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ABSTRACT

This instructional tool presents pension accounting using a worksheet approach where debits equal credits for both the employer and for the plan. Transactions associated with the initiation of the plan through the end of the second year of the plan are presented, including their impact on accumulated other comprehensive income and deferred taxes. This article is intended as a supplemental teaching tool that demonstrates the impact of a plan's funded status on the employer's financial statements in a way that, based upon anecdotal evidence, accounting students and practitioners have found extremely beneficial beyond traditional accounting textbooks.

Keywords: Pension Reporting; Other Comprehensive Income; Deferred Income Taxes; FASB ASC No. 220, FASB ASC No. 715

INTRODUCTION

Accounting educators are tasked with conveying complex topics, such as defined benefit pension plans, in a manner that students can assimilate in the classroom. Unfortunately, the true complexities of these topics may be lost in the simplified scenarios presented in traditional textbooks. Traditional textbooks[1] typically present the accounting for pensions in isolation, lacking a comprehensive discussion of the impact of pension plans on the recognition of deferred income taxes, and the presentation of other comprehensive income. Accounting educators need a tool that will bring these otherwise separate topics together, and allow students to see this topic in its entirety.

We find a worksheet approach useful in teaching the underlying accounting processes and disclosure requirements of single-employer defined benefit pension plans. Where textbooks present an unbalanced set of information for the plan side of the pension, we can balance the plan side of the worksheet by including a 'Due from (Due to) Employer' column. This simple adjustment facilitates reconciliation of the plan side of the pension, and allows students to utilize a foundational tenant of accounting. Using the worksheet, one can readily see the how the periodic pension transactions affect the funded status of the plan, and more comprehensively illustrates changes in additional reporting information related to deferred taxes and other comprehensive income.

Students utilizing this methodology in the classroom have found it useful when confronted with pension accounting issues in subsequent coursework, and in practice. A prior student, and audit manager, successfully used this presentation during audit planning to prepare his audit team for a client engagement that included a defined benefit pension plan.

[1] For examples, see Kieso, Weygandt, and Warfield, *Intermediate Accounting*, and Spiceland, Sepe, Nelson, and Tomassini, *Intermediate Accounting.*

This paper presents the transactions and worksheet from initiation of the plan through the second year of a plan. Required disclosures and Comprehensive Income presentation are summarized for the two years.

THE WORKSHEET

Textbook presentation of pension accounting focuses on the employer side of the pension plan, providing plan side figures as they apply to employer reporting such as the projected benefit obligation (PBO) and plan assets. We have adapted the employer side to encompass the new reporting requirements of SFAS 158 and Comprehensive Income (Topic 220), and we have developed a means of balancing the plan side of the worksheet as well as the employer side of the worksheet.

This worksheet, similar to most, has sections for both the employer (plan sponsor) and the plan. The employer's portion of the worksheet includes traditional columns for pension expense, cash, and the accrued pension liability. To fulfill the reporting requirements of FASB ASC 715 we have included the non-current pension liability, accumulated other comprehensive income (OCI), and deferred taxes. The plan portion of the worksheet includes the projected benefit obligation (PBO), plan assets, and a receivable from the employer. The inclusion of the receivable from employer column allows both the plan and employer sides of the worksheet to balance; debits equal credits.

The due from (due to) employer represents the cumulative obligation from the employer, corresponding to the combination of the Prepaid (Accrued) Pension Expense and the Noncurrent Portion - Pension Asset (Liability). The deferred taxes will be computed at the reporting date, and treated as a reversing entry. This will clearly provide totals for the gross and net of tax figures required by the amendments to comprehensive income reporting in FASB ASC 220.

Plan adoption and first year worksheet activity

The actuarial report for the first year of the plan is provided below. It shows the PBO at plan adoption, pension expense incurred during the year, and contributions to the plan.

	Projected Benefit Obligation	Plan Assets	Pension Expense
Plan adoption	$(100,000)		
Service Costs	(15,000)		$15,000
Interest Costs	(8,000)		8,000
Amortization of prior service costs			10,000
Employer contribution		$30,000	
Ending Balances	$(123,000)	$30,000	$33,000

The expected return on assets and interest costs are 8% and the average service life of plan participants is 10 years. The employer's side of the worksheet below reflects these transactions.

Date	Description	Unrecognized Prior Service Costs (OCI)	Deferred Income Tax	Noncurrent portion- Pension Asset (Liability)	Pension Expense	Cash	Prepaid (Accrued) Pension Expense
1/1/x1	Plan Adoption	$100,000		$(100,000)			
12/31/x1	Service Costs				$15,000		$(15,000)
12/31/x1	Interest Costs				8,000		(8,000)
12/31/x1	Amortization of PSC	(10,000)		10,000	10,000		(10,000)
12/31/x1	Employer Contribution					$(30,000)	30,000
12/31/x1	Year-end Balances	$90,000		$(90,000)	$33,000	$(30,000)	$(3,000)

The plan side of the worksheet below reflects these transactions.

