Analyzing Financing Activities

3

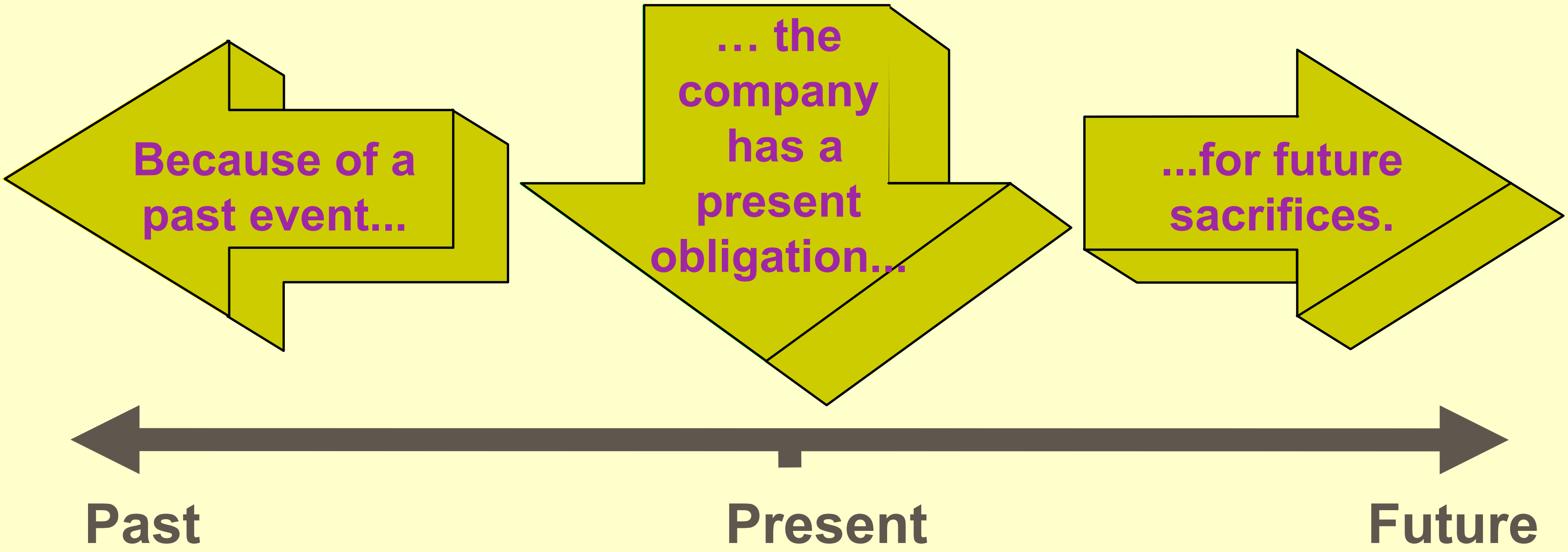
CHAPTER

McGraw-Hill/Irwin

Liabilities

Definition

A liability is a probable future payment of assets or services that a company is presently obligated to make as a result of past transactions or events.



Liabilities

Classification

Current (short-term) Liabilities

Obligations whose settlement requires use of current assets or the incurrence of another current liability within one year or the operating cycle, whichever is longer.

Noncurrent (Long-Term) Liabilities

Obligations not payable within one year or the operating cycle, whichever is longer.

Liabilities

Alternative Classification

Operating Liabilities

Obligations that arise from operating activities--examples are accounts payable, unearned revenue, advance payments, taxes payable, postretirement liabilities, and other accruals of operating expenses

Financing Liabilities

Obligations that arise from financing activities--examples are short- and long-term debt, bonds, notes, leases, and the current portion of long-term debt

Liabilities

Disclosures for Current (Financing) Liabilities

- Compensating balance arrangements, including those not required by law
- Balance sheet segregation of (1) legally restricted compensating balances and (2) unrestricted compensating balances related to long-term borrowing arrangements if balances are computable at a fixed amount

Liabilities

Disclosures for Current (Financing) Liabilities

- Short-term bank and commercial paper borrowings, including:
  - Commercial paper borrowings separately listed in balance sheet
  - Weighted-average interest rate and terms separately stated for short-term bank and commercial paper borrowings
  - Weighted-average interest rate, average outstanding borrowings, and maximum month-end outstanding borrowings for short-term bank debt and commercial paper combined for the period
- Disclosure of amounts and terms of unused lines of credit for short-term borrowing arrangements (with amounts supporting commercial paper separately stated) and of unused commitments for long-term financing arrangements

