Financial Accounting & Reporting 5

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PRESENT VALUES AND ANNUITIES

I. GENERAL

Problems involving interest, annuities, and present values are all concerned with the use of money over a period of time, which is referred to as the time value of money. The idea of present value is also the basis for the latest foundational concept, SFAC No. 7. The principles used in computing interest, annuities, and present values are applied to many accounting problems. Accounting for leases, pensions, bonds, and long-term debt are some of the more important applications.

A. CONCEPTS

For examination purposes, present value concepts are divisible into six separate types:

1. Present value of $1,
2. Future value of $1,
3. Present value of an ordinary annuity,
4. Future value of an ordinary annuity,
5. Present value of an annuity due, and
6. Future value of an annuity due.

An explanation of each concept is presented below, with interrelated examples.

B. DEFINITION OF ANNUITIES

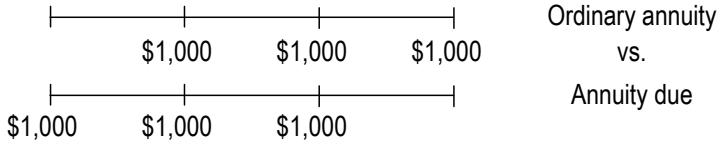
A large number of business transactions involve multiple payments or receipts. Bond interest payments and lease rental payments are two examples. Transactions that result in identical periodic payments or receipts at regular intervals involve annuities. Ordinary annuity (also called "annuity in arrears") payments are made at the end of each period. An annuity is classified as an annuity due (also called "annuity in advance") if payments/receipts occur at the beginning of each period.

C. ORDINARY ANNUITY VS. ANNUITY DUE

The timing of payments is the only difference between an ordinary annuity and an annuity due. This applies to both present value and future value annuities. In calculating the present value of an ordinary annuity, the number of payments is equal to the number of interest periods. In calculating the present value of an annuity due, the number of interest periods is one less than the number of payments.

EXAMPLE

3 Payments of $1,000 Each



II. PRESENT VALUE OF $1

The present value of $1 is the amount that must be invested now at a specific interest rate so that $1 can be paid or received in the future.

EXAMPLE

Present Value of $1

On January 1, Year 1, ABC Corp. received an offer from a competitor to buy their equipment at the end of Year 4. The competitor would pay $500,000 at the end of Year 4. The equipment is worth $300,000 now, and the prevailing interest rate is 10%, compounded annually.

The present value of the $500,000 is calculated as follows:

Present value of 1 for 4 periods at 10% = .683
$500,000 x .683 = $341,500

ABC should accept the offer of payment at the end of Year 4. The current value of the Year 4 payment is $341,500 which is more than the equipment's current value.

III. FUTURE VALUE OF $1

The future value of $1 is more easily understood as compound interest. It is the amount that would accumulate at a future point in time if $1 were invested now. The interest factor causes the future value of $1 to be greater than $1.

EXAMPLE

Future Value of $1

Your partner is retiring in five years. It will cost $300,000 to purchase her interest. If you invest $200,000 now, earning 10% compounded annually, will you have enough money in five years?

Future value of 1 at 10% for 5 periods = 1.611
$200,000 x 1.611 = $322,200

$322,200 > $300,000, so you will be able to purchase your partner's interest.

IV. PRESENT VALUE OF AN ORDINARY ANNUITY

The present value of an ordinary annuity is the current worth of a series of identical periodic payments to be made in the future.

EXAMPLE

Present Value of an Ordinary Annuity

Parker, Inc. enters into a 10-year noncancelable lease requiring year-end payments of $100,000 each year for 10 years. Parker's borrowing rate is 10% compounded annually. What is the present value of the lease payments?

Present value of an ordinary annuity of 1 at 10% for 10 periods = 6.145
$100,000 x 6.145 = $614,500

Parker should record the lease at $614,500.

V. FUTURE VALUE OF AN ORDINARY ANNUITY

The future value of an ordinary annuity is the sum, to be received at some point in the future, of identical periodic investments made from the present until that future point.

EXAMPLE

Future Value of an Ordinary Annuity

Jay Planner wants to save for his 12-year-old son's college education. If he sets aside $5,000 at the end of each of the next five years, earning 10% compounded annually, how much money will be in Jay's account at the end of five years?

Future value of an ordinary annuity of 1 at 10% for 5 periods = 6.105
$5,000 x 6.105 = $30,525

VI. PRESENT VALUE AND FUTURE VALUE OF ANNUITY DUE

Remember that the only difference in the calculations of an annuity due and an ordinary annuity is the timing of the payments. Therefore, by adding 1.00 to the present value of an ordinary annuity of 1 for n periods, the present value of an annuity due of 1 for n + 1 periods may be found.

EXAMPLE

Ordinary Annuity vs. Annuity Due

Present value of an *ordinary annuity* of 1 at 6% for 2 periods = 1.833.

Present value of an *annuity due* of 1 at 6% for 3 periods = 2.833 (1.833 + 1.00).

To convert from an annuity due to an ordinary annuity, read the figure from the present value of an annuity due table for one period greater than the number desired, then subtract 1.00 from that number.

EXAMPLE

Conversion

Present value of an *ordinary annuity* for 3 periods at 8%	2.577
Plus: 1.00	1.000
Present value of an *annuity due* for 4 periods at 8%	3.577

EXAMPLE

Present Value of an Annuity Due

Avalanche Inc. enters into a 10-year lease requiring beginning of the year payments of $100,000 each year for 10 years. Avalanche's borrowing rate is 10% compounded annually. What is the present value of the payments?

Present value of an ordinary annuity due of $1 at 10% for 9 periods = 5.759 + 1.000 = 6.759
$100,000 x 6.759 = $675,900

ACCOUNTING FOR LEASES

I. OVERVIEW

A *lease* is a contractual agreement between a *lessor,* who conveys the right to use real or personal property (an asset), and a *lessee,* who agrees to pay periodic rents over a specified time.

	Rental	Sale (in substance)
Lessee	Operating Lease	Capital Lease
Lessor	Operating Lease	Sales Type or Direct Financing Type

II. OPERATING LEASES

A. DEFINITION

An *operating* lease includes a lessor, who collects rent, and a lessee, who uses the leased asset and pays periodic rent for such use. The lessee merely uses the asset; there is no transfer of ownership, or of any risk or benefit of ownership.

B. ACCOUNTING FOR OPERATING LEASES

1. Lessee Accounting

a. Lease Rent Expense

The lessee records rent expense over the lease term, usually on a straight-line basis unless other methods are warranted (for example, lease expense can be tied to sales, to the Consumer Price Index, or to the prime interest rate).

DR	Rent expense	$XXX	
CR	Cash/rent payable		$XXX

b. Lease Bonus (Prepayment)

Lease bonus (prepayment) for future expenses should be classified as an asset (deferred charge) and amortized using the straight-line method over the life of the lease.

c. Leasehold Improvements

A leasehold improvement is one that is permanently affixed to the property and reverts back to the lessor at the termination of the lease. In general, if the property is not moveable from the premises by the tenant, it is a leasehold improvement. Air conditioning ducts would be considered a leasehold improvement, while a painting hanging on a wall would not.

(1) Capitalize Leasehold Improvements

The value of leasehold improvements should be capitalized and added to the property, plant, and equipment section or the intangible assets section of the balance sheet.

(2) Depreciation—Useful Life or Lease Term

Leasehold improvements should be depreciated (amortized) over the lesser of:

(a) Lease life

(b) Asset/improvement life

d. Rent Kicker

A premium rent payment required for specific events.

(1) Period expense

e. Refundable Security Deposit

Is reported as an asset until refunded by the lessor.

f. Free or Reduced Rent Consideration

If consideration (free rental months or reduced rental charge at beginning) is part of package, lessee must take total rent expense to be paid for the entire lease term and divide it evenly over each period (matching principle).

EXAMPLE

Rental-Agreement

5 years (60 months) @ $1,000		$60,000	
*First 6 months are free		<6,000>	
Net cost for five years		$54,000	
Total months rented		÷ 60 mo.	
Monthly rental expense		$ 900	
First 6 months (Mo. 1 – 6)			
DR	Rent expense	$900	
CR	Rent payable		$900
Next 54 months (Mo. 7 – 60)			
DR	Rent expense	$900	
DR	Rent payable	100	
CR	Cash/rent payable		$1,000

2. Lessor Accounting

a. Fixed Asset

The cost of the property is included in the lessor's property, plant, and equipment.

(1) Depreciation—over the asset's useful life

b. Rental Income

Rental income is reported using the straight-line or other systematic method.

DR	Cash/rent receivable	$XXX	
CR	Rental income		$XXX

c. Security Deposits

Security deposits required by the lease may be either refundable or nonrefundable:

(1) Nonrefundable—deferred by the lessor (unearned revenue) and capitalized by the lessee (prepaid rent expense) until the lessor considers the deposit earned.

(2) Refundable—treat as a receivable by the lessee and a liability by the lessor until the deposit is refunded to the lessee.

DR	Cash	$XXX	
CR	Refundable deposit		$XXX

PASS KEY

The CPA exam has attempted to trick candidates into recognizing security deposits as revenue in advance of their being earned (violation of the revenue recognition rule and rule of conservatism). The fact pattern will provide information about the historical percentage of security deposits, which ultimately will be earned. Remember, revenue is only recognized when the earning process is complete; we never anticipate revenue.

d. Temporary Difference

(1) GAAP Rule—report prepaid rental income when earned

(2) Tax Rule—report prepaid rental income when received

e. Lease Bonus

The lease bonus is deferred (unearned income) and amortized (into income) over the life of the lease.

f. Free or Reduced Rent Consideration

If consideration (free rental months or reduced rental charge at beginning) is part of package, lessor must take total rental income to be received over the entire lease term and divide it evenly over each period (matching principle/revenue recognition principle).

EXAMPLE

Rental-Agreement

5 years (60 months) @ $1,000			$60,000
*First 6 months are free			<6,000>
Net rental income for five years			$54,000
Total months rented			÷ 60 mo.
Monthly rental income			$ 900
First 6 months (Mo. 1 – 6)			
DR	Rent receivable	$900	
CR	Rental income		$900
Next 54 months (Mo. 7 – 60)			
DR	Cash	$1,000	
CR	Rental income		$900
CR	Rent receivable		100

EXAMPLE

Operating Lease with Lease Bonus—Lessor

Jodel Company purchased a machine on January 1, Year 1 for $1,500,000 with an expected life of 10 years from the date of purchase. There is no residual value, and it is to be depreciated on the straight-line method. On January 1, Year 1, Lynn Company leased the machine from Jodel for 3 years at a monthly rate of $32,000. In addition, Lynn paid a lease bonus of $75,000. What amount of related income on this operating lease should Jodel Company report for the year ending December 31, Year 1?

Monthly rentals ($32,000 x 12)	$ 384,000
Plus: Lease bonus amortization ($75,000 x 12/36)	25,000
Less: Depreciation ($1,500,000 / 10 yrs)	(150,000)
Income from leased asset, Year 1	$ 259,000

EXAMPLE

Operating Lease with Lease Bonus—Lessee

Assume the same facts as in the previous example. Calculations of the lessee's expense for Year 1 for the operating lease would be:

Monthly rentals	$ 384,000
Plus: Lease bonus amortization	25,000
Expense for leased asset, Year 1	$ 409,000

III. CAPITAL LEASE

CAPITAL LEASES

A *capital* lease transfers substantially all of the benefits and risks inherent in ownership of property to the lessee.

(i) This is an accounting transaction, which is, in substance, an installment purchase in the form of a leasing arrangement.

(ii) The lessee accounts for this type of lease as the acquisition of both an asset (leased asset under capital lease) and a related liability (obligation under capital lease).

(iii) The lessor accounts for such a lease as a *sales-type* or a *direct financing* lease. A sales-type lease results in a dealer's or manufacturer's profit or loss to the lessor. A direct financing lease does not result in a dealer's or manufacturer's profit or loss.

A. LESSEE CAPITAL LEASE CRITERIA

1. Must meet just one condition to capitalize.

DR	Fixed asset—leased property	$XXX	
CR	Liability—obligation under capital lease		$XXX

Ownership transfers at end of lease (upon final payment or required buyout)

Written option for bargain purchase

Ninety (90%) percent of leased property FV ≤ PV of lease payments

Seventy-five (75%) percent or more of asset economic life is being committed in lease term

2. Criteria (N) and (S) cannot be used for a lease that begins within the last 25% of the original estimated economic life of the leased property.

EXAMPLE

Equipment FV is $3,500, lease payments are $1,000 per year, on 12-31 lease term is four years, asset life is ten years.

Incremental borrowing rate is 10%

No ownership

No written bargain

FV	PV Cost
$3,500	1 2 3 4
	$1,000 $1,000 $1,000 $1,000
	$ 910
	830
	750
x 90%	680
$3,150	$3,170

B. LESSOR: SALES-TYPE/DIRECT FINANCING TYPE CRITERIA

1. If a lease, at inception, meets all three of the following conditions, it shall be classified by the lessor as a sales-type or direct financing lease, whichever is appropriate.

Lessee "owns" the leased property (meets any one of the four lessee's criteria).

Uncertainties do not exist regarding any unreimbursable costs to be incurred by the lessor.

Collectibility of the lease payments is reasonably predictable.

2. Comparison of Sales-Type and Direct Financing Leases for Lessors

a. Sales-Type Lease

SALES-TYPE LEASE

In a sales-type lease, the fair value of the leased property at the inception of the lease differs from the cost or carrying amount to the lessor. This difference gives rise to a manufacturer's or dealer's profit or loss. It must be remembered that a lessor need not be a dealer or manufacturer to realize a profit or loss, if at the inception of the lease the fair value differs from the cost or carrying amount.

b. Direct Financing Lease

DIRECT FINANCING LEASE

In a direct financing lease, the fair value of the leased property at the inception of the lease is the same as the cost or carrying amount. Therefore, there is no manufacturer's or dealer's profit or loss.

c. Transfer of Benefits and Risks

Both sales-type and direct financing leases transfer substantially all of the benefits and risks inherent in the ownership of the leased property to the lessee, who records the transaction as a capital lease.

PASS KEY

The CPA examination focuses most of its questions on the following three issues:

1. Capitalized lease criteria
2. Asset capitalized amount and depreciation
3. Liability amortization

IV. LESSEE (CAPITAL LEASE) ACCOUNTING

A. CALCULATION OF LEASED ASSET AND LIABILITY AMOUNTS

The lessee treats the capital lease as if an asset were being purchased over time; that is, it is a financing transaction in which an asset is acquired and a corresponding obligation (liability) is created.

DR	Fixed asset—leased property	$XXX	
CR	Liability—obligation under capital lease		$XXX

1. Recording the Lease

a. Capitalized Amount

The lessee records the lease as an asset and a liability at the lower (lesser) of:

(1) Fair value of the asset at the inception of the lease, or

(2) Cost = present value of the minimum lease payments.

(a) Includes (all payments that the lessee is obligated to make):

(1) Required Payments

(2) Bargain Purchase Option

When the lease contains a bargain purchase option, the lease obligation includes the present value of the payment required to exercise the bargain purchase option in addition to the present value of the minimum lease payments.

(3) Guaranteed Residual Value

The guaranteed residual value is the amount guaranteed by the lessee to the lessor for the estimated residual value of the asset at the end of the lease term. The lease obligation includes the present value of any guaranteed residual value in addition to the present value of the minimum lease payments.

(b) Exclude:

(1) Executory Costs

Insurance, maintenance, and taxes can be paid by the lessor or lessee. If the *lessor* pays them, a portion of each lease payment representing executory costs is *excluded* from the calculation of minimum lease payments. If the lessee pays these costs directly, they are not included in the minimum lease payments.

(2) Optional Buyout (not required and not a bargain)

PASS KEY

Periodic payment
- Beginning = PV of an annuity due
- Ending = PV of an annuity (in arrears/ordinary)

Bargain OR Guaranteed residual
- PV of $1

b. Interest Rate

The lessee uses the incremental borrowing rate, determined as the lower (lesser) of:

(1) Rate implicit in the lease (if known)

(2) Rate available in the market to the lessee (not prime)

c. Summary

INCREMENTAL BORROWING RATE

Capitalized Cost (remember, lower of this cost or market):

Ownership	=	PV of payments and required buyout—(if any)
Written	=	PV of payments and bargain buyout
Ninety % FV	=	PV of payments (not option buyout)
Seventy-five % life	=	PV of payments (not option buyout)

PASS KEY

A simple way to remember the capitalized amount computation rules is to recall that leases are between a lessee and **lessor**. Therefore, always use the **lesser of**:

- Cost or market
- Implicit interest rate or market rate

EXAMPLE

Recording a Capital Lease—Lessee's Books

Beta Corporation leases an asset to Omega Corporation for ten years beginning January 1, Year 1 at an annual rental of $5,000. Beta's (lessor) implicit borrowing rate (implicit in the lease) of 10% is known to Omega (lessee). Omega's incremental borrowing rate is 11%. The first payment is due at the beginning of the first year. The asset's economic life is 12 years and the fair value (FV) of the asset at the inception of the lease is $34,000. The lease requires Omega to pay the $800 annual executory costs. The lease does not transfer ownership nor contain a bargain purchase option.

Present Value Amounts

The PV of an annuity due of 1 for 10 periods at 10%	6.759
The PV of an annuity due of 1 for 10 periods at 11%	6.537

Step 1: Does the lease meet the criteria for capitalization?

