Understanding Credit and Credit Analysis: Substantive Characteristics of securities applied to credit instruments

Fernando Diz

Credit Risk

- What is it?
  - The probability that a money default will happen.

- Events of default:
  - Broadly, there are two types of defaults:
    - Money Defaults
    - Non-Money defaults

- We shall define CREDIT RISK as the probability of a "Money Default"; i.e. an issuer fails to pay when payment is due.

Credit Risk Analysis

- Credit Risk Analysis *or Credit Analysis vs.* Distressed Analysis?

- The analogy is as follows:
  - In credit analysis you are trying to predict whether a storm is going to happen while the waters are calm.
  - In distressed analysis you are trying to steer a ship in the middle of a storm.

Credit risk analysis

- Credit risk is a function of three factors:
  - Leverage
  - Priority
  - Time

Understanding Leverage

- To understand LEVERAGE one must understand the sources of CREDIT SUPPORT.
- Remember: Low levels of credit support are equivalent to HIGH levels of leverage and vice-versa.

- Where does credit support come from?

Forms of Credit Support

- Credit support comes in three different forms:

1. Cash flows from operations
2. Collateral (the value of assets that can be sold and can be pledged to “secure” payment of obligations)
3. Access to capital markets (ability to refinance or raise more capital)

Lenders' considerations about credit support

- Are cash flows adequate support for the loan? (levels)
- Are they very volatile or stable? (certainty of flows)
- Who do the lenders have to share the cash flows with? (other claimants in the capitalization)

Secured Lending

- If cash flows are: a) inadequate, or b)too volatile, and/or c)have to be shared with other claimants, then
- Lenders will demand other sources of support, namely: assets that can be pledged as collateral to “secure” the loan.
- This gives rise to “secured lending”

Common forms of secured lending?

1. A loan secured by a Mortgage. A mortgage is not a loan. A mortgage is a document giving the lender a “security interest” (legal ownership) in the collateral, in this case “real property”.
2. Working capital lines (revolvers) secured by inventories and receivables. These are called asset-based lending. Very common in the retail world.

Secured and Unsecured credit

- Depending on the forms of credit support behind a loan, we can divide credit into two categories:

1. Secured credit (credit support represented by both cash flows AND collateral)
2. Unsecured credit (credit support only provided by cash flows)

Secured and Under secured credit

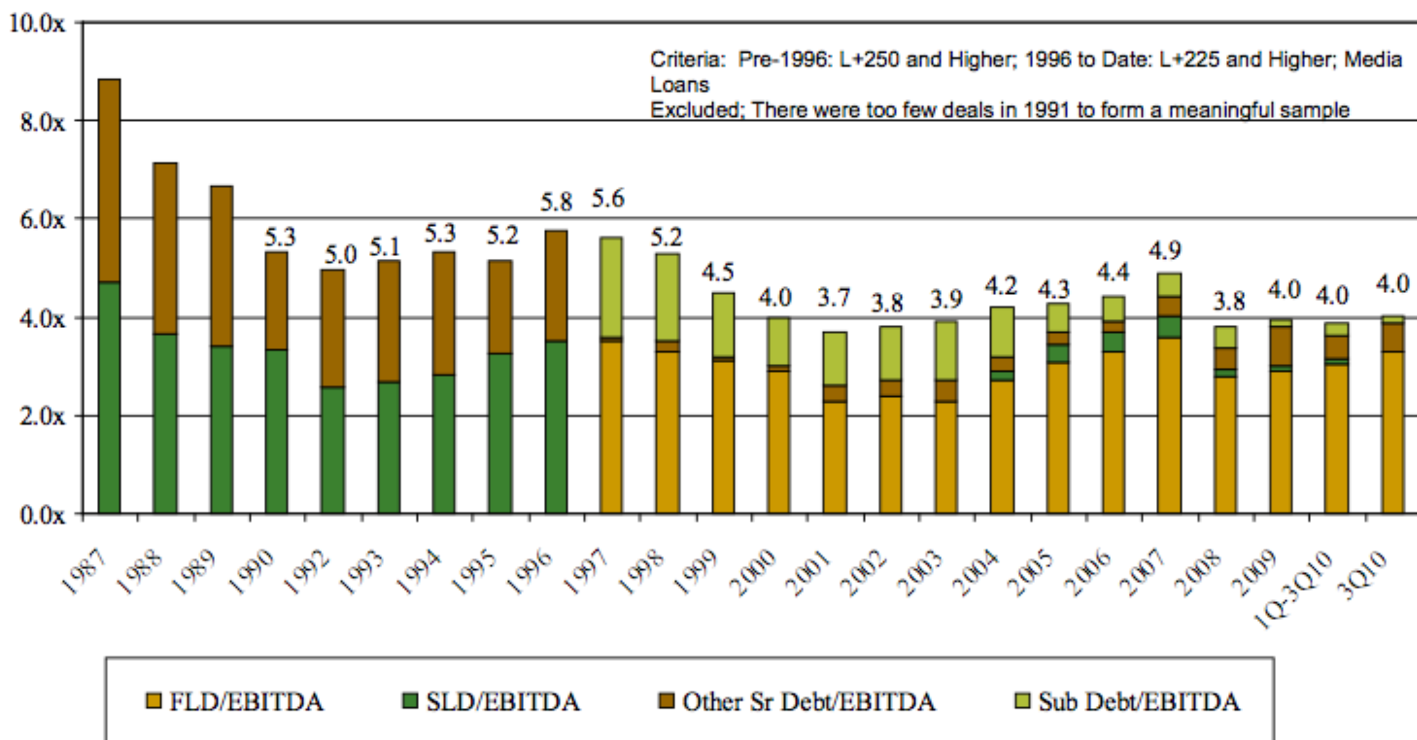
- If the value of the collateral more than covers the amount of the loan AND this collateral is not shared with any other creditor, the loan is said to be “over-secured”
- If the value of the collateral covers less than the value of the secured loan, then the loan is said to be under-secured.
- In bankruptcy this difference is quite important in the calculation of recoveries to different creditors.