Liabilities

Accounting-Based Liability Restrictions (Covenants)

Aim: Safeguard creditors' investments

Common restrictions include:

- Dividend distribution restrictions
- Working capital restrictions
- Debt-to-equity ratio restrictions
- Seniority of asset claim restrictions
- Acquisition and divestment restrictions
- Liability issuance restrictions

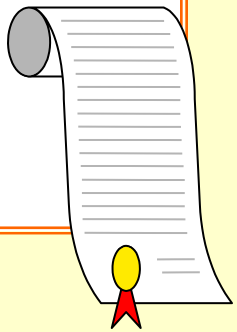
Potential information sources: Liability prospectus, annual report, SEC filings, and creditor information services (e.g., *Moody's*)

Leases

Leasing Facts

Lease – contractual agreement between a lessor (owner) and a lessee (user or renter) that gives the lessee the right to use an asset owned by the lessor for the lease term

MLP – minimum lease payments (MLP) of the lessee to the lessor according to the lease contract



Leases

Lease Accounting and Reporting

(1) *Capital Lease Accounting* For leases that transfer substantially all benefits and risks of ownership—accounted for as an asset acquisition and a liability incurrence by the lessee, and as a sale and financing transaction by the lessor

A lessee classifies and accounts for a lease as a capital lease if, at its inception, the lease meets *any* of four criteria:

(i) lease transfers ownership of property to lessee by end of the lease term

(ii) lease contains an option to purchase the property at a bargain price

(iii) lease term is 75% or more of estimated economic life of the property

(iv) present value of rentals and other minimum lease payments at beginning of lease term is 90% or more of the fair value of leased property less any related investment tax credit retained by lessor

(2) *Operating Lease Accounting* For leases other than capital leases—the lessee (lessor) accounts for the minimum lease payment as a rental expense (income)

Leases

Lease Disclosure and Off-Balance-Sheet Financing

Lease Disclosure

Lessee must disclose: (1) future MLPs separately for capital leases and operating leases — for each of five succeeding years and the total amount thereafter, and (2) rental expense for each period an income statement is reported

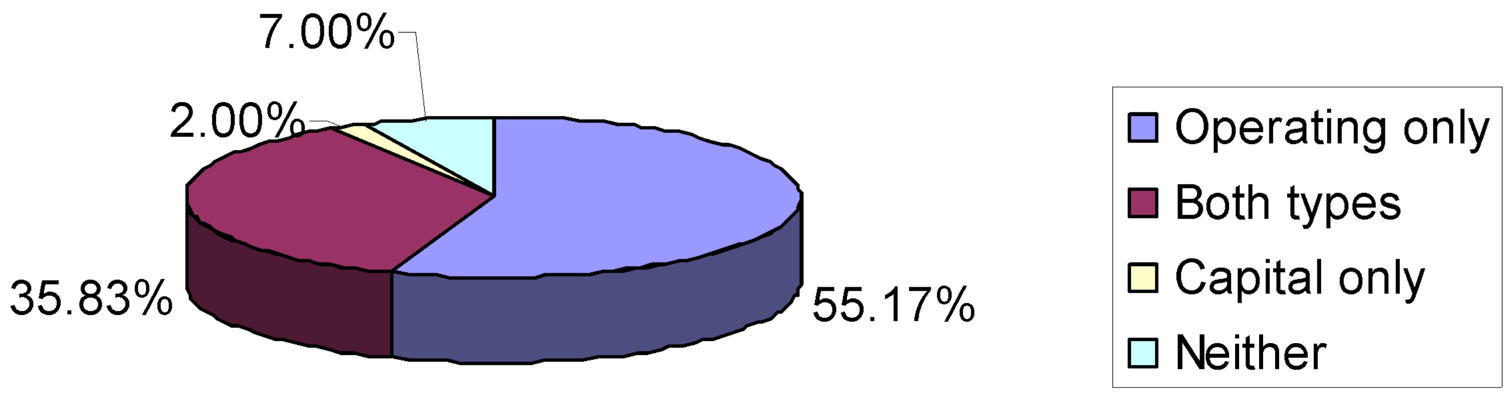
Off-Balance-Sheet Financing

Off-Balance-Sheet financing is when a lessee structures a lease so it is accounted for as an operating lease when the economic characteristics of the lease are more in line with a capital lease—neither the leased asset nor its corresponding liability are recorded on the balance sheet

