

# Chapter 1

## Introduction – The Goals and Nature of Credit Analysis

Credit analysis is an art, not a science. The goal of credit analysis is to make a judgment about an obligor's ability and willingness to pay back what it owes, when it is owed. Obligations could be a loan, bond, trade payable, or any kind of financial contract.

The fundamental question that a credit analyst needs to answer is: "what is the degree of risk that an obligor will have sufficient cash to pay back an obligation when it is due?" If the obligation is short term, and the obligor has a lot of liquidity, the answer is usually easy to determine.

If the time frame is longer, the answer to this question is not easy. The credit analyst must assess the factors that will impact an obligor's ability to pay in the future, including the willingness to pay. The basis for this assessment is the prediction of future cash flow, future liquidity, and capital structure.

In order to make a judgment about the degree to which cash will be able to fulfill an obligation in the future, the credit analyst must be able to project future cash flow, and make an assessment about the risks associated with that projection. Analysis of historical financial performance is usually the starting point for the estimates of future performance. Assessing the capital structure relative to the operating risks is a critical indicator of the degree of "financial" risk that the obligor is incurring. But, financial analysis must be supported by the logic of assessing business strategy and industry key success factors. Events don't happen by themselves – assessing management capability is also critical to the forecasting process.

Judgments must be made about the forecasts of future performance relative to history, future capital structure, management capability, business strategy, competitors' performance and competitive pressure, and the macro-economic environment. If the future revenue generation of the obligor is risky, due to the nature of the business, the strategy, and environment (i.e., it has high operating risk), then the capital structure should be relatively conservative. If future revenue and cash flow seems to be stable with little risk, then the capital structure can have higher degrees of leverage and "financial risk".

Equity analysts try to estimate the value of a company.

Credit analysts try to establish the degree to which an obligor can fulfill the terms of its debt obligations – short term and long term

Both equity analysis and credit analysis require the use of significant judgment to assess future performance and future cash flow.

**Estimates of future cash flow are the basis for all securities valuation – equity and debt.**

The art of both equity and credit analysis rests upon the understanding of the many factors that can impact future cash flow, and making judgments about those factors. While the value of equity may be enhanced by the use of a lot of debt (leverage), this adds risk to the creditors of the obligor. At some point, high degrees of leverage can substantially increase the risk of bankruptcy. Finding the balance between operating risk (business risk) and financial risk (capital structure) is a key element of the role of the credit analyst.

A borrower / obligor rarely suggests that it will not be able to generate the cash necessary to repay an obligation when it is due! The job of the credit analyst is to use financial analysis, industry analysis, strategy analysis and management analysis to make a reasonable judgment about an obligor's ability to have the cash on hand to fulfill the terms of its obligation. That judgment takes the form of an assessment of the degree of risk associated with the ability to do so – the generation of cash from operations, and the nature of the capital structure.

## **In traditional bank credit training, the process of credit analysis is framed by three simple questions:**

**Who's the borrower?**

**What's the purpose of the loan (or other type of obligation)?**

**How and when will it be paid back?**

The analysis to be done to answer these questions can be addressed in another traditional way, referred to as the four "C's" of credit – capacity, capital, condition and character (some consider another "C", collateral).

Capacity is the ability to generate enough cash to repay all obligations, when due. Assessing this is a primary goal of credit analysis.

Capital is required during periods of weak cash flow generation for a company to sustain itself. If there isn't sufficient cash flow from operations to meet obligations, then assets may have to be sold to produce cash.

Condition refers to the macro economic and competitive environment which will impact an obligor's future performance and its ability to generate cash.

Character is not only the willingness to repay an obligation, and live up to its terms, but also honesty relative to the risk of fraud. It might also refer to the competence of the obligor.

**The challenge for the credit analyst is to move from these simplistic statements to a framework for reaching an answer to this question:**

**"What is the degree of risk that an obligor will be able to have a sufficient amount of cash to pay back the obligation when it is due?"**

Of course, the degree of risk ranges from “zero risk” to “a lot of risk”. The goal of credit analysis is to establish where an obligor, and specific obligations, fits into this range. In modern bank risk management, this is analogous to determining a “risk rating”. It is also analogous to a public debt rating established by Moody’s or Standard and Poor’s.

Short term credit obligations are often “rolled over” or extended. But if the holder of the debt demands payment, this will come from a company’s liquidity. Either from cash on hand, or the natural cash generated from the collection of accounts receivable or the liquidation of inventory.

Repayment of long term debt comes from cash on hand, cash flow generation or refinancing. But, refinancing of long term debt will occur only if the lender is confident that the borrower has the ability to generate cash flow to repay it, or the ability to sell large amounts of assets to repay.

