

## DEBT CREDIT RISK ANALYSIS (11/11/15)

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I. Credit (default) risk varies by type of loan and by borrower. Good credit is based on an ability and willingness to repay debts. Factors to be considered in granting the loan:

A. 5 Cs of Credit -

1. Capacity (ability to pay, e.g., payment/income ratio and variability)
2. Character (willingness to pay, e.g., credit history)
3. Collateral (decreases risk but may increase monitoring costs)
4. Capital (loan/value; signals borrower's expectations, decreases moral hazard)
5. Conditions (affects other 4 Cs as they change over time)
- 6?. Covenants (restricts actions of owners, e.g., dividends)

B. Loan portfolio diversification - loan and geographic types, borrowers, correlations

C. Hedging with credit derivatives

D. Example of commercial real estate (collateral) lending policy: 3 Questions asked by lender: 1. Have they been there, done that? (capacity), 2. Do they pay their bills? (character), 3. Do they have a cushion in rougher times? (capital and conditions)

II. Industry Risk - what factors and risks affect all businesses in the industry?

SWOT = strengths, weaknesses, opportunities, and threats

- A. Economic cycle (local, regional, national or international) and its effect on predictability and stability of revenues and expenses
- B. Sensitivity to inflation, energy costs, exchange rates, international competition, and social and political trends
- C. Projected demand and maturity of market; over- or under-utilized plant capacity
- D. Regulation, court decisions, potential legislation
- E. Consolidation through mergers and acquisitions
- F. Barriers to or ease of entry

III. Firm Risk: SWOT = strengths, weaknesses, opportunities, and threats

- A. Market share and stability of share
- B. Product diversity
- C. Marketing and distribution requirements
- D. Obsolescence or product life cycle length
- E. Diversity of major customers and percentages and length of relationships or contracts
- F. Ability to maintain or improve profit margins
- G. Production costs - age and productivity of plant; raw materials; labor availability and costs, labor contracts; energy costs; pollution control costs
- H. Quality of management - experience, succession, depth of management, past performance vs. peers, dependence on key person (especially for small businesses)

IV. Evaluation of Information is Based on Good Financial Statements

- A. Analysis is no better than data; therefore:
  - 1. Data should be prepared by a reputable CPA, should be qualified, affiliated with a sound, well-managed CPA firm, true third party
  - 2. If statements are not audited, the bank credit analyst will have to do the audit work
  - 3. Data should not be ancient history; get last 3 to 5 years of data
  - 4. Changes in auditors (SEC Form 8K) may signal a problem with a company's disclosures
  
- B. Basic accounting statements needed to begin analysis
  - 1. Balance Sheet - Stock Concept
  - 2. Income Statement - Flow Concept
  - 3. Sources and Uses Statement - Flow Concept
  - 4. Footnotes to financial statements – Be sure to read the footnotes as you read the statements. In particular, read the following sections: changes in accounting policy, revenue recognition, debt discussion and any off-balance sheet debt (operating leases and securitization of receivables), stock options, pension accounting, acquisition analysis, acquisition/asset impairments or goodwill write-downs, and segment reporting.
  
- C. Bank should maintain credit files
  - 1. In writing, not in the head of an ill loan officer - for reasons of continuity
  - 2. Continually up-date as new information comes available - e.g., newspaper, quarterly reports

V. Methods Used to Analyze Financial Statements - Should be for past 3 to 5 years, current year and pro forma

- A. Valuation of balance sheet items and income statement items – If valuations of these items are not good then ratios based on them are not good..
- B. Ratio analysis
- C. Sources and uses of funds – simple version of cash flow statement
- D. Cash budget

VI. Valuation of Balance Sheet Items - Common-size ratios, i.e., each item/total assets, should be compared over time for trends and against peers to determine causes of both high and low deviations from norms

