ROBERT S. KRICHEFF

A PRAGMATIST'S GUIDE TO LEVERAGED FINANCE

Credit Analysis for Bonds and Bank Debt

A Pragmatist's Guide to Leveraged Finance

Credit Analysis for Bonds and Bank Debt

Robert S. Kricheff

Vice President, Publisher: Tim Moore
Associate Publisher and Director of Marketing: Amy Neidlinger
Executive Editor: Jim Boyd
Editorial Assistant: Pamela Boland
Operations Specialist: Jodi Kemper
Senior Marketing Manager: Julie Phifer
Assistant Marketing Manager: Megan Graue
Cover Designer: Alan Clements
Managing Editor: Kristy Hart
Project Editor: Anne Goebel
Copy Editor: Gayle Johnson
Proofreader: Debbie Williams
Senior Indexer: Cheryl Lenser
Compositor: Nonie Ratcliff
Manufacturing Buyer: Dan Uhrig

© 2012 by Robert S. Kricheff
Publishing as FT Press
Upper Saddle River, New Jersey 07458

This book is sold with the understanding that neither the author nor the publisher is engaged in rendering legal, accounting, or other professional services or advice by publishing this book. Each individual situation is unique. Thus, if legal or financial advice or other expert assistance is required in a specific situation, the services of a competent professional should be sought to ensure that the situation has been evaluated carefully and appropriately. The author and the publisher disclaim any liability, loss, or risk resulting directly or indirectly, from the use or application of any of the contents of this book.

FT Press offers excellent discounts on this book when ordered in quantity for bulk purchases or special sales. For more information, please contact U.S. Corporate and Government Sales, 1-800-382-3419, corpsales@pearsontechgroup.com. For sales outside the U.S., please contact International Sales at international@pearson.com.

Company and product names mentioned herein are the trademarks or registered trademarks of their respective owners.

All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher.

Printed in the United States of America

First Printing March 2012

ISBN-10: 0-13-285523-2
ISBN-13: 978-0-13-285523-5

Pearson Education LTD.
Pearson Education Australia PTY, Limited
Pearson Education Singapore, Pte. Ltd.

Pearson Education Asia, Ltd.
Pearson Education Canada, Ltd.
Pearson Educatión de Mexico, S.A. de C.V.
Pearson Education—Japan
Pearson Education Malaysia, Pte. Ltd.

Library of Congress Cataloging-in-Publication Data:

Kricheff, Robert, 1963-
A pragmatist's guide to leveraged finance : credit analysis for bonds and bank debt / Robert Kricheff. -- 1st ed.
p. cm.
ISBN 978-0-13-285523-5 (hardcover : alk. paper) 1. Financial leverage. 2. Securities. I. Title.
HG4521.K7375 2012
332.63'23--dc23

2011049988

I would like to dedicate this book, with love,
to my wife and my parents, all of whom
I am blessed to have.

Contents

Acknowledgments

For their help and advice in preparing this project, I would like to thank John Lutz of McDermott Will & Emery LLP and Andrew N. Rosenberg of Paul, Weiss, Rifkind, Wharton & Garrison LLP. Both are great attorneys and entertaining, to say the least. And thanks to John Kolmer, a great person and boss, whom I still tell stories about.

About the Author

Robert S. Kricheff is a Managing Director and Head of the Americas High Yield Sector Strategy for Credit Suisse. He has more than 20 years of experience doing credit analysis. In his career he has followed numerous industries, including media, cable, satellite, telecom, gaming, entertainment, healthcare, and energy. He has worked with emerging-market corporate debt as well as strategy and portfolio analysis. His work has covered investment vehicles including bonds, converts, loans, preferred stocks, and credit default swaps. He has a BA from New York University in economics and an MSc from the University of London SOAS in financial economics.

1. Introduction

What's in this chapter:

- What the market is
- How companies become part of the leveraged finance market
- Unique aspects of leveraged finance credit analysis
- The two starting points of credit analysis

The high-yield leveraged bond and loan market is over $2.3 trillion in North America, about € 650 billion in Europe, and $600 billion in emerging markets—and it's still growing. Perhaps you want to manage money in this sector, sell, trade, work as a banker, be a credit analyst, work in capital markets or credit default swaps, or work as an advisor. Or maybe you work in the finance department of a company that issues this debt. Whatever the case, the basic skills of credit analysis are key to being able to operate effectively.

This skill set is also exceptionally valuable for those operating in the equity markets, especially if you ever have to focus on distressed or leveraged equities.

The market is unique. It has certain features of traditional investment-grade fixed income, but it also has the event-driven volatility typically associated with equities. Furthermore, it has structural features within the securities and among the participants that are unique to the leveraged market.

For these reasons, the analysis involved in evaluating these investments is unique. This book covers the major practical aspects of doing that analysis. It does not delve into theory. Instead, it focuses on how people in these markets work as they prepare and utilize leveraged finance credit analysis, using explanatory examples.

Although leveraged loans and bonds have been issued in several currencies, including U.S. dollars, Canadian dollars, British sterling, and euros, the issuers are still predominantly based in the U.S. But the Eurozone and emerging markets are growing quickly. This book primarily uses examples from the U.S. dollar markets.

The core of the market are bonds and loans issued by corporations that generally are rated below investment grade by the major rating agencies or sometimes are never rated at all. The market encompasses a wide spectrum of credit risk, from fairly stable BB-rated securities that are close to investment grade all the way down to those in bankruptcy.

The companies that make up this market join the market in a few ways. Some are known as "fallen angels." These companies were investment-grade debt issuers, but as operations weakened or some specific event occurred, they were downgraded and became part of the leveraged market. This happened to General Motors for a period of time. The existence of the leveraged finance market allows these fallen angels to still have access to public and private financing and gives first-time issuers the flexibility to finance growth projects.

Other companies issued debt that was initially rated below investment grade by the major agencies. Typically the funding was raised for expansion or acquisition that added leverage. Leveraged buyouts are another common way in which an issuer comes to the leveraged debt market. Usually this is where private equity firms or individual investors add debt to buy out a company. Sometimes developmental companies issue in the debt markets. These are fairly early-stage companies. This type of funding was key for the development of the cable and satellite television industries and the mobile telephone industry. Many of these companies got most of their early funding through the leveraged finance markets and probably would not have developed as quickly without financial innovations in this market. New casinos and oil refineries have also come to this market to be financed as start-ups. For many years, some of the stalwarts of the investment-grade market were part of the

below-investment-grade market. These include issuers such as Comcast and Viacom.

A company's ability to access funding in the leveraged finance markets can be a key to survival and can lead to great growth and job creation. Many companies that have grown dramatically were greatly helped in this process by access to this source of debt financing:

- One company had $24 million in revenue and 225 employees when it first accessed the leveraged finance debt market to fund expansion. By the end of 2010 it had over $300 million in revenue and more than 800 full-time employees.
- Another company grew from about $100 million in revenue and 975 employees to $1.9 billion in revenue and 1,700 employees.
- Yet another company first accessed the high-yield market as a leveraged buyout with $1.2 billion in revenue. It grew 20% over 5 years and added about 900 employees.

All these companies accessed the leveraged debt markets multiple times as they grew their businesses.

Ever since Michael Milken and his team at Drexel Burnham Lambert helped the modern high-yield market evolve, it has been a place driven by innovation and events. Few companies in the high-yield market are stagnant or stable. Some produce steady improvements as they evolve toward investment grade, and others go through transitions, evolving through new ventures or acquisitions. Still others may be for sale or are looking to refinance to return capital to shareholders. Finally, some companies are struggling and may be slipping toward default and bankruptcy. It is unlikely that any below-investment-grade companies are in a state of equilibrium.

It is often said that for your analysis to be proven right when you buy a bond, you just need to wait to maturity, but for your analysis to be proven right when you buy a stock, you must convince others that you are right. This is true. Correct credit analysis in buying a bond will eventually reap the yield at which the bonds were bought, or sometimes greater if an early takeout occurs. When you buy a stock, the only way the price goes up is when more people become convinced that they should pay more for it than you just did.

In leveraged finance, if you buy a bond or loan and it goes along just fine and pays off at maturity, the return usually outperforms many other assets because of the high coupon. Because of this investment's ability to outperform just by fulfilling its obligations, a credit analyst in this market always looks to protect his downside in an investment and considers how things could go wrong. Therefore, when analyzing scenarios for a credit, a good analyst must take a cynical approach and constantly ask himself how he could get hurt. Additionally, in the interim between buying a bond/loan and its being retired, the prices can move about fairly wildly. So an analyst must keep in mind the investment time frame within which he is working.

When doing credit analysis, you must remember that the work that is being done is heading toward a conclusion. Your approach may vary depending on whether your goal is to decide to buy, sell, or hold a security or to underwrite a new financing.

Analyzing these companies and their credit quality is a dynamic process. The tools described in this book are just that—tools. No quantitative model can give a complete answer of whether a debt security for a company will default, or whether one loan will outperform another. The tools covered in this book are used every day and are valuable in determining a security's value. However, making a decision about a credit involves numerous subjective aspects. That's what makes it much more of an art than a science.

Leveraged finance credit analysis borrows tools that are typically associated with many other fields. Some of these tools come from traditional fixed income markets, as well as equity markets and probability and game theory. It is often said that the leveraged finance market has characteristics of both fixed income and equity. This fact is evident in the tools used to analyze credits in this market.

Credit analysis starts from two basic items:

- The first is financial liquidity. You want to analyze whether the company that is being looked at has liquidity from cash generated by operations or elsewhere, to pay the investors interest and principal over the life of the loan.
- The second item is asset protection. The asset value is key. If the liquidity is not there to repay the investor in the debt, the holder of the loan or bond must look to the value of the underlying asset from which it can be repaid. Almost all the other aspects of the credit analysis derive from these two fairly basic ideas.

This book spends a good amount of space on a few topics. Two chapters are on financial ratios and metrics, because these are often key determinants of credit quality and are strong tools to use when comparing the relative value of various investment options. A significant amount of space is also devoted to structural issues and the basics of bankruptcy analysis. Understanding these factors can be key in protecting your downside. Understanding these issues also is critical in explaining how various investments in the same capital structure should be valued relative to each other. One chapter gives examples of how you can use these tools to react to breaking news events, as analysts must do every day. Some concepts, such as spreads, floating-rate notes, and deferred pay coupons, are repeated in a few places in different ways, because new market participants often ask about them.

When you get to the chapters on ratio analysis, modeling, and structural issues, go online and find financial results for several companies. Read through them and try the analysis as shown in the examples in this book.

Keep in mind that nothing is a constant in the analysis of leveraged finance securities. Many examples in this book might seem to be followed by a contradiction. It is important for you to always be aware of exceptions to the norm. When doing credit analysis, remember that nothing is always true, and nothing is ever certain.

The volatility caused by companies in transition and the unique nature of almost every security in the market make leveraged finance credit analysis frustrating but also challenging and fun. But you cannot become complacent in this market. With that point in mind, I end this chapter with a great Oscar Wilde quote that is a good creed for anyone who wants to do leveraged finance credit analysis:

> To believe is very dull. To doubt is intensely engrossing. To be on the alert is to live; to be lulled into security is to die.

2. Common Leveraged Finance Terms

What's in this chapter:

- Definitions of some key terms, including common synonyms
- Terms used to describe prices and returns on debt instruments
- Key points relating to how bonds and loans trade

Like most specialties, from firefighting to neurosurgery, the leveraged finance market has its own lingo. This chapter outlines some key terms commonly used in the market and throughout this book. Some definitions are fairly generic to the securities business, and others are specific to or more widely used in only the leveraged finance market.

This industry often has several synonyms for the same word. Even the market itself goes by several names: leveraged finance, high yield, junk market. All these terms refer to the market for debt instruments that are rated below investment grade. This chapter and book list common synonyms to make you familiar with the various interchangeable terms that market participants often use.

General Terms

amortization

Usually refers to the required paydown of a debt instrument. On company financial statements this refers to the depletion of intangible assets on the balance sheet, just as depreciation refers to the same for tangible assets.

call

The right to purchase a bond or loan at a set price for a set period of time.

corporate bank loan

A loan to a company. Legally, it is not a security, but a financing. It usually takes the form of a term loan (typically not reborrowable) or a revolver (that can be repaid and reborrowed). Other terms often used include loan, bank debt, and syndicated loan.

corporate bond

A loan to a company in the form of a security. Bonds are also called debentures or notes.

covenant

A rule laid out in the indentures and loan documents by which the company agrees to operate as part of the terms of the loan or the bond. *Affirmative covenants* are something the company must do. This can include items such as a requirement to report financials or a minimum cash flow. *Financial covenants* or maintenance convenants are typical in bank debt and include financial tests *Negative covenants* typically prevent or restrict what a company can do. They may include requirements that must be met before a dividend is paid or more money is borrowed.

credit

Refers to the issuer of the bond or loan.

default

When the company that issues a bond or loan fails to make a required payment on time. A technical default occurs when a maintenance/affirmative covenant is violated.

equity

What is left of value in a company after the debt and other obligations are subtracted from the total value. This can also refer to a company's common stock.

grace period

Most loan agreements and bond indentures have a set period of time in which they are allowed to cure a nonprincipal default before the borrowers can accelerate and force a bankruptcy. This grace period typically is 30 days.

indenture

The legal document containing all the terms that the issuer of a bond agrees to.

interest rate

The interest that is required to be paid on the loan. This is sometimes called a coupon.

issuer

The company that issues the loan or bond.

leverage

A company's level of debt.

LIBOR

London Interbank Offering Rate. An interest rate that is often used as the base rate for floating-rate notes. Similar to the U.S. prime rate.

loan book/bank book

Usually a summary of a new loan offering. Sometimes it is private. Generally it is a bank loan version of the bond prospectus.

maturity

The date on which the bond or loan must be repaid. Another term for this is due date.

money terms

Refers to the principal due, maturity, and interest rate. These terms typically cannot be changed during the life of the loan or bond without agreement from all the borrowers.

par

Face value, or 100% of the principal of a note or loan.

pari passu

A Latin term meaning "without partiality." Generally refers to two debt instruments being ranked equally.

principal

The amount owed on a loan or bond at maturity. Other terms that are often used include face value and par

value.

pro forma

A Latin term meaning "as a matter of form." Refers to financial statements that have been adjusted for certain assumptions such as a merger or new debt offering.

pro rata

A Latin term meaning "according to the rate." Refers to a method of allocating something equally and proportionally.

prospectus

When a new bond is being issued, this is a summary document of the company's business, recent results, and indenture. This is one of the best documents for you to quickly get familiar with a company.

put

The right to sell a bond or loan at a set price for a set period of time.

technical default

When the company that issues a bond or loan fails to follow one of the rules under its covenants; this usually involves the violation of an affirmative covenant in the bank loans, not a payment.

tranche

From the French for "cut" or "slice." Refers to a portion of an investment issue. Typically used to reference the different tiers of debt in a capital structure. For example, within one company's capitalization, a bank loan and a senior subordinated bond would each be referred to as a separate tranche.

Yield and Spread Definitions

spread

A commonly used measure of value. It uses the yield-to-maturity (YTM) minus some interest rate benchmark. In the U.S. market it is usually used against a treasury bond with an equivalent maturity of the bond. In the European market it is typically measured off a sterling, bund, or European government note. Bank loans are typically spread off of LIBOR. This gives an idea of a bond/loan's yield relative to other interest rate instruments of different maturities.

spread-to-worst (STW)

The same as a spread, but using the yield-to-worst (YTW). STW is usually the best tool to compare the relative value of different bonds/loans with varying maturities.

yield-to-call (YTC)

The yield assuming that the bonds are taken out at the next call date.

yield-to-maturity (YTM)

A calculation that takes into consideration the price that is paid for the bond/loan, as well as the interest payments and principal payments expected to be made over the life of the bond and the amount of time to maturity. It calculates an annualized return on the investment. It assumes that cash payments are reinvested at the same rate that the bond/loan is paying.

yield-to-worst (YTW)

A more commonly used variation of YTM. Assumes the retirement based on the call schedule with the worst return. It really applies only when a bond/loan is being bought at a premium (a price above par) and calculates which would be the lowest return to any possible call date.

Here are some simple and logical things to remember about bond prices and yields:

- Bonds trading below par are referred to as trading at a discount. Bonds trading above par are referred to as trading at a premium.
- When bonds are at par, the yield is equal to the coupon.
- When bonds are at par or at a discount, the YTW and YTM are the same. When they are at a premium, the two can differ.

Trading Parlance

When a trader gives a market, it usually is given with a bid and an ask. (This is common for most security and loan markets.) The bid is where the trader is willing to buy, and the ask is where the trader is willing to sell. If the market bid is 98 and the market offer is 99, it might be written like this: 98=99. If the trader is willing to only bid on the bonds, it might be written like this: 98=. If someone accepts the bid price and sells the bonds to the trader, the trader may say he has been *hit*. If someone buys the bonds from the trader, the trader may say he has been *lifted*.

Let's finish this chapter with some quick comments on trading bonds and loans.

Typically the minimum size at which a corporate bond can be traded is $1,000. However, in practice, the minimum "round lot" trade is $1,000,000. The same is true for loans. (This is one reason why it tends to be an institutional investor market and not an individual investor market.)

When prices are given for bonds and loans, they are typically given as a percentage of face value. For example, if a bond is trading at 100% of face value, you would quote the price as *par*, or 100. If it was trading at a discount to face value—for example, at 98 or 99—this would mean for a round lot the buyer would pay $980,000 or $990,000. Although a percentage sign actually should be placed after these prices, in practice this is rarely done. More commonly people mistakenly use a dollar sign.

Sometimes a price is given in yield instead. Yields are usually given as a percentage, so a 10% bond at par may be referred to as trading at par, or at 100, or at a yield of 10%. Unless otherwise stated, this usually refers to the yield-to-worst.

Bank loans and bonds trading at very low spreads (said to be trading *tight*) are frequently quoted by their spread-to-worst rather than a percentage of par or a yield. When spreads are used, they are typically quoted in basis points (bp). There are 100bp in 1%. So if a US$ bond is trading at 10% and the equivalent maturity treasury is trading at 6%, the spread between the two would be 4 percentage points. But this would typically be quoted in basis points as a "spread of 400 bp."

Interest payments are made on specific dates, typically monthly on bank loans and semiannually on bonds. But the bonds continue to accrue interest between the payment dates. In a typical transaction, when you buy a bond, you pay the seller the price plus accrued interest. For example, if a bond has a 10% coupon and pays semiannually, it pays 5% on each interest payment date. If someone bought the bond halfway between the interest payment dates (90 days after the last coupon payment), he or she would pay the price set for the bond plus 2.5% of accrued interest. If a bond is trading without accrued interest because it is in default, it is said to

be trading flat.

Questions

1. Which of the following terms does not refer to a bond?

   A. Debenture

   B. Note

   C. Preferred

   D. Subordinated note

2. A maintenance covenant is also typically known as what?

   A. A negative covenant

   B. A blocking covenant

   C. A ratio test

   D. An affirmative covenant

3. When a seven-year bond is trading at a yield-to-worst of 9%, and a seven-year treasury bond is trading at a yield of 3%, what is the bond's spread?

   A. 13% or 1,300 bp

   B. 7% or 700 bp

   C. 6% or 600 bp

   D. 9% or 900 bp

4. If a buyer is paying 98 for $2,000,000 par amount of bonds (with no accrued interest), how much will she actually pay the seller?

   A. $980,000

   B. $1,960,000

   C. $2,000,000

   D. $2,980,000

5. If a bond has a 10% coupon and pays on a 360-day calendar and is selling at par (100), how much do you pay for $1,000,000 face amount of bonds if it is 90 days since the last interest payment?

   A. $1,250,000

   B. $1,500,000

   C. $1,025,000

   D. $1,000,000

3. Defining the Market and the Ratings Agencies

What's in this chapter:

- How the market is defined by the ratings agencies
- Agency ratings and price impact
- Ways to use the ratings agencies

The leveraged finance market is also called the high yield market and the junk bond market. The leveraged finance market is generally defined to include bonds and loans issued by corporations that the major credit rating agencies (Moody's, Standard & Poor's [S&P], and sometimes Fitch) have assigned ratings they believe are below *investment grade*. Many pools of investment money have strict limits on investing in bonds/loans rated below investment grade.

Although it never caught on, I always liked the idea of referring to the market as the BIG debt market—as in Below Investment Grade.

Table 3-1 lists the categories for Moody's and S&P.

Table 3-1. Ratings Categories of the Major Agencies

Moody's	S&P
Aaa	AAA
Aa	AA
A	A
Baa	BBB
Ba	BB
B	B
Caa	CCC
Ca	CC
C	D
D	

Bonds that are rated BBB-/Baa and above are considered investment grade or nonspeculative. In the ratings descriptions for Moody's, the Ba-rated category is the first one said to "...have speculative elements and are subject to substantial credit risk."[1] Standard & Poor's includes a paragraph describing all the bonds rated BB and below and says that they "...are regarded as having significant speculative characteristics."[2]

1 "About Moody's Ratings: Ratings Policy & Approach." Moody's Investors Service Inc., 2011.

2 "General Critera: Understanding Standard & Poor's Rating Definitions." Sta0ndard & Poor's Financial Services LLC, 2011.

Although some criticisms about the ratings agencies have been laid out in great detail during the mortgage crisis, they do add value and play an important role in the market. These agencies are typically shown projections from the companies. You can glean some insights from agency write-ups, particularly on new issues. They also highlight short-term and long-term concerns. However, their value to an analyst or investor in trying to determine trading value is very limited.

The agencies are typically backward-looking in their analysis. More importantly, in a market such as the leveraged finance market, which is heavily event-driven, the agencies respond slowly to new credit events. They also give little to no insight into how the debt will trade and what prices represent value.

For market participants, how the bonds and loans trade is one of the most important factors, and generally the ratings do not help too much. At any given time you can typically find two identically rated single B issues trading at yields that are 1,000 basis points (bp) apart or more, a significant variance. The variance within the CCC-rated category can be even greater. This shows how little the markets sometimes value the agencies' ratings when trying to determine trading levels on below-investment-grade debt.

There are some trigger points in ratings that can have an impact on trading levels, but it often takes some time after the facts are in place for the agencies to react. For example, many bond buyers are limited in or restricted from buying CCC+ and below rated bonds. Similarly, many funds have limits on buying issues rated less than investment grade, so an upgrade to BBB can add to the universe of potential buyers and cause prices to rally. These crossover points can influence trading levels, although much of the price movement often occurs well before the ratings agencies get around to actually upgrading or downgrading the debt. So when reading agency write-ups, look for some of these fact patterns that the ratings agencies would want to see to lead to key rating changes.

> A useful item in most credit agency write-ups is that they specify what the company would have to do to get upgraded or downgraded. This is particularly helpful when a credit is on the verge of going to investment grade. You should also monitor credits that are just barely clinging to an investment-grade rating and may be on the watch for a downgrade. These credits may be the next opportunities in high yield.

Many nonrated loans and bonds are also considered part of the leveraged finance market. Note that convertible bonds are typically not included. But sometimes when they trade at such low levels, or the stock price has moved so much that they are a "busted" convert, meaning that the feature to convert to equity is perceived to have no value, they attract high-yield investors.

> Many bonds and loans in the below-investment-grade market are nonrated. The ratings agencies charge to rate a company, and some choose not to pay the agencies, even if it may cost them in the pricing of the coupon on their financing. Other companies that sometimes expect a CCC rating or lower decide that the agency rating won't help them and choose not to hire the agency. The agencies may choose to rate a company even if they are not hired to do so.

4. The Participants

What's in this chapter:

- What types of companies and organizations are the major players in the market
- Participants are broken into the issuers, the sell side, the buy side, and private equity
- How each one operates in the market and its traditional roles

Broadly speaking, the marketplace has three major groups of participants, which are fairly typical in most securities markets. The first category is the issuers, which in this case are corporations. The second is the sell side—the arrangers of the financings. They provide liquidity in the secondary markets and, to a certain extent, are investors as well. Third is the buy side—a diverse group of potential investors in these financial instruments. For the leveraged finance market we will add private-equity firms as a significant participant as well.

We will omit numerous other subsets of market participants, such as lawyers and street brokers, who also play important roles in the marketplace.

The Issuers

In the leveraged finance market for bank loans and bonds, the issuers of these debt instruments are all corporations or corporate-like entities. They can choose to issue the debt for diverse reasons. Issuers may simply be looking for more capital to expand, to take on a new project, or to build a new facility. The issuer may be a growing company that utilized various forms of less permanent capital to grow and is looking to put in place a more permanent debt structure. The issuer may be looking to fund an acquisition. Or it may be facing an unusual obligation, such as a lawsuit or tax settlement.

Alternatively, the company may be issuing debt for purely financial reasons. It might want to replace older maturing debt or return some capital to shareholders. Or perhaps the company is going private, and the debt will finance this transaction (effectively another way of returning capital to shareholders).

These are some, but not all, of the reasons a company might access the markets.

Some companies are quite comfortable staying rated below investment grade for their lifetime. Many management teams in certain industries believe that their company has optimal leverage that keeps it rated high yield based on its growth characteristics, its tax structure, and the best way for it to maximize long-term returns for its owners. Other entities believe that the lower leverage and lower cost of capital that an investment-grade rating brings are the best route to take for a company's capital structure. So some companies are striving to get upgraded and leave the market, and others are more comfortable with more leverage.

The Sell Side

The sell side is primarily made up of investment banks and commercial banks. Many commercial banks also have investment banking operations, so the two are not mutually exclusive.

Investment banks fulfill many roles for their corporate clients as well as their investment clients. On the corporate side, investment banks advise companies on funding their financial needs, develop strategies for expanding, divestitures of assets and acquisitions, and generally help them with liability management. Investment banks also help companies raise funding. In the leveraged market this comes in the form of debt and usually entails bank lending and bond issuance.

On the bank loan side, investment banks and/or commercial banks advise the company on the structure, size, and covenants of the borrowing. Then they undertake due diligence about the company and help educate potential investors about the loans and help place the loan, utilizing investor feedback where needed.

The process is similar when bond issuance is involved. However, when the funding is in the form of a loan, the bank loan arranger (or agent bank) typically holds, or retains, a reasonable amount of the loan on its books. Also, if there is a revolving facility, the banks usually hold this as well. On the bond side, the investment bank is required to fully distribute the issue before it can start market making in the bonds. This is an interesting juxtaposition between the two markets.

An important role of the investment bank or commercial bank is that it uses its balance sheet to provide liquidity to the investors who bought the initial debt. The initial investors may want to buy more or sell some, or all, of the position they own over time. The bank also looks to keep investment professionals abreast of developments at the corporation that issued the debt.

It should be noted that the sell side also includes bankers, salesmen, traders, analysts, and capital markets personnel.

The Buy Side

The buy side encompasses a broad range of buyers and investors of leveraged finance instruments. Ultimately these asset managers get the funds they invest from individuals, pension and other retirement funds, insurance accounts, endowments, and similar sources. Individual investors rarely invest directly in high-yield corporate debt.

Individual investors may put money into mutual funds that are dedicated to the leveraged debt markets. Or there may be funds that invest part of their pool of assets into leveraged loans and bonds. These funds could be diversified fixed-income funds or even equity funds. A number of other types of funds may select part of their investments to be in the high-yield markets. Mutual funds typically are long only, meaning that they do not short investment instruments.

A significant number of assets that are managed by money managers and others are not in mutual funds. These may be pools of money from pension funds, endowments, or wealthy individuals. Individuals may also have life insurance policies. Part of the large pool of investments that insurance companies invest in can encompass high-yield loans and bonds. Like retirement money and mutual fund money, it can be managed in-house or by third parties.

Institutional managers as well as wealthy individuals and others can choose to invest in alternative investment vehicles, such as hedge funds or distressed investment funds. Hedge funds and most distressed investment funds can short securities as well as be long them. Additionally, hedge funds tend to be more flexible about investing in bonds or bank debt. Many of the other types of asset managers tend to be more limited in either one or the other. Many hedge funds are not dedicated to investing in the leveraged debt markets and may opportunistically increase or decrease their overall exposure to the asset class. Hedge funds tend to have a different payout schedule than the other asset managers discussed here. Hedge funds often have a bar for a fairly high return that must be achieved to enhance the management's payout. Therefore, they tend to invest in higher-yielding and/or distressed investments that have greater risk but usually potential for greater return. Also, a number of funds focus on distressed and bankrupt situations as well. These may not be limited to investing in loans and bonds; they may be involved in other asset classes such as equities or trade claims.

Another buy-side participant is the structured products manager. These managers are typically running money in structures such as collateralized debt obligations (CDOs) or collateralized loan obligations (CLOs). These

products buy debt to fit a structured format that meets certain diversity, coupon, and maturity profiles and usually has a limited life. These vehicles often are more biased toward buy-and-hold-type strategies. These structured products have been a much larger factor in the loan market than the bond market.

Private Equity

Private-equity (PE) firms are an important participant in the market. Although they usually fall into the "issuer" category, they are a special type of issuer. PE firms generally raise funds that are designed to buy companies, increase the value of the enterprises they buy, and then over time monetize these gains. They typically do this by selling the company, bringing the company public, paying themselves dividends, or using some other means to return value to themselves and their investors.

PE firms often use leverage in their acquisitions to enhance their returns. Financings to fund PE transactions make up a large part of the leveraged finance market. By their nature these companies that are owned by PE firms tend to be somewhat event-driven as the sponsors (another term for PE buyers) look to enhance value and eventually monetize their investment.

Some PE firms may also appear in the public markets to buy back the debt securities of the companies they own if they have gotten cheap.

Because many of the new debt issues that come to market are not publicly registered and issued under securities rule 144a, almost all the participants outlined here are qualified institutional buyers (QIBs). Under U.S. securities law, you must be a QIB to be able to buy and trade 144a securities. The $1 million-plus size of a typical trade, the number of rule 144a bonds, the private nature of the bank loans, the relative illiquidity, and the expense to diversify a portfolio tend to keep individuals from investing in the high-yield market directly. But they can do so through many of the vehicles described here.

Depending on what type of firm you work at, you might be asked to do very different things with your credit work. Although the priorities of what to focus on may vary, the basics of the work will still be the same.

5. Why Is Leveraged Finance Analysis Unique?

What's in this chapter:

- Why volatility exists in the leveraged finance market
- How and why the analysis for this market uses components of fixed income, equity, and investment banking, among others
- Why leveraged finance credit analysis is different from investment grade and equities

Leveraged finance analysis encompasses key components from other types of securities analysis. It also emphasizes and incorporates features unique to its market. This combination of tools commonly used in equity, debt, and corporate finance makes the analytical work done in this market unique.

Companies with more debt leverage (or *gearing* in the UK) have less margin for error. Therefore, the security prices of these companies react more dramatically to relatively smaller changes in operating results or news headlines than prices of companies with less leverage (such as investment-grade companies). This more volatile reaction in price is more similar to stocks than to traditional investment-grade corporate or government-issued bonds.

Investors in investment-grade bonds fully expect to get their principal and interest serviced from cash flows or other liquidity sources. The speculative nature and higher debt levels in the high-yield market make it more important to have a sense of the company's underlying asset value. This is in case cash flows cannot service the debt. Investors look to the asset value as a way to restructure and service the debt or recapture value in a bankruptcy. This heavy focus on the underlying asset value is more akin to your analyzing the fundamental value in an equity than typical bond analysis.

We would also argue that mergers, acquisitions, and asset sales are significantly more common on a relative basis in the leveraged finance markets than in the investment-grade market, which also aligns much of the analysis more to equity-like analysis than to traditional debt analysis.

Meanwhile, leveraged finance bonds and loans are still debt instruments. Key ratios that are used to analyze these debt instruments are also used in investment-grade corporate analysis. Additionally, interest rate movements and access to borrowing markets are clearly more of a focus in debt markets than in equity markets and are important in the analysis explored in this book.

Many measures of value used in leveraged finance, such as yield and spread, are used throughout the debt markets. But when situations get distressed, you often switch to a total return basis. Then prices and measures of value are more akin to what is seen in equity markets.

Because of the typical amount of debt on the companies in this market, management teams and investment bankers are likely to spend much more time on the capital structure of these companies than a typical investment grade debt issuer. Management and their advisors regularly look at ways to improve their cost of borrowing and increase liquidity. Undertaking major financings is a regular event for many of these companies. Therefore, when you analyze these companies' bonds and loans as an investor, you must also use the type of analysis that is used in corporate finance concerning funding choices, liquidity, and access to capital markets. As shown later, you must also analyze how the position of an existing debt instrument can get hurt or be improved by undertaking a new financing or transaction.

Corporate structural issues can occasionally become a factor in equity and investment-grade analysis. But it is a way of life to focus on these topics when doing leveraged finance analysis. Covenant analysis, structural

rankings, and such are an everyday part of the job in leveraged finance analysis. These topics come up much less frequently in investment-grade work and even more rarely in equity analysis.

Leveraged finance analysts spend much more time on these structural and covenant issues than investment-grade and equity analysts do. However, understanding these aspects can greatly enhance the work of investment-grade and equity analysts.

Finally, although you usually hope that default can be avoided, you must always keep an eye toward bankruptcy analysis. This involves analyzing asset values, liquidity, ranking of securities, and legal issues. How securities would ultimately get treated in a bankruptcy is critical in understanding how different issues within the same capital structure should trade relative to each other, even if the company is far from worrying about bankruptcy.

> The combination of skills used in leveraged finance credit analysis is increasingly being used to look at securities and investments outside the debt world. Private-equity investors for a long time have made sure to understand the nuances of analyzing and pricing leveraged debt in a transaction. This skill set also has increasingly been used to analyze and invest in the underlying equities of these high-yield credits. Some equity investment funds are actually dedicated to leveraged equities.

It is worth noting that numerous studies and regularly published data show that the leveraged finance market is more highly correlated to equities (especially mid-cap and small-cap equities) than to fixed-income markets. This data goes all the way back to the days when Michael Milken at Drexel Burnham was developing the modern market, up to more recent studies by the likes of Credit Suisse.

The factors outlined here are why the market is often viewed as a hybrid and why the analytical tools used are a combination of numerous tools from various other areas that create a unique skill set. Incorporating all these factors and deciding which analytical tools and factors take priority in different situations is an art that you develop through practice and exposure to different situations. This book tries to give you a sample.

6. The Major Components of Analysis

What's in this chapter:

- Why analysis starts with liquidity and asset value
- Why the issues of corporate and bond structure matter so much in analysis
- Why event analysis is used
- When relative value analysis is used

Earlier, the two starting points of credit analysis were outlined:

- Is there enough liquidity to service the debt?
- In case there is not enough liquidity, is there enough asset value to get repaid through a sale of the company or restructuring?

The next few chapters discuss credit analysis in detail. Before we move on, this chapter expands on these two basic points and shows you how understanding structure and ranking fits into understanding asset protection. You'll also see how event analysis helps prepare you for sudden changes in trading levels.

Liquidity and asset values may be the most basic foundation of leveraged credit analysis. However, the goal of the analysis is usually to reach a decision about a specific bond or loan. Without understanding structural issues and ranking, your ability to decide would be limited, and you would have a difficult time knowing how to react to any breaking news.

You should look at each component of credit analysis from a historical perspective to get a sense of how the company has been progressing. However, it is critical that you also examine how each component might act in the future. Try to think through and analyze what can happen next and how the liquidity, asset values, and structural issues will be impacted.

The Components

As mentioned, the first component to focus on is financial liquidity. Does the company have enough cash-flow-generating capabilities to fund its operations? If not, what is the cash on hand? Does the company have other sources of liquidity to operate and pay the interest on the debt that is being analyzed? What are the options for paying back the principal?

The second component is the asset value. If the company does not have the liquidity to pay off its obligations to the investors, what is the company's underlying asset value? Is there enough asset value to repay the investment in the loan? This could be through the sale of the company or the sale of selected company assets. You must also factor in how long it might take to get the benefits of the asset value. Part of this analysis must take into account where the bond or loan that an investor is buying ranks in having a claim on the asset values.

That brings us to the next component in the analysis of leveraged debt—a focus on structural issues. The corporate and debt structure can be a major factor in the value of a debt security. Items to examine here include the following:

- Which subsidiaries have which assets, and which entities issued the debt?
- What is the ranking of the notes? For example, are they secured or unsecured or subordinated?
- What are the key structural issues of the individual debt instrument? For example, is there an early call date at the company's option?

- What covenants in the security are being analyzed and what covenants are there in other debt instruments in the structure? For example, covenants may allow significantly more debt to be placed senior to the bond, thus weakening its position.
- What technical factors about the bond or loan are important? For example, what is the size of the issue, or the currency it is issued in?

The next component is to analyze event scenarios. This involves laying out potential upcoming events, figuring out how likely they are to occur, and analyzing how each one may impact the securities you are examining. It is often useful in this analysis to create decision trees or timelines of possible events.

Another major component is analyzing the investment's relative value. This is a common theme throughout investing. In this part of analysis, you try to define the investment objective or goal. Does the debt instrument fulfill that objective at the current pricing better than other options? Part of the answer lies in the analysis of risk versus return on investment. You should examine how this risk versus return compares to other investment alternatives, whether it is other bonds, loans, equities, or commodities.

Depending on what kind of organization you work for and the goals of your analysis, the answers can vary greatly. Some organizations are more focused on limiting risk, and others are more focused on total return opportunities. Additionally, some can evaluate options only among leveraged finance investments, whereas others can invest across the entire securities and commodity spectrum. Other typical constraints can include rules concerning diversification, currency, and geography.

A Pragmatic Point on the Various Aspects of Analysis

The basic building blocks of leveraged finance credit analysis are based on liquidity and asset value analysis. But you must remember that because credit analysts are always concerned about downside risk, even if a company appears to have excellent liquidity to meet its obligations, an analyst still wants to understand the underlying structural issues as they relate to asset protection as well. Therefore, for you to ultimately reach a decision—the goal of analysis—it is critical that you understand structural issues, event risk, and relative value.

