Accounting for Leases

I. Lease Accounting

a. Synthetic leases are not included within the financial statements
    i. Ex bank of America sets up a specia purpose entity that builds and then leases the plant to Krispy Kremes
b. Lessor and lessee compose a lease agreement.
c. Who are the lessors that own this property?
    i. Banks
        1. Low cost funds that allow them to purchase items at a lower cost than their competitors.
    ii. Captive leasing companies
        1. Primarily provide leasing functions as subsidiaries for the parent company.
        2. Point of sale advantage, and knowledge of the parent company's product line
    iii. Independence.
        1. Innovative contracts for leases

d. Advantages of Leasing
    i. 100% financing at fixed rates.
        1. No money down
        2. Fixed rates protect against inflation and price fluxes
    ii. Protection against obsolescence
        1. Protects against obsolescence and passes on the residual value to the lessor.
        2. Also, can trade in an old computer in for a new one, and the lessor may add additional value to the original lease
    iii. Flexibility
        1. Short period of time to the entire span of the economic asset.
        2. Rental payments may be level or they may change from year to year
    iv. Less costly financing
        1. Leasing provides tax deductions
    v. Tax advantages
        1. Companies can capitalize and lease the asset.
    vi. Off balance sheet financing.
        1. Don't affect financing or add debt. They do not affect financial ratio's
        2. They ultimately add borrowing capacity.

e. Conceptual Nature of a Lease
    i. Comparison of a 10 year note vs a 10 year lease results in the question as to whether there is a capitalization of a lease and asset as there is for a year note.
    ii. Generally, capitalization of a lease that transfers all the risks and benefits of ownership provided the lease is noncancelable.
        1. Benefits and risks of transfer are completely identified
        2. The lessor and lessee have the same risks applied
        3. Those that do not transfer benefits and risks are **operating leases**.

iii. **Noncancellable** means that the possibility of cancelling is minimal, relies on a contingency or is extremely costly to the entity that leases the item.

iv. Various views of capitalization of leases

1. **No capitalization** – lease is an executory contract with performance obligations that must be met.
    a. In the example, delta would be considered as not actually owning the plane.
2. **Capitalize leases that are similar to installment** –
    a. Should report the asset at their economic substance.
    b. Companies that are involved with the capitalization of purchases leads to the capitalization of leases
    c. Lessees make rental payments whereas owners make mortgage payments
3. **Capitalize all long-term leases**
    a. Just long-term leases are capitalized.
4. **Capitalization** of **leases** where the result of nonperformance is substantial.
    a. Capitalization occurs with only firm noncancelable leases
    b. Unlikely to avoid performance without severe penalty.

II. Accounting by the Lessee

a. Lessee capitalizes a lease and the asset and liabilities is equal to the present value of all the future cash flows.

b. Lessee
    i. Leased equipment
        1. Lease liability

c. Lessor
    i. Lease receivable
        1. Equipment

d. Capitalization Criteria – **<u>Capital Leases</u>**
    i. Lease transfers ownership to the lessee
    ii. Bargain purchase option-
    iii. 90% of the fair value estimate-present value of minimum lease payments involves three values
        1. Executory costs – insurance, maintenance and tax assets
            a. These are excluded in the calculation of the present value of the cash flows representing the value of the lease.
            b. Generally the executory costs are paid directly and thus rental payments are designated without adjustment.
        2. Minimum lease payments
        3. Discount rates
            a. Present value of the minimal lease payments using the incremental borrowing rate.
            b.

iv. Minimum lease payments in connection with leased property

1. Minimum rental payments
2. Guaranteed residual value-
    a. The amount applied towards purchase at the end of a lease
    b. The amount applied towards returns that is guaranteed
3. Penalty for failure to renew or extend a lease
4. Bargain-purchase option

v. 75% of the present value of future estimate of the economic life of the property

1. If the fair value of the capital lease is less than 90% then it is a
2. Lease term is the fixed noncancelable term of the lease
3. Bargain renewal option allows renewal at a pricing lower than the typical rental fair value at the date the option becomes exercisable.
4. If the lease starts at the last 25% of its life then it cannot be capitalized as a lease.

vi. Recovery of Investment Test(90% Test)

