

Chapter 7

Corporate Debt Instruments

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Corporate Bonds

- Long-term debts issued by corporations
- Minimum denominations publicly traded corporate bonds is \$1,000
- Generally pay interest semiannually
- Bondholders has a **prior** legal claim over common and preferred stockholders as to both income and assets of the corporation
- Four general classification
 - Utilities
 - Transportations
 - Industrials
 - Bank and finance companies

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Feature of a corporate bond issue

- Bond indentures
 - The promises of the corporate bond issuers is set in contracts
 - The indenture is made out to the corporate trustee as a representative of the interest of bondholders
- Term bonds
 - entire issue matures on a single date
 - Most issues take the form of bonds due in 20 to 30 years
 - Obligations due in under 10 years are called notes
- Serial bonds
 - Specified principal amounts become due on specified dates
 - For instance with a ten year overall maturity, some serial bonds would mature in five years, some in six years, etc, so that a portion of the outstanding debt is paid off each year

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Security for Bonds

- Mortgage bonds
 - Some real property are pledged as collateral
- Collateral trust bonds
 - Stocks, notes, bonds or other kind of obligations are pledged as collateral
- Debentures
 - Not secured by a specific pledge of property
 - backed solely by the general credit of the issuing firm, including
 - Assets of the issuer not pledged to secure other debt
 - Pledged assets having more value than necessary to satisfy secured creditors
- Subordinated debentures
 - unsecured debentures that are junior in their rights to mortgage bonds and regular debentures
- Secured debt (such as *mortgage bonds*) will cost less than debenture bonds, and debenture bonds will cost less than subordinated debenture bonds.
- Guaranteed bonds
 - Obligations guaranteed by another entity

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Railway financing

- A railway company orders some cars and locomotives from a manufacture
- The manufacture transfers legal title to the equipment to a trustee
- The trustee **leases** the equipment to the railroad
- The trustee at the same time sells trust certificates (bonds) to obtain the funds to pay the manufacturer
- The trustee collects lease payments from the railroad and use the money to pay interest and principal on the certificates

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Provisions for Paying Off Bonds

- Call and refund provision
 - The provisions that allow issuers to redeem the entire amount of bonds on a date before maturity
 - Bonds are usually called in when interest rates drop so that the issuer can gain by calling in the old bonds (with higher coupon rates) and issuing new bonds (with lower coupon rates)
 - This right is a disadvantage to the bondholders due to reinvestment risk
- Call premium
 - the difference between the call price and the face value on the bond
 - The initial call premium is the interest coupon plus par
 - Scale down for subsequent years
 - Make-whole premium provision
 - also called yield-maintenance premium provision
 - A schedule of call premium that provides a yield equal to the original yield
 - To protect the investors who purchased the issue at issuance

Provisions for Paying Off Bonds

EXHIBIT 7-1 REDEMPTION SCHEDULE FOR ANHEUSER-BUSCH COMPANIES, INC.
10% SINKING FUND DEBENTURES DUE JULY 1, 2018

Redemption

The Debentures will be redeemable at the option of the Company at any time in whole or in part, upon not fewer than 30 nor more than 60 days' notice, at the following redemption prices (which are expressed in percentages of principal amount) in each case together with accrued interest to the date fixed for redemption:

If redeemed during the 12 months beginning July 1,

1988	110.0%
1989	109.5%
1990	109.0%
1991	108.5%
1992	108.0%
1993	107.5%
1994	107.0%
1995	106.5%
1996	106.0%
1997	105.5%
1998	105.0%
1999	104.5%
2000	104.0%
2001	103.5%
2002	103.0%
2003	102.5%
2004	102.0%
2005	101.5%
2006	101.0%
2007	100.5%
2008 and thereafter	100.0%

Provided, however, that prior to July 1, 1998, the Company may not redeem any of the Debentures pursuant to such option, directly or indirectly, from or in anticipation of the proceeds of the issuance of any indebtedness for money borrowed having an interest cost of less than 10% per annum.