- A. Assets

1. Cash - related to length and regularity of collection period
2. Accounts receivable
  - a) show a gross and net of loan loss reserve based on experience
  - b) examine size, age, location, degree of diversification
  - c) with asset-based lending, best way for lender to validate receivables is direct confirmation with customers to determine the amount and that the customer is a real entity; also track checks on daily basis to make sure not returned for insufficient funds
3. Notes receivable
  - a) arise when customers do not pay and seller secures a note to strengthen his claims
  - b) if notes receivable are large as a % of TA, beware
  - c) better notes may be discounted and firm may keep those notes the discounters would not accept; are notes discounted with or without recourse?
  - d) notes receivable may or may not be current assets
  - e) are the goods sold guaranteed verbally or written
4. Inventory
  - a) examine
    - (1) age
    - (2) liquidity (obsolescence, deterioration, elasticity of demand)
    - (3) valuation method
    - (4) insurance coverage
  - b) LIFO, FIFO or Average Cost affect profits and balance sheet differently - analysts prefer lower of market or present cost of replacement; use same method for taxes and financial reporting
  - c) goods in process are less liquid than final product or raw materials. Raw materials are the most liquid.
  - d) inventory on consignment is not an asset
  - e) does a firm have future purchase commitments at a fixed price
    - (1) good if prices are rising
    - (2) bad if prices are falling
  - f) with asset-based lending the lender may use field examiners or an outside accounting firm to count the actual work-in-progress and completed inventory and you may use appraisers to value the inventory.
5. Other current assets
  - a) accrued interest
  - b) cash value of life insurance
  - c) short-term marketable securities
  - d) bonds coming due this year
  - e) prepaid expense, e.g., insurance, rent, property taxes, utilities
6. Fixed assets: the foundation of income creation - Gross fixed assets minus

accumulated depreciation equals net fixed assets; method of depreciation (straight-line, accelerated, or units of production) affects profit and accumulated depreciation

- a) land
- b) buildings
- c) machinery
- d) equipment
- e) furniture and fixtures
- f) trucks, autos, etc.
- g) banks are interested in the condition, adequacy, income-creating ability, and marketability of fixed assets
- h) if fixed assets are mortgaged they should be carried as an asset with the lien listed under the proper liability

7. Intangible assets

- a) goodwill, trademarks, brands, and copyrights, patents, leaseholds, formulas, and franchises - in general, non-goodwill intangibles are amortized; goodwill must be evaluated annually and written down when it is deemed to be worth less than the company paid for it.
- b) tangible net worth (equity) = (equity-intangible assets); if  $<$  or  $=$  market value of stock, goodwill or other intangibles may have no value and may need to be written off. This action may violate loan covenants related to minimum level of book value or maximum value of (debt/total assets) or (debt/equity). Covenant waivers or amendments may result in higher interest rates or fees, the additional pledging of assets, or a faster loan payoff.

8. Deferred tax assets – deferred tax assets may be used to reduce future tax payments; however, if a firm is so unprofitable that it has to be liquidated then the assets may have no value and one may want to deduct them from capital in the same way the goodwill is deducted to find tangible equity.

B. Liabilities

1. By type:

- a) secured: hold liens on specific assets or properties (UCC)
- b) preferred: wages due and taxes due
- c) general

2. Current liabilities

- a) accounts payable (AP)
  - (1) usually low in a well-managed business because of advantageous trade credit terms.  $2/10$  Net 30 = 36.7% interest cost to borrow
  - (2) AP and NP should vary inversely
  - (3) if AP are large, may indicate an inability to secure bank funds. AP is likely to increase as risk increases because the

- costs of other sources increase or availability decreases.
- b) notes payable (NP) may be due to
    - (1) sellers of merchandise - NP may indicate an inability to pay trade receivables and a seller asking for a note rather than selling on open account
    - (2) for equipment
    - (3) officers
    - (4) others, e.g., a line of credit at a bank
  - c) reserves for taxes
  - d) current installments on long-term debt
  - e) dividends declared but not yet paid
  - f) customer deposits
  - g) unearned income
3. Deferred income taxes - occurs when financial income exceeds taxable income, e.g., use accelerated depreciation for taxes and straight-line for financial reporting; deferred tax = reported tax - actual tax; may be current or noncurrent
  4. Long-term liabilities: maturity is over 1 year
    - a) mortgages
    - b) bonds
    - c) debentures: subordinated or not
    - d) notes
    - e) term loan
    - f) failure to pay interest on bonds or term loans may result in their becoming due in their entirety, (if acceleration clause is present)
  5. Contingent liabilities – may be shown on balance sheets or in footnotes
    - a) unfunded pension liabilities - Is assumed rate of return on defined benefits liabilities reasonable and what effect has it had or will it have on pretax income? Is the pension accounting based on “mark-to-market” or average returns, e.g., 7%, and values?
    - b) guaranties and warranties behind products
    - c) litigation or pending lawsuits
    - d) environmental liabilities
    - e) leasing arrangements (often in footnotes)
  6. Preferred stock - usually carries a fixed dividend but no voting rights; cumulative dividends must be paid before common dividends; viewed as equity by debt holders and as debt by common equity holders
  7. Common equity
    - a) par value
    - b) additional paid-in capital - excess of issue price over par value
    - c) retained earnings - measurement of all undistributed earnings
    - d) other equity accounts
      1. Foreign currency translation adjustments - foreign financial

statements for U.S. firms must be translated into U.S. dollars at end of accounting period; gains or losses are accumulated in common stockholders equity

