LOS 16a: describe the qualitative and quantitative factors used to evaluate a corporate borrower's creditworthiness.

Creditworthiness of a Company

The main factor in assessing a company's creditworthiness is its capacity to generate profits and cash flow adequate to fulfill its interest and principal obligations. This is a crucial aspect of a company's financial health and stability, and it is closely monitored by analysts and investors alike. For instance, a company like Apple Inc., with a strong cash flow and high profitability, is considered to have high creditworthiness.

Corporate Default

Analysts use a combination of qualitative and quantitative factors to assess the likelihood of a corporate default. A corporate default occurs when a company is unable to meet its financial obligations, such as paying interest or repaying the principal on its debt. The risk of corporate default is a key concern for investors, as it can result in significant financial losses. For example, the default of Lehman Brothers in 2008 led to massive losses for its investors and triggered a global financial crisis.

Qualitative and Quantitative Factors in Credit Risk Analysis

Qualitative Factors in Evaluating Corporate Borrowers' Creditworthiness

The ability of a company to satisfy its debt obligations is gauged by several key qualitative factors. These include the company's business model, the industry it operates in, and the competitive forces and business risks it faces. For instance, a company like Amazon, with a diverse business model and a dominant position in the e-commerce industry, is likely to have a higher capacity to use debt in their capital structure and a lower likelihood of default compared to a small retail business with a single line of business and high competition. Qualitative factors are discussed in more detail below.

1. Corporate Governance:

i. Use of Proceeds & Treatment of Debtholders: Companies must transparently communicate how they intend to use the borrowed funds. If funds are directed towards growth or improving operational efficiency, it signifies a positive intention. Equally important is the company's history of treating its debtholders, which can provide insights into its ethical standards and reliability.
ii. Legal, Tax, and Accounting: Adherence to legal regulations, punctual tax payments, and adoption of universally accepted accounting practices reflect a company's commitment to ethical operations. Any deviations or legal disputes can be red flags for potential debtholders.
iii. Covenant Compliance: Consistent compliance with loan covenants indicates the borrower's respect for contractual obligations and its intent to maintain a positive relationship with lenders.

2. Industry and Competition:

i. Structure & Concentration: A dominant position in the industry or a less crowded market can mean reduced competitive pressures, potentially leading to stable revenues.
ii. Competitive Forces: Companies in hyper-competitive industries may face challenges like price wars, which can erode profit margins and impact their ability to service debt.
iii. Long-Term Growth & Demand: Industries with a positive growth trajectory offer better opportunities for companies to expand, improving their revenue streams and ability to meet financial obligations.

3. Business Risk

Business risk refers to the potential for adverse outcomes or uncertainties that may impact the operations, profitability, or overall success of a business. It encompasses various factors such as market volatility. Companies that frequently fail to meet their projected financial outcomes may be perceived as exhibiting unpredictability, hence creating challenges for lenders in placing confidence in their future projections.

4. Business Model:

  i. Demand/Revenue/Margin: A consistent demand for products/services, steady revenue streams, and healthy profit margins are indicators of a robust business model. This consistency assures lenders of the company's ability to generate enough revenue to meet its debt obligations.
  ii. Stability and Predictability: A business model that demonstrates resilience, especially during economic downturns, is more attractive to lenders.
  iii. Asset Quality: High-quality assets can be liquidated easily if needed, providing an additional layer of security for lenders.

5. Issuer-Specific Factors:

  i. Demand/Revenue/Margin: Factors specific to the issuer, such as its market reputation, client relationships, and unique selling points, can influence its revenue patterns.
  ii. Stability and Predictability: Issuers with a history of stable operations and predictable cash flows are more likely to be trusted by lenders.

6. Industry-Specific Factors:

Cyclicality, intra-industry rivalry, and life cycle are important factors to consider when analyzing companies in different stages of industry development. Mature industries often experience slower growth rates due to their established market positions. On the other hand, companies operating in developing industries may encounter higher growth rates but also confront greater unpredictability.

7. External Factors:

  i. Macroeconomy & Technology: Economic downturns or rapid technological changes can disrupt operations. Companies that can adapt and innovate are better positioned to navigate these challenges.
  ii. Demographic, Government, Geopolitics, & ESG: Changes in population dynamics, governmental policies, geopolitical tensions, and ESG considerations can significantly

impact a company's operations. Companies that proactively address these challenges demonstrate foresight and resilience.