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Provisions for Paying Off Bonds

- Noncallable vs. nonrefundable
 - Nonrefundable provision prevents redemption **only** from the proceeds of other debt issues sold at a lower cost of money
 - Noncallable provision provide more general protection against premature redemption
 - Bullet bonds: noncallable-for-life
- Sinking fund provision
 - Require the issuer to retire a specified portion of an issue each year
 - The purpose it to reduce the credit risk of issuers
 - Means to retire bonds
 - Making a cash payments to the corporate trustee, who then calls the bonds for redemption using a lottery
 - Purchase the bonds in the open market

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Accrued Interest

- ✓ In addition to the agreed-upon price, the buyer must pay the seller *accrued interest*.
 - ✓ with 30/360 convention
- ✓ Each month in a corporate bond year is 30 days, whether it is February, April, or August.
- ✓ A 12% coupon corporate bond pays \$120 per year per \$1,000 par value, accruing interest at \$10 per month or \$0.33333 per day.

Bond Ratings

- Bonds are rated by the issuer's default risk
- Large bond investors, traders and managers evaluate default risk by analyzing the issuer's financial ratios and security prices → credit analysis
- Three major bond rating agencies
 - Moody's Investors Services,
 - Standard & Poor's Corporation (S&P)
 - FitchRatings
- Bonds assigned a letter grade based on perceived probability of issuer default
 - High grade means low credit risk and high quality
 - **Junk bonds** (or noninvestment-grade bond or high-yield bond) are bonds rated below Baa by Moody's or BBB by S&P
 - Higher ratings are termed **investment grade bonds**

Bond Ratings

EXHIBIT 7-2 Summary of Corporate Bond Ratings Systems and Symbols

Moody's	S&P	Fitch	Brief Definition
Investment Grade: High Credit Worthiness			
Aaa	AAA	AAA	Gilt edge, prime, maximum safety
Aa1	AA+	AA+	Very high grade, high quality
Aa2	AA	AA	
Aa3	AA-	AA-	
A1	A+	A+	Upper medium grade
A2	A	A	
A3	A-	A-	
Baa1	BBB+	BBB+	Lower medium grade
Baa2	BBB	BBB	
Baa3	BBB2	BBB2	
Distinctly Speculative: Low Creditworthiness			
Ba1	BB+	BB+	Low grade, speculative
Ba2	BB	BB	
Ba3	BB-	BB-	
B1	B+	B+	Highly speculative
B2	B	B	
B3	B-	B-2	
Predominantly Speculative: Substantial Risk or in Default			
Caa	CCC+	CCC	Substantial risk, in poor standing
Ca	CCC-	CC	May be in default, extremely speculative
	CC		
C	C	C	Even more speculative than those above
		DDD	Default
		DD	
		D	

Bond Ratings

- Rating transition matrix
 - Shows how ratings change over various periods of time

EXHIBIT 7-3 ANNUAL DOWNGRADES AND UPGRADES BY MOODY'S AND S&P: 1999-2002

Year	Moody's			S&P		
	Downgrade	Upgrade	Up-Down Ratio	Downgrade	Upgrade	Up-Down Ratio
1999	88	114	1.30	85	122	1.44
2000	104	149	1.43	93	180	1.94
2001	82	209	2.55	63	198	3.14
2002	46	244	5.30	41	231	5.63

Source: Lehman Brothers, *Global Relative Value*, April 7, 2003, p. 144.

EXHIBIT 7-4 HYPOTHETICAL ONE-YEAR RATING TRANSITION MATRIX

Rating at Start of Year	Rating at End of Year							Total
	Aaa	Aa	A	Baa	Ba	B	C or D	
Aaa	91.00	8.30	0.70	0.00	0.00	0.00	0.00	100.00
Aa	1.50	91.40	6.60	0.50	0.20	0.00	0.00	100.00
A	0.10	3.00	91.20	5.10	0.40	0.20	0.00	100.00
Baa	0.00	0.20	5.80	88.00	5.00	0.90	0.10	100.00

