

Module 1 Understanding Financial Statements for Investment Decisions

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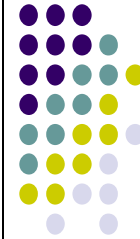
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Introduction to the Financial Statements

- The general purpose financial statements are intended to serve information needs of diverse stakeholders of a business enterprise. Investors, creditors and bondholders comprise the prime group of stakeholders.
- The preparation and presentation of general purpose financial statements is regulated by an overlapping set of acts and rules and, for the listed companies in Bangladesh, by the International Financial Reporting Standards (IFRSs).
- The financial statements are comprised of five parts including (i) a statement of financial position, (ii) a statement of comprehensive income, (iii) cash flow statement, (iv) a statement of changes in equity, and (v) notes comprising a summary of accounting policies and other explanatory information.
- The statement of financial position, commonly called the balance sheet, assets, liabilities and stockholders' equity of a company. It is an identity showing economic resources owned by a company and claims against those resources. Shareholders, creditors and bondholders are generally claimants.
- Identity: $TA_{it} = TL_{it} + CSE_{it}$ (1)

Exhibit 1: Consolidated Statement of Financial Position
Square Pharmaceuticals & its subsidiaries



SQUARE PHARMACEUTICALS LTD.
and its subsidiaries

Consolidated Statement of Financial Position
 As At 31 March 2014

		31-03-2014 Taka	31-03-2013 Taka (Revised)	31-03-2012 Taka (Revised)
ASSETS				
Non-Current Assets:				
Property, Plant and Equipment-Carrying Value	2.1	23,545,701,250	20,605,309,448	16,313,597,638
Capital Work-in-Progress	3.1	13,933,689,469	9,908,013,592	9,357,244,473
Investment - Long Term (at Cost)	4.1	3,256,802,171	4,907,035,756	1,274,390,572
Investment - Associate Undertakings	4.2	147,694,430	157,694,430	167,694,430
Investment in Marketable Securities (Fair Value)	5.1	5,364,154,708	4,914,958,933	4,709,080,125
Pre-Operating/Preliminary Expenses		844,350,472	686,985,768	804,636,100
		-	30,616,969	549,938
		7,199,373,281	6,946,361,767	8,248,571,022
Current Assets:				
Inventories	6.1	2,737,085,779	3,091,263,712	3,178,672,614
Trade Debtors	7.1	766,634,978	812,741,079	819,002,633
Advances, Deposits and Prepayments	8.1	671,719,541	952,111,276	694,814,720
Short Term Loan	9.1	1,161,185,776	1,108,757,914	1,717,773,377
Margin against B/B Letter of Credit		-	-	1,091,148,736
Cash and Cash Equivalents	10.1	2,162,717,207	981,167,836	747,626,997
		31,046,074,531	27,551,671,215	24,562,168,660

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Exhibit 1: Consolidated Statement of Financial Position
Square Pharmaceuticals & its subsidiaries



SHAREHOLDERS' EQUITY AND LIABILITIES:

Shareholders' Equity:				
Share Capital	11.1	26,739,581,929	22,586,225,346	19,251,480,428
Share Premium	12.1	4,819,992,630	3,707,666,640	2,648,347,600
General Reserve		2,035,465,000	2,035,465,000	2,035,465,000
Tax Holiday Reserve		105,878,200	105,878,200	105,878,200
Gain on Marketable Securities (Unrealized)	12.2	406,231,702	406,231,702	449,870,449
Retained Earnings	5.1	449,255,557	313,532,274	470,437,468
		18,922,758,840	16,017,431,580	13,591,481,711
Non Controlling Interest	12.3	9,369,803	7,719,551	7,348,592
		1,902,585,673	1,682,318,885	987,949,283
Non-Current Liabilities:				
Long Term Loans - Secured	13.1	1,183,627,923	1,106,327,183	508,778,060
Deferred Tax Liability	14.1	718,957,750	575,991,702	479,171,223
		2,394,537,126	3,275,407,433	4,315,390,357
Current Liabilities:				
Short Term Bank Loans	15.1	131,104,817	1,302,040,378	2,237,495,956
Long Term Loans - Current: Portion	16.1	461,433,822	540,421,336	477,141,480
Trade Creditors	17.1	217,855,755	7,034,724	531,295,427
Liabilities for Expenses	18.1	20,518,598	173,261,777	114,515,510
Liabilities for Other Finance	19.1	1,563,624,134	1,252,641,218	954,941,984
		31,046,074,531	27,551,671,215	24,562,168,660