Measures of Leverage

- Based on these sources of credit support, we can understand the most common measures of leverage:
  1. Amount of Debt Outstanding / EBITDA
     - EBITDA = earnings before interest, taxes, depreciation and amortization. It is a quick operating measure of cash flows.
     - What is the unit of measurement of this measure of Leverage?
     - Amount of Debt outstanding = $
     - EBITDA = $/year or quarter (it is a flow measure)
     - So, the measure of leverage measures how quickly Debt Outstanding can be repaid.

Average Debt Multiples of Highly Leveraged Loans

Note: For years 1987-1996, breakouts of first-lien debt & second-lien debt were not available, therefore the lower portion of the column reflects Bank Debt/EBITDA and top reflects all Non Bank Debt/EBITDA



Measures of Leverage

2. Times Interest Earned = EBITDA / Interest
   - This is an interest servicing measure, important if debt has bullet maturity and its maturity is far from now.
3. Amount of Debt Outstanding / Total Assets.
   - This is a measure of asset or collateral support. May be less valuable if we use “book value” of assets which may differ substantively from their actual commercial value.

Important to Remember

- Most of these measures of leverage are calculated using GAAP numbers!!
- What this means is that:

  Lenders, Regulators, etc. will be looking at measures that YOU can calculate with published financial information in 10K reports!

Limitations

- In Multilayered Corporate Structures, the asset support measure may not mean much because we need to know which entities are doing the borrowing.
- More on this later.

Credit Capacity

- What is it?
- How much can a business borrow “prudently”.
- NO SINGLE ANSWER TO THIS BECAUSE it will depend on how much CREDIT RISK a business is willing to undertake.
- The issue of credit capacity applies only to UNSECURED lending. (get it?)

Way to think about secured lending

- When one thinks about secured lending, one may be fooled into thinking that a secured lender has TWO layers of credit support; a) cash flows, and b) collateral.
- Credit support due to collateral comes only into play if a company gets into financial trouble and has to file for Bankruptcy.

Secured lending

- Ultimately, secured lender will pay attention to:
  1. Ability to pay (cash flow)
  2. Extractable EBITDA (look for waste)
  3. Meaningful repayment of principal over time. (secured loans are amortizing)
  4. Ability to refinance at maturity
  5. Maintaining asset value (collateral value)

- TIP: What lender look for to make a loan, they also look into to MONITOR the debtor (covenants)

Priority

- Priority mechanisms and the allocation of credit risk: how is credit risk ALLOCATED among creditors in the capital structure?
- The primary method by which credit risk is "allocated" is through prioritization mechanisms that control the order of payment. (remember Zahn vs. Transamerica?)

Determination of priorities

- There are four primary techniques for the determination of payment priorities:

1. Grants of Collateral
2. Contractual provisions
3. Corporate structure
4. Maturity structure

Grants of Collateral

- We have already discussed secured lending at length.
- Suffice it to say, in the event that a company files for Bankruptcy (either Chapter 7 or Chapter 11), secured lenders have first priority of payment since they have security interests in valuable collateral.

Contractual provisions

- Corporate law assumes that all liabilities of a company have the same priority of payment, unless the holders of those liabilities EXPLICITLY AGREE to reduce their priority.