2. Treasury stock - repurchased shares that are not retired; cost of shares is shown as reduction
3. Net unrealized gains (losses) on marketable securities classified as "available for sale" are accumulated in common stockholders equity

## VII. Valuation of Income Statement Items

- A. Net Revenues or Sales - examine over time
- B. Cost of Goods Sold
  1. Focus on large changes over time
  2. Examine effect of depreciation and other non-cash expenses
  3. Examine Labor Costs - union or labor contracts, permanent vs. temporary, fringe benefits (health and life insurance, retirement, vacations), salaries and bonuses, transportation, expense accounts
  4. Owner Compensation (particularly for small business) -
    1. Direct - salary, bonuses, dividends
    2. Indirect - fringe benefits (health and life insurance, retirement, vacations), salaries and bonuses, transportation, expense accounts, club dues and expenses, excess or "padded" payrolls with friends or relatives
  5. Occupancy Costs - typical costs are rent (vs. Depreciation, repairs, insurance, and property taxes for owned property), and utilities. You may consider whether total occupancy costs (particularly if provided by a related party) are at market values.
  6. Non-recurring items - business interruptions or disturbances (strikes, fires, weather, illness of key person), insurance proceeds, lawsuit settlements, gains or losses on disposal of assets, discontinued operations or products, temporarily low tax rates
  7. Imminent Changes in the Business or Markets
  8. Related Party Transactions (particularly for small businesses) - examine all related party expenses for reasonableness and market values
  9. Is assumed rate of return on defined pension benefits liabilities reasonable and what effect has it had or will it have on pretax income?
- C. Accuracy of "operating or pro forma" earnings - be very careful in using these numbers. U.S. companies report quarterly results on generally accepted accounting principles, GAAP, but regulators allow them to provide non-GAAP adjusted measures as long as they provide proper disclosure. These are adjustments by the company or another source that try to provide information about future earnings by excluding "non-operating or non-recurring events" such as restructuring charges, merger-related expenses, or

unusual charges. They may also use non-GAAP measures to award compensation. You should analyze all factors above to arrive at your own estimates of what is relevant to estimate future earnings. Even normal categories of expenses and revenues may be unusually large, so you should determine if those levels are sustainable in the future. Different sources will use different definitions of operating earnings so be careful when using comparison numbers. On December 4, 2001, the SEC issued cautionary advice that companies should provide clear and comprehensible explanations of the nature and size of the omissions so they do not mislead the investors.

VIII. Ratio Analysis - **CAUTION**: Ratios can be misleading because some information, e.g., liens on assets, are not considered. A **business credit report** describing the use of any assets as collateral should be used to make any necessary adjustments to the ratios. These are particularly important when you are considering the position of a secured lender versus an unsecured lender.

- A. Four basic types of ratios and what they measure.
  1. Liquidity ratios - ability of firm to meet short term obligation
  2. Leverage ratios - relative contributions of owners and creditors and ability to meet long-term obligations
  3. Activity or Efficiency Ratios- asset management efficiency
  4. Profitability - overall effectiveness of firm and its management
- B. Relative importance of ratios
  1. Short-term creditors are more interested in liquidity and efficiency of current assets
  2. Long-term creditors and equity owners are more interested in past and future:
    - a) leverage and coverage ratios
    - b) efficiency ratios
    - c) profitability ratios
- C. Liquidity ratios
  1. Current ratio = (current assets / current liabilities); *Experian critical ratio*
    - a) CA = cash, market securities, accounts receivable, inventory
    - b) CL = accounts payable, short-term notes payable, current maturity of long term debt, accrued taxes and other accrued expenses
    - c) if low, then may have trouble paying bills
    - d) if high, then funds are not being used efficiently or maybe excess and slow moving inventory or accounts receivable
    - e) break down CA by %s into components should give some better idea
    - f) CR measures amount by which CA could fall in value and still meet the need of creditors (short-term)
  2. Quick or Acid Test Ratio = (CA - Inventory) / CL
    - a) same as current ratio but inventories are not included since inventories are assumed to be the least liquid of the CA