1. If the present value of the leased asset equates to 90% of the fair value of the lease then you should capitalize the asset.
    a. Determining the present value requires minimum payments, executory, discount rate.

vii. Minimum Lease Payments

1. Minimum rental payments equate to the lease payments
2. **Guaranteed residual value** is the certain or determinable amount that will be paid at the end of the lease term
    a. The unguaranteed residual value is the amount exclusive of any portion guaranteed.
3. The amount that is guaranteed to the lessor upon return of the asset
4. **Penalty for failure to renew or extend a lease.**
5. **Bargain-purchase option**
    a. An option to purchase at the end of the lease that is significantly below the fair value, so purchase is guaranteed.

viii. **Executory costs** – insurance, maintenance, tax expenses

1. It excludes a portion of the present value of the lease that represents the executory costs.
2. Lesee pays executory costs to third parties which represents payments without adjustment.

ix. **Discount rate**- present value of lease payments using the minimum incremental borrowing rates. The incremental borrowing rates represent the amount necessary to pay back a loan with specific interest rates.

1. If the implicit rate is less than the discount rate, then the implicit rate is used.
    a. When applied it ultimately causes the present value of lease payments with unguaranteed payments to equal the fair value of the property leased to the lessor.

2. The implicit rate is a more realistic rate to use in calculating a asset and a reported liability.
3. Using extremely high borrowing discount rates, would cause the present value of the payments to be less than 90% of the fair value.
    a. Use of such rate would guarantee the capitalization of the asset and liability.
    b. It cannot use a low discount rate because that would mean capitalization is higher than its fair value.

III. Asset and Liability Accounted for Differently

a. Leases are utilized as a source of financing as payments are made as installments. Rental payments to IFLC constitute principal interest.
    i. **Asset and Liability recorded** – purchases a lease and as a result creates an asset and liability. It uses the lower of the present value of the lease payments or the fair value of the leased asset.
    ii. **Depreciation period** – If there is transfer or ownership or the bargain purchase option then there is normal consideration of the leased asset, then depreciation is conducted using the economic life of the asset. Conversely, if not, then the amount of years the asset is leased is used.
    iii. **Effective interest method –** Effective interest method to allocate between interest and payments.
    iv. Depreciation concept
        1. Depreciation and discharge are independent processes

IV. Capital Lease Method(Leasee)
    i. Terms and provisions of the lease agreement and other pertinent data are as follows:
        1. The term of the lease agreement is five years. The lease agreement is noncancellable, requiring equal rental payments of
        2. The loader has a fair value at the inception of the lease of the lease 100,000, an estimated economic life of five years, and no residual value.
        3. Sterling pays all of the executory costs except property taxes of 2000 per year.
        4. The lease no renewal options.
        5. Sterling's incremental borrowing rate is 11 percent per year.
        6. Sterling depreciates on a straight line basis.
        7. The annual rate of return is set at 11% interest.
    ii. Satisifies 75% test, the lease is 5 years and the and the economic life is 5 years.
    iii. The 90% rate is exceeded because the present value of the lease payments is 100,000
    iv. Capitalized amount = (25,981.62-2,000) X Present value of annuity due for 1 of 5 payments at 10% = 23,981.62 x 4.16986 = 100,000
        1. Leased equipment 100,000
            a. Lease Liability 100,000
    v. The gross amounts of (23981.62 X 5) = 119,908.10
    vi.

vii. Property tax expense 2,000
viii. Lease liability 23,981.62
a. Cash 25,981.62
ix. **Each lease payment of 25,981.62 consists of 3 elements**: 1-Executory costs, 2-financing costs 3- reduction of the lease liability.

b. **Lease Amortization Schedule**

Date	Annual lease payment	Executory Costs	Interest on Liability	Reduction of lease liability	Lease Liability
1/1/12					100,000
1/1/12	25,981.62	2000	0	23981.62	76,018.38
1/1/13	25,981.62	2000	7601.84	16,379.78	59,638.60

c. Accrued Interest
i. Interest expense: 7,601.84
1. Interest payable7,601.84
ii. Depreciation expense(capital leases) 20,000
1. Accumulated Depreciation-capital leases 20,000