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Information Content of Balance Sheet



- A description of assets, liabilities and shareholders' equity based on a mixed system of accounting involving both historical cost accounting and fair value accounting (also called mark-to-market accounting).
- Assets and liabilities are grouped in terms of current/non-current distinction and in order of liquidity. A traditional focus is therefore on assessing liquidity of a going concern.
- A restatement of assets and liabilities is however possible for defining productive capacity of a business and for discerning managerial decisions to finance them.
- Restatement is done in terms of operating and financial types and in line with corporate management's operating and financial policies. It will thus lead to measuring management's policy effectiveness and more towards informed investment decisions.
- A set of *stock* variables so defined will be matched with their counterparts *flow* variables in the income statement and cash flow statement.
- Taken together, a coherent set of accounting ratios will be identified predicting future earnings and growth in earnings.

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A Reformulation of Balance Sheet Identity



- Net Operating Assets (NOA) is indicative of productive capacity of a business enterprise.

$$TA = TL + CSE$$

$$(CA + NCA) = (CL + NCL) + CSE$$

$$(OA + FA) = (OL + FO) + CSE$$

$$(OA - OL) = (FO - FA) + CSE$$

$$NOA = NFO + CSE$$

- NOA is Operating Assets (OA) net of Operating Liabilities (OL). If OA is indicative of productive potential, a firm's ability to depend on low-cost operating liabilities will enhance profitability by a number of ways. *To be explained later.*
- NOA is financed by Net Finance Obligations and Common Stockholders' Equity (CSE). Ratio of NFO to CSE is called financial leverage and a measure of financing risk.
- In presence of corporate and personal taxes, the prudential use of NFO is essential. A failing to do so will destroy profitability and bring about insolvency. *To be shown later.*

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Exhibit 2. Restated Balance Sheet Square Pharmaceuticals & its subsidiaries



Assets:	2007	2009	2011	2013	2014	2015Q3
Total Assets	12,539.0	14,904.6	22,520.5	27,551.7	31,046.1	33,465.0
Operating Assets (OA)						
Property, plant and equipment, net	4,844.4	5,462.1	8,059.5	9,908.0	13,933.7	14,534.4
Intangible assets, net						
Accounts receivable, net	773.7	477.6	1,421.6	812.7	766.6	818.3
Inventories	2,105.9	2,405.5	3,179.0	3,091.3	2,737.1	2,989.8
Advances, deposits and prepayments	258.4	303.7	598.0	952.4	671.7	772.0
Advanced VAT						
Other operating assets	3,069.1	5,166.5	5,482.8	9,852.6	8,621.0	8,752.8
	11,051.5	13,815.4	18,740.9	24,617.0	26,730.1	27,867.3
Financial Assets (FA)						
Cash and cash equivalents	157.3	314.4	429.3	981.2	2,162.7	3,211.3
Short term investment	32.6	20.3	0.0	0.0	0.0	1,288.5
Long term deposit						
Other financial assets	1,297.6	754.5	3,350.4	1,953.5	2,153.3	1,097.8
	1,487.5	1,089.2	3,779.7	2,934.7	4,316.0	5,597.6
Total Assets	12,539.0	14,904.6	22,520.6	27,551.7	31,046.1	33,464.9

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Exhibit 2. Restated Balance Sheet Square Pharmaceuticals & its subsidiaries