Date	Description	Due From (Due To) Employer	Projected Benefit Obligation	Plan Assets
1/1/x1	Plan Adoption	$100,000	$(100,000)	
12/31/x1	Service Costs	15,000	(15,000)	
12/31/x1	Interest Costs	8,000	(8,000)	
12/31/x1	Amortization of PSC			
12/31/x1	Employer Contribution	(30,000)		30,000
12/31/x1	Year-end Balances	$93,000	$(123,000)	$30,000

As presented above the plan is adopted resulting in the recognition of the original benefit obligation of $100,000 on the employer and plan side of the worksheet. Service costs are included as given, and Interest costs are computed using the 8% expected return. At the year end the Unrecognized Prior Service Cost is amortized, and employer contributions recognized. The year-end total for Due From Employer is equal to the funded status of the plan, and reconciles with the pension liabilities reflected on the employer's side of the worksheet (Noncurrent portion – Pension Liability and Accrued Pension Expense).

Finally, using the information in the worksheet the employer can use the non-current pension asset (liability) to determine the related deferred tax (liability) asset. The deferred taxes should be allocated to the other comprehensive income components arising from pension plan activity. The worksheet below shows the components of other comprehensive income, net of taxes, which should be reflected in the equity section of employer's balance sheet. We use a future tax rate of 35%. The changes to other comprehensive income, net of taxes, are the components of the current year, comprehensive income that should be presented in the Statement of Comprehensive Income.

Date	Description	Unrecognized Prior Service Costs (OCI)	Deferred Income Tax	Noncurrent portion- Pension Asset (Liability)	Pension Expense	Cash	Prepaid (Accrued) Pension Expense
1/1/x1	Plan Adoption	$100,000		$(100,000)			
12/31/x1	Service Costs				$15,000		$(15,000)
12/31/x1	Interest Costs				8,000		(8,000)
12/31/x1	Amortization of PSC	(10,000)		10,000	10,000		(10,000)
12/31/x1	Employer Contribution					$(30,000)	30,000
12/31/x1	Year-end Balances	$90,000		$(90,000)	$33,000	$(30,000)	$(3,000)
	Deferred Income Tax	(31,500)	31,500				
	After Tax Amounts	$58,500	$31,500	$(90,000)	$33,000	$(30,000)	$(3,000)

Second year worksheet activity

The actuarial report for the second year follows.

	Projected Benefit Obligation	Plan Assets	Pension Expense
Beginning Balances	$(123,000)	$30,000	
Service Costs	(18,000)		$18,000
Interest Costs	(9,840)		9,840
Amortization of prior service costs			10,000
Earnings on Plan Assets		3,200	(2,400)
Employer contribution		$40,000	
Benefits Paid	1,000	(1,000)	
Ending Balances	$(149,840)	$72,200	$35,440

The worksheet reflecting this activity follows.

Date	Description	Unrecognized Prior Service Costs (OCI)	Unrecognized (Gain) Loss (OCI)	Deferred Income Tax	Noncurrent portion- Pension Asset (Liability)	Pension Expense	Cash	Prepaid (Accrued) Pension Expense
12/31/x1	After Tax Amounts	$58,500		$31,500	$(90,000)	$33,000	$(30,000)	$(3,000)
1/1/x2	Reverse Deferred Tax	31,500		(31,500)				
12/31/x2	Service Costs					$18,000		$(18,000)
12/31/x2	Interest Costs					9,840		(9,840)
12/31/x2	Amortization of PSC	(10,000)			10,000	10,000		(10,000)
12/31/x2	Return on Plan Assets		$(800)		800	(2,400)		2,400
12/31/x2	Employer Contribution						$(40,000)	40,000
12/31/x2	Year-end Balances	$80,000			$(79,200)	$35,440	$(40,000)	$1,560
	Deferred Income Tax	(28,000)	280	27,720				
	After Tax Amounts	$52,000	$(520)	$27,720	$(79,200)	$35,440	$(40,000)	$1,560

Date	Description	Due From (Due To) Employer	Projected Benefit Obligation	Plan Assets
12/31/x1	Year-end Balances	$93,000	$(123,000)	$30,000
12/31/x2	Service Costs	18,000	(18,000)	
12/31/x2	Interest Costs	9,840	(9,840)	
12/31/x2	Amortization of PSC			
12/31/x2	Return on Plan Assets	(3,200)		3,200
12/31/x2	Benefits Paid		1,000	(1,000)
12/31/x2	Employer Contribution	(40,000)		40,000
12/31/x1	Year-end Balances	$77,640	$(149,840)	$72,200

As presented above we start the year by reversing the deferred taxes from year X1. Service costs are given, and the Interest costs are computed by multiplying the ending balance in the PBO from X1 by the expected return of 8%. The Unrecognized Prior Service Cost is amortized, and employer contributions are recognized. In year X2, the return on plan assets exceeds the expected return. Pension Expense captures the expected return on plan assets, while the excess is captured in Other Comprehensive Income (OCI) column labeled 'Unrecognized Gain'. The deferral of the unrecognized (gain) loss demonstrates how the employer achieves income smoothing through accounting for pension expense.

