

Financial Statement Analysis

Topics in Long-Term Liabilities and Equity



Exam Focus

- Leases
 - Lessee (finance and operating)
 - Lessor accounting (financing and operating)
- Defined benefit pension plans
 - Balance sheet asset or liability
 - Costs impacting I/S or OCI
- Stock grants and stock options

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Leased Assets

Terminology

- **Lessee:** party who directs how the asset is used receives the economic benefits from the asset over the life of the contract
 - Makes regular periodic payments
 - Benefits: lower up-front payment, effective interest rate lower than unsecured borrowing, avoids risk of ownership such as obsolescence
- **Lessor:** legal owner of the asset who grants the right of use to the lessee in return for periodic installments of consideration
 - Benefits: increased market for products and interest income

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Lease Classifications—IFRS and U.S. GAAP

Finance lease if it meets any of these conditions:

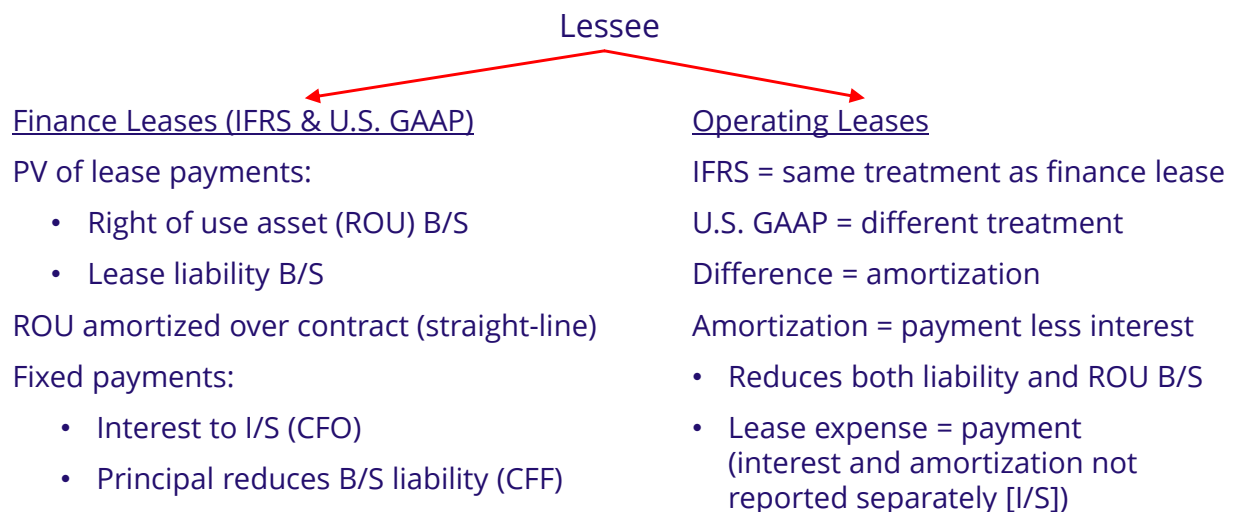
1. Transfers ownership to the lessee
2. Lessee has an option to buy and is “reasonably sure” they will exercise it
3. Lease is for most of the asset’s useful life
4. PV of lease payments \geq fair value of the asset
5. Lessor has no alternative use for the asset

Operating lease otherwise*

*Short-term and low-value leases treated as rental expense

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Lessee Classifications



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Finance Lease: Example

Proton Enterprises, a hypothetical manufacturer based in Germany, is offered the following terms to lease a machine: five-year lease with an implied interest rate of 10 percent and an annual lease payment of €100,000 per year payable at the end of each year. The asset will be amortized over the five-year lease term on a straight-line basis. Proton reports under IFRS.

1. What would be the impact of this lease on Proton's balance sheet at the beginning of the year?
2. What would be the impact of this lease on Proton's income statement during the following years?
3. What would be the impact of this lease on Proton's statement of cash flows during the following years?