7. Some Features of Bank Loans

What's in this chapter:

- Types of bank loans
- The role of the administrative agent
- Loan structure: coupons, amortization, calls
- Bank loans and amendments

Leveraged bank loans have many features similar to the bonds in the market. But they also have many unique features, some of which are described in this chapter.

Although these loans are typically called bank loans, syndicated loans, or just loans, in the leveraged finance market they are not always held by banks. However, they are usually initially arranged by banks. These loans end up being held and traded by a wide array of buy-side and sell-side participants. These loans are not securities, they are not traded on an exchange, and documentation for trades can vary greatly compared to bonds. In part, due to the lack of a central exchange for trade clearing, one of the features of this market is the inability to put on a traditional short.

Bank loans generally can be divided into revolvers and term loans. Revolvers are loans that are typically for temporary funding of business. They can be borrowed and repaid and reborrowed over the life of the loan. Term loans usually are more permanent. Generally, if the principal is repaid, it cannot be reborrowed.

The nature of a revolver is that the lender often has a large unfunded or undrawn commitment. The borrower usually pays a very low rate, maybe 0.25%, on the undrawn portion of the revolver but then pays a full interest rate on any drawn portion. The need to keep these undrawn funds available for the borrower means that revolvers tend to be held by commercial banks. Other investors, such as mutual funds or hedge funds, would need to hold money in reserve for the undrawn portion of the revolver. That would not be earning a full coupon, and this could damage its returns. Commercial and investment banks are more willing to supply funding for revolvers as this is part of their business of supplying liquidity.

As with bonds, a lead bank underwrites the loans; it is the arranger and is usually also the administrative agent or agent bank. Agent banks have certain obligations regarding documentation, due diligence, and information flow. However, an important difference is that in the sale of a new issue bond, the underwriter typically has to have the issue fully distributed and off its own balance sheet to begin making markets and providing liquidity for the issue. In the bank market, the agent and, to a lesser extent, others involved in distributing the bank loan are expected and, in some cases, required to hold on to part of the loan. Investors in this market sometimes become uneasy if the agent bank does not hold any of the loan.

Several other features are typical in the loan market and differ from what is usually seen in the leveraged bond market. These are covered in greater detail in later chapters, but it is worthwhile to briefly highlight them here.

Loans usually have floating-rate coupons, meaning that they are priced as a spread off some index, typically LIBOR. The coupon moves up and down over time. Sometimes a minimum floor is put on LIBOR. Sometimes company issuers or investors pay a fee to "swap" their loan into a fixed-rate coupon for part or all of the life of the loan. Additionally, loans sometimes have a grid that lowers or increases the spread that the issuer has to pay, depending on how strong a certain ratio or other metric may be. This is described in a bit more detail in Chapter 13, "Structural Issues: Coupons."

Loans sometimes have principal amortization during the life of the security (a fancy word for required debt

paydown). This is exceptionally rare in bonds. However, these amortizing loans are significantly less common in the high-yield market than in the investment-grade market. Many lower-rated loans generally have little or no amortization.

Loans often have a required cash flow sweep. This means that a defined portion of excess cash flow from operations may be required to pay down bank debt each year. This feature is fairly unusual to see in bonds.

Term loans may often be divided into a term loan A and a term loan B. There are no hard rules about the differences between term As and term Bs, but typically term loan A tranches are designed to be held by traditional commercial banks, and term loan B tranches by institutional investors like mutual funds or CLOs. Term loan A tranches will typically have some better terms, perhaps a slightly shorter maturity or more amortization. Term loan B tranches rarely have meaningful amortization. There can also sometimes be tranches beyond B: there could be C, D, or E tranches, too.

Bank loans are typically callable at any time, and usually at a very low premium. Bondholders usually want some call protection to reap benefits from credit improvements and due to their lower ranking. Any bank loan repayments, even open market repurchases, typically need to be made pro rata across all tranches of bank debt. This is not true with bonds. However, bank debt has exceptions. Sometimes there are "first out" tranches of debt that are required to be paid out ahead of other tranches of bank debt, especially from proceeds from an event, such as a public stock offering or asset sale.

Bank loans are usually senior or at least pari passu (equal ranking) with bonds. They typically have security or subsidiary guarantees.

Bank loans typically have affirmative and financial covenants that require that certain reporting and financial metrics be maintained. These are often called maintenance covenants; bonds typically do not have these.

It is also much more common, and generally considered easier, to get amendments and waivers from loan holders than from bondholders. For example, if the issuer of a loan begins to experience an operational rough patch and cannot meet its maintenance covenants, it goes to its loan group and, usually for a fee, asks for a change or temporary waiver on the covenant test. When a company is troubled and violating some of the covenants in its loan agreement, banks often continue to give waivers and work with the company. This is due to a number of reasons:

- Banks typically rank senior and are more comfortable that they will be taken care of in any restructuring than more subordinated lenders.
- The concept of lender liability often dissuades lenders from forcing a company to default on a technical matter.
- The amendment and waiver fees are a way of getting repaid some cash from a troubled or potentially troubled loan.

If an analyst is on the public side, getting bank documents can sometimes be a challenge. Some companies make their bank agreements public, and some do not. Even companies with public stock do not always make their bank agreements public. Also note that sometimes bank agreements are filed not as a separate document but as an appendix to a quarterly or annual report or some other filing. Sometimes the agreement is filed on special gated websites where you have to get permission from the company to gain access. If you do have a bank document, remember to check for any filings of amendments or waivers that may have changed the terms of the agreement from its original terms.

Trading loans takes more documentation than bonds. There are two different ways to trade bank loans—by assignment (more common) or through participation. With assignment, the purchaser of the bank debt ends up owning the piece of bank debt and has voting rights and so on. Assignments typically need to get approval from the agent bank and the company. The other way of trading bank debt is through participation. Here a buyer gets a legal claim to the economics of owning the bank debt, but the debt actually remains held by the seller. Voting rights and such are retained by the seller.

When analyzing bank debt, do not fall into the trap of just assuming that if the bank debt is secured, it is secured ahead of other debt obligations or is secured by all assets. Also do not assume that bank debt always has priority over other debt instruments. As described in Chapters 13 through 16, be sure to read the terms of a bank agreement to fully understand ranking, guarantees, and security.

Because bank loans are not publicly registered, securities and traditionally bank lenders get more regular updates on financial results than the public. Bank investors usually can choose to be public or private. Typically, if an investor chooses to be private, he gets more information about the company. However, he is restricted from talking about it with investors or potential investors who are not private. He also is restricted from being able to trade bonds or public stock in the company.

Questions

1. Which type of loan can typically be repaid and then reborrowed?
   A. Revolving loan
   B. Term loan
   C. Bank loan
   D. Secured loan
2. Most bank loans rank _____ relative to bonds.
   A. pari passu
   B. junior
   C. equal
   D. senior
3. Which method of trading bank debt transfers the voting rights to the new owner?
   A. Cash trading
   B. Assignment
   C. Participation
   D. Lender terms
4. Which traits listed below are *not* typical of loans?
   A. Floating rate coupons and LIBOR floors
   B. Immediately callable and low or no call premiums
   C. Administrative agent fully distributes the loans and no debt amortization
   D. Security, subsidiary guarantees, and maintenance covenants

8. A Primer on Prices, Yields, and Spreads

What's in this chapter:

- How prices are used in high-yield debt
- How yields and spreads are used
- Differences between typical bank loan coupons and bond coupons
- When and how duration and total return are used
- The concept of prices and yields in deferred pay bonds

This chapter covers how prices, yields, and spreads are used in the leveraged finance market. Prices, trades, and value are often discussed in the market using these terms, especially when relative value between two or more investments is being discussed. However, yields and spreads are also measures of expected absolute and relative returns on these debt instruments.

The Basics

When someone wants to know the "price" at which to buy or sell a bond or loan, the price is actually given as a percentage of the principal or face value, which is a proxy for the debt's dollar price. However, just as often, bonds and loans are quoted by giving the yield that the bonds are offering at a given price and sometimes by giving the spread. It is worth reviewing these measures used to discuss the price of debt instruments.

Even though people in the market often put a dollar or other currency sign in front of a bond price, this is wrong. The bond price is quoted as a percentage of face value. For example, suppose the price is 90 and you are buying a bond that at maturity will pay off $1,000 (face value, par value). You would pay $900 for that bond, not $90 (1,000 × 0.90, or 90%). Similarly, if you bought €2,000,000 of the same bond, you would not pay €90, but €1,800,000.

Bonds have different coupon terms and mature at different dates. Therefore, comparing two bonds by price doesn't really tell an analyst which bond represents better value. Typically either yield or spread is used to compare two different fixed-income securities. Yield is effectively a rate of return if the debt is held to a certain time and then retired at a certain price. Spread is that rate of return compared to a benchmark. (The benchmark is most commonly a government bond or a proxy for it with a similar maturity.) LIBOR and U.S. treasuries are two of the most common benchmarks from which to spread loans and bonds. These benchmark yields are viewed as *riskless*. The idea is that the spread represents the compensation for the risk that you do not get paid back when buying a corporate bond or loan. It is important to note that the spread is calculated from a benchmark of similar maturity. So if a bond is trading to a seven-year maturity, you should use a seven-year treasury bond as a benchmark. Note loans are more often spread off of LIBOR and bonds off a government bond of similar currency, such as U.S. treasuries.

When you compare bonds of different maturities, especially when they are meaningfully different, comparing spreads is usually more meaningful than comparing yields. This is true because of the concept of the time value of money. The yield curve is partially based on the concept that longer maturities (or the longer you must wait to get paid back) should get paid higher yields, to compensate for inflation and such. So by looking at the spread rather than the yield, you get a better sense of the value of bonds of different maturities.

A Few Points on Yields

- The yield-to-maturity (YTM) and yield-to-worst (YTW) are simply measures of rates of return. The

actual calculations are fairly time-consuming. But many programs can calculate these yields rapidly, such as systems from Bloomberg and Interactive Data Corp. Also, systems can be built using programs such as Microsoft Excel. The YTM takes a bond's cash flows from its interest payment and maturity and its price and determines the return, or yield, using rate of return and reinvestment calculations.

- When the bonds are at par (100% of face value), the YTM and the coupon on the bond are the same. When the price is higher, the yield goes down and is below the coupon. The inverse is true when the price goes lower.
- When a bond is callable, meaning that the company can buy back the bonds at a set price at its option, the YTW comes into play. If the bonds are trading at a price above the call price, the yield-to-call (YTC) is lower than the YTM. Whichever yield is lower is usually the one that is used, to be conservative. This is the YTW, and we will use it throughout the rest of this book. Bond calculators run the yield to each possible call date and to maturity and pick out the most conservative.

A Few Points on Spreads

- Considering all the different yields, such as yield-to-maturity, yield-to-worst, and yield to the next call, how do you look at the spread? Typically you just use the corresponding spread to the corresponding yield. So if the lowest yield corresponds to a call date that is five years out, you would use a treasury bond with a five-year maturity to run the spread. As explained in Chapter 2, "Common Leveraged Finance Terms," the spread-to-worst (STW) is simply the yield-to-worst minus the yield on some benchmark of a similar maturity.
- Let's use the ten-year bond as an example. Suppose the yield-to-worst meant that the bond was "trading to" a call date that was only seven years out. You would run the spread off the seven-year U.S. treasury rather than the ten-year (or a rate interpolated from the treasury curve that equated to seven years). If the bond was issued in British sterling (pounds), the spread typically would be calculated from the British government equivalent.

Bank Loan Coupons

To reiterate from the preceding chapter, bank loans typically have floating coupons and usually are spread over LIBOR. For example, a bond would typically have a set interest rate, such as 10%, and a typical bank rate would be set at +500bp over LIBOR. This means that if LIBOR is 2%, the holders of the bank debt get paid 7% interest (2% + 5%, or 500bp). But if on the next interest rate reset date LIBOR is at 3%, holders of the bank debt would get paid 8%. Occasionally bonds are set up as floating-rate notes too, but not often. For floating-rate notes and loans, instead of an STW, a calculation called the discount margin generally is used. It assumes that the reference rate (LIBOR in our example) will follow a certain pattern over the life of the loan. Also, some loans and floating-rate bonds have a "floor" set for LIBOR. For example, using a bond or loan with a floating-rate spread of +500 bp, as we just did, if a 3% floor is set in the terms of the bonds or loan, even if LIBOR is at 2%, the rate on the loan or bond would have to be a minimum of 8% (3% floor +500 bp).

Duration

Another concept worth mentioning that involves prices, coupons, and maturity is duration. Duration is a measure of the estimated change in price if the yield changes. So if a bond's duration is four, it is assumed that if the yield changes 100bp, the price moves about four points.

In general bond texts, this measure is used to compare the difference in sensitivity or volatility between two

bonds to the change in interest rates. This can also be used to see how the prices of two bonds issued by the same company might respond differently to a news event that would materially change the yield. Typically, the longer the maturity and the lower the coupon, the higher the duration (or the more sensitive price movements are to changes in yield).

Total Returns

The information about yields, spreads, and prices is fairly universal with bonds. However, as mentioned, certain features are more relevant to leveraged finance companies than others. In leveraged finance, analysts also often need to look at total return in the case of a major news event or a bankruptcy.

The easiest way to address this is as if you are running a typical yield-to-worst calculation. However, the end price you get is not the par value of the bond or loan, but whatever the payout is due to an event or what the recovery is in bankruptcy. Similarly, the date you are getting this principal payoff may not be at the maturity date of the bonds or the call date, but some other date that you will estimate in your analysis.

For example, assume that the high-yield company Zeta is bought by investment-grade company Alpha. If Alpha has a much lower cost of borrowing, it might not even wait for the bonds to be callable. Alpha may decide to try to offer a price to buy the bonds early, with an offer called a *tender*. An analyst would want to calculate the *yield* or *total return* for that tender date and price.

In a bankruptcy analysis you might want to see what the return is if you buy the bonds at a certain price today and the bankruptcy does not settle for two years. Then you would estimate the different types of values you might get at the end of the bankruptcy. Similarly, in a stressed situation you might want to assume that a bond pays interest for one year and then goes through a one-year bankruptcy. In these cases you typically run an internal rate of return starting with the price paid for the bond (including accrued interest) of the stream of payments to see the total return.

Deferred Payment Bonds: Prices and Yields

One type of bond that has been prevalent during certain cycles of the high-yield market is the issuance of deferred-pay securities. This typically includes discount notes and pay-in-kind (PIK) notes. You must understand how bonds work to understand the differences in the concepts of face value and accreted value and how the bonds are quoted in the market. Because some of these concepts can take time to get used to, we go over them in Chapters 13, "Structural Issues: Coupons," and 23, "Distressed Credits, Bankruptcy, and Distressed Exchanges."

Zero coupon bonds are usually issued below par and then pay par at maturity. The value of this note increases each day it moves closer to maturity; this is called *accretion*. It is important to note that the note's value and its claim in bankruptcy are based on the accreted value, not the face value that would be due at maturity.

For example, if a five-year note was issued at a discount price of 61.4%, the yield to maturity would be 10%. Assume that the amount that this bond is due at maturity is $500 million.

- The price of a bond when it was issued would be 61.4 (quoted in a percentage of face value), the same as its accreted value.
- The amount of debt on the company's balance sheet would be $307 million ($500 million × 0.614).

After year one from issuance, the note should have accreted to 67.68% of face value.

- If on that date you still wanted to buy the bond with a yield of 10% (the yield that it was issued at), you would pay the accreted value price of 67.68. If you believed the bond's risk required a higher yield, you would pay a price below accreted value.

- On the company balance sheet, the $500 million face amount obligation that was on the balance sheet a year ago at $307 million has now accreted to $338.5 million ($500 million × 0.6768). The increase in the accreted value is booked as interest expense on the income statement.

In the high-yield market, the zero coupon note structure is a bit different. A typical structure is for a discount note to be issued at a discount and take five years to accrete to par. At that time the bond usually begins paying cash interest for the remainder of its life, typically another five years.

There are also PIK notes. Instead of being issued at a discount, these bonds are issued at or close to face value. However, the company can pay the interest on these notes by issuing additional bonds valued at par, instead of cash. This causes the debt on the balance sheet to increase in a pattern similar to a zero coupon note. Typically, these bonds PIK for three or five years and then are required to start paying cash interest. After each PIK payment, the next interest payment is calculated from the new amount of bonds outstanding, the original amount, and the PIK amount.

More recently a slight change to the PIK structure has evolved, known as *toggle bonds*. The company issuing the notes has an option for the PIK period, typically three or five years to either PIK the notes or pay in cash. Frequently it can do both.

Here are three points to keep in mind about PIK and toggle notes:

- Unless the company has announced that it will pay in cash, the notes do not trade with accrued interest. (But typically the price increases commensurate with the implied interest accrual and then drops on the payment date.)
- Once the interest is paid in additional bonds, the next interest payment is made on the original bonds plus those issued for the PIK payment.
- If the bonds are trading at a significant discount or premium to par value, those who trade the bonds typically adjust the yield or price on the bond because the PIK interest payment has a value less than or greater than par.

A Pragmatic Point on Terminology

In practice, usually the higher quality the credit is, the lower the yield on the debt instruments. The bonds and loans that trade at relatively low yields are more likely to be quoted using a spread. The bonds and loans that are trading at higher yields tend to be quoted in price and/or yield.

When bonds and loans are trading at yields closer to the benchmark, they are often said to be trading "tighter." If they are trading at yields further from the benchmark, they are said to be "wider." Also, if two bonds of similar quality are trading at different yields, the one with the lower yield may be referred to as "trading rich." The other might be said to be "trading cheap."

Questions

1. If you pay $900,000 for $1,000,000 face amount of a bond, how would that price be quoted in the high-yield market?

   A. 900

   B. $900,000

   C. 90

   D. $1,000,000

2. If a ten-year bond has seven years until it matures, which maturity of a treasury bond should you use to

calculate the spread?

A. Ten-year

B. Seven-year

C. Three-year

D. Five-year

3. If a bond is trading at par, the coupon is equal to which figure?

A. The spread-to-worst

B. The call price

C. The yield-to-maturity

D. The spread-to-maturity

4. True or false: If a bond is noncallable, meaning that it does not have a call price, the YTW doesn't matter.

5. If a bond has a face amount of $2,000,000 and was issued at an accreted value of 60, the price of the bond is ____, and the amount on the balance sheet for the bond is _____ at the time of issuance.

A. 60, $2,000,000

B. 60, $1,200,000

C. 100, $2,000,000

D. 60, $600,000

9. A Primer on Key Points of Financial Statement Analysis

What's in this chapter:

- What sections of the financial statement commentary to prioritize
- How to derive key figures from company financial statements
- Deriving EBITDA and deciding what to include in adjusted EBITDA
- Free cash flow and interest expense, capital expenditures, and changes in working capital
- What you should focus on from the balance sheet

This chapter shows you how to derive key data used in our analysis from a company's financial statements. It also discusses other uses of these documents.

A company's financial statements include more than just key numbers. Material amounts of descriptive information lend considerable insight to the analysis. Whenever possible, read through all the information—especially the footnotes to the financial statements. When your time is limited, try to focus on these sections:

- A description of the business (if you're looking at a new company)
- Management's discussion of recent results
- Recent events (which often include events that happened after the reporting period)
- The section describing liquidity
- The footnotes regarding the debt structure

Although accounting standards differ slightly around the globe, they are becoming more and more similar with the use of international accounting standards. The examples in this book use the U.S. generally accepted accounting principles (GAAP). Most companies make quarterly financial results available. Some European companies report only semiannually. Sometimes a company puts out an earnings release as a press release that may contain different or additional information than what is included in its formal financial filings. For companies that file with the U.S. Securities and Exchange Commission, the press release will be in a form 8-K, quarterly financials will be in a form 10-Q, and the annual financials will be in a form 10-K.

The key parts of the financial statement used in credit analysis are the income statement, balance sheet, and consolidated statement of cash flows. You hope to derive numerous subsets, details, and nuances from a more detailed reading of the documents. But initially you want to derive four key items from these statements:

- Key measures of cash flow, most commonly using adjusted EBITDA and free cash flow
- The amount of debt obligations
- The cost to service the debt obligations
- Other potential sources of liquidity to help service debt

EBITDA

The most widely used figure as a measure of cash flow from operations is EBITDA: earnings before interest, taxes, depreciation, and amortization. (Some people use OIBDA: operating income before depreciation and amortization.)

EBITDA is not a GAAP figure but is derived using GAAP numbers. It is looked upon as a measure of cash from operations available to service interest expense and other obligations, which is why interest and taxes are

added back. The depreciation and amortization are added back because they are noncash charges. EBITDA is also often viewed as the key unleveraged cash flow figure by which people value companies—or at least it's a reasonable proxy.

EBITDA is often faulted in textbooks for a number of reasons. Typical reasoning is that depreciation is a proxy for capital spending, so it is unrealistic to add it back—and that there are truer measures of cash flow. For this reason, some prefer EBIT (excluding depreciation and amortization). However, the bottom line is that the relatively easy-to-derive EBITDA figure is the one that is most widely used when looking at leveraged finance credit analysis, so it cannot be ignored. For almost all these other measures of cash flow, we will construct them starting with EBITDA.

EBITDA can usually be derived from the income statement. The income statement shown in Table 9-1 is a typical example. You can start with the net income on line 12 and add back taxes, interest expense, depreciation, and amortization from lines 11, 9, 5, and 6, respectively. From this you derive a simple EBITDA.

Table 9-1. Income Statement Sample in $000,000s

		A	B	C
		Year 1	Year 2	Year 3
1	Revenue	3,659	3,666	3,870
2	Costs			
3	Operating costs	1,544	1,539	1,575
4	Selling, general, and administrative	770	790	810
5	Depreciation	900	955	995
6	Amortization	150	240	260
7	Total expenses	3,364	3,524	3,640
8	Operating income	295	142	230
9	Interest expense	500	479	485
10	Earnings before taxes	(205)	(337)	(255)
11	Taxes (tax benefit)	(6)	(7)	(12)
12	Net income	(199)	(330)	(243)
	EBITDA (12 + 11 + 9 + 6 + 5)	1,345	1,337	1,485

Sometimes, however, depreciation and amortization are not broken out on the income statement. Sometimes they are included in certain expense lines, as shown in Table 9-2. When this is the case, you must go to the statement of cash flows. As you can see in Table 9-3, the first section focuses on cash related to operating activities, as opposed to investing or financing. This section derives a figure called net cash provided by operating activities. Within the line items in this section, the depreciation and amortization are shown on line 2 and can be added back. This statement contains numerous other helpful items, several of which we will come back to later. For credit analysis, this statement is one of the most useful financial pages on any

company.

Table 9-2. Income Statement Sample 2 in $000,000s

		A	B	C
		Year 1	**Year 2**	**Year 3**
1	Revenue	3,659	3,666	3,870
2	Costs			
3	Operating costs	2,594	2,734	2,830
4	Selling, general, and administrative	770	790	810
5	Total expenses	3,364	3,524	3,640
6	Operating income	295	142	230
7	Interest expense	500	479	485
8	Earnings before taxes	(205)	(337)	(255)
9	Taxes (tax benefit)	(6)	(7)	(12)
10	Net income	(199)	(330)	(243)
11	Adjusted EBITDA	1,357	1,356	1,505

Table 9-3. Statement of Cash Flows in $000,000s

		A	B	C
		Year 1	**Year 2**	**Year 3**
1	Net income (loss)	(199)	(330)	(243)
	Adjustments to Reconcile Net Cash Provided by Operating Activities			
2	Depreciation and amortization	1,050	1,195	1,255
3	Noncash compensation	12	19	20
4	Noncash interest expense	40	10	10
5	Income taxes (benefit)	(6)	(7)	(12)
6	*Changes in Operating Assets and Liabilities*			
7	Accounts receivable	(29)	28	(9)
8	Inventories	(5)	0	(14)
9	Accounts payable	(11)	5	8
10	Deferred revenue	15	16	17
11	Net cash provided by operations	867	936	1,032

	Investing Activity			
12	Purchases of fixed assets	(1,000)	(860)	(700)
13	Proceeds from sale of assets	20	50	35
14	Net investing activity	(980)	(810)	(665)
	Funding Activities			
15	New borrowings	200	0	(50)
16	Distributions to shareholders	0	0	(100)
17	Net cash from funding activities	200	0	(150)
18	Cash at beginning of the year	100	142	268
19	Cash at end of the year	142	268	485

More commonly used now instead of EBITDA is *adjusted EBITDA*. This typically adds back other types of noncash items. The most universal add-back is *noncash* or *stock compensation*, as shown on line 3 in Table 9-3. Sometimes you also add back other noncash items, such as noncash charges or write-downs of asset values.

When you use adjusted EBITDA on a spreadsheet or report, it is strongly recommended that you footnote the adjusted EBITDA and include in the footnote exactly which items are being added to EBITDA to avoid any confusion.

> This chapter mentions OIBDA as an alternative to EBITDA. OIBDA is operating income before depreciation and amortization. This implies that operating income is measured before taxes and interest expense are deducted, although some definitions simply define OIBDA as adding back these two items. OIBDA is similar to EBITDA. But because it uses operating income instead of earnings as its starting point, it typically excludes any income from discontinued operation, gains, or losses from subsidiaries and other nonoperating items. For these reasons you could argue that OIBDA is a significantly better figure to use, and in many cases it is. However, realistically EBITDA is still the standard. Then people may adjust the EBITDA to get a more realistic operating figure.

Before talking about measures of free cash flow, we should discuss capital expenditures, cash and noncash interest expense, and cash and noncash taxes and changes in working capital in a bit more detail.

Capital Expenditures

Capital expenditures are the amount that a firm invests in longer-term assets. Because these are not regular operating expenses for accounting purposes, but are considered longer-term investments, they do not appear on the income statement. Instead, they appear on the statement of cash flows under investing activities. Then the investment is recorded on the balance sheet as an asset, and the income statement includes a "depreciation" expense spread out over the "useful life" of the asset for accounting purposes. As discussed earlier, depreciation is not a cash item but represents the decline in value of a capital investment, or sort of a proxy for how much would need to be spent each year to replace the asset over its useful life. However, in reality this does not always match up, especially when things such as rapidly evolving technology impact a company. So typically as an analyst, you use adjusted EBITDA and then net out capital expenditures. Sometimes this is called unleveraged free cash flow, but we prefer a more detailed free cash flow measure. In the statement of cash flows, capital expenditures is shown, but its label may vary. Sometimes it is called capital expenditures, and other times it is something like purchases of fixed assets, as shown on line 12 of Table 9-3.

Here is a simple example. A manufacturing company decides to invest $100 million in a new plant for a new product. That is recorded as a use of cash in the investment section of the statement of cash flows and as a new asset on the balance sheet. Using a simple straight line method, if the plant is supposed to last ten years, the company would record $10 million of depreciation expense per year for each of the next ten years on its income statement. The asset on the balance sheet would be reduced each year by that amount. However, the plant may actually last much longer, or it may become obsolete sooner, or technology could cause the cost of the plant to come down, so ten years from now the plant may cost less to replace. However, importantly, the company is not spending that $10 million a year of depreciation that appears on the income statement and therefore can use it for other items.

Although companies do not show it in their statement of cash flows, an analyst often wants to determine how much capital expenditure is necessary to maintain the business and how much is discretionary. This helps determine the true cash needs to keep the business running if liquidity is tight. Those types of insights can sometimes be gleaned from text in management's earnings releases or comments from management. Sometimes you have to estimate it by looking at the historical patterns.

Interest Expenses

Not all the interest expense that is recorded on the balance sheet is always an actual cash item. The income statement records a total interest expense figure, as shown on line 7 on the income statements shown earlier. However, several debt structures (such as the deferred pay structure mentioned in the preceding chapter) and other factors may result in a difference between the cash interest expense paid and the amount recorded on the income statement. So you want to see what the true cash interest is. You can start with the total cash interest from the income statement and then look at the statement of cash flows to see what noncash interest expenses need to be adjusted.

You can see on line 4 of the statement of cash flows the noncash interest expense. So an analyst could record both the cash and noncash interest expense. Note that on this statement, the noncash cash interest in column A line 4 is much larger than the next two years in columns B and C. This implies that perhaps a deferred-pay bond was outstanding in year 1 that was either retired or perhaps began paying cash interest afterwards.

Taxes

You also have to be careful to properly account for taxes versus actual cash taxes. Because of interest expense and depreciation and amortization, most high-yield companies are not cash taxpayers. Or if they are, the cash taxes are not very significant.

Taxes may be recorded on the income statement, but because of items such as net loss tax carry-forwards, they may not actually be a cash item. Similarly, as laid out in the income statements in this example, the "tax benefits" are not actually cash gains. So again you should use the items from the income statement and adjust them for items in the statement of cash flows to determine if they are truly cash or noncash items. In the earlier examples, the tax adjustments occur on line 5 in the statement of cash flows.

Changes in Working Capital

Working capital is defined using two figures from the balance sheet—current assets (line 7) and current liabilities (line 17). However, the changes in working capital can often be a meaningful source or use of cash that is not shown on the income statement but that can be derived from the statement of cash flows. On the statement of cash flows, the changes in the components of working capital can be seen on lines 7 through 10. Working capital items are balance sheet items related to operations.

To explain this, we'll go over a simple example of how this might work for one line item. Accounts payable is money that the company owes to others. This may be suppliers of raw materials or delivery companies. When that figure on the balance sheet goes down, this means that the company used cash to pay others. This would appear as a use of cash on the statement of cash flows, as it was in year 1 (column A, line 9).

To calculate the changes in working capital during a given time period, you would add up the line items from the statement of cash flows from lines 7 through 10, remembering that the numbers in parentheses are negative.

Changes in working capital should always be calculated, and material changes or large items in changes in working capital should always be questioned. In some free cash flow calculations you will want to use changes in working capital.

However, an analyst also must try to understand when this is inappropriate to use. Most businesses go through periods where changes in working capital are a use and some where it is a source. These cycles can be due to seasonality in a business, changes in customers, new-product timings, or any number of factors. So one of the important considerations when using changes in working capital is to make sure you are looking at it over a long-enough period of time to be meaningful. Looking at it for just one quarter or even half a year can be misleading. Even looking at changes in working capital over a one-year period can be misleading for some businesses, depending on what changes or delivery cycles they go through. Counterbalancing these caveats previously listed, when a company is in a tight liquidity position, changes in working capital can be a vital item that can force the company to default or supply critical liquidity for a period of time.

> Keep in mind that not all financial statements are laid out the same. The amount of detail and the breakout of various line items can vary greatly from company to company. This can be particularly true in the statement of cash flows, especially for the changes in working capital.

Free Cash Flow

Free cash flow is a derived figure that uses information from both the income statement and the statement of cash flows. It is a good measure of cash liquidity generated from operations. This figure is useful in credit analysis for bondholders to see what is available to pay down debt obligations each year.

It is generally preferred to use a free cash flow figure that nets out interest expense, cash taxes, and capital expenditures and adjusts for changes in working capital as well (see Table 9-4). Capital expenditures are an "investment" item on the statement of cash flows, but a large component of it can be an ongoing and vital business expense and often a large use of cash.

Table 9-4. Free Cash Flow in $000,000s

Adjusted EBITDA	1,357	1,356	1,505
Purchases of fixed assets	(1,000)	(860)	(700)
Interest expense	(500)	(479)	(485)
Noncash interest expense	40	10	10
Adjustments to Working Capital			
Accounts receivable	(29)	28	(9)
Inventories	(5)	0	(14)
Accounts payable	(11)	5	8
Deferred revenue	15	16	17
Free cash flow	(133)	76	332

The importance of both capital expenditures and working capital can vary by industry. Certain industries, such as manufacturing and retailing, can be big capital spenders and see significant changes in working capital. However, other industries, such as broadcasting, are not big users of either.

Later chapters use these items as key factors in analyzing liquidity ratios.

The Balance Sheet

The next key items to look at are the balance sheet items—notably, cash and debt.

As shown in Table 9-5, line 2 has the figure for cash on hand. Line 3 has an item for marketable securities. This often includes other highly liquid stocks or bonds or other items that can be monetized. These items are usually accounted for along with cash as a form of liquidity.

Table 9-5. Sample Balance Sheet in $000s

		B	C
	Assets	**Year 2**	**Year 3**
1	Current assets		
2	Cash and equivalents	268	485
3	Marketable securities	50	55
4	Accounts receivable	200	231
5	Inventory	180	190
6	Prepaid expenses	50	70
7	Total current assets	748	1,031
8	Net value of fixed assets	3,000	3,200
9	Goodwill and intangibles	1,000	1,000
10	Other assets	75	80
11	**Total assets**	5,571	6,342
12	Current liabilities		
13	Accounts payable	290	300
14	Accrued expenses	250	375
15	Deferred revenue	190	190
16	Current portion long-term debt	0	50
17	Total current liabilities	730	915
18	Long-term debt	5,100	5,000
19	Capitalized leases	100	100
20	Shareholders equity	(359)	327
21	**Total liabilities and equity**	5,571	6,342

Sometimes you see a line item for "restricted cash." Typically this is not counted in cash for liquidity. But you should read the footnotes to the financial statements to find out what this cash is, because sometimes it is reserved to meet debt obligations.

On to the liability side of the balance sheet. The first item to go to is the current portion of debt, which is line 16 on the balance sheet. This is the debt that is due within one year. You want to see if this is manageable relative to the company's liquidity and free cash flow.

Then you want to note the total debt number on line 18. In other cases several lines may have more details about each of the debt items, perhaps breaking out bank debt and bonds. Another item on the balance sheet to consider in the same section as the debt items are capital leases, on line 19, which are like a debt obligation.

Typically it is conservative to count debt due within one year, long-term debt, and capitalized leases all as part of total debt.

To look at net debt, you would subtract cash and equivalents from the total debt figure.

These items give you the basics of debt, but you must look up other items to get a fuller picture of the debt. Earlier it was recommended that you read the footnotes to the financial statements. If time does not permit that, at a minimum read the footnote covering the debt. This footnote will give you varying amounts of detail about each part of the debt structure. Most importantly, it will tell you when each piece of debt matures. Debt maturities represent possible downside event risks for the company.

Typically the annual reports, but not the quarterly ones, also summarize annual maturities for the next five years. This section usually also outlines whether other borrowings are available to the company, such as an undrawn revolving loan commitment or an accounts receivable facility; these are other key potential sources of liquidity.

These are the major items that will help you understand financial statements. The next chapter covers the typical type of ratio analysis that you will do with data from financial statements when analyzing leveraged finance credits.

A Pragmatic Point on Financial Statements

Many books on financial analysis focus on the income statement. This is often the first place an analyst looks when examining a company. However, it is strongly recommended that if you want to analyze a company, especially a leveraged one, make sure you spend more time with the statement of cash flows. Also, never believe that an analysis is complete unless you understand what is going on with the various items on this sheet.

The statement of cash flows is usually divided into three sections: operating activities, investing activities, and financing activities. This is a good layout to understand where cash is being generated and where it is being used.

The statement of cash flows shows a more realistic picture than the income statement of where and how cash is being used, giving you a better picture of liquidity. In particular, you should always look at the cash flow from operating activities and compare it to the various measures of EBITDA and free cash flow that you are deriving. Remember that whenever liquidity is tight, changing trends in the uses of working capital can be vital to study.

Questions

1. What items get added back to net earnings to calculate EBITDA?
2. If depreciation and amortization are not broken out on the income statement, where can they typically be found?
   A. Balance sheet
   B. Footnotes
   C. Statement of cash flows
   D. Management's statement
3. What is the most common add-back for adjusted EBITDA versus EBITDA?
   A. Noncash compensation
   B. Amortization
   C. Noncash taxes
   D. Deferred revenue
4. Using only the appropriate figures from the choices shown in the following table, build up free cash flow.

EBIT	$100
Depreciation and amortization	$25
Cash interest expense	$30
Total interest expense	$45
Cash taxes	$5
New borrowings	$50
Changes in working capital	$10
Operating expenses	$60

5. Capital expenditures are most related to what items on the income statement?

A. Operating expenses

B. Net income

C. Depreciation and amortization

D. Gross profit

6. Using only the appropriate figures from the choices shown in the following table, calculate net debt.

Total debt	$760
Cash	$100
Equity value	$165
Net income	$35

10. Credit Ratios

What's in this chapter:

- Why and how ratios are used
- How to construct and use common liquidity ratios
- How to use and construct leverage ratios
- Relating leverage ratios to asset value
- Free cash flow ratios as another measure of liquidity

This chapter deals with various types of credit ratio analysis. These are the most common ratios used to assess the credit quality of a leveraged loan/bond. This chapter focuses on ratios that give you a better understanding of the trends in a company's finances and help you figure out the relative merits of different securities and credits.

Complaints about ratio analysis include that it can be too simple, that it gives you only a partial idea of a company's credit profile for one time period, and that it can become a reason not to do more in-depth work. Although ratio analysis on its own does not tell you about a company's credit quality, ratio analysis is a valuable tool and is the most widely used one in credit analysis. When discussing a bond or loan key ratios are usually one of the first items discussed, because they make comparisons easy. Ratio analysis lets you compare a company over time, even if it has undergone major changes. (Perhaps it has completed a series of acquisitions over several years, and you want to analyze whether this has improved or weakened the company's credit profile.) More importantly, ratio analysis allows you to relatively easily compare companies of different sizes with each other and with averages in the market.

The usefulness of ratio analysis depends on the quality of the inputs you use, such as the calculations of adjustments to EBITDA, interest expense, and debt outstanding. Second, keep in mind that ratio analysis does not capture trends but is typically a static snapshot of a period of time, usually 12 months. Third, always try to keep in mind when either constructing or using ratios what the ratio is being used to analyze, versus what you are trying to look at. (For example, do you care how well a company can handle total interest, or are you just concerned with its ability to meet cash interest?)