Ownership transfer → No

Written bargain → No

Ninety % FV → Yes ($34,000 x 90% = $30,600 < $33,795 PV)

Seventy-five % life → Yes (10 years / 12 years)

Step 2: Compute the present value of the minimum lease payments, using the lessee's incremental borrowing rate, unless:

(1) The lessor's implicit rate is lower, *and*

(2) The lessee has knowledge of the lower rate.

Use the lessor's rate since it is lower and the lessee has knowledge of it. The executory costs are excluded from this calculation. They would be expensed annually.

$5,000 x 6.759 (PV of an annuity due for 10 periods at 10%) = $33,795

Step 3: Record the leased asset at the lesser of the asset's fair value at lease inception ($34,000) or the present value of the minimum lease payments ($33,795). Since the present value of the minimum lease payments is less than fair value, capitalize the lease at $33,795.

DR	Leased equipment under capital lease	$33,795	
CR	Obligations under capital lease		$33,795

PASS KEY

The easiest way to determine if a lease should be capitalized is to test the criteria in the following order:

1st the **O**;
2nd the **W**;
4th the **N** (since it is the most difficult to calculate); and
3rd the **S**.

EXAMPLE

Recording a Capital Lease with Guaranteed Residual Value—Lessee's Books

Assume that Beta Corporation leases an asset with an economic life of five years, to Omega Corporation for five years beginning January 1, Year 1. The annual lease payment is $5,000, with a $1,000 guaranteed residual value. The first payment is due on December 31, Year 1. The lessee's rate is 11%. The lessor's rate is not known. The FV of the asset is $25,000. There is no transfer of ownership. There is no bargain purchase option (PV annuity is 3.696 and PV of $1 is .594). Compute the present value of the minimum lease payments.

Step 1: Does the lease meet the criteria for capitalization?

Ownership transfer → No

Written bargain → No

Ninety % FV → No ($25,000 x 90% = $22,500 > $19,074 PV)

Seventy-five % life → Yes (5 years / 5 years)

Step 2: Compute the present value of the minimum lease payments:

Present value of minimum rental payments:	
$5,000 x 3.696 (PV of an ordinary annuity, 5 periods, 11%)	$18,480
Present value of guaranteed residual value:	
$1,000 x .594 (PV of 1, 5 periods, 11%)	594
Present value of minimum lease payments	$19,074

Step 3: Record the leased asset at lesser of cost or FV:

DR	Leased equipment under capital lease	$19,074	
CR	Obligations under capital lease		$19,074

B. TERM TO USE IN COMPUTING DEPRECIATION OF THE ASSET

1. Formula for Depreciation

Capitalized lease assets
< Salvage value >
Depreciable Basis
÷ Periods of benefit
Depreciation Expense (per period)

2. Period of Benefit (Depreciable Life)

a. Ownership Transfer and Written Bargain

(1) *Estimated economic life of the asset* if the lessee takes ownership of the leased asset by the end of the lease or if there is a bargain purchase option as part of the agreement. The asset is depreciated in a manner consistent with the lessee's normal policies.

b. Ninety % FV and Seventy-five % Life

(1) The lessee uses the *lease term* if the lessee does not take ownership of the asset by the end of the lease or if there is not a bargain purchase option.

3. Summary

Depreciation Rules: (Capitalized lease asset—salvage value):		
Ownership	=	Depreciate over asset life (legal form)
Written	=	Depreciate over asset life (legal form)
Ninety % FV	=	Depreciate over lease life (substance over form)
Seventy-five % life	=	Depreciate over lease life (substance over form)

EXAMPLE

Depreciation (Amortization) of Asset by Lessee

Assume that Beta Corporation leased an asset to Omega for ten years beginning January 1, Year 0, at $5,000 per year. The present value of the minimum lease payment is $33,795 and the fair value of the asset is $34,000. The useful life of the asset is twelve years. How much depreciation expense should be taken each year if the lessee normally uses the straight-line method of depreciation?

Since the present value of the minimum lease payments is less than the fair value of the asset, the asset is initially recorded at $33,795.

This is a capital lease due to the requirement that stipulates the lease term be 75% or more of the useful life of the asset (10/12). Therefore, because the 75% criteria (OWNS) is met and there is no ownership transfer or written bargain purchase option, the asset will be depreciated over the ten-year term of the lease.

The depreciation expense is as follows:

$33,795 ÷ 10 years = $3,379.50 per year

C. LEASE AMORTIZATION-LIABILITY AND ASSET ON LESSEE'S BOOKS

The Obligation under Capital Lease account and the related Leased Asset account are recorded initially at the same amount. However, subsequent amortization of each account takes place independently and results in different account balances by the end of the first year. The lease liability is amortized using the effective interest method.

EXAMPLE

Lease Liability and Asset Amortization—Lessee's Books

Assume that Beta Corporation leased an asset to Omega Corporation for ten years beginning January 1, Year 0 at $5,000 per year. The interest rate used is 10%, the lessor's rate, because it is lower than the lessee's rate and it is known. The first payment is due on January 1, Year 0 and the lease qualifies as a capital lease. The present value of the minimum lease payments is $33,795, and it is lower than the fair value of the asset at the inception of the lease.

Required: Show the lease amortization schedule for this asset and the related journal entries on January 1, Year 0 and January 1, Year 1.

Date	(1) Annual Lease Payment	(2) Interest on Unpaid Obligation (10% x Col. 4)	(3) Reduction of Lease Liability (1 - 2)	(4) Carrying Amount of Lease Obligation
1/1/Yr 0				$33,795.00
1/1/Yr 0	$ 5,000.00	—	$ 5,000.00	28,795.00
1/1/Yr 1	5,000.00	$ 2,879.50	2,120.50	26,674.50
1/1/Yr 2	5,000.00	2,667.45	2,332.55	24,341.95
1/1/Yr 3	5,000.00	2,434.20	2,565.80	21,776.15
1/1/Yr 4	5,000.00	2,177.62	2,822.38	18,953.77
1/1/Yr 5	5,000.00	1,895.38	3,104.62	15,849.15
1/1/Yr 6	5,000.00	1,584.92	3,415.08	12,434.07
1/1/Yr 7	5,000.00	1,243.41	3,756.59	8,677.48
1/1/Yr 8	5,000.00	867.75	4,132.25	4,545.23
1/1/Yr 9	5,000.00	454.77*	4,545.28*	—
	$50,000.00	= $16,205.00	+ $33,795.00	

*Rounded

Journal Entry: To record the lease on the lessee's books at January 1, Year 0

DR	Leased equipment under capital lease	$33,795.00	
CR	Obligations under capital lease		$33,795.00

Journal Entry: To record the first payment on January 1, Year 0

DR	Obligations under capital lease	$5,000.00	
CR	Cash		$5,000.00

Journal Entry: To accrue interest expense and liability due on January 1, Year 1

DR	Interest expense	$2,879.50	
CR	Interest payable		$2,879.50

Journal Entry: To depreciate the asset over the ten year lease life $33,795 ÷ 10 years = $3,379.50

DR	Depreciation expense	$3,379.50	
CR	Accumulated depreciation—leased asset		$3,379.50

Journal Entry: To record the payment January 1, Year 1

DR	Interest payable	$2,879.50	
DR	Obligation under capital lease	2,120.50	
CR	Cash		$5,000.00

D. ASSET RETIREMENT OBLIGATION (FASB 143)

1. Overview

a. Initially based for nuclear decommissioning.

b. Expanded to other similar closure or removal-type costs in other industries such as oil and gas and mining industries.

c. Asset Retirement Obligation (ARO): Balance sheet approach.

2. Retirement

a. Retirement is defined as the other-than-temporary removal of a tangible long-lived asset from service.

b. It does not encompass the temporary idling of a long-lived asset.

3. Scope

a. Applies to all entities.

b. Legal obligations associated with the retirement of a tangible long-lived asset that result from the acquisition, construction, or development and/or normal operation of a long-lived asset, except for certain lease obligations (minimum lease payment and contingent rentals).

c. Excludes obligations:

(1) Relating to the ongoing operation, but not the retirement of, asset (maintenance).

(2) Resulting solely from a plan to dispose of an asset.

(3) Component Parts

(a) Cost of replacement parts is not within the scope.

(b) Legal obligations related to the retirement of the *replaced* part (that is, the ***old*** part), *are* within the scope.

4. Liability Recognition

a. An ARO qualifies for recognition when it meets the definition of a liability:

(1) Duty or responsibility

(2) Little or no discretion to avoid

(3) Obligating event

b. Uncertainty about whether performance will be required does not defer the recognition of a retirement obligation; rather, that uncertainty is factored into the measurement of the fair value of the liability through assignment of probabilities to cash flows.

5. Leases

a. For Lessees:

(1) If ARO is included in minimum lease payments, no separate ARO accounting (FASB 13 applies).

(2) If ARO is imposed otherwise, then ARO accounting applies.

b. For Lessors:

(1) ARO accounting applies.

6. Basic Accounting

a. Initial balance sheet recognition

(1) Debit asset (asset retirement cost).

(2) Credit liability (asset retirement obligation).

b. Period-to-period income statement

(1) Depreciation expense (asset retirement cost).

(2) Accretion expense (asset retirement liability).

PASS KEY

The asset retirement obligation is recorded at a discounted amount. Accretion expense is the growth of the liability over time so that at the time the liability is satisfied, it is reported at its total non-discounted value.

7. Initial Measurement

a. An entity shall recognize the fair value of a liability for an asset retirement obligation in the period in which it is incurred if a reasonable estimate of fair value can be made.

b. If a reasonable estimate of fair value cannot be made, the liability shall be recognized *when* a reasonable estimate of fair value can be made.

8. Subsequent Measurement

a. In periods subsequent to initial measurement, period-to-period changes in the ARO liability result from:

(1) Passage of time (accretion expense).

(2) Revisions in timing or amount of estimated cash flows.

9. Revisions to Cash Flow Estimates

a. Upward revisions to undiscounted cash flows are "new" liabilities – use current discount rate.

b. Downward revisions require removal of "old" liabilities – use historical (or weighted average) discount rate.

E. LESSEE'S FINANCIAL STATEMENT DISCLOSURE OF LEASES

1. Capital Lease

a. Assets, accumulated amortization, and liabilities from capital leases should be reported separately in the balance sheet and classified as current or noncurrent in the same manner as other assets and liabilities.

b. Current amortization charges to income must be clearly disclosed, along with this additional information:

(1) The gross amount of assets recorded under capital leases as of each balance-sheet date presented by major property categories. This information may be combined with the information for comparable owned assets.

(2) Future minimum lease payments in the aggregate and for each of the next five years, showing deductions for executory costs, including any profit thereon, and the amount of imputed interest to reduce the net minimum lease payments to present value.

(3) The total of minimum sublease rentals to be received in the future under noncancelable subleases.

(4) Total contingent rentals actually incurred for each period for which an income statement is presented.

2. Operating Leases

a. The following financial statement disclosure is required for all operating leases of lessees having noncancelable lease terms in excess of one year:

(1) Minimum future rental payments: in total, and for each of the next five years.

(2) Minimum sublease income: due in future periods under noncancelable subleases.

b. The following disclosure is required for all operating leases: schedule of total rental expense showing the composition by minimum rentals, contingent rentals, and sublease income (excluding leases with terms of one month or less that were renewed).

3. General Disclosure

General disclosures of the lessee's leasing arrangements include: (1) basis of contingent rental payments; (2) terms of renewals, purchase options, and escalation clauses; and (3) restrictions imposed by lease agreements, such as additional debt, dividends, and leasing limitations.

F. SUMMARY OF LESSEE CAPITALIZATION RULES

1. Capitalize

As PP&E on the balance sheet, the leased asset at the lower LESSER of:

a. Cost

PV of future lease payments

Include: Guaranteed Residual Value by Lessee

Bargain Purchase Option (if applicable)

Exclude: "Executory Cost" = Insurance, Taxes, and Repair & Maintenance

(1) Discount Rate: Incremental borrowing rate is the lower (LESSER) of:

(a) Rate implicit in the lease (if known)

(b) Rate available in market to lessee (not prime)

b. Fair Value

(Given in the CPA Exam Question)

		Capitalize	Depr. Life
Ownership	=	PV of payments and required buyout	Asset life
Written	=	PV of payments and bargain buyout	Asset life
Ninety % FV	=	PV of payments (ignore option)	Lease life
Seventy-five % life	=	PV of payments (ignore option)	Lease life

PASS KEY

If a lease meets more than one of the criteria, then the order of priority for applying the rules is the exact way they are spelled:

O – W – N – S

V. LESSOR ACCOUNTING

SALES-TYPE LEASE

A. RECORDING A SALES-TYPE LEASE

GROSS INVESTMENT

The terms which are important to know for sales-type leases include:

1. Gross Investment (lease receivable)

The minimum lease payments *plus* any unguaranteed residual value accruing to the benefit of the lessor. This is recorded as Lease Payments Receivable on the lessor's books.

Lease payment
+ Unguaranteed residual value
Gross investment

Note that minimum lease payments would include the periodic lease payments, plus any bargain purchase option or guaranteed residual value.

2. Net Investment

This is computed as the sum of the present value of the minimum lease payments and the present value of any unguaranteed residual value accruing to the benefit of the lessor, using the interest rate implicit in the lease.

Lease payment
+ Unguaranteed residual value
Gross investment
x PV
Net investment

3. Unearned Interest Revenue (Contra-Lease Receivable)

The gross investment less unearned interest revenue equals net investment. This is amortized over the life of the lease by the effective interest method and is included in the balance sheet as a deduction from the gross investment to report the net investment.

Gross investment
< Net investment >
Unearned interest revenue

4. Cost of Goods Sold

The cost of the leased asset plus any initial direct costs, such as legal fees or commissions to the lessor, minus the present value of any unguaranteed residual value accruing to the lessor's benefit. This is charged against income in the period in which the corresponding sale is recorded.

Cost of Asset
< PV Unguaranteed Residual Value >
Cost of Goods Sold

5. Sales Revenue

The present value of the minimum lease payments is recorded as sales revenue. This does include the present value of any guaranteed residual value but does not include the present value of any unguaranteed residual value.

PASS KEY

Rule for Sales-type Lease

Cost
+ Profit
Present Value = Selling Price = FV

Note: The examiners may give you any of these to help you determine the sales revenue to be recorded in the transaction.

EXAMPLE

Recording a Sales-Type Lease with Unguaranteed Residual Value (Lessor)

Assume that a lease with a ten-year term requires rental payments of $5,000 on January 1 of each year. The lessor's cost for the leased asset is $35,000. The estimated fair value at the end of the lease (unguaranteed residual value) is $4,000, and the lessor retains ownership at the end of the lease. The implicit interest rate is 10 percent (PV of annuity due is 6.759 and PV of $1 is .386). Compute the information necessary to record this sales-type lease.

1. Gross investment = Minimum lease payments + Unguaranteed residual value
= ($5,000 x 10 yrs) + $4,000
= $54,000

2. Net investment = Lease payments x PV of annuity due of $1, 10 periods, 10%
+ Unguaranteed residual value x PV of $1, 10 periods, 10%
= ($5,000 x 6.759) + ($4,000 x .386)
= $35,339

(The present value of the minimum lease payments, but not the unguaranteed residual value, is recorded as sales, $5,000 x 6.759 = $33,795)

3. Unearned interest revenue = Gross investment – Net investment
= $54,000 – $35,339
= $18,661

4. Cost of goods sold = Lessor's cost of leased asset + Initial direct costs
– PV of unguaranteed residual value
= $35,000 + 0 – ($4,000 x PV of $1, 10 periods, 10%)
= $35,000 – (4,000 x .386)
= $33,456

5. Present value of lease payments (sale) = $5,000 x 6.759 = $33,795

Journal Entry: To record this sales-type lease

DR	Lease payments receivable	$54,000	
DR	Cost of goods sold	33,456	
CR	Sales		$33,795
CR	Equipment		35,000
CR	Unearned interest revenue (contra-lease receivable)		18,661

Note: The lessor's profit on sale is $33,795 – $33,456 = $339, which is recognized at the lease's inception.

EXAMPLE

Recording Profit on Sale and Interest Income on a Sales-Type Lease

Assume that Moore Company leased equipment from Less Company on January 1, Year 1 for eight years. The lease expires December 31, Year 8. Equal annual payments on the lease are $51,121.08 and are due on January 1 each year, beginning January 1, Year 1. The rate of interest is 10 percent. The equipment's cash selling price is $300,000; the cost of the equipment according to Less's records is $275,000. What is the *profit on sale and interest income* to be recognized by Less Company for the year ended December 31, Year 1? (Assume the lease is recorded appropriately as a sales-type lease.)