	2007	2009	2011	2013	2014	2015Q3
Total Liabilities	4247.2	3976.3	6551.0	4957.8	4297.1	4056.8
Financial Obligations (FO)						
Borrowings from banks and Fis	3232.4	2929.2	4157.9	2948.7	1776.1	1044.8
Other financial obligations	443.0	614.7	791.5	1252.6	1563.6	2117.4
	3675.4	3543.9	4949.4	4201.3	3339.7	3162.2
Operating Liabilities (OL)						
Operating Liabilities (OL)	571.8	432.4	1601.6	756.5	957.4	894.6
	571.8	432.4	1601.6	756.5	957.4	894.6
Common Stockholders' Equity (CSE)						
Share capital	596.2	1207.2	1961.7	3707.7	4820	5543
Retained Earnings	4116.2	6329.4	10033.5	16017.4	18922.8	20974.2
Rest of the Equity	3579.4	3391.7	3974.3	2868.8	3006.2	2891.0
CSE	8291.8	10928.3	15969.5	22593.9	26749	29408.2
Total Liabilities and Equity	12539.0	14904.6	22520.5	27551.7	31046.1	33465.0

SQUARE PHARMACEUTICALS LTD.
and its subsidiaries

Consolidated Statement of Comprehensive Income
For the Year Ended 31 March 2014

		2013-2014 Taka	2012-2013 Taka (Restated)
	Notes		
GROSS TURNOVER	21.1	26,945,687,557	23,360,199,256
Less: Value Added Tax		3,677,274,340	3,158,193,334
NET TURNOVER		23,268,413,217	20,202,005,922
COST OF GOODS SOLD	22.1	(12,960,738,683)	(11,308,857,708)
GROSS PROFIT		10,307,674,534	8,893,148,214
OPERATING EXPENSES:		(4,340,021,264)	(4,051,595,561)
Selling and Distribution Expenses	26.1	(3,431,938,716)	(2,955,935,819)
Administrative Expenses	27.1	(730,951,152)	(738,507,999)
Financial Expenses	28.1	(177,131,396)	(357,151,743)
PROFIT FROM OPERATIONS		5,967,653,270	4,841,552,653
Other Income	29.1	245,133,874	377,846,808
PROFIT BEFORE WPPF		6,212,787,144	5,219,399,461
Allocation for WPPF	30.1	(300,438,842)	(246,729,864)
PROFIT BEFORE TAX		5,912,348,302	4,972,669,597
Provision for Income Tax	31.1	(1,518,801,391)	(1,237,851,545)
Provision for Deferred Income Tax	14.1	(142,966,048)	(96,820,479)
PROFIT AFTER TAX		4,250,580,863	3,637,997,573
Profit/(Loss) from Associate Undertakings	31.2	695,624,299	575,807,315
PROFIT FOR THE YEAR		4,946,205,162	4,213,804,888
Other Comprehensive Income:			
Gain/(Loss) on Marketable Securities (Unrealized)	5.1	135,723,333	(107,174,041)
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		5,081,928,495	4,106,630,847

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Determination of Operating Profitability & its Distribution

CNI=Earnings After Taxes (EAT)+Other Comprehensive Income

Assume no other comprehensive income.

CNI=EAT

NFE=Financial Expenses (FE) - Financial Income (FI)

Let x be Net Operating Income (before tax), also called EBIT.

$$CNI = (x - r \cdot D_L)(1 - \tau_C)$$

$$(1 - \tau_C)x = (1 - \tau_C)(r \cdot D_L) + CNI$$

Here τ_C is corporate tax rate,

D_L =NFO (Net Financial Obligations)

$(r \cdot D_L)$ =NFE (before tax)

$(1 - \tau_C)x$ =Net Operating Income (after-tax)

$(1 - \tau_C)(r \cdot D_L)$ =Net Financial Expenses (after-tax)

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Income Statement
of Square Pharmaceuticals & its Subsidiaries



