SS7 Financial Report and Analysis

Friday, July 16, 2021

10:05 PM

# READING 22. UNDERSTANDING BALANCE SHEETS

* 1. Describe the elements of the balance sheet: assets, liabilities, and equity
  2. The balance sheet (also known as the statement of financial position or statement of financial condition) reports the firm’s financial position at a point in time, consisting- **Assets**: Resources controlled as a result of past transactions that are expected to provide future economic benefits. BS omits important aspects of a company’s ability to generate future cash flows, such as its reputation and management skills, so differs from market value of shareholders’ equity. **Liabilities**: Obligations as a result of past events that are expected to require an outflow of economic resources. **Equity, aka "net assets"**: The owners’ residual interest in the assets after deducting the liabilities.
  3. Describe uses and limitations of the balance sheet in financial analysis
  + Used to asses a firm's ability to make distributions to shareholders and **liquidity** (ability to meet short-term obligations) and **solvency** (ability to meet long-term obligations).

The balance sheet elements (assets, liabilities, and equity) should NOT be interpreted as market value or intrinsic value, but historical cost, amortized cost or fair current value.

* + Describe alternative formats of balance sheet presentation
  + **Classified** BS: current/non-current; **liquidity-based(IFRS)** BS: present in order of liquidity, in banking industry
  + Distinguish between current and non-current assets and current and non-current liabilities
  + Describe different types of assets and liabilities and the measurement bases of each
  + 
    - ***Cash equivalents***: treasury bills, commercial paper, money market funds - little interest rate risk; financial asset aka FA, amortized cost or fair value.
    - ***Marketable securities***: FA traded in public market, treasury bills notes, bonds, equity securities, derivatives, loans, receivables. **Held-to-maturity** securities: @**amortized** cost = issue price - principal payments + amortized discount - impairment ± amortized. **Market-to-market (held-for-trading, available-for-sale**, derivatives): @**fair market value** Unrealized gain/loss aka holding period gain/loss of [HFT & derivatives] recognize in IS; of AFS(IFRS NO longer exists) report in other comprehensive income under equity in BS. Dividend, interest income, realized gains and losses (actual gains or losses when the securities are sold) record in IS. ***[in BS as CA/NCL]***

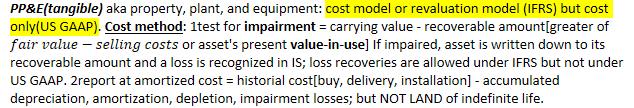
Historical Cost 
Unlisted equity investments 
Loans and receivables 
Amortized Cost 
Held-to-maturity securities 
Fair Value 
Trading securities 
Available-for-sale securities 
Derivatives 

* + A 6% bond, at par, for $1,000,000 at the beginning of the year. Interest rates have recently increased and the market value of the bond declined $20,000.

If the bond is classified as a held-to-maturity security, the bond is reported on the balance sheet at 
Interest income of $60,000 x 6%] is reported in the income statement. 
If the bond is classified as a trading security, the bond is reported on the balance sheet at $980,000. 
The $20,000 unrealized loss and $60,000 of interest income are both recognized in the income 
statement. 
If the bond is classified as an available-for-sale security, the bond is reported on the balance sheet 
at $980,000. Interest income Of $60,000 is recognized in the income statement. The $20,000 
unrealized loss is not recognized in the income statement. Rather, it is reported as a change in 
stockholders' equity. 

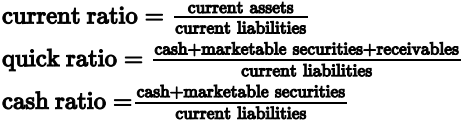
* + Beginning of year, Company P purchased 1,000 shares of Company S for $80 per share. During year, Company S paid a dividend of $4 per share. At the end of the year, Company S’s share price was $75. Both trading securities and available-for-sale securities are reported SAME on the balance sheet at their fair values. At year-end, the fair value is $75,000 [$75 per share × 1,000 shares]. For IS: a loss of $1,000 is recognized if securities are considered trading securities ($4 dividend × $1,000 shares) – ($5 unrealized loss × 1,000 shares); if investment is available-for-sale, $4,000 [$4 dividend × $1,000].
  + 