Profit on sale = Cash selling price - equipment cost
= $300,000 – $275,000
= $25,000

Interest income = Sales price – first rental payment (since it was received at the beginning of the lease term, January 1) x interest for 12 months at 10%. (See amortization table below.)
= ($300,000 – $51,121.08) x 10%
= $24,887.89

Date	(1) Annual Lease Payment	(2) Interest on Unpaid Obligation (10% x Col. 4)	(3) Reduction of Lease Liability (1 - 2)	(4) Carrying Amount of Lease Obligation
1/1/Yr 1				$300,000.00
1/1/Yr 1	$51,121.08	—	$ 51,121.08	248,878.92
1/1/Yr 2	51,121.08	$ 24,887.89	26,233.19	222,645.73
1/1/Yr 3	51,121.08	22,264.57	28,856.51	193,789.22
1/1/Yr 4	51,121.08	19,378.92	31,742.16	162,047.06
1/1/Yr 5	51,121.08	16,204.71	34,916.37	127,130.69
1/1/Yr 6	51,121.08	12,713.07	38,408.01	88,722.68
1/1/Yr 7	51,121.08	8,872.27	42,248.81	46,473.87
1/1/Yr 8	51,121.08	4,647.21*	46,473.87*	—
	$408,968.76	= $108,968.76	+ $300,000.00	

*Rounded

Journal Entry: To record the sales-type lease

DR	Lease payments receivable	$408,968.76	
CR	Unearned interest income (contra-lease receivable)		$108,968.76
CR	Sales revenue		300,000.00
&			
DR	Cost of goods sold	$275,000.00	
CR	Inventory (asset sold)		$275,000.00

B. RECORDING A DIRECT FINANCING LEASE

Since no manufacturer's or dealer's profit is realized in a direct financing lease, the fair value of the leased property equals the cost or carrying value at the inception of the lease. The information necessary to record this type of lease is:

1. Gross Investment (Lease Receivable)

Gross investment equals the minimum lease payments plus the unguaranteed residual value and is recorded as Lease Payments Receivable.

Lease payments
+ Unguaranteed residual value
Gross investment

2. Net Investment

Net investment equals the gross investment plus any unamortized initial direct costs less the unearned income. The initial direct costs are amortized over the lease term by the effective interest method.

Gross investment
x PV
Net investment

3. Unearned Interest Revenue

This is the gross investment less the cost of the leased property plus any initial direct costs. It is amortized over the lease term by the effective interest method.

Gross investment
< Net investment >
Unearned interest revenue

Journal Entry: To record a direct financing lease

DR	Lease payments receivable (gross investment)	$ 408,968.76	
CR	Unearned interest revenue (contra-lease receivable)		$108,968.76
CR	Asset		300,000.00

PASS KEY

Rule for Direct Financing Lease

Present value = Carrying amount of receivable = Cost of asset sold

VI. SALE-LEASEBACK

A. INTRODUCTION

In a sale-leaseback transaction, the owner of a property (seller-lessee) sells the property and simultaneously leases it back from the purchaser-lessor. Usually there is no visible interruption in the use of the property. Sale-leaseback transactions are treated as single financing transactions where, in general, any profit or loss is deferred and amortized. In general, two questions are involved in determining the treatment of any profits:

1. Is the lease a capital or operating lease? And
2. What portion of the rights to the leaseback property are retained?

B. TERMINOLOGY

1. Selling Price

Selling price is the negotiated price in the sale-leaseback agreement. It may be less than, equal to, or greater than the market value of the property, depending on the negotiated terms of the sale-leaseback.

2. Profit or Loss on Sale

Profit or loss on the sale is the amount that would have been recognized by the seller-lessee assuming there was no leaseback. It is calculated by subtracting book value from fair value (sale price).

3. Excess Profit on Sale-Leaseback

a. Operating Lease Excess Profit

The amount of profit on the sale that exceeds the present value of the minimum lease payments.

Sale price
< Asset NBV >
Tentative gain
< PV min. lease payments >
Excess gain

b. Capital Lease Excess Profit

The amount of profit on sale that exceeds the recorded amount of the asset. Note that this amount will be the same as in an operating lease unless the leaseback asset is recorded at the lower fair value.

The recorded amount of the leaseback asset is the lesser of

(i) The fair value of the leased property, or

(ii) The present value of the minimum lease payments.

Sale price
< Asset NBV >
Tentative gain
< Leaseback asset >
Excess gain

4. Rights to Remaining Use of Property Retained by Seller-Lessee

The rights to the remaining use of the property are determined by the present value of rent payments paid by the seller-lessee. The seller-lessee's rights may be categorized as follows:

a. "Substantially All" Rights Retained (Greater than 90%)

The present value of the rent payments is equal to or greater than 90% of the fair value of the property. These leases are usually accounted for as capital leases.

b. Rights Retained Are Less Than "Substantially All" but Greater than "Minor" (Between 90% - 10%)

The present value of the rent payments is less than 90% of the fair value, but greater than 10% of the fair value of property at the lease inception. These leases are accounted for as either capital or operating leases, depending on the criteria.

c. "Minor" Portion of Rights Retained by Seller-Lessee (Less than 10%)

The present value of the rent payments is 10% or less of the fair value of the property at lease inception or the lease (back) period is 10% or less of the asset's remaining life. These leases are usually accounted for as operating leases.

Note: To determine whether any sales-leaseback transaction should be accounted for as operating or capital, use the "OWNS" test.

C. ACCOUNTING BY SELLER/LESSEE

1. Classification

The lease (back) would be classified as a capital lease or an operating lease based on the criteria previously discussed:

2. Capital Leaseback

Capital lease (back): any gain or loss on the sale is deferred and amortized in proportion to the amortization of the leased asset.

a. The deferred gain (or loss) would be recognized as an "unearned profit (or loss) on sale-leaseback."

b. The "unearned profit (or loss) on sale-leaseback" would be treated as a valuation account of the leased (back) asset.

3. Operating Leaseback

Operating Lease (back): any gain or loss on the sale is deferred and amortized in proportion to the gross rental expense over the life of the lease.

a. The deferred gain (or loss) would be recognized as an "unearned profit (or loss) on sale-leaseback."

b. The "unearned profit (or loss) on sale-leaseback" would be reported as a deferred credit (or debit) in the balance sheet.

4. Amount of Deferred Gain

The amount of the deferred gain is determined by the retained rights to remaining use of the "leaseback" property.

a. "Substantially All" Rights Retained (Greater Than 90%)

Defer all gain and amortize over the leased asset.

b. Rights Retained Are Less Than "Substantially All" But Greater Than "Minor" (Between 90% - 10%)

Defer gain up to the present value of the minimum leaseback payments (operating lease) or capitalized asset (capital lease). Gain in excess of this amount is recognized immediately.

c. 10% or Less Lease (Back) / No Deferral

Recognize gain or loss immediately when the seller/lessee relinquishes the right to substantially all of the remaining use of the property sold, retaining only a minor portion of the use of the asset (e.g., 10% or less use of asset sold or the lease (back) period is 10% or less of the sold asset's remaining life).

d. Real Economic Loss / Recognize Immediately

(1) Real Economic Loss

A loss that must be recognized immediately is when the fair value of the property at the time of the sale-leaseback is less than book value, in which case the excess of book value over fair value is the loss.

(2) Artificial Loss

When the sales price is below the fair value, the loss is deferred and amortized over the leaseback period.

Sale-Leaseback: Summary

	Major 90% or More	**Middle** 90%—10%	**Minor** 10% or Less (Life or Sales Price)
Gain	Defer All (Amortize over leaseback)	Defer (up to PV of leaseback) (Amortize over leaseback)	No Deferral
Loss (NBV > FV) (real economic losses)	Recognize Immediately	Recognize Immediately	Recognize Immediately
Other Losses (artificial loss)	Defer All (Amortize over leaseback)	Defer All (Amortize over leaseback)	Recognize Immediately

EXAMPLE

Lease (back)—"Minor" Rights Retained

On December 31, Year 1, Linda, Inc., sold a machine to Denise and simultaneously leased it back for one year. The following information is available:

Sale price, fair value	$360,000
Carrying amount (book value)	315,000
Estimated remaining useful life	12 years
Monthly rent payment	3,000
Present value of lease rentals	34,100

How much profit should Linda recognize on the sale?

First, determine the character of the lease. Since the lease does not meet the capital lease criteria, it is an operating lease.

Next, determine the portion of rights retained by the seller-lessee. Because $34,100 (the present value of the annuity) is less than $36,000 (10% x $360,000), Linda has retained a "minor" portion of rights in the asset. Therefore, Linda would recognize the entire $45,000 gain immediately ($360,000 – $315,000).

EXAMPLE

Leaseback—Less Than "Substantially All" but More Than "Minor"

On January 1, Year 1, Carlson Company sold an airplane with an estimated useful life of ten years. Carlson simultaneously leased back the airplane for three years. The lease is classified as an operating lease. Applicable data follow:

Sale price, fair value	$500,000
Book value of airplane	100,000
Monthly rental	5,100
Present value of lease rentals	153,000

Calculate the amount of Carlson's profit recognized on January 1, Year 1, and rent expense on December 31, Year 1.

The present value of lease rentals exceeds 10% of the fair value ($50,000) but is less than 90% of the fair value ($450,000). Therefore, the amount of profit recognized is the amount in excess of the present value of the minimum lease payments. The calculation follows:

Sale price	$500,000
Less book value	(100,000)
Total profit	400,000
Less present value of lease payments (deferred amount)	(153,000)
Profit recognized at lease inception 1/1/Yr 1 (excess profit on sale leaseback)	$247,000

Carlson's rent expense for the year is calculated as follows:

Annual rent payments ($5,100 x 12 months)	$ 61,200
Less one year recognition of deferred profit ($153,000 ÷ 3 years)	(51,000)
Rent expense 12/31/Yr 1	$ 10,200

EXAMPLE

Sale-Leaseback Other Losses

On June 30, 19X2, Lang Co. sold equipment with an estimated useful life of eleven years and immediately leased it back for ten years. The equipment's carrying amount was $450,000; the sales price was $430,000; and the present value of the lease payments, which is equal to the fair value of the equipment, as $465,000. In its June 30, 19X2, balance sheet, what amount should Lang report as deferred loss?

This sale-leaseback is classified as a capital lease since the term of 10 years is greater than 75% of the equipment's lifetime (11 years). All gains and losses (other than real economic losses) are deferred since substantially all the use of the equipment is retained (present value exceeds 90% of fair value). The loss of $20,000 ($450,000 book value – $430,000 sales price) is deferred because the fair value of the equipment exceeds its carrying amount.

EXAMPLE

Comprehensive Sale-Leaseback

On December 31, 19X2, Dirk Corp. sold Smith Co. two airplanes and simultaneously leased them back. Additional information pertaining to the sale-leasebacks follows:

	Plane #1	*Plane #2*
Sale price	$600,000	$1,000,000
Carrying amount, 12/31/X2	$100,000	$ 550,000
Remaining useful life, 12/31/X2	10 years	35 years
Lease term	8 years	3 years
Annual lease payments	$100,000	$ 200,000

In its December 31, 19X2, balance sheet, what amount should Dirk report as deferred gain on these transactions?

Plane #1: This sale-leaseback qualifies as a capital lease; the lease term is 80% of its useful life. In the absence of present value information, the percentage of rights retained can only be estimated. The annual lease payments times the term of the lease is well above the sales price, indicating that a substantial portion of the rights have been retained. The profit of $500,000 ($600,000 - $100,000) is deferred and amortized over the life of the lease.

Plane #2: This sale-leaseback qualifies as an operating lease since the lease does not meet any of the criteria of a capital lease. Lacking any information concerning the present value, the inference must be made that only a minor portion of the rights have been retained. The basis for this conclusion is that the lease term (3 years) is far shorter than the remaining life (35 years) and the annual lease payments times the lease term is less than the selling price. Thus, all profit ($1,000,000 – $550,000) is recognized immediately.

D. ACCOUNTING BY PURCHASER-LESSOR

The acquisition of the asset is accounted for as a purchase. If the lease is an operating lease, it is accounted for as such. If the lease is a capital lease, it is accounted for as a direct financing lease.

VII. SUBLEASES

When a lessee sublets property to another, the newly created sublease must also be classified as either an operating lease or a capital lease.

A. SUBLEASE CLASSIFICATION BY LESSOR

The lessor classifies the sublease in the same category as the original lease.

B. SUBLEASE CLASSIFICATION BY LESSEE

1. Original Lease = Operating Lease

If the original lease was an operating lease, the sublease is also an operating lease.

2. Original Lease = Capital Lease

a. If the original lease was a capital lease due to:

(1) **O**wnership transfer

(2) **W**ritten bargain purchase option

Then the sublease is also a capital lease

b. If the original lease was a capital lease because it met either of the other requirements:

(1) **N**inety percent FV

(2) **S**eventy-five percent of life

Then the sublease will be an operating lease unless it can meet one of the requirements for a capital lease.

DEBT -- SECURITIES

INVESTMENT IN DEBT SECURITIES

I. INTRODUCTION

According to SFAS No. 115, investments in debt securities classified as *held-to-maturity* are measured at amortized cost, also referred to as "carrying amount" on the balance sheet. SFAS No. 140 clarifies SFAS No. 115 by stating that the held-to-maturity classification may **not** be used for debt securities that may be settled in a way that would cause the holder to recover *less* than substantially all of its original recorded investment.

A. TYPES OF DEBT SECURITIES

A debt security represents a creditor relationship with an entity. Examples of investments in debt securities include U.S. Treasury securities, U.S. government agency securities, municipal securities, corporate bonds, convertible debt, commercial paper, and all securitized debt instruments.

B. GENERAL PURPOSE OF INVESTMENT

The investor purchases a bond in anticipation of a return on its investment. The investor receives a fixed rate of interest in the form of a series of cash payments based on the stated rate on the instrument (coupon rate) in addition to the principal (face value) at maturity.

II. DEFINITIONS

These terms are important to understand when dealing with investments in debt securities. They are referenced to "bonds," as this is the most common instrument of this type tested on the CPA exam.

A. BOND INDENTURE

This document describes the contract between the issuer (borrower) and bondholders (lenders).

B. FACE VALUE

Face value is the total dollar amount of the bond, and this serves as the basis on which periodic interest is paid. Bonds are issued at face value (par) when the stated rate equals the market rate.

C. STATED (NOMINAL) INTEREST RATE

The stated interest rate is the interest to be paid to the investors. This rate is specified in the bond contract.

D. MARKET (EFFECTIVE YIELD) INTEREST RATE

The market interest rate is the rate of interest actually earned by the bondholder and is the rate of return for comparable contracts as of the date of issuance.

E. TREASURY BONDS

Bonds payable that have been reacquired, but not retired, by the issuer are treasury bonds. Their par value is shown on the balance sheet as a deduction from bonds payable.

III. COST OF INVESTMENT

Investment cost equals the present value of the principal or face value plus the present value of the series of interest payments to be received during the term of the bond. The present value is calculated based on the prevailing market rate at the date of purchase. The market rate and the stated rate may be identical (that is, bonds are issued at par), but it is more probable that the rates would differ because of the time lag between the date the rate was determined and the date the bonds were issued.

Because a bond is a fixed income security (i.e., the cash flows are fixed by contract and known at the time of purchase), the purchase price will equal the present value of the cash flows discounted at the market (effective yield) rate for the grade, type, and maturity of the bond.

IV. DISCOUNT OR PREMIUM

A. DISCOUNT

If the market rate is higher than the stated rate, the bonds will be purchased at a *discount,* in which case the bonds sell for less than the face amount to make up for the lower return being provided.

B. PREMIUM

If the market rate is lower than the stated rate, the bonds will be purchased at a *premium* because the investor will pay more than face value due to the higher return offered.

V. BALANCE SHEET PRESENTATION

A. ASSET: INVESTMENT IN BONDS

Classification as a current asset or noncurrent asset is based upon management intent.

1. Valuation of asset is at total cost of acquisition
2. Premium/Discount is considered an integral part of the asset
    a. Short-term—no amortization
    b. Long-term—amortize

LONG-TERM LIABILITIES AND BONDS PAYABLE

I. INTRODUCTION

Long-term liabilities are probable future expenditures associated with current obligations that are **not** payable within the current operating cycle or reporting year, whichever is greater. A long-term liability is nothing more than a contract, and as people are able to contract for anything that is legal, long-term liabilities can come in many forms and labels.

A. EXAMPLES OF LONG-TERM LIABILITIES

Examples of long-term liabilities include long-term promissory notes payable, bonds payable, long-term leases, long-term contingent liabilities, purchase commitments, equipment purchase obligations, amounts due under deferred compensation agreements, post-retirement pension and other benefits payable, other financial instruments, short-term debt expected to be refinanced (to the extent of post-balance sheet refinancing with support), and deferred income taxes payable. Most of these types of liabilities are covered in other sections of this course. This portion of the materials will focus on bonds payable, and it will identify the similarities to long-term notes payable.

B. INTRODUCTION TO BONDS PAYABLE

Bonds are one of the most common types of long-term liabilities tested on the CPA Examination. They are an important source of long-term funding for a company needing large amounts of capital that would be too great for a single lender to supply or as an alternative to issuing new equity securities. Bonds represent a contractual promise by the issuing corporation to pay investors (bondholders) a specific sum of money at a designated maturity date plus periodic, fixed interest payments (usually made semi-annually) based on a percentage of the face amount of the bond. The following are various types of bonds that have been tested on the CPA Examination:

1. Debentures

Debentures are unsecured bonds.

2. Mortgage Bonds

Mortgage bonds are bonds that are secured by real property.

3. Collateral Trust Bonds

Collateral trust bonds are secured bonds.

4. Convertible Bonds

Convertible bonds are convertible into common stock of the debtor (generally) at the option of the bondholder.

a. Nondetachable Warrants

The convertible bond itself must be converted into capital stock.

b. Detachable Warrants

The bond is not surrendered upon conversion, only the warrants plus cash representing the exercise price of the warrants. The warrants can be bought and sold separately from the bonds.

5. Participating Bonds

Participating bonds are bonds that not only have a stated rate of interest but participate in income if certain earnings levels are obtained.