With its benefits and shortcomings, ratio analysis is still by far the most widely used technique in analyzing leveraged finance credits. The most common ratios try to address the two key starting points in credit analysis:

- How well a company can service its debt obligations from operations
- What is the overall asset value of a company to help support the repayment of the debt if no liquidity exists to service the debt

The EBITDA/interest ratio gives you a snapshot of the ability to service interest expense payments as a proxy for liquidity. But EBITDA – capital expenditures/interest is being used more often and is the more pragmatic ratio. Debt/EBITDA gives you an idea of how much asset protection is offered to the bonds. These ratios are frequently shouted across trading desks and are generally the first ones talked about between salesmen, analysts, traders, bankers, and portfolio managers.

EBITDA/Interest Ratio

The most basic item a lender to a company wants to see is if the company can pay the interest on the bond or loan. The quickest way to look at that is the adjusted EBITDA/total interest ratio.

A ratio of 1x shows that the company's cash generated from its business operations can just cover the interest expense for any given period. The bigger the ratio, the better the company can service its interest. If the ratio is below 1x, the company requires other sources of liquidity to pay its interest expense.

You also want to look at the EBITDA/cash interest ratio. We explained in an earlier chapter how to derive cash interest versus total interest using the statement of cash flows. Table 10-1 shows the adjusted EBITDA/total interest ratio and the adjusted interest/cash interest ratios using the income statements and the statement of cash flows from the preceding chapter.

Table 10-1. Adjusted EBITDA/Interest Ratios

	A	B	C
	Year 1	**Year 2**	**Year 3**
Adjusted EBITDA/total interest	2.7x	2.8x	3.1x
Adjusted EBITDA/cash interest	3.0x	2.9x	3.2x

If the difference between the two ratios is not large, it is typically ignored, and the total interest ratio is used. However, if the difference between the two is large, the ratios should be run both ways, and you should decide which one to focus on, depending on the goal of the analysis.

For example, if you just want to discover the company's overall ability to meet its cash obligations for this past year, you should use the ratio with cash interest. However, assume that the company has a large bond that is a zero coupon for five years and then starts paying cash interest. If the company is only one year away from having the bond be required to pay cash interest or, in common parlance, "go cash pay," you might want to look at the ratio for total interest. That is closer to the amount that needs to be serviced in the very near future and may be the more realistic level of obligations that an analyst should worry about.

Note that in both of these cases we used adjusted EBITDA as the numerator. This was simply adjusted for the noncash compensation and is the more realistic ratio to use than pure EBITDA.

The other common ratio would be adjusted EBITDA – capital expenditures/interest expense. Capital expenditures, while counted as investments for accounting purposes, can actually be an ongoing operating cost of many businesses.

As mentioned in the preceding chapter, it is sometimes difficult to determine what portion of capital spending is a regular payment and what portion may be a one-time or exceptional expenditure. If there are a large number of one-time or exceptional expenditures, this ratio can become less meaningful. Additionally, this ratio is not as meaningful if you are looking at an industry that has a very low level of capital spending. Table 10-2 shows the ratios for our company outlined in the preceding chapter.

Table 10-2. (Adjusted EBITDA – Capital Expenditures)/Interest Ratios

	A	B	C
	Year 1	**Year 2**	**Year 3**
Adjusted EBITDA – capital expenditures/ total interest	0.7x	1.0x	1.7x
Adjusted EBITDA – capital expenditures/ cash interest	0.8x	1.1x	1.7x

An analyst often wants to discern what portion of capital expenditures is for regular ongoing maintenance to keep the company going and what portion is more of a one-time or special project expenditure. The discussion

of a special one-time project might appear in the text of a company's financial statements. It would typically appear under "Management's Discussion of Results" in the "Liquidity" section and might read like this:

> Our capital expenditures for the year totaled $200 million. The expenditures included approximately $75 million related to our new computer center that was completed this year.

This implies, but doesn't state, that about $125 million of the expenditures were regular ongoing expenditures. If you wanted a more regular snapshot of the ability to cover interest expense with EBITDA-capital expenditures on a regular basis, you might want to use the $125 million figure rather than the reported $200 million. This is especially true if this $125 million figure aligns more closely with historic levels of capital spending. However, we strongly recommend that if you do this in a presentation or report, you should clearly label and footnote how the capital expenditures are being adjusted.

These ratios give a snapshot in time that can be compared to other time periods for the same company to see if this ratio has been improving or declining. Looking at our example, it appears that in column A, year 1, the company was spending more than in later years on capital expenditures. Furthermore, adjusted EBITDA net of capital spending was not enough to cover interest expenditures, so the company borrowed to help cover its costs (as shown in column A, line 15 of the statement of cash flows). However, by year 3, EBITDA increased and capital expenditures decreased so that the interest coverage ratios net of capital expenditures are now reasonably above 1x. Additionally, you can see on the statement of cash flows that the cash generation is enough that the company paid back some debt and distributed cash to shareholders. See column C, lines 15 and 16, in the statement of cash flows.

These ratios by themselves do not capture the company's other cash obligations, such as debt maturities or uses of working capital. It also does not show what other resources the company may have to meet these various obligations, such as cash or borrowing capacity.

Debt/EBITDA

The debt/EBITDA or adjusted EBITDA ratio may be the most widely used ratio when comparing different companies. It is fairly simple and fairly easily calculated. But you should not become overly dependent on it, because by itself it has shortcomings.

The ratio is commonly called the leverage ratio. Do not confuse this with operating leverage, which is often discussed in financial analysis. (It generally refers to how much of an increase in revenue drops to the bottom line.) But in this book, as generally in the business, leverage ratio means the debt/EBITDA ratio.

To calculate this ratio, the numerator is the total debt figure we referred to in Chapter 9, "A Primer on Key Points of Financial Statement Analysis." In this example, for year 3 (column C) it would be the sum of lines 16, 18, and 19 from the balance sheet. As stated earlier, this includes the current portion of long-term debt, the total long-term debt, and the capital leases. These items add up to total debt of $5.150 billion.

Then, for the numerator, you can use either the EBITDA or adjusted EBITDA ratio—whichever one you have decided is more realistic. In this case it is the adjusted EBITDA that we derived in Chapter 9, which for year 3 totals $1.505 billion. Putting this into the ratio, you would have $5.150 / $1.505, or a leverage ratio of 3.42x.

Another common way of calculating this ratio is using "net debt"/adjusted EBITDA, or a net leverage ratio. In this case you simply subtract the cash on hand from the numerator. This is commonly used if the company has a large cash position that is not earmarked for some special use. For example, suppose a company has a large stockpile of cash but has said it may invest it shortly in a developmental project. You might not want to use that cash in calculating leverage and, therefore, not use the net leverage ratio and instead just use the

traditional leverage ratio.

If you are comparing this ratio between companies with very similar businesses, you can get a good quick picture of which one is likely to have better asset protection (the less leveraged one). However, this does not give you a sense of how much of an asset value cushion there is. If you can find comparable companies with public equities, you can look at the total market enterprise value (EV) of these companies and see what multiple of adjusted EBITDA they are trading at and compare them to the leverage ratio.

The total market enterprise value would be the public value of the company's stock plus all its debt, net of any cash on hand. This calculation is discussed later. For now I will assume that if we looked at three comparable publicly traded companies, they would trade at an average multiple of 5x. So this would imply that our sample company has an "equity cushion" of about 47% (5 / 3.42, or EV multiple/leverage ratio). This implies that the company has almost one and a half times more value than debt. This can be used to compare an equity cushion for companies in different industries by establishing an average enterprise value multiple for each industry.

Table 10-3 shows the calculation for an EV multiple. You take the total number of shares outstanding and multiply it by the share price. Then you add total debt and subtract the cash on hand, because the cash is not part of the value of the operating business. This market value of the equity plus the debt is a company's market enterprise value and is the numerator in the ratio. The denominator is the adjusted EBITDA. Note that the total number of shares is usually shown on the balance sheet. Or you can find more details in the footnotes to the financial statements.

Table 10-3. Comparable Company Enterprise Value Calculation

	Comparable Company 1	Comparable Company 2	Comparable Company 3	
Number of shares outstanding (in 000,000s)	175	330	345	
Recent stock price (in dollars)	25	5	45	
Total market equity value (in $000,000s)	4,375	1,650	15,525	
Total debt (in $000,000s)	2,000	1,000	4,000	
Minus cash on hand (in $000,000s)	100	300	200	
Total enterprise value (EV) (in $000,000s)	6,275	2,350	19,325	
Adjusted EBITDA (in $000,000s)	1,200	490	3,875	
				Average
EV / adjusted EBITDA (valuation multiple)	5.2x	4.8x	5.0x	5.0x

Another way that you can estimate the size of the equity cushion is if comparable acquisitions have occurred within the industry. If there have been recent acquisitions of comparable companies, this is a great example of what the value could be for the company you are analyzing. For example, suppose a comparable company was recently sold to a larger entity, and the buyer paid $1 billion for the company. Prior to being bought, the company generated $200 million of adjusted EBITDA; then the price it was sold for was equal to a multiple of 5x.

If you are comparing different types of companies, what does the leverage ratio tell you? Well, in a vacuum, not much. However, if you can put the ratios into a relative basis using the valuation multiples that are applicable to each industry and then compare the asset value cushions over the debt, this ratio can be useful.

Not surprisingly, different industries tend to be valued at various average multiples. The valuation can vary due to longer-term business trends, the level of competitiveness, the size of companies in that sector, and similar factors. Another point is that because this ratio does not include capital spending, a business that may require a higher level of capital spending should usually look to have a lower debt ratio than a company with very little regular capital spending.

Therefore, what are reasonable multiples for companies in one industry may be very different from those in another industry. For example, a highly cyclical manufacturing company may typically trade at 5x to 6x adjusted EBITDA, and investors may feel most comfortable giving these types of companies a leverage ratio between 3x and 4x. Meanwhile, investors may feel much more comfortable with a higher leverage ratio for a satellite communications company that has shown more stability and growth and that may see comparable equities trade at a multiple of adjusted EBITDA closer to 9x.

Therefore, just as the valuations for different types of companies vary, so does the amount of leverage that investors find reasonable for a company.

Two other debt ratios are used to look at leverage: debt/equity and market-adjusted debt/EBITDA. But they are much less common and less valuable.

Debt/equity is a classic ratio seen in textbooks on financial analysis. Equity is an accounting-derived value for the company when all liabilities are subtracted from all assets. On the balance sheet shown in Chapter 9, it appears on line 20. The problem is that this is an accounting-derived number that can be adjusted by mergers and acquisitions and write-ups and write-downs of assets and net income losses (not cash flow losses). Because this equity rarely reflects a company's true value, the balance sheet equity figure is not a very good measure of the company's value.

Market-adjusted debt (MAD)/EBITDA factors in the market value at which a company's bank loans and bonds are trading. This implies that when you are buying the securities at a discount, that is the real leverage risk you are taking. For example, assume that a company has $1 billion of bank debt, $500 million of senior notes, and $200 of subordinated notes outstanding. Also assume that an investor can buy each one at 95, 80, and 75 of face value. The market-adjusted debt would be 1.5 billion, as shown in Table 10-4.

Table 10-4. Market-Adjusted Debt (MAD) in $000,000s (Except Price)

	Amount	Price	MAD
Bank debt	1,000	95	950
Senior notes	500	80	400
Subordinated notes	200	75	150
Total	1,700		1,500

If the company's EBITDA was $400 million, its debt/EBITDA ratio would 4.25x, but its market-adjusted ratio would be 3.75x. This ratio is unrealistic, however. In reality, if you were looking at the subordinated debt and a restructuring occurred, the bank loan and the senior notes would conceivably get paid their full face value or close to it before the subordinated notes would get anything. So you wouldn't really be buying the debt at 3.75x. You could argue that this ratio *is* realistic for the most senior piece of the debt structure—the bank debt in this case—but not for the more junior tranches of debt.

A Pragmatic Point on the Leverage Ratio

It is helpful sometimes to think of ratios in different ways.

We just went over the debt/EBITDA ratio, but what does the reciprocal of the debt/EBITDA ratio tell you? The reciprocal of this ratio is EBITDA/debt. This tells you the maximum interest rate you could have on the debt to equal 1x interest coverage. For example, if the debt/EBITDA ratio is 1,500 / 250 = 3x, the reciprocal is 0.17. So if this company had a 17% interest rate, its interest coverage ratio would be 1x.

Suppose you want to quickly look at how high an interest rate this company could handle and still have enough to pay off $50 million of debt a year and service $50 million of capital expenditures a year. You could subtract $100 million from the EBITDA to service these two obligations and rerun the reciprocal 150 / 1,500, which equals 0.10, or 10%. This type of analysis can give you a snapshot of restructuring or refinancing scenarios.

Another fact about the leverage ratio is that it can be run at various levels of debt. So if a company had €1 billion in bank debt, €500 million in senior subordinated debt, and €250 million of adjusted EBITDA, you could say its bank leverage was 4x (1 billion / 250 million) and its total leverage was 6x (1.5 billion / 250 million). The size of the increase in leverage between the two tranches has a big impact on how the two pieces of debt trade relative to each other.

Another item to keep in mind is what does it mean if two companies have identical leverage ratios but very different EBITDA/interest expense ratios? It probably means one has much higher borrowing costs than the other, and the analyst should ask herself why.

A Pragmatic Point on Valuations

The preceding section highlighted EBITDA multiples for valuing a company. Using EBITDA multiples is a quick and fairly efficient way to derive enterprise values. Ratios such as EV/EBITDA are frequently used as a valuation measure. Another common multiple used in the equity market is the price/earnings ratio. Ultimately these methods are shorthand versions of or proxies for discounted cash flow (DCF) analysis, which is the best way to measure cash-flow-producing assets. These equity multiples likely represent the aggregate of what the universe of investors think is the right DCF value for a company.

Perhaps you think of a company's breakup value and assign a value to undeveloped real estate on a per-square-foot basis. The ultimate buyer probably will factor in the net present value of the cash flows he or she could generate from that property over time to determine the price.

Of course, don't assume that the DCF calculations are pure science that will result in everyone's reaching the same number; numerous subjective factors are involved:

- What measure of cash flow will be used—free cash flow, EBITDA, or some other item?
- What types of rates of growth or decline in the cash flow measure are being used?
- Over what time period will the analysis be run?
- What, if any, terminal value will be applied to the calculation?

- What discount rate will be used (a proxy for the rate of return)?

Being pragmatic, you cannot run a DCF on every company and respond in a timely manner to the typical daily pressures of your analytical work. Using comparable EBITDA multiples is a great proxy for this longer analysis. However, do not lose sight of what is really driving the ultimate value decisions.

It is a good exercise to periodically pick a company (often a more stressed one is the most interesting) and run your own DCF analysis to try to solve to the market valuation. You get to see what expectations need to be applied to the DCF to achieve the valuation and whether the assumptions that the market appears to be using make sense. This is a great way to spend a weekend or some of your vacation time.

> Keep in mind that you can derive other financial credit metrics, but EBITDA/total interest and debt/EBITDA, and their close derivatives, are the most widely used. You can tell that the FCF/debt (discussed next) is extremely valuable as a quick and comparative measure of financial strength. But in reality it is not nearly as widely used as the other two ratios mentioned.

Free Cash Flow Ratios

For the purposes of the next ratios, free cash flow (FCF) will be utilized. The main ratio used is free cash flow/total debt. This ratio shows hypothetically how long it would take the company to pay back its debt with cash generated from the business.

To get to the FCF that will be used, start with adjusted EBITDA and net out capital expenditures, cash interest expense, cash taxes, and changes in working capital.

As mentioned earlier, this FCF before capital expenditures should approximate the "net cash provided by operations" on the statement of cash flows. If it doesn't, the analyst should have a good explanation for the discrepancies.

Table 10-5 shows a basic calculation for this free cash flow.

Table 10-5. Sample of Free Cash Flow in $000,000s

		All Using Column C
Adjusted EBITDA	1,550	*(Line 11 from income statement 2)*
Less:		
Cash taxes	0	*(Line 9 income statement – line 5 statement of cash flows)*
Cash interest expense	475	*(Line 7 income statement – line 4 statement of cash flows)*
Capital expenditures	700	*(Line 12 statement of cash flows)*
Working capital (benefit)	(2)	*(Sum of lines 8 through 11 statement of cash flows)*
FCF	377	

Before you use FCF in the ratio, a few items are worth reviewing.

Changes in Working Capital

In some businesses, changes in working capital are so minimal that they may not even be worth including. If you are looking at quarterly numbers, be careful not to extrapolate or annualize swings in changes in working capital. For many companies they are highly seasonal. Additionally, for many companies, changes in working

capital are relatively neutral over longer time periods.

Dividends

Dividends are discretionary and usually are regular payments to the equity holders. In the U.S., quarterly dividends are typical; in Europe, annual or semi-annual dividends are more common. If a company has been paying a regular dividend, it is often reluctant to stop or even reduce these payments, for fear of how this may be perceived by shareholders. Some companies occasionally pay a special dividend rather than a regular one. Because of their discretionary nature, many analysts do not deduct dividends when arriving at free cash flow. However, if you are using the FCF/debt ratio to determine how much cash is available to pay down debt, and the company is a regular dividend payer, it is not likely to cut that dividend to pay down debt unless it absolutely has to. So typically if the company is a regular dividend payer, it is prudent to subtract that payment from FCF too, although most leveraged companies are not dividend payers of any kind. If you do decide to net out dividends, be sure to footnote this on any worksheets.

Acquisitions

Typically an acquisition is an occasional or one-time event for a company. However, some companies are constantly buying assets, and doing so is an ongoing part of their business. An analyst must decide whether to include these acquisitions in the calculations for FCF. Typically they are not included because of their discretionary nature. Acquisitions and divestitures are usually shown in the investment section of the statement of cash flows.

One-Time Charges

One-time charges typically appear on the income statement as an expense item. These types of charges often have both a cash component and a noncash component.

A noncash portion of this charge would appear in the statement of cash flows as an addition to cash from operations. So you could net the noncash portion of the charge from the total portion on the income statement to determine the actual cash spent on these charges. A typical example may be if a company undertook a number of layoffs. The charge may include payments to be made to the laid-off workers over a period of years. The total charge on the income statement may be the present value of these payments, but only a portion of this was paid out in the year of the layoffs, and that would be the cash portion.

You must decide whether that cash portion of these irregular expenses should be included or excluded in the free cash flow calculation. For example, suppose you are trying to determine the ability of a credit to pay down debt over time. Over the last several years this type of item has appeared on the income statement only once. It is probably best to ignore it. However, suppose you want to see how much cash flow is generated to be able to meet a maturity this year, or if these types of charges seem to have occurred with great frequency over recent years. It would likely be best not to add back the cash portion of this "one-time charge" but to net it out of your free cash flow calculation.

The FCF/Debt Ratio

When you have determined which FCF is being used, you will probably want to put it within a context to be able to compare it to different time periods and to other companies. The easiest way to do this is by using it in a ratio. The ratio we like to use is FCF/debt. Using the previous examples of free cash flow of $377 million and debt of $5.1 billion, this ratio would be 7.4% for our sample company.

In this example, the ratio tells us that in the past 12 months the company generated enough FCF to retire 7.4% of the debt structure per year. The higher the number, the quicker the company can deleverage and deal

with maturities. This is not to say that the company will necessarily choose to pay down debt with the cash it generates, but it can. This is a useful tool to see a company's relative strength in generating true cash and being able to meet its obligations. Overall, this can be one of the most telling and useful ratios when you're doing credit analysis. It should probably be even more widely used than it is.

A Pragmatic Point on Free Cash Flow

You can also examine other aspects of a company's free cash flow. For example, you can compare it to upcoming debt maturities. An interesting exercise can be to see what the company has done with the cash it generates over time. This can give you good insight into a company's management style. Figure 10-1 shows how this examination might look.

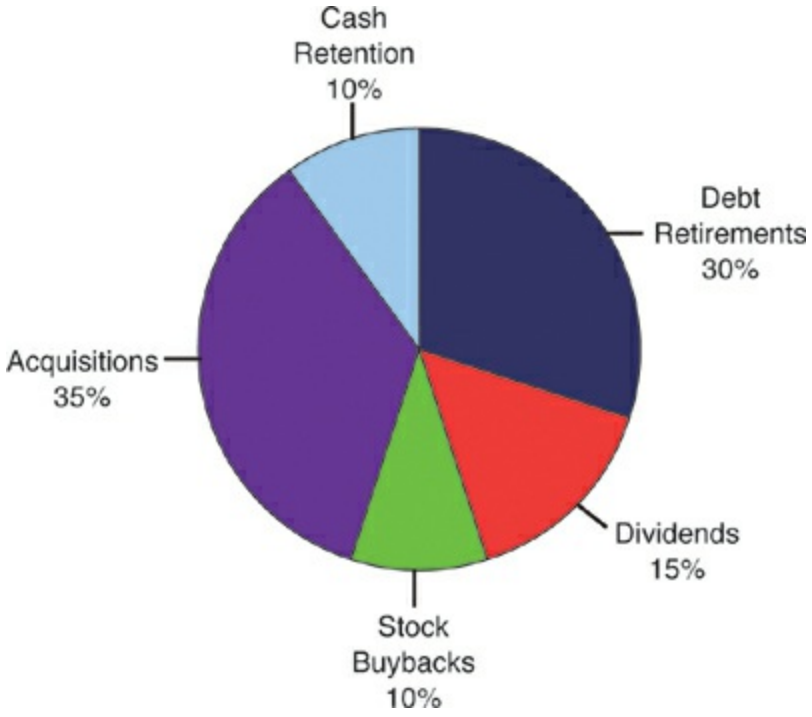

Figure 10-1. Five-year cumulative use of free cash flow

When FCF is not very high, you should carefully examine the maturity schedule and other sources of liquidity. Liquidity sources obviously include cash and equivalents and undrawn bank borrowings. However, you need to read the terms of the bank borrowing to make sure it would actually be available to draw; covenants usually have to be met. You can also look at assets that could be sold and try to assess whether the company would be able to raise money in the public or private equity or debt markets.

Questions

1. What does an EBITDA/interest ratio of 1 mean?
   A. The company has a perfect ratio.
   B. Interest expense uses up all the available EBITDA.
   C. The company has significant excess liquidity from operations.
   D. The company is overleveraged.
2. Which combination is the best?
   A. A low EBITDA/interest ratio and a low leverage ratio
   B. A high EBITDA/interest ratio and a low leverage ratio
   C. A high EBITDA/interest ratio and a high leverage ratio

D. A low EBITDA/interest ratio and a high leverage ratio

3. Comparing the following two companies' leverage ratios and equity market enterprise value multiples, which one has more asset protection?

	Company Alpha	Company Zeta
Debt/EBITDA	6x	4x
Enterprise value/EBITDA	10x	6x

4. Describe what the FCF/debt shows.

5. What is the debt/EBITDA ratio commonly called?

A. Asset coverage ratio

B. Leverage ratio

C. Coverage ratio

D. Liquidity ratio

11. Business Trend Analysis and Operational Ratios

What's in this chapter?

- What to look for in operational trends
- What to look for in margins
- The basics of how to lay out financial information to examine trends and margins
- How to examine trends in capital spending

The ratios we used in the preceding chapter could all be characterized as financial or credit metrics. They measure how well the company can service aspects of its debt structure. They are the most common terms used day-to-day to determine a large portion of relative value, or what to buy or sell.

However, it is also key to look at how well the underlying business is doing both over time and compared to other companies. This chapter explores some of the ways to examine these factors, using some trend analysis and some ratio analysis. If the ratios in Chapter 10, "Credit Ratios," attempted to measure credit risk, this chapter focuses on operational or business risks.

Some of the important factors when examining operational risks are more subjective and cannot easily be put into a ratio:

- The overall competitive environment in which the company operates
- How dependent the company is on a few key customers
- The barriers to entry in the industry
- How sensitive the business is to the economy or to event risks (such as a spike in oil prices)
- How capital-intense the business is
- Whether the company is a price taker or a price setter

Business Trends

Certain ways of laying out the financial data can help an analyst look at a credit. First, it is best to focus on basic trends in a company's revenue and EBITDA over the last three to five years, as shown in Table 11-1. When possible, it is also good to analyze this by quarter for at least the latest two years, comparing year-over-year results for each quarter (see Table 11-2).

Table 11-1. Simple Trend Analysis Annually in $000,000s

	Year 1	Year 2	Year 3
Revenue	1,300	1,250	1,325
% change		*–3.8%*	*6.0%*
EBITDA	273	253	282
% change		*–7.5%*	*11.8%*
Margin	*21.0%*	*20.2%*	*21.3%*

Table 11-2. Simple Trend Analysis Quarterly in $000,000s

	Year 2 Q1	Year 3 Q1	Year 2 Q2	Year 3 Q2
Revenue	300	305	310	325
% change		*1.7%*		*4.8%*
EBITDA	60	61	64	68
% change		*1.9%*		*7.4%*
Margin	*20.0%*	*20.1%*	*20.5%*	*21.0%*

The key here is to see in which general direction the business is going. You also should compare these rates to the gross domestic product (GDP) in the country in which the company operates and compare it to other companies in the same industry.

You must also see if the company made acquisitions or divestitures that had some impact on the changes in the numbers. You can find this out from the text of management's discussion in its financial statement and/or from the statement of cash flows under the "Investing Activity" section.

If the company has made acquisitions or divestitures of assets of a meaningful size, hopefully the company will have supplied pro forma information. Pro forma information typically shows an example of what key financials would look like for the company as if the transaction occurred several periods ago. Usually pro forma information will be shown in format so that year-over-year comparisons can be made as if the acquisition was in place for both periods.

It is also important to note that if a company has several business lines, any trend analysis should also try to break out the details of these business lines. This way, you can see which ones are causing the greatest changes in the company's overall results. The breakout of business lines typically appears on either the income statement or in management's description of recent results. However, sometimes it appears in the footnotes to the financial statements. Other times it appears only in the earnings press release that a company may file. Some companies simply do not break out divisional or business line results.

Additionally, in the notes to the financial statements, the company usually breaks out business done domestically and internationally. This can also help an analyst know if some of the change in results was due to declines or growth in specific business areas or currency changes.

> As you focus on specific industries, you will see that certain operational metrics are specific to each one. You must become familiar with these to truly get a sense of relative performance between each credit in an industry. Some examples may include comparing "drop and handle" per square foot of casino space in the gaming industry, or the cost of acquiring subscribers for a cable television company (CPGA), or the net present value of gas and oil reserves for an energy company.

Margins and Expenses

You can see that we also break out in our simplified trend analysis tables the EBITDA margins. The EBITDA margin is calculated as EBITDA/revenue, giving you a sense of a company's ability to convert revenue to EBITDA. If you are seeing meaningful changes in margins, you will want to examine the cost lines in greater detail.

One common item for retailers and manufacturers to analyze is the cost of goods sold. This is often viewed by monitoring the gross profit margin. Typically you take revenue less cost of goods, and this is total gross income or gross profit. Gross profit margin (gross profit/revenue) is typically shown and analyzed for these types of companies.

Examining the expenses and margins can give you a sense of the company's operating leverage. Operating leverage measures how well a company's growth in revenue can be translated into cash flow. One way to think of this is whether the company has a high portion of its total expenses as "fixed" expenses that do not shift when sales go up. Therefore, the EBITDA margin increases significantly as revenues rise; this implies higher operating leverage. Similarly, if a company's revenue is declining, fixed costs cannot come down as easily, and margins may shrink more rapidly.

Unfortunately, companies typically do not show their fixed and variable costs. You must try to estimate these by looking at different time periods and the descriptions of the line items in the expenses (see Table 11-3). Sometimes conversations with management can help, or company presentations can give insights. By looking at many companies in the same industry over periods of time, you can acquire a better sense of operating leverage in an industry. This is one of the many reasons why securities analysis tends to be divided by industry.

Table 11-3. Simple Trend Analysis with Costs Annually in $000,000s

	Year 1	Year 2	% Change	Year 3	% Change
Revenue	1,300	1,250	–3.8%	1,325	6.0%
Cost of goods sold	500	489	–2.2%	522	6.7%
Gross profit	800	761	–4.9%	803	5.5%
Gross margin	*61.5%*	*60.9%*		*60.6%*	
Expenses:					
Selling expenses	400	382	–4.5%	397	3.9%
As a % of revenue	*30.8%*	*30.6%*		*30.0%*	
General and administrative expenses	127	126	–0.8%	124	–1.6%
As a % of revenue	*9.8%*	*10.1%*		*9.4%*	
Depreciation and amortization	72	70		68	
Operating income	201	183		214	
EBITDA	273	253	–7.5%	282	11.8%
Margin	21.0%	20.2%		21.3%	

When comparing margins among different companies in the same business, note whether one has meaningfully better margins than the other, and try to analyze why. The difference in margin may be due to management styles or because one company operates in an area of the country where rents and employment costs are higher or lower. Another common reason is economies of scale. In many industries a large company has better pricing for its supplies and perhaps has pricing power for the finished goods as well. Either way, try to note what is causing the differences in margins.

A few comments on Table 11-3: The growth rates appear in a separate column to make the data easier to read. Here are a few items to watch:

- The gross margin has gone down at least two years in a row, in both a year of revenue growth and a year of decline. You should watch this trend and explore it further if possible, even though the change is not large.
- Selling expenses appear to be somewhat variable, but not as variable as revenue. So it would appear that

selling expenses have a fixed component. This can include sales salaries, fixed costs for a marketing team, and perhaps promotional spending.

- General and administrative expenses, not surprisingly, appear relatively fixed.

> In some companies and situations, it may also be common to examine turnover of accounts payable, accounts receivable, and inventories. These ratios can give you insight into how a company is managing its working capital and sometimes if it is slowing down payments because liquidity is getting tight. A typical inventory turnover calculation might be cost of goods sold/average inventories.

These items, discussed earlier, are all based on operational data from the income statement. At least a portion of capital expenditures are regular ongoing expenditures. An analyst also wants to get a sense of the size and trends of capital spending.

Capital Expenditures

Some industries use specific metrics concerning capital expenditures, but the most common way of looking at this category is as a percentage of total revenue, as we did earlier with other expenditures.

This can be even more helpful if you can break out maintenance capital spending as a percentage of revenue and get a sense of the needed rate of reinvestment in the business. You can also look over time and see if this varies with revenue levels. This can be particularly helpful when you're trying to value a company.

When you're comparing different companies in the same industry, it can be informative to examine whether one company has higher growth rates and if it is investing in capital expenditures more than a company with slower growth rates. There are also time periods where, for any number of reasons, one company defers capital expenditures for a period of time. This may make the FCF generation look higher on both an absolute basis and as a percentage of revenue for a period of time. But the firm may have underinvested and hurt revenue growth and may have to play catch-up for a period of time, during which it experiences a spike in capital spending or perhaps even a drop in revenue.

It is worth noting that many textbooks and much equity-based research highlight return-on-investment (ROI) analysis or return-on-equity (ROE) analysis. This is done by using a measure of earnings or cash flow over a denominator using a percentage of invested capital or some valuation of the equity. This type of analysis is certainly helpful in measuring the value of the business. It can be used to compare the strength of two different management teams or types of company assets. However, it is not often used in typical leveraged finance analysis.

Operational trends are obviously important when analyzing the business strength of a credit. For different industries, some of these measures will prove more important than others. You can look at numerous other items to analyze a business, such as inventory turnover or receivables turnover. But this chapter describes the basics that should highlight the general direction a company is going in operationally.

Questions

1. From the following data, what is the EBITDA margin?

Revenue	2,550
Operating costs	1,400
General and administrative costs	600
EBITDA	750
Capital expenditures	300

2. What items stand out in the following trends?

	Year 1	Year 2	Year 3
Revenue	500	525	546
Operating expenses	200	210	218
General and administrative expenses	100	105	109.2
Selling expenses	125	135	144.5

3. Pro forma information might typically be given in which situation?

A. A major acquisition was made.

B. Capital expenditures spiked for a two year period.

C. Fixed costs moved in tandem with revenue growth.

D. The leverage ratio increased.

4. With the following data, what would be the most logical and typical way to look at trends in capital expenditures?

	Year 1	Year 2	Year 3
Revenue	500	525	546
Operating expenses	200	210	218
Depreciation and amortization	200	205	210
EBITDA	135	140	144
Capital expenditures	55	58	59

12. Expectations, Modeling, and Scenarios

What's in this chapter:

- How to drive revenue in a simple model
- How to factor EBITDA and free cash flow generation into a model
- How to build out debt and interest expense
- How to factor in debt refinancing
- Simple scenario analysis

The information presented in this book so far has all been backward-looking. An analyst also wants to try creating an idea of what the company might look like going forward.

The analyst can build a single model or a series of scenarios of how a company might perform going forward. As with most forecasting, this involves a certain amount of extrapolation from past performance and expectations about what the general economy may be like, as well as what competitors and customers might do.

Many companies give guidance for a few selected metrics, and this is often used as a basis of projections or scenarios. This company "guidance" is typically given just for the next quarter or the next year.

In the bank market, if you choose to go "private" on a company, you generally get one, two, or three-to-five-year projections from the company. But this prohibits the person who has chosen to go private from communicating about the company with others who are not private. It also usually prohibits trading in the company's public bonds or stock.

Obviously when a company gives guidance or you have its longer-term projections, this is often the base case from which you can judge the company's performance and build a model or set of scenarios. If you have guidance from a number of companies in the same industry, you should look to see if there are any meaningful differences.

For companies with public stock, there are also places you can get a composite of sell-side equity analysts' earnings estimates. This is often called *consensus estimates* and can be viewed as a measure of how investor expectations might be set.

Sales and Revenue

One typical way to start building any model is from the top down, trying to derive what macro numbers influence revenue. You can start with GDP. However, often more-specific data related to the industry is available. This can vary by industry and company. Often you can use specific projected data from industry groups or the government. For example, if you are looking at a company that sells tires to car manufacturers, projections for new-car sales would obviously be a great macro driver.

When building a model for both revenue drivers and expenses, keep in mind that you want to build a model that can be sustained over time. So you must choose inputs that you can obtain regularly, because you will want to update a model regularly. For example, if there is a great data point you could use to drive a model that comes out only once every ten years, and another slightly weaker one that is updated every year, you will likely want to use the more frequently available one.

You also must decide how detailed to make the model. For example, do you need an expectation for every expense item, or will it be enough to know what the EBITDA margin is? The details may vary depending on

what the biggest questions or concerns are surrounding the credit.

After you choose the key macro drivers, you must figure out how those drivers impact revenue. You can go back through recent results for the last several years to see how well correlated a company's revenue is to these factors. You must also try to tie the revenue drivers into any plans for expansion or divestiture that the company is undergoing. For example, you might be looking at a retailer and using a consensus outlook for national consumer spending for the next year to drive revenue for the retailer. However, if the company plans to build ten new stores a year, you might want to use the macro drivers to project sales per square foot for the retailer (in this case you are referring to square feet of selling space in the stores). Then, as the company expands new stores, you can simply add more square feet to the model. It might look something like Table 12-1.

Table 12-1. Sample Model Driver

		Year 1 Actual	Year 2 Actual	Year 3 Actual	Year 4 Projected	Year 5 Projected	Year 6 Projected
1	Consensus growth in retail sales				*1.0%*	*3.5%*	*1.0%*
2	*Company Data*						
3	Sales per square foot (in $)	420	418	421	*425*	*440*	*445*
4	*Growth rate*		*–0.6%*	*0.9%*	*1.0%*	*3.5%*	*1.0%*
5	Total retail square feet	200,000	200,000	205,000	*215,000*	*225,000*	*245,000*
6	Total sales (in $)	84,000,000	83,520,000	86,346,000	*91,463,580*	*99,067,820*	*108,952,586*
7	Growth rate		*–0.6%*	*3.4%*	*5.9%*	*8.3%*	*10.0%*

In this simple example, the first three numeric columns are actual historic results, and then the next three italicized columns are projected estimates. This model is driven by sales per square foot in row 3 and total retail square feet in row 5. It assumes that the company's sales per square foot, or retail space, grow with the industry consensus and that the company grows its total sales in row 6 above the industry rate by adding square feet of retail space in the projected years. The first thing that someone with a healthy level of cynicism should notice is that the growth rates in the projected years are much higher than in the historic years. The main factors appear to be both higher growth in sales per square feet and more square feet owned by the company. So this assumes that "new" retail space will capture as much revenue per square foot as existing retail space and thus implies that simply by adding square footage, you can capture market share. This may be true, but it can be viewed as a fairly aggressively optimistic outlook that should be questioned.

Not only could components of different types of retail square feet be broken down, but other techniques can be used in more advanced models too. You could compare historical macro projections to the actual data and make your own adjustments to the third-party macro information that is driving the growth rates. Additionally, you could, for example, utilize multiple regression to determine how various factors in the past have caused revenue to move for both existing and new store openings. Then you could use a set of forward-looking assumptions to apply that model to derive future revenue. When you are modeling a company that is entering a new phase, such as opening a new hotel or introducing a new product line, often you can try to study similar projects undertaken by competitors to see how they evolved. Then you can apply judgmental techniques to the size of project that is being added.

There is no question that among analysts there are modeling junkies. Some build elaborately detailed and interconnected models. There are clearly times when this is necessary. You have to be careful not to spend too much time on elaborate models when a simpler one can give you the same results. An analyst always must balance thoroughness against timeliness. Additionally, you want a model that can be used to react quickly to news events on a company. If a more elaborate and complex model is appropriate, it is wise to have a much simpler submodel linked in as well. This can be used often for quick news items and presentations.

A Full Model

Next we will consider a simple but more full model; see Table 12-2. It goes from revenue through expenses and then to modeling the important debt metrics and capitalization.

