

**Aufgabe QR-7.14: Changes in Depreciation**

(Veränderung der Abschreibungsmethode)

TYGERVALLEY Ltd. is a production firm for MP3 players. It runs a machine for assembling the players. It was bought on 4.04.20X4 at a price 126,000.00 EUR net of VAT. The useful life of the machine is 6 years. Depreciation is along arithmetic-declining method. On 1.04.20X7 TYGERVALLEY changes the depreciation method to straight line method. Determine depreciation charge year-wise and assign it to the fiscal years then. (Determine depreciation for the first year and split it at a ratio 3:1 between 20X4 and 20X5. Financial statement for taxation follow straight line method for all years.

**Required: Make all bookkeeping entries in relevant accounts until the end of useful life. Prepare an trial balance for the accounts: P, P, E, Accumulated Depreciation, Deferred taxes, Depreciation for all fiscal years at the year end. Income tax rate is 30%, VAT rate is 20%.**

**Lösung (Solution):**

Firstly, depreciation is to be determined along the arithmetic declining method. Depreciation for the years of useful life is:

- first year:  $6 \cdot 6,000 = 36,000.00 \text{ EUR}$
- second year:  $5 \cdot 6,000 = 30,000.00 \text{ EUR}$
- third year:  $4 \cdot 6,000 = 24,000.00 \text{ EUR}$
- forth year:  $3 \cdot 6,000 = 18,000.00 \text{ EUR}$
- fifth year:  $2 \cdot 6,000 = 12,000.00 \text{ EUR}$
- sixth year:  $1 \cdot 6,000 = 6,000.00 \text{ EUR}$ .

Accordingly depreciation charge in the fiscal years is:

- in 20X4:  $0.75 \cdot 36,000 = 27,000.00 \text{ EUR}$
- in 20X5:  $0.25 \cdot 36,000 + 0.75 \cdot 30,000 = 31,500.00 \text{ EUR}$
- in 20X6:  $0.25 \cdot 30,000 + 0.75 \cdot 24,000 = 25,500.00 \text{ EUR}$ .

Along the statements for taxation depreciation charge is  $126,000/6 = 21,000.00 \text{ EUR}$ . In 20X4 it is  $0.75 \cdot 21,000 = 15,750.00 \text{ EUR}$ .

The bookkeeping entries are as follows:

In 20X4:

(1) Acquisition:

<b>DR PPE at cost</b>	<b>126,000.00 EUR</b>
<b>DR VAT</b>	<b>25,200.00 EUR</b>
<b>CR Bank</b>	<b>151,200.00 EUR</b>

## (2) Depreciation

<b>DR Depreciation</b> .....	<b>27,000.00 EUR</b>
<b>CR Acc. Depr.</b> .....	<b>27,000.00 EUR</b>

In contrast to the statements for taxation depreciation is too low. The difference is  $27,000 - 15,750 = 11,250.00$  EUR. Accordingly, the profit along the commercial financial statements is lower than in the tax statement. There are assets for deferred taxes to be recognized. They amount to  $11,250 \cdot 30\% = 3,375.00$  EUR. It is a deferred tax income.

## (3) Deferred tax:

<b>DR Deferred tax</b> .....	<b>3,375.00 EUR</b>
<b>CR R/E</b> .....	<b>3,375.00 EUR</b>

In 20X5:

## (A) Depreciation

<b>DR Depreciation</b> .....	<b>31,500.00 EUR</b>
<b>CR Acc. Depr.</b> .....	<b>31,500.00 EUR</b>

(B) Deferred taxes  $(31,500 - 21,000) \cdot 30\% = 3,150.00$  EUR.

<b>DR Deferred tax</b> .....	<b>3,150.00 EUR</b>
<b>CR R/E</b> .....	<b>3,150.00 EUR</b>

In 20X6:

## (a) Depreciation

<b>DR Depreciation</b> .....	<b>25,500.00 EUR</b>
<b>CR Acc. Depr.</b> .....	<b>25,500.00 EUR</b>

(b) Deferred taxes  $(25,500 - 21,000) \cdot 30\% = 1,350.00$  EUR:

<b>DR Deferred tax</b> .....	<b>1,350.00 EUR</b>
<b>CR R/E</b> .....	<b>1,350.00 EUR</b>

In 20X7 depreciation method is changed. This means that the new depreciation method is to be applied (for comparative information) from 1.01.20X6 onwards. At the end of 20X5 the carrying amount for the machine was  $126,000 - 58,500 = 67,500.00$  EUR. The remaining useful life is to be  $72m - (9m + 12m) = 51m$ . Monthly depreciation charge is accordingly:  $67,500/51 = 1,323.53$  EUR. Depreciation for a year is  $12 \cdot 1,323.53 = 15,882.36$  EUR. Under application of the new method from 1.01.20X6 onwards the carrying amount of the machine would be  $67,500 - 15,882.36 = 51,617.64$  EUR.

All business activities for 20X6 have been booked already. The financial statements for 20X6 won't be changed anymore. It is required to change the comparative information for 20X6 in the financial statements for 20X7.

To adjust the Accumulated depreciation account there is an correction required to be  $51,617.64 - 42,000 = 9,617.64$  EUR.

