

Aufgabe QR-7.18: Leasing

(Accounting for Leases)

Die LINDENTHAL GmbH will ein neues Auslieferungsfahrzeug MB Sprinter zum 1.01.20X3 anschaffen. Der Listenpreis beträgt 27.000,00 EUR. Der Autohändler bietet einen Leasingvertrag (operatives Leasing) auf 3-Jahre-Basis an. Die Leasingzahlen sind 5.600,00 EUR pro Jahr, zahlbar zum Jahresende.

LINDENTHAL überlegt auch den Van über die Hausbank zu finanzieren. Die Bank verlangt einen Zinssatz von 4 %/Jahr zahlbar zum Jahresende. Die Annuität für das Darlehn beträgt 2.430,00 EUR. LINDENTHAL erwartet, dass sie das Auto (Van) nach 3 Jahren zu einem Preis von 10.800,00 EUR verkaufen kann.

Gefragt: Machen Sie alle provisorischen Buchungen für beide Alternativen und beraten Sie LINDENTHAL hinsichtlich der Vorteilhaftigkeit der Alternativen. Um einen Barwert von Zahlungen zu bestimmen, verwenden Sie den gewichteten Kapitalkostensatz von 8 %/Jahr. Ignorieren Sie die Umsatzsteuer. Befolgen Sie die Regelungen des IAS 1 zur Unterscheidung von kurzfristigen und langfristigen Schulden. Verwenden Sie lineare Abschreibung, wenn sie für die Lösungsfindung relevant ist.

English Version:

LINDENTHAL (Pty) Ltd. tends to buy a new delivery van MB Sprinter as at 1.01.20X3. The list price is 27,000.00 EUR. The car dealer offers an operating lease contract which is based on 3 years. The lease payments are 5,600.00 EUR/a. The payments are scheduled for the year end.

LINDENTHAL considers financing the van by its house bank. The bank's interest rate is 4 %/a and is to be paid at the end of the year. The annuity for the liability is 2,430.00 EUR. LINDENTHAL estimates to sell the car (van) after 3 years at a price of 10,800.00 EUR.

Required: Make all provisional bookkeeping entries for both alternatives and advice LINDENTHAL in terms of the best alternative. In order to derive the present value of payments use a weighted average cost of capital rate 8 %/a. Ignore VAT. Follow the regulations of IAS 1 for the current / non-current distinction of liabilities. Use straight line method in case depreciation is relevant for your solution.

Lösung (Solution)

In order to compare both alternatives bookkeeping entries are made as provisional bookkeeping entries. The first alternative is to agree in the operating lease offered by the car dealer:

(1), (2), (3) The leasing rate is to be paid via the bank account.

DR Lease Rate 5,600.00 EUR
CR Bank 5,600.00 EUR

See accounts below for achieving the overview:

Lease rate - 20X3				Lease rate - 20X4				Lease rate - 20X5			
D			C	D			C	D			C
(1)	5.600,00	c/d	5.600,00	(2)	5.600,00	c/d	5.600,00	(3)	5.600,00	c/d	5.600,00
b/d	5.600,00	P&L	5.600,00	b/d	5.600,00	P&L	5.600,00	b/d	5.600,00	P&L	5.600,00

Bank			
D			C
c/d	5.600,00	(1)	5.600,00
		b/d	5.600,00
c/d	11.200,00	(2)	5.600,00
	11.200,00		11.200,00
		b/d	11.200,00
c/d	16.800,00	(3)	5.600,00
	16.800,00		16.800,00
		b/d	16.800,00

Exhibit 1: Accounts

The present value for all payments is $-5,600 - 5,600 \cdot 1.08^{-1} - 5,600 \cdot 1.08^{-2} = -15,586.28$ EUR. The total of expenses is $3 \cdot 5,600 = 16,800.00$ EUR.

The bank alternative means the recognition of the car in LINDENTHAL's bookkeeping records. Depreciation is prescribed by the offer to sell the van for 10,800.00 EUR after 3 years. It amounts to $(27,000 - 10,800)/3 = 5,400.00$ EUR.

In 20X3:

(A) The recognition of the van requires crediting the long-term liability account.

DR P, P, E 27,000.00 EUR
CR Long-term Liabilities 27,000.00 EUR

(B) The payment for the annuity amounts to 9 % ($2,430 / 27,000 = 0.09$). The amount comprises interest and pay-off. In the first year interest is $0.04 \cdot 27,000 = 1,080.00$ EUR. The amount for pay-off is $2,430 - 1,080 = 1,350.00$ EUR.

amount	interest	Pay-off	annuity	year
27.000,00	1.080,00	1.350,00	2.430,00	2003
25.650,00	1.026,00	1.404,00	2.430,00	2004
24.246,00	969,84	24.246,00	25.215,84	2005
		<u>27.000,00</u>		

Exhibit 2: Payment schedule

DR Interest	1,080.00 EUR
DR Long-term Liabilities	1,350.00 EUR
CR Bank	2,430.00 EUR

(C) As the van got recognized in the bookkeeping records it is required to write it off for depreciation: The car will be in use for 3 years and is sold after that period. Depreciation along straight line method amounts to $(27,000 - 10,800)/3 = 5,400.00$ EUR.