Table 12-2. Actual and Projected Model Sample for a Tire Company (in 000,000s Unless Noted)

	A	B	C	D	E	F	G
		Year 1	**Year 2**	**Year 3**	*Projected Year 4*	*Projected Year 5*	*Projected Year 6*
1	*Drivers*						
2	Car sales	19	22	21	*20*	*19*	*22*
3	Inflation	1.0%	2.0%	1.0%	*1.5%*	*1.5%*	*1.5%*
4	Replacement units	15	14	15	*15*	*15*	*15*
5	New car units	15	19	18	*18*	*17*	*19*
6	New car market share	20%	22%	22%	*22%*	*22%*	*22%*
7	Price per unit (in $)	30	30	30	*31*	*31*	*31*
8	Growth		1.1%	0.6%	*0.8%*	*0.8%*	*0.8%*
9	*Income Statement Data*						
10	Revenue	906	1,012	1,021	*1,002*	*983*	*1,074*
11	Revenue growth		11.7%	0.9%	*–1.8%*	*–1.9%*	*9.2%*
12	Cost of goods sold	589	668	679	*677*	*669*	*736*
13	Gross profit	317	344	342	*326*	*315*	*338*
14	Gross margin	35%	34%	34%	*33%*	*32%*	*32%*
15	Selling, general, and administrative	181	192	194	*195*	*197*	*204*
16	Depreciation	85	83	82	*81*	*81*	*80*
17	Operating income	51	69	66	*49*	*37*	*54*
18	Total interest expense	28	28	28	*27*	*27*	*27*
19	Cash taxes	9	15	14	*8*	*4*	*10*
20	EBITDA	136	152	148	*130*	*118*	*134*
21	*Margin*	*15%*	*15%*	*15%*	*13%*	*12%*	*13%*
22	*Free Cash Flow*						
23	EBITDA	136	152	148	*130*	*118*	*134*
24	Capital expenditures	72	71	70	*69*	*69*	*68*
25	Interest expense	28	28	28	*27*	*27*	*27*
26	Cash taxes	9	15	14	*8*	*4*	*10*
27	Working capital uses	12	14	14	*(5)*	*12*	*15*
28	Free cash flow	15	24	22	*31*	*7*	*14*

29	*Debt*						
30	Bank debt (4%) due year 5°	300	300	290	*280*	*270*	*270*
31	Senior notes (8%) due year 6	200	200	200	*200*	*200*	*200*
32	Total debt	500	500	490	*480*	*470*	*470*
33	*Other Data*						
34	Interest expense	28	28	27.6	*27.2*	*26.8*	*26.8*
35	Cash	20	44	56	*77*	*74*	*88*
36	*Credit Metrics*						
37	EBITDA/total interest	4.9x	5.4x	5.4x	*4.8x*	*4.4x*	*5.0x*
38	Bank debt/EBITDA	2.2x	2.0x	2.0x	*2.1x*	*2.3x*	*2.0x*
39	Total debt/EBITDA	3.7x	3.3x	3.3x	*3.7x*	*4.0x*	*3.5x*
40	Net debt/EBITDA	3.5x	3.0x	2.9x	*3.1x*	*3.4x*	*2.8x*
41	FCF/debt	3.0%	4.8%	4.6%	*6.5%*	*1.4%*	*3.0%*

° Amortization begins in year 3. This assumes that it is refinanced at the end of year 5 at the same rate.

This model uses a maker of car tires. Columns B through D represent historic results. Columns E through G, in italic, represent projections.

The macro drivers for the model include national car sales in row 2 and inflation in row 3. We assume that you got these from third-party sources such as industry or government historical data and projections. The sales are driven by replacement tires (row 4), which remain relatively constant, and new car sales, and our company's market share of tire sales for new cars. Revenue is simply driven by unit sales and price, (line 4 + line 5) × line 7. Note that the price per unit both historically and in the projected numbers does not keep pace with inflation; the prices actually rise at only about half the rate of inflation.

Next, look at line 12, where costs begin.

A quick comment on modeling expenses: It is usually not worthwhile to try to build a model of expenses with items that cannot be tracked. It is always helpful to try to break out fixed and variable costs in a business. But companies do not usually present expenses in this way, so it is difficult to always build a model based on that. This is not to say that it is not a good exercise to try to do periodically, but from public documents typically available to an analyst, it is hard to maintain a model based on this type of breakdown.

When raw material inputs are part of the expenses, they can sometimes be modeled separately, such as crude oil for a refinery, or paper costs for a printing plant. Obviously it is helpful to run scenarios with different commodity pricing environments. You should also factor in wage inflation and pension costs if applicable.

Table 12-2 breaks out two major operating cost items. Line 12 shows cost of goods sold, and line 15 shows selling, general, and administrative expenses (SG&A). Cost of goods sold should be impacted by the number of sales as well as inflation. The implication is that cost of goods has been rising, and the model projects that it will rise more quickly than revenue, more in line with overall inflation, and this is causing gross profit margins to decline. SG&A moves along relatively consistently as a percentage of revenue.

With these factors in place, our EBITDA can be derived.

Interest expense appears on line 18; it is derived from how you model the debt capitalization. Usually it is best to build a separate capitalization section and run the interest expense from that section. This model takes the average debt amount outstanding during a given year from lines 30 and 31. It multiplies the average amount outstanding by the respective interest rate for each tranche of debt and adds them together. You can get more complex, particularly for floating-rate debt, as bank borrowing typically is, and factor in scenarios with increasing or decreasing interest rates.

Starting on Line 22, a section is set up to derive free cash flow. We start with EBITDA and then begin to subtract items. Capital expenditures are usually the most important item you need to add. This can be

modeled in various ways, as discussed in a moment. Company management often gives guidance on these expenses, particularly if large projects are in place.

A typical method of modeling capital expenditures is as a percentage of revenue. However, you must also look at other factors. For example, if a company has been expanding or contracting its businesses, this could cause a shift in capital expenditures. Also, some types of capital expenditures can be lumpy, where maybe very little has to be spent for several years, but then there is a large increase for a replacement.

Although depreciation figures can be shifted do to write-ups and write-downs, you should always see how well over a period of time depreciations and capital expenditures are aligned. If they are materially different, you should try to understand why. Mergers and acquisitions are often the cause of a mismatch between depreciation and amortization versus capital expenditures. Other things, such as a major shift in strategic spending, can cause this too. The footnotes to the financial statements also usually discuss the useful life of the company's major assets, at least for accounting purposes. If capital expenditures are very low as a percentage of depreciation over time, be cautious in case these expenditures spike suddenly. Similarly, if a major asset is nearing the end of its accounting "useful life," explore whether there might be a pickup in capital spending.

When calculating free cash flow, always check if there is a difference in reported, or total, interest expense versus cash interest expense. In this model there is not.

Cash taxes can typically be calculated based on a pretax net income figure. However, many leveraged companies do not have to pay taxes if they do not generate pretax net income or because they have built up excess tax losses (net operating losses) that can be used to defer tax bills. So do not fall into the trap of assuming that a tax line on the income statement is actually a cash item. Always check the statement of cash flows and the footnotes.

Finally, there are changes in working capital swings. This can be tough to model going forward. You may find it is helpful to see how this has changed relative to revenue levels and trends historically and then base it off these trends. However, timing and sudden shifts in business levels can cause this figure to vary from past trends.

Do not forget to explore the financial statement footnotes of a company to find out details of pension obligations. While details may appear elsewhere in the statements, they are commonly detailed in the footnotes. The pension related expenses sometimes are large and may need to be modeled separately from other expenses.

The debt section and the cash position (line 35) have to be looked at together. In this model the tire company generates positive free cash flow. You must decide what to do with the cash. In this case, for the first two years of historic results in columns B and C, you can see that the company simply adds its free cash flow to its cash position. In year 3 in column D, bank amortization begins. Some free cash flow is used to pay down bank debt ($10 million), and then the balance is added to cash. Based on this historic pattern, the model assumes that the company will do the same in the projected years.

You should break out each piece of the debt structure in as much detail as possible. You should also read through the footnotes or the separate documents that describe the debt instruments and note the maturities of debt. For more complex debt capitalizations, it is recommended that you set up a separate section in the model highlighting the debt amortization (debt paydown).

If you build a separate section of the model outlining the debt amortization, I recommend that you link it to the amount of debt outstanding so that these figures reduce inline with scheduled amortization.

Generally, the more links you have, the better. This results in fewer changes having to be made when you want to run scenarios or make changes and leaves room for fewer mistakes.

Note that the bank debt matures in year 5. You must make an assumption about what happens when this debt matures. In this model we assume that the bank facility can be refinanced with a new loan at maturity. However, you should not just assume that a refinancing can be accomplished. First, you should look at the leverage in the model at the time the debt matures. In this model the debt is maturing in a year where car sales have declined and margins have dropped for our tire company. This could make it more difficult to refinance. Looking at the bank leverage at the time it needs to be refinanced, you can see that it is 2.5x and net of cash it is about 1.7x. Based on those relatively low leverage ratios (you could compare the leverage to other recently completed bank loans), this should give the analyst comfort, or pause, about the ability to refinance this maturity. You also must make some assumptions about the cost of refinancing. For example, in this case, given that it is being refinanced in a relatively weak operational year, would the banks demand a higher interest rate? Assuming no changes in the macro interest rate environment, it is likely that the banks would insist on a higher interest rate than the historical level. If so, you must include this in the model for the years after the refinancing, and this will impact free cash flow.

In this simple model we have footnoted what the debt amortization is and what we assume happens in year 5 when the bank debt matures. You should become a big fan of footnoting so that when you go back to look at a model, you can quickly determine the major assumptions that are being used. In a more complex capital structure, you might want to have a separate section outlining assumptions.

This model only shows the cash line as a source of liquidity. In a more complex capitalization, you might want to have a section on other liquidity sources. In this section, along with cash there should be a line item for any other borrowings that are available. The most common facility offering liquidity is a bank revolver. However, there are other possible sources of liquidity, such as asset-backed lines and vendor financing. Any borrowings under the available facilities should be linked to the model's debt section.

What happens if there is not enough cash or available borrowings to meet a required debt paydown and perhaps the leverage is too high for a typical refinancing? You would have to make some decisions about what you think the company can and will do. There are several ways you can address this in a model:

- The model can have a separate line that is labeled either "deficit" or "funding needs" that simply shows what the company needs to raise. You can decide if you want to assume that the paydown occurs and go forward with the model.
- You can assume that the debt will be refinanceable and create a new line for "new financing," making an assumption about whether it is in the bond or bank or even equity market. Then you include that in the model going forward.
- You can assume that this is a trigger for a default and/or a major asset sale.

The bottom line is, when there is a shortfall to meet an obligation in a model, the analyst must begin thinking about options for the company and what the possible outcomes might be for the holder of a bond or bank loan in the company. This is where in an analysis it is often important to run multiple scenarios.

Clearly you can build models in a multitude of ways. It is important to remember that sometimes models vary by what you are focused on in the analysis. For example, suppose the company you are analyzing is doing well and you want to focus primarily on how quickly it can deleverage and perhaps get a rating agency upgrade. You might want to build the model to show free cash flow going immediately to pay down debt as rapidly as possible. In another example, suppose a company has a number of debt maturities coming up and does not have the cash to meet them. The analyst may be more interested in how much cash can be built up and in analyzing what avenues might be available for new financings. This might include looking at the bank leverage and determining if there is room within the bank agreement to raise more borrowing, or if the current lending

environment would allow a refinancing.

> One of the biggest dangers in any model, as in many other analyses, is too much extrapolation. When building models, don't just assume that the conditions of the recent past will continue.

Scenarios

With so many variables, you can see that minor changes in one or two assumptions can change a company's outlook, especially over a longer time period. Therefore, rather than building a single model and using that as an ideal projection or estimate, it is often preferable to look at a few scenarios to analyze how sensitive a company's credit quality may be.

You might want to build scenarios to solve to a given event and see if they look realistic. Using the preceding examples for the upgrade candidate, instead of building an actual estimate, the analyst may want to explore how much deleveraging would have to occur for an upgrade and see if that can be reasonably achieved over a given time period. In the second case, you might want to see how much of an EBITDA decline has to occur for a company to see its free cash flow go negative and figure out if that level of decline is realistic. Or you might just simply want to run financials assuming various business trends to see how a company can perform during a recession, during a raw materials price increase, or in a growth scenario. Or you might want to see if one company can perform better than another credit.

You could build a simple scenario to run a downside scenario and an upside scenario. Table 12-3 takes our tire company model, looks at the projected years, and reduces EBITDA by 10%. In this case it appears that the free cash flow and the EBITDA/interest expense ratio are the metrics most sensitive to the decline.

Table 12-3. Scenarios Down 10% (in $000,000s Except for Metrics)

	E	F	G
	Projected Year 4	**Projected Year 5**	**Projected Year 6**
EBITDA	*117*	*106*	*121*
Margin	*12%*	*11%*	*11%*
Growth	*–21%*	*–9%*	*14%*
Free Cash Flow			
EBITDA	*117*	*106*	*121*
Capital expenditures	*69*	*69*	*68*
Interest expense	*27*	*27*	*27*
Cash taxes	*8*	*4*	*10*
Working capital uses	*(5)*	*12*	*15*
Free cash flow	*18*	*(5)*	*1*
Debt			
Bank debt (4%) due year 5*	*280*	*270*	*270*

Senior notes (8%) due year 6	200	200	200
Total debt	480	470	470
Other Data			
Interest expense	27	27	27
Cash	74	69	70
Credit Metrics			
EBITDA/total interest	1.7x	1.5x	1.8x
Bank debt/EBITDA	2.4x	2.5x	2.2x
Total debt/EBITDA	4.1x	4.4x	3.9x
Net debt/EBITDA	3.5x	3.8x	3.3x
FCF/debt	4%	–1%	0%

[a] Assumes it is refinanced at the end of year 5.

A Pragmatic Point on Bank Maintenance Covenants and Expectations

Bank loans frequently have maintenance covenants, such as minimum EBITDA/interest ratios or maximum leverage ratios. These typically get tougher over time. It is useful when building estimates or scenarios to include these in the model in the section with ratios and to see how much "headroom" is expected on these maintenance covenants in each scenario. A violation or potential violation of these covenants certainly is an event that needs to be examined; it can be a fee event for bank debt holders.

The maintenance tests are usually based off of company projections that both the company and the banks get comfortable with. The covenants might typically be designed to give "headroom" of 25% over these projections, or less in stressed situations. This can sometimes be used as a roadmap for public analysts as to what the company's internal projections are.

Keep in mind that for the covenant ratio, the definition may differ from how the model may be calculating a given ratio. For example, in the covenant leverage ratio, the definition may allow add-backs of one-time cash charges to EBITDA and allow cash to be counted against total debt.

Another item to keep in mind is expectations. In stock market commentary, when a company releases earnings, there is often much focus on whether the company met consensus expectations of analysts' estimates. The stock may frequently trade up or down based on how well the company did versus these expectations. The leveraged finance market does not have the same degree of sensitivity, but it is a factor, especially with the larger capitalization companies that have public equity. Therefore, for short-term trading around earnings, a credit analyst should try to have a good understanding of the expectations for quarterly results. However, if a significant reaction occurs, you should try to figure out whether it will have a short-term or long-term impact in the company's stock.

In upcoming chapters, many of these topics will help you better model companies. Understanding items such as the impact of interest rates, debt structures, and corporate structures can all meaningfully affect how you build a model.

Questions

1. Which of the following factors should *not* be used to derive revenue projections?
   A. Company guidance
   B. Industry group demand projections

C. Government GDP estimates

D. Competitors' operating margins

2. Which items can inflation expectations influence in a model? Choose all that apply.

A. Raw material expense projections

B. Revenue projections

C. Depreciation

D. Selling expenses

3. Capital expenditures are frequently modeled as a percentage of what?

A. Revenue

B. Operating expense

C. Free cash flow

D. Net income

4. If a model is built and there is a debt maturity that cash generated from operations cannot meet, what should the analyst consider?

13. Structural Issues: Coupons

What's in this chapter:

- The structure of coupons on loans
- The structure of coupons on bonds
- Other nontraditional coupon structures
- What factors go into determining a coupon

Leveraged finance debt instruments have several types of coupon structures. This chapter describes the most common. Most of them have been at least briefly discussed in earlier chapters. However, keep in mind that periodically some unusual coupon structures appear that do not fall into any of these categories. The chapter begins by describing typical cash pay structures for bank debt and bonds and then goes into various types of deferred-pay structures. The chapter ends with a brief look at how coupons are usually determined.

Loan Coupons

Let's review typical coupon structures on bank loans.

The interest rate on bank loans is usually a floating rate instead of a fixed rate. This means that the interest rate moves at a set spread to some base rate; as the base rate moves, so does the coupon. The base rate is usually a U.S.-based rate such as the prime rate, a UK-based index, or sometimes a pan-European one. The most common one to use is LIBOR.

So a typical bank loan might be said to have a rate of LIBOR plus 625 bp (basis points). A basis point is 1/100th of a percentage point, so this means that the rate would be 6.25 percentage points over LIBOR. So if the LIBOR rate is 2.5%, the company that borrowed this bank loan would be paying 8.75%. Bank loans generally pay interest monthly.

However, as always, other features make some bank agreements different. For example, some loans may have a "LIBOR floor" that kicks in if the LIBOR goes below a certain rate. If LIBOR drops from 2.5% to 1.5% for a loan without a floor, the terms would now require the company to pay its lenders 7.75% (the 1.5% LIBOR rate plus 625 bp). However, if the loan had a floor of 2% that would go into effect, this loan would use 2.0% and would pay 8.25% (or 2% floor + 625 bp rate). So this loan with the floor will never pay below 8.25%.

Some loans also have what is known as a pricing grid, as shown in Table 13-1. The rate that the company pays on the loan may move depending on some financial metric, usually a debt/EBITDA or a senior-secured debt/EBITDA (because bank debt is often senior-secured). The grid moves the spread if the ratio moves up or down significantly.

Table 13-1. Pricing Grid

If the Quarterly Senior-Secured Debt/ EBITDA Ratio Is Between:		The Spread to LIBOR Is:
<	2.00x	+250
2.01x	4.00x	+350
4.01x	6.01x	+450

Bond Coupons

Leveraged finance bonds have several types of interest structures.

By far the most common is simply a fixed-rate structure. This is where the bond pays a set rate, such as 10% per year. Bonds typically pay interest semiannually. So if you purchased €1 million of a 10% bond, you would get paid two installments a year of €50,000.

Some bonds have a floating-rate structure, as described in the bank agreements. When a bond is a floating rate, it almost always has a floor. But floating-rate notes are atypical.

More common in the high-yield market are deferred-pay bonds, which were briefly described in earlier chapters. The four common types of deferred-pay bonds are zero coupon, zero-step, pay-in-kind, and toggle.

Deferred-pay bonds pay no cash interest for all or part of the bond's life. So usually if investors will forgo cash interest during the life of the bond, they require a higher yield than they would if it were a regular cash-paying bond. This is true for all the deferred structures we will cover. The deferred-pay structure also typically makes the bonds more volatile to changes in interest rates than a similar cash-paying bond. Generally, deferred-pay structures are issued by companies that are going through a startup phase of some kind and cannot afford all the interest. For these reasons they tend to be higher risk and also require more yield. Typically these companies are expected to see meaningful growth rates or could sell assets at multiples that allow for deleveraging over time.

Zero and Zero-Step Coupons

The first type of bond we will discuss is actually not that commonly used in leveraged finance, but it is an important base to start from. With a straight zero coupon for life, the company issues a bond to buyers at a deep discount from par. For example, suppose the company sells a five-year bond at 55.75% of face value. If it was selling a face amount of $100 million in bonds, it would raise $55.75 million from investors. Bondholders would pay $55.75 million. Then, if they held on to maturity, they would get $100 million from the company when it matured in five years. The bond's value goes up each day (called *accretion*) as it gets closer to maturity. Table 13-2 shows the amount of the bond when it was issued and what the accreted value is on selected dates. If you bought the bond on that given date at the accreted price, the yield would be 12%. If you paid more than the accreted value, the yield would be less than 12%. If you paid less than the accreted value, the yield would be more than 12%, just like par or 100 on a regular cash pay bond.

Table 13-2. Annual Accretion on a $100 Million Five-Year Zero Coupon Note

Date	Accreted Value in $000,000s
At issuance	55.75
End of year 1	62.74
End of year 2	70.50
End of year 3	79.20
End of year 4	88.90
End of year 5	100.00

Before we look at other typical deferred-pay bonds, this is a good place to highlight the difference between looking at a whole bond issue and an individual bond. Why does this matter? Because there is a difference in how accreted value is viewed in a company financial statement and how it is used when trading an individual bond.

When looking at your model or a company financial statement, you are considering the whole bond issue. Using the data shown in Table 13-2, the company issued $100 million bonds at 55.75% of face value. On the

balance sheet immediately after the bonds were issued, a new debt obligation of $55.75 million would appear. One year from now, that bond would appear on the balance sheet as $62.74 million, because it accreted to that amount. The difference would have been recorded on the income statement as interest expense of $6.99 million ($62.74 million – $55.75 million). The statement of cash flows would show this as a noncash interest payment.

However, when figuring out how the bonds will trade, and when talking to a trader, the analyst must think on a per-bond basis. So the typical bond is in $1,000 increments for trading purposes and must be translated into a per-bond basis and quoted on a percentage of face value basis. Continuing with the example, 100,000 bonds were issued. Because a round number like $100 million is outstanding, it is not difficult to figure that at the end of year 1, if you wanted to buy the bond at the accreted value, to equal a yield of 12% you would simply pay 62.74 per bond.

To change this example, assume that the company issued $200 million in bonds. So at the time the bond was issued, the accreted value was 55.75% of face value. However, on the balance sheet this would not appear as $55.75 million but as debt of $111.5 million ($200 million × 0.5575). At the end of year 1 the balance sheet would show debt of $125.48 million ($200 million × 0.6274). However, if you were telling a portfolio manager or trader the price of the bond if it was supposed to trade at the accreted value, you would not say 111.5 at the time of issuance or 124.88 at the end of one year. You would still say 55.75 or 62.74, respectively. This is because bond prices are quoted as a percentage of par value. Thinking about this in a different way, at issuance the proceeds received by the company were $110 million. But at maturity the par value would be $200 million, so at issuance the accreted value is 110 / 200.

Table 13-3 shows the balance sheet accreted value for the $200 million bond and how the bond's trading price (accreted value per bond) would be quoted.

Table 13-3. Annual Accretion on a $200 Million Five-Year Zero Coupon Note

Date	Balance Sheet Accreted Value in $000,000s	Accreted Value Per Bond in Percentage
At issuance	111.50	55.75
End of year 1	125.48	62.74
End of year 2	141.00	70.50
End of year 3	158.40	79.20
End of year 4	177.80	88.90
End of year 5	200.00	100.00

This accreted value is an important concept in bankruptcy, because the principal claim that a bond has in bankruptcy is only for the accreted value.

Note that the accreted value changes every business day. We show only the difference annually for illustrative purposes. Most bond-calculating systems can show this calculation for any given day. Bond-calculating systems typically give the accreted value on a per-bond basis. The analyst must multiply it against the face amount to calculate the full amount of the debt on the balance sheet.

For all these deferred-pay structures, keep in mind that the accretion, or growth in the debt, must be modeled onto the model's debt structure section. Also remember to distinguish between the income statement interest expense and the actual cash interest expense.

Probably the most common type of deferred-pay issue is a zero-fix or zero-step. We will use the term zero-step

because the interest rate, or coupon, "steps up." These bonds are issued as a zero coupon and, after a set number of years, begin to pay cash interest.

A typical structure is for the bond to be issued at a discount, accrete for five years, and then begin paying cash interest. The bond accretes from its discounted issue price to par (the face amount) during the period in which it is not paying cash interest. When the bond begins to pay cash, it pays on the full face amount. The rate at which the bond accretes during the zero period is usually the same as the cash coupon when it starts paying. The bonds are usually callable on the date that the cash interest begins accruing. Table 13-4 is a schedule of what a typical bond like this might look like.

Table 13-4. $100 Million Zero-Step 12% Eight-Year Bond; Goes Cash Pay at the End of Year 5

Date	Accreted Value in $000,000s	Annual Cash Interest Payments
At issuance	55.75	—
End of year 1	62.74	0
End of year 2	70.50	0
End of year 3	79.20	0
End of year 4	88.90	0
End of year 5	100.00	0
End of year 6	100.00	12.00
End of year 7	100.00	12.00
End of year 8	100.00	12.00

Much more rare is a cash pay step coupon bond. These bonds pay cash interest for the whole life of the bond. Usually they start paying at a lower rate, and then at some point over the life of the bond the coupon increases. These typically are issued from a restructuring or bankruptcy reorganization.

The other common type of deferred-pay bond is pay-in-kind (PIK).

In this structure, the bonds are usually issued at face amount—100. However, for a period of time, most commonly three or five years, interest is paid not in cash but by issuing additional bonds, thus paying the interest "in kind" rather than in cash.

You should remember a few things about this type of structure:

- After the new bonds are issued, the next interest payment is made on the new number of bonds outstanding, so the next interest payment is actually larger (see Table 13-5). When modeling the bond, the number of bonds increases by the amount of the interest payment (similar to the accretion of a zero coupon).

Table 13-5. Interest Payments on a $100 Million 10% PIK Bond in $000,000s

Date	Amount Outstanding	Amount of PIK Payment	New Amount Outstanding
At issuance	100	—	—
Issuance + 6 months	100	5.00	105.00
Issuance + 12 months	105	5.25	110.25
Issuance + 18 months	110.25	5.51	115.76
Issuance + 24 months	115.76	5.79	121.55
Issuance + 30 months	121.55	6.08	127.63
Issuance + 36 months	127.63	6.38	134.01

- When trading or valuing bonds, if they are trading at a significant discount, the coupon payment will initially be valued at less than par. This can impact how the bonds trade.
- Although cash pay bonds are traded with accrued interest, PIK bonds do not trade with accrued interest. So, theoretically, during the period between interest payment dates, the price rises for the amount of interest that is accruing. It declines after the interest payment is made by a like amount.

After the bond finishes its PIK period, it begins paying cash interest.

An innovation on this structure is now more common than a standard PIK bond. It is called a PIK toggle or just a toggle. In this type of bond, for the PIK period the company does not have to make PIK payments. It may choose at the beginning of any interest period to pay the coupon with a PIK payment or cash payment or, frequently, a combination of the two. Sometimes this type of note has a different coupon rate if the company chooses to PIK versus pay cash. (The coupon is usually lower for cash payment.)

Deferred-pay bonds are typically used to help preserve cash during a developmental or transitional period for a company when the company probably would be unable to service the interest payments on the notes. Another way that this type of problem has been addressed is with overfunding, although this has never been as popular as the zero-step, PIK, or even step-up structure. In this overfunded structure, the bond is issued in an amount more than the company actually needs. The extra money is put in an escrow account to service the interest payments for a period of time, generally two or three years.

How the Coupon Is Determined

The interest rate or coupon is determined when the bond or bank loan is issued. Multiple factors influence the rate. These include the general interest rates in the country where the bonds are being issued and, more importantly, the average rates on high-yield bonds and loans in general. If the company has bonds or loans outstanding, another factor is what kind of yield they are trading at and what yield comparable bonds or bank loans are trading at when the new debt is issued. Obviously, the better the issuer is perceived, and the better the structure of the new debt, the lower the coupon and related interest rate are. Additionally, market supply and demand at the time of issuance can be a factor in determining the coupon.

If the issuer has improved considerably over the next few years after it issues bonds or bank debt, assuming that the markets are about the same, the bonds will trade over the issue price and will offer a lower yield. In this case the company may start thinking about trying to refinance the notes or loans at a lower rate to save money.

However, general interest rates impact the interest rate at which a company can issue. If rates have risen dramatically and a company is nearing a maturity of its financing, it can suddenly be much more expensive to refinance. This could eat into a company's free cash flow considerably if its borrowing costs increase. Obviously this can also happen with a company's floating-rate debt.

Modeling Changes in Coupons

Refinancing risk when debt comes due can be a significant factor for companies. It can be hard to estimate over a longer time period or during a phase of exceptionally high interest rate volatility. You should consider modeling fixed and floating-rate debt and factor in a sensitivity analysis with increased interest rates when you are modeling scenarios.

The other thing to keep in mind is interest rate hedges. Companies can purchase a hedge to lock in and effectively turn a floating-rate coupon into a fixed rate. This hedge has a cost, perhaps 50 to 75 bp on the face amount of the debt or interest payments being hedged. The hedge also typically has an expiration, so it may be hedged for two or three years and then expire. This can be a good thing for companies if they got a very low rate and interest rates are rising. However, if interest rates fall materially, the company may be paying more for its borrowing than it might otherwise. Always read the footnotes to financial statements with an eye toward seeing if some or all of the debt is hedged to make sure that you are modeling the correct interest expense.

You can see from this discussion that the leveraged finance market is definitely impacted by changes in interest rates, as is the entire economy. The high-yield market moves with rates, but historically it is much less sensitive and less correlated to interest rate movements. Other large segments of the bond market live and die by minor moves in general interest rates. These include government and/or sovereign bonds and those of related entities, mortgage-backed securities, and high-grade corporates. All these other issuers typically move with a high correlation to general moves in interest rates.

This lower correlation for high-yield debt is due to a number of factors. The first is that credit improvements and declines in high-yield companies tend to have much more influence on what yields the bank debt and bonds trade at than relatively small moves in general interest rates. Second, the coupon on these notes tends to be much higher than those on the other types of fixed-income securities mentioned here, so a change in interest rates has a smaller impact on these issues. Third, it is rare for leveraged companies to issue bonds with maturities much longer than ten years; longer maturities are fairly common in government and high-grade bonds. Intuitively, the longer the bonds are outstanding, the more sensitive they can be to a minor change in rates.

Questions

1. What form do coupons on loans usually take?
   A. Fixed rate
   B. Floating rate
   C. Zero-fix
   D. PIK
2. 0.25% equals how many basis points?
   A. 25 bp
   B. 250 bp
   C. 2.5 bp
   D. 0.25 bp
3. If a loan has a rate of L + 450 with a LIBOR floor of 2.5%, and LIBOR is at 2%, what is the rate on this loan?
   A. 4.5%

B. 7%

C. 6.5%

D. 9.0%

4. Suppose a company has a €200 million bond outstanding that is a zero coupon bond, and its accreted value increases in one year from 52 to 60. How much interest expense appears on the income statement for that year, and how much debt is on the balance sheet at the end of the year?

A. €16 million and €120 million

B. €16 million and €200 million

C. €12 million and €160 million

D. €12 million and €120 million

5. A PIK bond during its PIK period pays interest by _____.

A. paying cash

B. accreting

C. issuing more bonds

D. deferral

6. With a toggle bond, who typically has the right to decide if it pays PIK or cash?

A. The company

B. The bondholder

C. The company and the bondholder have to agree.

D. This is predetermined by the indenture when it pays cash and when it PIKs.

14. Structural Issues: Maturities, Calls, and Puts

What's in this chapter:

- Typical bond and loan maturities
- Call features in bonds
- How special calls and clawbacks work
- How different sweeps work
- Other call features

This chapter discusses leveraged finance maturity structures for bonds and bank loans along with calls, which can impact a debt's effective maturity.

Maturities

For a bond or loan, the maturity is the date by which the company must repay principal to the investors. There is no "standard" maturity. For bonds, a ten-year maturity from the time of issuance is the most common. Seven-, eight-, and 12-year maturities are also very common. Within a company capital structure, the bonds usually mature at a later date than bank loans. Bank loans tend to have shorter maturities than ten years.

In some situations, a bond matures ahead of more senior bank debt. However, bank lenders (and often any more senior lender) often require a "springing maturity" in these cases. This feature typically states that if the more junior bond is not retired, say, six months before it actually matures, the maturity of the bank loan "springs forward" and becomes due immediately. This feature helps the more senior security to initially have control over forcing a company into bankruptcy or other actions related to the payment of debt.

Leveraged finance bonds usually do not require any payments of principal on the notes before maturity. Some bonds in the past had what was known as a sinking fund, which required the company to retire a small portion of the bonds in selected years ahead of maturity. But this feature is almost never seen anymore. Several more common structures give the company or note holders the option to have the company retire some of the notes before maturity. This chapter outlines some of these calls in a bit.

Bank loans more often have had some form of debt amortization required during the life of the loan. However, this has become less and less common in the leveraged loan market. Frequently the amount that is required to be repaid prior to maturity is fairly minimal, maybe 0.25% of the amount outstanding each quarter. It is also worth noting that often this type of amortization may not be in effect for the first few years of a loan and may also increase or decrease during the life of the loan. However, any required prepayments, even if small, are important to note when modeling cash flows and liquidity for a company.

Calls

The most common way, other than a maturity, for a company to retire a bond or loan is through a call. A call gives the company the right to buy back the notes or loan (or *call* them) beginning on a specific date at a specific price. In a typical high-yield bond that has a ten-year maturity, the bond may be noncallable for five years. Then it becomes callable at half the coupon (this is standard) in the fifth year, reducing by an amount each year so that it is callable at par one year before it matures. Table 14-1 shows common language for a call schedule for a 12% bond, but there are all sorts of variations.

Table 14-1. Call Schedule

From December 31, 2017 until December 30, 2018	106
From December 31, 2018 to December 30, 2019	104
From December 31, 2019 to December 30, 2020	102
From December 31, 2020 and thereafter	100

Prior to December 30, 2017 these bonds are not callable. After this date they are callable at the prices shown as a percentage of face amount as laid out in Table 14-1.

Bank loans usually do not have the same level of call protection as bonds do. Traditionally bank loans could be called at any time at par. However, more often now leveraged bank loans have some minor call protection for the first year or two after being issued. This might be 103 of face amount in the first year, 101.5 in year two, and nothing thereafter.

Let's be clear on the concept of the call. Having the right to call the bonds or the bank debt is typically an advantage for the issuer (the company) as opposed to the buyer (investor) of the bond or loan. For example, if a company issues a 12% seven-year note and then dramatically improves as a credit over the next three years, that bond should trade up and may be trading at a yield of 7%. This would equate to a price of 117.2 if the bond could not be called before maturity. It also implies that the company could issue new debt at close to 7%. If there was no call protection, the company could issue new debt at 7% and call those bonds at 100, and investors' bonds never would have traded at such a high price. No one would buy the bond at 117.2 if they knew the company could force people to sell back the bond at 100 at any time. Even if the bond was callable at a normal call schedule, it would be callable at 106 at the end of year three. It would still be below where the investor could sell the bond if it were noncall for life. So the call is really a benefit and an option for the issuer of the bond, not the buyer.

When a bond is issued, or is trading at a discount to its face value, the lowest yield calculation is if that bond stays outstanding until maturity, as shown in Table 14-2. If it rises in price, the lowest yield, or yield-to-worst, may be to one of its call dates. So if a bond is trading at 112, as shown in Table 14-3, it may not actually be trading on a yield-to-maturity; it may be trading on a yield to its worst call. The bond is trading to its call date in year 3 because if the bond is called in that year, it will result in the lowest (worst) yield. Table 14-2 shows that if the same bond is trading at 101, the worst yield is to the call date in year 5. Bond investors, always looking at their possible downside, universally would use the yield-to-worst measure unless otherwise specified. Obviously the call schedule has a huge impact on the yield calculation. If by chance the bonds are not called on that date and remain outstanding longer, the bondholder gets a higher return than the yield-to-worst. Note that most bond-calculating systems change the duration to the call date that equates to yield-to-worst.

Table 14-2. Call Schedule for a 10% Bond Callable in Three Years Trading at a Price of 101

Call Date	Call Price	Yield	Spread
First call year 3	105.00	11.05	1,097
Call year 4	102.50	10.21	979
Call year 5	100.00	9.74	916
Maturity	100.00	9.78	897

Table 14-3. Call Schedule for a 10% Bond Callable in Three Years Trading at a Price of 112

Call Date	Call Price	Yield	Spread
First call year 3	105.00	7.02	694
Call year 4	102.50	7.06	664
Call year 5	100.00	7.10	652
Maturity	100.00	7.48	668

Some bonds are not callable for the life of the bonds. In a burst of creativity, investors often refer to these as *noncall bonds* or *noncall for life* (NCL). This structure is attractive to the buyer. Most leveraged companies hope to see meaningful improvements in their operations and therefore want opportunities to lower their cost of borrowings in the future. If the issuer wanted to refinance an NCL bond prior to maturity, it would probably have to pay a significant premium to get bondholders to sell back the bonds to the company. NCL bonds are not uncommon in the leveraged finance market, but they are not the norm either. They are more common in the high-grade market, where changes in credit quality generally have been less pronounced.

Clawback

Other types of calls have become fairly standard in leveraged bonds. The first one we will discuss is the equity clawback. *Clawback* is a fancy word for a specific type of call option. Typical language for a clawback is as follows.

> Prior to the call schedule, the Company may at its option on any one or more occasions redeem the Notes in an aggregate principal amount not to exceed 35% of the aggregate principal amount of the Notes originally issued at a redemption price of 110% of the principal amount thereof, plus accrued and unpaid interest thereon, if any, to the redemption date, with the net cash proceeds of one or more Equity Offerings; provided that: at least 65% of such aggregate principal amount of the originally issued remains outstanding immediately after the occurrence.

What this means is that if new money is raised in a stock offering for the company, the company can retire some of the bonds earlier than otherwise allowed. However, as you can see, doing so often requires a fairly high call price; standard is par plus the coupon. This option usually is available only for the first three years after issuance, when the standard call structure is not in effect. Additionally, investors do not want their bond issue to be so small that it may not trade regularly. Therefore, this clause often has a restriction that after the clawback, a certain percentage of the original bonds still must be outstanding. The concept behind the clawback is that raising equity money for the company is a credit improvement and something that bondholders would like the company to do. Therefore, if the company does this relatively soon after issuing the bonds, the bondholders are willing to give the company a call option.