* + 
  + ***Inventories***: goods held for sale or use in manufacturing(raw material, work-in-process, finished goods) **Product costs** (capitalize under BS): 1. purchase cost-discounts, 2. conversion of labor overhead, 3. delivery; **Period costs**(expense when incur): abnormal waste, storage cost(unless part of production process), administrative overhead, selling costs. Lower of cost/NRV(IFRS); lower of cost/market(GAAP).
  + Standard costing: predetermined rate(manufacturing), Retail method: measure at retail - gross profit. LIFO is only permitted under US GAAP but not IFRS(lower of cost or NRV), same or market cost when using LIFO or retail method to report inventories. Market is usually equal to replacement cost; however, market cost? cannot be greater than net realizable value or less than net realizable value less a normal profit margin. If net realizable value (IFRS) or market (U.S. GAAP) is less than the inventory’s carrying value, the inventory is written down & loss in IS, write-up is allowed in IFRS but not US GAAP.
  + ***Other*** current assets: prepaid expenses (operating cost in IS paid in advance), deferred tax assets (temporary differences between financial report and tax report income, tax payable>income tax exp)
  + **Current liabilities**: obligations 1yr, held for trading purposes.
    - ***Accounts/trade payable***: FA buy on credit, owes vendors/suppliers for purchases of goods & services
    - ***Notes payable and current portion of long-term debt***: FA financial liabilities thru loan agreements, promissory notes owned to creditors and lenders <1yr [non-current liability if >]
    - ***Accrued liabilities***: expense recognized in IS but not contractually due. And tax, interest, wages, warranty accrued payable of estimate. To recognize the warranty expense, it must be probable, not just possible; future operating lease payments aren't reported BS.
    - 
  + **Noncurrent assets**: investing activities, tangible and intangible.
    - 
    - ***Investment property(tangible)***: generate rental income or capital appreciation, reported at amortized cost (= PP&E) or fair value(changes in **fair value model** is recognized in IS) for **IFRS**. US GAAP-NOTHING.
    - ***Intangible assets***: non-monetary assets lacking physical substance, either **identifiable(rights or privileges conveying, eg. Patents, trademarks, copyrights)** or **unidentifiable eg. Goodwill**[unlimited life, excess of purchase price - fair value in acquisition] Economic goodwill: expected future performance; Accounting goodwill: result of past buy acquisitions. Purchased or amortized identifiable report, like PP&E, by cost or revaluation method if active market(IFRS), historical cost only(US GAAP). Intangible research & development cost created internally: expense in US GAAP; IFRS 1expense during research stage but 2capitalize during development. Intangible with infinite lives &Goodwill aren't amortized, but tested impairment at least 1yr; if impaired, loss in IS. EXPENSE under IFRS&USGAAP:
      * Start-up and training costs
      * Administrative overhead
      * Advertising and promotion
      * Relocation and reorganization
      * Termination costs
  + **Noncurrent liabilities**: long-term financing activities
    - ***Long-term financial liabilities***: bank loans, notes payable, bonds payable, derivatives. FL not issue at face value report @amortized cost; held-for-trading short-term FL report @fair value.
    - ***Deferred tax liabilities*** = tax expense in IS > taxes payable
  + Describe the components of shareholders’ equity
  + 
  + **Preferred stock**: certain rights and privileges(early claim) not conferred by common stock, having dividends. Perpetual non-redeemable pf classified as **debt OR equity**: pf calls for mandatory redemption is FL.
  + 
  + **Retained earnings**: undistributed net income since inception, cumulative earnings before paid as dividends.
  + **Noncontrolling interest** aka minority interest: minority' pro-rate share of net assets/equity of a subsidiary.
  + **Accumulated other comprehensive income** includes all changes in stockholders’ equity except for transactions recognized as net income in IS and transactions with shareholders(i.e., unrealized gains and losses from available-for-sale securities, cash flow hedging derivatives, foreign currency translation, and adjustments for minimum pension liability). CI = NI + OCI

Retained 
Common 
Beginning balance 
Net income 
Net unrealized loss on 
available-for-sale securities 
Net unrealized loss on cash 
flow hedges 
Minimum pension liability 
Cumulative translation 
adjustment 
Comprehensive income 
Issuance of common stock 
Repurchases of common stock 
Dividends 
Ending balance 
Stock 
S49,234 
1 ,282 
(6,200) 
S44 316 
Earnings 
(in thousands) 
$26 , 664 
6,994 
(2.360) 
$31 298 
Accumulated 
Other 
Comprehensive 
Income (loss) 
(S406) 
(40) 
(56) 
(26) 
42 
(S486) 
Total 
$75,492 
6,994 
(40) 
(56) 
(26) 
42 
6,914 
1,282 
(6,200) 
(2.360) 
$75 128 