Income Statement Data	2007	2008	2009	2010	
Turnover/Revenue (net)	8747.7	10553.8	11826.2	12970.9	
Gross profit	3347.5	4008.0	4813.4	5618.4	
Operating expenses	1431.0	1759.3	1884.4	2292.5	
Operating profit	1916.5	2248.7	2929.0	3325.9	
Net Finance Expense, before taxes	292.9	437.8	451.3	310.7	
Profit before income tax	2685.4	2046.9	2745.6	3105.6	
Income tax expenses	1437.0	506.3	630.0	737.2	
Net Profit after taxes	1248.4	1540.6	2115.6	2368.4	
Other comprehensive income	0.0	0.0	0.0	0.0	
Comprehensive Net Income (CNI)	1248.4	1540.6	2115.6	2368.4	
Tax adjustment (1-t)	0.46	0.75	0.77	0.76	
Net financial expenses (after taxes)	136.2	329.5	347.7	236.9	
Operating income after taxes	1384.6	1870.1	2463.3	2605.3	
Income Statement Data	2011	2012	2013	2014	2015Q3
Turnover/Revenue (net)	16974.7	19798.1	20202.0	23268.4	20065.8
Gross profit	6690.9	7890.3	8893.1	10307.7	9185.6
Operating expenses	3183.5	3739.4	4051.6	4340	3932.6
Operating profit	3507.4	4150.9	4841.6	5967.7	5253
Net Finance Expense, before taxes	299.2	447.4	337.9	151.4	119.1
Profit before income tax	3770.1	4350.1	4972.7	5912.3	5150
Income tax expenses	939.2	1225.1	1334.7	1661.7	1391.1
Net Profit after taxes	2830.9	3125.0	3638.0	4250.6	3758.9
Other comprehensive income	127.2	126.3	-107.2	135.7	104.1
Comprehensive Net Income (CNI)	3386.5	3746.3	4106.6	5081.9	4114.5
Tax adjustment (1-t)	0.75	0.72	0.73	0.72	0.73
Net financial expenses (after taxes)	224.7	321.4	247.2	108.8	86.9
Operating income after taxes	3611.2	4067.7	4353.8	5190.7	4201.4

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Relating Flow to Stock Variables & Key Drivers of ROCE



Three Key Ratios:

$$1. \text{ Return on Net Operating Assts (RNOA)} = \frac{\text{NOI}}{\text{NOA}}$$

$$2. \text{ Net Borrowing Costs (NBC)} = \frac{\text{NFE}}{\text{NFO}}$$

$$3. \text{ Return on Common Equity (ROCE)} = \frac{\text{CNI}}{\text{CSE}}$$

Drivers of ROCE:

$$\begin{aligned} ROCE_t &= \frac{CNI_t}{CSE_{t-1}} = \frac{NOI_t - NFE_t}{CSE_{t-1}} \\ &= \left[\frac{NOI_t}{NOA_{t-1}} \cdot \frac{NOA_{t-1}}{CSE_{t-1}} \right] - \left[\frac{NFE_t}{NFO_{t-1}} \cdot \frac{NFO_{t-1}}{CSE_{t-1}} \right] \\ &= \frac{NOI_t}{NOA_{t-1}} + \frac{NFO_{t-1}}{CSE_{t-1}} \left[\frac{NOI_t}{NOA_{t-1}} - \frac{NFE_t}{NFO_{t-1}} \right] \\ &= RNOA_t + FLEV_{t-1} \cdot [RNOA_t - NBC_t] \end{aligned}$$

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Key Drivers of RNOA and Role of OLLEV



