jan. 1, 2005		640,000
Projected benefit obligation at Jan. 1, 2005		800,000
Unrecognized prior service cost at Jan. 1, 2005		150,000
Interest/discount (settlement rate)		10%
COMPUTE PENSION EXPENSE		
Service cost	90,000	
PSC amortization	10,000	
Actual & expected return	(64,000)	
Interest cost	80,000	
Pension expense	116,000	

Amortization of Unrecognized PSC

Question: Should an expense and related liability for these prior service costs (PSC) be fully reported at the time a plan is initiated or amended?

ANSWER: SORT OF!

Under new rules, the liability gets lumped into the "Pension asset/ liability" and the *expense* sits in OCI and amortizes over future service life.

Illustration - Amortization of Prior Service Costs

E21-5 Janet Valente Company has five employees participating in its defined benefit pension plan. Expected years of future service for these employees at the beginning of 1999 are as follows:

Employee	Future Years of Service	
Ed	3	
Paul	4	
Mary	6	25
Dave	6	
Carol	6	

On January 1, 1999, the company amended its pension plan increasing its projected benefit obligation by $60,000.

Instructions

Compute the amount of prior service cost amortization for the years 1999 through 2004 using the years-of-service method.

E21-5 Computation of Service-Years

Year	Ed	Paul	Mary	Dave	Carol	Total		Cost		Amortization
1999	1	1	1	1	1	5	x	$2,400	=	$12,000
2000	1	1	1	1	1	5	x	2,400	=	12,000
2001	1	1	1	1	1	5	x	2,400	=	12,000
2002		1	1	1	1	4	x	2,400	=	9,600
2003			1	1	1	3	x	2,400	=	7,200
2004			1	1	1	3	x	2,400	=	7,200
	3	4	6	6	6	25				$60,000

	Future Years of Service	
Ed	3	
Paul	4	
Mary	6	25
Dave	6	
Carol	6	

Cost per service-year:
$60,000 / 25 = $2,400

E21-5 continued

What is the unamortized prior service cost at the end of 2001?

15*2,400=36,000 amortization. We started at $60,000 therefore would be 60,000-36,000=24,000

How would the amortization of PSC find it's way to the income statement of the Company?

As a component of the pension expense annually until fully amortized.

COMPLICATION: SMOOTHING!

What vehicle have we seen the FASB employ when they want the best of both worlds (one way on income statement, another way on the balance sheet)?

OCI/ AOCI

Comes into play here for TWO things:

1. **Prior Service Cost (PSC): When there is an amendment to the plan which impacts the amount owed to employees.**
   - ***Charge cost in year of the change creating the PSC to OCI. You will see that each year the Sponsors asset/ liability is a plug and consequently the asset or liability adjusts for this.***
   - ***Amortize the OCI into the P&L (through the annual pension expense) over the remaining service life.***
2. **Gains & Losses: We recognize the annual return on plan assets as the EXPECTED return. Actual results may vary. Also changes in assumptions used by actuaries can have an impact on the PBO. Both these diffferences goes to OCI.**
   - ***ONLY amortizes if exceeds threshold (10% of greater of Plan assets or PBO at beginning of year)***
   - ***If exceeds threshold the OCI amortizes to pension expense over the remaining service life.***

Illustration - Work Sheet & Journal Entry

E20-7 The following defined pension data of Doreen Corp. apply to the year 2005:

Projected benefit obligation, 1/1/05 (Before amendment)	$560,000
Plan assets, 1/1/05	546,200
Prepaid / accrued pension cost (credit) 1/1/05	13,800
On January 1, 2005, Doreen Corp., through plan amendment, grants prior service benefits having a present value of	100,000
Settlement rate	9%
Annual pension service cost	58,000
Contributions (funding)	55,000
Actual/ Expected return on plan assets	52,280
Benefits paid to retirees	40,000
Prior service cost amortization for 2005	17,000

Instructions

Prepare the journal entry to record pension expense for 2005.

E20-7 COMPUTATION

TEMPLATE YEAR 1	General Journal Entries				Memo Record		
Items DR./ <CR>	Annual Pension Expense	Cash	OCI	Pension Asset/ Liability	Projected Benefit Obligation	Plan Assets	Balance?
BOY				(13,800)	(560,000)	546,200	-
Prior service cost			100,000		(100,000)		-
BOY adjusted	-	-	100,000	(13,800)	(660,000)	546,200	-
Amortize prior service cost	17,000		(17,000)				-
Annual service cost	58,000				(58,000)		-
Interest Cost	59,400				(59,400)		-
Actual return	(52,280)					52,280	-
Unexpected loss							
Contributions/ Funding		(55,000)				55,000	-
Benefits paid					40,000	(40,000)	-
	82,120	(55,000)	83,000		(737,400)	613,480	
Prepaid/ accrued (PLUG)				(110,120)			
	ENDING PENS. ASSET/ LIAB			(123,920)	PENS. ASS/ LIAB=NET MEMO?		
					-		

ANNUAL JOURNAL ENTRY:

Pension expense	82,120	
Cash		55,000
OCI	83,000	
Pension Liability		110,120

Reporting in F/S

Balance Sheet

	2000
Assets:	
Cash	**(55,000)**
Liabilities:	
Accrued cost	**(123,920)**
Equity:	
AOC loss	**83,000**
Retained earnings	**82,120**

Income Statement

	2000
Revenues:	
Expenses:	
Pension expense	**82,120**
Net (income) loss	82,120

Debit (Credit)

Gain or Loss

Unexpected swings in pension expense could be caused by:

(1) large changes in market value of plan assets and

(2) changes in actuarial assumptions that affect the PBO.

Question: What is the potential negative impact on Net Income?

Volatility

The profession decided to reduce the volatility with smoothing techniques.