* + Convert balance sheets to common-size balance sheets and interpret common-size balance sheets
  + Vertical common-sized BS express as a percentage of **total assets**, for time-series analysis or cross-sectional comparison across firms. Investment returns on working capital are usually < returns on long-term assets.
  + Calculate and interpret liquidity and solvency ratios
  + **Liquidity** ratios(current ratio, quick ratio, cash ratio) measure firm’s ability to satisfy short-term obligations. Quick ratio(aka acid-test ratio) excludes inventory from CA; Cash ratio excludes inventory &A/R. **Solvency** ratios(long-term debt-to-equity, total debt-to-equity, debt ratio, financial leverage ratio) measures firm's ability to satisfy long-term obligations. Financial leverage ratio captures the impact of all obligations, both interest bearing and non-interest bearing.



pa//ôV(Zg SJeÓ¯ 
L51Ä-S— 
Cűgtä 
g coŕt 
9w12 
Iwřop rq*-řo 
Cash revf-řo 
deb± 
tčnnvvôd leveĺapr 
twf-ôo 
coorneo-ř 

# READING 23. UNDERSTANDING CASH FLOW STATEMENTS

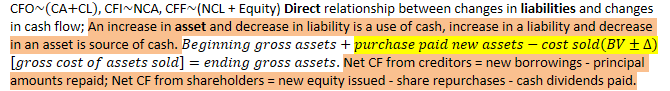
* + Compare cash flows from operating, investing, and financing activities and classify cash flow items as relating to one of those three categories given a description of the items
  + CFS provides Information about a company’s cash receipts and cash payments during an accounting period; An understanding of the impact of accrual accounting events on cash flows; liquidity, solvency, flexibility.
    - CFO operating: transactions of net income effect[IS, BS] Inv interest, received dividends, paid interest; changes in working capital [current assets/current liabilities] less than 1yr replace in CFO not CFI.
    - CFI investing[BS]: acquisition or disposal of long-term assets & certain investment[gross asset account in BS] Acquisition of debt & equity (not trading securities) loans paid; IFRS either-or flexible, US GAAP:

Operating Activities 
Inflows 
Cash collected from customers 
Interest and dividends received 
Sale proceeds from trading securities 
Outflows 
Cash paid to employees and suppliers 
Cash paid for other expenses 
Acquisition of trading securities 
Interest paid on debt or leases 
Taxes paid 
Investing Activities 
Inflows 
Sale proceeds from fixed assets 
Sale proceeds from debt and equity 
mvestments 
Principal received from loans made to others 
Outflows 
Acquisition of fixed assets 
Acquisition of debt and equity 
mvestments 
Loans made to others 
Inflows 
Principal amounts of debt issued 
Proceeds from issuing stock 
Financing Activities 
Outflows 
Principal paid on debt or leases 
Payments to reacquire stock 
Dividends paid to shareholders 

* + CFF financing: transactions affecting capital structure[BS debt] Borrowed principal; paid dividends
  + Describe how non-cash investing and financing activities are reported
  + 
  + Contrast cash flow statements prepared under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles (US GAAP)
  + 
  + Distinguish between the direct and indirect methods of presenting cash from operating activities and describe arguments in favor of each method
  + CF from investing and financing SAME, but operating differ. **Direct** method: accrual-basis IS convert into cash-basis receipts/payments. **Indirect** method: net income converted to operating CF by adjustments - noncash(depreciation, amortization), nonoperating(gains & losses), accrual changes in BS. **Comparison**: direct method is easier understanding past cash flows; but indirect gives only the differ between NI & CFO,

indirect method prepares less costly, mirrors forecasting approach based on NI & BS for future income.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  |  | | --- | --- | | Net Income |  | | Adjustments to reconcile net income to CF by operating activities: | Sum() | | * + - Gain from sale of land | Non-operating | | + Depreciation & amortization | Non-cash | | **Changes in operating accounts:** |  | | **+ Deferred income taxes** | Non-operating | | * + - Increase in A/R | BS | | * + - Increase in inventory | BS | | **+ Decrease in prepaid expenses** | Non-operating | | + Increase in A/P | BS | | **+ Increase in accrued liabilities** | Non-operating | | Operating cash flow |  | |

* + US **GAAP**: 1. direct method must present adjustments needed to reconcile = info of indirect method (not required by IFRS); 2. payments for interest and taxes can be reported in CF or disclosed in footnotes. **IFRS**: payments for interest and taxes must be disclosed Separately in cash flow statement under either method.
  + Describe how the cash flow statement is linked to the income statement and the balance sheet
  + Describe the steps in the preparation of direct and indirect cash flow statements, including how cash flows can be computed using income statement and balance sheet data
  + 
  + Net income for the year ended December 31, 20X7 was $78,000. Its accounts receivable balance at December 31, 20X7 was $121,000, and this balance was $69,000 at December 31, 20X6. The accounts payable balance at December 31, 20X7 was $72,000 and was $43,000 at December 31, 20X6. Depreciation for 20X7 was $12,000, and there was an unrealized gain of $15,000 included in 20X7 income from the change in value of trading securities. What's cash flow from operations for 20X7?