Quantitative Factors in Evaluating Corporate Creditworthiness

Financial statement analysis and projections offer a numerical representation of an analyst's expectations for a firm's outcomes. Insights into the company's core operational factors and anticipated challenges and prospects guide the formulation of these models. These insights are gathered either through a broader, macroeconomic viewpoint or a more granular, company-focused approach. In contrast to equity models, which determine stock value based on all available cash flows to shareholders, quantitative credit assessment calculates a firm's ability to handle future debt.

A top-down review starts by considering the economic trends, comparing a company's growth to the GDP, understanding its potential market size, its position within that market, and evaluating potential negative events via scenario analysis. Given that economic phases influence when and how credit cycles happen, the expected effects of these credit cycles on a company or sector often serve as a barometer for broad-scale credit risk. Integrating anticipated economic trends with specific company factors can help forecast cash flows. Conversely, a bottom-up approach zeroes in on primary sources of income and key items on the balance sheet. The aim of quantitative research is to pinpoint what influences a company's likelihood of default (POD) and track its evolution over various credit cycles. Qualitative factors include;

1. Macro (Top-Down) Approach:
    - Macroeconomy:

        i. GDP growth: This reflects the economic health of the country or region where the company operates. A rising GDP often suggests a thriving economy, which can be beneficial for businesses.

        ii. Cyclicality: Businesses often face ups and downs based on economic cycles. Understanding where a company stands in these cycles can provide insights into its future performance.
    - Industry:

i. Addressable Market: It's essential to know the total potential market the company can cater to. A larger addressable market often means more opportunities for growth.
ii. Market share: The company's share in its market can indicate its competitiveness and dominance. A higher market share often equates to better business stability.

- Event risk:

i. Scenario analysis: Anticipating various future scenarios (both positive and negative) helps in understanding how external factors might affect the company.
ii. External shocks: Unpredictable events, like geopolitical issues or natural disasters, can impact a company's performance. A company's preparedness and resilience to such shocks can be a critical factor in its creditworthiness.

2. Issuer-Specific (Bottom-Up) Approach:

- Balance sheet:

i. Liquidity: A company's ability to quickly convert its assets into cash to meet short-term obligations is crucial. High liquidity often suggests that a company can comfortably cover its immediate liabilities.
ii. Leverage: This measures the company's dependence on borrowed funds. High leverage can indicate higher risk, as it means the company has significant debt compared to its equity.
iii. Profitability: The company's margin and return on assets or equity can provide insights into its operational efficiency and its ability to generate returns.

- Income statement:

i. Revenue growth: A steady increase in sales suggests that the company is growing and can potentially expand further.
ii. Operating profit: This is a clear indicator of how well a company's core business operations are performing, excluding any one-off items or financial activities.

- Cash flow statement:

i. Debt service coverage: The ratio of operating income to total debt service. It helps determine if the company generates enough income to cover its debt obligations.

ii. Interest coverage: This measures the company's ability to pay interest on its outstanding debt. Higher values indicate more earnings available to cover interest expenses, suggesting lower credit risk.

Question

When evaluating the creditworthiness of a company in a mature industry, which of the following is most likely a potential challenge lenders should consider?

A. The company will likely experience higher growth rates due to its established market position.
B. The company may face greater unpredictability in its operations.
C. The company may encounter slower growth rates due to the established nature of the industry.

The correct answer is **C.**

Mature industries often experience slower growth rates because of their established market positions.

A and B are incorrect: Companies in mature industries are less likely to experience higher growth rates and typically face less unpredictability than those in developing industries.

LOS 16b: calculate and interpret financial ratios used in credit analysis.

Financial ratios derived from quantitative factors enable credit analysts to gauge a company's financial health, spot trends, and conduct comparisons within and across sectors. The focus is primarily on three critical areas: profitability, coverage, and leverage.

Profitability Ratios

EBIT Margin

It assesses a company's operational efficiency before considering capital costs and taxes.

$$\text{EBIT Margin} = \frac{\text{Operating Income}}{\text{Revenue}}$$

A high EBIT margin suggests that a larger portion of sales revenue remains after paying for variable costs of production, indicating good profitability.

Coverage Ratios

EBIT to Interest Expense

This metric measures a company's ability to cover its interest obligations using its operating profit.

$$\text{EBIT to Interest Expense} = \frac{\text{Operating Income}}{\text{Interest Expense}}$$

A higher value suggests that the company can easily meet its interest obligations from its operating profit, indicating lower credit risk.

Leverage Ratios

Debt to EBITDA

It evaluates the company's leverage by comparing its total debt to its overall operating performance.

$$\text{Debt to EBITDA} = \frac{\text{Debt}}{\text{EBITDA}}$$

A higher Debt to EBITDA is a red flag, indicating a higher degree of financial risk.