Default Rates

- ✓ Exhibit 7-4 shows the number of defaulted and then broken down by their original rating for investment-grade and noninvestment-grade bonds
 - ✓ a higher percentage of defaults are for non-investment-grade rated bonds.
- ✓ Exhibit 7-5 provides information about default rates for high-yield corporate bonds

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Exhibit 7-4 Defaults by Original Ratings (Investment Grade Versus Non-Investment Grade) by Year, 1985–2006

Year	Total # Defaulted Issues	% Originally Rated Investment Grade	% Originally Rated Non-Investment Grade
2006	52	13	87
2005	184	49	51
2004	79	19	81
2003	203	33	67
2002	322	39	61
2001	258	14	86
2000	142	16	84
1999	87	13	87
1998	39	31	69
1997	20	0	100
1996	24	13	88

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Exhibit 7-5 Historical High-Yield Dollar-Denominated Rate for Corporate Bonds in the U.S. and Canada 1985–2006

Year	Par Value Outstanding (\$ millions)	Par Value Defaults (\$ millions)	Default Rate (%)
2006	993,600	7,559	0.761
2005	1,073,000	36,209	3.375
2004	933,100	11,657	1.249
2003	825,000	38,451	4.661
2002	757,000	96,858	12.795
2001	649,000	63,609	9.801
2000	597,200	30,295	5.073
1999	567,400	23,532	4.147
1998	465,500	7,464	1.603
1997	335,400	4,200	1.252
1996	271,000	3,336	1.231

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Default Loss Rates

- ✓ To evaluate the performance of the corporate bond sector, more than just default rates are needed.
- ✓ It is perfectly possible for a portfolio of corporate bonds to **suffer defaults and to outperform** Treasuries at the same time, provided the *yield spread of the portfolio* is sufficiently high to offset the losses from default.
- ✓ The **recovery rate** is the percentage of the face amount of the bond recovered by the holder.
- ✓ An important measure in studying the performance of the corporate bond sector is the *default loss rate*, defined as:

$$\text{Default loss rate} = \text{Default rate} \times (100\% - \text{Recovery rate})$$

See : Exhibit 7-6,7-7

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Default Risk Premium

- Investors charge a default risk premium (above riskless or less risky securities) for default risk
- The default risk premium (DRP) is the difference between the promised rate and the yield on a comparable (same term) riskless security (Treasury security)
 - $DRP = i - i_{rf}$
- In August of 2002 the average yield on AAA rated bonds was 6.37%, on BAA was 7.58%, for a default yield spread of 121 basis points.
- Investors are satisfied if the default risk premium is equal to the expected default loss

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Default Risk Premium

Notice that as bond rating quality declines, the default risk premium increases.

SECURITY	SECURITY YIELD (PERCENT)	EQUIVALENT RISK-FREE RATE ^a (PERCENT)	RISK PREMIUM (PERCENT)
Corporate bonds: Aaa	6.51	5.61	0.90
Corporate bonds: Aa	6.95	5.61	1.34
Corporate bonds: A	7.37	5.61	1.76
Corporate bonds: Baa	7.89	5.61	2.28

^aTwenty-year Treasury bond yield.

Source: Federal Reserve Statistical Release H.15 and Dow Jones Market Data

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Default Risk Premium

- Ratings spreads tend to **vary inversely** with the phase in the cycle of the economy
- Default risk premiums increase (widen) in periods of recession and decrease in economic expansion
- In good times, risky security prices are bid up; yields move nearer that of riskless securities
- With increased economic pessimism, investors sell risky securities and buy "quality" – widening the DRP

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Bond Ratings

- Factors considered in rating corporate bonds
 - Quality of management
 - Strategic direction, financial philosophy, track record,...
 - Capacity to pay
 - Industry trends, the regulatory environment, basic operating and competitive position, financial position and sources of liquidity,...
 - Collateral
 - Assets pledged to secure the debt
 - The quality a value of the unpledged assets
 - Covenants
 - Terms and conditions of the lending agreement
 - Restrictions on how management operates the company and conducts its financial affairs