cash from bond issue = ending bonds payable + bonds repaid — beginning bonds payable = 
$15,000 + $0 - $10,000 = $5,000 (source) 
beginning bonds payable + bonds issued — bonds repaid = ending bonds payable = $10,000 
$5,000 - $0 = $15,000 
cash to reacquire stock = beginning common stock + stock issued — ending common stock — 
$50,000 + $0 — $40,000 = $10,000 (use, or a net share repurchase of $10,000) 
beginning common stock + stock issued — stock reacquired = ending common stock = 
$50,000 + so - $10,000 = $40,000 
cash dividends = —dividend declared + increase in dividends payable — —$8,500* + $5,000 = — 
$3,500 (use) 
beginning dividends payable + dividends declared — dividends paid = ending dividends 
payable = $1,000 + $8,500 - $3,500 - $6,000 
*Note: If the dividend declared amount is not provided, you can calculate the amount as follows: 
dividends declared = beginning retained earnings + net income — ending retained earnings. Here, 

* + Convert cash flows from the indirect to direct method

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Net sales in IS | Cost Of Goods Sold (COGS) in IS | + tax/interest expense |
| - increase in A/R | + depreciation/amortization | * + - Increase in income tax payable |
| + increase in unearned revenue  (cash advance) | * + - increase in A/P | - deferred tax liabilities |
|  | + increase in inventory  (cash paid to purchase) | + deferred tax assets |
| Begin A/R + sales - collections = end | * + - Inventory write-off   (reduce ending inv, but no cash) |  |

Beginning Tax/P + beginning deferred liability + tax expense - tax paid = ending Tax/P + ending deferred

* + Analyze and interpret both reported and common-size cash flow statements
  + 
  + Calculate and interpret free cash flow to the firm, free cash flow to equity, and performance and coverage cash flow ratios
  + Free cash flow: measure of cash for discretionary purposes, available once capital expenditures covered.
  + 
  + FCInv=fixed capital investment (net capital expenditure), WCInv=working capital investment, Int=$ interest



* + Free cash flow to equity: available distribution to common shareholders. **IFRS** dividends need adding to CFO.



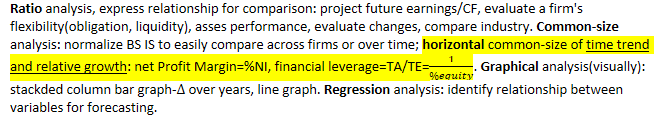
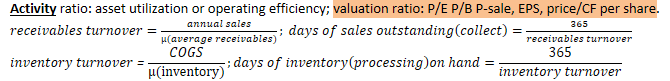
Performance 
Ratios 
Cash flow to 
revenue 
Cash return on 
assets 
Cash return on 
equity 
Cash to income 
Cash flow per 
sharea 
Coverage Ratios 
Debt coverage 
Interest coverageb 
Reinvestment 
Debt payment 
Dividend payment 
Investing and 
financing 
Calculation 
CFO 
CFO 
CFO 
CFO 
(CFO 
— Net revenue 
* Average total assets 
* Average shareholders' equity 
— Operating income 
— Preferred dividends) - Number of 
common shares outstanding 
Calculation 
CFO * Total debt 
(CFO + Interest paid + Taxes paid) 
Interest paid 
CFO * Cash paid for long-term assets 
CFO * Cash paid for long-term debt 
repayment 
CFO * Dividends paid 
CFO * Cash outflows for investing and 
financing activities 
What It Measures 
Operating cash generated per dollar of 
revenue 
Operating cash generated per dollar of 
asset investment 
Operating cash generated per dollar of 
owner investment 
Cash generating ability of operations 
Operating cash flow on a per-share 
basis 
What It Measures 
Financial risk and financial leverage 
Ability to meet interest obligations 
Ability to acquire assets with operating 
cash flows 
Ability to pay debts with operating cash 
flows 
Ability to pay dividends with operating 
cash flows 
Ability to acquire assets, pay debts; and 
make distributions to owners 

OGD ー 
Rou. 
- れ 塹 
Alp 
ヤ い 次 ツ い 〕 
年 ツ 匸 の 
1- イ め ~ 紐 イ ~ 〔 の 
ム ル A/R 人 de-fgmeøt 祀 
い め “ 当 ↑ 