There are a few other points to note about this clawback option. Typically a company's bank agreement requires the proceeds, or at least part of the proceeds, from an equity offering to be used to reduce bank borrowing. But companies can frequently get a waiver from the banks. Second, you must read the terms of the clawback and the defined terms carefully. Chapter 16, "Key Leveraged Finance Covenants," discusses defined terms in more detail. Usually whenever a term is capitalized in a loan agreement, bond prospectus, or indenture, it is being used in a form that is defined specifically in the document. For example, in the clawback language shown at the beginning of this section, "Equity Offerings" appears to be a specifically defined term. When you go to the definition section in the bond prospectus, you can read the definition of Equity Offerings. It may be defined as a new "public" share offering, or it may include private share offerings as well. In case this does not sound like enough fun yet, there is frequently a defined term within the definition of another defined term. So read these terms carefully, and have note paper nearby.

10% Call

Another common type of call feature is the right to call a certain percentage of the issue each year. This is a newer structural item. So far it has only really been seen when a senior secured bond is being issued, typically replacing bank loans. The normal structure is that at the company's option it can use cash to call up to 10% of the original amount of bonds outstanding annually at a price of 103. The rationale for this feature is that bank debt usually is callable immediately, and the company can deleverage by retiring bank debt. Companies that issue bonds with these structures typically have bonds outstanding and no loans. The company wants to be able to deleverage in the early years that the bonds are outstanding and this feature allows them to.

Cash Flow Sweeps

One fairly common feature in bank loans for leveraged companies that occasionally appears in bonds is the concept of an excess cash flow sweep. In these types of structures, you should carefully read the definitions of the terms. As mentioned, defined terms often appear within the definitions too. For example, within the definition of Free Cash Flow, EBITDA may be defined. In the terms of one bond the EBITDA definition might include one-time charges, but in another bond from the same issuer it might not.

The excess cash flow sweep takes several forms. It is typically annual, because both parties usually want to tie it into fully audited numbers. It sometimes is structured as a call, where the company is required to call the loans or bonds. This clause usually does not utilize the entire portion of the calculated excess free cash flow, but typically 50% or a bit more or a bit less. In bank loans, it is more common to see a required retirement than in bond structures with this feature.

A more common structure in bonds is where the debt holder has the option to sell the debt back to the company. So the company has an obligation to make a "Mandatory Offer to Purchase" for a certain percentage amount of the defined excess free cash flow. The holder can either sell the bonds or not. If more debt is put back to the company than the size of the offer, the debt usually is accepted on a pro rata basis. Suppose the defined excess free cash flow is $90 million and the sweep requires 50% of it to be used to make an offer to retire a bond at par. The company makes an offer to all holders of its bond to buy up to $45 million of its bonds at 100. If less than $45 million is put to the company, all the bonds put are retired. For example, if $120 million is put back to the company, each holder would have only 37.5% of its bonds retired ($45 million / $120 million = 37.5%).

AHYDO

AHYDO stands for applicable high-yield discount obligation. It is a factor for most deferred-pay high-yield instruments. Officially it is applied when a corporate bond has a "significant original issue discount," as in the case of zero coupon bonds, has an initial offering yield of more than 500 bp over an applicable federal rate, and has an initial maturity of more than five years. To maintain certain tax attributes after year 5, the issuer can make a "catch-up" payment by retiring some bonds. Most deferred-pay bonds have a feature that allows, and generally requires, the company to call at par the portion of the bond necessary to meet this obligation. The payment is usually required at the end of the five-year deferral period. Open-market repurchases made ahead of the catch-up payment date can be applied to meet this obligation as well.

Other Bank Prepayments

Bank agreements typically require mandatory prepayments upon the occurrence of a number of events. These often include all or a portion of the proceeds from asset sales. There is usually also some limitation on how much of the proceeds of an asset sale have to be in cash. In addition, a typical minimal threshold must be met to trigger this, such as an asset sale of over $10 million.

There are also typically mandatory prepayments for all or a portion of the proceeds from the issuance of equity, and sometimes for the proceeds from the issuance of more junior debt securities as well. In practice, if one of these events occurs, the company can often negotiate a compromise with the banks for a partial paydown with the proceeds.

Open-Market Repurchases

Although it is not actually a call or put, it is important for analysts to understand the concept of open-market purchases of debt by companies. They also should understand the differences in how this can be done with bank loans and bonds.

Open-market repurchases are typically where a company utilizes cash on hand, or sometimes bank borrowings, to buy back bonds in the open market. For a company to repurchase bonds in the open-market, this usually has to be allowed by the covenants in the bank loans and any more senior notes. A test such as a leverage test usually must be met. Also, a "basket" of a certain amount of excess cash flow must be met before a company's bank loans or more senior debt allows these purchases to be pursued.

However, if the company is permitted to pursue open-market purchases, it can buy them at any price where there is a willing seller. So if the company's bonds are trading at a discount, it can buy them at that price. Another way of looking at it is that it can buy them for less money than it would be required to pay at maturity, thus reducing its debt by more than the cash it is using. When doing such a trade and "capturing the discount" in the bonds, the company effectively uses $1 of cash to retire more than $1 of debt. Therefore, the company actually books a gain on its income statement (noncash) and reduces the amount of debt on its balance sheet.

The company typically cannot do discount buybacks in the bank debt. Generally the company is restricted from buying back bank debt at a discount, even if it is trading at a discount in the secondary market. Bank agreements usually require any paydown of bank debt to be paid pro rata to all holders of the bank loans, so companies typically cannot benefit from open-market repurchases of bank debt. But there have been cases where waivers have been given.

Therefore, if a company's debt is trading at meaningful discounts, and it has enough cash on hand to retire debt, it is often most attractive for the company to look to retire its bonds rather than bank debt. (And the bonds typically have higher coupons and therefore are more expensive for the company.)

> It is worth noting that when buybacks happen, the bonds are not always retired. For various structural reasons, companies sometimes hold on to the repurchased bonds rather than retire them. Additionally, when a company is owned by a private equity firm, the private equity firm may occasionally buy back the company's bonds. Remember not to confuse the sponsor buying the bonds with the company buying back the bonds. The sponsor is a separate legal entity, and if it owns the notes (or the bank debt), they remain outstanding. The sponsor can also buy loans. The company usually cannot unless it is at par and pro rata.

Other puts and calls can evolve and be triggered by events that are usually covered in the various covenants of the debt securities. These are addressed in Chapter 16. They typically are triggered by significant asset sales or a change in the company's ownership.

A Pragmatic Point on Early Refinancing of Debt

When a bond is trading at a yield much lower than its coupon, analysts often try to analyze whether the company will look to refinance the debt. Typically this is done by running a net present value of leaving the

bonds outstanding versus a net present value of issuing the new debt and retiring the old debt. This must include any premiums necessary to call the old bonds and fees associated with issuing the new bonds and an assumption on the interest rate of the new financing.

A quick way to get a glimpse of whether it makes sense to do this is to take the existing bond's call price; this gives a proxy for how much funding is needed to retire the existing bonds. Then multiply this amount by the likely new issue coupon. (The YTW on the existing bonds is a good proxy.) Finally, see if this new figure, which is a proxy for new financing costs, is meaningfully less than the bond's existing coupon; if it is, then it is usually worth exploring refinancing possibilities in more detail, such as using a net present value analysis. Table 14-4 shows an example.

Table 14-4. Quick Check on Refinancing

Existing Bond	Coupon	Call Price	Recent YTW
Senior notes	10%	104.00	7%
Cost to retire bonds	104.00		
Assumed new coupon	7%		
Annual interest cost on new notes(104*.07)	7.28		
Annual interest cost on old notes	10.00		

Also, if a bond is not callable, or is not callable yet, the company can tender for the bonds. This offer to repurchase bonds is made to all holders. Typically the company prices this offer so that the yield on the bonds would equate to a yield that is at a spread of only 50 to 100 bp wide of the equivalent maturity treasury or other government bond. Most bonds, even noncall bonds, have a make-whole provision that lets them call bonds at an equivalent treasury note plus a 50 bp spread (typically referred to as "T + 50") at any time.

Questions

1. True or false: A bond maturity is usually longer than a loan maturity.
2. Is a call feature in a bond more of an advantage for the company issuing the bond or for the buyer of the bond, and why?
3. When is the idea of a yield to call most likely to come into on a bond?
   A. When the bond is trading at par
   B. When the bond is trading at a slight discount
   C. When the bond is trading at a slight premium
   D. When the bond is trading at a large premium
4. A clawback can typically be used when which of the following occurs?
   A. A new bank agreement is put in place.
   B. A new equity offering is completed.
   C. A more junior bond is retired.
   D. There is excess cash flow at the end of the year.
5. Open market repurchases are _____.
   A. more common in loans
   B. more common in bonds

C. equally common in both loans and bonds

15. Structural Issues: Ranking of Debt

What's in this chapter:

- How typical debt rankings work
- Why security language can be misleading
- Why and how structural subordination can circumvent traditional rankings
- How subsidiary guarantees can circumvent traditional rankings

Debt securities have a ranking that refers to the securities' priority. You might wonder why this ranking matters as long as all the tranches of debt get paid the respective interest and principal payments they are owed. The primary answer is because sometimes things go wrong. The most wrong they can go is usually bankruptcy.

In bankruptcy, the more senior, or higher-ranking, securities are given the highest priority in getting repaid. Thus, theoretically they have the right to get paid off first. In certain circumstances a more senior debt with security may even have the right to continue getting paid interest during the bankruptcy process. As you can imagine, ranking is critical when investors are looking to protect their downside. However, the devil is often in the details. Many nuances can make what looks like a typical priority ranking vary greatly from its initial appearance.

Because of these factors, even if a company appears far from being worried about a bankruptcy, the ranking and structure of loans and notes will impact how they trade relative to each other and to other investments.

Ranking

The ranking of securities affects the coupon that is initially applied to the bond or loan at issuance and will affect how a bond and loan trades throughout its life. When a company is strong and doing well, the difference in yield between more senior bonds and more junior bonds may be small. However, the more risky a credit may be, the more of a spread between more junior and more senior securities you should see.

In a moment you will see a typical ranking of obligations in a multitiered capital structure. Bank loans usually are the most senior, but sometimes bonds or other securities have equal (pari passu) claims or even occasionally more senior claims.

A typical bank loan has a senior ranking and also security. The security is a priority claim on specific assets that lenders can theoretically take possession of if payments are not made, like a mortgage has a first claim on a house. The key here, as in other places, is how the security is defined. The agreements can be very specific.

As an example, we'll look at a company called Excel Corp. As shown in Figure 15-1, it has three factories and also owns 50% of the stock of another company called ComputerCo. Excel has a secured bank loan and senior unsecured bonds. The security agreement (which is part of the loan document) may list all three factories as assets that are secured (as indicated by the shaded boxes in the figure). (Other phrases that describe this are that "It has liens on these assets" and that "It is collateralized by these assets.") In this case the 50% stake in ComputerCo is not part of the collateral. So what does this mean for the loan holders? If the company goes bankrupt, the loan would have first claim on all the factories' value. However, if the value of the factories was not enough to pay off all the loan, it would look toward the company's other assets—namely, the ComputerCo stock. Because the stock is not part of the security agreement, the loan only has a "senior" claim on these assets. It must share any value from this stock equally with other "senior" claims, such as the senior

unsecured notes.

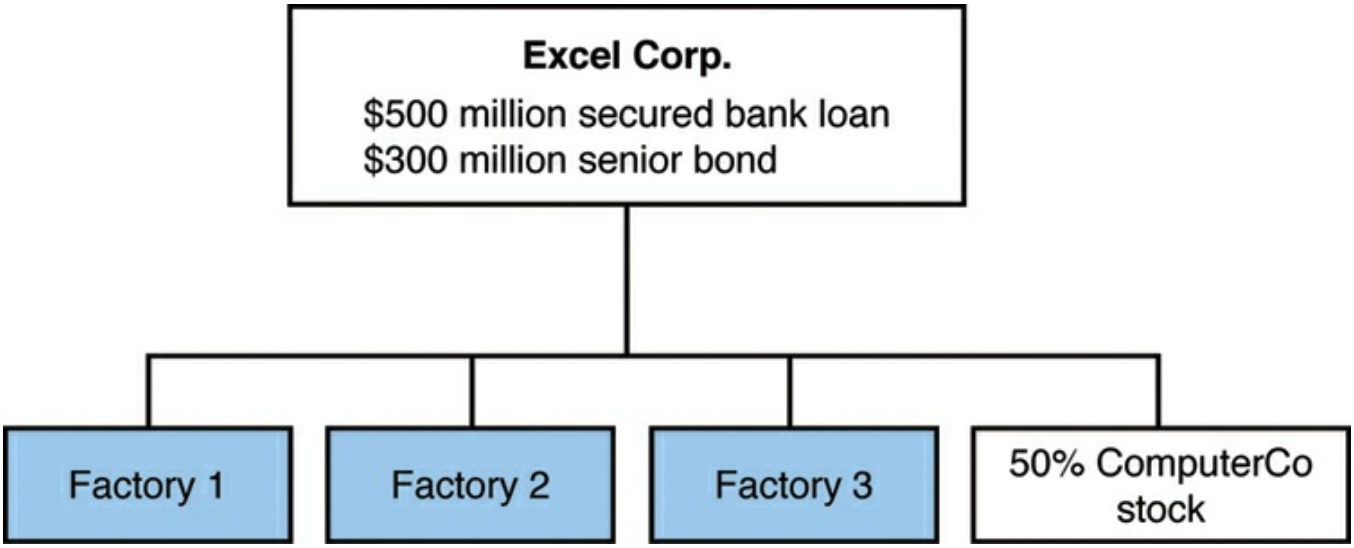

Figure 15-1. Excel Corp. secured debt

One thing to note is that even if the security agreement says something like "substantially all the assets of the company," it's important that you read the definitions and the actual collateral agreement. Also, foreign subsidiaries typically are not included in the security packages. Here is a simple ranking of priorities:

1. Senior secured debt
2. Senior unsecured debt
3. Senior subordinated debt
4. Subordinated debt
5. Preferred stock
6. Common stock

Senior secured debt is most commonly bank debt. Senior secured debt and senior (but unsecured) notes both rank as a senior class of debt. Secured debt simply has the secured priority claim on selected assets. Bank loans sometimes are senior unsecured, but more often senior unsecured debt is in the form of bonds.

Ranking below senior debt is subordinated debt. There can be senior subordinated debt and subordinated debt, which would rank lower. However, senior unsecured debt has historically been the most common type of high-yield bond issued. Bank debt is almost never subordinated. It is important to recognize that subordinated bonds have an actual subordination agreement. As you can imagine, these become important in a bankruptcy. Be sure to read the subordination agreements. This can be an important intercreditor agreement. Sometimes it has unusual features or exceptions as to when these notes actually are subordinate to other debt.

Sometimes there is also preferred stock. If it has a preference date on which the shares are to be repaid, it more resembles debt than an equity issue, and it may be sold into the leveraged finance market, not the equity market. There are also perpetual preferred shares, which do not have a set debt to be repaid and are more like equity. Preferred shares also usually have a set face amount and a dividend rate. Sometimes the dividends are PIK. Sometimes, if they are not paid, the dividends accrue. Either type of preferred share is junior to all debt and typically has limited recourse if the company does not fulfill its obligations. Preferred shares cannot trigger a default the way debt can even if dividend and mandatory share repayment obligations are not made. Sometimes the shares offer other recourse for the company's missing these obligations, such as the preferred getting to vote for a certain number of board seats. If a remedy is not spelled out in the preferred stock document, the shareholders could theoretically sue in court for lack of payment.

Of course, the common equity or stockholders come last in the priority ranking.

Now that this ranking has been laid out and explained, you must realize that there are some common ways in which bonds and sometimes loans are structured that can circumvent traditional rankings. There are structural ways to make debt rank more junior or more senior regardless of its priority ranking. The two most common ways are through corporate structures and subsidiary guarantees. The former is much more common.

Structural Subordination

Corporate structures usually do not consist of just one legal entity; normally they have several. A parent company may have many subsidiaries, and each one can be a legal entity. Corporations may also structure holding companies that may simply own the stock of other operating subsidiaries. Additionally, debt can be issued at any number of these entities.

When some debt is issued at an entity closer to the operating assets while other debt is issued at an entity that is further away, such as a holding company, the debt at the holding company is often referred to as being structurally subordinated.

A common type of structure is shown in Figure 15-2. It shows a holding company that does not have any assets itself. This entity is called ESP Public HoldCo in our example. This entity's only asset is 100% of the stock (or a 100% ownership stake) in its main operating entity, ESP OpCo. ESP OpCo then performs its operations through three entities—Factory 1 Co., Factory 2 Co., and Factory 3 Co. These three subsidiaries are where all the cash flow is produced.

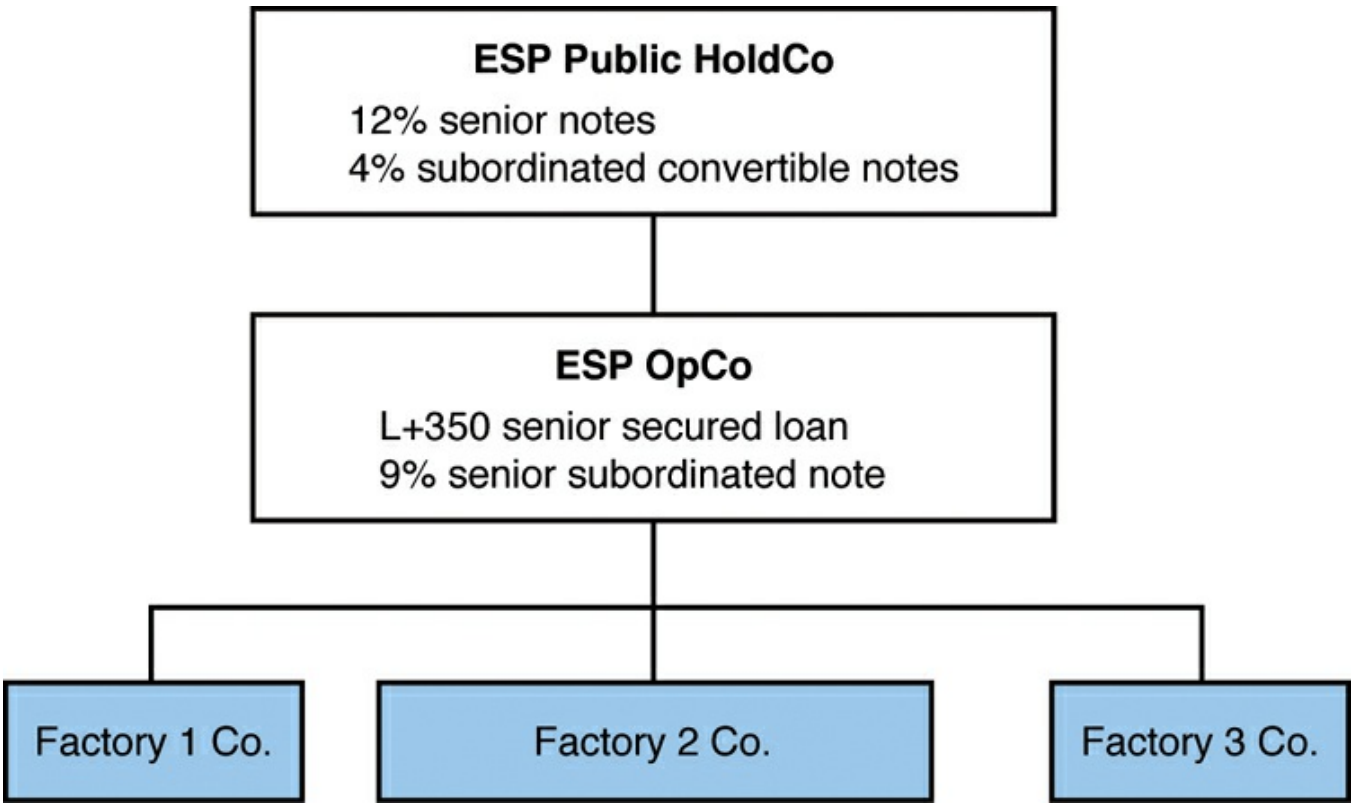

Figure 15-2. Structural subordination

ESP Public HoldCo (ESP HoldCo) is where the company's public stock is issued, so shareholders who buy stock end up owning a stake in this entity. As you can see from Figure 15-2, two bonds are issued at this level. One is a 12% senior note, and the other is a 4% subordinated convertible note. ESP HoldCo's only asset is its 100% ownership of ESP OpCo. At ESP OpCo there is an L + 350 (LIBOR + 350 bp) senior secured bank term loan, secured by the stock of the three Factory Co.s, and a 9% senior subordinated note. Unless otherwise designated, a debt instrument only has a claim on the assets of the entity that issued the debt. ESP

OpCo's assets are the stock of the three companies that own the factories. In this case there is no debt at those three "operating subsidiaries." So if this entire entity went bankrupt, the senior secured bank loan would clearly have first priority on the cash flow producing assets. Which note do you think would come next?

The ESP OpCo senior subordinated notes would have a priority claim on the assets over the "senior" notes issued at the holding company. Why is this? Because the ESP OpCo notes were issued by the company that owns the assets, anything that is left over *after* paying off the debts at ESP OpCo goes to the equity shareholders of ESP OpCo, which means to ESP HoldCo. Remember that ESP HoldCo's only asset is the stock of ESP OpCo. So although the 12% senior note is a "senior note" because of the corporate structure and which entity issued the note, it is "structurally subordinated" to the claims of all the debt at ESP OpCo. So it is clearly important to be sure of which issuers are the actual entity with the debt obligation.

A logical question is why you would want to form a more complex structure. Why not just issue junior debt at OpCo? Several factors are usually involved.

One is that banks are focused on how much debt is actually at their issuing entity. Theoretically, if the company defaults on the holding company debt, those debt holders may get control of ESP OpCo's stock, but they cannot necessarily force ESP OpCo into a bankruptcy. (In practice, it is fairly uncommon for a holding company to default and the entire entity not to. Bank loans and bonds also often have "cross-default" provisions.) The lenders at ESP OpCo also typically are in a stronger position in bankruptcy defending their position against a holding company claim than a junior claim at the same corporate entity.

Additionally, the company and its advisors, when issuing the various debt instruments, will try to decide which structure will result in the lowest interest expense, or cost of capital. Several factors will be considered. Is it cheaper on a blended basis to get a higher rate on the bank debt and issue all the debt at the operating company? Or is it better to get a lower rate on the bank debt and the senior subordinated notes and a somewhat higher rate on the most junior piece of debt and issue that last junior piece at a holding company?

Finally, sometimes the debt was not issued all at the same time. If the ESP OpCo debt was issued first, several years later the company may have wanted to pursue an expansion or an acquisition. The covenants in the existing bonds may not have permitted more debt to be issued at ESP OpCo. Therefore, the company pursued new financing at the holding company level.

You may have noticed that we did not mention the convertible note. Convertible notes are typically held by more equity and equity-like investors than high-yield investors. However, they are debt and need to be included in any analysis. Typically they rank on a junior basis and typically at a holding company, because they are usually at the same level at which the actual shares are issued. However, this is not always the case, so read the documents.

Another factor to consider when a company has convertible debt outstanding is its convertibility. If the stock is trading at a price at which the bond is more valuable being converted than staying as debt, you must decide how aggressively you want to treat this in your analysis. If the conversion feature is "in the money," do you want to consider it debt, or do you want to be aggressive and assume that the bonds get converted and treat it as equity? Additionally, converts usually have a feature that if the stock is trading at a big-enough premium over the price at which the bond can be converted into equity, the company can force the bondholder to convert. About 150% is typical.

Finally, do not neglect to read the terms of convertible notes, because they often have their own unique features. For example, it is not uncommon for these bonds to have a date on which they can be put back to the company—effectively an early maturity. They also sometimes have features that allow the company on those put dates, or sometimes even at maturity, to pay off the face amount of the notes with stock rather than

cash. You should include all these factors when analyzing a company that has converts outstanding. Even if the convertible notes are at the holding company and all the leveraged finance debt that is being analyzed is at the operating company, you cannot ignore the converts. Why? Because management is most focused on taking care of the equity holders. If necessary, management will look to the operating company to try to get cash or add leverage if it needs to service the holding company convert.

> Remember that when there is a holding company and an operating company structure, the covenants on the bonds and the loans at the operating company do not dictate what the holding company can do. However, the operating company covenants usually do control how cash or assets could move up to the holding company to service that debt.

Subsidiary Guarantees

The other structure that is sometimes seen that can make for some unusual priorities is the use of subsidiary guarantees. A guarantee from entity 1 on the debt issued by entity 2 effectively makes the debt of entity 2 an obligation of both entities.

For example, in the earlier example, if ESP OpCo guaranteed the 12% notes of ESP HoldCo on a *senior basis*, these bonds would have a priority claim on all the assets ahead of the senior subordinated notes of ESP OpCo.

Typically, guarantees in leveraged finance tend to be used when older legacy bonds (often originally issued in the investment-grade market) have a covenant that requires the legacy notes to get secured if any other debt gets security. (This is often called a negative pledge.) The use of subsidiary guarantees gives the new debt a better ranking than the old existing debt and gets around the "negative pledge" language, because security is not actually being given up.

The way a guarantee works is that an operating subsidiary guarantees the debt and thus gives it a structurally senior claim on the assets of that subsidiary versus all other notes issued alongside it. Figure 15-3 is a chart for Serenity Inc., which has three operating subsidiaries. The company has an L + 350 bank loan. It is secured by the stock of the operating subsidiaries that Serenity Inc. owns and has senior guarantees from each subsidiary. It also has an old 10% senior note that allows for only $20 million more in secured debt unless these 10% notes are given equal security. The company wants to issue more debt to pay for expansion. It wants this debt to be lower cost and rank ahead of the 10% senior notes. However, the banks do not want all the new debt "and" the existing 10% notes to be secured. So Serenity Inc. management gets the banks to agree to a new "senior unsecured" bond. But instead of having senior guarantees from the operating subsidiaries, which would be a claim similar to what the banks have, the company gets subordinated guarantees. This new 8% senior note effectively has become structurally senior to the old existing 10% senior notes, because the old notes do not have any subsidiary guarantees but is still junior to the banks and does not trigger the negative pledge. This will probably cause these old notes to trade down, because first the banks and then the new notes have first claims on the subsidiaries in which all the asset value lies.

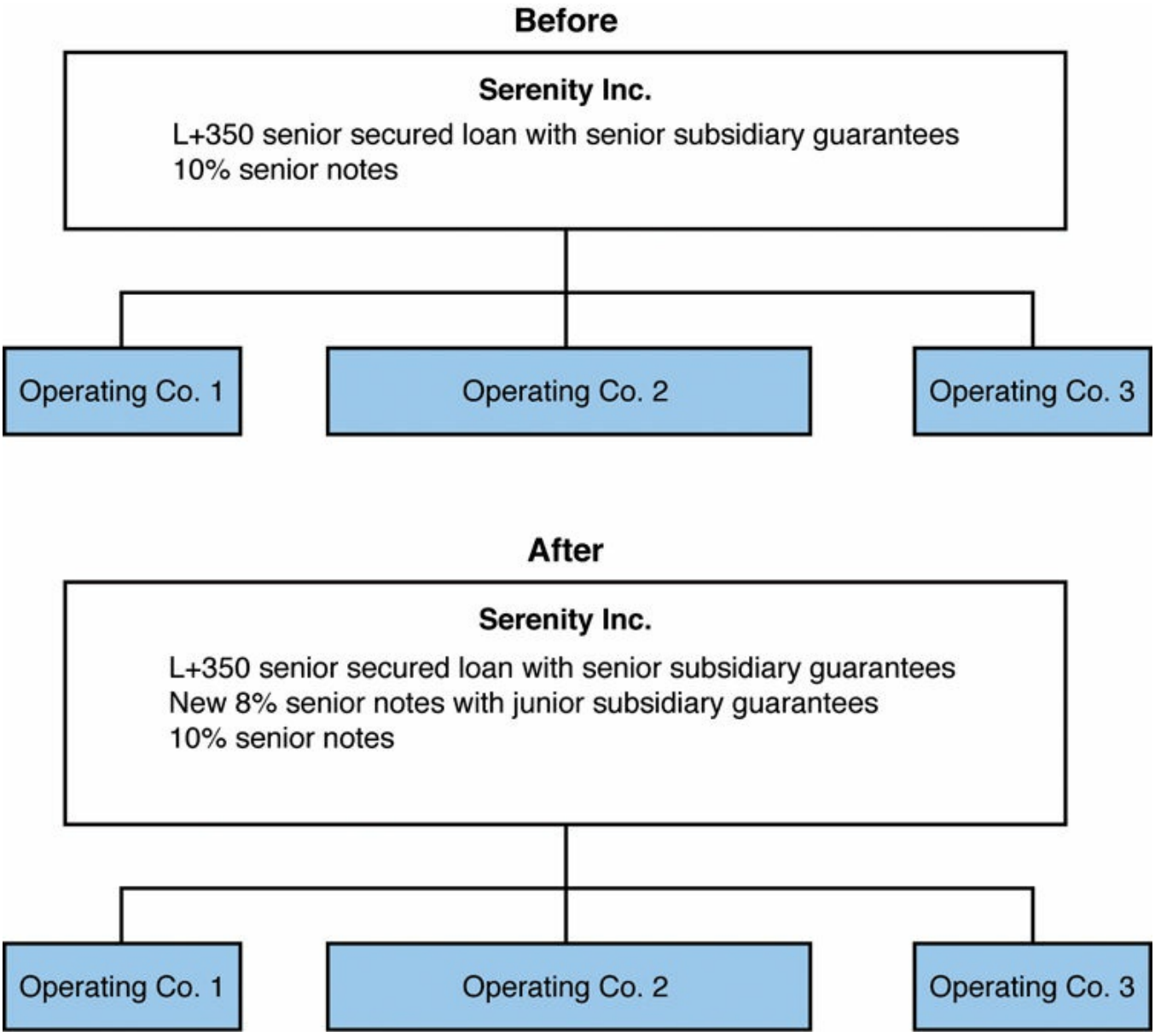

Figure 15-3. A new issue with a subsidiary guarantee

When an existing bond has debt issued senior to it, investors often say that the old existing bonds have been *primed*. Structural subordination through corporate structures and guarantees can accomplish the same thing. If existing holders are unaware of the loopholes or features in the bonds they own, and they see the bonds trade down substantially because of getting primed or through one of the transactions described here, they have a more colorful phrase for what has happened to them.

> Keep in mind that when there are subsidiary guarantees, they have rankings too. So, for example, a subsidiary could guarantee holding company debt on a senior secured basis or perhaps on a subordinated basis. This is not uncommon where a subsidiary may offer a bank loan a senior secured guarantee and a bond a senior subordinated guarantee mirroring the structure at the issuing entities.

You must always be careful to read all the language relating to rankings. For example, suppose a company has a revolver and a senior secured bond. The document actually states plainly that both are equal (pari passu). However, if you stopped reading there, you would not see the language later that expressly gives priority to the revolver in the case of a bankruptcy. This effectively gives it what is considered a "first out." The detailed specific language can also address how the two tranches are treated in the case of proceeds from an asset sale,

equity offering, or other event. There may be language that even though they rank "equal," the first $25 million of any asset sale proceeds is used to repay the revolver before the "equally" ranked senior secured notes share in the proceeds.

Questions

1. Rank the following debt in typical priority order:
   A. Subordinated debt
   B. Senior debt
   C. Senior subordinated debt
   D. Senior secured debt
2. Suppose that in the same corporate structure, senior debt is at a holding company that holds all the stock of the operating company, and subordinated debt is at an operating company at which all the asset value resides. Which debt has a higher claim on the company's value?
3. When a subsidiary guarantees debt that was issued by its parent company, the debt is _____.
   A. not an obligation of the subsidiary
   B. ranked equally with other debt of the parent company
   C. effectively an obligation of the subsidiary issuing the guarantees
   D. structurally subordinated to all other debt
4. A bond is said to be "primed" when _____.
   A. a more senior bond is issued
   B. a more junior bond is issued
   C. equity is issued
   D. a more junior bond is called

16. Key Leveraged Finance Covenants

What's in this chapter:

- How key covenants work: debt incurrence, restricted payments, change of control
- How defined terms impact covenants
- How carve-outs to covenants typically work
- Affirmative/maintenance covenants and what they do
- The concepts of restricted and unrestricted groups

Understanding and analyzing covenants is an important part of leveraged finance credit analysis. Each bond indenture or loan agreement has covenants, which are effectively rules that the company has to follow as long as these debt instruments are outstanding. The covenants in leveraged finance tend to be much more complex than investment-grade debt issues because of the greater risks and sometimes more complex capital structures that are common in leveraged finance.

There are some typical covenants, but never assume that a covenant for one issue or one issuer is the same as another. Read them all the way through, and make sure that you understand the defined terms.

Covenants can sometimes show what a company wants to do or plans to do. For example, if certain types of transactions are specifically permitted under the covenants, such as a type of acquisition or distribution, this can be a sign of what management hopes to do in the future.

Analyzing covenants can be a complex task. It has often been compared to peeling off layers of an onion, slowly uncovering each level of a covenant to see how it works. Just like peeling an onion, you might shed a few tears during the process.

Sometimes it is helpful to lay out the covenants in a flowchart or diagram to understand how they work. You can develop your own forms.

Covenants are best read when you're in a cynical mood, because you want to read them with an eye toward how the company can harm the loan or bondholder. The covenants are the rules that help protect the loan and bondholders.

First, this chapter looks at covenants typically as they are seen in bond indentures, although similar covenants appear in loan agreements, too. The most important bond covenants are typically negative covenants. Affirmative covenants in bond agreements typically are not critical to study. However, bank agreements often have affirmative covenants that are important for you to be familiar with. Financial covenants often require the company to maintain certain financial targets (typically called maintenance covenants). A common financial covenant might require the company to maintain a certain leverage ratio quarterly.

The most common, and typically most important, covenants found in bond indentures and bank agreements deal with debt incurrence limits, restricted payments, restrictions on asset sales, and change of control.

There can also be limits on liens, which typically read somewhat like debt incurrence covenants. There are also typically limitations on payments from subsidiaries, sometimes restrictions on lines of business, and sometimes a description of restricted investments and several others. Although not every type of covenant is covered here, after you read about the details of these key covenants, you'll know how to apply the analysis to other covenants.

Debt Incurrence

The debt incurrence limit basically states under what terms a company is allowed to add to its debt. Typically the basic test is based on a leverage ratio or a fixed charge coverage test.

When a leverage ratio is used, the basic test sometimes uses a total debt/EBITDA ratio and states that pro forma, for the issuance of the new debt, this ratio has to be met. If it is assumed that the covenant uses a 5x leverage test, the basics of the test would work as follows.

If the company was currently leveraged 4x and had $500 million of EBITDA outstanding, this covenant would allow it to issue approximately $500 million more in debt, which would bring it to 5x leverage. This addresses total leverage but does not directly address the ability to service the debt. So if the new debt is particularly high-cost (a high coupon), it could put a disproportionate strain on net free cash flow.

The other common test that is used is not the leverage ratio but the fixed charge coverage ratio. This ratio is usually an adaptation of the EBITDA/interest expense ratio. In the case of a fixed charge ratio test, the denominator (fixed charges) is defined. The denominator usually starts with interest expense and then may or may not include items such as noncash interest, debt maturities, capital expenditures, and such. Continuing with the same example, it is assumed that the company had a fixed charge ratio test that simply ran off of total interest expense and that the incurrence test is 2.0x. Prior to the transaction, the ratio is 2.5x. If the new debt is issued at an interest rate of 10% (see Table 16-1), the company could issue $500 million more debt and pro forma for the new debt still meet the test of 2.0x. If the rate on the new debt was only 7%, the company could issue $800 million in debt (this would be more debt than the 5x leverage ratio test would allow). If the rate were higher—say, 13%—the company would be permitted to issue only $400 million of debt. Obviously the fixed charge test ratio is much more sensitive to the overall interest rate environment and the company's borrowing costs than a leverage test. Therefore, an improving credit that uses a fixed charge coverage test under its debt incurrence test should see the combination of its increasing EBITDA and its decreasing borrowing costs combine to give it more capacity to leverage the company up.

Table 16-1. New Issuance Under Incurrence Tests in $000,000s (Except for Ratios)

EBITDA	500
Debt (@ 10% coupon)	2,000
Interest expense	200
EBITDA/interest expense	2.5x
Debt/EBITDA	4.0x
With new debt at 10% coupon	
EBITDA	500

Debt (@ 10% coupon)	2,000
New debt (@ 10% coupon)	500
Total debt	2,500
Interest expense	250
EBITDA/interest expense	2.0x
Debt/EBITDA	5.0x
With new debt at 13% coupon	
EBITDA	500
Debt (@ 10% coupon)	2,000
New debt (@ 13% coupon)	400
Total debt	2,400
Interest expense	252
EBITDA/interest expense	2.0x
Debt/EBITDA	4.8x
With new debt at 7% coupon	
EBITDA	500
Debt (@ 10% coupon)	2,000
New debt (@ 7% coupon)	800
Total debt	2,800
Interest expense	256
EBITDA/interest expense	2.0x
Debt/EBITDA	5.6x

Defined Terms and Carve-outs

Now it is worth exploring what terms typically are "defined terms" in this type of covenant. These terms usually are capitalized in the description of the notes or loans and have a specific definition for the purposes of the document. The term is then typically defined elsewhere in the document, usually in a section specifically for definitions. This is where paperclips, sticky notes, or familiarity with the bookmark function on your computer come in handy. You will find yourself switching back and forth between the pages with the covenant language and the pages with the definitions.