RCF to Net Debt

Assesses leverage by comparing cash retained in the business to net debt.

$$\text{RCF to Net Debt} = \frac{\text{Retained Cash Flow (RCF)}}{\text{Debt} - \text{Cash and Marketable Securities}}$$

A higher RCF to Net Debt suggests the firm has retained more cash relative to its net debt, pointing toward better financial stability.

Cash Flow Measures

Cash flow measures such as Free Cash Flow (FCF), Funds From Operations (FFO), and Retained Cash Flow (RCF) are often used in credit analysis. They emphasize cash flows from operations over those from asset sales or financing. Some cash flow measures Include:

1. Free Cash Flow (FCF): Net income minus necessary investments in working capital and fixed assets and net interest paid.
2. Funds from Operations (FFO): Net income with added back non-cash expenses.
3. Retained Cash Flow (RCF): Operational cash flow minus dividends.

These measures are conservative because they adjust for cash used in core business activities or distributed to shareholders.

Additional Considerations

Debt and interest measures might undergo adjustments to account for operational leases or other fixed commitments, not on the balance sheet. The concepts and definitions provided for these ratios are among several usages and may not have official IFRS definitions.

Example: Credit Analysis

A credit analyst is evaluating the financial health of AlphaTech Inc. The company's financials are given in the following table:

Metric	Amount ($ in millions)
Operating Income (EBIT)	50
Revenue	200
Interest Expense	10
Total Debt	150
EBITDA	70
Cash and Marketable Securities	30
Dividends	5

Profitability Ratios

EBIT Margin = $\frac{\text{Operating Income}}{\text{Revenue}} = \frac{50}{200} = 0.25$ or 25%

With an EBIT Margin of 25%, AlphaTech Inc. retains $0.25 for every dollar of revenue after covering variable production costs. This is a strong profitability indicator.

Coverage Ratios

EBIT to Interest Expense = $\frac{\text{Operating Income}}{\text{Interest Expense}} = \frac{50}{10} = 5$

An EBIT to Interest Expense ratio of 5 indicates that AlphaTech can cover its interest expense 5 times over with its operating profit, implying lower credit risk.

Leverage Ratios

Debt to EBITDA:

$$\text{Debt to EBITDA} = \frac{\text{Debt}}{\text{EBITDA}} = \frac{150}{70} = 2.14$$

The Debt to EBITDA ratio of 2.14 suggests that AlphaTech's debt is slightly over twice its operational performance. A higher value here would be concerning.

RCF to Net Debt:

RCF (Net cash from operations - Dividends) = $50 - 5 = 45$

Net Debt = Debt - Cash and Marketable Securities = $150 - 30 = 120$

$$\text{RCF to Net Debt} = \frac{\text{RCF}}{\text{Net Debt}} = \frac{45}{120} = 0.375 \text{ or } 37.5\%$$

The RCF to Net Debt ratio of 37.5% indicates that the company retains cash, equating to 37.5% of its net debt, which is a positive sign of financial stability.

Question

Company A and Company B operate in the same industry.

	Company A	Company B
EBITDA margin	20%	18%
FCF	(−15)	10
FCF before dividends	(−10)	5
Debt/EBITDA	3.0	2.0
EBITDA/interest expense	2.5	3.0

Based on the financial information above, which of the following statements Is most likely correct?

A. Company A has a lower credit risk than Company B.
B. Company B has a lower credit risk than Company A.
C. Both companies have the same credit risk.

The correct answer is **B.**

1. EBITDA margin: Company A has a higher EBITDA margin (20% vs. 18%), suggesting it is more profitable.
2. FCF: Company B has a positive FCF of 10, while Company A has a negative FCF of (15). This indicates that Company B is in a better cash flow position.
3. FCF before dividends: Company B also has a better position here with 5 compared to Company A's (10).
4. Debt/EBITDA: Company B has a lower Debt/EBITDA ratio (2.0 vs. 3.0), suggesting it is less leveraged and, therefore, potentially less risky.
5. EBITDA/interest expense: Company B has a higher EBITDA/interest expense ratio (3.0 vs. 2.5), meaning it is better positioned to cover its interest expenses with its earnings.

Based on the evaluation: Company A has a higher EBITDA margin, but this advantage is offset by its negative FCF, higher leverage, and lower interest coverage. Company B has positive FCF, better FCF before dividends, lower leverage, and better interest coverage.