6. Term Bonds

Term bonds are bonds that have a single fixed maturity date. The entire principal is paid at the end of this term/period.

7. Serial Bonds

Serial bonds are pre-numbered bonds that the issuer may call and redeem a portion by serial number (often redeemed pro-rata annually/in a series of annual installments).

8. Income Bonds

Income bonds are bonds that only pay interest if certain income objectives are met.

9. Zero Coupon Bonds

Zero coupon bonds (also known as "deep discount bonds") are bonds sold with no stated interest but rather at a discount and redeemed at the face value without periodic interest payments.

10. Commodity-Backed Bonds

Commodity-backed bonds (also known as "asset-linked bonds") are bonds that are redeemable either in cash or a stated volume of a commodity, whichever is greater.

II. BONDS PAYABLE VS. NOTES PAYABLE

The accounting for long-term notes payable is similar to the accounting for bonds payable. The accounting for long-term non-interest bearing notes is similar to the accounting for short-term non-interest bearing notes (discussed in class F3). The following schedule identifies the typical differences between bonds and notes:

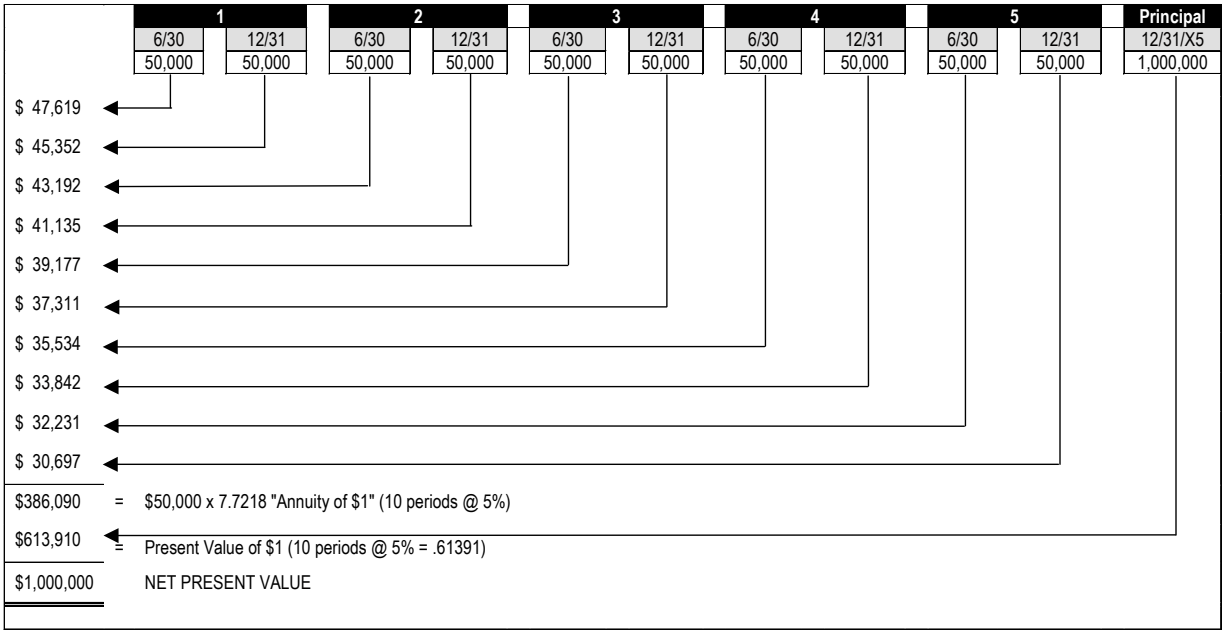
Attribute	Bonds	Notes
Implementing instrument	Bond	Note
Definitive agreement	Indenture	Loan agreement
Book entry only	Yes	No
Face amount increments	$1,000 (general)	Negotiated
Term	10 - 30 years	Negotiated
Payments prior to maturity	Interest only	Negotiated
Payments at maturity	Principal	Negotiated
Number of creditors	Many	Few
Publicly traded	Yes	No
Easily re-negotiable	No	Yes
Secured	Yes and no	Yes
Registered (order) form	Yes	Yes
Bearer (coupon) form	Yes	No
Right of debtor to call/pre-pay	Yes	Yes
Right of creditor to put w/o default	Yes	No

III. PRINCIPLES AND RULES FOR BONDS OVERVIEW: ACCOUNTING FOR BONDS PAYABLE

Bonds payable should be recorded as a long-term liability at face value and adjusted to the present value of their future cash outflows by either subtracting unamortized discounts or adding unamortized premiums. Bonds payable are recorded at the true present value at the date of issuance based on the market rate at that date.

A. Usually in denominations of $1,000
B. Price is always quoted in 100's (% of par value)
C. Indenture is a contract for purchase of bond
D. Coupon rate = the stated interest rate on the bond
E. Bond interest (check amount) = coupon rate × face
F. Principal payoff is always the full face amount
G. Premium/discount is the result of buyer and seller "adjusting" the coupon rate to the prevailing market rate of interest

BOND
$1,000,000
10%
5 years
Semi-annual
June 30
&
December 31



1. Bond Selling Price

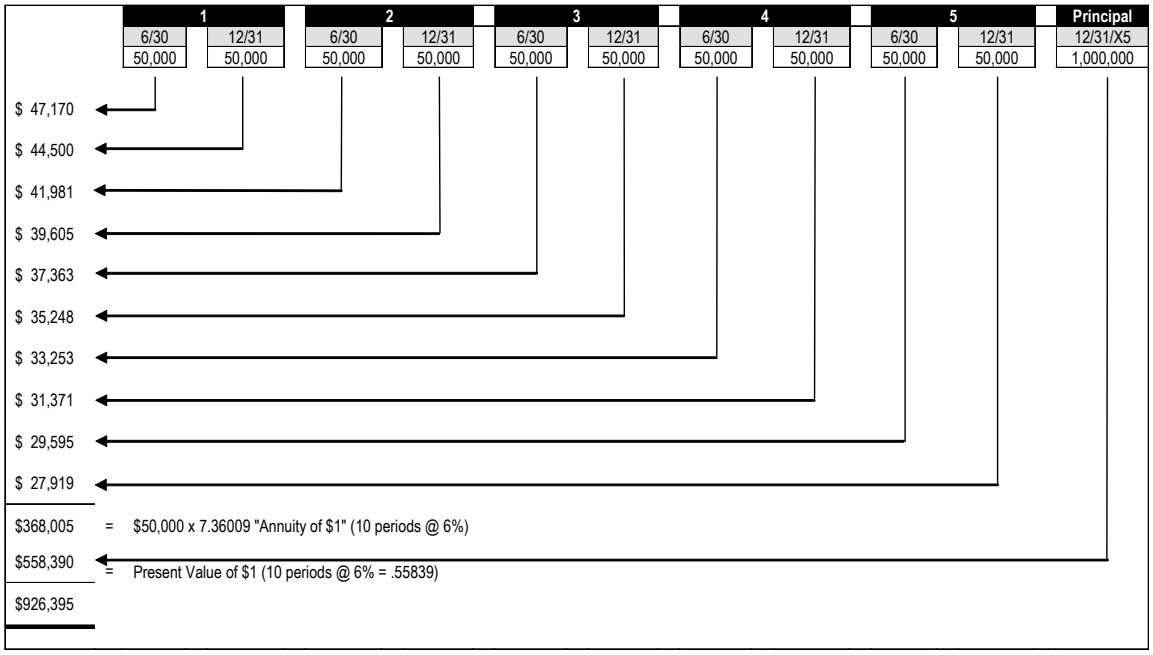
When a bond is issued, the price is computed as the sum of the present value of the future principal payment *plus* the present value of the future periodic interest payments. Both cash flows are discounted at the prevailing market rate of interest. This recorded price is the value of the bond at its current cash equivalent.

EXAMPLE

Computation of Bond Selling Price: Discount

Assume that Kristi Corporation issued a 10%, $1,000,000 bond, due in five years. Interest is due on June 30 and December 31. The yield or market rate is 12%. Determine the selling price of the bond, noting the amount of discount or premium. The bonds were issued January 1.

PV of $1 at 10% for 5 periods	.62092
PV of $1 at 12% for 5 periods	.56743
PV of $1 at 5% for 10 periods	.61391
PV of $1 at 6% for 10 periods	.55839
PV of an annuity of $1 at 10% for 5 periods	3.79079
PV of an annuity of $1 at 12% for 5 periods	3.60478
PV of an annuity of $1 at 5% for 10 periods	7.72173
PV of an annuity of $1 at 6% for 10 periods	7.36009



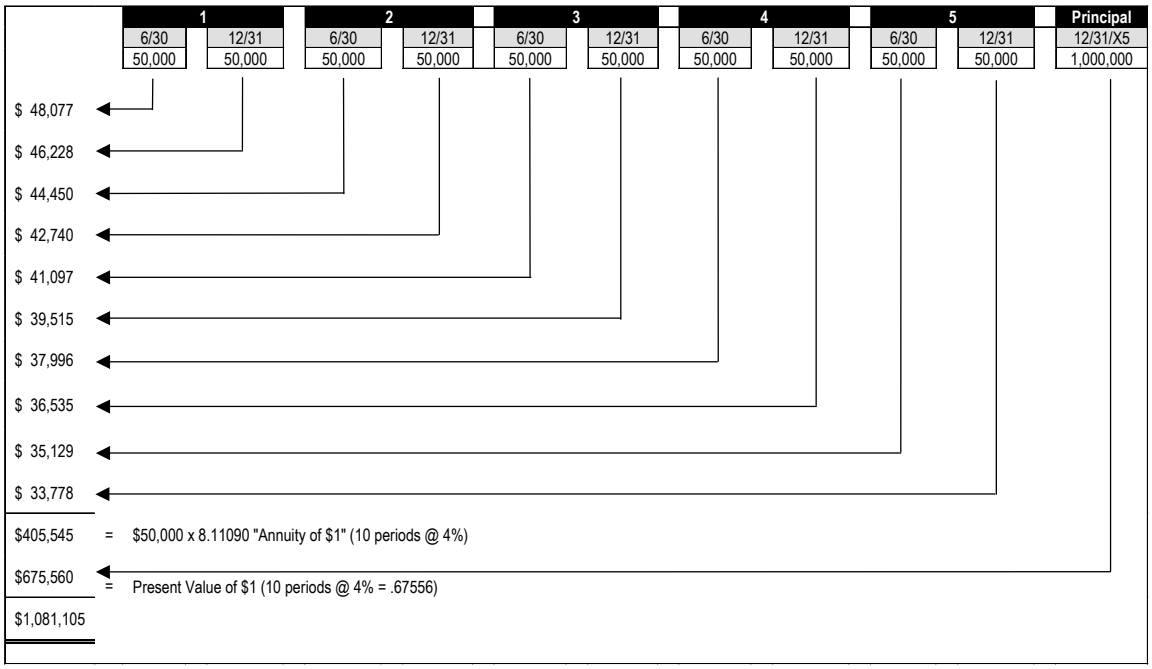
BORROWER				INVESTOR			
DR	Cash	$926,395		**DR**	Investment in bonds	$926,395	
DR	Discount on bond payable	73,605		**CR**	Cash		$926,395
CR	Bond payable		$1,000,000				

EXAMPLE

Computation of Bond Selling Price: Premium

Assume that Kristi Corporation issued a 10%, $1,000,000 bond, due in five years. Interest is due on June 30 and December 31. The yield or market rate is 8%. Determine the selling price of the bond, noting the amount of discount or premium. The bonds were issued January 1.

PV of $1 at 10% for 5 periods	.62092
PV of $1 at 8% for 5 periods	.68058
PV of $1 at 5% for 10 periods	.61391
PV of $1 at 4% for 10 periods	.67556
PV of an annuity of $1 at 10% for 5 periods	3.79079
PV of an annuity of $1 at 8% for 5 periods	3.99271
PV of an annuity of $1 at 5% for 10 periods	7.72173
PV of an annuity of $1 at 4% for 10 periods	8.11090



BORROWER			INVESTOR		
DR	Cash	$1,081,105	**DR**	Investment in bonds	$1,081,105
CR	Premium on bond payable	$81,105	**CR**	Cash	$1,081,105
CR	Bond payable	1,000,000			

H. STATED INTEREST RATE

The stated rate of interest of a bond is typically printed on the bond and included in the bond indenture before the bond is brought to market. The stated rate of a bond will **not** change, regardless of the market rate at the date of issuance. The amount of cash received by a bondholder at regular interest payment intervals throughout the life of the bonds will always be at the stated rate applied to the face amount of the bond.

Interest is typically paid on bonds twice a year (semiannually), although interest expense will accrue monthly.

I. EFFECTIVE INTEREST RATE

Because the amount of cash to be received in the future is fixed at the time the bond is sold, the market will automatically adjust the issue price of the bond so that the purchaser receives the **market rate of interest** for comparable risk bonds (i.e., the effective interest rate). A discount or premium on the bonds will exist when the bonds are issued with a stated rate that differs from the market rate at the date of issuance.

J. DISCOUNTS

DISCOUNT

If the market rate of interest is higher than the stated rate of interest on the bond, the bonds will sell "at a discount." This means that the bond will sell for **less** than the face value of the bond (at less than 100% of par). The difference between the face value of the bond and the sales price of the bond (i.e., the discount) is the "automatic adjustment" to the interest rate.

1. Unamortized Discount

The unamortized discount on bonds payable is a contra account to bonds payable, which means that it is presented on the balance sheet as a direct reduction from the face (par) value of the bonds to arrive at the bond's carrying value at any particular point in time.

Long-term liabilities:		
Bonds payable, 10%, due 12/31/Yr x	$1,000,000	
Less: Unamortized discount	(73,605)	
		$926,395

2. Amortization of the Discount: General

Bond discount represents additional interest to be paid to investors at the bond maturity and is amortized over the life of the bond. The discount is amortized over the life of the bond, with amortized amounts **increasing interest expense** each period. Therefore, the amortization of the discount is added to the amount of cash paid at the stated rate to obtain GAAP interest expense (remember that the amount of cash paid could be zero).

K. PREMIUMS

PREMIUM

If the market rate of interest is lower than the stated interest rate on the bond, the bonds will sell "at a premium." This means that the bonds will sell for **more** than the face value of the bond (at more than 100% of par). The difference between the face value of the bond and the sales price of the bond (i.e., the premium) is the "automatic adjustment" to the interest rate.

1. Unamortized Premium

The unamortized premium on bonds payable is presented on the balance sheet as a direct addition to the face (par) value of the bonds to arrive at the bond's carrying value at any particular point in time.

Long-term liabilities:		
Bonds payable, 10%, due 12/31/Yr x	$1,000,000	
Add: Unamortized premium	81,105	
		$1,081,105

2. Amortization of the Premium: General

Bond premium represents interest paid in advance to the issuer by bondholders who then receive a return of this premium in the form of larger periodic interest payments (at the stated rate). The bond premium is amortized over the life of the bond, with amortized amounts **decreasing interest expense** each period. Therefore, the amortization of the premium is subtracted from the amount of cash paid at the stated rate to obtain GAAP interest expense.

L. CARRYING VALUE

As bonds approach maturity, their carrying values approach face value, so that the carrying value of the bonds equals face value at maturity. The carrying value of a bond equals face plus the balance of unamortized premium or face minus the balance of unamortized discount. The carrying value of a bond with a discount increases to maturity value as the discount is amortized. The carrying value of a bond with a premium decreases to maturity value as the premium is amortized.

FACE
+ Unamortized premium
- Unamortized discount
Carrying value

IV. BOND ISSUE COSTS

Bond issue costs are transaction costs of the bond issue. Examples include legal fees, accounting fees, underwriting commissions, and printing. These and any other issue costs should be recorded as a deferred charge (an asset) and amortized from the date of issuance of the bonds into expense (typically interest or bond issue expense) using the **straight-line** method.

Bond issue costs are typically paid directly by the broker and are repaid to the broker by the company through the proceeds of the bond issue, which means that the issuing company receives bond proceeds net of the bond issue costs.

EXAMPLE

Bond issue costs

$1,000,000 bond is sold at 98 = $980,000 and costs of $50,000 are incurred for issue.

DEFERRED CHARGE (Amortize straight-line over life of bond)

DR	Cash	$930,000	
DR	Discount	20,000	
DR	**Bond Issue Cost**	50,000	
CR	Bonds Payable		$1,000,000

V. METHODS OF DISCOUNT AND PREMIUM AMORTIZATION

AMORTIZATION

There are generally two methods to calculate bond discount and premium amortization. Regardless of the method of amortization used, however, the period over which to amortize is the time period that the bonds are **outstanding** (i.e., from the date the bonds are **sold**).

EXAMPLE

Amortization Period

A 5-year bond dated January 1 doesn't actually sell until November 1. In this case, the period of amortization is 50 months (not 60 months).

A. STRAIGHT-LINE METHOD

STRAIGHT-LINE METHOD

To amortize a discount or premium using the straight-line method, simply divide the unamortized discount or premium by the number of periods the bonds are outstanding and amortize the same amount of discount or premium each period. This method of amortization results in a **constant dollar amount of interest** each period. The straight-line method is **not GAAP** but is allowed if the results are not materially different from the effective interest method, and is tested frequently on the CPA exam. Interest expense is calculated as follows:

1. $\dfrac{\text{Premium or discount}}{\text{Number of periods bond is outstanding}} = \text{Periodic amortization}$

2. Interest expense = (face value x stated interest rate) *minus* premium amortization or *plus* discount amortization

EXAMPLE

Bond Discount Amortization – Straight-Line Method, Semi-Annual Interest Payments

Continuing with the Kristi Corporation example, this is an example of amortization and interest expense calculated under the straight-line method.