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Finance Lease: Solution

Initial B/S treatment

$N = 5$

$PMT = €100,000$

$I/Y = 10\%$

} PV =

ROU asset

B/S liability split
between current and
long term

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Finance Lease: Solution

ROU asset:

annual amortization = _____ =

End of Period	B/S Carrying Value €	I/S Expense €
Year 1		
Year 2		
Year 3		
Year 4		
Year 5		

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Finance Lease: Solution

B/S financing liability and cash flow effects:

Period	Opening Liability €	Interest € (10%)	Payment €	Closing Liability €	CFO & Interest Expense €	CFF & Principal Repayment €
Year 1	379,079		100,000			
Year 2			100,000			
Year 3			100,000			
Year 4			100,000			
Year 5			100,000			

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U.S. GAAP Operating Lease: Example

Consider the differences in accounting if Proton Enterprises classified the lease of the machinery from the previous example as an operating lease (under U.S. GAAP).

B/S asset and liability at initiation:
difference to finance lease:

-1

Operating Lease: Solution

B/S financing liability, I/S expense, and cash flow effects:

Period	Opening Liability €	Net Payment €	Closing Liability €	ROU €	Lease Expense and CFO €
Year 1	379,079	62,092	316,987	316,987	100,000
Year 2	316,987	68,301	248,685		
Year 3	248,685	75,131	173,554		
Year 4	173,554	82,645	90,909		
Year 5	90,909	90,909	0		

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Comparison: U.S. GAAP

	Interest €	Finance Lease Amortization €	Total €	Operating Lease Lease Expense €
Year 1	37,908	75,816	113,724	100,000
Year 2	31,699	75,816	107,515	100,000
Year 3	24,869	75,816	100,685	100,000
Year 4	17,355	75,816	91,171	100,000
Year 5	9,091	75,815	84,906	100,000
	<u>129,922</u>	<u>379,079</u>	<u>500,001*</u>	<u>500,000</u>

*Rounding difference

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Lessor Accounting

Lessor

Finance Leases

Initiation:

PV of lease receipts = lease receivable asset

Derecognition of leased asset

Difference in PV of lease receipts and carry value of asset = I/S gain or loss

Effective interest reported as revenue if leasing assets is a primary business activity

Operating Leases

Treats the contract as a rental agreement

Asset remains in lessor's balance sheet and is depreciated

Not treated as a financing activity = no interest receivable

Lease revenue recognized on a straight-line basis

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Lessor Accounting: Example

Let's examine Proton's machine lease from lessee examples from the perspective of the lessor. Assume that the carrying value of the asset immediately prior to the lease is €350,000, accumulated depreciation is zero, and the lessor elects to depreciate it on a straight-line basis over five years.

How are the lessor's financial statements affected by the classification of the lease as a finance or operating lease?

PV of lease receipts = €379,079

Finance Lease: Solution

Gain reported at initiation in I/S:

	€
PV of lease receipts	379,079
Carrying value of asset	<u>350,000</u>
Gain	29,079

Finance Lease: Solution

B/S lease receivable asset, income statement interest, and cash flow effects:

Period	Opening Lease Receivable €	Interest Revenue (10%) €	Receipt €	Closing Lease Receivable €	Interest Revenue €	CFO €
Year 1	379,079	37,908	100,000	316,987	37,908	100,000
Year 2	316,987	31,699	100,000	248,685	31,699	100,000
Year 3	248,685	24,869	100,000	173,554	24,869	100,000
Year 4	173,554	17,355	100,000	90,909	17,535	100,000
Year 5	90,909	9,091	100,000	0	9,091	100,000

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Operating Lease: Solution

PP&E asset:

$$\text{annual depreciation} = \frac{\text{€}350,000}{5 \text{ years}} = \text{€}70,000$$

End of Period	B/S Carrying Value €	I/S Expense €
Year 1	280,000	70,000
Year 2	210,000	70,000
Year 3	140,000	70,000
Year 4	70,000	70,000
Year 5	0	70,000

