

## **Alternative Funding Standard Account (AFSA) (See IRC section 412(g))**

- Must use the Entry Age Normal funding method.
- May be elected at will by the plan sponsor.
- AFSA Charges
  - Smaller of Entry Age Normal or Unit Credit normal cost.
  - Excess of PVAB over market value of assets (unadjusted by credit balance), if any.
- Regular funding standard account must continue to be maintained. It will generally show a funding deficiency.
- Any funding deficiency or credit balance in the alternative funding standard account is not carried forward within that account.
- The overall funding deficiency of the plan (for which a 10% excise tax must be paid by the plan sponsor) is equal to the smaller of the deficiency in the funding standard account or the deficiency in the alternative funding standard account.
- Return to regular funding standard account.
  - The regular funding standard account is adjusted for the year following the last year that the alternative funding standard account is used.
  - The regular funding standard account is credited with the difference between the deficiency in the regular funding standard account and the deficiency (if any) in the AFSA.
  - A new charge base is established in the regular funding standard account equal to that same credit. The base is amortized over 5 years.

### Question 3

Plan effective date: 1/1/1995.

Valuation interest rate: 6% per year.

Actuarial value of assets:

Before 2006: Market value  
After 2005: Average value with a 5-year averaging period as defined in IRS regulation 1.412(c)(2)-1(b)(7) using replacement values from the phase-in described in section 3.12 of Revenue Procedure 2000-40

Market value of assets as of 12/31/2003: \$200,000

Reconciliation of market value of assets:

	<u>2004</u>	<u>2005</u>	<u>2006</u>
Contributions	\$ 40,000	\$ 50,000	\$ 60,000
Benefit payments	30,000	30,000	30,000
Administrative expenses	5,000	8,000	6,000
Interest and dividends	7,000	6,000	10,000
Realized gain (loss)	2,000	(4,000)	5,000
Unrealized gain (loss)	6,000	11,000	20,000
Market value of assets, 12/31	220,000	245,000	304,000

What is the actuarial value of assets as of 1/1/2007?

### Solution to question 3

Under the average value method, the actuarial value of assets is equal to an average of the market value of assets as of the valuation date and the adjusted market value of assets for each prior year (up to 4 years). In this question, there is a 5-year averaging period that includes the current year (2007) and the four prior years (2003 through 2006). However, the phase-in requires that in the first year the method is used, the prior year adjusted value be used for all prior years, and in the second year the method is used the second prior year adjusted value be used for each year before that. The phase-in is complete in the fourth year that the method is used. 2007 is the second year that the method is being used, so an adjusted value is need for 2006 and 2005 assets. The 2005 adjusted value will be used as the adjusted value for 2004 and 2003 in determining the 1/1/2007 actuarial value.

The adjusted assets for each prior year are determined by taking the market value of assets as of the valuation date in the prior year, adding the total contributions and interest/dividends, and subtracting the total benefit payments and plan expenses, for each year since that valuation date. Note that realized and unrealized gains and losses are not used as adjustment items.

$$\begin{aligned}\text{Adjusted value of assets from 1/1/2005} &= 225,000 + (50,000 + 60,000) \\ &\quad + (6,000 + 10,000) \\ &\quad - (30,000 + 30,000) - (8,000 + 6,000) \\ &= 277,000\end{aligned}$$

$$\begin{aligned}\text{Adjusted value of assets from 1/1/2006} &= 245,000 + 60,000 + 10,000 - 30,000 - 6,000 \\ &= 279,000\end{aligned}$$

$$\text{Average value of assets} = \frac{(277,000 \times 3) + 279,000 + 304,000}{5} = 282,800$$

Note: The actuarial value of assets must fall within 20% of the fair market value. This is clearly the case in this situation.

## Question 21

Plan effective date: 1/1/2004

Actuarial cost method: Frozen initial liability

Assumed interest rate: 5% per year

Selected valuation results as of 1/1/2004:

Entry age normal accrued liability	\$100,000
Entry age normal cost	20,000

The contribution for 2004 in the amount of \$30,000 was contributed on 12/31/2004.

There were no gains or losses in 2004.

The minimum required contribution for 2005 was waived.

What is the unfunded liability as of 1/1/2006?

## Solution to question 21

The initial unfunded liability as of 1/1/2004 is \$100,000. Since this is the first year of the plan, the normal cost under FIL is the same as the entry age normal cost.