# 

# 

# READING 24. FINANCIAL ANALYSIS TECHNIQUES

* + Describe tools and techniques used in financial analysis, including their uses and limitations
  + 
  + Classify, calculate, and interpret activity, liquidity, solvency, profitability, and valuation ratios
  + 







* + ****



* 1. ****

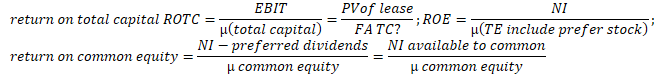




* 1. ****

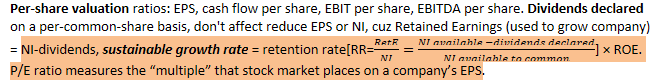
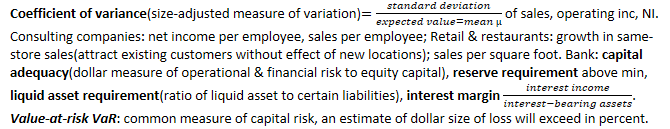
|  |  |
| --- | --- |
| Net sales |  |
| * + - COGS |  |
|  | = gross profit |
| * + - Operating expenses |  |
|  | = operating profit (EBIT) |
| * + - Interest |  |
|  | = Earnings before taxes (EBT) |
| * + - Taxes |  |
|  | = Earnings after taxes (EAT) |
| ± below the line items adjusted for tax |  |
| Net Income |  |
| * + - Preferred dividends |  |
|  | = income available to common stock |





* + Describe relationships among ratios and evaluate a company using ratio analysis
  + Demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components
  + Debt-to-equity=total debt ratio × financial leverage; 5-step:tax burden=(1-tax%), interest burden,EBIT margin



* + Calculate and interpret ratios used in **equity analysis** and credit analysis
  + 
  + 

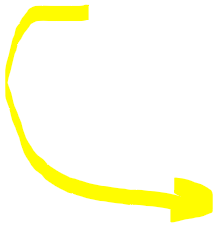
Credit Ratio 
EBITDA interest 
coverage 
FFOC (Funds from 
operations) to debt 
Free operating cash flow 
to debt 
EBIT margin 
EBITDA margin 
Debt to EBITDA 
Return on capital 
Numerator 
EBITDAb 
CFOd (adjusted) minus 
capital expenditures 
EBITe 
EBITDA 
Total debt 
EBIT 
Denominatora 
Interest expense, including non-cash interest on 
conventional debt instruments 
Total debt 
Total debt 
Total revenues 
Total revenues 
EBITDA 
Average beginning-of-year and end-of-year 
capital' 

* + **Risk analysis**: interest coverage ratios, return on capital, debt-to-assets ratios, cash flow to debts. Altman bankruptcy z-score <1.8 based on: WC, RetE, EBIT, revenue to assets; market to book value of a stock share.
  + Explain the requirements for segment reporting and calculate and interpret segment ratios
  + Business segment: a portion of company accounting for more than **10%** revenue, operating profit or assets, but separate from other lines of business in terms of risk and return characteristics. Geographic segments: meet size criterion and differ geographic environment. - Growth rates, PM, asset utilization(turnover), ROA
  + Describe how ratio analysis and other techniques can be used to model and forecast earnings
  + **Sensitivity** analysis (what if, show a range of possible outcomes as specific given assumption), **scenario** analysis (a specific range set of outcomes for key variables or financial quantities given economic events), **simulation**(computer-generated probability distributions modeling to outcome). When developing forecasts: economic analysis, financial analysis, professional judgement.

X 8 ・ ・ 応 0 0 当 
っ -738 ← 1 さ ・ 」 , 3 0. 
0 は ミ き 
ト 
ー C お 2 
ト ト ー 



-term debt-to-equity = long-term debt 
total equity 
tal debt-to-equity = total debt 
total 
debt ratio = 
total debt 
total 
leverage = 
total us-etg 





Net income 
Depreciation 
Unrealized gain 
Increase in accounts receivable 
Increase in accounts payable 
Cash flow from operations 
$78,000 
12,000 
(15,000) 
(52,000) 
29 000 
$52,000 cash from sale of land = decrease in asset + gain on sale = $5,000 + $10,000 = $15,000 (source) 
beginning land + land purchased — gross cost of land sold — ending land = $40,000 + $0 — 
$5,000 = $35,000 
Note: If the land had been sold at a loss, we would have subtracted the loss amount from the 
decrease in land. 
P&E purchased = ending gross P&E + gross cost of P&E sold — beginning gross P&E = $85,000 + 
$0 - $60,000 = $25,000 (use) 
beginning gross P&E + P&E purchased — gross cost of P&E sold = ending P&E = $60,000 + 
$25,000 - so = $85,000 