This concept of defined terms applies throughout the analysis of covenants and structures in bond and loan agreements. The following sections describe some of the items that are typically defined. You'll also find out what to look for within the definition, starting with the leverage ratio test.

Defined Term Examples

Total debt may seem like a straightforward term, but do not assume so. This term may or may not include debt at a parent, may or may not exclude debt junior to the instrument being analyzed, may exclude noncash-

paying debt, and may include or exclude items such as accounts receivable facilities. All these exceptions to a "simple definition" have been seen in various issues and these are just a few examples.

As far as the definition of EBITDA, as discussed earlier, it may or may not include noncash charges, fees paid to owners, and other items. More interestingly, it can include pro forma add-backs. This could include EBITDA from a company being acquired. It also may include cost savings that the company has budgeted for from the acquisition or simply cost savings from its own plans that have not been achieved yet. Furthermore, it may add back the actual cash costs that are related to these cost savings.

Obviously, making all these adjustments or even just a few of them for total debt and EBITDA can end up creating a very different set of metrics than what might be produced if just simple definitions of the terms were used.

Often on a summary spreadsheet, an analyst will choose to show both debt and EBITDA as they would typically be calculated. She may also show the related ratios as defined by the covenants including "covenant debt," "covenant EBITDA," and the related "covenant" ratios. Some companies in their press releases report a "covenant EBITDA" or "covenant ratio." You can compare this covenant calculation to the required tests in the covenants.

Carve-outs

If you look at any high-yield bond prospectus and read the debt incurrence covenant, you can see that the ratio test just described is usually only a small part of the covenant. The bulk of the rest of the covenant typically describes exceptions to the ratio test. These exceptions outline other ways in which debt can be issued even if the debt test ratio is not met. These are often called *carve-outs*. Some of these are fairly straightforward, such as liens or mortgages on acquired property, or permitting a tax lien if it occurs. However, some other items are worth further discussion. Again, similar carve-outs are likely to appear in most other major covenants as well.

A typical carve-out may include the existing bank line. The key is how this carve-out is written. Sometimes it allows borrowing on the bank line above and beyond the ratio test. Sometimes the carve-out for the bank line is reduced by any permanent repayments of the bank borrowing. This means that prepayments of the bank debt may permanently reduce a company's borrowing capacity, and the company may look to avoid making these prepayments. The prepayments of a revolver typically are not permanent, and the company may look to repay a revolver ahead of term loans for this reason. Additionally, how this bank borrowing is defined can make a difference. If it is defined as senior secured debt, the facility could be funded with a bond financing if it is senior secured. If a bank or credit agreement is specified, any financing using this carve-out would need to be in the form of an actual bank loan.

You must read all the other carve-outs, because there may be specifics for acquisitions or refinancing. An investor usually does not mind a refinancing of junior existing debt as long as the new financing is longer-dated and no more senior than the existing financing that is in place.

Another carve-out has appeared in the debt of early-stage companies that need multiple rounds of funding from various sources. This funding is frequently based on perceived or real asset value, so the carve-out would allow additional debt financing based on new equity funding raised. An example might be that the carve-out would allow that for every $1 of new equity raised, the company could add $0.50 of new debt regardless of the debt tests described here.

Restricted Payments

The next major covenant to examine is the restricted-payments test.

The basic concept is that a holder of a bond or loan would want the company to meet certain goals before it

can use money to either pay dividends on the equity, do stock buybacks, or be able to retire securities that are more junior.

Within the covenant, or in the definitions section of the document, what constitutes a "restricted payment" is defined. This definition usually is not short and includes many carve-outs. From a debt holder's perspective the definition of restricted payments should specify at a minimum that money or other assets going to the equity holders through dividends or stock repurchases and early retirement of more junior debt are all included as restricted payments.

The core of a restricted-payments covenant normally has two parts. The first is a test that has to be met to be able to make such a payment. The second part is a "basket" that limits how big of a payment can be made.

Typically, the test that would have to be met feeds off the debt test. It is normal to say that pro forma for a restricted payment the company would have to meet the ratio portion of its debt test and be able to issue at least $1 of debt under that test. So it usually refers to the debt incurrence test and uses either the leverage ratio or a fixed charge test that is used in that covenant.

The basket is a bit different, because it basically builds over time. The basket starts from a specific date. Common language is that the basket builds by cumulatively adding 50% of net income from that start date to the time of the payment. Whatever that accumulates to is what the company can use for restricted payments, and any restricted payment made gets deducted from that basket. However, to be clear, if the test mentioned in the preceding paragraph is not being met, the basket cannot be used.

Instead of the 50% of net income test, another common test for a basket builder is any EBITDA over 1.4x interest coverage.

Here are some items to examine in the definitions and terms of basket language:

- How are periods of negative net income counted? Are they deducted from the basket or just excluded?
- How are net income and interest coverage defined?
- What other items can be added to the basket, such as proceeds from equity offerings?

In some higher-quality issuers the restricted-payments tests are much simpler; they have a debt test that must be met. As long as pro forma for any transaction the company stays within that test (perhaps a 4x leverage ratio), the company has no limits on its ability to make restricted payments. This has been seen in some better-quality European leveraged bank financings and has appeared in some bonds, too.

Restricted-payments descriptions tend to have many more carve-outs than debt incurrence tests. In the normal course of running a company, some selected stock buybacks or other payments may have to be made. These are typically allowed to a limited amount. Perhaps there might be a carve-out for the repurchase of stock from a departing employee up to a total of $10 million in any one year and a total of $100 million over the life of the bonds or loans. (These sizes will vary to some extent depending on the company's size.) There are often general carve-outs for one-time payments and some carve-outs for refinancings as well. There are also often carve-outs that allow proceeds from equity financing to be used to make restricted payments.

> You should try to look at the permitted-investment covenant if time permits. Some structures have multiple subsidiaries, and "permitted investments" can sometimes allow for money to leave the entity. This can catch an investor by surprise.

Change of Control

Change-of-control covenants generally relate to a takeover of the company or sometimes simply a change in

the control of the board. Typically if a change of control as defined in the document takes place, the company that issued the debt must make an offer to repurchase the bonds at 101 of face amount, usually within 90 days of the event's closing (not being announced). There is usually a clause that allows an acquiring company to make the offer as well.

Bank covenants for change of control are fairly similar, although often the offer to purchase is at par.

The key, as you might have figured out, is in the definition of change of control and how certain terms are defined within that definition. The definition of change of control varies significantly. Some common examples include 35% or 50% of the voting control or control of the board of directors, but numerous variations exist.

Usually the description of change of control carves out *permitted holders*. This is usually a defined term that you must examine. Sometimes it includes a family of the controlling shareholder, and other times it allows for another company that already has a significant stake in the issuer.

Other features sometimes appear in the change-of-control section. Exceptions might prevent the change-of-control offer from going into effect. The covenant may specify that as long as the leverage ratio pro forma for a change of control is no higher than it was prior to the event, the change of control is not triggered. Or the exception might specify that as long as the ratings agencies do not lower the ratings due to the change of control, it is not triggered. Other variations are also possible. They could include a specific ratio target that must be met, or perhaps require a ratings upgrade or an investment-grade rating to be achieved.

Change-of-control covenants come into effect often in event analysis. This is especially true when two companies are merged. The structure of the transaction and the language of the change of control can be key in whether this "put option" for debt holders comes into play.

Asset Sale

Asset sale covenants typically define the form that major asset sales can take and how the proceeds from an asset sale can be utilized.

This covenant usually first describes what size of an asset sale the covenant covers. It may have a dollar amount, such as "any asset sale valued at over $50 million." Or it may define a percentage of assets, such as "any asset sale that would be valued at more than 15% of net tangible assets." Or it may be described in some other manner.

The next section of the covenant may dictate how the asset sale can take place. For example, it may dictate that 85% of the proceeds must be in cash. Or it may allow that a swap for similar assets may be undertaken (such as a cable television company swapping markets with another operator for a more geographically desirable asset).

Finally, there is usually a description of what can be done with the proceeds from such an asset sale. Typically, an offer has to be made to repurchase bank debt and any more senior debt. If proceeds remain and/or the more senior debt chooses not to sell, the usual language for a senior subordinated note gives the company 180 days in which to either reinvest the money into permitted assets (sometimes this requires it to be in the same line of business) or make an offer to repurchase the bonds at par. If no bondholders choose to sell bonds into this offer, the company is typically free to do as it chooses with the balance of the proceeds, within the boundaries of the other covenants.

Generally this type of covenant doesn't have that many carve-outs, except sometimes specific types of assets may be excluded from this definition. Perhaps the company owns a large piece of real estate or a nonstrategic subsidiary; this may be excluded from the asset sale restrictions.

Reporting Requirements

Another covenant that sometimes gets overlooked is a covenant to make financial statements available.

If a company has public stock outstanding, most countries and exchanges require financial statements to be regularly and widely available, either quarterly or semiannually. It is not always the same with debt securities.

Debt securities usually are not listed on exchanges. Some formats of the notes are considered private placements anyway. So this covenant is important to bondholders if the company is private—and even if it is public, in case the company goes private at some point. Additionally, note that the public financials filed to fulfill the requirements for a company's stock will usually be for the holding company financials; often the bonds are issued at a subsidiary that may or may not have comparable financial results to the holding company.

How the financials are made available can be important. Although some companies may prefer not to have their financials publicly available for competitive reasons, the more restrictive the availability of these financials, the less liquid the trading in these securities can be. So how the company makes them available is important. Typically the most open forum is either to file them with a regulatory body such as the U.S. SEC or to make them available on the company's website. A more-restrictive practice might be to have them made available to "existing note holders." The company may legally limit these holders from forwarding the financials to others, too. There are also closed sites that require company approval to get the financials and then limit their distribution, such as IntraLinks. So from a trading perspective, this covenant can be important.

Along the same lines, some bonds may covenant in a requirement to hold quarterly or semiannual investor conference calls, effectively requiring the management to make themselves available to investors.

Other Covenants

Other covenants may include the following:

- A covenant might restrict a company's "lines of business." For example, an oil and gas exploration company may be limited by this type of covenant to being in the energy business.
- There are also often restrictions on transactions with related parties and a description of how they need to be handled. For example, if the chairman of the company also owns a consulting business that the issuer of the bonds wants to hire, this may have to be approved by all outside board members. Or the covenant might limit the fees that can be paid.
- Another feature that appears in some bonds is a covenant *drop away*. This typically states that if one, or sometimes a combination, of the major ratings agencies (generally S&P, Moody's, and Fitch or DBRS in Canada) upgrades the bonds to investment grade, a number of the covenants no longer become operative. These covenants that would "drop away" are carefully defined and usually include the most restrictive ones. You should note another part of these covenants. If an upgrade occurs, do these covenants drop away permanently? Or if the company gets downgraded again, do they get reinstated? Clearly the latter is better for debt holders.

Typically, bank agreements have negative covenants that are slightly tighter than those found in bonds. They also often require offers for first payouts when payoff situations occur. You may also see limitations on capital spending in bank covenants. This is certainly not usually seen in bond covenant packages.

There are a few words to always be careful of in covenants. In a list of criteria, note whether the word "and" or "or" is used. In a change-of-control covenant, it can make a big difference if the change-of-control offer to repurchase does not go into effect if "1) There is a ratings upgrade ___ 2) The Leverage ratio is no higher pro forma for the event." The meaning is quite different depending on whether "and" or "or" is inserted in the blank.

The other word to watch for is "notwithstanding." For example, after the fourth or fifth paragraph of a covenant, it might say "Notwithstanding the prior paragraphs in this section...". This basically means to ignore everything you just read because here are a bunch of ways around it.

Affirmative/Maintenance Covenants

Although most of the covenants described so far are what are known as *negative covenants*, the reporting requirement described earlier is an *affirmative covenant* because it requires the company to do something. Typically, bonds do not have many affirmative maintenance covenants. However, leveraged bank agreements usually have a lengthy section of affirmative covenants. Failing to meet these covenants is a *covenant default*, sometimes called a *technical default*.

Some common maintenance covenants can include a required minimum amount of cash or liquidity, maintenance of annual appraisals on the security underlying the loans.

The maintenance covenants that analysts most closely monitor tend to be financial maintenance tests. These can include revenue levels, EBITDA levels, and/or most often some combination of ratio tests.

Typically there are leverage tests, such as debt to EBITDA, or interest coverage tests. As with the other covenants, you need to read these terms carefully, because definitions can be critical.

The definitions of these maintenance tests in the bank agreements have an even greater tendency than the bond definitions to include add-backs for cost savings or temporary losses from a single subsidiary and such.

The other thing to note is that these financial tests generally are not static; they tend to get tougher over time. This means that the bank agreement effectively requires/implies credit improvement.

When the bank agreement is publicly available, these grids can show an analyst what the company's own internal model may look like. Typically the bankers who build these covenants work with the company's model to create a grid that makes sense, because neither side wants to design a covenants package that is a failure. The covenants usually build in some cushion over the company's projections. It is not a bad rule of thumb to assume that there is about a 20% to 25% cushion built into the maintenance covenants versus the company's actual internal models. Of course, this is not always the case. Sometimes one side or the other is more or less aggressive.

Another feature that is commonly found in bank covenants, alluded to earlier, is a springing maturity. If a tranche of bonds or any more junior debt is outstanding and mature on a date ahead of the bank debt, a springing maturity often exists. In this case, the clause typically states that if the more junior debt is not refinanced or retired, say, six months prior to its actual maturity, it will trigger a default or early maturity in the bank debt.

When building a model to show how much "headroom" there is between a bank agreement's maintenance covenant and the actual ratio that the company is generating, be sure you are defining the "actual ratio" the same way it is defined in the covenants.

Restricted and Unrestricted Groups

Before we leave the covenant discussion, another important concept can be critical to understanding bank and bond covenant packages. This is the idea of restricted and unrestricted groups.

Both bank agreements and bond indentures employ the concept of restricted and unrestricted subsidiaries. Restricted subsidiaries are entities that are party to the bond/loan agreements. They must abide by all the covenants and must support the payment of these debt instruments. Unrestricted subsidiaries do not have any obligation to support the bond or loan or follow its restrictions, so effectively, from the debt holder's perspective, management can do what it wants with these unrestricted assets.

For example, assume that a company owns five casinos: two in Atlantic City, two in Las Vegas, and a new early-stage riverboat casino in Indiana. The four established casinos in Atlantic City and Las Vegas are the restricted subsidiaries, and the property in Indiana is unrestricted.

The EBITDA from the restricted subsidiaries must meet any required ratios. Any EBITDA gains or losses at the new Indiana casino do not affect these ratios. Additionally, the company could add debt, or sell the unrestricted Indiana assets, and not have to worry about whether this is allowed under any of the covenants in the restricted group debt agreements. It also doesn't have to worry about the restrictions under the loan agreements about what it did with the proceeds.

In this example, the casino company will likely report consolidated results for all five properties. When a bond or loan agreement includes the concept of restricted and unrestricted subsidiaries, the company often is required to separately report the results for the restricted group, even if it is public and reported results include all the consolidated operations. Additionally, if the company is private, the reporting requirements typically require only the results of the restricted group, not the unrestricted subsidiary, to be reported. Investments or transactions with the unrestricted subsidiaries usually should have to meet the requirements under the restricted payments basket and the restricted investment basket, because this effectively results in money leaving the group of entities supporting the debt.

When debt agreements contain the concept of restricted and unrestricted subsidiaries, there is also the concept of changing a subsidiary's classification from a restricted subsidiary to an unrestricted one. Typically, the restrictions are pretty loose, but this would not be allowed if it would violate the various restricted payment and debt tests.

Not all companies and their debt instruments are structured with restricted and unrestricted groups. However, when they are, this is an important concept to understand.

Understanding covenants can be time-consuming and sometimes seems like a never-ending process that may not have a clear answer. The quote that always comes to my mind when I think about analyzing covenants is part of Sir Winston Churchill's description of Soviet foreign policy. It is "...a puzzle inside a riddle wrapped in an enigma."

Questions

1. Which two of the following are typical ratio tests for a debt incurrence covenant?

   A. Fixed charge coverage ratio

B. Free cash flow/debt ratio

C. Profit margin ratio

D. Leverage ratio

2. In the following sentence, what would most likely be the defined term?

"The test will use net income and include Accepted Add-backs to measure a cash flow figure."

A. net income

B. cash flow

C. Accepted Add-backs

D. The test

3. A restricted-payments test usually impacts the ability to do what?

A. Pay dividends

B. Make capital expenditures

C. Make new hires

D. Cut costs

4. Which of the following is not an affirmative covenant?

A. A requirement to report financials

B. A covenant requiring annual asset appraisals

C. A covenant requiring achieving a certain EBITDA

D. A limit on the ability to sell assets

5. If a loan agreement is in place, which of the following best describes the obligations of an unrestricted subsidiary?

A. It must follow all the loan's covenants.

B. It must follow all the negative covenants in the loan agreement.

C. It must follow all the negative and affirmative covenants in the loan agreement.

D. It does not have to follow any of the covenants in the loan agreement.

17. Amendments, Waivers, and Consents

What's in this chapter:

- What causes a company to pursue changes to its covenants
- Differences between amendments, waivers, and consents
- How tenders and exchange offers are used to achieve covenant changes

The preceding chapter covered some of the complexity of understanding covenants. This chapter addresses how covenants can get changed.

Sometimes a company either wants to do something that would violate the existing negative covenants or is worried about violating affirmative covenants. When this happens, the company has a few options to address the problem. One is to retire the existing debt and, if necessary, replace it with new debt that permits it to undertake the actions it wants to perform. This can sometimes be expensive and difficult. The new financing requires a new round of legal, accounting, and financing fees and exposes the company to market risk in the coupon for the new financing. The second method is to approach the debt holders and negotiate an amendment or a waiver to the terms that the company needs to change. This usually involves paying the debt holders a fee or giving them an improvement in the terms of their debt.

Note that there is a difference between an amendment and a waiver. An amendment is a permanent change to the terms of an agreement. A waiver is usually a one-time or event-specific change to the covenants.

Within the terms of the debt securities are included details of how changes to the covenants or other terms can be made. Typically the changes require a simple majority of the loan or note holders to approve them. (This means that if it is a $1 billion bond, holders of $500.1 million of the notes would need to approve a change.) Sometimes terms require a supermajority, such as 67%. And sometimes the terms specify that certain changes require one percentage, and changing another term would require a different amount. Additionally, it is important to note that what are commonly called *money terms* require a 100% affirmative vote usually. As you can imagine, it is difficult to get a 100% vote on anything. Money terms are usually the amount due, the interest rate, and the maturity, including amortization requirements.

Because bank agreements tend to have more covenants, more amendments and waivers tend to occur in the bank market. This is especially true of affirmative and financial covenants, because companies and the general economy get hit with some curves, and growth plans sometimes struggle. Additionally, it is generally considered easier to get amendments and waivers done in the bank market. This is true partly because of the makeup of the investors and partly because the same size of issue typically has fewer holders of bank debt than bonds. Given the senior position that bank lenders usually enjoy, they also tend to be more flexible, in exchange for fees. Additionally, especially when it comes to adjustments on affirmative and mainenance covenants, there is the concept of lender liability in the bank market. Bank lenders have an obligation not to act in a manner that is detrimental to the company they have lent money to.

The agent bank is equivalent to a lead underwriter on a bond. Generally it maintains communications with all the holders. Because of the nature of how the debt trades, the agent bank usually knows who all the holders are. The agent bank is also typically a holder of the debt and is usually the logical entity for the company to use as a lead negotiator on the hoped-for changes.

The need to change financial covenants can be driven by a poor economy or a change in competition. The need to change negative covenants, such as the ability to issue more debt or waive a change of control, is usually driven by an unforeseen event, such as a merger or acquisition or a shift in expansion plans.

For example, it is not uncommon to see a company undergoing a transaction to pursue a waiver for the change-of-control covenant.

This example focuses on a waiver for the bonds, but it could just as easily apply to loans as well.

Sometimes it appears obvious that a change-of-control put would not be exercised by any holders, but it can still matter. Assume that a company has a 10% senior note outstanding and the company is being bought by a much stronger credit, maybe even an investment-grade company that has bonds that trade at 5%. This implies that those 10% bonds will be trading significantly over 101 when the acquisition closes. Even though a 101 offer to purchase may be made, it is unlikely that any bondholder would sell the bonds, because they would be trading at a higher price than the change-of-control put of 101.

However, acquisitions can take a long time from the time they are announced until they actually close, and market conditions could change rapidly. Typically the board of directors of the selling company will want to protect its shareholders. Therefore, it will require the acquiring company to line up some kind of financing to pay for the change of control in case market conditions vary greatly by the time the transaction closing finally comes around. Then the company management must decide which is more cost-effective—lining up financing for the change-of-control put (in case the change-of-control offer gets hit), or trying to get a waiver from bondholders.

The acquiring company must weigh what it will cost to secure this financing commitment—usually some form of bridge loan fees to a bank or other institutional lenders—versus what it is willing to pay the bondholders to agree to waive this right to put. The bondholders have to weigh how much they can get the company to pay them, versus the company's walking away and using other financing in which case the bondholders get nothing and give up a chance to get paid an extra fee in what already appears to be a good transaction for them. The bondholders also have to weigh what they think the risk is that market conditions could change enough that pro forma for the acquisition the bonds might be trading below that 101 put they could have been offered at the time the acquisition closes.

As mentioned, bank lenders tend to be involved in consents more often than bondholders because of affirmative covenants. Often what happens is that the company foresees that it will violate one of the financial maintenance covenants. Because bank holders can be "private" as opposed to "public," the company can start discussing its issue with the agent bank and hopefully some of the largest holders before a violation occurs.

The company may be seeking an amendment to the test, or perhaps just a one-time waiver. Depending on the reasons for the request, the company's performance and, to some extent, the makeup of the holders of the bank debt, the company may have to pay a nominal fee for the consent. This might be nothing, or it might be a substantial fee. Sometimes this can even be an upward adjustment to its coupon. Typically, if a company violates one of these terms, the bank agreement gives it 30 days (or some other set amount of time) to fix the problem before officially causing a default. (Typically this is called a grace period. The same is true for a missed coupon payment.) Additionally, temporary waivers can be passed while negotiations are ongoing. Theoretically these "technical defaults" could cause a bankruptcy, but it is hard to think of a case where such a technical default has caused one by itself.

Another way to "cure" a technical default is through an *equity cure*. This sometimes allows a company's owner to cure a financial technical default simply by putting more equity capital into the company. For example, suppose a company is in violation of a debt/EBITDA test, and a reduction in the debt of $50 million would keep the company out of the violation. The company's owner would be allowed to invest another $50 million into the company's equity to "cure" this default. This is generally true in cases where the company is owned by a private-equity firm; it does not get exercised that often.

As mentioned earlier, bank covenants often require paydowns of all or a large portion of the proceeds from actions such as asset sales and equity offerings. In the case of asset sales, the company may actually require the bank lender's approval. In reality the company often negotiates with the banks on what it can do with the proceeds before agreeing to the transaction. It is easier for the company when bank lenders are private, because these negotiations may be done well before any transaction is finalized or announced publicly. Because these transactions are typically overall positives for the issuer's credit quality, the banks usually agree to some form of partial payment and then give the company more leeway in what to do with the balance of the proceeds.

The types of holders of bank debt can matter in the process of getting amendments and waivers completed. For example, if the majority of the holders tend to be traditional commercial banks, it is generally believed that they are more focused on the relationship with the company and are more willing to reach reasonable agreements quickly. When aggressive, stressed, or distressed investors tend to hold much of the bank debt, they have a reputation for being more concerned about near-term returns. Other investors, from structured collateralized loan obligation (CLO) types through public funds, view this process in many different ways.

Other options are available if covenants or structural changes are needed and the bonds are not callable or it is too difficult or costly to use a call. These typically involve the use of tenders and exchanges.

A *tender* is a company's offer to purchase securities. For example, if the company wanted to change a covenant, it could make an offer to buy at least 51% of a bond issue outstanding at 110. Part of this price would include a *consent fee* for agreeing, almost simultaneously, to the waiver or amendment, and then the bond would be sold back to the company at that price. Obviously this requires the company to have either existing liquidity or new financing in place. The price for the tender can be expensive for the company, too. Therefore, this is not seen nearly as frequently in cases where amendments or waivers are being sought.

So when doing a tender, the company must have cash or raise financing to pay for the tender. The company's financial team and advisors must weigh how expensive the new debt would be versus how high a consent fee might need to be to get the transaction done. The bonds' callability, or how close they are to maturity, also becomes a factor in the ability to do this. In bank debt, because of the callability and the requirement to make all prepayments pro rata, these types of tenders are not usually seen.

Another less commonly used alternative to a straight consent, waiver, or tender is an *exchange* offer. Bondholders receive an offer to exchange into a new note with the changes in the covenants that the company needs. As opposed to a tender, an exchange prevents the company from having to raise new financing or use cash. And unlike with a tender, the bondholder is offered not cash, but a new security.

The exchange offer typically has some incentive to the holders to exchange rather than not exchange, or hold out. The first and most obvious incentive is that if the exchange gets the requisite amount to change the covenants, usually 50.1% of the amount of old notes, the exchange typically strips all the protection of the old covenants from the notes that do not exchange, just as in a tender. Other incentives are possible. The new exchange notes could also be senior to the old notes, thus priming the old notes. The new notes could also have a bigger coupon or a shorter maturity. Or they could even exchange into more debt. Perhaps the holder exchanges $1 worth of old bonds and gets back $1.05 of new ones. For obvious reasons these exchanges usually have a minimum acceptance rate. Keep in mind that 100% acceptance is unlikely. Therefore, both the old outstanding issue and the new issue will probably be smaller and therefore may have less trading liquidity.

One type of amendment that you may often hear about in the loan market is an *amend and extend*. This is actually a new issue that looks a bit like an exchange offer that is negotiated with the banks. In a simple form, the company negotiates with the banks to agree to keep in place the basic terms of the bank agreement and perhaps make one or a few changes to the covenants; this is the "amend" part. Then the company also gets holders to "extend" the maturity and issues a new loan with these terms using the proceeds to retire the old

loans. But even if the company gets 90% of the bank debt to agree to this, it cannot force the other 10% to accept the longer date. So it typically effectively works like an exchange, where sometimes there are two tranches of the loan after the amend and extend transaction. Of course, because it is a new issue, the company may bring new investors into the new amended and extended loan.

You also often see exchange offers in distressed situations. These are usually attempts to improve a troubled or stressed situation. In some cases these exchanges are structured in hopes of avoiding a bankruptcy. These types of exchanges are really part of the bankruptcy and restructuring discussion, not part of the discussion about getting amendments and waivers to covenants.

Consents, tenders, and exchanges often happen because an event occurs; frequently, it is a merger or acquisition. The next chapter describes some common types of headline-causing events, followed by the process that an analyst typically goes through to try to analyze how the bonds and bank debt may react.

Questions

1. What is the difference between a consent and a waiver?
2. Which terms of a bond or loan typically cannot be changed without 100% of the holders agreeing?
   A. Coupon, principal, and maturity
   B. Coupon, call structure, and maturity
   C. Call structure, maturity, and debt incurrence
   D. Maturity and change of control
3. Suppose you are pursuing a bond tender that also includes a consent to change the debt incurrence test. To get the consent, what percentage of bonds would you likely need to win a consent?
   A. 100%
   B. 66.4%
   C. 50.1%
   D. 75%
4. True or false: Consents and waivers are more common in the bond market than the loan market.
5. True or false: Amend and extend transactions are more common in bank agreements.

18. Making Money or Losing It Off of News Events

What's in this chapter:

- The process for analyzing typical credit events
- How to examine covenants and structures to analyze how events might impact bond and loan prices
- Two acquisitions scenarios
- An IPO scenario
- A refinancing scenario

As pointed out in earlier chapters, the leveraged finance market is more prone to and reactive to events than most other fixed-income markets.

Unfortunately, no set of rules governs how a company's debt securities will react in response to a certain type of news event. Often the entire market may view an announced event as positive (or negative). But investors may have significantly different views on how much the news should impact security prices, and different structures among the bonds of the same company may cause each issue to react differently. Also bear in mind that sometimes a headline is positive for a company's equity but negative for its debt, or vice versa.

The examples in this chapter describe an event and then walk through at least part of the typical thought process that an analyst would need to undertake.

It is worth noting that most events have no immediate closure. When there is an announcement of an acquisition, an initial public stock offering, or a new debt financing, the transactions do not close immediately when they are announced. Therefore, there is always a chance that the event won't close. This should cause the bonds and loans to trade at some discount or premium to your view of the true value upon closure. This risk factor can rise or fall prior to the actual closing of the event, depending on the perceived risk of the transaction's falling apart.

Scenario: An Issuer Makes an Acquisition

In the first scenario, the restaurant chain FastFoodCo announces a plan to buy a smaller competitor, GoodFoodCo. The following are some key facts about the acquisition. Sometimes not all of these items are included in the announcement.

FastFoodCo (FFC) Facts

- Revenue: $1,500 million; EBITDA: $300 million
- Debt: senior secured bank debt term loan $800 million L + 350 due in five years
- Bonds: $400 million 8% senior subordinated notes due in seven years
    - Leverage: Bank debt/EBITDA 2.7x; total debt/EBITDA 4.0x
    - Cash on hand: $100 million; net leverage: 3.7x
    - Preannouncement trading levels: bank debt at par; bond at 8.5% YTW

GoodFoodCo (GFC) Facts

- Revenue: $500 million; EBITDA: $80 million
- Debt: revolver $50 million; term loan $50 million

Deal Facts

- FFC is paying $480 million, including assumption of GFC's debt. The acquisition is being made all in cash (as opposed to doing all or some of it with a stock swap).
- This is a 4.8x EBITDA multiple.
- FFC expects $60 million of cost savings in the first 12 months.
- Both boards have approved the transaction. Board members represent more than 50% of the voting rights of the stock of both companies.
- Quick pro forma analysis assuming 100% debt funding:
  - Pro forma debt of $1,680 million
  - Pro forma EBITDA of $380 million
  - Pro forma EBITDA with cost savings $440 million
  - Leverage: pro forma debt/EBITDA 4.4x; with cost savings 3.8x

We can surmise the following right away:

- If FFC uses debt to finance the entire transaction, the leverage will initially go up. But if and when cost savings are achieved, the pro forma leverage will go down. So the analyst must decide how much credit on day one should be given for the "planned" cost savings. A healthily cynical analyst never gives the company 100% credit.
- Along these lines, you should ask whether the cost savings look reasonable. In this case you can see that GFC's operating margins are meaningfully lower than those of FFC, and there is a difference in scale, so you can assume that there should logically be some meaningful gains.[1]

1 Also note that if the cost savings are applied to the combined company, margins are not way out of line with FFC's historical margins, so it would appear reasonable.

- There appears to be a low level of "deal risk," because a majority of shareholders and the boards have both approved the transaction.

Here is a partial list of questions we do not know the answers to:

- Will GFC be assumed by the main operating entity of FFC where the FFC debt is currently outstanding? Or will it be kept as a separate wholly owned subsidiary, and the GFC debt will sit at that entity, having less impact on FFC?
- How is the transaction being paid for? To be conservative, we assumed that the company was using all debt to fund the purchase. However, FFC could plan to sell some stock. Another factor is that FFC could plan to use some of its cash on hand. However, noting its cash position and balance sheet items, we notice that it has no revolver, so odds are some of its cash is used for working capital.
- The analyst needs to look at the debt incurrence covenants and see if they would allow the transaction to be funded with all debt under the debt incurrence test. You would also have to be sure to look at the definitions of EBITDA to see if pro forma cost savings could be included in the calculation.
- What cash costs are expected with the cost savings? Savings rarely happen for free. Are there system integration costs, severance payments, or costs related to breaking leases?

You would like to have the answers to numerous other questions. These might include the expected timing of the closing; potential breakup fees if the transaction doesn't close; whether GFC management has noncompete clauses; whether GFC's capital spending needs are greater than, equal to, or less than those of FFC; and what GFC's operating trends have been.

And you should factor in even more intangibles when calculating how the FFC bonds should trade. These may focus less on the actual deal and more on FFC in general:

- Is making an acquisition like this a departure from FFC's strategy? (This adds risk.)
- Is this a good fit for FFC? For example, is there much geographic overlap? Do they operate similar/complementary types of properties?
- How did FFC management communicate the acquisition? Did they put out a short, tersely worded press release and nothing else? Or did they offer a more detailed press release with rationale for the acquisition and other available details? Did they hold a conference call to make themselves available to investors? If so, were they responsive or nonresponsive to questions?

These types of factors can all impact how FFC debt may trade shortly after the announcement and how it might trade longer-term.

It is unlikely that in any given transaction an analyst will get all his questions answered and receive all the information he would like. Therefore, assumptions and decisions must be made based on imperfect information.

It would not be uncommon for FastFoodCo to decide to fully integrate GoodFoodCo into its operations and to fully fund the transaction with new term bank debt and a new bond. The GCF bank debt would be retired. The banks might be willing to increase the leverage at the senior secured level to 3x. This would allow $340 million of the acquisition funding to come from the bank line; the balance would need to be funded in the bond market. The new bank line would replace the existing FFC term loan and retire the GFC bank lines. There would likely also be an increase in the rate on the bank debt. Table 18-1 shows how a sources and uses table might look for this transaction. Note that it contains a line item for expenses related to the transaction.

Table 18-1. Sample Sources and Uses Table for the GoodFoodCo Acquisition in $000,000s

Sources		Uses	
New senior security bank facility	1,140	Retire GFC bank lines	100
New senior notes	150	Retire old FFC bank lines	800
Total sources	1,290	Buy GFC equity	380
		Fees	10
		Total uses	1,290

The bank debt gets a takeout and a chance to roll into a new, higher coupon loan facility with a similar risk profile, so it is fairly positive for the bank debt.

So if you assume that FFC management has a decent track record with acquisitions, that this acquisition is in line with its overall strategy, that the bond covenants allow the transaction, and the company doesn't have to offer any consent payments to the bondholders, it might appear relatively neutral for the bondholders. However, it is not. Notice that the existing bondholders are senior subordinated notes and that the new notes are senior. The existing notes are getting hit with the brunt of the increase in leverage and are getting primed. Wherever the market decides to price the new notes, the existing notes will assuredly trade behind them. Although the transaction is not transformative enough nor is the increase in leverage large enough to likely cause a major sell-off in the existing senior subordinated notes of FFC, but they will likely trade down. At the same time, management has sent a message that they are willing to prime existing note holders in future transactions if the covenants permit. The analyst should check how much more room for senior debt the

covenants allow.

Scenario: The Issuer Gets Bought

The preceding case was examined from the perspective of analyzing the bonds and loans of the buyer of a company. The example in this section looks at the perspective of the company being bought.

What happens when a company announces it will be sold? The sale of a company can have many twists. In most cases bank debt gets refinanced, but this can be either good or bad, and various degrees in between, for the trading level of the bonds.

The biggest factors are who or what is the buyer and how are they structuring the acquisition. If a company is being sold to a stronger credit, this should be a positive for the existing bonds. If a company is being sold to a credit of equal quality or to a private-equity (PE) firm, it depends on whether the existing bonds need to be retired to complete the transaction. Or can the buyers leave the bonds outstanding and increase the leverage to pay for the transaction? This is what occurred in the FastFoodCo case. The scenario described in this section looks at how the bonds and loan of the company being acquired may be treated and react.

First, you might want to see if the change of control in the bonds will go into effect. You want to see if the transaction would trigger this covenant and set a floor for what could happen to the bonds. However, because almost all change-of-control offers to repurchase the bonds occur at 101, this becomes a factor only if the bonds would be trading at 101 or below. If the bonds are trading substantially over 101, there is the potential for some meaningful losses if the change-of-control tender price is your floor and actually ends up being used by investors. So the more interesting scenarios come into play when the price of the bonds prior to the transaction is trading above the change of control, and it appears that the change-of-control feature will not be a factor.

In this case a German dialysis company, DeutscheDialysis (DD), is up for sale. After an auction, DD is being sold to an investment-grade company, EuroMed (EM).

The first thing an analyst needs to try to discern is how EuroMed will structure the acquisition. Some common ways might include the following:

- Keeping DeutscheDialysis as a separate wholly owned subsidiary. This means that DeutscheDialysis will still be a separate credit. Although there is implied support from the stronger parent, the bonds of DeutscheDialysis are likely to stay outstanding and trade at some yield higher than EuroMed's bonds.

  The analyst must try to analyze how much wider than EuroMed's bonds the DeutscheDialysis bonds should trade. This will be based on the reaffirmation of the underlying asset value, the size of the new investment by EuroMed, any synergistic cost savings that the combination may bring to DeutscheDialysis, and the likelihood that EuroMed will eventually refinance the DeutscheDialysis existing bonds in an effort to get cheaper financing and perhaps better covenants.

- EuroMed may choose to either retire or refinance the existing DeutscheDialysis bonds. Why might it do so?

  First, EuroMed might want to be able to lower the cost of financing.

  Second, EuroMed might want to get rid of the covenants. Perhaps it wants to take more money out of DD than the restricted payments test allows.

  Third, sometimes EuroMed might not want separate reporting requirements.

  Therefore, EuroMed might look to refinance these old bonds or may seek amendments from the investors. You must analyze whether it is cost-effective to refinance the bonds. You should factor in any

call premiums or tender premiums that would need to be paid and analyze whether some of the covenants are too onerous for EuroMed to live with.

- EuroMed may also look to assume the bonds and make them part of the EuroMed debt structure. This should cause the DeutscheDialysis bonds to trade in line with the investment-grade EuroMed debt—usually a big positive for bondholders.