The minimum required contribution for 2004 is:

$$(\$20,000 + \$100,000/\ddot{a}_{30}) \times 1.05 = \$27,505$$

Credit balance in funding standard account as of 12/31/2004 is:

$$\$30,000 - \$27,505 = \$2,495$$

The unfunded liability as of 1/1/2005 may be calculated two ways:

Unfunded liability = Outstanding balance – credit balance

$$= \$100,000 \times \frac{\ddot{a}_{29}}{\ddot{a}_{30}} - \$2,495 = \$96,000 \quad \text{or,}$$

Unfunded liability = [(Prior unfunded liability + Prior normal cost) × (1 + i)]  
- Prior year contribution

$$= [(\$100,000 + \$20,000) \times 1.05] - \$30,000 = \$96,000$$

The normal cost remains the same in 2005 since the FIL normal cost does not differ from the entry age normal cost until there is a gain or loss. The minimum required contribution for 2005 is:

$$(\$20,000 + \$100,000/\ddot{a}_{30} - \$2,495) \times 1.05 = \$24,885$$

This is waived by the IRS. There is a \$0 as of 12/31/2005.

The unfunded liability as of 1/1/2006 may be calculated two ways:

Unfunded liability = Outstanding balance – credit balance

$$= \$100,000 \times \frac{\ddot{a}_{28}}{\ddot{a}_{30}} + \$24,885 - \$0 = \$121,800 \quad \text{or,}$$

Unfunded liability = [(Prior unfunded liability + Prior normal cost) × (1 + i)]  
- Prior year contribution

$$= [(\$96,000 + \$20,000) \times 1.05] - \$0 = \$121,800$$

## Question 57

Type of plan: Defined benefit plan for sole proprietor

Plan effective date: 1/1/2004

Valuation date: 12/31

Actuarial cost method: Frozen initial liability

Accrued liability as of 12/31/2004: \$100,000

Selected actuarial assumptions:

Interest rate:	7% per year
Pre-retirement mortality or withdrawal:	None

Normal cost as of 12/31/2004: \$50,000

2004 earned income (after all deductions other than plan contributions) for sole participant Smith (owner employee): \$40,000

The contributions for 2004:

\$60,000 deposited on 12/31/2004

The sole proprietor has never filed for an extension of an income tax return.

There are no experience gains or losses in 2005.

2005 earned income (after all deductions other than plan contributions) for sole participant Smith (owner employee): \$90,000

- What is the excise tax on nondeductible contributions for 2004?
- What is the amount of the contribution that must be made for 2005 in order for the sole proprietor to be able to deduct the full deductible limit for 2005?

## Solution to question 57

a) The deductible limit under IRC section 404(a)(1)(A)(iii) for 2004 is equal to the normal cost plus the limit adjustment.

$$\$50,000 + 100,000/\ddot{a}_{\overline{10}|} = \$63,306$$

However, the deduction for 2004 cannot exceed the earned income (as provided by IRC section 404(a)(8)). This is \$40,000.

The nondeductible contribution for 2004 is:

$$\$60,000 - \$40,000 = \$20,000.$$

This is generally subject to a nondeductible excise tax of 10%. However, IRC section 4972(c)(4) provides that when a sole proprietor's deduction is limited by IRC section 404(a)(8), the additional contribution needed to meet the minimum funding requirement is exempt from the excise tax.

The minimum required contribution for 2004 is:

$$\$50,000 + 100,000/\ddot{a}_{\overline{30}|} = \$57,531$$

The contribution subject to the excise tax is:

$$\$60,000 - \$57,531 = \$2,469$$

The excise tax for 2004 is:  $\$2,469 \times 10\% = \$247$

b) Since there were no experience gains or losses in 2005, the normal cost remains the same as the 2004 normal cost, and the deductible limit under IRC section 404(a)(1)(A)(iii) remains \$63,306. This is not limited by the 2005 earned income.

IRC section 404(a)(1)(E) allows for contributions paid in a tax year that are not deductible to be carried forward and deducted in a future year. However, this provision only applies to contributions not deductible under IRC section 404(a)(1). Since the contributions for 2004 were not deductible due to IRC section 404(a)(8), they are not eligible to be carried forward.

Therefore, the contribution for 2005 must be equal to \$63,306.

Note that the \$20,000 that was not deductible for 2004 can never be deducted.