Facts: Assume that Kristi Corporation issued a 10%, $1,000,000 bond, due in five years. Interest is due on June 30 and December 31. The yield or market rate is 12%. Determine the selling price of the bond, noting the amount of discount or premium. The bonds were issued Jan.1.

$1,000,000 – 926,395 = ($73,605 ÷ 10 periods = $7,360.50)

			JE Impact	
			B/S	I/S
Date	Net Carrying Value	Straight-line Amortization	Face × Coupon	Paid + Discount - Premium
6/30/Yr 1	$ 926,395.00	$7,360.50	$50,000	$57,360.50
12/31/Yr 1	933,755.50	7,360.50	50,000	57,360.50
6/30/Yr 2	941,116.00	7,360.50	50,000	57,360.50
12/31/Yr 2	948,476.50	7,360.50	50,000	57,360.50
6/30/Yr 3	955,837.00	7,360.50	50,000	57,360.50
12/31/Yr 3	963,197.50	7,360.50	50,000	57,360.50
6/30/Yr 4	970,558.00	7,360.50	50,000	57,360.50
12/31/Yr 4	977,918.50	7,360.50	50,000	57,360.50
6/30/Yr 5	985,279.00	7,360.50	50,000	57,360.50
12/31/Yr 5	992,639.50	7,360.50	50,000	57,360.50
12/31/Yr 5	$1,000,000.00			

BORROWER				INVESTOR			
JANUARY 1, X1				**JANUARY 1, X1**			
DR	Cash	$926,395		**DR**	Investment in bonds	$926,395	
DR	Discount on bond payable	73,605		**CR**	Cash		$926,395
CR	Bond payable		$1,000,000				
JUNE 30, X1				**JUNE 30, X1**			
DR	Bond interest expense	$57,360.50		**DR**	Cash	$50,000.00	
CR	Discount on bond payable		$7,360.50	**DR**	Investment in bonds	7,360.50	
CR	Cash		50,000.00	**CR**	Bonds interest revenue		$57,360.50

EXAMPLE

Bond Premium Amortization – Straight-Line Method Semi-Annual Interest Payment

Continuing with the Kristi Corporation example, this is an example of amortization and interest expense calculated under the straight-line method.

Facts: Assume that Kristi Corporation issued a 10%, $1,000,000 bond, due in five years. Interest is due on June 30 and December 31. The yield or market rate is 8%. Determine the selling price of the bond, noting the amount of discount or premium. The bonds were issued January 1.

$1,081,105 – 1,000,000 = ($81,105 ÷ 10 periods = $8,110.50)

			JE Impact	
			B/S	I/S
Date	Net Carrying Value	Straight-line Amortization	Face × Coupon	Paid + Discount - Premium
6/30/Yr 1	$1,081,105.00	$8,110.50	$50,000	$41,889.50
12/31/Yr 1	1,072,994.50	8,110.50	50,000	41,889.50
6/30/Yr 2	1,064,884.00	8,110.50	50,000	41,889.50
12/31/Yr 2	1,056,773.50	8,110.50	50,000	41,889.50
6/30/Yr 3	1,048,663.00	8,110.50	50,000	41,889.50
12/31/Yr 3	1,040,552.50	8,110.50	50,000	41,889.50
6/30/Yr 4	1,032,442.00	8,110.50	50,000	41,889.50
12/31/Yr 4	1,024,331.50	8,110.50	50,000	41,889.50
6/30/Yr 5	1,016,221.00	8,110.50	50,000	41,889.50
12/31/Yr 5	1,008,110.50	8,110.50	50,000	41,889.50
12/31/Yr 5	$1,000,000.00			

BORROWER				INVESTOR			
JANUARY 1, X1				**JANUARY 1, X1**			
DR	Cash	$1,081,105		**DR**	Investment in bonds	$1,081,105	
CR	Premium on bond payable		$81,105	**CR**	Cash		$1,081,105
CR	Bond payable		1,000,000				
JUNE 30, X1				**JUNE 30, X1**			
DR	Bond interest expense	$41,889.50		**DR**	Cash	$50,000.00	
DR	Premium on bond payable	8,110.50		**CR**	Investment in bonds		8,110.50
CR	Cash		$50,000.00	**CR**	Bonds interest revenue		$41,889.50

B. EFFECTIVE INTEREST METHOD

EFFECTIVE INTEREST METHOD

Use of the effective interest method of accounting for the amortization of unamortized discounts/premiums is required by GAAP. GAAP interest expense is calculated by multiplying the carrying value of the bond at the **beginning** of the period by the effective interest rate. This method of amortization results in a **constant rate** of interest each period. The difference between GAAP interest expense and the cash paid for interest is the amortization for the period of the discount or premium. Interest expense and amortization for the period is calculated as follows:

1. GAAP Interest Expense

GAAP interest expense = Carrying value at the **beginning** of the period x effective interest rate

2. Discount/Premium Amortization

Amortization of the discount = GAAP interest expense – Cash paid at the stated rate

Amortization of the premium = Cash paid at the stated rate – GAAP interest expense

PASS KEY

I/S	Net carrying value	×	Effective interest rate	=	Interest expense
B/S	Bond face	×	Coupon rate	=	< Interest paid >
Diff					**Amortization**

Income Statement		**Balance Sheet**		**Difference**
Net carrying value × Effective interest rate Interest expense	–	Bond Face × Coupon Rate Interest Paid	=	Amortization

EXAMPLE

Bonds Premium Amortization – Interest (Effective Rate) Method Semiannual Interest Payments

Assume Kristi Corporation issued a 10%, $1,000,000 bond due in five years. The bond sold for $1,081,105 on January 1, Year 1, to yield 8%. Determine the interest expense by the effective interest method (interest is paid semiannually on June 30 and December 31).

			JE Impact			
Date	Beginning of Period Net Carrying Value	4% Semi-Annual Amortization Interest	I/S N.C.V. × Effective	B/S Face × Coupon	Diff Amortization	End of Period Net Carrying Value
6/30/Yr 1	$1,081,105	4%	$43,244	$50,000	6,756	$ 1,074,349
12/31/Yr 1	1,074,349	4%	42,974	50,000	7,026	1,067,323
6/30/Yr 2	1,067,323	4%	42,693	50,000	7,307	1,060,016
12/31/Yr 2	1,060,016	4%	42,401	50,000	7,599	1,052,417
6/30/Yr 3	1,052,417	4%	42,097	50,000	7,903	1,044,514
12/31/Yr 3	1,044,514	4%	41,782	50,000	8,218	1,036,296
6/30/Yr 4	1,036,296	4%	41,453	50,000	8,547	1,027,749
12/31/Yr 4	1,027,749	4%	41,111	50,000	8,889	1,018,860
6/30/Yr 5	1,018,860	4%	40,755	50,000	9,245	1,009,615
12/31/Yr 5	1,009,615	4%	40,385	50,000	9,615	1,000,000
					81,105	

BORROWER

JANUARY 1, X1

DR	Cash	$1,081,105	
CR	Premium on bond payable		$81,105
CR	Bond payable		1,000,000

JUNE 30, X1

DR	Bond interest expense	$43,244	
DR	Premium on bonds payable	6,756	
CR	Cash		$50,000

DECEMBER 31, X1

DR	Bond interest expense	$42,974	
DR	Premium on bonds payable	7,026	
CR	Cash		$50,000

INVESTOR

JANUARY 1, X1

DR	Investment in bonds	$1,081,105	
CR	Cash		$1,081,105

JUNE 30, X1

DR	Cash	$50,000	
CR	Investment in bonds		$6,756
CR	Bond interest revenue		43,244

DECEMBER 31, X1

DR	Cash	$50,000	
CR	Investment in bonds		$7,026
CR	Bond interest revenue		42,974

EXAMPLE

Bonds Discount Amortization – Interest (Effective Rate) Method Semiannual Interest Payments

Assume Kristi Corporation issued a 10%, $1,000,000 bond due in five years. The bond sold for $926,395 on January 1, Year 1, to yield 12%. Determine the interest expense by the effective interest method (interest is paid semiannually on June 30 and December 31).

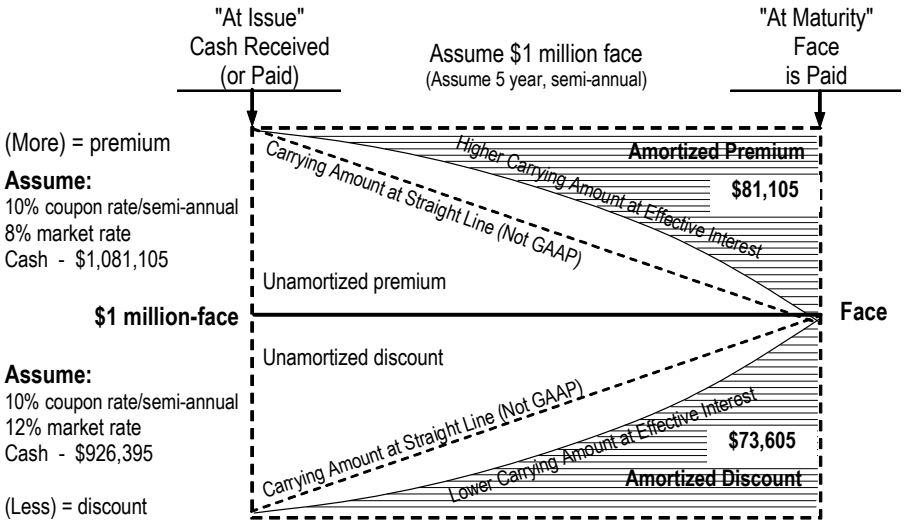
			JE Impact			
Date	Beginning of Period Net Carrying Value	6% Semi-Annual Amortization Interest	I/S NCV × Effective	B/S Face × Coupon	Diff Amortization	End of Period Net Carrying Value
6/30/Yr 1	$926,395	6%	$55,585	$50,000	5,585	$931,980
12/31/Yr 1	931,980	6%	55,920	50,000	5,920	937,900
6/30/Yr 2	937,900	6%	56,275	50,000	6,275	944,175
12/31/Yr 2	944,175	6%	56,651	50,000	6,651	950,826
6/30/Yr 3	950,826	6%	57,050	50,000	7,050	957,876
12/31/Yr 3	957,876	6%	57,473	50,000	7,473	965,349
6/30/Yr 4	965,349	6%	57,921	50,000	7,921	973,270
12/31/Yr 4	973,270	6%	58,396	50,000	8,396	981,666
6/30/Yr 5	981,666	6%	58,900	50,000	8,900	990,566
12/31/Yr 5	990,566	6%	59,434	50,000	9,434	1,000,000
					73,605	

BORROWER				INVESTOR			
JANUARY 1, X1				**JANUARY 1, X1**			
DR	Cash	$926,395		**DR**	Investment in bonds	$926,395	
DR	Discount on bond payable	73,605		**CR**	Cash		$926,395
CR	Bond payable		$1,000,000				
JUNE 30, X1				**JUNE 30, X1**			
DR	Bond interest expense	$55,585		**DR**	Cash	$50,000	
CR	Discount on bonds payable		5,585	**DR**	Investment in bonds	5,585	
CR	Cash		$50,000	**CR**	Bond interest revenue		$55,585
DECEMBER 31, X1				**DECEMBER 31, X1**			
DR	Bond interest expense	$55,920		**DR**	Cash	$50,000	
CR	Discount on bonds payable		5,920	**DR**	Investment in bonds	5,920	
CR	Cash		$50,000	**CR**	Bond interest revenue		$55,920

C. COMPARISON OF STRAIGHT-LINE AND EFFECTIVE INTEREST METHOD

Illustration

Diagram of "Carrying Amount" of Bond Liability on the Balance Sheet



Borrower's Initial Journal Entry			
PREMIUM			
DR	Cash	$1,081,105	
CR	Premium on bonds payable		$81,105
CR	Bonds payable		1,000,000
DISCOUNT			
DR	Cash	$926,395	
DR	Discount on bonds payable	73,605	
CR	Bonds payable		$1,000,000

PASS KEY

Examiners often require a candidate to answer questions regarding the comparison of carrying values of bonds accounted for under both methods (e.g., which method will have the higher carrying value in Year 2?). If you think of this diagram with the effective interest method creating a type of oval and the straight-line method cutting a point inside the oval, you will have your answer without crunching any numbers.

VI. BONDS ISSUED BETWEEN INTEREST DATES

Interest payments on bonds are generally made semiannually. However, bonds are usually sold between interest dates, which requires additional entries for accrued interest at the time of sale. The amount of interest that has accrued since the last interest payment is added to the price of the bond. The purchaser pays such interest and is reimbursed at the next payment date upon receipt of a full period's interest.

EXAMPLE

Bond Issued Between Interest Dates

On April 1, Year 1, Kristi Corporation issued 10% bonds dated January 1, Year 1 in the face amount of $1,000,000. Interest is due on June 30 and December 31. The bonds were issued for $926,395, plus accrued interest for three months (January through March). Determine the cash received.

Selling price ($1,000,000 face)	$926,395
Plus: Accrued interest ($1,000,000 x 10% x 3/12)	25,000
Total cash received	$951,395

Journal Entry: To record the sale on April 1

DR	Cash	$951,395	
DR	Discount on bonds payable	73,605	
CR	Bonds payable		$1,000,000
CR	Bond interest expense (or payable)		25,000

Journal Entry: To record the first interest payment on June 30 ($1,000,000 x 10% x 6/12)

DR	Bond interest expense (or payable)	$50,000	
CR	Cash		$50,000

The interest expense account would then contain a debit balance of $25,000, the proper amount of interest expense for three months at 10% ($1,000,000 x 10% x 3/12 = $25,000).

***Journal Entry**: To record amortization should also be recorded

VII. YEAR-END BOND INTEREST ACCRUAL

When the date of a scheduled interest payment and the issuer's year-end do not agree, it is necessary to accrue interest by an adjusting entry on the issuer's books at year-end. The accrual must take into account a pro-rated share of discount or premium amortization.

EXAMPLE

Interest Accrual at Year-End

Kristi Corporation, whose year-end is December 31, issued $1,000,000 of 5-year, 10% bonds payable on July 1 and January 1. The bonds sold at a discount for $926,395. Calculate the amount of the year-end accrual for interest and discount amortization.

Year-end Adjustment

Interest payable:

Face value x coupon rate x period ($1,000,000 x 10% x 6/12)	=	$50,000
Amortization (per prior schedule)	=	5,920

Journal Entry: December 31, X1

To record interest accrual from July 1, X1 through December 31, X1:

DR	Interest expense	$50,000	
CR	Interest payable		$50,000

To record discount amortization on bonds from July 1, X1 through December 31, X1:

DR	Interest expense	$5,920	
CR	Discount on bonds payable		$5,920

VIII. BOND SINKING FUNDS

To avoid a cash shortage at the time of debt repayment, a company may build up a separate cash (sinking) fund. A bond sinking fund is a trusteed fund (restricted cash) pursuant to the indenture wherein the company contributes money each year so that at maturity, there is a sum available to repay the entire liability.

A. CLASSIFICATION

The sinking fund is generally a non-current (restricted) asset on the financial statements of the issuer. It is a current asset only to the extent that it offsets a current liability.

B. SINKING FUND BALANCE

The sinking fund earns interest or dividends over time. The accumulated deposits and interest/dividends thereon will be used to pay the bonds upon maturity. The amount accumulated from regular deposits with the trustee serve as collateral for the issued bonds.

C. APPROPRIATION

A bond sinking fund reserve is merely an appropriation of retained earnings to indicate to the shareholders that certain retained earnings are being accumulated for bond sinking fund purposes.

D. FOOTNOTE

The amount of current maturities of long-term debt does not include the annual sinking fund requirement (which is outlined in the bond indenture), but the amount would be included as a footnote.

E. DETERMINATION OF THE PERIODIC SINKING FUND PAYMENTS

To determine the periodic payments to be made into the fund, the future value of an annuity of $1 at an assumed rate must be used because the periodic deposits are earning interest.

EXAMPLE

Determination of Sinking Fund Payments

Assume that an issuer wished to deposit ten equal semiannual payments to retire $1,000,000, five-year bonds. Deposits are to be made semiannually on June 30 and December 31 for ten periods. Fund earnings, which accrue directly to the fund, are expected to be 10% annually. What should the semiannual payments be, and what are the related journal entries for year 1?

Given

Number of periods	10 (5 yrs/semiannually)
Interest rate	10% annually/5% semiannually

Future value of an annuity of $1 for ten periods at 5% = 12.57789

Calculations

Bond maturity value	=	Periodic (semiannual) payments x future value of an annuity of $1 for ten periods at 5% (semiannually)
$1,000,000	=	Semiannual payments x 12.57789
Semi-annual payments	=	$1,000,000 ÷ 12.57789
	=	$79,505/per period

Journal Entry: To record the sinking fund on June 30, Year 1

DR	Bond sinking fund (asset)	$79,505	
CR	Cash		$79,505

Journal Entry: To record the first semiannual interest payment to the fund

DR	Bond sinking fund	$3,975	
CR	Interest revenue ($79,505 x 5%)		$3,975

IX. SERIAL BONDS

Serial bonds are an alternative to using sinking funds.