Smoothing Gains and Losses on Plan Assets

The expected return on the plan assets is to be included as a component of pension expense, not the actual return. The difference between the expected return and the actual return is gain/loss and is "smoothed"

Question: What happens to the difference between the expected return and the actual return?

Answer

Recorded in ***OCI*** account with the offset impacting the net pension asset/ Liability.

OCI amortized to pension expense over the **average remaining service period of active employees expected to receive benefits under the plan. IF EXCEEDS "CORRIDOR" THRESHOLD**

Smoothing Gains and Losses on PBO

In estimating, the PBO, actuaries make assumptions about such items as mortality rate, retirement rate, turnover rate, disability rate, and salary amounts.

Question: What happens with unexpected gains or losses from changes in the Projected Benefit Obligation (PBO)?

Answer

EXACTLY THE SAME AS THE UNEXPECTED GAINS/ LOSSES ON PLAN ASSETS!!! SEE PRIOR SLIDE: *OCI/* AMORTIZE IF > "CORRIDOR"

Corridor Amortization

The **unrecognized net gain or loss** balance is considered too large and must be amortized when it exceeds the arbitrarily selected FASB criterion of 10% of the larger of the beginning balances of the PBO and the market-related value (FMV) of the plan asset.

Corridor Amortization

E20-8 Dougherty Corp. has beginning-of-the-year present values for its projected benefit obligation and market-related values for its pension plan assets:

	Projected Benefit Obligation	Plan Assets Value
2003	$2,000,000	$1,900,000
2004	2,400,000	2,500,000
2005	2,900,000	2,600,000
2006	3,600,000	3,000,000

The average remaining service life per employee in 2003 and 2004 is 10 years and in 2005 and 2006 is 12 years. The unrecognized net gain or loss that occurred during each year is as follows: 2003, $280,000 loss; 2004, $90,000 loss; 2005, $10,000 loss; and 2006, $25,000 gain .

Instructions

Compute the amount of unrecognized net gain or loss amortized and charged to pension expense in each of the four years.

E20-8

	PBO	FMV PLAN ASSETS	10% OF LARGER	UNRECOGN GAIN/ (LOSS)	BOY BAL	SVC LIFE	AMORTIZE	ENDING
2003	2,000,000	1,900,000	200,000	(280,000)	-	10	-	(280,000)
2004	2,400,000	2,500,000	250,000	(90,000)	(280,000)	10	(3,000)	(367,000)
2005	2,900,000	2,600,000	290,000	(10,000)	(367,000)	12	(6,417)	(370,583)
2006	3,600,000	3,000,000	360,000	25,000	(370,583)	12	(882)	(344,701)

COMPREHENSIVE Illustration - Work Sheet & Journal Entry

Page 1045 of the text has a pretty good comprehensive illustration. Using templates from class, this is solved on the excel spreadsheet available at the class web-page. We will cover in class- time permitting.

FACTS: dr./ <cr>

AT BOY:	Pension asset/ (Liability)	(105,400)
	OCI- PSC	32,000
	OCI- Loss	29,940
	PBO	(265,000)
	Plan assets	159,600
ACTIVITY	Service Cost	16,000
	Setlmnt rate and ROR	10%
	Actual return no assets	22,000
	Amort. Of unrecog. P svc cost	17,600
	Annual contributions	27,000
	Benefits paid	18,000
	Avg. service life of covered emp	20

SOLUTION

TEMPLATE YEAR 1

Items DR./ <CR>	General Journal Entries: Annual Pension Expense	Cash	OCI: PSC	OCI: Gains/ Losses	Pension Asset/ Liability	Memo Record: Projected Benefit Obligation	Plan Assets
BOY			32,000	29,940	(105,400)	(265,000)	159,600
Prior service cost							
BOY adjusted	-	-	32,000	29,940	(105,400)	(265,000)	159,600
Amortize prior service cost	17,600		(17,600)				
Annual service cost	16,000					(16,000)	
Interest Cost	26,500					(26,500)	
Actual return	(22,000)						22,000
Unexpected gain	6,040			(6,040)			
Contributions/ Funding		(27,000)					27,000
Min liab. Adjustments							
Amortization of gain/ loss	172			(172)		18,000	(18,000)
	44,312	(27,000)	(17,600)	(6,212)		(289,500)	190,600
Prepaid/ accrued (PLUG)					6,500		
	ENDING PENSION LIABILITY				(98,900)		

CHECK: DOES THE PPD/ACCRUED=NET MEMO?
-

ANNUAL JOURNAL ENTRY:

Pension expense	44,312	
Cash		27,000
OCI (psc)		17,600
OCI (G/L)		6,212
Pension Liability	6,500	
		-

COMPUTE AMORTIZATION OF UNREC. LOSS

> of BOY Passets or Unrecog loss	265,000
Corridor %	10%
	26,500
Gains/ Losses BOY	29,940
Amortizable	3,440
Remaining service life	20
Current year amortization of gain/ loss	172

FACTS: dr./ <cr>

AT BOY:	Pension asset/ (Liability)	(105,400)
	OCI- PSC	32,000
	OCI- Loss	29,940
	PBO	(265,000)
	Plan assets	159,600
ACTIVITY	Service Cost	16,000
	Setlmnt rate and ROR	10%
	Actual return no assets	22,000
	Amort. Of unrecog. P svc cost	17,600
	Annual contributions	27,000
	Benefits paid	18,000
	Avg. service life of covered emp	20

PRACTICE!!

- **The excel spreadsheet on the web-page (in the powerpoint presentations link) has a template for you to use. It also has a Zarle corp. computation which is the same as that used throughout the text's illustrations.**
- **Don't get too reliant upon using excel b/c you will need to be able to do it in a blue-book.**