What might be different if DeutscheDialysis were sold to a private-equity (PE) firm in the auction?

Again, one of the first questions you must ask is how the private-equity firm will pay for the acquisition. Typically, the acquisition includes an equity component paid by the PE firm. Remember that this equity check does not add to the capital of DeutscheDialysis. Instead, it goes directly to the shareholders, so it usually does not adjust any cash or debt on the balance sheet or covenant terms. The second component of the acquisition funding is usually debt borrowings.

The PE firm often looks to see if it can keep the existing bonds in place. However, any new borrowings to fund the acquisitions, if they were raised at the same corporate level or at a subsidiary of the existing DeutscheDialysis bonds, would have to meet the debt incurrence tests of the old notes. Additionally, if the money being raised was being used to effectively purchase company stock, it would need room under its restricted payments covenant tests and room in its basket to do this as well. Remember that one way around adding more leverage on the company and not having to work within the existing covenants is to form a new holding company that is not a party to the covenants of the subsidiaries.

Although the new holding company structure may not actually increase the leverage at the level where the old DeutscheDialysis bonds reside, the new owners obviously still expect to be able to use the DeutscheDialysis cash flows to service the new holding company bonds. You will want to analyze whether the DeutscheDialysis credit now has to help service the new holding company bonds. Will there be enough room under the restricted payments test to upstream this money? This is obviously a concern for the existing DeutscheDialysis bondholders, but it's an even bigger concern for the potential buyers of the new holding company bonds. Remember, you also want to check what senior and senior-secured capacity there may be within the covenants. If there is capacity, it could allow debt to come in above the existing bonds you are analyzing and prime these notes.

As you become a more experienced analyst, you will look at the new structure and the levels of where the old DeutscheDialysis bonds are trading. You will try to analyze if in a given market environment the new holding company financing could successfully be completed or if the structure needs to be changed.

Finally, what if a company of relatively equal credit quality decides to buy DeutscheDialysis? The same questions arise. How is the company paying for DeutscheDialysis? If it is paying with stock, it is relatively neutral for the bondholders from a financial basis, and the analyst must look at the strategic advantages of the combination. If the company is paying cash, it probably will have to leverage up. Then you must look at it on a combined basis with assumptions about the new funding.

Scenario: An Issuer Announces an IPO

When a company announces that it will raise equity, this is a significant and fairly common event that analysts need to react to.

In this example, NewDisc is a computer memory company owned by a private-equity firm. It has produced healthy growth for the past three years, ever since it was bought by the PE. It has lowered its leverage as measured by a debt/adjusted EBITDA ratio from 6x at the time of the buyout to 4x. The company announces it will issue stock and go public in what is called an initial public offering (IPO).

How should a leveraged finance analyst react?

An IPO is usually a positive for a company. This is due in part to the following factors:

- A meaningful amount of proceeds are usually used for deleveraging. This may include some bank debt retirement and premium takeouts of the bonds.
- A public stock price helps solidify a valuation on the company.
- There is usually better information flow and therefore greater trading liquidity in the debt of a public company.
- If the company is acquisitive, a public stock often gives it another currency with which to buy assets other than by having to raise cash. Although shareholders may not always like the dilution from an acquisition paid for in stock, debt holders usually like it.

So, on the surface, everything looks good, and NewDisc's bonds should trade up. However, an analyst has to look at the details.

First, the IPO is probably being pursued so that the equity investors can get back some (or, in rare cases, all) of their investment return. So you must look at how many shares the company is selling, in which case the proceeds go right back to the company (primary shares), versus how many shares are being sold by the PE, in which case the proceeds from the sale of stock go to the PE and not to NewDisc (secondary shares).

The next item an analyst should look at is what the company plans to do with the proceeds it will receive. Sometimes this information is in the initial document that is filed. Other times it takes a while for it to appear in the company filings. Either way, the analyst looks to see how much deleveraging is occurring. Additionally, the analyst tries to discern how and where that deleveraging is taking place, such as bank debt or bonds and which tranches.

An important factor for the bondholder is if NewDisc is planning to retire some of the bonds. How do they intend to do it?

Earlier chapters discussed some methods of early bond retirement. Now we will review this concept in the context of this transaction. If the bonds are in their callable period, the company can simply call them. If they are not, the company could use the clawback (assuming this feature is in the bonds). Also, if the bonds have a feature that allows 10% of the notes to be called annually with a 103 call, the company could utilize this feature, which again is usually only in senior secured notes. Although this isn't typical in an IPO, the company could pursue a tender for bonds, too.

Another valuable piece of information from the IPO may be how the company is being valued for the IPO and what multiple of EBITDA this equates to. However, this information usually is unavailable until near the actual marketing of the IPO. This may not occur for several months after the initial announcement.

The analyst must include in any model what the credit will look like pro forma for the IPO. What will the leverage be? What will the net free cash flow be? Does the document state if the company intends to pay dividends? Paying a dividend means that less money will likely go to debt service or deleveraging.

You also want to see whether the IPO materially changes the flexibility under the covenants, particularly the restricted-payments test and the debt-incurrence tests. Usually it does.

An analyst should look at the IPO filing for new information or insights into how the company operates. Frequently these documents offer more information about the business than the typical annual and quarterly filings that the company provides. This can be helpful for analyzing other companies in the same industry as well.

When being a pragmatic cynic, the analyst must look at the overall stock markets and get a sense of the type of valuation the company is using. You need to figure out if the IPO is doable or if it will eventually be pulled or fail because of the valuation or other reasons. You must assume that the company's owners, management, and investment bankers and other advisors have thoroughly analyzed the likelihood of success, but analysis is not an exact science, and market conditions change. As mentioned, the time it takes for regulatory approval and document preparation can cause significant gaps of time from the announcement to the completion of an IPO. You should try to develop a probability that you are comfortable with about the success of the proposed IPO. If the IPO is pulled, the bonds and loans will likely trade down. This can happen even if the IPO is completed at what is viewed as a disappointingly low price.

Taking things to the next cynical level, if the IPO gets pulled, you should ask yourself if ownership will do something else. The ownership and management were trying to accomplish something from the IPO, and just because that avenue was closed does not mean they will not look for another. Here are some possibilities:

- Will they look to sell the company? If so, what entities would be the natural buyers? An investment-grade company that might improve the debt securities? Or could it be another private-equity firm that might look to releverage the company and hurt the trading levels of the debt securities?
- Could the ownership decide to do what is known as a leveraged recap (short for recapitalization)? This typically entails issuing new debt (usually bonds) and using this money to simply pay it out as a dividend to the owners. This releverages the company and usually hurts the trading levels of the existing bonds and loans (assuming the loans do not require a refinancing).
- Or, of course, the company's ownership may choose to do nothing and simply bide its time.

Scenario: An Issuer Is Facing a Maturity

Another event to consider is when a company is facing a debt maturity. Concerns do not usually occur at the actual time of maturity but typically six to 12 months before.

If the markets are healthy, investors are asking for new debt offerings, and the company has been doing well, this is usually not a concern.

However, if the company is doing much worse than it had been, or the markets are very bad, this can be a problem. A new debt financing could be unfeasible. The company will need to look for other funding or asset sales, find new equity investors, or try to negotiate a restructuring with banks and bondholders. It may be forced into bankruptcy.

If the company can access new financing, it may be required to pay a higher cost. An analyst needs to factor in market conditions and try to see what the company's options may be and what the credit might look like after such a higher-cost financing is completed. This is especially true if multiple tranches of debt are outstanding, meaning that one tranche is being refinanced while others remain outstanding. A higher cost of borrowing typically weakens a credit. When you are calculating the various options for a refinancing, you must also see if the various scenarios that are being modeled can get done within the framework of the remaining debt's covenants.

In the scenario shown in Table 18-2, the company is fairly leveraged and needs to refinance its bank debt. The new rate on the bank debt that the market demands is almost twice the prior rate. This does not change the leverage, but it clearly cuts the free cash flow dramatically and lowers the interest coverage ratio. The cost of capital can have a major impact on the company's credit quality. You must examine possible scenarios before upcoming maturities. These refinancings can have as large an impact on credit performance as an IPO or acquisition.

Table 18-2. A Simple Refinancing Scenario (in $000,000s Except for Ratios)

Debt Structure	Interest Rate	Operating Data	Pro Forma with a New Bank Rate of 6%
Senior secured bank loan	3%	1,000	1,000
Senior notes	8%	400	400
Senior subordinated notes	10%	250	250
Total debt		1,650	1,650
Total interest expense		87	117
Free Cash Flow			
EBITDA		180	180
Interest expense		87	117
Capital expenditures		30	30
Cash taxes		0	0
Uses of working capital		3	3
Net free cash flow		60	30
Ratios			
EBITDA/interest expense		2.1x	1.5x
Debt/EBITDA		9.2x	9.2x
NFCF/total debt		4%	2%

A Pragmatic Point on the Blended Price to Retire Debt

When a transaction occurs and it appears likely that the bonds in the structure will be taken out, the analyst must assume that the company will choose the cheapest method to do this. Sometimes this may mean waiting for an upcoming call date to approach. If the bonds are not callable, it might involve a tender. However, the company may look to utilize an annual 10% call if it is in the structure and, depending on the type of transaction, maybe the clawback feature as well. So the analyst should incorporate these factors and come up with a blended price. In the blended price (or weighted average), the analyst looks at the price at which bonds would be retired by each method and then multiplies this price by the percentage that can be retired from that method. These percentage weighted figures are then added up to equal the blended price. This is where the bonds are likely to trade. As shown in Table 18-3, the blended price is meaningfully lower than the tender price.

Table 18-3. A Blended Price

Method of Buyback	% of Issue Retired	Price of Buyback
Tender price	55%	118.0
Equity clawback	35%	110.0
Annual debt call permitted	10%	103.0
Blended price		113.7

Questions

1. Suppose Beta Co. is leveraged 5x EBITDA, net of cash, and is acquiring Sigma Corp. for 8x EBITDA. How can the transaction be financed to be deleveraging for Beta Co.?

   A. Using cash on hand

   B. Using new convertible bonds

   C. Using equity

   D. By decreasing capital expenditures on a pro forma basis

2. In an acquisition scenario, which covenant is the *least* necessary to examine?

   A. Change of control

   B. Restricted payments

   C. Limitations on asset sales

   D. Debt incurrence

3. What feature can typically be exercised in a bond when an IPO is completed?

   A. Covenants fall away

   B. Clawback

   C. Reporting requirements

   D. Change of control

4. Suppose Lambda Corp. 10% bonds are trading at 105, and it is announced that the company is being acquired by a stronger credit. Will the change of control likely affect how the bonds trade? Why or why not?

5. What factors may influence the refinanceability of a bond issue? Choose all that apply.

   A. Where the bonds are currently trading

   B. What the change of control is

   C. Where average yields in the market are

   D. The company's current leverage

19. Management and Ownership

What's in this chapter:

- Why ownership of the company can matter to the debt holders
- Why management's history can matter to debt holders
- How to find information on ownership and management

An analyst should always understand a company's ownership structure and also have a sense of management's goals and track record whenever possible.

Remember that ownership and management's first obligation is to the shareholders and that sometimes what is good for shareholders may not be good for debt holders, and vice versa.

As an analyst, you hope to have access to both management and ownership, through conference calls and meetings. You should try to gain insight into what is going on with the business's operations and what key drivers of the business are, and also understand goals, strategies, and sometimes targets that the company hopes to achieve.

Here you can perform some subjective analysis of whether you believe the management team can do their jobs and if they are setting achievable or unrealistic goals and may end up disappointing investors. Where possible, look at what management has done in the past, either with the current company or with other companies.

One of the many advantages of looking at multiple companies in the same industry is that you can see if there are outliers among management expectations or strategies. Outliers are not necessarily bad; you just need to examine them carefully. For example, suppose that a manufacturer of auto parts states that through cost cutting, without hurting its revenue, it will get EBITDA margins up to 15% from 9%. The company would seem to be well on its way to improving the credit. However, if you look at five or six comparable companies and you cannot find one with EBITDA margins better than 12%, you should rightfully be skeptical of the announcement the company just made.

You should get a sense of the makeup of a credit's ownership. If the company is public in the U.S. and most other jurisdictions, it has to file an annual proxy. With this document you can track the major shareholders. (Read the footnotes too, because sometimes holding companies and trusts are involved.) When the company is privately owned, the ownership is typically laid out in the bond prospectus, bank book, or annual financials.

Sometimes controlling stakes in public companies are held in different classes of common stock, where one class has super-voting power. This is not as common as it once was, but it still occurs, particularly in public companies that may have a controlling family. Typically one class of stock is super-voting. Therefore, a relatively small ownership stake in these shares may have much more control over the board of directors and the overall vote in key shareholder matters. Often the non-super-voting stake is publicly traded, whereas the super-voting shares may not even be public. Usually, but not always, the economic benefits to the two classes are equal. So if the company is sold, each share of voting and super-voting gets paid the same amount. The same is true with dividends.

In the United States, for companies with public stock, an annual proxy statement must be filed. It shows the major shareholders and management's compensation and stockholdings, as well as the names of the board of directors and their holdings and affiliations. The compensation section can be particularly interesting, because it may outline options and bonuses for the management team if certain goals are met. This helps you understand management's incentives and the targets they are striving for.

When a company is publicly owned and has no controlling shareholders, you must consider whether it is a takeover target. In these cases you must also keep an eye on the stock. If it is materially underperforming its peers, management may be under pressure to do something more radical or depart from its strategy. Even though an analyst wants to understand the motivation of ownership, this is not always easy to discern.

Examining management and ownership's history with other companies can sometimes help you figure out a company's strategy. Find out whether management and ownership in the past were cost cutters, acquirers, or asset sellers. These facts can impact how the debt securities trade and can help guide you as to what types of scenarios you might want to model and prepare you to anticipate certain types of events.

The most common private ownership structure in the leveraged market is when it is owned by a private-equity (PE) firm. PE firms usually have a series of investment funds from which they use capital to buy companies. Investors in these funds have a time frame in which they want to see a meaningful rate of return. For these reasons, when a PE firm owns a company, the PE firm typically has in mind a time frame and strategy for how it will get a return on its investment. Therefore, ownership by a PE firm almost ensures that a transaction will occur in the future. PE firms vary greatly in their investment focus, their style, and what expertise and value-added features they bring to the company's management.

Although much of what can be analyzed about ownership and management is subjective, it is important to try to get a handle on the history of management and the strategies being employed. You usually feel more comfortable with a company if the people running it have meaningful economics in its performance. So analysts tend to favor situations where management has a meaningful stake or, in the case of a PE firm, where the PE investors have not taken out all or the vast majority of its investment in equity sales or dividends.

You should also always look at the makeup of the board of directors. You typically want to see some outside independent directors who are not aligned with management or ownership. The idea is that outside independent directors help balance those who may be closer to the company. The independent directors also should represent minority shareholders' views equally with the larger shareholders and management.

20. I'm Looking at Debt, So Why Does Equity Matter?

What's in this chapter:

- How to use equities to establish asset valuations
- Comparing leverage to equity value
- How to use equity prices to monitor debt positions

You should never ignore equities when analyzing leveraged finance credits, whether or not the company you are looking at has public stock. First, using the public stock of the company you are analyzing and those of comparable peers is generally a quick and relatively easy way of divining an estimate of underlying asset value. With the volatility of the equity markets, you can also get a relatively constant check on the market's perception of a company's value. Second, given the trading liquidity and news flow on public equities, you should always actively monitor the stock prices of the companies you cover and their peers for any sudden or unusual activity.

Valuation

Chapter 10, "Credit Ratios," touched on using equities to arrive at an approximate asset value for a company. This section goes into more detail and gives more examples. To start, you want to choose the peers or comparable companies that you want to use for your analysis and get the financial documents for these.

A key task is to make sure that you have the stock information for the company you're analyzing, particularly the right number of shares outstanding. This may seem simple, but various items such as multiple stock classes, options, and convertible securities can complicate the issue. You must be consistent in how you choose to count "in the money"[1] options or converts, and be sure to count preferred shares if any are outstanding.

1 This means a stock option or convert that has the right to convert to common stock on a per-share price that is below the stock's current trading price. If the conversion price were above the current stock price, it would be referred to as "out of the money."

One of the key decisions you'll make when looking at the equities is what valuation metric to use. Although leveraged finance analysis usually assumes that the equity is being valued on a multiple of adjusted EBITDA, this may not always be the best metric to use. Sometimes stocks may be valued using free cash flow or even net earnings. Sometimes even nonfinancial metrics have been cited, such as a value per subscriber for an early stage mobile phone company or proven reserves for an oil and gas company.

However, our examples will go with the most widely used metric, which in leveraged finance is total enterprise value (TEV) to adjusted EBITDA.

For this example, a cable television company will be used. You will want to analyze what multiple of EBITDA the cable company is trading at and also where a number of its peers are valued. The calculations shown in Table 20-1 are fairly straightforward. You might wonder why the cash is subtracted from the valuation. You do this to get a sense of the value of the business, not the excess cash on the balance sheet, which makes comparisons cleaner. There may be other types of analysis where the cash might be included.

Table 20-1. Sample Enterprise Valuation (in $000,000s Unless Noted)

		My Cable Company	Their Cable Company	Another Cable Company
1	Total number of shares	110	50	90
2	Recent share price (in $)	$35.00	$10.00	$12.00
3	Public market equity value (line 1 × line 2)	3,850	500	1,080
4	Total debt	2,000	1,500	2,300
5	Cash on hand	100	100	200
6	Total enterprise value (line 3 + line 4 – line 5)	5,750	1,900	3,180
7	Adjusted EBITDA	800	300	500
8	TEV/adjusted EBITDA (line 6 / line 7)	7.2x	6.3x	6.4x
9	Net debt/adjusted EBITDA (line 4 / line 7)	2.4x	4.7x	4.2x
10	TEV cushion (line 8 / line 9)	303%	136%	151%

You can see some variations in valuations. You must look at factors that can impact the equity trading levels:

- If a significant number of shares are not outstanding or free to trade, it can be said that there is not enough "float."[2] If a stock does not have enough float, it may limit larger investors from looking to own shares in this company and may cause it to trade at a lower valuation.

2 *Float* is generally the number of shares that actually trade. For example, if a company has 50 million shares outstanding, and the chairman owns 15 million of them, the float would generally be considered to be 35 million.

- Is there one company that is more likely to be a takeover target than the others because of ownership or other items? This may cause it to trade at a higher enterprise value.
- Is one company a significantly better operator or facing more competition?
- Is one company perhaps paying dividends on its stock or doing stock buybacks? Both of these actions can help the valuation.
- The equity market does not ignore leverage. It often looks at leverage as a risk and may put a discount on the more leveraged companies in an industry sector. In Table 20-1, the equity valuation is higher for the least-leveraged of the comparables (My Cable Company).

The easiest thing for an analyst to do is to compare this valuation to the debt leverage and see what kind of public enterprise valuation cushion there is for the debt, which appears on line 10 in Table 20-1.

Getting a handle on these peer groups is valuable. It is also interesting to compare this across industries. Too often investors apply the same range of reasonable leverage to all industries. For example, as shown in Table 20-2, you might look at My Cable Company and also at a chemical manufacturer, Your Chemical Company, and see that both have 2.4x leverage. If the bonds of Your Chemical Company were trading at a higher yield, you might think they represent better value. However, because cable television companies tend to trade at higher multiples, My Cable Company actually has much better enterprise value protection even though the two companies have the same leverage.

Table 20-2. Sample Enterprise Valuation (in $000,000s Unless Noted)

		My Cable Company	Your Chemical Company
1	Total number of shares	110	50
2	Recent share price (in $)	$35.00	$10.00
3	Public market equity value (line 1 × line 2)	3,850	500
4	Total debt	2,000	1,500
5	Cash on hand	100	100
6	Total enterprise value (line 3 + line 4 – line 5)	5,750	1,900
7	Adjusted EBITDA	800	300
8	TEV/adjusted EBITDA (line 6 / line 7)	7.2x	6.3x
9	Net debt/adjusted EBITDA (line 4 / line 7)	2.4x	4.7x
10	TEV cushion (line 8 / line 9)	303%	136%

Remember that the idea of the leverage ratio is usually to get a sense of how well protected the debt is relative to asset value. Different industries and different types of assets have different valuation ranges for a multitude of reasons. The major point is that you should not look at leverage ratios in a vacuum.

When doing this properly, the analyst would not just take a snapshot of where the equities are trading on one day. On any given day, numerous outside factors can cause a stock to trade where it does. It is recommended that you look at longer-term trends of where the stock has traded and, ideally, through different types of economic cycles.

A healthy stock multiple can often help give a company more financing options as well. You must consider this when doing scenario analysis for a company. Stock can be used in lieu of cash to make acquisitions and can have certain tax advantages in mergers and acquisitions. Additionally, a healthy stock valuation may lead a company to want to issue stock and utilize proceeds to deleverage.

This section has focused on using equity valuations to analyze companies' asset value. Remember that the stock price where a company is valued is not the be-all-and-end-all of valuations. Sometimes the market is wrong and misvalues a company or industry. Additionally, the stock price is typically based on a few shares of stock trading in a company and does not give someone control over that company. Usually someone pays a *control premium* to actually control a company. The stock market also does not often factor in synergies and cost savings that a strategic buyer could achieve. You should also try to keep track of mergers and acquisitions in the industries you follow, as well as what multiples are being paid in those transactions. Remember, all it takes is one person with lots of money who really wants to own a company to change that company's valuation and make the prior stock multiples look wrong.

Some databases can spit out equity multiples. However, they tend to use cookie-cutter-like rules and usually don't make the typical adjustments you may want to make to EBITDA or OIBDA. Additionally, these databases do not always adjust for share count accurately when factors such as convertible securities and options are significant and close to or in the money. Therefore, these systems frequently do not generate correct figures because of miscalculated share counts.

Monitoring Equities

Whatever market monitoring system you use at work, it is strongly recommended that you keep track of the stocks of all the companies you follow and their peers. It is generally best to keep the peers grouped on your computer screen. Stocks tend to be more liquid than bonds, and stocks typically trade on listed markets where prices are updated rapidly. You should monitor these stocks to see if there are any unusual trading trends in prices or volumes. This is especially true if a sector is performing much differently from the overall market or if one or two stocks are performing much differently from all the other peers when no major news events have been announced.

It is especially important to follow the industry leaders in a sector. Although they are usually investment grade and much larger than the leveraged companies, an analyst wants to know what trends the industry leaders are facing and what they are doing. This is especially true if the market leader is in a directly competitive position with the leveraged company you are analyzing.

Monitoring stocks can be especially helpful during earnings season. If certain peers report early, often you can get a sense of how the industry may have performed for the reporting period and how the equity markets are reacting to these types of results.

It can also be helpful to monitor the volume of trading that is happening in a sector or for an individual company's stock. Unusual spikes in volume could indicate that stories are beginning to circulate about a company or industry or that some investors are either buying or selling large, meaningful positions. Because some equity trading often has a lemming-like nature, these price volume trends can often lead to major declines or increases in the public equity values on little or no news.

It is incredibly valuable to monitor the stocks of the companies you are analyzing and their peers. Ideally, you should track what these peers are doing, what their management is saying, how they are performing, and how the market is reacting to all these factors.

Questions

1. Using the following table, calculate the total enterprise value.

Number of shares in 000,000s	200
Share price in $	5
Total debt in $000,000s	500
Preferred stock in $000,000s	20
Net tangible assets in $000,000s	200
Cash in $000,000s	0

2. Which of the following companies has better asset protection based on the equity market value?

	Wolf Company	Bear Corp.
TEV/EBITDA	8x	10.5x
Net debt/EBITDA	6x	7.5x

3. If one company has a higher dividend rate than another, it is likely to cause its equity to trade at a multiple that is _____.

A. higher

B. lower

C. the same

4. Describe a control premium.

5. In a stock, what besides price is a good thing to monitor during the daily trading?

A. Dividend rate

B. Share count

C. Trading volume

D. Voting control

21. Value, Relative Value, and Comparable Analysis

What's in this chapter:

- What tools to use to start comparing securities
- Using financial metrics, yields, and spreads to determine relative value
- Using operational metrics to determine relative value

What makes an investor choose to buy one bond versus another? It is not always just a formula; it involves numerous factors. Additionally, with many types of investors in the market, a bond that may be attractive to one style of investor may be of no interest to another.

Although most investors in stocks or leveraged debt want to maximize their returns, there are different philosophies on how to achieve this. Just as in equities there may be macro or momentum investors, or growth or value investing, the leveraged market has different investor types. Some of these differences were laid out earlier. Examples can include managers who emphasize bank debt or BB-rated bonds, or ones who will buy only bonds with a certain level of asset protection. Others are more focused on total return and are less concerned with volatility. Still others need to match assets and liabilities or may just want to perform better than an index.

For all these different styles, it is usually helpful for analysts to lay out relative-value comparisons using various financial and operational metrics and then use that as a starting point for an investment decision. From there, other factors can be overlaid, such as subjective views on competitive position or the likelihood of upcoming positive or negative events, as well as structural and covenant analysis.

Relative-value analysis can often compare potential investments, either in the same industry or across a broader spectrum. Table 21-1 looks at one industry—the mobile telephone industry. It is assumed that this sector has five issuers.

Table 21-1. Simplified Relative Value Sheet

		STW (in bp)	Bond Level Debt/ EBITDA	Total Debt/ EBITDA	FCF/ Debt	TEV*/ EBITDA	STW/ (Debt/ EBITDA)
Mobile Co.	8% senior notes 2015	400	3.0x	5.0x	3.0%	6.0x	133
	10% senior subordinated notes 2018	600	5.0x	5.0x	3.0%	6.0x	120
Cell Co.	7.5% senior notes 2017	350	4.0x	5.0x	2.5%	6.2x	88
	9.5% senior subordinated notes 2020	600	5.0x	5.5x	2.5%	6.3x	120
Phone Inc.	9% senior notes 2019	300	3.5x	3.5x	5.0%	7.0x	86
Wireless Co.	8% senior notes 2019	500	4.5x	4.5x	3.5%	5.8x	111
DataFone Co.	9% senior notes 2019	475	3.5x	7.0x	0.1%	7.1x	136
	9.5% senior subordinated notes 2021	800	7.0x	7.0x	0.1%	7.1x	114

*Total Enterprise Value

It is important to remember that you aren't comparing just companies, but actual securities. So if a company has a senior note outstanding and a senior subordinated note outstanding, both need to be shown. Table 21-1 shows two leverage ratios. One is the leverage through the specific debt issue (Bond Level Debt/EBITDA), and the other is the "all-in" leverage for the company (Total Debt/EBITDA). This is because when considering the asset protection, you can look at the level of leverage where the individual security is, but you cannot ignore the amount of leverage that the company has to service on the whole company to avoid a restructuring or distressed credit situation. You would do the same when comparing the bank debt to the bonds.

This table is fairly basic. First are the company name and the description of the debt. These are followed by the spread-to-worst, key financial metrics, and then a relative value measure. This takes the spread-to-worst and divides it by the leverage at the bond level to show how many basis points of spread you get paid for each turn of leverage.

The last column is an interesting tool, but it does not supply the full answer. For example, the DataFone 9% Senior Notes look the cheapest by this measure, offering the widest spread per point of leverage, but the DataFone 9.5% Senior Subordinated Notes offer the highest total spread. This is because its all-in leverage is higher than any of the other issues at 7x, and its free cash flow as a percentage of its debt at 0.1% is meaningfully lower than any of the other comparables. Also, a minimal asset value cushion is implied by the equity market value at DataFone, primarily due to the high leverage. These factors add considerable risk to the DataFone Senior Notes.

It is also interesting to look at the intracapital relationships. For DataFone and Mobile Co., the senior subordinated notes offer less spread per point of leverage than the senior notes within each company's capital structure. However, for Cell Co. the relationship is inverted, and the senior notes offer less spread per point of leverage. What could the reason be? Do the Cell Co. senior notes have particularly strong covenants or an unusual call feature that could make them more valuable? Or are the Cell Co. senior notes simply overvalued and trading too rich on a relative value basis? Finally, note that in Cell Co., the Total Debt/EBITDA ratio is higher than the Bond Level Debt/EBITDA of the Senior Subordinated Notes, indicating that there is additional debt outstanding junior to this issue, perhaps a holding company convertible note or other instrument.

A more detailed relative value page might include more data:

- For bond or bank loan specific data, this might be the issue size, a credit agency rating, and maybe the next call date and price.
- As far as pricing information, you could include the price, the yield-to-worst, and perhaps the duration. Because some of these bonds are of differing maturities, the spread is probably the more meaningful measure to compare than the yield.
- Bank debt issues and trading levels of credit default swaps (CDSs) could be included as well.
- You also could include many more financial ratios. Most notably absent is the EBITDA/interest expense or EBITDA-Capital Expenditures/EBITDA.

You also might want to look at these measures relative to the spreads offered by an index to put the relative value in context with the market or a larger portfolio. This can help you put this sector in the context of a larger decision process for relative value. When a good example is available of a comparable investment-grade issue, that should also be included. Depending on what the investment is for, you may even want to include high-dividend-paying stocks or a projected return on a stock index. All these items help to put the relative value of the sector you are looking at in the context of the universe of investment options.

> When doing relative value, it is always useful to also compare a loan or bond against a larger market context. As mentioned, one way is to compare yields and spreads to an index of the high-yield bond or loan market. But don't limit yourself to a standard index. You might want to use the yield equivalent of one of the tradeable CDS indices.

To take the relative value analysis to the next level, you probably want to look at more-detailed operating metrics. The operational comparison shown in Table 21-2 includes some information that could be

meaningful for any industry. This includes growth rates in revenue and EBITDA and EBITDA margins, whereas growth in subscribers and the average revenue per unit (ARPU) are more industry-specific.

Table 21-2. Simple Operational Comparison

	Latest Quarter Change in Revenue	Latest Quarter Change in EBITDA	Latest Quarter Change in Subscribers	EBITDA Margin	Monthly ARPU in $
Mobile Co.	12.0%	9.0%	7.0%	22.0%	56.00
Cell Co.	10.0%	10.5%	5.0%	20.5%	45.00
Phone Inc.	10.0%	9.5%	5.0%	22.0%	42.00
Wireless Co.	9.0%	8.5%	6.0%	23.0%	50.00
DataFone Co.	7.5%	8.0%	4.3%	20.0%	39.00

Obviously, you can add more tiers of operational data to this type of spreadsheet. For example, you can track longer historical trends. It is often good to include a dominant industry-leading comparable on this sheet, even if it is not in the universe of investments that you are examining because it offers an industry benchmark to compare to.

Tables 21-1 and 21-2 are based on fairly objective figures. However, as you probably have surmised from prior chapters, you must consider numerous subjective factors in an analysis. These can be helpful to lay out in tabular form as well.

You can compare possible upcoming events, both positive and negative, and assign some probability to them. For example, if a company is sold, would the likely acquirers strengthen or weaken the credit? Would the sale require a take-out of the bonds? Would the company make a leveraging acquisition, or would it deleverage through a stock offering? You should probably limit the likely time horizon on these events to six to 18 months, because over a long-enough horizon, practically anything is possible. You may also want to factor in your best estimate of growth rates, or a projected leverage improvement or decline over the next year (this is subjective by nature).

It also can be helpful to compare summary covenants and even structural issues in a table. In particular, you can lay out basic ratios that drive the covenants—perhaps an estimate of a restricted payment basket.

One helpful exercise for covenant analysis can be to compare bank maintenance tests to current ratios. You want to see how much "headroom" the current company ratios have versus the bank maintenance covenants. Because these covenants tend to step down over time, you may also want to look one year out to see how the headroom may look then, too. This can be a helpful comparison among credits. Bank investors may actually prefer to be in situations where there might be a fee event, as long as it does not look as if the overall credit quality will be jeopardized.

Establishing relative value between credits and between individual investments involves comparing objective and subjective factors. It is extremely useful to lay out in worksheets some of the key data you will use to compare various possible investments. After you use these tools to find what appears to be the most attractive choice for your investment thesis, you probably will want to go into even more detail on the company.

Questions

1. Using the data in the following table, what column might you add to get a better sense of relative value?

Bond Description	Bond Leverage	YTW	STW
10% 3-year senior note	6x	7%	500
8% 7-year senior note	4x	8.5%	450
8% 3-year senior note	7x	8%	575

2. In the following table, if the bonds are all from the same company, why is the leverage for the bonds different?

Bond Description	Bond Leverage	YTW	STW
8% senior notes	4x	6.5%	400
7.75% senior notes	4x	6.75%	405
9% subordinated notes	7x	8%	600

3. Which of the following should you consider in relative value analysis? Choose all that apply.

A. Leverage ratio

B. Strength of covenants

C. EBITDA trends

D. Competitive position

4. Define the term headroom as used in this chapter.

22. New Issuance

What's in this chapter:

- What documents are typically available in the new-issue process
- Why companies come to market with new issues
- How to examine pro forma adjustments in new-issue documents

Depending on the market cycle and your job, a large part of a high-yield credit analyst's job can be spent on new issuance. Typically when a new issue for a bond or loan is coming to market, the analyst can get more detailed information about the industry and the company, as well as more access to management.

Along with company management, the sell-side investment bankers, lawyers, accountants, capital markets team, and analysts may spend several weeks or even months working with the company and doing due diligence to assess the validity of the company's business and prospects. This team also takes this time to make sure that all the documents being prepared for potential investors have accurate information and meet the detailed rules and limitations required by law. This team also usually prepares an informational presentation for management to give to investors, typically called a road show. More-seasoned issuers may simply do a conference call for investors.

The rules for bond offering documents tend to be more limiting than those for bank offering documents, particularly for those that choose to "go private" on the bank side. Most notably, the private books can include projections.

> When the new-issue market is highly active, the number of new issues in loans and bonds can be daunting. When the market is strong and there is great new-issue demand, a new issue may get priced at a yield comparable to or even occasionally a touch lower than bonds of its peer group. When the market is softer, there is typically a new-issue discount in the pricing of the financing relative to existing bonds, because the price at which a company can sell perhaps $500 million of a bond may logically be lower than the price where the company could sell $1 million of a bond.

The bank offering book or the bond prospectus has some items that investors should always read through.

First is the use of the proceeds and the details of the reason for the transaction. Even if the investors like the credit, they may not want to fund a transaction that they disapprove of.

As with most 10-Ks, there is also a risks section that is always worth reading. You can decide which potential risks to focus on, which are of minimal concern, and which are priced into the transaction.

There is usually a structure and terms section including covenants that you should always read. Also read the section on transactions with affiliates, because this may give you insight into the interaction among the company, management, and ownership.

New financings are done for numerous reasons. However, often they are related to a merger or acquisition.

A common item to look at in these transactions is what price was paid for the asset. Then you can research to see how it compares to other transactions and/or public-equity multiples. Additionally, if the acquisition was of a public company, the company being bought typically has to file a proxy statement for shareholders to assess if the price was fair and how they want to vote on the transaction. This document can offer insights as well. Most notably, it often gives price levels of the other bids for the company. This can give an analyst

comfort (or discomfort) that the winning bid was reasonable and that other bidders were willing to pay for the asset.

Frequently these transactions include pro forma results and may also include a section on adjustments to EBITDA. It is important to look at the adjustments and the footnotes that accompany them. Although the prospectus for a debt offering may be allowed to show a number of adjustments to reach its adjusted EBITDA, you might be uncomfortable with including all these factors in your own analysis. You might not want to give credit for certain items that are added back in the new-issue adjusted EBITDA: management fees paid to private-equity firms, full planned cost savings, cash costs related to restructuring. Which items you might want to add back or not may vary, depending on what you're focused on. If you want to focus solely on operational trends, acceptable add-backs may be different than if you are primarily focused on cash and liquidity.

Table 22-1 shows how adjustments and add-backs in a new-issue offering document might appear. In this case there is a significant swing from negative to positive, from reported EBITDA to a positive adjusted EBITDA.

Table 22-1. Adjusted EBITDA in $000,000s

EBITDA	**$(90.6)**
Management compensation one-time payments	$(42.3)
Stock compensation expenses	2.1
Deferred revenue adjustments	159.6
Sponsor management fees	20.0
Implemented cost savings	50.0
Restructuring/reorganization professional fees	9.5
Internal restructuring cost	26.0
Total pro forma adjusted EBITDA	**$134.6**

Given how the credits in the market are so often in a state of perpetual change, new issuance is a large part of life in the leveraged finance market. Analyzing new issues can take considerable time. The process often can give you more insight into a company's operation than general credit work can. Even though the new-issue information packages contain considerable information, you should not feel pressure to accept it all. You must make adjustments that fit with your own analysis.

23. Distressed Credits, Bankruptcy, and Distressed Exchanges

What's in this chapter:

- Examining liquidity in distressed credits
- Why bankruptcy analysis matters, even if a company is not filing bankruptcy
- How to look at rankings, claims, and subordination of claims
- The impact of valuation on bankruptcy and restructuring
- How companies restructure without bankruptcy

Companies sometimes get into financial trouble, and this can lead to default. This is more common for below-investment-grade companies than for investment-grade companies. However, the risk of default is part of the reason why yields are higher on leveraged debt instruments. Many studies show that over the long term, across a diverse portfolio, investors are actually more than compensated for the risk of default by investing in the leveraged finance market.

There are numerous reasons why a company might become distressed, but generally they fall into two broad categories. One is that the company has had operational declines that resulted in a drop in financial results. The second is because too much debt was put on the company, it has not grown its cash flow enough to deleverage, and the investors' opinion about the level of acceptable debt has changed.