- b) QR measures amount by which (CA - Inventory) could fall in value and still meet the need of creditors (short-term)
  - 3. Net Working Capital = CA-CL; Experian critical ratio
  - 4. Others - the activity ratios below that relate to cash, accounts receivables and inventory turnover are also considered liquidity ratios because they measure the turnover or liquidity of those current assets
- D. Leverage Ratios (also includes coverage ratios)
- 1. (Debt/Total Assets) or (Debt/Equity) - some use long-term debt, others use total debt; unless otherwise specified use total debt
    - a) compare with rule of thumb for industry and size
    - b) the lower the ratio the greater the cushion against creditors losses
    - c) owners may seek a high ratio to magnify earnings or fear losing control by selling new equity; also, new equity issues may depress stock prices
    - d) compare growth in assets and equity
    - e) if goodwill is impaired and written down, may affect negatively and violate a loan covenant
    - f) Experian uses total debt/tangible net worth and current debt/tangible net worth as critical ratios; tangible net worth is common equity minus goodwill and other intangibles that may have no value in a failure situation.
  - 2. Times Interest Earned
    - a) EBIT/Interest Expense
    - b) measures the extent to which earnings can fall without causing financial embarrassment and possible acceleration clauses
    - c) EBITDA/Interest Expense: depreciation and amortization expenses may be added to numerator to examine coverage of cash flows to interest expense
    - d) how variable are interest rate payments, i.e., fixed- or variable-rate
    - e) what are expected future interest rates, e.g. fed funds futures rate
  - 3. Fixed (Financial) Charge Coverage
    - a) 
$$\frac{[EBT + \text{interest payments} + \text{lease payments}]}{[\text{Interest} + \text{lease payment} + (\text{principal payment}/(1-\text{tax rate}))]}$$
    - b) more inclusive since problems can arise just as easily from a failure to pay *fixed financial charges* other than interest such as operating lease payments or principal payments associated with bonds or amortized loans. The interest and lease payments are added back to the numerator because they were deducted to determine EBT. Principal payments are not tax deductible therefore they are not added to the numerator and they are divided by (1 – tax rate) to determine the before-tax level of earnings necessary to cover the principal payments.
    - c) it also is better if lease payments or amortized debt are common in

- the industry
- d) depreciation and amortization may be added to numerator to examine coverage of cash flows to fixed charges
4. Bowe and Larik, Financial Review, November 2014, p. 726 (Table 3, Panel A), provide coverage (EBITDA/Interest Expense) and leverage (Long-term debt/total assets) ratios by credit ratings for 4,037 observations in 1995-2009. Coverage ratios are AAA (31.17), AA (23.97), A (18.09), BBB (10.97), BB (6.92), and B or less (3.77). Leverage ratios are AAA (0.10), AA (0.15), A (0.18), BBB (0.22), BB (0.332), and B or less (0.39).
- E. Activity Ratios - measures of operating efficiency
1. Cash velocity (turnover) =  $\text{Sales} / (\text{Cash} + \text{Marketable Securities})$
- a) number of times cash turns over in a year
- b) larger the ratio the greater the efficiency
- c) cash + marketable securities + *unused lines of credit* may be considered a covenant item related to liquidity
2. Inventory turnover -  $\frac{\text{Annual Sales}}{\text{Inventory}}$  Or  $\frac{\text{CGS}}{\text{Inventory}}$
- Both versions considered *Experian critical ratios*
- a) use average inventory if sales are seasonal or cyclical
- b) time of year can seriously affect level of inventory
- c) CGS is conceptually better because it removes the gross profit margin from the numerator; however, it is often not available on a peer basis.
- d) too high may indicate that inventory is too low to service customer demands and may lead to lost current and future sales; too low may indicate that the inventory is obsolete or overpriced or poorly managed
- 3A. Average collection period =  $\text{Account Receivables} / \text{Daily Credit Sales}$
- Considered *Experian critical ratio*
- a) number of days credit sales are tied up in receivables
- b) substitute for accounts receivable turnover
- c) aging schedule could disclose other problems
- d) if credit sales not available, must use sales
- e) too high may indicate that receivables may be poorly managed or not be fully collectible; too low may indicate that not enough credit is being offered to the customers
- 3B. Accounts receivable turnover =  $\text{Annual Sales} / \text{Average Receivables}$
- a) a six would indicate today's receivables would be collected in 2 months
- b) substitute for average collection period
4. Fixed asset turnover =  $\text{Annual Sales} / \text{Net Fixed Assets}$
- a) low ratio may indicate excessive investment in FA