A. MATURE IN INSTALLMENTS

Serial bonds have principals that mature in installments. These bonds allow the issuer to match maturity dates with the organization's cash flow requirements.

B. ACCOUNTING FOR SERIAL BONDS

The present value of *each maturity* in the series should be separately calculated, as in the case of a term bond.

1. Since short and long-term interest rates often differ, there also could be a different discount or premium relating to each maturity.
2. One account, Unamortized Bond Discount or Unamortized Bond Premium, is used to accumulate all the discounts or premiums for each maturity.
3. The present value of the periodic interest payments for each maturity is calculated separately, based on these different yield rates, just as with separate term bonds.
4. When underwriters bid on an entire serial bond issue at one average interest rate, an average yield can be used for all maturities in the series to calculate interest expense. Amortization methods on serial bonds are:
    a. *The effective interest method*, just as explained for term bonds.
    b. *The bonds outstanding method.* This variation of the straight-line method uses the percentage of decrease in outstanding debt each maturity period as the basis for calculating the related amount of premium or discount on the bonds. The bonds outstanding method is not GAAP, but it has been tested on the CPA Exam.

EXAMPLE

Premium Amortization on Serial Bonds—Bonds Outstanding Method

Assume that $1,000,000 of 10% serial bonds were issued for $1,055,000. Bonds of $100,000 mature semiannually on June 30 and December 31, for five years. Compute premium amortization for these bonds using the bonds outstanding method.

			Diff	B/S	I/S
(1) Period	(2) Outstanding Value	(3) Fraction of Total Bonds Outstanding	(4) Premium Amortization ($55,000 x Col. 3)	(5) Interest Payment (10% x Col. 2 / 2)	(6) Interest Expense (Col. 5 – Col. 4)
1/1/Yr 1	$1,000,000				
6/30/Yr 1	1,000,000	$1,000,000/$5,500,000	$10,000	$ 50,000	$40,000
12/31/Yr 1	900,000	900,000/5,500,000	9,000	45,000	36,000
6/30/Yr 2	800,000	800,000/5,500,000	8,000	40,000	32,000
12/31/Yr 2	700,000	700,000/5,500,000	7,000	35,000	28,000
6/30/Yr 3	600,000	600,000/5,500,000	6,000	30,000	24,000
12/31/Yr 3	500,000	500,000/5,500,000	5,000	25,000	20,000
6/30/Yr 4	400,000	400,000/5,500,000	4,000	20,000	16,000
12/31/Yr 4	300,000	300,000/5,500,000	3,000	15,000	12,000
6/30/Yr 5	200,000	200,000/5,500,000	2,000	10,000	8,000
12/31/Yr 5	100,000	100,000/5,500,000	1,000	5,000	4,000
	$5,500,000	$5,500,000/5,500,000	$55,000		

Journal Entry: To record interest expense for June 30, Year 3

DR	Interest expense	$24,000	
DR	Premium on bonds payable	6,000	
CR	Cash		$30,000

Journal Entry: To record payment of principal for June 30, Year 3

DR	Bonds payable	$100,000	
CR	Cash		$100,000

The bond's carrying value (not shown) each period would decrease by the sum of the principal repayment ($100,000/semiannually) *plus* the corresponding amount of premium amortization.

For example, for June 30, Year 1: $1,055,000 (beginning balance) - $100,000 (principal payment) - $10,000 (premium amortization) = $945,000 (carrying value at the beginning Period 2 = July 1).

X. CONVERTIBLE BONDS

Convertible bonds are often issued at more than face value because of the value of the conversion feature. However, since the conversion feature cannot be assigned a specific value, the issuance price is allocated to the bonds with no recognition of the conversion feature. Because the right to obtain shares of stock cannot be separated from the bonds, the conversion simply involves an exchange of the bonds for stock.

The conversion may be recorded under either the book value method (GAAP) or the market value method (not GAAP, but tested on the CPA Exam).

A. BOOK VALUE METHOD

Under the book value method, **no gain or loss is recognized**. At conversion, the bond payable and related premium or discount are written off and common stock is credited (at par). Additional paid-in capital is credited for the excess of the bond's carrying value over the stock's par value less any conversion costs. No gain or loss is recognized because the book value method views the conversion as the completion of a prior transaction (issuance of convertible debt), rather than viewing it as culmination of the earning process.

In summary, upon conversion, the issuer must:

1. Pay the accrued interest up to the conversion date,
2. Amortize the bond discount or premium up to the conversion date,
3. Amortize the bond issue costs up to the conversion date, and
4. Record any difference as additional paid-in capital.

B. MARKET VALUE METHOD

The market value method views the conversion as culmination of the earnings process, thereby resulting in a **recognized gain or loss**. At conversion, the bonds payable and related premium are written off, and common stock is credited (at par). The credit to additional paid-in capital is the excess of the market price of the stock over par value. The difference between the market value of the stock and the book value of the bonds is a recognized gain or loss on redemption.

C. PREMIUM

Convertible bonds are often issued at more than face value because of the value of the stock. However, since the conversion feature cannot be assigned a value, the difference between the proceeds and the face value of the bonds is recorded as a premium on bonds payable.

When the conversion feature is exercised, any unamortized premium attributable to that portion of the converted bonds must be written off.

EXAMPLE

Convertible Bond / Book Value Method

FACTS:

- 1,000 convertible bonds (1,000 x $1,000 = $1,000,000) are issued on January 1, X1
- The convertible bond and $300 are convertible into one share of common stock
- The bonds sold for $1,081,105
- The common stock's par value is $200
- Half (500) of the bonds were converted on January 2, X1
- The company uses the book value method

BORROWER			INVESTOR		
January 1, X1			**January 1, X1**		
DR Cash	$1,081,105		**DR** Investment in bonds	$1,081,105	
CR Bond payable		$1,000,000	**CR** Cash		$1,081,105
CR Premium on bond payable		81,105			

HALF ARE CONVERTED

January 2, X1			**January 2, X1**		
DR Cash	$150,000		**DR** Investment in common stock	$690,552	
DR Bond payable	500,000		**CR** Cash		$150,000
DR Premium on bond payable	40,552		**CR** Investment in bonds		540,552
CR Common stock		$100,000			
CR A.P.I.C.		590,552			

BOND		PREMIUM		CASH		COMMON STOCK
BOND $1,000		$ 81,105		$300		Common Stock Par $200
X 500		X 50%		X 500		X 500
						$ 100,000
					A.P.I.C.	590,552
$500,000	+	$ 40,552	+	$150,000	=	$ 690,552

EXAMPLE

Convertible Bond / Market Value Method

FACTS:

- 1,000 convertible bonds (1,000 x $1,000 = $1,000,000) are issued on January 1, X1
- The convertible bond and $300 are convertible into one share of common stock
- The bonds sold for $1,081,105
- The common stock's par value is $200
- All of the bonds were converted on January 2, X1
- The company uses the market value method
- The FV of common stock was $1,400

BORROWER				INVESTOR			
January 1, X1				**January 1, X1**			
DR	Cash	$1,081,105		**DR**	Investment in bonds	$1,081,105	
CR	Bond payable		$1,000,000	**CR**	Cash		$1,081,105
CR	Premium on bond payable		81,105				

ALL ARE EXERCISED

January 2, X1				**January 2, X1**			
DR	Cash	$300,000		**DR**	Investment in common stock	$1,400,000	
DR	Bond payable	1,000,000		**CR**	Cash		$300,000
DR	Premium on bond payable	81,105		**CR**	Investment in bonds		1,081,105
DR	Loss on conversion	18,895		**CR**	Gain on conversion		18,895
CR	Common stock		$200,000				
CR	A.P.I.C.		1,200,000				

BONDS	PREMIUM	CASH	COMMON STOCK	A.P.I.C.	GAIN < LOSS >
Bond $1,000	$81,105	$300	Common Stock Par $200	FV 1,400 PAR – 200 DIFF 1,200	PLUG
X 1,000	X 100%	X 1,000	X 1,000	X 1,000	
$1,000,000	+ $ 81,105	+ 300,000	= 200,000	+ 1,200,000	+ < 18,895 >

XI. BONDS SOLD WITH DETACHABLE STOCK PURCHASE WARRANTS

WARRANTS

Warrants are option contracts that are issued with, and detachable from, bonds (and notes). The warrant gives the bondholder the right to buy stock at a fixed price within a specific time period. Because they are detachable, the warrants are traded separately and are considered to be a separate financial instrument. Thus, they are accounted for differently than convertible bonds.

A. ACCOUNT FOR SEPARATELY

A conversion feature that is separate from a security should be accounted for separately, and a value should be assigned to it. The value assigned to a separate conversion feature is its relative fair value at the time of issue. This amount is credited to A.P.I.C.—Warrants. It is important to remember that a value is assigned to a conversion feature only if it is detachable and has its own market value.

DR	Cash	$XXX	
CR	Bonds payable		$XXX
CR	A.P.I.C.—Warrants		XXX

B. ACCOUNTING TREATMENT

Bonds with detachable stock purchase warrants may be recorded at issuance using two different methods. The **warrants only method** is used if only the fair value of the warrants is known. The **market value method** (warrants and bonds method) is used if the fair value of both the warrants and bonds are known. Following are the general steps to account for bonds issued with detachable stock purchase warrants.

1. Separate the warrants from the debt at the date of issuance of the bonds.
2. Generally, allocate the amount received upon issuance separately to debt and to the detachable warrants according to their relative fair values at the date of issuance (using the market value method).
    a. In some cases, it is not possible to obtain the relative fair values of both the debt and the warrants, but the fair value of one of them can typically be determined (usually, this is the warrants).
    b. In this case (the warrants only method), allocate the known fair value to its related item (again, usually the warrants) and allocate the remainder of the proceeds to the other item (typically the debt).
3. The amount that is allocated to warrants is credited to an account called "Additional paid-in capital: warrants" in the shareholders' equity section.
4. Any difference between the amount allocated to the bonds and the face value of the bonds should be debited or credited to discount or premium on bonds payable.
5. Exercise of the warrants
    a. Additional cash is received by the company upon exercise of the warrants.
    b. At this time, the following journal entry is typical to record issued shares of stock due to the exercise of the warrants:

DR	Cash (additional received)	$XXX	
DR	A.P.I.C.—Warrants	XXX	
CR	Common stock (at par)		$XXX
CR	A.P.I.C.		XXX

EXAMPLE

Detachable Warrants (Warrants Only Method)

FACTS:

- 1,000 bonds (1,000 x $1,000 = $1,000,000) with a detachable warrant (to purchase 1 share of common stock) are issued on January 1, X1
- One warrant and $1,250 can be exchanged for one share of common stock
- The bonds sold for $1,076,395
- The common stock's par value is $200
- The FV of the warrants are $150,000 (1,000 x $150 cash)
- Half the warrants (500) are exercised on January 2, X1
- The other half of the warrants expired (later)

BORROWER				INVESTOR			
January 1, X1				**January 1, X1**			
DR	Cash	$1,076,395		**DR**	Investment in bonds	$926,395	
DR	Discount on bonds payable	73,605		**DR**	Warrants	150,000	
CR	Bond payable		$1,000,000	**CR**	Cash		$1,076,395
CR	A.P.I.C. - Warrants		150,000				
	HALF ARE EXERCISED						
January 2, X1				**January 2, X1**			
DR	Cash	$625,000		**DR**	Investment in common stock	$700,000	
DR	A.P.I.C. - Warrants	75,000		**CR**	Cash		$625,000
CR	Common stock		$100,000	**CR**	Warrants		75,000
CR	A.P.I.C.		600,000				
	OTHER HALF EXPIRE						
DR	A.P.I.C. - Warrants	$75,000		**DR**	Loss on investment	$75,000	
CR	A.P.I.C.		$75,000	**CR**	Warrants		$75,000

BONDS		PREMIUM DISCOUNT		WARRANTS		CASH		COMMON STOCK
BONDS $1,000		$73,605				$1,250		Common Stock Par $200
				Warrants $150,000				
x 0		x 0		X 50%		x 500		x 500
								$100,000
							A.P.I.C.	$600,000
0	+	0	+	$75,000	+	$625,000	=	$700,000

XII. EXTINGUISHMENT OF DEBT

EXTINGUISHMENT OF DEBT

Corporations issuing bonds may call or retire them prior to maturity. Callable bonds can be retired after a certain date at a stated price. Refundable bonds allow an existing issue to be retired and replaced with a new issue at a lower interest rate.

A. DEFINITION OF EXTINGUISHMENT

SFAS No. 140 states that a liability cannot be derecognized in the financial statements until it has been extinguished. A liability is considered extinguished if either of the following conditions is met:

1. Debtor Pays

A liability is considered extinguished if the debtor pays the creditor and is relieved of its obligation for the liability.

2. Debtor Legally Released

A liability is considered extinguished if the debtor is legally released from being the primary obligor under the liability, either judicially or by the creditor.

B. IN-SUBSTANCE DEFEASANCE NOT EXTINGUISHMENT

An in-substance defeasance is an arrangement where a company places purchased securities into an irrevocable trust and pledges them for the future principal and interest payments on its long-term debt. Because the company remains the primary obligor while there is outstanding debt, the liability is not considered extinguished by an in-substance defeasance.

C. DETERMINING AND RECORDING GAIN OR LOSS

1. Adjust Items in the Financial Statements

In any bond reacquisition, the following items must be accounted for and adjusted in the financial statements:

a. Bond issue costs,

b. Any related unamortized discount or premium, and

c. The difference between the bond's face value and the reacquisition proceeds.

2. Calculation of the Gain or Loss

Gain or loss on extinguishment of debt is the difference between the reacquisition price and the net carrying amount of the bond at the date of extinguishment.

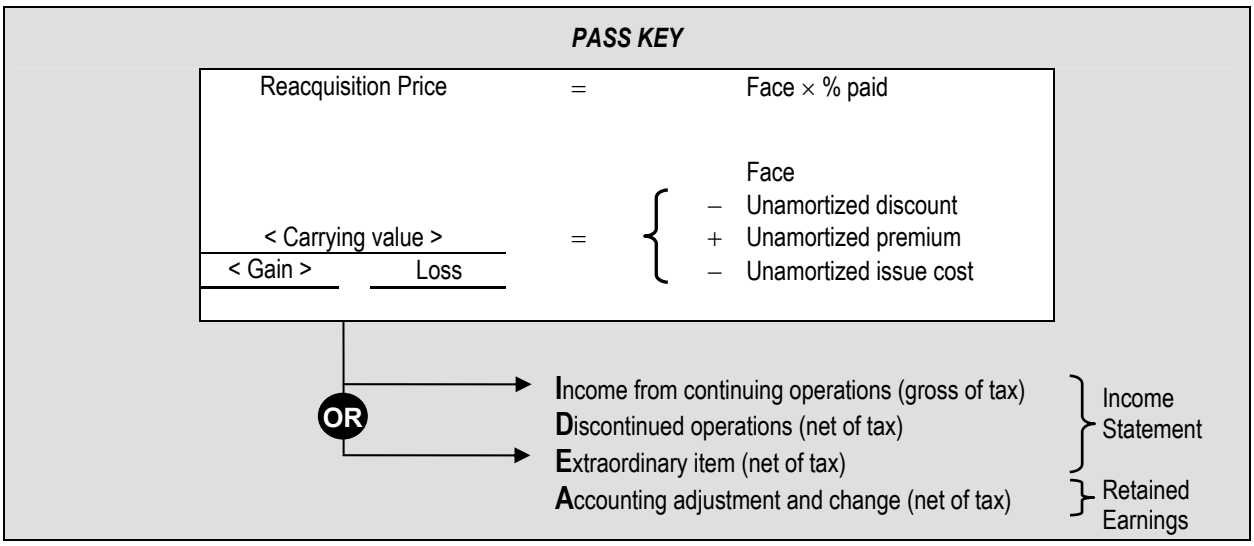
(Gain) or loss = Reacquisition price – Net carrying amount

a. Reacquisition Price

Reacquisition price is usually shown as a percentage of the bond's face value (e.g., $100,000 at 102 or $100,000 at 95). To calculate the reacquisition price, multiply the percentage by the face value (e.g., $100,000 x 102% = $102,000 or $100,000 x 95% = $95,000).

b. Net Carrying Amount

The net carrying amount of the bond is the carrying value (i.e., face value of the bond plus unamortized premium or minus unamortized discount) minus unamortized bond issue costs (the unamortized bond issue costs are the difference between the carrying value of the bond used for the effective interest method and the net carrying amount of the bond on the financial statements).



D. POSSIBLE EXTRAORDINARY ITEM TREATMENT

The gain or loss on bond extinguishments (including bond refundings) by the company will be treated as an extraordinary item, net of the related tax effect, if it is material in aggregate, unusual in nature, and has occurred infrequently (per SFAS No. 145 and APBO No. 30). Note that the classification of gain or loss on extinguishments of debt as an extraordinary item is no longer automatic under SFAS 145, but is subject to the normal criteria of unusual in nature and infrequent in occurrence.

EXAMPLE

Loss on Extinguishment of Bonds

Assume that $1,000,000 bonds due in 5 years are issued on January 1, Year 1 at a discount for $926,395. There are $50,000 of bond issue costs being amortized over 5 years. Two years later, on January 1, Year 3, the entire issue is redeemed at 101 and cancelled. (Ignore income tax considerations).
(Note: this example uses the numbers from the table on page F5-46.)