Interest payable	Current	7601.84
Lease liability	Current	16379.78
Lease Liability	Noncurrent	59,638.60

d. Sterling records the lease liability of January 1, 2013
i. Property tax expense 2,000
ii. Interest payable 7601.84
iii. Lease Liability 16379.78
a. Cash 25,981.62

e. After expiration of the lease, the accumulated depreciation is removed from the lease
i. Equipment(100000+5000) 105,000
ii. Accumulated depreciation 100,000
1. Leased equipment(under capital leases) 100,000
2. Accumulated depreciation 100,000
3. Cash 5,000

f. Operating Method(Lessee)
i. The lessee assigns rent to the periods benefiting from the use of the asset and ignores, in the accounting any commitments to make future payments.
1. Rent expense 25981.62
a. Cash 25981.62

2. Sterling must disclose all operating leases that have noncancellable leases in excess of a year

V. Comparison of Capital Lease with Operating Lease

a. Charges for capital leases and operating leases are the same. However, capital leases have charges that are higher for earlier years then for later years.

b.

Year	Depreciation	Executory costs	Interest	Total Charge	Operating Lease Charge	Difference
2012	20,000	2,000	7601.84	29601.84	25981.61	3620.22
2013	20,000	2,000	5963.86	27963.86	25,981.62	1982.24

c. An accelerated method of depreciation will accelerate depreciation even more in the earlier than the later years.

d. In addition, an asset and liability of 100,000 would be on the balance sheet using the capital lease approach.

e. The following differences occur using a capital lease versus an operating lease

i. Increase in amount of total debt

ii. Increase in the amount of assets

iii. Lower amount of income earlier and as a result a lower retained earnings later.

f. **Disadvantages**: violation of loan covenants, lower rates of return and affect debt to equity ratio's, amount of compensation received by owners.

VI. Accounting By The Lessor

a. **Interest revenue** – Leasing is a form of financing

b. **Tax incentives** – cannot utilize the tax benefits of the asset but allow you to transfer the benefits

c. **High residual value** – Return of the property at the end of the lease. Residual values can produce very large profits.

VII. Economics of Leasing

a. Determines the amount of rental/rate of return, the implicit rate.

Fair value of leased equipment	100,000
Less: Present value of the residual value	0
Amount to be recovered by lessor through lease payments	100,000
Five beginning of the year lease payments to yield a 10% return	23981.62

b. The three types of leases: Operating, **direct financing, sales type**

c. Groups 1(1,2,3, and 4) and 2(1 and 2) result in direct finance and sales type leases

Group I
1. The lease transfers ownership of the property to the lease.
2. The lease contains a bargain purchase option
3. The lease term is equal to 75 percent or more of the estimated economic life of the leased property.

Group II
4. Collectibility of the payments required from the lesee is reasonably predictable
5. No important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor under the lease(lessors's performance is substantially complete or future costs are reasonably predictable)

d. Group II wants to make sure that ownership is transferred.
    i. If collectability is in question then it will be treated as an operating lease.
e. The distinction between **direct finance lease** or a **sales contract lease** is the presence of a manufacturer's or dealer's profit or loss, which belongs to a sales-type lease.
f. The difference between the **FV of the leased property at the inception of the lease** and **the cost or carrying value of the lease**.
g. Lessors classify all of those that aren't direct financing and sales contract as operating leases.

VIII. Direct Financing Method(Lessor)

a. In substance the financing of an asset purchase by lease with financial institutions.
b. Record a lease receivable instead of a leased asset
c. The minimum lease payments include:
    i. **Rental payments**(excluding executory costs)
    ii. Bargain purchase option
    iii. Guaranteed residual value
    iv. Penalty for failure to renew
d. We repeat the information relevant to accounting for lease transaction
    i. The term of the lease is five years beginning January 1, 2012 noncancelable, and requires equal rental payments. Payments include executory costs.
    ii. The equipment has a cost of 100,000 to Caterpillar, a fair value at the inception of the lease of 100,000, economic life of 5 years and no residual value.
    iii. Caterpillar incurred no initial direct costs in negotiating and closing the lease transaction
    iv. The lease contains no renewal options

v. Collectability is reasonably assured and Caterpillar incurs no additional costs
vi. Caterpillar sets the annual lease payments to ensure a rate of return of 10 percent.