Again, the calculation of deferred tax asset (liability) related to the components of other comprehensive income must be made at the end of the year. The net changes to other comprehensive income, net of taxes, are the components of the current year comprehensive income related to pension expense.

DISCLOSURE

The amounts presented in the worksheet are direct inputs into the financial statements. The balance sheet accounts include the Noncurrent portion – Pension Liability, Prepaid (Accrued) Pension Expense, and the AOCI items (Unrecognized Prior Service Cost and Unrecognized (Gain) Loss) which are presented net of deferred taxes. The amounts would be presented as follows:

Reporting Year	X1 DR(CR)	X2 DR(CR)
Current Assets – Prepaid Pension Expense		1,560
Noncurrent Assets – Deferred Taxes	31,500	27,720
Current Liabilities – Accrued Pension Expense	(3,000)	
Noncurrent Liabilities - Pension Liability	(90,000)	(79,200)
Equity – Accumulated OCI	58,500	51,480

The Statement of Comprehensive Income would capture current period changes in the OCI accounts. These amounts can be presented in a single statement below Net Income, or is a separate statement immediately following the Statement of Income. OCI amounts can be presented net of tax, or at their gross amount with an aggregate tax expense of benefit.

These examples present the items of comprehensive income beginning with net income. The first presents numbers before tax and provides a summary of the impact of income tax. The second presents the numbers net of tax.

Reporting Year	X1	X2
Net Income	$	$
Other Comprehensive Income, before tax:		
Defined Benefit Pension Plans:		
Prior Service Cost arising from plan adoption	(100,000)	
Net income arising during period		800
Less: amortization of prior service cost		
Included in net periodic pension cost	10,000	10,000
Other Comprehensive Income, before tax	(90,000)	10,800
Income tax related to items of other comprehensive income	31,500	(3,780)
Other Comprehensive Income, net of tax	(58500)	7,020
Comprehensive Income	$	$

Reporting Year	X1	X2
Net Income	$	$
Other Comprehensive Income, net of tax:		
Defined Benefit Pension Plans:		
Prior Service Cost arising from plan adoption	(65,000)	
Net income arising during period		520
Less: amortization of prior service cost		
Included in net periodic pension cost	6,500	6,500
Other Comprehensive Income, net of tax	(58,500)	7,020
Comprehensive Income	$	$

The before tax presentation allows the user to draw the information directly from the worksheet, as presented in this paper. The after tax presentation can be accommodated by inserting additional columns for each transaction within the pension related other comprehensive income accounts. For example, separate columns could be used to account for plan adoption/amendment and amortization of unrecognized prior service cost as well as columns for actuarial gains (losses), unrecognized gains (losses) arising from the difference between actual and expected returns on plan assets, and amortization of the unrecognized gains (losses).
Summary

CONCLUSION

Using a worksheet approach allows the students to utilize their knowledge of basic accounting entries and that debits must equal credits to generate the information needed to properly account for pensions under FASB ASC 715. The worksheet also makes it easier for students to see the components of other comprehensive income that arise from pension transactions as well as the related deferred tax amounts. Additionally, students see when the components of other comprehensive income enter the earnings stream. Once the student understands accounting for pensions, it will be much easier to transition to the accounting for other post-employment benefit plans.

AUTHOR INFORMATION

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APPENDIX A

Journal entries for year 20X1:

Accrued Pension Expense	30,000	
Cash		30,000
To record employer contribution to pension plan during 20X1		
Pension Expense	33,000	
Accrued Pension Expense		33,000
To record pension expense for the 20X1		
Other comprehensive income – Unrecognized PSC	58,500	
Deferred Income Taxes	31,500	
Pension Liability – non-current		90,000
To record change in Other Comprehensive Income net of related deferred taxes, the related deferred taxes, and the change in the non-current liability during the current year		

After recording these entries, the general ledger will reflect the amounts shown in the worksheet for 20X1.

Journal entries for 20X2:

Accrued Pension Expense	40,000	
Cash		40,000
To record employer contribution to pension plan during 20X2		
Pension Expense	35,440	
Accrued Pension Expense		35,440
To record pension expense for the 20X2		
Pension Liability – non-current	10,800	
Other comprehensive income – Unrecognized PSC		6,500
Other comprehensive income – Unrecognized (Gain) Loss		520
Deferred Income Taxes		3,780
To record adjustments to Other Comprehensive Income net of related deferred taxes, the related deferred taxes, and the change in the non-current liability during the current year		

After recording these entries, the general ledger will reflect the amounts shown in the worksheet for 20X2.

NOTES