Financial results can decline for numerous reasons:

- A dramatic shift in costs and expenses, such as a spike in gas prices
- Changes in the competitive landscape, such as price-cutting from a stronger competitor
- Secular changes in an industry, such as the switch from print to digital
- Changes in government policies, such as healthcare payment changes forced by the government
- Simply bad strategic choices

In situations where a company has done okay financially but not well enough to deleverage and refinance its debt, it is often said to be a "good company with a bad balance sheet." Sometimes these companies were overleveraged when the financing market and valuations were too robust. Sometimes growth was anticipated and expansion was funded with debt; perhaps deferred-pay coupon structures were put in place, and debt grew but cash flow did not.

When a company is distressed, you should more carefully analyze liquidity and cash flows. Analyze events that might cause the company to run out of money, such as interest payments and maturities, down to the actual dates of interest and principal payments.[1] You also should run scenarios on what other sources of liquidity might be available:

1 Remember, on income statements the interest payments are averaged straight line over the year, but in reality bond interest payments typically are made in a lumpy fashion semiannually. Bank interest payments are usually monthly.

- Are asset sales available to be made, such as sale lease-backs of real estate?
- Frequently covenants allow certain assets to be securitized, such as receivables. Is this a possibility?
- Can availability be drawn under a revolver? If covenants have not been violated, the revolver should be

available.

- Although it's usually difficult to do when liquidity is an issue, you should consider whether an outside investor could be attracted.

After analyzing the potential payment violation dates and running scenarios of other potential funding sources, you should have a sense of if and when the credit may "hit the wall." After you have decided that a credit will probably need to restructure, you should analyze the recovery potential for each tranche of the capitalization.

Realize that even if the company can avoid a bankruptcy and undertake a restructuring with the debt holders out of the court system, the potential recoveries under bankruptcy form the basis of how the parties would negotiate such a transaction.

Bankruptcies are almost always driven by money issues rather than technical issues, such as violation of an affirmative covenant. The default typically occurs when a company cannot or will not make an interest or principal payment that is due on its debt obligations. The company usually has a 30-day grace period in which to cure the default on an interest payment. After that time the parties that have not been paid can begin moving toward forcing the company to file bankruptcy.

Bankruptcy law varies from country to country. In some countries, a company that enters bankruptcy effectively gets liquidated, and proceeds are used to pay down debt obligations in strict order of priority. The U.S. and, to a large extent, Canada employ the concept of restructuring. Under U.S. bankruptcy code, a Chapter 11 bankruptcy filing is a restructuring for a corporation, and a Chapter 7 is liquidation. In a Chapter 11 restructuring, the judge has great power in directing how this reorganization will take place. Generally the judge tries to avoid liquidating the company. This chapter focuses on U.S. bankruptcy laws.

Claims

Chapter 15, "Structural Issues: Ranking of Debt," ranked securities in order of priority:

1. Senior secured
2. Senior
3. Senior subordinated
4. Subordinated
5. Preferred equity
6. Common equity

When a company files for bankruptcy, the debt obligations are considered claims. The basic idea is that any value that is created from a restructuring is first used to repay the highest-priority claim. If those claims are met, the residual value can then be applied to the next most senior level of claims.

A debt obligation's claim typically includes the principal amount owed and any accrued but unpaid interest up to the date of the bankruptcy filing.

In most cases for most claims, interest does not get paid or accrue during the bankruptcy process. However, there is the concept of *post-petition* interest, or getting paid or accruing interest payments during the bankruptcy. This usually is true only in the case of secured debt. If the court believes the value of the assets that secure the debt is large enough to cover the value of the principal of the bonds and the interest expense, and assuming there is enough liquidity, the judge may require that the interest payments on the secured debt continue to be paid or accrue through the bankruptcy. It is important to note that the judge focuses on the value of the collateral, not the company's overall value. Before post-petition interest is granted, various parties, such as the company, secured debt holders, and perhaps subordinated debt holders and others, will likely get

into a debate and make their cases to the court for and against granting post-petition interest.

Another concept to remember when considering the amount of the claim of a bond or loan in a bankruptcy is that the claim is based on accreted value, not the face value of debt. Chapter 13, "Structural Issues: Coupons," discussed the idea of deferred-pay structures and accreted value. Most common are the zero-fixed or zero coupon bonds that were outlined. The claim that these bonds have in a bankruptcy is only the accreted value up until the date that the bankruptcy is filed. Suppose $100 million of bonds were originally issued at 61% of face value. On the day the issuer filed bankruptcy, the accreted value of the bonds was 83.3% of the face value, or $83.3 million. That would be the bondholders' claim in bankruptcy. Suppose this bond was a zero-fixed that had a five-year zero period, and the bankruptcy took place after these bonds had fully accreted to face value in year five. Its claim would be the full face amount, or, in this case, 100%, or a claim of $100 million.

It is important to note that not only deferred coupon bonds are issued at a discount. Some bonds, for various reasons during the negotiation of the new issue pricing, are priced with a cash coupon but are issued at a discount. For example, maybe a $500 million ten-year bond was issued with an 11% coupon, but it was issued with a discount of 3 points at 97 to yield 12%. That 3-point discount will accrete in value over the life of the bond, and its claim in a bankruptcy will, again, be only what the accreted value is, not the full $500 million. This discount is typically called an original issue discount (OID).

Classes of Claims

Claims in bankruptcy are divided into classes based on priority. Each claim within a class of security should be treated equally. For example, these classes generally may be divided into secured, senior unsecured, subordinated, and equity classes. However, typically the division of claims into classes can become complex. One of the important concepts is that when a class is considered impaired, it gets to vote on any proposed bankruptcy plan.

If the court rules that a class is getting all that it is legally entitled to on its claims, it is considered unimpaired and does not vote on the plan, because it is deemed that this class will approve the plan. If a class is getting nothing, it is deemed to have rejected the plan, and it does not get to vote either. If a class is impaired, it must approve the bankruptcy with both two-thirds of the class's dollar amount of claims and 50% of holders. Therefore, in negotiations, if an investor controls 33.4% of the amount outstanding in an impaired class, typically he or she can block a plan from getting approved. This size position is typically called a *blocking position*. If an impaired class cannot get the requisite votes for a plan, it is within the court's power to force the plan to be accepted, or to "cram down" the impaired class. Bankruptcy courts generally do not like to force through plans on impaired classes. For this reason, very small classes that may have no true value on a strict priority basis are sometimes given a token stake in a reorganization.

Which class of claims one is placed in can matter, too. Assume that there are two tranches of secured debt, in this case a first and second lien. Generally a second lien can be structured in two ways. It can simply be party to the security agreement of the first lien, or it can have its own security agreement. If it is part of the same agreement and a bankruptcy filing occurs, the holders typically are made part of the same class of claims. This means that the holders of the two issues are in the same class. This causes a few things to happen. One is that the second liens may not have as much say in the restructuring, because their class will likely be dominated by holders of the first lien. A second consequence is that typically the collateral would need enough value to cover both issues for the judge to consider post-petition payments. If the second lien debt has a separate security agreement, holders would be in their own class. The first liens would only need enough value in the collateral to cover their loan to receive post-petition interest.

A considerable amount of time in bankruptcy cases is often taken up by arguments over where various claims

rank. Remember when considering the fights over ranking and classes that this does not just involve debt claims but may also include claims from the trade, leases, and pensions, among others.

Subordination

Something else that comes up frequently for leveraged finance bondholders when there is a debate over priority is the idea of subordination. Usually, if not otherwise stated, debt is assumed to be senior. This book has discussed a type of note called the senior subordinated note. What makes this note subordinated is part of the indenture called the subordination agreement.

This subordination clause may state that "the notes are subordinated in right of payment to Senior Debt." As covered in Chapter 16, "Key Leveraged Finance Covenants," because Senior is capitalized, it is a defined term. This may be tightly or loosely defined. If no further clarification is given and the language simply refers to senior debt, it is loosely defined, and many claimants may argue that the bonds should be subordinated to their own claim. However, suppose the definition of Senior Debt in an indenture is "the existing bank loans at the time of this indenture and the 8% Senior Notes." This could be interpreted to mean that the subordination agreement is recognizing that the subordinated note is only subordinating its claim to these two items, and therefore any senior trade claims should rank equally with these notes.

How would this work in a bankruptcy? Table 23-1 shows a simple capital structure laid out with only three claims. It is assumed that the equity will get zero, so it is not included in the table. The valuation of the assets of the demolition services company BlowUp Co. is $250 million, and this will be distributed among the claims. It is also assumed that the subordination clause in the subordinated notes only expressly subordinates the notes to the senior bonds.

Table 23-1. Simple Subordination Example for BlowUp Co. in $000,00s

				Adjusted for Subordination	
		Pro Rata Recovery in $	Pro Rata Recovery in % of Claim	Recovery in $	Recovery in % of Claim
Enterprise value	250.0				
Claims:					
Senior notes	100.0	62.5	62.5%	100.0	100.0%
Trade claims	50.0	31.3	62.5%	31.3	62.5%
Subordinated notes	250.0	156.3	62.5%	118.8	47.5%
Total	400.0	250.0		250.0	

Effectively what happens is that the pro rata share for all the claims is established. Then proceeds are taken from the subordinated notes to make the senior notes whole—in this case, $37.5 million. The trade claims are not party to the subordination agreement, and their recovery remains unchanged.

One other item is worth noting on this worksheet. The recovery is shown in the dollar amount and on a percentage basis. The dollar amount is the amount you might model with regard to the balance sheet. The percentage amount equates to the value per bond a holder would receive or the price by which a trader would quote the bonds or loan.

Claims Arising from Bankruptcy

Another thing to remember is that claims can arise during the bankruptcy process and that the bankruptcy process can be very expensive. Claims related to bankruptcy expenses usually get a super priority from the court. You should factor these into your analysis. Many of these are typical lawyer, accountant, and advisory fees. However, you also should consider whether additional debt needs to be issued to help the company remain a going concern. This super-priority debt is called a debtor-in-possession (DIP) loan. This DIP in some bankruptcies has been huge, and in others very manageable. Either way, an analyst will want to try to estimate how much of a DIP might be required. You can look at operational cash burn, working capital needs, and the estimated length of the bankruptcy to estimate the size of the DIP that might need to be repaid upon exiting bankruptcy. Similarly, you should try to analyze whether a cash buildup during a bankruptcy could add value.

Valuing the Enterprise

Establishing enterprise value is obviously very important in a bankruptcy and in your analysis prior to a bankruptcy. Even if the company has a bid to sell itself, the various creditors, including the equity, will want to compare the price of the bid for the company to what they believe the company could be worth on a restructured basis. You should not just assume that a company can get sold. If you *are* assuming that the company will be sold, part of your analysis should include a list of potential buyers. The more realistic potential buyers you can come up with, the more likely it is that the company could actually be sold.

Ultimately, deciding on the company's value is largely a subjective exercise, but generally a number of valuation methodologies are used. One is usually similar to the exercise we did to establish total enterprise value. Valuations based on a cash flow multiple for a number of public comparables are run, and the average is applied to the company's cash flow. Similarly, an analysis may be run on acquisitions of comparable assets. A third common type of analysis is to run a longer-term model of the company and calculate a discounted cash flow analysis. Various parties involved in the bankruptcy are likely to debate the valuations for some time in front of the court.

These valuation methodologies capture only the value of cash-flow-producing assets. You need to consider whether to add other assets to the company's overall valuation. There are a few obvious ones: cash on the balance sheet and separable assets that are not producing cash flow. In the latter category, suppose the bankrupt entity is a lodging company that has several hotels that are losing money, but another manager might find value in owning these assets, even though they currently produce negative cash flow. Digging deeper, there may be undeveloped real estate or real estate on which a sale lease-back could be done. Also, perhaps minority stakes in other companies or other assets that are not part of the company's cash flow generation could be sold.

Another factor to consider in the company's valuation is how well the assets are being run. Keep in mind that if all or some of the assets are operating at margins that are below industry averages, you might want to factor this into the valuation analysis. For example, suppose a manufacturing company is making its products at a 12% margin, and all its peers are operating at an 18% margin. A buyer that believes it can achieve 18% margins would probably pay a higher multiple than the industry average, because its "projected" adjusted EBITDA is higher than the historical average.

Sale or Restructuring

Section 363 of the bankruptcy code specifically deals with the sale of a company in bankruptcy. Usually the court gets at least one bid for the company—a bit of a "stalking horse" bid. Sometimes this comes from a group of creditors. The company is then put up for auction, with the initial stalking horse bid as a floor. Usually if the secured creditors are the stalking horse bid, they can offer their secured debt claims as part of the payment.

However, more frequently in a bankruptcy, the company is not sold but is reorganized. In the reorganization, the existing claims are given new securities in the reorganized company. The potential outcomes of these types of reorganizations are endless. They usually evolve through various rounds of negotiations, sometimes while the arguments over valuation and priority of claims are ongoing.

A typical case may be where a company was originally leveraged at 7x adjusted EBITDA, but over time, adjusted EBITDA declined and now the company is in bankruptcy with total debt of $1.170 billion, which equates to 9.0x adjusted EBITDA. However, after all types of experts have submitted their reports and arguments have been made, the courts determine that a valuation should be no more than 5x adjusted EBITDA, or $650 million. After much wrangling between the claimants, the court determines that no more than 3x leverage should be on the company. So it can pay a reasonable interest rate on its debt and meet its capital expenditures and generate free cash flow while leaving, say, a 15% cushion for operational declines.

Assume the structure shown in Table 23-2.

Table 23-2. Capital Structure in $000,000s

DIP loan	40
Pre-petition claims:	
Senior bank debt	350
Senior subordinated debt	500
Subordinated debt	320
Total debt	1,210

In this hypothetical case, upon exiting bankruptcy, the company gets a new secured bank line for $40 million to pay off the DIP financing. The bank debt gets a new senior bond in the same amount outstanding as its claim. Together, this new debt totals $390 million to equal 3x, which would cover the full claim value. The bank creditors could either accept the plan or be "crammed up" because they are recovering full value. The bank creditors, the holders of the new senior bond, will want to make sure that the new debt instrument they are receiving will be structured to trade at least at par so that the market value of its new security equals its prior claim. This may entail a high coupon or significant covenants. The more junior securities will receive equity. They realize that the higher the coupon and the more restrictive the new senior note will be, the more downward pressure it could put on the value of the stock it will receive. So this class will argue in the courts for lower coupons and more lenient covenants versus what the former bank debt holders want.

Sometimes post-bankruptcy funding is arranged by some of the existing debt holders through a commitment to a rights offering. Those who subscribe may receive other benefits as well.

Under this scenario, the company is worth $650 million, and $390 million of that value has been allocated to the debt for the DIP and the bank claims. The remaining $260 million would go to the senior subordinated debt. However, its claim is $500 million, so this class and the subordinated debt would be considered impaired classes. The most senior class of debt that is impaired and not paid in full is sometimes called the *fulcrum security*. This impaired class needs to vote on approving the plan and also frequently controls the equity post-bankruptcy.

Theoretically, no value should be allocated to classes more junior than the senior subordinated debt. However, as mentioned earlier, in reality some token value is often given to expedite the process. In this case 3% of the equity value was given to the subordinated debt, and warrants that had a strike price equal to a valuation of 7x current EBITDA were given to the equity. The allocations and recoveries are outlined in Table 23-3. Except

for the DIP facility, the securities are getting their value not in cash, but in a package of securities—the true value of which depends on how they trade in the market.

Table 23-3. Capital Structure and Recoveries (in $000,000s Unless Noted)

	Claim	Received in Bankruptcy	Valuation	% Recovery
DIP loan	40	Cash	40	100.0%
Pre-petition claims:				
Senior bank debt	350	New senior debt	350	100.0%
Senior subordinated debt	500	97% of equity*	252	50.4%
Subordinated debt	320	3% of equity*	8	2.5%
Total debt	1,210		650	

*Based on equity value of $260 million

As mentioned, bankruptcy laws vary by country. In Europe in particular, you should note where the company issuing the bonds is domiciled. This location may be different from where the company is operating. Luxembourg is a popular country for bond-issuing entities. There have also been cases of shifting venues for where the bankruptcy case is actually filed. Luxembourg law allows for various ways to liquidate a company in bankruptcy. It also has the concept of restructuring under what is known as "controlled management" using the courts and commissioners, although this method does not appear to be that successful. Frequently, corporations and creditors spend an extensive amount of time trying to negotiate an out-of-court restructuring plan in European cases.

Restructuring Without Bankruptcy

A company typically exhausts many other avenues of trying to finance or fix its situation before filing for bankruptcy. These alternatives often include looking to undertake asset sales, bring in new investors (although they may look for extreme terms), and, of course, negotiate with existing lenders to try to arrange some type of debt exchange out of bankruptcy.

One of the many reasons companies want to avoid bankruptcy is the cost associated with the process. These include not just the legal and transactional costs just outlined, but costs that can hurt the company's long-term value. Such costs could include the loss of customers and the ability of customers and/or suppliers to sometimes break contracts. There can also be ramifications for the company's ability to win new business, especially if it's dealing with government entities. These factors need to be added to any analysis. This does not address the fact that as soon as the legal process has begun, the management and equity owners tend to lose control of the process, and sometimes their jobs. For these reasons, as well as many others, management, equity holders, and most debt holders usually prefer to avoid bankruptcy.

Frequently, management and the debt and equity owners try to work out a reorganization that may look like a bankruptcy, but in reality it is an out-of-court restructuring in the form of an exchange offer. Frequently this helps preserve more equity for the owners. The more senior creditors tend to get a relatively comparable package to what they might get in a bankruptcy, but without the time, risks, and impact associated with a bankruptcy. There are endless possibilities for how these exchanges could take place. It is not always easy to get the various parties to agree to terms without going through the courts.

Another major problem with these out-of-court restructurings is the idea of "holdouts." This occurs when a small group of holders of a security choose not to go ahead with an exchange. In many cases by holding out they can improve their position and get a better return on their holdings. But if holdouts become too large, they tend to jeopardize the entire exchange.

One method to avoid the holdout situation as well as a long bankruptcy process, and sometimes to clean up other aspects for the company, is to prepare a pre-packaged bankruptcy. In this case the company reaches a prenegotiated agreement with two-thirds of each class of creditors to go ahead with the proposed plan. It then files the bankruptcy plan. By doing this through a bankruptcy process, with the majority votes already in place, the courts can force holdouts to go along with the plan. This process also looks to be in and out of the courts in approximately 90 days. This time frame is much accelerated from a typical bankruptcy. Such a filing still may have challenges, but the courts are usually anxious to move the process along.

A Few Pragmatic Points on Bankruptcy Reorganizations

The examples in this chapter have dealt with fairly simple structures. Companies that have more complex structures can have a significantly more complex debate over priorities. For example, this can occur when multiple entities have issued debt within the corporation, when varying cross-guarantees exist between subsidiaries, and when significant transfers have occurred between restricted and unrestricted groups. Additionally, if a company has a large number of foreign subsidiaries, foreign laws can add to the complexity of a restructuring.

When looking at recoveries, you must consider the securities you are receiving. Frequently post-bankruptcy securities are fairly illiquid, especially equities. Additionally, because of the negotiated nature of the bankruptcy process, some of the more unusual features you may see in a debt instrument often appear in the structure of a new bond or loan issued out of a restructuring. This can add to the illiquidity of the new consideration that bondholders and loan holders receive.

Suppose you are analyzing the company described earlier in Tables 23-2 and 23-3, just "prior" to its filing bankruptcy, and you reach the conclusions outlined earlier. Table 23-3 would imply that just before the company files bankruptcy, the senior subordinated notes are worth a price of 50, right? Wrong. The analysis implies that 50 should be the value at the end of the bankruptcy process. Bankruptcy can take a very long time. If you are examining the value at the beginning of the process, you need to look at how long you think the process will take and what you expect for the final recovery and present-value the payment. So if you expect a two-year bankruptcy and you are looking for a 20% internal rate of return, the day the company files bankruptcy, an investor should be willing to pay 34.7 $(50 / (1.2)^2)$, not 50, for that claim. It is not unusual that the more complex the structure, the longer the bankruptcy can take.

This chapter has been fairly long and has covered a number of concepts involving bankruptcy. However, in reality we have barely touched on this topic. As an analyst, whether or not you expect to be involved in reorganizations, understanding how securities tend to get treated in a bankruptcy is key to having a clearer understanding of the value of rankings and similar features when analyzing bonds and loans of going concerns and getting a better sense of intracapital relative value.

Questions

1. What is the difference between a Chapter 7 filing and a Chapter 11 filing under the U.S. bankruptcy code?
2. Which kind of security is likely to get paid post-petition interest?
   A. A senior secured note with security value of 100% of its claim

B. A senior secured loan with security value of 135% of its claim

C. A senior note with asset value of 110% of its claim

3. Suppose a bond's accreted value is $950 million, with a face value of $1 billion, and a coupon of 10% is paid semiannually. The company files for bankruptcy on the day the coupon is due. What is the bond's claim value in bankruptcy?

4. If a bond has a face amount outstanding of $200 million and an accreted value of 65, what is the bond's total claim, and how would the claim for a single bond be quoted?

A. $200 million, 65

B. $130 million, 100

C. $200 million, 100

D. $130 million, 65

5. Where does a debtor-in-possession loan rank relative to a pre-petition senior unsecured loan?

24. Preparing a Credit Snapshot

What's in this chapter:

- How to prioritize items when doing an analysis under time pressure
- What items to obtain first and where to obtain them
- Factors in deciding where to go after the basics

In almost any situation where you are asked to do analysis, there is likely to come a time when you will be asked to quickly run a credit summary, effectively a snapshot of the credit. The depth of this analysis will vary by how much time you are given.

First you should try to clearly understand why you are being asked to look at something quickly. Common reasons may be a sudden offering of new debt or breaking news on a company. The priorities of what you will want to look at first will vary. Are you being asked to look at a credit because the bonds just dropped 20 points in the market? Or are you being asked to do a snapshot on a company because it just announced it is making a large acquisition?

It is worth outlining a typical prioritization of items to look at when you're operating within a short time frame. As with most analysis, you must balance thoroughness with timeliness. The following is a typical order of steps to follow when you're doing a snapshot. But like so many things covered in this book, it will vary depending on the circumstances, so use your best judgment.

> Analysts often have templates for preparing credit snapshots. Similarly, because analysts tend to focus on a few industry sectors rather than being generalists, they can build and maintain a list of debt and equity comparables that they can quickly use in a snapshot. They also might keep a database of acquisition multiples in an industry.

Start with the basics of what the company does.

Your next priority is to acquire the debt capitalization structure and build a table for it. It is best to also include cash on this table and whether there is undrawn borrowing availability. Just because a bank agreement or other facility shows that there is availability does not always mean that it can be drawn. Limits on drawing revolving facilities can be due to covenants. Or sometimes there is a borrowing base, maybe a minimum amount of receivables or inventory. Also key when putting together this information is whether there are any upcoming maturities.

Then I recommend going to the statement of cash flows. Look at the funds from operations relative to capital spending over the latest 12 months to get a sense of whether the company is generating cash from operations. Do this even before building up EBITDA, because this can be more quickly established for a snapshot of free cash flow if your time is limited. It can also give you a better sense of the overall liquidity situation.

Your next step should be to begin building the adjusted EBITDA calculation for the latest 12-month period (often abbreviated LTM). Then run some of the most basic ratios: debt-to-EBITDA and EBITDA – capital expenditures / interest expense. If you are familiar with the industry, this should give you a sense of how risky the company is from the amount of leverage relative to comparables and/or equity market valuations. If the company has public equity, you should also run a market-based enterprise value/EBITDA. This coupled with a quick look at equity trading patterns can show you how this equity cushion has changed over time. Also, if you notice any extreme stock movements, you should probably check for news items around the time that the

movement occurred.

After these basics you should have a sense of whether the company is facing a liquidity issue, maturities, or operational shortfalls, or if it is in good financial shape. You should also have a sense of the underlying asset value to support the debt.

The next steps may vary greatly according to the company's financial condition and why you are being asked to look at it.

If a specific debt issue is being examined, as opposed to just the overall credit, the structural and covenant issues of that issue must be examined. Even if a specific issue is not being examined, these factors can impact the overall company as well, so if time permits, examine these issues.

If cash generation from operations is not covering capital expenditures and interest expense, or if there are meaningful upcoming maturities, the next step is probably to do a more detailed analysis of liquidity.

If liquidity is not a major issue, the next step may be to look at the general operating trends with revenue and cash flow generation over the last several quarters versus both the same quarters a year earlier and, if the company is not highly seasonal, against sequential quarters. You should also go back over past years if time permits. Also if you have time, read any recent news articles and read management's discussion of the results from recent financial statements and transcripts from any recent conference calls.

From that point onward, you can begin adding layers to your analysis:

- You can prepare margin and cost trends.
- You can analyze ownership.
- You can analyze other upcoming events, such as step-downs in maintenance covenants.
- You can see how competitors are performing.

Creating snapshots can be a good use of your time even if they are not being assigned to you because of breaking news. It can be helpful to prepare these on a number of comparable companies if you are relatively new to the business or new to looking at an industry. This can help you develop an overview of trends in an industry and ratios for comparable credits.

25. The Investment Decision Process

What's in this chapter:

- Why a process is beneficial
- Factors that cause the investment decision process to vary from business to business
- Points to consider and include in the investment decision process
- Typical investment traps that a process can usually help avoid

Analysis for its own sake is not terribly useful; analysis needs a goal. In leveraged finance, the goal of analysis is usually to make a decision about a debt instrument. Often the decision is to buy, sell, or hold, but it can also be whether you should go ahead with a financing.

To reach a decision, you need a process. It can be either an informal one that you go through by yourself, or a more formalized one that involves a committee or team.

As mentioned earlier in this book, the leveraged debt markets employ various types of investment strategies. Each market participant must factor these into the ultimate buy, sell, or hold decision on a security.

Assuming that your goal is to reach an investment decision, choosing the right investment involves understanding the level of risk that your portfolio can tolerate. Risk typically takes the form of interim volatility or principal loss and typically is weighed against the potential return. This risk/reward relationship is what analysts are constantly trying to divine.

This is not a portfolio strategy book. But I've watched the markets for many years, and I believe that different styles can be successful. However, the styles that have consistently succeeded over time have similarities. The successful strategies have a defined investment style and a process for their decisions. They tend to be fairly consistent with their set of standards over long periods of time and tend not to react to each market whim or sudden change in market mentality. This does not mean that these strategies are not adaptive. They are forward-looking enough to periodically reconsider their rules to evolve with major changes in the global or market environments, but they do this through a process.

The types of strategies can be wide-ranging. They can focus on more senior and less volatile issues, or they can focus on finding good credits and going to the most volatile, highest-yielding issues. Different strategies may, obviously, outperform or underperform dramatically over shorter cycles, depending on the type of markets that are being experienced.

> At the very least, an analyst should have his own checklist for walking through key items and reaching a conclusion about a credit investment. You might also want to keep a short list and a long list, depending on the environment you are working in. Even if you're doing credit work for a purpose other than making an investment decision, a checklist for reaching the appropriate decision can still be critical.

A Sample Investment Process

There are many effective styles of organizing an investment process. The following sections describe some core ideas.

Big-Picture Items

- It is helpful to start with a macro context so that you are not trying to be a global economist as well as a

credit analyst.[1]

1 However, good macro strategists and economists tend to seek out details on business and investment trends from industry analysts.

- It is a good idea to take a strategic view of any themes that are going on in the investment world. For example, is a certain type of business suddenly in vogue to be leveraged in buyouts? Is the IPO market particularly strong or weak as a source of deleveraging? Is a new securitized financing vehicle being widely used? These types of themes often come in waves and are important to consider.
- Big-picture technical questions can be helpful, too. These generally involve supply and demand—how much cash is uninvested and in the hands of portfolio managers versus how many new financings will be coming to market. Demand for leveraged loans and bonds can also be influenced by the relative attractiveness of the high-yield markets versus other investments.

When a general macro picture is available, you can do a better job of looking at the company.

The Company

- What business lines is the company involved in?
- Is the business in a notable part of its life cycle?
- What industry dynamics are most influencing the company, such as price cutting or acquisition activity?
- What operating trends are occurring at the company?
- Are any specific comments or background reviews on ownership or management necessary?

Credit Fundamentals

In this section you consider key financial aspects.

- Review financial metrics and any historical changes.
- Analyze the sensitivity of key metrics to potential operational declines.
- Review cash flow and liquidity.
- Go over balance sheet summaries.
- Review the company's structural issues and figure out which entities support the company's debt.
- Review sources of liquidity other than cash flow from operations.
- Review and analyze asset values and implied equity value cushion for the debt.
- How strong is the overall credit quality, and what is the risk of default?

Event Analysis

- Are any liquidity events likely to occur in the future?
- Is a refinancing likely?
- Are there maintenance covenants that might be violated?
- What is the probability that the company will be sold or acquire something?
- Is there a possibility of an IPO, dividend, or stock buyback?

For all these possibilities, you should consider their probability; what the likely impact on the securities would be; which other companies, if any, might be involved; and a general time frame.

Security Analysis

- What primary debt instrument is being examined?
- What are the key structural issues with the security's ranking?
- Review key covenants, and highlight any that stand out, especially relative to your event analysis.
- Also review technical issues. How large is the security? Is it actively traded? Will it be a private placement or a publicly registered issue?
- Is it likely that the maturity, covenants, or structure of other debt in the capital structure will impact the bond or loan that is being examined?

Relative Value and Return

- Review financial metrics and operating metrics relative to comparables.
- Review pricing and yields of comparables, including any relevant indices or benchmarks.
- Review the likely return on investment, particularly if event risk is high.

The Decision

- Does the security fit with the general strategy of the investment pool?
- Do the potential returns look attractive relative to the risks?
- Is it a buy, sell, or hold?
- If you decide to make or not make an investment, should there be a time frame or event trigger in which you review the decision?
- How heavily weighted should the investment be?
- Are there other ways to invest in this company that make more sense? Are there other debt issues, equities, options, converts that should be considered instead?
- Has this process triggered other investment ideas worth reviewing?

You should review the credit quarterly or at some other regular interval. It is also important to design certain triggers that cause an immediate credit review. Some examples are a meaningful movement in the underlying equity or comparable equities (maybe 15% or more) and a meaningful move in the security prices of this credit or a peer. Additionally, if an event was listed as part of the investment thesis and it passes, this should be a trigger to review the investment as well.

Often analysts may want to categorize the investment. Sometimes it may be put in a grid or numeric ranking. Common categories for the grid or ranking can include the level of credit risk, such as high, medium, or low. Some analysts may put a qualifier if there is a reasonable probability of a positive or negative event. Then you might add a factor for the pricing and yield and how they can fit into a portfolio. You also can use rankings such as overweight, evenweight, underweight, and avoid.

Some Investment Traps

While trying to reach an investment decision based on your analysis, it can be easy to fall into certain traps. But you can avoid many investment traps by having a process and following rules.

A common trap is to think that yield can make up for poor credit quality. Notice in the investment decision process that the discussions about credit quality and relative value are separate. A common trap is being lured into a credit that cannot fundamentally make it because of a low price. Likewise, a low price on a company in disfavor should not color your fundamental credit decision (although it should cause you to dig deeper).

Another trap is almost the inverse. It occurs when a high price and low yield lure an investor into complacency

over a credit and keep him or her from properly assessing the risks.

You can also become trapped by being too complacent in your models. If you begin building your models simply from pure extrapolation of past results, rather than layering in some changes, or at least running scenarios that highlight the sensitivity to changes, you can easily make mistakes in assessing a company's outlook.

Some traps make investors miss opportunities. One school of thought says that investors need to have "hard" (physical) assets in a company to make it a compelling investment. Ultimately the value of that hard asset is based on the cash flow it can produce for the company that owns it or for someone else. Hard assets can be overweighed. For example, suppose the market has an overabundance of digital printing machines. Would it be better for these "hard assets" to underlie a bank loan than, say, a valuable brand name or a patent that can produce significant cash flow for a consumer products company, just because one is a "hard asset" and the other is not? At the very least, a pragmatic investor should consider which is more sellable and valuable relative to the amount of debt on a company. This is especially true in an increasingly technology-driven world.

Depending too much on financial ratios and metrics in choosing an investment is another common trap. This is especially true in the age of data extraction and computerized spreadsheets. It is too easy to spit out a model that highlights bonds and loans with attractive relative value based on financial metrics and yields but does not analyze structural issues of the individual security or potential positive and negative event risk. Using relative-value data sorts can be a valuable way to search for opportunities, but you shouldn't base your final decision on them alone.

Finally, be cautious about the "lemming effect." This is when it appears that all market participants have the same investment thesis or want to invest in the same type of company. In the flurry to invest in the next available hot item, analytical mistakes are often made, or investment rules are pushed aside. This is where a disciplined strategy can often pay off in the long run. It also brings to mind a favorite quote by General George S. Patton, Jr. on which to end the chapter:

> If everyone is thinking alike, someone isn't thinking.

26. Closing Comments

When I was a teenager and wanted to get my pilot's license, my father bought a small poster for my room. It was a black-and-white photo of a biplane crashed into a tree, with a mangled pilot hanging upside down from the cockpit. The caption read, "Flying is not inherently more dangerous than any other means of transportation. It is just less forgiving." This statement also could describe investing in the leveraged finance market relative to other securities markets.

The market is a valuable financing tool for a diverse universe of corporations around the globe. It has a history of constantly evolving and developing creative ways to meet the needs of these corporations. For these reasons, credit analysts need to try to stay abreast of new developments and structures in the marketplace. It is an exciting segment of finance to work in. You are working with companies that are taking risks and trying to grow. It is a market of innovative structures and change. In addition, I have always found it exciting that every day, headlines in the news and breaking stories impact how your day will go and what you will be working on.

Because of the leverage on these companies, the thoroughness of your work is key. Credit analysts constantly struggle to balance thoroughness and timeliness. Remember not to become complacent and assume that just because something was done one way in one debt instrument that the next one will be done the same way.

Cynicism can be a positive trait in credit analysis, because you must always look at downside possibilities. However, remember that in this market, which is so heavily impacted by events, both negative and positive events can occur for the debt holders.

The two basics that credit analysis start from are liquidity and asset value. They may seem simple. However, other factors make the analysis more complex. Business trends, event risks, and structural issues all make a huge difference in ultimate trading levels and recovery on these debt instruments. Finally, credit analysts must keep in mind the end goal of their analysis. They must design their work to meet that goal and ultimately reach a decision.

Answers

Chapter 2

1. C
2. D
3. C (9% – 3% = 6% or 600 bp)
4. B ($2,000,000 × 0.98)
5. C ($1,000,000 × 1.025). 90 days is 25% of 360, so the bond seller gets 25% of the coupon.

Chapter 7

1. A
2. D
3. B
4. C

Chapter 8

1. C
2. B
3. C
4. True, because yield-to-worst factors in the call price.
5. B. The amount on the balance sheet equals the face amount times the accreted value, or $2,000,000 × .60.

Chapter 9

1. Interest, taxes, depreciation, and amortization
2. C
3. A
4. $100 ($100 + $25 – $30 – $5 + $10)
5. C
5. $660 ($760 – $100)

Chapter 10

1. B
2. B
3. Company Alpha (10/6) > (6/4)
4. It shows how much cash flow from operations is available to repay debt.
5. B

Chapter 11

1. 29.4% (750 / 2,550)
2. General and administrative expenses are usually relatively fixed, and they are growing in lockstep with revenue. Selling expenses are growing much faster than revenue and other expense items.
3. A
4. Capital expenditures as a percentage of revenue

Chapter 12

1. D
2. A, B, D
3. A
4. Are there other liquidity options to meet the maturity? Is a refinancing possible? Will this trigger a default?

Chapter 13

1. B
2. A
3. B (L + 450 = 4.5% + 2.5% = 7%)
4. A (€ 200 × .08 and € 200 × 0.60)
5. C
5. A

Chapter 14

1. True
2. It is an advantage for the company issuing the bond. If the company is doing well enough that it can retire the bond, the bond buyer would prefer that the price go up above the call price.
3. D
4. B
5. B

Chapter 15

1. D, B, C, A
2. The operating company subordinated debt
3. C
4. A

Chapter 16

1. A and D
2. C (because it is capitalized)
3. A
4. D

5. D

Chapter 17

1. A consent is typically for a permanent change to terms; a waiver is temporary.
2. A
3. C
4. False
5. True

Chapter 18

1. C
2. C
3. B
4. Change of control probably will not affect the bonds. This tender is usually at 101, and the bonds are trading well above that and are going to a stronger credit.
5. A, C, D

Chapter 20

1. (In $000,000s) $1,520 ((200 × 5) + 500 + 20)
2. Bear Corp. (10.5 / 7.5 > 8 / 6)
3. A
4. Someone pays a higher multiple for a stock if the purchase gives that person control over the company versus the price someone would pay for just buying a share in the company.
5. C

Chapter 21

1. An STW/bond leverage column would be most useful. Because of the varying maturities, the YTW/bond leverage is not as useful.
2. The first two notes are both senior, and the leverage ratio includes only the debt through that level. The 9% notes are more junior.
3. A, B, C, D
4. Headroom is the amount of room between a maintenance covenant metric and the company's current metric.

Chapter 23

1. Chapter 7 is a liquidation; Chapter 11 is a reorganization.
2. B
3. $1 billion (The accreted value plus the unpaid interest up to the day of filing. Note that the interest is paid on the face amount and is paid semiannually—$1,000 × 0.05.)
4. D
5. Senior to it. A DIP is usually senior to all prepetition issues.

Index

A

B

C

D

E

F

G

H

I

J–L

M

N

O

P

Q–R

S

T

U–V

W

Y

Z

In an increasingly competitive world, it is quality of thinking that gives an edge—an idea that opens new doors, a technique that solves a problem, or an insight that simply helps make sense of it all.

We work with leading authors in the various arenas of business and finance to bring cutting-edge thinking and best-learning practices to a global market.

It is our goal to create world-class print publications and electronic products that give readers knowledge and understanding that can then be applied, whether studying or at work.

To find out more about our business products, you can visit us at www.ftpress.com.