Leases

Frequency of Capital and Operating Leases

Frequencies of Different Lease Types - Lessee



Leases

Accounting for Leases – An Illustration

Lease Facts

- A company leases an asset on January 1, 2000 -- it has no other assets or liabilities
- Estimated economic life of leased asset is 5 years with no salvage value -- company will depreciate the asset on a straight-line basis over its life
- Lease has a fixed non-cancelable term of 5 years with annual MLPs of $2,505 paid at the end of each year
- Interest rate on the lease is 8% per year

Leases

Accounting for Leases – Illustration (continued)

Lease Amortization Schedule

Year	Beg. Year Liability	Interest and Principal Components of MLP			Year-end Liability
		Interest	Principal	Total	
2000	$10,000	$ 800	$ 1,705	$ 2,505	$8,295
2001	8,295	664	1,841	2,505	6,454
2002	6,454	517	1,988	2,505	4,466
2003	4,466	358	2,147	2,505	2,319
2004	2,319	186	2,319	2,505	0
Totals		$2,525	$10,000	$12,525	

Straight-line depreciation

$2,000 per year ([$10,000 - $0]/5 years)

Leases

Accounting for Leases – Illustration (continued)

Income Statement Effects of Alternative Lease Accounting

	Operating Lease	Capital Lease		
Year	Rent Expense	Interest Expense	Depreciation Expense	Total Expense
2000	$ 2,505	$ 800	$ 2,000	$ 2,800
2001	2,505	664	2,000	2,664
2002	2,505	517	2,000	2,517
2003	2,505	358	2,000	2,358
2004	2,505	186	2,000	2,186
Total	$ 12,525	$ 2,525	$ 10,000	$ 12,525

Leases

Accounting for Leases – Illustration (continued)

Balance Sheet Effects of Capitalized Leases

Date	Cash	Leased Asset	Lease Liability	Equity
1/1/2000	0	$ 10,000	$ 10,000	$ -
12/31/2000	(2,505)	8,000	8,295	(2,800)
12/31/2001	(5,010)	6,000	6,454	(5,464)
12/31/2002	(7,515)	4,000	4,466	(7,981)
12/31/2003	(10,020)	2,000	2,319	(10,339)
12/31/2004	(12,525)	0	0	(12,525)

Leases

Effects of Lease Accounting

Impact of Operating Lease when Capital Lease is Apt:

- Operating lease understates liabilities—improves solvency ratios such as debt to equity
- Operating lease understates assets—can improve return on investment ratios
- Operating lease delays expense recognition—overstates income in early term of the lease and understates income later in lease term
- Operating lease understates current liabilities by ignoring current portion of lease principal payment—inflates current ratio & other liquidity measures
- Operating lease includes interest with lease rental (an operating expense)—understates both operating income and interest expense, inflates interest coverage ratios, understates operating cash flow, & overstates financing cash flow

Leases

Converting Operating Leases to Capital Leases

Determining the Present Value of Projected Operating Lease Payments and Lease Amortization

Year	Payment	Discount Factor	Present Value	Interest	Lease Obligation	Lease Balance
2001						$ 2,381
2002	$ 388	$ 0.917	$ 356	$ 214	$ 174	2,207
2003	377	0.842	317	199	178	2,029
2004	346	0.772	267	183	163	1,866
2005	315	0.708	223	168	147	1,719
2006	289	0.650	188	155	134	1,585
2007	289	0.596	172	143	146	1,438
2008	289	0.547	158	129	160	1,279
2009	289	0.502	145	115	174	1,105
2010	289	0.460	133	99	190	915
2011	289	0.422	122	82	207	708
2012	289	0.388	112	64	225	483
2013	289	0.356	103	43	246	238
2014	259	0.326	84	21	238	0
Total	3997		2381			

Leases

Restated Financial Statements after Converting Operating Leases to Capital Leases—Best Buy 2001

Income Statement	Before	After		Before	After
Sales	$ 15,327	$ 15,327			
Operating Expenses	14,723	14,518			
Operating income before interest and taxes	604	809			
Interest Expense (income)	(37)	177			
Income Taxes	246	243			
Net Income	$ 395	$ 389			
Balance Sheet	**Before**	**After**		**Before**	**After**
Current assets	$ 2,929	$ 2,929	Current liabilities	$ 2,715	$ 2,889
Fixed assets	1,911	4,292	Long-term liabilities	303	2,510
			Stockholders' equity	1,822	1,822
Total assets	4,840	7,221	Total liabilities and equity	4,840	7,221

Leases

Effect of Converting Operating Leases to Capital Leases on Key Ratios-Best Buy 2001