- b) effect of depreciation on net FA
  - c) high ratio may indicate high plant utilization near 100% capacity which may indicate a future need for more capital investment
5. Total asset turnover = Annual Sales / Total Assets
- a). low rate may indicate unproductive use of assets
  - b) more specific turnover ratios should be evaluated to identify potential problems

F. Profitability Ratios - these ratios are the most widely used income statement common-size ratios, i.e., (income statement item / sales)

1. Gross Profit Margin = Gross Profit (or Sales - CGS) / Sales  
Degree to which revenues contribute to covering costs other than CGS and contribute to profit

2. Net Operating Margin  
$$\frac{\text{Net Operating Income}}{\text{Sales}} = \text{EBIT (or NOI)} = (\text{S} - \text{CGS} - \text{G\&AE} - \text{Depr})$$

- a) Degree to which unit selling price can fall without causing a loss on an *accrual basis*
- b) Depreciation and amortization of intangibles may be added to numerator to examine degree to which unit selling price can fall without causing a loss on a *cash flow basis*

3. Net Profit Margin Before Tax = NIBT / Sales  
% of unit sales price can fall without leading to an overall loss

4. Net Profit Margin (NPM) = NIAT / Sales  
% of unit sales price that goes toward dividends or retained earnings  
Considered *Experian critical ratio*

5. Return on Assets (ROA) - Relative profitability of assets

$$\frac{\text{NIAT}}{\text{Total Assets}} = \frac{\text{NIAT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{TA}} : \text{Dupont Analysis}$$

6. Return on Equity (ROE) - Relative profitability for owners/common equity  
$$\frac{\text{NIAT}}{\text{Net Worth}} = \frac{\text{NIAT}}{\text{TA}} \times \frac{\text{TA}}{\text{Net Worth}}$$

Experian uses after-tax income/tangible net worth as one of its critical ratios; tangible net worth is common equity minus goodwill and other intangibles

that may have no value in a failure situation.

7. Tax Efficiency = Income Taxes/EBT. If tax rate is low, is it sustainable and for how long?

G. Market and other information

1. PE ratio = price per share/earnings per share, as the ratio investors are willing to pay more for a dollar of earnings
- 2A. Market Value/Book Value = price per share/book value per share; if below 1, examine carefully
- 2B. Market Value/(Book Value - Goodwill), if  $<$  or  $=$  1, then suggests market attaches no value to goodwill and company may be a candidate to write-off its goodwill to bring its books more in line with its current value.
3. Beta: covariability of stockholder's return with market return; measure of systematic (or market or nondiversifiable) risk. Also realize that a low beta may be an indicator of low marketability or trading volume.
4. Percentage change in stock price relative to industry or other peer group
5. Credit Ratings - local credit bureaus (individuals) or Dun & Bradstreet (businesses); also past creditors and suppliers
6. Bond or debt ratings - e.g., Moody's or S&P
7. Management Discussion and Analysis in 10K (annual) or 10Q (quarterly) reports

H. Importance of Ratios

1. Industry comparison
  - A. RMA Annual Statement of Studies (by industry SIC)
  - B. Almanac of Business and Industrial Financial Ratios by Leo Troy (similar to RMA but developed from IRS data)
  - C. If company's ratio is way out of line, investigate cause, but also remember to evaluate the legitimacy of the comparison standard.
2. Firm comparison
3. Trend analysis
4. Common-size analysis
  - a) express balance sheet items as a % of total assets
  - b) express income statement as a % of sales (except financial institutions which are often expressed as a % of total assets)
5. Pro forma - examine key assumptions; scenario or simulation analyses
6. Interrelationships of ratios
7. Effect of inflation on trends, e.g., real sales growth

- I. Common Covenants (Excerpts from "Credit Market Conditions and the Use of Bank Lines of Credit," C.M. James, FRBSF Economic Letter, #2009-27, August 31, 2009.) Most credit lines have material adverse condition clauses. Although rarely invoked, such clauses permit lenders to withhold funds if a borrower's

credit quality deteriorates significantly. A far more important potential limitation is the requirement that borrowers must comply with cash flow, coverage, liquidity, and other covenants specified in the credit agreement.

Cash flow covenants restrict borrowing if cash flow, or EBITDA (earnings before interest, taxes, depreciation, and amortization), drops below a preset minimum, or the ratio of debt to cash flow exceeds a preset maximum. (Jan. 2014, FED and OCC discouraged banks from providing financing for buyouts where debt/EBITDA was  $\geq 6$  for new firm, WSJ.com, 1/21/14)

Coverage covenants require that a borrower's coverage ratio (typically the ratio of EBITDA to fixed charges or interest expenses) remain above a minimum.