### **Credit Risk and Cash Flow Volatility**

The degree of risk associated with a company’s cash flow is related to the volatility of its cash flow. High credit risk is often due to highly volatile cash flow. Low risk is a function of very low volatility of cash flow.

For example, think about the volatility of the rental income from an office building that is fully leased, in its entirety, to a highly rated corporation for a very long term, with that corporation paying all operating costs and maintenance and taxes. The risk of the cash flow from those rental payments is not related to the office building, but only the credit of the corporate tenant. The credit risk of a mortgage loan made to finance this building would have risk characteristics very similar to that of the long term corporate tenant. The cash flow volatility associated with that property would be very low, especially if the tenant is a low credit risk corporation. The risk would vary with the credit risk of the tenant.

On the other hand, the risk of a mortgage loan for the same building, but with no major long term tenant, might be very high. It would be real estate risk. To make a judgment about this, the credit analyst would have to do extensive research about current and historic rental rates, occupancy rates, the existence of competitive buildings and plans for new ones, and the macro-economic outlook for the demand for office space in the location. An appraisal would be obtained to establish an independent view of the building’s value, but this should not be the only basis for establishing the degree of risk of the potential loan.

Highly risky (volatile) future cash flow doesn’t mean that a particular loan or obligation has to be risky. A good lending officer or risk manager can structure a loan to remove some of the risk. For a general corporate loan, the analysis can focus on a “second way out”. If the borrower can’t generate sufficient cash to repay an obligation, it can hopefully raise cash in a second way – usually through the sale or liquidation of an asset. This can be a variety of assets available to the obligor, or a specific asset that might be identified and secured.

An obligation can be structured such that the risk of the specific obligation is actually lower than the overall risk of the obligor. Collateral (security) is used to accomplish this. Some very secure loans are made to bankrupt companies! Where this is done, the risk rating of the specific obligation could be much better than the risk rating of the bankrupt company. The probability of the secured obligation being repaid on time could be very high, due to the nature of the collateral. On the other hand, the ability to forecast the repayment of unsecured obligations to a bankrupt company would be very difficult.

The phrase “ring fencing” is often used in corporate finance for transactions that are structured to isolate the risk of a particular financing. It implies that cash flow associated with a particular project, or structure finance entity, will be dedicated entirely to the repayment of debt incurred by that entity. Project finance, dedicated financings for a road, mine, etc, are structured to ensure that all of the cash flow generated by the project can first be allocated to the repayment of the debt incurred by that project.

The credit crisis of late 2007 was a result of the flawed assessment of collateral used to reduce risk in structured finance entities. The “CMO’s” (collateralized mortgage obligations) were secured by home mortgages in The United States. The credit quality of the individual obligors was relatively low (maybe very low), but each loan was secured by a residence. There seemed to be a very low risk that losses in a “pool” of mortgages (the CMO) would exceed a certain level. The crisis occurred because default rates turned out to be much higher than anticipated, the value of the collateral (the mortgages on homes) turned out to be less than the amount of the mortgage loans, and the actual losses in these pools of mortgages far exceeded what was forecast. The credit analysts for many of these CMO’s did a poor job of forecasting cash flow of the individual borrower’s, as well as the value of the underlying collateral. Many of the mortgage applications apparently were fraudulently underwritten.

### Summary of the Introduction

The fundamental question of credit analysis is: “what is the degree of risk that an obligor will have sufficient cash to pay back an obligation on a timely basis?” The “art” of credit analysis is to understand how to convert historic financial and operating performance and financial condition into a judgment about an obligor’s willingness and ability to repay an obligation in the future, and the degree of risk around that judgment. The traditional four “C’s” of credit analysis still provide a valid, if simplistic, framework for this process – assessing Capital, Capacity, Conditions, and Character.

An appropriate capital structure is one that provides adequate returns to the equity investors, while not incurring so much debt that the risk of bankruptcy becomes very high. A good credit analyst will always be assessing the quality of an obligor’s capital structure, and the degree of risk that it creates for the various suppliers of capital. A company’s capital structure should be designed to match financial risk with the nature of its business risk. A company with very low business risk can safely assume a lot of balance sheet (financial) risk in the form of leverage (debt). A company with very high business risk will not survive for long if it also assumes a great deal of financial risk (leverage).

The remaining chapters of this course cover more specific aspects of credit analysis, including:

- Fundamentals of financial analysis

- Fundamentals of credit analysis – cash flow forecasting and debt capacity. Assessing financial position, capital structure adequacy and relative risk. Short term debt capacity. Long term debt capacity.

- The goals and requirements of various suppliers of credit and capital to companies, including trade creditors, commercial banks, private investors, and institutional investors – expectations about risk and return

Credit facility structure and secured lending

Modern risk management in commercial banks and the concept and use of risk ratings in banks and by rating agencies