Fair value of leased equipment	100,000
Less present value of residual value	**0**
Amount to be recovered by lessor through lease payments	**100,0000**
Five beginning of the year lease payments to yield a 10% return(100,000/4.16986)	**23,981.62**

vii. The lease meets the criteria for direct financing lease for several reasons:
   1. Present value of the sums are **equal to 75% of the estimated economic life.**
   2. Minimum of the lease payments exceeds **90 percent of the equipment's fair value.**
   3. Collectability of the payments is **reasonably assured.**
   4. Caterpillar incurs no further costs.

viii. Lease receivable(25981.62 – 2000)*present value of annuity due of 1 for 5 periods at 10%
   1. Lease receivable 100,000
      a. Equipment 100,000

ix. Companies invest in leases account on the balance sheet as "Net investments in capital leases"
x. Companies classify it as current or noncurrent.
xi. Lease receivable 100,000
   1. Equipment 100,000

Date	Annual Lease Payment	Executory Costs	Interest(10%) on Lease Receivable	Lease receivable recovery	Lease receivable
1/1/12					100,000
1/1/12	25,981.62	2,000	0	23981.62	76018.36
1/1/13	25,981.62	2000	7601.84	16,379.76	59,638.60
1/1/14					
1/1/15					
1/1/16					

xii. Lease 25,981.62

i. Lease Receivable 23981.62
ii. Property tax expense 2,000

xiii. Interest receivable 7601.84
a. Interest revenue 7601.84

Current Assets	
Interest Receivable	7,601.84
Lease receivable	16,379.76
Noncurrent Assets(Investments)	
Lease Receivables	59,638.60

xiv. Cash 5000
1. Gain on Sale of Leased Equipment 5000

xv. Operating Method(Lessor)
1. In the operating method, the lessor records each rental receipt as rental revenue
2. It depreciates a leased asset in a normal manner, with the depreciation expense match with revenue
3. Maintenance in addition to depreciation is charged regarding
4. Amortization of finders, appraisers and cost of credit checks.
   a. Cash 25,981.62
      i. Rent 25,981.62
5. Records depreciation
   a. Depreciation expense 20,000
      i. Accumulated depreciation 20,000
6. Separately classifies **leased equipment** and accompany **accumulated depreciation.**

IX. Special Accounting Problems

a. Features of lease arrangements that cause unique accounting problems are:
- **i.** Residual values
- **ii.** Sales-type leases(lessor)
- **iii.** Bargain-purchase options
- **iv.** Initial direct costs
- **v.** Current versus nonclassification
- **vi.** Disclosure

b. Residual Values
- **i.** **Residual value** is the amount of the leased asset at the amount of the lease.
- **ii.** **Title does not pass to the lessee** and a **bargain purchase** does not exist- there is retention of the physical asset at the end of the lease term.

c. **Guaranteed vs Unguaranteed**
   i. The **lessee** agrees to make up any deficiency below a stated amount that the **lessor** realizes in residual value at the end of the lease term.
   ii. Stated amount is **guaranteed residual value.**

d. **Lease Payments**
   i. **Guaranteed residual value** has the highest chance of realization than an **unguaranteed residual value.**
   ii. **Adjustments to lease payments** because of a higher chance of recovery.

Fair value of leased asset	100,000
Less: Present value of residual value(5000x.62092)	3,104.6
Amount to be recovered by lessor through lease payments	96,895.40
Five periodic lease payments(96,895.40/4.16986)	23,237.09

   iii. **Lessee Accounting with Residual**
      1. Guaranteed and unguaranteed has both economic and accounting consequence to the lessee.
      2. The accounting consequence for the minimum lease payments is that the guaranteed payments are included and the unguaranteed are excluded.
      3. Guaranteed affects the lease and lease obligation
      4. Additional lease payment will equate to property, cash or both at the end of the lease period.