LOS 16c: describe the seniority rankings of debt, secured versus unsecured debt and the priority of claims in bankruptcy, and their impact on credit ratings.

Debt seniority is the system that determines the priority of payment when a company defaults. Debt obligations vary in seniority. Some companies have simple capital structures, while others, especially those in industries impacted by regulations or acquisitions, have complex debt structures.

Seniority Rankings of Debt

Secured vs. Unsecured Debt:

Secured debt Is a type of debt that has collateral (e.g., real estate, machinery) backing it. In case of a default, lenders can seize the collateral to recover their money. An example would be a mortgage, where a house serves as collateral. On the other hand, lenders of unsecured debt provide funds without any specific asset as collateral. Credit cards are common unsecured debts. Debt with a higher seniority ranking often has better credit ratings due to its priority in repayment and the security it offers to lenders.

Hierarchy of Seniority:

i. First Mortgage and First Lien: These are top of the pile when it comes to debt repayment. They have the first claim on assets in case of a default.
ii. Second Lien: Ranking just below the first lien, it has a secondary claim on the collateral.
iii. Senior Unsecured Debt: Without specific collateral but ranks higher than other unsecured debts.
iv. Subordinated Debt and Junior Subordinated Debt: These are at the bottom of the ranking. They will only be repaid once all other debt obligations are satisfied.

Priority of Claims in Bankruptcy

When a company goes bankrupt, there's a legal pecking order regarding who gets paid back first:

i. Secured Creditors: These lenders have the first dip into the company's assets. If a company pledged specific assets like property or equipment to secure a loan, the lender could seize and liquidate these assets to recover its money.
ii. Unsecured Creditors: Once secured creditors are paid, unsecured creditors, like bondholders or suppliers who provided goods on credit, are next in line.
iii. Shareholders: These stakeholders are last in line. Common shareholders will only receive money if there are any leftover funds after all the creditors have been paid. Often, they end up with nothing.

Bankruptcy can reduce a company's value due to associated costs, like legal fees, and operational challenges, like the loss of key personnel.

Recovery Rates

Recovery rates indicate the portion of the debt that might be recovered in a bankruptcy scenario.

Factors Affecting Recovery Rates:

i. Seniority Ranking: Senior debts usually have higher recovery rates.
ii. Industry & Economy: Industries in decline tend to have lower recovery rates. Strong economies lead to higher recovery rates due to better resale value of collateral.
iii. Debt Composition: An abundance of secured debt might reduce the recovery rate for lower-ranked debt.

Bankruptcy Implications

The legal standard prioritizes the highest-ranked creditors first. However, to expedite the bankruptcy process, lower seniority creditors and shareholders might receive payments. Bankruptcy can also erode company value due to legal fees, loss of key personnel, and market share reduction. Finally, bankruptcy laws and outcomes differ across countries, influencing creditor outcomes in default scenarios.

Issuer vs. Issue Ratings

Credit rating agencies often differentiate between a company's overall creditworthiness (issuer rating) and the creditworthiness of a specific debt issue (issue rating). While the issuer rating might look at the big picture, the issue rating would consider specifics like seniority. The probability of default might be the same for an issuer and its issues. However, ratings can differ due to differences in loss-given default (LGD) stemming from factors like seniority.

Notching is a rating adjustment methodology that considers differences in loss severity. Structural subordination arises when a corporation with a holding company structure has debts at both its parent holding company and operating subsidiaries.

Role of Seniority

The seniority of a debt instrument can influence its credit rating. Senior debts are often seen as less risky and might get a higher rating compared to subordinated debts.

Rating Agencies' Approaches

i. Moody's focuses on both the probability of default and the expected financial loss, with their ratings primarily reflecting the expected loss.

ii. Standard & Poor's (S&P) leans more towards the probability of default in its credit ratings. They issue separate recovery ratings to indicate relative seniority and expected loss.

iii. Fitch aligns more with S&P, offering Issuer Default Ratings reflecting a probability of default view, and making rating adjustments based on expected recoveries for specific issues.

Question

Which of the following debt types Is most likely to have the lowest priority in the event of a company bankruptcy?

A. First Mortgage
B. Senior Unsecured Debt
C. Subordinated Debt

The correct answer is C:

Subordinated Debt is at the bottom of the seniority rankings and will only be repaid once all other debt obligations are satisfied.

A is incorrect: First Mortgage is at the top of the debt repayment hierarchy.

B is incorrect: Senior Unsecured Debt, while it doesn't have specific collateral, still ranks higher than Subordinated Debt.