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Operating Lease: **Solution**

Income statement impacts:

Period	Lease Revenue	Depreciation	Net Impact
Year 1	100,000	70,000	30,000
Year 2	100,000	70,000	30,000
Year 3	100,000	70,000	30,000
Year 4	100,000	70,000	30,000
Year 5	100,000	70,000	30,000

Lessor I/S Comparison

		Year 1	Year 2	Year 3	Year 4	Year 5
Finance lease	Disposal gain	29,079				
	Interest revenue	37,908	31,699	24,869	17,355	9,091
	Total	66,987	31,699	24,869	17,355	9,091
Operating lease	Lease revenue	100,000	100,000	100,000	100,000	100,000
	Depreciation	70,000	70,000	70,000	70,000	70,000
	Total	30,000	30,000	30,000	30,000	30,000

Lessor B/S & Cash Flow Comparison

		Year 1	Year 2	Year 3	Year 4	Year 5
Finance lease	Lease receivable	316,987	248,685	173,554	90,909	0
	CFO	100,000	100,000	100,000	100,000	100,000
Operating lease	PP&E	280,000	210,000	140,000	70,000	0
	CFO	100,000	100,000	100,000	100,000	100,000

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Employee Compensation

Terminology:

- **Vest** = earning the right to consideration or an asset
- Time-based vesting = the right is earned over time (e.g., salary, pension payments)
- Milestone-based vesting (performance) = the right is earned when certain criteria (tasks, objectives, targets) are met (e.g., performance shares)
- **Deferred compensation** = employees earn the right to compensation in the current period but receive consideration in future periods (e.g., defined benefit pension plans)

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Defined Benefit Pension Plans

Deferred compensation

Employee entitled to future benefits on retirement based on predetermined factors: "formula"

- Service history
 - Expected final salary
 - Accrual rate
- } Significant assumptions

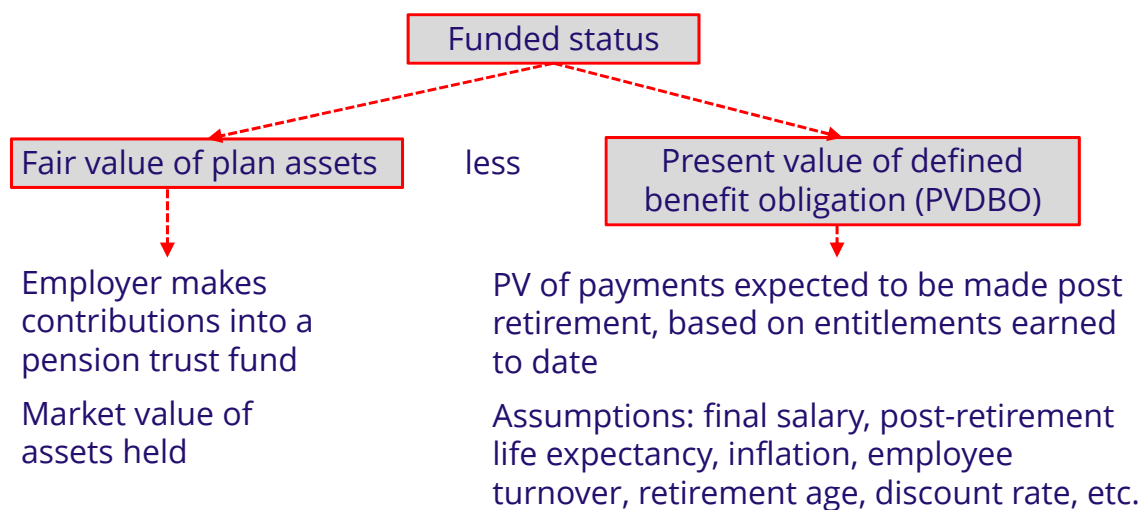
Payments on retirement to death

Risk of funding payments on retirement lies with the employer

Typically prefunded

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Balance Sheet Asset/Liability