Liquidity covenants require borrowers to maintain liquidity, typically defined as cash and cash equivalents plus the unused portion of the credit line, above a particular level.

From January 2007 to March 2009, 84% of credit lines of publicly traded companies and 88% of lines of privately held companies contained at least one of these covenants. Credit-line availability will also vary depending on how tightly covenant threshold levels are set. For example, if a borrower's maximum debt-to-EBITDA is set at 4.5 and the ratio is already 4.25 when the commitment takes effect, then even a small EBITDA decline may violate the covenant threshold. Overall, such loan covenants in effect make credit availability contingent on borrower operating performance. If a firm's performance deteriorates, as it may during an economic slowdown, credit availability will be reduced. Lenders typically react to violations of financial covenants (so-called technical defaults) by reducing or limiting additional borrowing under the line. Thus, for lenders, credit lines provide a contingent form of insurance against liquidity shocks.

J. Liabilities - Effects of Capital Vs. Operating Leases at <http://www.investopedia.com/exam-guide/cfa-level-1/liabilities/capital-operating-leases-effects.asp>, on April 25, 2013.

**Capital Leases:** The lease agreement has to be classified as a capital lease if the non-cancelable lease term is equal to 75% or more of the expected economic life of the asset.

Effects on Balance sheet - At the inception of a capital lease, the company leasing the equipment will record the equipment as an asset, and the company will also recognize a liability on the balance sheet, by an amount equal to the present value of the minimum lease payments. The discount rate used will be the lower of the following two rates:

The lessor's (the rental company's) implied rate

The lessee incremental borrowing rate

Going forward, the leased asset is depreciated in a manner consistent with the lessee's usual policy for depreciating its operational assets. It can be over the term of the lease (most common) or over the asset's useful life, if ownership transfers or a bargain purchase option is present.

Effects on Income statement - A capital-lease payment includes two components: one is the interest expense - which is included in the income statement but is not part of operating income (earnings before taxes from continuing operations) - and the second component is the principal payment, which is included in the income statement and operating income. The interest portion will be higher in the first few years of the lease, and is consistent with the interest expense of an amortized loan. Total income over the life of the leased assets will be the same for operating and capital leases.

Effects on Cash flow statement - Total cash flow statements remain unaffected by operating and capital leases. That said, cash flow from operations will include only the interest portion of the capital-lease expense. The principal payment will be included as a cash outflow from cash flow from financing activities. As a result, capital leases will overstate CFO and understate CFF.

**Operating Leases** - Effects on Balance sheet - No assets or liabilities are recorded.

Effects on Income statement - The operating-lease payment will be treated as an operating expense.

Effects on Cash flow statement - Cash flow from operations will include the total lease payment for the specified accounting period.

**“Coming to a Balance Sheet Near You: \$2 Trillion in Leases,” Michael Rapoport, Nov. 10, 2015 7:13 p.m. ET WSJ.com, <http://www.wsj.com/articles/leases-to-put-new-weight-on-corporate-balance-sheets-1447200831>.** Emily Chasan contributed to this article. (EXCERPTS)

Some of America’s best-known companies—names such as AT&T Inc., CVS Health Corp. and Delta Air Lines Inc. —likely will soon have to effectively boost the debt they report on their balance sheets by tens of billions of dollars. The total possible impact for all companies: as much as \$2 trillion.

Within a few years, companies may have to add to their books the cost of many leases for real estate, aircraft and other items that aren’t already carried there. U.S. rule makers are set to vote Wednesday on whether to approve in principle long-awaited new rules requiring companies to make that addition, though the move wouldn’t take effect until at least 2018.

If approved, as many observers expect, that change could dramatically boost the reported leverage for retailers, restaurant chains, airlines, package-delivery companies and other companies that use leases heavily. Companies must already disclose their lease obligations, but it is done in the footnotes to their financial statements; they aren’t included in the balance-sheet numbers to which investors pay the most attention.

The change won’t create any new obligations for companies, and it isn’t expected to drastically change companies’ earnings or book value. But it could change some financial ratios, such as return on assets. That is because companies will be adding assets to their balance sheets as well

as obligations to reflect the impact of the leases. As assets rise, the return as a percentage of those assets would decline.

The proposed rules have been in the works for a decade, and are “very much needed,” said J. Edward Ketz, an associate professor of accounting at Penn State University. Companies have often structured the terms of their leases to enable them to keep from officially counting many leases on their books, regulators and critics have said.