$$\begin{aligned}
 RNOA_t &= \frac{NOI_t}{NOA_{t-1}} = \frac{NOI_t + icol_t}{NOA_{t-1}} - \frac{icol_t}{NOA_t} \\
 &= \left[\frac{NOI_t + icol_t}{OA_{t-1}} \cdot \frac{OA_{t-1}}{NOA_{t-1}} \right] - \left[\frac{icol_t}{OL_{t-1}} \cdot \frac{OL_{t-1}}{NOA_{t-1}} \right] \\
 &= \frac{OI_t}{NOA_{t-1}} + \frac{OL_{t-1}}{NOA_{t-1}} [ROA_t - \theta_t] \\
 &= ROA_t + OLLEV_{t-1} \cdot [ROA_t - \theta_t] \\
 RNOA_t &= \frac{NOI_t}{NOA_{t-1}} = \frac{NOI_t}{Sales_t} \times \frac{Sales_t}{NOA_{t-1}} = PM_t \times ATO_t \\
 RNOA &= \frac{NOI}{NOA} = \frac{Sales\ OI + Other\ OI}{NOA} = \left(\frac{Sales\ OI}{Sales} \times \frac{Sales}{NOA} \right) + \frac{Other\ OI}{NOA} \\
 &= (Sales\ PM \times ATO) + \frac{Other\ OI}{NOA}
 \end{aligned}$$

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Financial Statement Analysis and Identification of Ratios



Key Ratios	2007	2008	2009	2010
OA	11,052	13,258	13,815	14,673
Less: OL	(572)	(695)	(432)	(391)
NOA	10,480	12,563	13,383	14,282
FO	3,675	4,841	3,544	3,071
Less: FA	(1,488)	(1,801)	(1,089)	(1,733)
NFO	2,188	3,040	2,455	1,338
CNI	1,248	1,541	2,116	2,368
Add: NFE	136	330	348	237
OI	1,385	1,870	2,463	2,605
OI	1,385	1,870	2,463	2,605
NOA	10,480	12,563	13,383	14,282
RNO)	0.132	0.178	0.196	0.195
PM	0.158	0.177	0.208	0.201
ATO	0.835	0.840	0.884	0.908
NFE	136	330	348	237
NFO	2,188	3,040	2,455	1,338
NBC	0.062	0.151	0.114	0.097
NFO	2,188	3,040	2,455	1,338
CSE	8,292	9,523	10,928	12,944
FLEV	0.26	0.26	0.32	0.22
RNOA	0.132	0.178	0.196	0.195
NBC	0.062	0.151	0.114	0.097
SPREAD	0.070	0.028	0.082	0.098
RNOA	0.132	0.178	0.196	0.195
FLEV	0.264	0.264	0.319	0.225
SPREAD	0.070	0.028	0.082	0.098
ROCE	0.151	0.186	0.222	0.217

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Financial Statement Analysis and Identification of Ratios

Key Ratios	2011	2012	2013	2014	2015Q3
OA	18,741	20,940	24,617	26,730	27,867
Less: OL	(1,602)	(1,071)	(757)	(957)	(895)
NOA	17,139	19,868	23,861	25,773	26,973
FO	4,949	4,178	4,201	3,340	3,162
Less: FA	(3,780)	(3,437)	(2,935)	(4,316)	(5,598)
NFO	1,170	741	1,267	(976)	(2,435)
CNI	3,387	3,746	4,107	5,082	4,115
Add: NFE	225	321	247	109	116
OI	3,611	4,068	4,354	5,191	4,230
OI	3,611	4,068	4,354	5,191	4,230
NOA	17,139	19,868	23,861	25,773	26,973
RNO)	0.253	0.237	0.219	0.218	0.219
PM	0.213	0.205	0.216	0.223	0.158
ATO	0.990	0.996	0.847	0.903	0.992
NFE	225	321	247	109	116
NFO	1,170	741	1,267	(976)	(2,435)
NBC	0.168	0.275	0.334	0.086	(0.158)
NFO	1,170	741	1,267	(976)	(2,435)
CSE	15,970	19,127	22,594	26,749	29,408
FLEV	0.10	0.07	0.04	0.06	(0.04)
RNOA	0.253	0.237	0.219	0.218	0.219
NBC	0.168	0.275	0.334	0.086	(0.158)
SPREAD	0.085	(0.037)	(0.114)	0.132	0.377
RNOA	0.253	0.237	0.219	0.218	0.219
FLEV	0.103	0.073	0.039	0.056	(0.036)
SPREAD	0.085	(0.037)	(0.114)	0.132	0.377
ROCE	0.262	0.235	0.215	0.225	0.205