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Change in Funded Status: IFRS

Periodic change in balance sheet asset or liability:

I/S Expense	
Service costs	X
Past service costs	X/(X)
Net interest (income) or expense	X/(X)
Total	X/(X)

Change in OCI	
Remeasurement gains and losses	X/(X)
Total	X/(X)

I/S expense taken to COGS and SG&A; footnote disclosure shows total expense and components

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Change in Funded Status: US GAAP

Periodic change in balance sheet asset or liability:

I/S Expense	
Service costs	X
Interest cost	X
Expected return on plan assets	(X)
Amortization of past service costs	X/(X)
Amortization of actuarial gains and losses	X/(X)
Total	X/(X)

Change in OCI	
Past service costs	X/(X)
Actuarial gains and losses	X/(X)
Total	X/(X)

B/S asset/liability and the change is the same as IFRS

Difference = location of changes I/S or OCI

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Share-Based Compensation

- Comprise:
 1. Stock grants
 2. Stock options
- Benefits:
 - Aligns management and shareholder interests
 - Potentially no cash outlay
- Costs:
 - Reduced earnings and potential EPS dilution
 - Managers may have limited or no influence over share price
 - Potential risk aversion or increased risk-taking

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Stock Grants

- Shares given to employees:
 - Outright
 - With restrictions
 - Contingent on performance

Outright:

- Measured at fair value of shares on grant date
- Allocated over service period
- Service period assumed to be current period unless there are restrictions
 - Reduce net income (additional compensation expense) by fair value
 - Increase common stock at par and APIC

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Stock Grants With Restrictions

- Restricted stock grant = employee must return the shares to the company if specific conditions are not met
- Typical restriction = employee must remain employed for a specific time period (service period/vesting period)
- Measure fair value at grant date
- Spread fair value over the service period
 - Reduce net income (additional compensation expense)
 - Increase common stock at par and APIC

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Stock Options

- Fair value at grant date established using a valuation model
- Key assumption: **volatility** of stock price
- Compensation expense spread over service period (vesting) = time to first exercise
- Over vesting period:
 - Reduce net income (additional compensation expense)
 - Increase APIC
- On exercise:
 - Increase common stock for the par value of shares issued
 - Increase APIC by the difference between fair value at grant date

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Presentation and Disclosure

- Leases: IFRS and U.S. GAAP disclosure designed to give information to assess amounts, timings, and uncertainties of cash flows
- Pensions: IFRS and U.S. GAAP disclosure designed to explain characteristics and risks, identify amounts in the financial statements, and describe the impact on amounts, timings, and uncertainty of future cash flows
- Share-based compensation: disclosure designed to enable users to understand the nature and extent of share-based compensation arrangements
- For specific details, review SchweserNotes and module videos

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Solutions

Finance Lease: Solution

Initial B/S treatment

N = 5

PMT = €100,000

I/Y = 10%



PV = €379,079

ROU asset

B/S liability split
between current and
long term

-2

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Finance Lease: Solution

ROU asset:

$$\text{annual amortization} = \frac{€379,079}{5 \text{ years}} = €75,816$$

End of Period	B/S Carrying Value €	I/S Expense €
Year 1	303,263	75,816
Year 2	227,447	75,816
Year 3	151,631	75,816
Year 4	75,815	75,816
Year 5	0	75,815

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Finance Lease: Solution

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Year 2	316,987	31,699	100,000	248,685	31,699	68,301
Year 3	248,685	24,869	100,000	173,554	24,869	75,131
Year 4	173,554	17,355	100,000	90,909	17,535	82,645
Year 5	90,909	9,091	100,000	0	9,091	90,909

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U.S. GAAP Operating Lease: Example

Consider the differences in accounting if Proton Enterprises classified the lease of the machinery from the previous example as an operating lease (under U.S. GAAP).

B/S asset and liability at initiation:

No difference to finance lease: €379,079

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Finance Lease: **Solution**

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