Financial Ratio	Before	After
Current Ratio	1.08	1.01
Total Debt to equity	1.66	2.96
Long-term debt to equity	0.17	1.38
Return on common equity	21.7%	21.4%
Return on assets	8.16%	5.39%
Times interest earned	n.a.	4.57

Postretirement Benefits

Postretirement Benefits Facts

Defined -- Employer-provided benefit(s) to employees after retirement

Two kinds of Postretirement Benefits

Pension benefits -- Employer-provided monetary pension benefits to employees after retirement, e.g., monthly stipend until death

Other Postretirement Employee Benefits (OPEB) -- Employer-provided non-pension (usually nonmonetary) benefits after retirement, e.g., health care and life insurance

Postretirement Benefits

Pension Basics

Pension Plan – agreement with employer to provide pension benefits involving 3entities: employer-who contributes to the plan; employee-who derives benefits; and pension fund

Pension Fund Assets – account administered by a trustee, independent of employer, entrusted with responsibility of receiving contributions, investing them in a proper manner, & disbursing pension benefits to employees

Vesting – specifies employee's right to pension benefits regardless of whether employee remains with the company or not; usually conferred after employee serves some minimum period with the employer

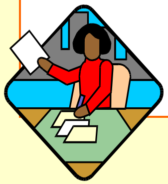
Pension Plan Categories

Defined benefit – a plan specifying amount of pension *benefits* that employers promise to provide retirees; *employer* bears risk of pension fund performance

Defined contribution – a plan specifying amount of pension *contributions* that employers make to the pension plan; *employee* bears risk of pension fund performance

Focus of Pension Analysis

Defined benefit plans constitutes the major share of pension plans and are the focus of analysis given their implications to future company performance and financial position



Postretirement Benefits

Elements of the Pension Process

Employer

Contributions

Pension Fund

Benefits (Disbursements)

Employee

Investment

Postretirement Benefits

Illustration of Pension Accumulation and Disbursement for a Defined Benefits Plan

Annual payments into the fund required to accumulate to $134,200 in 15 years with a discount rate of 8% per annum

Funds required at employees' retirement:
Present value of 10 payments of $20,000 per annum with a discount rate of 8% per annum

Annual benefits of $20,000 paid to employee for 10 years

Contributions = $4,942 per annum

$134,200

Benefits = $20,000 per annum

15 years

10 years

Preretirement

Retirement

Postretirement

Postretirement Benefits

Three Alternative Definitions of Pension Obligation

Accumulated benefit obligation (ABO) – actuarial present value of pension benefits payable to employees at retirement based on their current compensation and service to-date

Project benefit obligation (PBO) – actuarial estimate of future pension benefits payable to employees on retirement based on expected future compensation and service to-date

Vested benefit obligation (VBO) – actuarial estimate of future pension benefits payable to employees at retirement based on current compensation & benefits vested to employees

Relation between Plan Assets and Funded Status

Funded Status – Difference between the value of the plan assets and the PBO

Note: Plan is *overfunded* (*underfunded*) when value of plan assets exceeds (is less than) PBO

Net Economic Position – PBO less the value of the plan assets

Postretirement Benefits

Economic Pension Cost

Economic pension cost -- net cost arising from changes in net economic position for a period; includes both *recurring* and *nonrecurring* components along with *return on plan assets*

Recurring pension costs consist of two components:

- Service cost – actuarial present value of pension benefit earned by employees
- Interest Cost – increase in projected benefit obligation arising when pension payments are one-period closer to being made; computed by multiplying beginning-period PBO by the discount rate

Nonrecurring pension costs consist of two components:

- Actuarial Gain or Loss – change in PBO that occurs when one or more actuarial assumptions are revised in estimating PBO
- Prior Service Cost – effects of changes in pension plan rules on PBO

Return on plan assets:

- Actual return on plan assets – pension plan's earnings, consisting of investment income—capital appreciation and dividend and interest received, less management fees; plus realized and unrealized appreciation (or minus depreciation) of other plan assets

Postretirement Benefits

Pension Accounting Example – The Facts

- A pension plan with a single employee, J. Smith, who joins the plan exactly 5 years ago on January 1, 1996; Smith is due to retire on Dec. 31, 2020, and is expected to live for 10 years after retirement
- J. Smith's current compensation is $10,000 per year; actuarial estimates indicate compensation is expected to increase 4% per year over the next 20 years
- Pension plan specifies the following formula for determining an employee's pension benefit: "Annual pension is equal to one week's compensation at time of retirement for each year with the plan"; employees vest 4 years after joining the plan
- At Dec. 31, 2000, the fair value of assets in the pension fund is $2,000; in 2001, the employer contributes $200 to the pension fund
- Return on pension assets is 22% in 2001; long-term return is expected to be 10% per year
- Discount rate is 7% per year