DR Depreciation	5,400.00 EUR
CR Acc. Depr.	5,400.00 EUR

(D) Along IAS 1 short-term liabilities are to be shown separately. The liabilities settled in the next period are $2,430 - 0.04 \cdot (27,000 - 1,350) = 1,404.00$ EUR.

DR Long-term Liabilities	1,404.00 EUR
CR short-term Liabilities	1,404.00 EUR

In 20X4:

(1) Payment for interest and pay-off:

DR Interest	1,026.00 EUR
DR Short-term Liabilities	1,404.00 EUR
CR Bank	2,430.00 EUR

(2) Depreciation:

DR Depreciation	5,400.00 EUR
CR Acc. Depr.	5,400.00 EUR

(3) Transfer next year's liabilities to short-term liabilities. As in the next year the whole bank loan is to be paid off, the balancing figure of the long-term liabilities gets transferred to short-term liabilities:

DR Long-term Liabilities	24,246.00 EUR
CR Short-term Liabilities	24,246.00 EUR

In 20X5:

(I) In 20X4 interest is $0.04 \cdot 24,246 = 969.84$ EUR. The amount for pay-off is $2,430 - 969.84 = 1,460.16$ EUR.

DR Interest	969.84 EUR
DR Short-term Liabilities	1,460.16 EUR
CR Bank	2,430.00 EUR

(II) The bank loan is paid off completely: $24,246 - 1,460.16 = 22,785.84$ EUR.

DR Short-term Liabilities	22,785.84 EUR
CR Bank	22,785.84 EUR

(III) Depreciation:

DR Depreciation	5,400.00 EUR
CR Acc. Depr.	5,400.00 EUR

() Selling the van requires the following bookkeeping entries, here the Realization-account is in use as explanted at the end of chapter 7 in the text book.

DR Realization	27,000.00 EUR
CR P, P, E	27,000.00 EUR

DR Acc. Depr.	16,200.00 EUR
CR Realization	16,200.00 EUR

DR Bank	10,800.00 EUR
CR Realization	10,800.00 EUR

Alternatively, you can use bookkeeping entries like

DR Acc. Depr.	16,200.00 EUR
DR Bank	10,800.00 EUR
CR P, P, E	27,000.00 EUR

Find all bookkeeping entries in exhibit 3 below.

PPE				Long-term Liab				Short-term Liab			
D		C		D		C		D		C	
(A)	27.000,00	c/d	27.000,00	(B)	1.350,00	(A)	27.000,00	c/d	1.404,00	(D)	1.404,00
b/d	27.000,00	Real	27.000,00	(D)	1.404,00			(1)	1.404,00	b/d	1.404,00
				c/d	24.246,00			c/d	24.246,00	(3)	24.246,00
					27.000,00		27.000,00		25.650,00		25.650,00
				(3)	24.246,00	b/d	24.246,00	(I)	1.460,16	b/d	24.246,00
								(II)	22.785,84		
									24.246,00		24.246,00

Interest - 20X3				Interest - 20X4				Interest - 20X5			
D		C		D		C		D		C	
(B)	1.080,00	c/d	1.080,00	(1)	1.026,00	c/d	1.026,00	(I)	969,84	c/d	969,84
b/d	1.080,00	P&L	1.080,00	b/d	1.026,00	P&L	1.026,00	b/d	969,84	P&L	969,84

Depr - 20X3				Depr - 20X4				Depr - 20X5			
D		C		D		C		D		C	
(C)	5.400,00	c/d	5.400,00	(2)	5.400,00	c/d	5.400,00	(III)	5.400,00	c/d	5.400,00
b/d	5.400,00	P&L	5.400,00	b/d	5.400,00	P&L	5.400,00	b/d	5.400,00	P&L	5.400,00

Acc. Depr.				Bank				Realization			
D		C		D		C		D		C	
c/d	5.400,00	(C)	5.400,00	c/d	2.430,00	(B)	2.430,00	PPE	27.000,00	Acc D	16.200,00
		b/d	5.400,00			b/d	2.430,00			Bank	10.800,00
c/d	10.800,00	(2)	5.400,00	c/d	4.860,00	(1)	2.430,00		27.000,00		27.000,00
	10.800,00		10.800,00		4.860,00		4.860,00				
		b/d	10.800,00	REAL	10.800,00	b/d	4.860,00				
c/d	16.200,00	(III)	5.400,00			(I)	2.430,00				
	16.200,00		16.200,00			(II)	22.785,84				
REAL	16.200,00	b/d	16.200,00								

Exhibit 3: Accounts

The present value for the payments is: $-2,430 - 2,430 \cdot 1.08^{-1} + (10,800 - 2,430 - 22,785.84) \cdot 1.08^{-2} = -17,039.25 \text{ EUR}$.

The total of expenses for all 3 years is $1,080 + 5,400 + 1,026 + 5,400 + 969.84 + 5,400 = 19,275.84 \text{ EUR}$.

LINDENTHAL should accept the dealer's offer to finance the van by the operating lease.