Reacquisition price:			
(Face x % Paid)			
$1,000,000 x 101	=		$1,010,000
Bond Carrying Value:			
Face	1,000,000		
Less: Unamortized discount	< 49,174 >		
		950,826	
Less: Unamortized bond issue cost		< 30,000 >	
Net Carrying Value			< 920,826 >
Total Loss on Extinguishment			89,174

Components of the loss are:

▫ Unamortized bond discount	$49,174
▫ Unamortized bond issue cost	30,000
▫ Premium paid to retire ($1,000,000 x 1%)	10,000
TOTAL LOSS	$89,174

Journal Entry:

DR	Bonds payable	$1,000,000	
DR	Loss on extinguishment of bonds [possibly extraordinary]	89,174	
CR	Discount on bonds payable		$ 49,174
CR	Unamortized bond issue costs		30,000
CR	Cash		1,010,000

EXAMPLE

Gain on Extinguishment of Bonds

Assume that $1,000,000 bonds due in 5 years are issued on January 1, Year 1 at a premium for $1,081,105. There are $50,000 of bond issue costs being amortized over 5 years. The entire issue is redeemed two years later, on January 1, Year 3 for 96 and cancelled. (Ignore income tax considerations).
(Note: this example uses the numbers from the table on page F5-45.)

Reacquisition price: (Face x % Paid) $1,000,000 x 96	=		$960,000
Bond Carrying Value:			
Face	1,000,000		
Plus: Unamortized premium	52,417		
		1,052,417	
Less: Unamortized bond issue cost		< 30,000 >	
Net Carrying Value			< 1,022,417 >
Total Gain on Extinguishment			< 62,417 >

Components of the loss are:

❑ Unamortized bond premium	$52,417
❑ Unamortized bond issue cost	< 30,000 >
❑ Discount to retire ($1,000,000 x 4%)	40,000
TOTAL GAIN	$62,417

Journal Entry:

DR	Bonds payable	$1,000,000	
DR	Premium on bond payable	52,417	
CR	Cash		$960,000
CR	Unamortized bond issue costs		30,000
CR	Gain on extinguishment of bonds [possibly extraordinary]		62,417

XIII. DISCLOSURE REQUIREMENTS

A. Companies having large amounts of debt issues often report only one balance sheet total that is supported by comments and schedules in the accompanying notes. Notes often show details regarding the liability maturity dates, interest rates, call and conversion privileges, assets pledged as security, and borrower-imposed restrictions.

B. Part of the disclosure should include any future sinking fund payments and maturities for each of the next five years to aid users in evaluating the timing and amounts of cash flows. (The maturity amounts and sinking fund requirements are reported in the aggregate.)

TROUBLED DEBT RESTRUCTURINGS (IMPAIRED LOANS)

TROUBLED DEBT RESTRUCTURING

I. INTRODUCTION

A troubled debt restructuring is one in which the creditor allows the debtor certain concessions to improve the likelihood of collection that would not be considered under normal circumstances. Concessions include items such as reduced interest rates, extension of maturity dates, reduction of the face amount of the debt, and reduction of the amount of accrued interest. The concessions must be made in light of the debtor's financial difficulty, and the objective of the creditor must be to maximize recovery of the investment. Troubled debt restructurings are often the result of legal proceedings or of negotiation between parties.

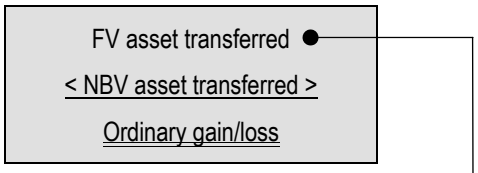
II. ACCOUNTING AND REPORTING BY DEBTORS

A debtor accounts for a troubled debt restructuring according to the type, as follows:

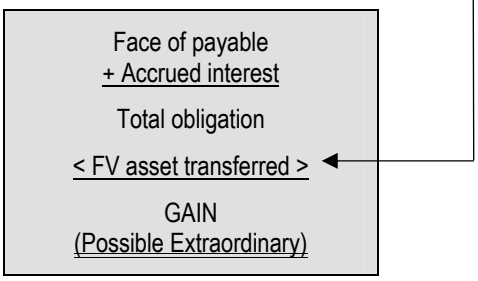
A. TRANSFER OF ASSETS

The debtor will recognize a gain in the amount of the excess of the carrying amount of the payable (including accrued interest, premiums, etc.) over the fair value (an arm's length purchase or sale price) of the assets given up. The gain or loss on disposition of the asset (i.e., difference between book value and fair value) is reported in income of the period. Per SFAS No. 145, the restructuring gain is possibly reported as an extraordinary item, if it meets the requirements of APBO No. 30 (i.e., material in aggregate, infrequent, and unusual in nature).

1. Recognize ordinary gain/loss on:



2. Recognize [possibly extraordinary] gain on:



B. TRANSFER OF EQUITY INTEREST

Per SFAS No. 145, the difference between the fair value of the equity interest and the carrying amount of the payable may be recognized as an extraordinary gain, if it meets the requirements of APBO No. 30 (see above).

1. Recognize [possibly extraordinary] gain on:

FV equity transferred
< Face of payable >
GAIN
(Possible Extraordinary)

C. MODIFICATION OF TERMS

A restructuring that does not involve the transfer of assets or equity will often involve the modification of the terms of the debt. In a modification, the debtor usually accounts for the effects of the restructuring prospectively. The debtor does not change the carrying amount unless the carrying amount exceeds the total future cash payments specified by the new terms.

1. Total Future Cash Payments

The total future cash payments are the principal and any accrued interest at the time of the restructuring that continues to be payable by the new terms.

2. Interest Expense

Interest expense is computed by a method that causes a constant effective rate (e.g., the effective interest method). The new effective rate of interest is the discount rate at which the carrying amount of the debt is equal to the present value of the future cash payments.

3. Future Payments

When the total future cash payments are less than the carrying amount, the debtor should reduce the carrying amount accordingly and recognize the difference as a gain (note that the gain may be treated as extraordinary if it is material in the aggregate, unusual in nature, and infrequent in occurrence, per SFAS No. 145 and APBO No. 30). When there are several related accounts (discount, premium, etc.), the reduction may need to be allocated among them. All cash payments after the restructuring reduce the carrying amount, and no interest expense is recognized after the date of restructure.

When there are indeterminate future payments, or any time the future payments might exceed the carrying amount, the debtor recognizes no gain. The debtor should assume that the future contingent payments will have to be made at least to the extent necessary to obviate any gain.

Note: In estimating future cash payments for any purpose in this area, it is assumed that the maximum amount of periods (and interest) is going to occur.

D. COMBINATION OF TYPE

When a restructuring involves a combination of asset or equity transfers and modification of terms, the fair value of any asset or equity is used first to reduce the carrying amount of the payable. The difference between the fair value and the carrying amount of any assets transferred is recognized as gain or loss. No gain on restructuring can be recognized unless the carrying amount of the payable exceeds the total future cash payments.

All gains on debt restructuring are aggregated and included in net income for the period. Per SFAS No. 145 and APBO No. 30, if the gains are material in the aggregate, are unusual in nature, and have occurred infrequently, they are reported as an extraordinary item (net of tax effects) on the income statement. Otherwise, they are treated and classified along with other gains of the company, typically in the continuing operations section of the income statement.

EXAMPLE

Debtor's Accounting for Restructuring

Hull Company is indebted to Apex under a $500,000, 12%, three-year note dated December 31, Year 1. Because of Hull's financial difficulties developing in Year 3, Hull owed accrued interest of $60,000 on the note at December 31, Year 3. Under a troubled debt restructuring, on December 31, Year 3, Apex agreed to settle the note and accrued interest for a tract of land having a fair value of $450,000. Hull's acquisition cost of the land is $360,000. On its Year 3 income statement, what should Hull report as a result of the troubled debt restructuring?

Hull's total debt is the $500,000 face value of the note plus $60,000 of accrued interest, or $560,000.

The debt was forgiven in exchange for Hull giving Apex (the lender) land worth $450,000, with a cost to Hull of $360,000.

Hull's total gain is:

Debt forgiven	$560,000		
Carrying value of asset given	(360,000)		
Total gain	$200,000		[$90,000 + $110,000, per below]

Breakout of Gain

Ordinary Gain on Disposal of Land (Adjustment to Fair Value)

Fair value of land		$450,000
Acquisition cost		(360,000)
Holding gain on sale of land		$ 90,000

Gain on Restructuring (Extraordinary if it Meets Criteria of APBO No. 30)

3-year note	$500,000	
Accrued interest	60,000	
Amount owed		560,000
Settlement amount (fair value of land)		(450,000)
Gain on restructuring of debt		$110,000 [Extraordinary if it meets the criteria]

Journal Entry: To record the troubled debt restructuring on the books of the debtor

DR	Notes payable	$500,000	
DR	Interest payable	60,000	
CR	Land		$360,000
CR	Gain on disposal of land		90,000
CR	Gain on restructuring		110,000 [Extraordinary if it meets the criteria]

III. IMPAIRMENT OF LOANS BY CREDITORS

SFAS No. 114 and No. 118 address the reporting of impairment of loans due in over one year by creditors. Simply stated, impaired loans are measured based on the present value of expected future cash flows discounted at the loan's effective interest rate. Creditors should assess the need to evaluate all loans when assessing the need for a loss accrual.

A. RECOGNITION OF IMPAIRMENT

A loan is considered impaired if it is probable (likely to occur) that the creditor will be unable to collect all amounts due under the original contract when due. Normal loan procedures should be used to judge whether or not a loan is impaired.

B. MEASUREMENT OF IMPAIRMENT

1. Receipt of Assets or Equity

When the creditor receives either assets or equity as full settlement of a receivable, these are accounted for at their fair value at the time of the restructuring. The fair value of the receivable satisfied can be used if it is more clearly determinable than the fair value of the asset or equity acquired. In a partial payment, the creditor must use the fair value of the asset or equity received.

The excess of the recorded receivable over the fair value of the asset received is recognized as an ordinary loss. The creditor accounts for these assets as if they were acquired for cash.

2. Modification of Terms (Use Present Value)

Impairment should be measured based on the loan's present value of expected future cash flows discounted at the loan's historical effective interest rate. The observable market rate can be used if more readily available. Likewise, the fair value of the collateral can be used if the loan is collateral dependent. Any costs to sell should be estimated and should reduce the cash flows.

The impairment is recorded by creating a valuation allowance with a corresponding charge to bad debt expense:

DR	Bad debt expense	$XXX	
CR	Allowance for credit losses		$XXX

EXAMPLE

Modification of Terms

Creditor Y holds a 5-year, 9%, $100,000 note from X Corp. The note was issued January 1, Year 1. On January 1, Year 2, Creditor Y determines that X Corp. is unable to pay the note and agrees to restructure the terms. The interest due is forgiven and the interest rate is dropped to 5%. Make the entry to record the modification of terms on the books of Creditor Y.

First, the investment needs to be revalued, using the present value of the expected future cash flows:

Present value of $100,000 at 9%, due in 4 years $100,000 x .7084	$ 70,840
Present value of annuity, 9% (original rate), 4 years $100,000 x 5% (new rate) x 3.2397	16,198
Present value of cash flows	$ 87,038
Carrying value of loan (book value plus accrued interest)	$109,000
Restructured loan	(87,038)
Impairment of loan	$ 21,962

Journal Entry: To record the modification of terms and the reclassification of the note to the new note account

DR	Note receivable	$109,000	
DR	Bad debt expense	21,962	
CR	Accrued interest receivable		$ 9,000
CR	Note receivable		100,000
CR	Valuation allowance for impaired loan		21,962

Subsequent period accounting is as follows: Interest revenue will be recognized by the creditor at the historical effective interest rate even though actual interest received will be calculated under the new terms of 5%. The balance is accounted for through amortization of the difference.

C. EXCEPTIONS

SFAS No. 114 and No. 118 do not apply to:

1. Groups of loans collectively evaluated for impairment (e.g., credit card loans and residential mortgage loans).
2. Loans measured at market value (or lower of cost or market).
3. Leases.
4. Held-to-maturity debt securities.

IV. DISCLOSURE REQUIREMENTS FOR IMPAIRED LOANS AND RESTRUCTURED DEBT

The following information must be disclosed either in the body of the financial statements or in the notes:

A. GENERAL DISCLOSURES FOR DEBTORS

1. A description of the main changes in terms and/or features of settlements
2. Gain on restructuring of payables (in the aggregate)
3. Net gain or loss on transfers of assets recognized in the period (in the aggregate)
4. Per share amount of the aggregate gain on the restructuring of payables
5. The amount of contingently payable amounts included in the carrying amount of restructured payables (and any conditions that would cause those amounts to become payable or to be forgiven)

B. GENERAL DISCLOSURES FOR CREDITORS

1. The creditor's policy for recognizing interest income
2. Any commitment the creditor has to lend additional funds to the debtor
3. The activity in the allowance account for the reporting period
4. The average recorded investment in impaired loans for the period (including the amount of related interest income and the interest income recognized on a cash basis)

C. ADDITIONAL DISCLOSURES FOR CREDITORS

If restructured debt is still impaired or does not provide an acceptable rate of interest, also disclose the:

1. Total recorded investment in troubled debt,
2. Amount of debt with a bad debt allowance, and
3. Amount of debt without a bad debt allowance.

NOTES

HOMEWORK READING

Liabilities

I. ACCOUNTS PAYABLE AND OTHER MISCELLANEOUS CURRENT LIABILITIES

SFAC No. 6 defines current liabilities as obligations with maturities within one year or the operating cycle, whichever is longer. Current liabilities are valued at their settlement values. Settlement value is also known as net realizable value.

A. TRADE ACCOUNTS PAYABLE

Trade accounts payable are amounts owed for goods, raw materials, and supplies that are not evidenced by a promissory note. Purchases of goods and services on credit are usually determinable as to amounts due and the due date. Cash discounts associated with accounts payable can be anticipated and journalized. The purchase may be recorded gross or net.

1. Gross Method

The gross method records the purchase without regard to the discount. When invoices are paid, within the discount period, a purchase discount is credited.

2. Net Method

Under the net method, purchases and accounts payable are recorded net of the discount. If payment is made within the discount period, no adjustment is necessary. If payment is made after the discount period, a purchase discount lost account is debited.

B. DIVIDENDS PAYABLE

Dividends payable are dividends that have been declared payable by a company's board of directors. Upon declaration, they become a debt of the corporation (credit to dividends payable) and are debited to retained earnings. Upon the payment of the dividend, the dividends payable account is simply debited and the cash account is credited. Preferred dividends in arrears are not debt.

C. RETURNABLE DEPOSITS

Returnable deposits are cash deposits that must be returned upon the satisfaction of certain conditions. Examples include the return of a security deposit upon the termination of a lease and the return of a deposit on containers that required a deposit upon the purchase of the items they contained.

D. SALES TAXES PAYABLE

Sales taxes payable are sales taxes collected from customers on behalf of the taxing authority and held in trust until remission to the taxing authority. Sales taxes payable should be credited to a payable account after collected and until remitted, and it does not originate from an entry recording an expense of the company.

E. USE TAXES PAYABLE

Use taxes are taxes collected from the buyer on goods purchased by the buyer outside of the taxing jurisdiction. Use taxes must be accrued by the buyer until remitted to the taxing authority.

F. PROPERTY TAXES PAYABLE

Property taxes are often invoiced in arrears. There are two methods of accrual, and either one is acceptable, provided the method used is consistently applied. Property taxes payable may be accrued prior to the receipt of the tax invoice and matched in the year for which the invoice pertains. Property taxes may also be recorded as a payable upon the receipt of the tax invoice and expensed in the year of receipt (which is often different from the year to which the invoice pertains).

G. ACCRUED SALARIES AND WAGES PAYABLE

Accrued salaries and wages payable is the unpaid portion of salaries and wages as of the balance sheet date. Unpaid salaries and wages generally result from pay periods that overlap the balance sheet date. Accruals are calculated as the ratio of days occurring prior to the balance sheet date divided by the total days in the pay period times the amount of the affected payroll.

H. PAYROLL DEDUCTIONS

Payroll deductions for social security, Medicare, and income taxes are items withheld from employees out of the gross pay on their paychecks. Payroll deductions are held in trust until remission to the taxing authorities and should be credited to a payable account until remitted. They do not represent an expense to the employer.

I. UNEMPLOYMENT TAXES AND THE EMPLOYER'S SHARE OF PAYROLL TAXES

Unemployment taxes and the employer's share of payroll taxes (e.g., social security and Medicare) should be accrued by the employer as an expense (e.g., unemployment tax expense and payroll tax expense). These items are treated similar to trade accounts payable and are kept on the books until remission to the taxing authorities.

J. COMPENSATED ABSENCES (VACATION AND SICK PAY)

COMPENSATED ABSENCES

Compensated absences shall be accrued if all of the criteria are satisfied for accrual. The criteria include (1) the employee has performed the services to which the vacation or sick pay is attributable; (2) the liability is vested or accumulated; (3) payment is probable; and (4) the amount can be reasonably estimated. The accrual of non-vesting but accumulating sick pay is not required.

K. EMPLOYEE BONUSES

Many companies have incentives for employees to obtain additional pay in the form of a bonus. Often, bonuses are paid based on the performance of an employee of the performance of a division in which the employee works and are evaluated at the end of the period. These bonuses are, therefore, often paid at the end of the year. Bonuses should be recorded (accrued) as an expense and a current liability in the year in which the services that qualified for the bonus were rendered.