1. The primary provision to change priorities of payment are “subordination agreements”
   - Subordination agreements are “inter-creditor” agreements.

Contractual provisions

- When you read credit documents you must look for words like:
  - “Senior”
  - “Junior”
  - “Subordination”

Contractual provisions

2. Non-recourse provisions
    - A non-recourse provision, typically found in secured loans, states that in the event of default on the loan, the lender cannot (has no right) to attempt to recover from other parties (i.e. a subsidiary, management, etc.)
    - Common in real estate loans in the US (commercial)
    - Not common in Europe.

Contractual Provisions

3. Guarantees: providing guarantees is a common business practice that can enhance the credit support of a borrower
    - Your dad or mom being a co-signer on a loan, for example is a guarantee that if you do not pay, they will.
    - In corporate structures there are several types of guarantees: a) downstream guarantees, b) upstream guarantees, c) horizontal guarantees.

Maturity Structure

- A more important consideration when analyzing the characteristics of “debentures”; i.e. unsecured credit.
- Think:
  - Issuer: Wants longer maturity so that it has much longer to either refinance or repay.
  - Lender: Wants shorter maturity, the longer the maturity the longer they are exposed to adverse credit developments.
  - Senior lenders do not want Junior lenders’ instruments to mature before theirs. Why?

Corporate Structure

- Another way of assigning priorities is through the placement of debt at different levels on the Capital Structure.
- Corporate Structures arise out of:
  - The needs of insulating a parent companies from the liabilities of a subsidiary.
  - To manage disparate operating businesses
  - Financial Reporting
  - Organizational accountability
  - Create or reinforce capital structure priority differences.

Example:

Individual financials

Holding, Inc.	
Subsidiary 1 Stock	$500 Senior
	Equity

Subsidiary 1 Corp.	
Subsidiary 2 Stock	$250 Bank Loan
	Equity

Subsidiary 2 Corp.	
$1,500	Equity
	$500 Debenture

Consolidated Financials

Holding, Inc.	
$1,500	$250 Bank Loans
	$500 Sr. Notes
	$500 Debentures
	$250 Equity

Corporate Structure

- On the figure we see the effects that corporate structure will have on the assignment of priorities.
- On a consolidated basis, one may think the bank has priority over the senior notes.

Corporate structure

- Although on a consolidated basis, ”debt” may appear to be at the “parent” or “holding company” level, in reality that is seldom the case.
- In a multilayered corporate structure, by operation of law, value flows up in accordance with stock ownership.

Example

- If all three entities were to file for Chapter 11 Bankruptcy, the liquidation rules would be observed:
- 1. Sub 2 assets (operating assets) are sold, say for $1,500. After the Debentures are paid, the rest of the money belongs to Sub 2 sole shareholder; i.e. Sub 1.
- 2. Sub 1 gets $1,500 - $500 = $1,000, and pays the $250 loan. Once paid, the remaining $750 belongs to the sole shareholder of Sub 1, Holdco.

Example continued

- 3. Holdco pays the $500 senior notes and the rest is distributed among shareholders of Holdco.
- What if the liquidation value of the assets of Sub 2 decreases to $600 (for whatever reason)?
- By operation of law, the Debentures get paid in full, i.e. $600-$500 = $100.
- Sub 1 gets $100 and pays 40cents on the dollar to the Bank loan,
- Holdco gets nothing, i.e. the senior notes get nothing.

Corporate structure

- Corporate structure can be used to establish priority of payments among creditors.
- Sophisticated lenders will try use and/or bypass these mechanisms using contractual provisions.
- This is what “substantive consolidation” may undo! Later in the class under Distress Investing risks.

Monitoring of Credit Risk

- Once the loan is made or the debenture issued, lenders use contractual provisions called "covenants" to make sure that the borrower does not do things that will erode their credit support!
- Covenant types:
  1. Financial
  2. Affirmative (what the debtor must do)
  3. Negative (what the debtor must not do)

Financial covenants

1. Debt Ratio: Debt /EBITDA maximums
2. Interest Coverage Ratio
3. Debt Service Coverage Ratio: EBITDA / (Interest + Principal repayments)
4. Fixed charges coverage ratio: EBITDA / (Service Coverage + CAPEX + Dividends)
5. Capital Expenditure Limits (who do you think is likely to be subject to these today?)

Positive Covenants

- Disclosure
- Visitation rights
- Inspection of books
- Maintenance of Insurance
- Substantive consolidation
- Use of proceeds

Negative Covenants

- Negative pledge: restricts the borrower’s ability to grant liens.
- Debt: restrict the ability of the borrower to issue more debt.
- Fundamental changes
  - Mergers
  - Acquisitions
  - Sale leaseback transactions
- Guarantees
- Dividends