Present value of five annual rental payments(23,237.09 x 4.16986)	**96895.40**
Present value of guaranteed residual value of 5,000	**3,104.60**
Lesee's capitalized amount	**100,000**

Date	**Lease payment GRV**	**Executory Costs**	**Interest on liability**	**Reduction of lease liability**	**Lease liability**
1/1/12					**100,000**
1/1/12	**25,237.09**	**2000**		**23,237.09**	**76,762.91**

1/1/13	**25,237.09**	**2000**	**7676.29**	**15,560.18**	**61,202.11**
1/1/14	**25237.09**	**2000**	**6120.21**	**17116.88**	**44,085.23**
1/1/15	**25237.09**	**2000**	**4408.52**	**18828.57**	**25256.66**
12/31/16	**5000**	**0**	**454.76**	**4545.24**	**0**

e. The depreciation expense each year is 19,000((100,000-5,000)/5

Leased equipment(under capital leases)	**100,000**	**Interest payable**	**454.76**
Less: accumulated depreciation – capital leases	**95,000**	**Lease liability**	**4,545.24**
total	**5,000**		**5,000**

f. Journal entry

1. **Loss on capital lease 2,000**
2. **Interest expense(or IP) 454.76**
3. **Lease liability 4545.24**
4. **Accumulated Deprec 95,000**
   a. **Leased 100,000**
   b. **Cash 2,000**

g. Unguaranteed residual value(lease accounting)

i. An **unguaranteed residual value** is the same as no residual value in terms of its effect upon the lessee's method of computing the minimum lease payments and the capitalization of the leased asset and liability.

ii. **Capitalized Amount**

Present value of 5 annual rental payments of 23,237.09 X 4.16986	**96,895**
Unguaranteed residual value of 5,000(not capitalized by lessee)	**0**
Lessee's capitalized amount	**96,895**

Date	Annual Lease payments(a)	Executory costs(b)	Interest on liability(10%)©	Reduction of lease liability(d)	Lease liability(e)
1/1/12					96,895.40
1/1/12	25,237.09	2000	0	23,237.09	73,658.31
1/1/13	25,237.09	2000	7365.83	15,871.26	57,787.05
1/1/14	25,237.09	2000	5778.71	17458.38	40,328.67
1/1/15	25,237.09	2000	4,032.87	19,204.22	21,124.45
1/1/16	25,237.09	2000	2,112.64	21,124.45	0

h. Lesee Entries Involving Residual Values

	Guaranteed Residual Value		Unguaranteed Residual Value		
		Capitalization of Lease			
Leased Equipment	100,000		Leased Equipment	96895.40	
Lease liability		100,000		Lease liability	96895.40
Property tax expense	2000		Property tax expense	2000	
Lease liability	23,237.09		Lease liability	23,237.09	
Cash		25,237.09	Cash		25,237.09
Interest expense	7,676.29		Interest expense	7,365.83	
Interest payable		7,676.29	Interest payable		7,365.83
Depreciation expense	19,000		Depreciation expense	19,379.08	

Accumulated depreciation		19,000	Accumulated expense		19,379.08
Property Tax expense	2,000		Property Tax expense	2,000	
Lease liability	15,560.08		Lease Liability	15,871.26	
Interest expense	7676.29		Interest expense	7365.83	
Cash		25,237.09	Cash		25,237.09

i. Lessor Accounting for residual Value
    1. The assumption is made that the residual value will be collected at the end of the lease term whether guaranteed or unguaranteed.

Fair value of equipment	100,000
Less: Present value of residual value(5000x.62092)	3,104.60
Amount to be recovered by lessor through lease payments	96,895.40
Five beginning of the year lease payments to yield a 10% return(96895.40/4.16986)	23,237.09

ii. The amortization schedule is the same:

Date	Annual Lease payments(a)	Executory costs(b)	Interest on liability(10%)©	Lease receivable recovery	Lease liability(e)
					100,000
1/1/12	25,237.09	2000	0	23,237.09	76,762.91
1/1/13	25,237.09	2000	7676.29	15560.80	61,202.11
1/1/14	25,237.09	2000	6120.21	17116.88	44085.23