In 20X7:

(i) Adjustment

<b>DR Acc. Depr. ....</b>	<b>9,617.64 EUR</b>
<b>CR Depreciation ....</b>	<b>9,617.64 EUR</b>

The adjustment requires deferred taxes to be:  $9,617.64 \cdot 30\% = 2,885.29$  EUR. See (ii):

<b>DR R/E ....</b>	<b>2,885.29 EUR</b>
<b>CR Deferred tax ....</b>	<b>2,885.29 EUR</b>

(iii) Depreciation is 15,882.36 EUR, see above.

<b>DR Depreciation ....</b>	<b>15,882.36 EUR</b>
<b>CR Acc. Depr. ....</b>	<b>15,882.36 EUR</b>

(iiii) Deferred taxes are  $(15,882.36 - 21,000) \cdot 30\% = (1,535.29)$  EUR).

<b>DR R/E ....</b>	<b>1,535.29 EUR</b>
<b>CR Deferred tax ....</b>	<b>1,535.29 EUR</b>

In 20X8:

(I) Depreciation

<b>DR Depreciation ....</b>	<b>15,882.36 EUR</b>
<b>CR Acc. Depr. ....</b>	<b>15,882.36 EUR</b>

(II) Deferred taxes are  $(15,882.36 - 21,000) \cdot 30\% = (1,535.29)$  EUR).

<b>DR R/E ....</b>	<b>1,535.29 EUR</b>
<b>CR Deferred tax ....</b>	<b>1,535.29 EUR</b>

In 20X9:

(x) Depreciation

<b>DR Depreciation ....</b>	<b>15,882.36 EUR</b>
<b>CR Acc. Depr. ....</b>	<b>15,882.36 EUR</b>

(y) Deferred taxes are  $(15,882.36 - 21,000) \cdot 30\% = (1,535.29)$  EUR).

<b>DR R/E ....</b>	<b>1,535.29 EUR</b>
<b>CR Deferred tax ....</b>	<b>1,535.29 EUR</b>

In 20Y0:

(x) Depreciation is  $3 \cdot 1,323.53 = 3,970.59$  EUR:

<b>DR Depreciation</b> .....	<b>3,970.59 EUR</b>
<b>CR Acc. Depr.</b> .....	<b>3,970.59 EUR</b>

(y) Deferred taxes are  $(3,970.59 - 21,000/4) \cdot 30\% = (383.82 \text{ EUR})$ .

<b>DR R/E</b> .....	<b>383.82 EUR</b>
<b>CR Deferred tax</b> .....	<b>383.82 EUR</b>

See accounts to get the full picture:

D	PPE at cost	C
(1)	126.000,00	c/d 126.000,00
b/d	126.000,00	

D	VAT	C
(1)	25.200,00	c/d 25.200,00
b/d	25.200,00	Bank 25.200,00

D	Bank	C
	151.200,00	(1) 151.200,00
VAT	25.200,00	b/d 151.200,00

D	Depr 20X4	C
(2)	27.000,00	P&L 27.000,00

D	Depr 20X5	C
(A)	31.500,00	P&L 31.500,00

D	Depr 20X6	C
(a)	25.500,00	P&L 25.500,00

D	Depr 20X7	C
(iii)	15.882,36	(i) 9.617,64
		P&L 6.264,72
	15.882,36	15.882,36

D	Depr 20X8	C
(I)	15.882,36	P&L 15.882,36

D	Depr 20X9	C
(x)	15.882,36	P&L 15.882,36

D	R/E	C
	(3)	3.375,00
	...	
	(B)	3.150,00
	...	
	(b)	1.350,00
	...	
(ii)	2.885,29	
(iii)	1.535,29	...
...		
(II)	1.535,29	
...		
(y)	1.535,29	
...		
(Y)	383,82	
...		
		0,02

D	Acc. Depr.	C
c/d	27.000,00	(2) 27.000,00
		b/d 27.000,00
c/d	58.500,00	(A) 31.500,00
	58.500,00	58.500,00
		b/d 58.500,00
c/d	84.000,00	(a) 25.500,00
	84.000,00	84.000,00
		b/d 84.000,00
(i)	9.617,64	(iii) 15.882,36
c/d	90.264,72	99.882,36
	99.882,36	90.264,72
		b/d 15.882,36
c/d	106.147,08	(I) 15.882,36
	106.147,08	106.147,08
		b/d 106.147,08
c/d	122.029,44	(x) 15.882,36
	122.029,44	122.029,44
		b/d 122.029,44
c/d	126.000,03	(X) 3.970,59
	126.000,03	126.000,03
		b/d 126.000,03

D	Deferred tax	C
(3)	3.375,00	c/d 3.375,00
b/d	3.375,00	
(B)	3.150,00	c/d 6.525,00
	6.525,00	6.525,00
b/d	6.525,00	
(b)	1.350,00	c/d 7.875,00
	7.875,00	7.875,00
b/d	7.875,00	(ii) 2.885,29
		(iii) 1.535,29
		c/d 3.454,42
	7.875,00	7.875,00
b/d	3.454,42	(II) 1.535,29
		c/d 1.919,13
	3.454,42	3.454,42
b/d	1.919,13	(y) 1.535,29
		c/d 383,84
	1.919,13	1.919,13
b/d	383,84	(Y) 383,82
		c/d 0,02
	383,84	383,84
b/d	0,02	

D	Depr 20Y0	C
(X)	3.970,59	P&L 3.970,59

Exhibit 1: Accounts