L. ONE-TIME TERMINATION BENEFITS/CONTRACT TERMINATION COSTS

Liabilities for the costs associated with one-time termination benefits, contract termination, consolidation of facilities, relocation of employees, etc. that are associated with exit or disposal activities that are not covered by SFAS No. 143 (Asset Retirement) or No. 144 (Discontinued Operations) are covered by SFAS No. 146, which nullified EITF Issue No. 94-3. According to SFAS No. 146, a liability for costs associated with exit or disposal activities may not be recognized until the liability is actually **incurred** (previously, under EITF Issue 94-3, a liability was recognized on the date the entity made a commitment to an exit plan). The liability is measured initially at fair value on the date the liability is incurred.

II. IMPUTING INTEREST ON PAYABLES (AND RECEIVABLES)

GAAP requires that certain receivables and payables (contractual rights to receive or pay money at a fixed or determinable rate) must be recorded at the true present value at the date of issuance. If a note is non-interest bearing or the interest rate is unreasonable (usually below market), the value of the note must be determined by imputing the market rate of the note and by using the effective interest method.

Many of these rules apply when notes are exchanged for goods and services and the interest rate varies from the prevailing interest rates. Notes must be recorded at present value so that income or loss for the period is not distorted.

A. STATED INTEREST FACTORS

A note issued or received solely for cash equal to its face amount is presumed to earn the interest stated. However, if rights or privileges are attached to the note, they must be evaluated separately. If no rights or privileges are attached, record the note payable at face value without any present value considerations.

There is a general presumption that the interest stated on a note resulting from a business transaction entered into at arm's length is fair and adequate.

B. UNREASONABLY LOW OR ABSENT INTEREST FACTORS

When a note contains either no interest or an unreasonable rate of interest, the substance rather than the form of the transaction must be recorded. This involves determining the present value of the obligation at an appropriate market interest rate, and:

1. Recording the receivable or payable at its face amount;
2. Recording the sale of the asset at the present value of the obligation; and
3. Recording any difference between the face amount of the note and its present value as a discount or premium that must be amortized over the life of the note.

C. TRANSACTIONS NOT REQUIRING PRESENT VALUE CALCULATION

Receivables and payables that generally do not require this type of evaluation, and are presumed to be recorded at a fair valuation, are those:

1. Arising in the ordinary course of business, the terms of which do not exceed approximately one year.
2. Paid in property or services (not in cash).
3. Representing security or retainage deposits.
4. Bearing an interest rate determined by a government agency.
5. Arising from transactions between a parent and its subsidiaries.

D. DETERMINING THE APPROPRIATE INTEREST RATE

There is no predetermined formula for computing an appropriate interest rate. However, provided there is a market for these types of notes (i.e., they are not the more complex assets and liabilities discussed in SFAC No. 7) the objective is to approximate what the rate would have been, using the same terms and conditions as if it had been negotiated by an independent lender. The following issues are recommended for consideration in determining an appropriate rate:

1. Credit rating of the issuer,
2. Restrictive covenants or collateral involved,
3. Prevailing market rates, and
4. The rate at which the debtor could borrow funds.

E. AMORTIZATION OF THE DISCOUNT OR PREMIUM

Any discount or premium resulting from imputing interest on a note must be amortized over the life of the note using the effective interest method. The amortization is reported as interest.

F. EFFECTIVE INTEREST METHOD

The effective interest method is a method under which each payment on a note (or other loan) would be divided between an interest component and a principal component as though the note had a constant effective stated rate (or adequate rate) of interest.

EXAMPLE

Effective Interest Method

1. Company X is making three annual loan payments of $1,000 each to Company A. There is no stated rate of interest. The present value of the aggregate loan payments at the appropriate interest rate of 10% is $2,486.

2. Under the effective interest method, each payment would be allocated between interest and principal as follows:

(a) Payment	(b) Interest (d) X 10%	(c) Principal (a) – (b)	(d) Balance (d) – (c)
			$2,486
$1,000	$249	$751	1,735
1,000	174	826	909
1,000	91	909	-0-
	$514	$2,486	

PASS KEY

A solid understanding of the calculations of the effective interest method will assist you in getting the correct answers not only on questions relating to investments, but also on questions relating to payables. Many different types of questions may be answered with just knowing this simple format. Use a blank sheet of paper and prepare this schedule on your own a few times. Memorize the format. You'll be glad you did!

G. STATEMENT PRESENTATION OF DISCOUNT OR PREMIUM

The premium or discount that arises from the use of present values on cash and noncash transactions is inseparable from the related asset or liability. Therefore, such premium or discount valuation accounts are added to (or deducted from) their related asset or liability on the balance sheet. Discounts or premiums resulting from imputing interest must not be classified as deferred charges or credits.

H. DISCLOSURE

A full description of the receivable or payable, the effective interest rate, and the face amount of the note should be disclosed in the financial statements or notes thereto.

Issue costs should be reported separately in the balance sheet as deferred charges (and amortized over the life of the note).

EXAMPLE

Imputed Interest — Seller

A manufacturer sells a machine for $10,000 and accepts a $10,000 note receivable bearing no interest for five years. 10% is an appropriate interest rate.

The present value of $1 at 10% for 5 years is 0.621.

Journal Entry: To record the sale

Note receivable	10,000	
Sales (present value at 10%)		6,210
Discount on note receivable		3,790

Journal Entry: End of year to amortize the discount on notes receivable using the interest method

1st year:

Discount on notes receivable	621	
Interest income (10% x $6,210)		621

Balance Sheet Presentation:

Notes receivable	$10,000
Less: Discount on notes receivable	(3,169) [$3,790 - $621]
	$6,831

In the above example, the manufacturer records the note at its face amount but records the sale at the present value of the note. The difference between the face amount of the note and its present value is recorded as "discount on notes receivable." This deferred interest income is payment for the use of the manufacturer's funds for the five years. Interest income is realized each year, using the effective interest method (e.g., in year 2, 10% x ($6,210 + $621) = $683.10 interest income).

Note that this example and the effective interest example in Item F illustrate notes with periods longer than one year, even though this section covers working capital (current assets and current liabilities).

The concepts are better illustrated with these long-term examples, and they will also be useful during our discussion of long-term payables (class F5).

NOTES PAYABLE

III. NOTES PAYABLE

Short-term notes payable are amounts owed to creditors that are evidenced by a promissory note. They may be interest bearing or non-interest bearing.

A. INTEREST BEARING

If a note bears interest at the market rate for loans of similar risk (or trade notes payable), the note payable is simply recorded at its face value, and interest payable is accrued at the stated rate of interest until it is paid. If the interest rate on the notes varies significantly from the market rate for similar risk items, the note should be adjusted to the true present value (likely causing a discount to be recorded), and the effective interest method should be used to amortize the discount (or premium, if applicable).

B. NON-INTEREST BEARING

If the note is non-interest bearing, it should be recorded at its present value by discounting the face of the note using an appropriate interest rate and amortizing the difference using the effective interest method.

EXAMPLE

Non-interest Bearing Note

Facts and Requirement: Cinders Manufacturing has a one-year non-interest bearing note payable to Township Bank for $1,000. The appropriate interest rate for notes of similar risk and maturity is 10%. The present value of $1,000 at 10% for one year is $909. What is the journal entry to record the note?'

Solution: The journal entry to record the note is as follows:

DR	Cash	$909	
DR	Discount on note payable	91	
CR	Note payable		$1,000

FINANCIAL ACCOUNTING & REPORTING 5

Class Questions Answer Worksheet

MC Question Number	First Choice Answer	Correct Answer	NOTES
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

Grade:

Multiple-choice Questions Correct / 20 = _____% Correct

Detailed explanations to the class questions are located in the back of this textbook.

NOTES

CLASS QUESTIONS

1. CPA-00394

On December 30, 1994, Chang Co. sold a machine to Door Co. in exchange for a non-interest-bearing note requiring ten annual payments of $10,000. Door made the first payment on December 30, 1994. The market interest rate for similar notes at date of issuance was 8%. Information on present value factors is as follows:

Period	*Present value of $1 at 8%*	*Present value of ordinary annuity of $1 at 8%*
9	0.50	6.25
10	0.46	6.71

In its December 31, 1994, balance sheet, what amount should Chang report as note receivable?

a. $45,000
b. $46,000
c. $62,500
d. $67,100

2. CPA-00438

On January 1, 1989, Park Co. signed a 10-year operating lease for office space at $96,000 per year. The lease included a provision for additional rent of 5% of annual company sales in excess of $500,000. Park's sales for the year ended December 31, 1989 were $600,000. Upon execution of the lease, Park paid $24,000 as a bonus for the lease. Park's rent expense for the year ended December 31, 1989 is:

a. $98,400
b. $101,000
c. $103,400
d. $125,000

3. CPA-00410

Wall Co. leased office premises to Fox, Inc. for a five-year term beginning January 2, 1992. Under the terms of the operating lease, rent for the first year is $8,000 and rent for years 2 through 5 is $12,500 per annum. However, as an inducement to enter the lease, Wall granted Fox the first six months of the lease rent-free. In its December 31, 1992, income statement, what amount should Wall report as rental income?

a. $12,000
b. $11,600
c. $10,800
d. $8,000

4. CPA-00434

Lease A does not contain a bargain purchase option, but the lease term is equal to 90 percent of the estimated economic life of the leased property. Lease B does not transfer ownership of the property to the lessee by the end of the lease term, but the lease term is equal to 75 percent of the estimated economic life of the leased property. How should the lessee classify these leases?

	Lease A	*Lease B*
a.	Operating lease	Capital lease
b.	Operating lease	Operating lease
c.	Capital lease	Capital lease
d.	Capital lease	Operating lease

5. CPA-00424

On December 31, 1990, Day Co. leased a new machine from Parr with the following pertinent information:

Lease term	6 years
Annual rental payable at beginning of each year	$50,000
Useful life of machine	8 years
Day's incremental borrowing rate	15%
Implicit interest rate in lease (known by Day)	12%
Present value of an annuity of 1 in advance for 6 periods at 12%	4.61
Present value of an annuity of 1 in advance for 6 periods at 15 %	4.35

The lease is not renewable, and the machine reverts to Parr at the termination of the lease. The cost of the machine on Parr's accounting records is $375,500. At the beginning of the lease term, Day should record a lease liability of:

a. $375,500
b. $230,500
c. $217,500
d. $0

6. CPA-00411

On January 2, 1992, Nori Mining Co. (lessee) entered into a 5-year lease for drilling equipment. Nori accounted for the acquisition as a capital lease for $240,000, which includes a $10,000 bargain purchase option. At the end of the lease, Nori expects to exercise the bargain purchase option. Nori estimates that the equipment's fair value will be $20,000 at the end of its 8-year life. Nori regularly uses straight-line depreciation on similar equipment. For the year ended December 31, 1992, what amount should Nori recognize as depreciation expense on the leased asset?

a. $48,000
b. $46,000
c. $30,000
d. $27,500

7. CPA-00397

On January 2, 1995, Marx Co. as lessee signed a five-year noncancelable equipment lease with annual payments of $200,000 beginning December 31, 1995. Marx treated this transaction as a capital lease. The five lease payments have a present value of $758,000 at January 2, 1995, based on interest of 10%. What amount should Marx report as interest expense for the year ended December 31, 1995?

a. $0
b. $48,400
c. $55,800
d. $75,800

8. CPA-00439

Peg Co. leased equipment from Howe Corp. on July 1, 1988 for an eight-year period expiring June 30, 1996. Equal payments under the lease are $600,000 and are due on July 1 of each year. The first payment was made on July 1, 1988. The rate of interest contemplated by Peg and Howe is 10%. The cash selling price of the equipment is $3,520,000, and the cost of the equipment on Howe's accounting records is $2,800,000. The lease is appropriately recorded as a sales-type lease. What is the amount of profit on the sale and interest revenue that Howe should record for the year ended December 31, 1988?

	Profit on Sale	*Interest Revenue*
a.	$720,000	$176,000
b.	$720,000	$146,000
c.	$45,000	$176,000
d.	$45,000	$146,000

9. CPA-00417

The following information pertains to a sale and leaseback of equipment by Mega Co. on December 31, 1991:

Sales price	$400,000
Carrying amount	$300,000
Monthly lease payment	$ 3,250
Present value of lease payments	$ 36,900
Estimated remaining life	25 years
Lease term	1 year
Implicit rate	12%

What amount of deferred gain on the sale should Mega report at December 31, 1991?

a. $0
b. $36,900
c. $63,100
d. $100,000

10. CPA-00458

The market price of a bond issued at a premium is equal to the present value of its principal amount:

a. Only, at the stated interest rate.
b. And the present value of all future interest payments, at the stated interest rate.
c. Only, at the market (effective) interest rate.
d. And the present value of all future interest payments, at the market (effective) interest rate.

11. CPA-00460

On December 1, 1995, Money Co. gave Home Co. a $200,000, 11% loan. Money paid proceeds of $194,000 after the deduction of a $6,000 nonrefundable loan origination fee. Principal and interest are due in 60 monthly installments of $4,310, beginning January 1, 1996. The repayments yield an effective interest rate of 11% at a present value of $200,000 and 12.4% at a present value of $194,000. What amount of income from this loan should Money report in its 1995 income statement?

a. $0
b. $1,833
c. $2,005
d. $7,833

12. CPA-00470

On January 2, 1994, West Co. issued 9% bonds in the amount of $500,000, which mature on January 2, 2004. The bonds were issued for $469,500 to yield 10%. Interest is payable annually on December 31. West uses the interest method of amortizing bond discount. In its June 30, 1994, balance sheet, what amount should West report as bonds payable?

a. $469,500
b. $470,475
c. $471,025
d. $500,000

13. CPA-00463

On July 1, 1994, Eagle Corp. issued 600 of its 10%, $1,000 bonds at 99 plus accrued interest. The bonds are dated April 1, 1994 and mature on April 1, 2004. Interest is payable semiannually on April 1 and October 1. What amount did Eagle receive from the bond issuance?

a. $579,000
b. $594,000
c. $600,000
d. $609,000

14. CPA-00477

On January 31, 1992, Beau Corp. issued $300,000 maturity value, 12% bonds for $300,000 cash. The bonds are dated December 31, 1991, and mature on December 31, 2001. Interest will be paid semiannually on June 30 and December 31. What amount of accrued interest payable should Beau report in its September 30, 1992, balance sheet?

a. $27,000
b. $24,000
c. $18,000
d. $9,000

15. CPA-00493

On March 31, 1992, Ashley, Inc.'s bondholders exchanged their convertible bonds for common stock. The carrying amount of these bonds on Ashley's books was less than the market value but greater than the par value of the common stock issued. If Ashley used the book value method of accounting for the conversion, which of the following statements correctly states an effect of this conversion?

a. Stockholders' equity is increased.
b. Additional paid-in capital is decreased.
c. Retained earnings is increased.
d. An extraordinary loss is recognized.

16. CPA-00473

On December 31, 1993, Moss Co. issued $1,000,000 of 11% bonds at 109. Each $1,000 bond was issued with 50 detachable stock warrants, each of which entitled the bondholder to purchase one share of $5 par common stock for $25. Immediately after issuance, the market value of each warrant was $4. On December 31, 1993, what amount should Moss record as discount or premium on issuance of bonds?

a. $40,000 premium.
b. $90,000 premium.
c. $110,000 discount.
d. $200,000 discount.

17. CPA-00476

On March 1, 1987, Somar Co. issued 20-year bonds at a discount. By September 1, 1992, the bonds were quoted at 106 when Somar exercised its right to retire the bonds at 105. The amount is material and considered to be unusual in nature and infrequently occurring with respect to Somar Co. How should Somar report the bond retirement on its 1992 income statement?

a. A gain in continuing operations.
b. A loss in continuing operations.
c. An extraordinary gain.
d. An extraordinary loss.

18. CPA-00471

On July 31, 1993, Dome Co. issued $1,000,000 of 10%, 15-year bonds at par and (as a typical risk-management strategy to Dome Co.) used a portion of the proceeds to call its 600 outstanding 11%, $1,000 face value bonds, due on July 31, 2003, at 102. On that date, unamortized bond premium relating to the 11% bonds was $65,000. In its 1993 income statement, what amount should Dome report as gain or loss from retirement of bonds?

a. $53,000 gain.
b. $0
c. $(65,000) loss.
d. $(77,000) loss.

19. CPA-00532

The following information pertains to the transfer of real estate pursuant to a troubled debt restructuring (considered to be an extraordinary event for Knob Co.) by Knob Co. to Mene Corp. in full liquidation of Knob's liability to Mene:

Carrying amount of liability liquidated	$150,000
Carrying amount of real estate transferred	100,000
Fair value of real estate transferred	90,000

What amount should Knob report as ordinary gain (loss) on transfer of real estate?

a. ($10,000)
b. $0
c. $50,000
d. $60,000

20. CPA-00528

The following information pertains to the transfer of real estate pursuant to a troubled debt restructuring (considered to be an extraordinary event for Knob Co.) by Knob Co. to Mene Corp. in full liquidation of Knob's liability to Mene:

Carrying amount of liability liquidated	$150,000
Carrying amount of real estate transferred	100,000
Fair value of real estate transferred	90,000

What amount should Knob report as a pretax extraordinary gain (loss) on restructuring of payables?

a. ($10,000)
b. $0
c. $50,000
d. $60,000