1/1/15	25,237.09	2000	4408.52	18828.57	25256.66
1/1/16	25,237.09	2000	2525.67	20,711.42	4,545.24
12/31/16	5000		454.76	4,545.24	0
	131185.45	10,000	21,185.45	100,000	

iii. Entries for Either Guaranteed or Unguaranteed Residual Value
   1. Lease equipment 100,000
      a. Equipment 100,000
   2. Cash 25,237.09
      a. Lease receivable 23,237.09
      b. Property tax expense/payable 2,000
   3. Interest receivable 7,676.29
      a. Interest revenue 7,676.29

iv. Sales Type Leases(lessor)
   1. Difference between a direct-financing lease and sales type lease is a manufacturer or dealer's gross profit.
   2. Direct financing lease
      a. Equals fair value□cost of asset□interest revenue□total payments(interest and principal)
   3. Sales type lease
      a. Does not equal fair value□cost of asset□gross profit□sales price of asset□interest revenue□total payments(interest and principal)
      b. Lease receivable – present value of the minimum lease payments plus the present value of any unguaranteed residual value. The lease receivable therefore includes the present value of the residual value, whether guaranteed or not.
      c. Sales price of the asset – the present value of the minimum lease payments
      d. Cost of goods sold – cost of the asset to the lessor, less the present value of any unguaranteed value.
      e. Gross profit on residual value is the same whether guaranteed or unguaranteed residual value.
         i. Sales and cost of goods sold is recognized for the realized part.

	Sales type lease	
	Guaranteed Residual Value	Unguaranteed Residual Value

Lease receivable	[23237.09x4.16986+5,000x.62092]	Same
Sales price of an asset	100,000	100,000-3,104.60=96,895.40
COGS	85000	85000-3,104.60= 81,895.40
Gross Profit	100,000-85,000= 15,000	96895.40-81895.40= 15,000

f. The difference between the two is that the sales revenue and costs of goods sold amounts are different.

g. Deduction of the present value of the unguaranteed residual value from the sales revenue and cost of goods sold for 2 reasons :

   i. The criteria for revenue recognition have not been met

   ii. It is improper to match expense against revenue not yet recognized.

      1. Because of the uncertainty surrounding the realization of unguaranteed residual value.

Guaranteed Residual Value				Unguaranteed Residual value	
Cost of goods sold	85000		Costs of goods sold	81,895.40	
Lease receivable	100,000		Lease receivables	100,000	
Sales revenue		100,000		Sales revenues	96895.40
Inventory		85,000		Inventory	85,000
Cash	25,237.09		Cash	25,237	
Lease receivables		23,237.09		Lease receivables	23,237
Property tax exp./pau		2000		Property tax exp/pay	2000

Interest receivable	**7676.29**		**Interest receivable**	**7676.29**	
Interest revenue		**7676.29**		**Interest revenue**	**7676.29**
Cash	**25,237.09**		**Cash**	**25,237.09**	
	Interest receivable	**7676.29**		**Interest receivable**	**7676.29**
	Lease receivable	**15560.80**		**Lease receivable**	**15560.80**
	Property tax exp/pay	**2000**		**Property/tax exp**	**2000**
Interest receivable	**6120.21**		**Interest receivable**	**6120.21**	
	Interest revenue	**6120.21**		**Interest revenue**	**6120.21**
Inventory	**3000**		**Inventory**	**3000**	
Cash	**2000**		**Loss on capital leases**	**2000**	
	Lease receivable	**5000**		**Lease receivable**	**5000**

X. Bargain Purchase Option

- **a. The lessee must increase the present value of the minimum lease payments by parent value of the option price.**
- **b. Difference between the fair value and the option price creates a bargain purchase option**

XI. Initial direct Costs – do not include internal indirect costs, advertising, servicing leasing, and credit analysis.(supervision or administration for rent and depreciation)

- **a. Incremental**
    - **i. Paid to third parties for originating the lease**

   ii. **Independent apprasers collateral used to secure the lease, outside credit check of the lease, broker's fee for finding the lease**

b. **Internal direct costs**
   i. **Specified activities performed by the lessor**
   ii. **Financial connection, guarantees, collateral, and other security arrangements negotiating lease terms, preparing and processing lease documents, and closing the document.**
c. **Operating leases require deferral of initial direct costs and allocation in proportion of to the recognition of rental revenue**
d. **Sales type – lesser expenses the indirect costs in the period when it recognizes the profit on sale.**
e. **Direct sales – adds the initial direct costs and then amortizes them over the life of the lease.**