AT&T had \$31 billion in operating-lease obligations—those not currently carried on the balance sheet—as of the end of 2014, according to its latest annual report. Adding those obligations to the balance sheet would significantly increase its liabilities; the company has long-term debt of \$76 billion.

CVS, which leases real estate for its thousands of pharmacies, had \$27.3 billion in operating-lease obligations as of the end of 2014, compared with \$11.7 billion in long-term debt. Delta, which leases aircraft, had \$12.7 billion, compared with \$8.6 billion in long-term debt.

A CVS spokeswoman said that while the new rule could affect a company’s financial statements, “it does not affect a company’s creditworthiness or underlying cash flow.” Delta didn’t have any immediate comment.

One other issue some critics fear: Adding the lease obligations could trigger violations of debt covenants. But the FASB notes the long lead time until the new rule would take effect means it is likely that many such covenants will mature or be updated before it becomes an issue. And technically, the FASB says, leases will be considered “operating obligations” rather than debt.

K. **GAAP vs IFRS** at <http://www.differencebetween.net/business/difference-between-gaap-and-ifs/> on April 25, 2013.

The IFRS or the International Finance Regulation Standards are defined by the International Accounting Standards Board. The IFRS is increasingly being adopted by companies across the globe for preparing their financial statements. On the other hand, the US GAAP has been developed by the Financial Accounting Standards Board or FASB for listed companies. Chris Cox, former chairman of the Securities Exchange Commission or SEC, has asked US companies to transition to IFRS by 2016.

There are quite a few similarities between IFRS and US GAAP and the differences are rapidly getting reduced owing to the convergence agenda of both these organizations. The differences explained below are just a few significant ones and as of this point of time. These can change due to developments in the convergence agenda of the IFRS and US GAAP.

With respect to revenue recognition, US GAAP has developed a detailed guidance for different industries incorporating standards suggested by the other local accounting standard organizations in the US. IFRS, on the other hand, mentions two main revenue standards along with a couple of interpretations related to revenue recognition as guidance.

There are also some significant differences related to when an expense should be recognized and the amount that has to be recognized. For instance, IFRS recognizes the expense of certain stock options with vesting over a period of time sooner than the GAAP.

There are also some significant differences between the US GAAP and IFRS with respect to the arena of financial liabilities and equity. Instruments that were regarded as equity by the US GAAP will be considered as debt under the IFRS standards.

The US GAAP has several criteria for consolidation whereas under IFRS, a company can consolidate based on the power it can exercise on the financial and operational policies of the other entity. By being responsible for the reporting and performance of these new entities can affect the company's financing arrangements and several more areas.

Unlike US GAAP, IFRS forbids companies from using the LIFO or the last in, first out method of costing inventory. Companies using LIFO will have to transition to other costing methodologies.

#### Summary:

- 1.Regarding revenue recognition, US GAAP is more detailed and industry-specific than IFRS.
- 2.Expense recognition has some differences with respect to the time period and expense amount that can be recognized by the companies.
- 3.Some financial instruments that were recognized as equity by GAAP will be recognized as debt under IFRS.
- 4.The IFRS allows consolidation based on the power exercised by the company on the financial and operational policies of the other entity.
- 5.IFRS does not allow the use of LIFO method of inventory costing.

IX. Sources and Uses of Funds: Comparative Statics – This is a simple version of a statement of cash flows that analyzes operating activities (changes in current assets and liabilities), investing activities (changes in long-term assets), and financing activities (changes in long-term liabilities and equity).

- A. Purpose is to show historically where funds (cash or working capital) come from and where it was used
- B. Although it deals with the past, it can be made into a pro-forma condition
- C. Tabulate changes from one year to another then classify changes as to source or use
  - 1. Sources: increases in Depreciation and Retained earnings, i.e., net income after taxes minus dividends, are sources
    - a) decrease in an asset item
    - b) increase in a liability item
  - 2. Uses
    - a) increase in an asset item
    - b) decrease in a liability item
- D. Sources must equal uses
- E. Pro forma S&U Statements are useful in identifying additional financing needed (AFN):  $AFN = [\Delta CA + \Delta GFA - \uparrow \text{Accum. Depr.}] - [\Delta CL + \Delta LTD + \Delta PS + \Delta CS + \Delta RE]$