Postretirement Benefits

Pension Accounting Example – Pension Obligation

Determining Pension Obligations under Different Assumptions—J. Smith Example

	2000 Actual	Formula Projected	Projected	2001 Formula Assumption Change Actuarial	Plan
At Dec. 31, 2020 (Retirement)					
Salary per year	$10,000	$21,911	$21,911	$26,533	$26,533
Pension per year	962	2,107	2,528	3,061	4,592
Value of pension	6,753	14,798	17,757	21,503	32,254
At Dec. 31, 2000					
Present value of pension	1,745	3,824			
At Dec. 31, 2001					
Present value of pension		4,091	4,910	5,946	8,919

Vested benefits (VBO)	$1,745
+ Benefits not vested	0
= Accumulated benefit obligation (ABO)	$1,745
+ Effect of estimated increase in compensation	2,079
= Projected benefit obligation (PBO)	$3,824

Note: PBO $\geq$ ABO $\geq$ VBO

Postretirement Benefits

Pension Accounting Example – Economic Pension Cost

Recurring costs for J. Smith example:

- PBO increases by $819 in 2001 because Smith works an extra year – hence, the term *service* cost
- Present value increases from $3,824 in 2000 to $4,092 in 2001—this $267 increase arises from the time value of money – hence, the term *interest* cost (also computed as 7% x $3,824)

Nonrecurring costs for J. Smith example:

- Actuarial change (4% to 5% growth) increases estimated compensation at retirement from $21,911 to $26,533 and increases the PBO at end of 2001 by $1,036 (from $4,910 to $5,946) — an actuarial loss
- Pension formula changes to one-and-one-half week's compensation per year of service results in the pension benefit per year increasing by 50% from $3,061 to $4,592, which increases PBO by $2,973 ($8,919 - $5,946) — a prior service cost

Return on plan assets for J. Smith example:

- Actual return on plan assets is $440 (22% of $2,000)

In sum, net economic pension cost for the J. Smith example is:

Recurring costs:	
Service cost	$ 819
Interest cost	267
Nonrecurring costs:	
Actuarial gain or loss	1,036
Prior service cost	2,973
Gross economic pension cost	$ 5,095
Less return on plan assets	(440)
Net economic pension cost	$ 4,655

Postretirement Benefits

Pension Accounting Example – Articulation of Net Economic Position and Economic Pension Cost: J. Smith Example

Pension Asset

Beginning balance	2,000		
Contributions	200		
Return on assets	440	Benefits paid	0
Ending balance	2,640		

Pension Obligation

		Beginning balance		3,824
		Service cost	819	
		Interest cost	267	
		Actuarial gain or loss	1,036	
Benefits paid	0	Prior service cost	2,973	5,095
		Ending balance		8,919

Net Economic Position (Funded Status)

Contributions	200	Beginning balance	1,824
Return on assets	440	Gross pension cost	5,095
Ending balance	6,279		

Economic Pension Cost

Recurring costs	
Service cost	819
Interest cost	267
Nonrecurring costs	
Actuarial gain or loss	1,036
Prior service cost	2,973
Gross pension cost	5,095
Less return on assets	(440)
Net pension cost	4,655

Postretirement Benefits

Reported (or Net Periodic) Pension Cost

Reported pension cost -- defers recognition of economic effects vis-à-vis economic pension cost; each deferral (and amortization) follows:

- Expected return on plan assets reduces reported pension cost -- gains and losses from the difference between expected and actual returns are deferred and amortized to reduce volatility; expected return on plan assets is computed by multiplying the expected long-term rate of return on plan assets by the market value of plan assets at the beginning of the period.
- Deferral and amortization of net gains and losses arise from the delayed recognition of deviations from expectations regarding both pension obligations and pension assets—net gains and losses consist of (1) the difference between actual and expected return on plan assets and (2) actuarial gains and losses
- Deferral and amortization of prior service cost is the process of delaying recognition of prior service cost effects on reported pension cost (through amortization)
- Deferral and amortization of transition loss or gain arise when a plan is initially adopted—amortized over the average remaining service period of qualified employees

Net Reported Position (or Reported Status)

Net Reported Position -- is the cumulative reported pension cost net of cumulative contributions—for this reason, the liability (or asset) reported in the balance sheet is called **Accrued (or Prepaid) Pension Cost.**