**COMPARATIVE BALANCE SHEETS**  
**XYZ Corporation**

	<u>1/1/69</u>	<u>1/1/70</u>	<u>Source</u>	<u>Use</u>
Total Assets	<u>\$200</u>	<u>\$235</u>		
Cash	20	10	10	
Marketable Securities	15	0	15	
Accounts Receivables	30	40		10
Inventory	70	100		30
Gross Fixed Assets	100	140		40
<u>Less Accumulated</u>				
Depreciation	35	55	20	
Net Fixed Assets	65	85		
 Total Liabilities + Equity	 <u>200</u>	 <u>235</u>		
Accounts Payable	20	25	5	
Short-term Notes Payable	20	5		15
Long-Term Debt	20	45	25	
Preferred Stock	5	5		
Common Stock	45	45		
Retained Earnings	<u>90</u>	<u>110</u>	<u>20</u>	
 Total Sources or Uses			 95	 95

X. Cash Budget: Used to distinguish Between Long and Short-Term \$ Needs

A. Cash Cycle

1. Firm begins life by obtaining capital and putting part of funds into cash and part into plant and equipment
2. Firm receives an order → purchase of raw materials → accounts payable
3. Application of labor → increase in work-in-process inventories and accrued wages and may lead to a decrease in cash and an increase in notes payable
4. Sale of finished goods on credit → AR at market prices: peak in cash cycle since AR must be financed until they become cash

**WORK SHEET**

	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Sales	\$10,000	10,000	20,000	30,000	40,000	20,000	20,000	10,000
Collections								
1st Month (20%)	2,000	2,000	4,000	6,000	8,000	4,000	4,000	2,000
2nd Month (70%)	7,000	7,000	14,000	21,000	28,000	14,000	14,000	
3rd Month (10%)			1,000	1,000	2,000	3,000	4,000	2,000
TOTAL	2,000	9,000	12,000	21,000	31,000	35,000	22,000	18,000
Purchases (70% of next month sales)	7,000	14,000	21,000	28,000	14,000	14,000	14,000	7,000
Payments		7,000	14,000	21,000	28,000	14,000	14,000	7,000

**CASH BUDGET**

	<u>July</u>	<u>August</u>	<u>Sept.</u>	<u>October</u>	<u>Nov.</u>	<u>Dec.</u>
Receipts						
Collections	<u>12,000</u>	<u>21,000</u>	<u>31,000</u>	<u>35,000</u>	<u>22,000</u>	<u>18,000</u>
Payments						
Purchases	14,000	21,000	28,000	14,000	14,000	7,000
Wages & Sal.	1,500	2,000	2,500	1,500	1,500	1,000
Rent	500	500	500	500	500	500
Other Expenses	<u>200</u>	<u>300</u>	<u>400</u>	<u>200</u>	<u>200</u>	<u>100</u>
Total Payments	<u>16,200</u>	<u>23,800</u>	<u>31,400</u>	<u>16,200</u>	<u>16,200</u>	<u>8,600</u>
Net Cash Gain (Loss)	(4,200)	(2,800)	( 400)	18,800	5,800	9,400
Initial Cash	<u>6,000</u>	<u>1,800</u>	<u>(1,000)</u>	<u>(1,400)</u>	<u>17,400</u>	<u>23,200</u>
Cumulative Cash	1,800	(1,000)	(1,400)	17,400	23,200	32,600
Desired Level of Cash	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>
Cash Excess (or needs)	3,200	6,000	6,400	12,400	18,200	27,600

**Conclusions**

Pro-forma cash budget shows cash is needed for less than six months; short-term loan will take care of it.

**Example Income Statement and Common-Size Ratios**

Sales		\$250,000	100.0%
Cost of Goods Sold			
Materials	\$95,000		
Labor	60,000		
Heat, Light, Power	9,000		
Indirect Labor	15,000		
Depreciation	<u>5,500</u>	<u>184,500</u>	<u>73.8%</u>
Gross Profit		65,500	26.2%
Selling Expenses	25,000		
General & Adm. Expenses	<u>20,500</u>	<u>45,500</u>	<u>18.2%</u>
Net Operating Income (NOI or EBIT)		20,000	8.0%
Less: Interest Expenses		<u>1,200</u>	<u>0.48%</u>
Net Income Before Taxes		18,800	7.52%
Less: Federal/State Income Taxes		<u>9,400</u>	<u>3.76%</u>
Net Income After Taxes		<u><u>9,400</u></u>	<u><u>3.76%</u></u>

Notes:

1. A business that is losing money may be able to repay loans because certain expenses (depreciation, amortization of goodwill, patents, etc.) are non-cash outlays.
2. Common-size ratios, i.e., (each income statement item/sales), should be compared over time for trends and against peers to determine causes of both high and low deviations from norms.