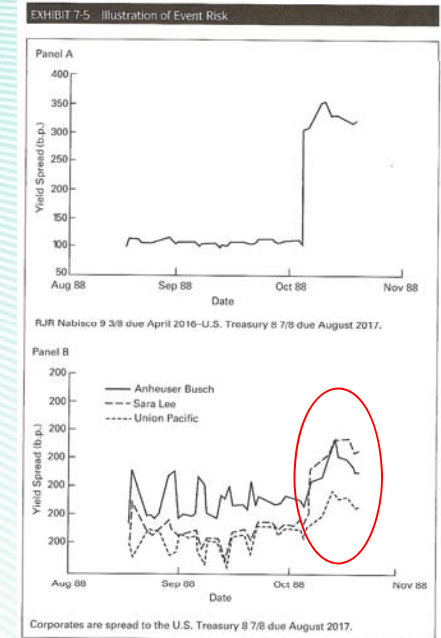
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Event risk

- The ability to repayment changes seriously due to some unexpected events
- Natural or industrial accident
- Regulatory change
 - Change in the accounting treatment of loan losses
 - Cancellation of nuclear plants
- Takeover or corporate restructuring
 - Leverage buyout may weaken firm's ability to repay outstanding debts
 - Ex: RJR Nabisco was purchased by Kohlberg Kravis Roberts & Co. in 1998.
 - The spillover effects:
 - other big companies may be takeover → spread increases

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- Examples of event risk
 - The RJR takeover reflects the higher possibility of being a takeover target for firms of the same size



Markets for Corp Bonds

- Primary sales of corp bonds occur through either a public sale (issue) or a private placement (non-public offering)
- Two secondary markets
 - the exchange market (e.g., the NYSE)
 - the over-the-counter (OTC) market
- OTC electronic market dominates trading in corp bonds
- Less than 1% of corporate bonds are exchange traded (primarily on the bond division of the NYSE)
- Corporate bonds have **lower secondary market** activity than Treasuries

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High-yield Bonds

- Bonds with higher default risk than the investment grade bonds and carry higher yields
 - Quality rating lower than BBB
- Two possible sources:
 - Original-issue high-yield bonds
 - Fallen angels
 - Bonds that have been downgraded due to financial difficult
- ✓ Bonds that have been downgraded fall into two groups:
 - i. Issuer voluntarily increased their debt as a result of a leveraged buyout or a recapitalization
 - ii. issues that have been downgraded for other reasons
- ✓ In *leveraged buyout (LBO)* or a *recapitalization*, the heavy interest payment burden the corporation
 - To reduce this burden, firms have issued bonds with *deferred coupon structures*

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High-yield Bonds

- LBO firms have issued bonds with deferred coupon structures
 - Deferred-interest bonds
 - Sell at a deep discount and do not pay interest for an initial period (3-7 years)
 - Step-up bonds
 - Coupon is lower initially and then increases
 - Payment-in-kind bonds
 - Issuers have an option to pay cash for coupon or give the bondholder a similar bond
- Extendable reset bond
 - The coupon rate may be reset
 - The new rate will reflect the level of current interest rates and the credit spread
- ✓ Advantage to issuers: assured of a long-term source of funds based on short-term rates.
- ✓ Advantage to investors: the coupon rate will reset to the market rate (both the level of interest rates and the credit spread, in principle keeping the issue **at par**).

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Performance of High-Yield Bonds

- ✓ There have been several studies of the risk and return in the high-yield bond market.
- In the long run, high-yield corporate bonds have outperformed both investment grade corporate bonds and Treasuries but have been outperformed by common stock.
- See next slide

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Performance of High-yield Bonds

EXHIBIT 7-6 Ten-Year Treasury and High Yield Bonds^a—Annual Returns, Yields, and Spreads, 1978—First Half of 2005

Year	Return (%)			Promised Yield (%)		
	HY	Treasury	Spread	HY	Treasury	Spread
2005(H1)	0.82	4.09	(3.27)	7.98	3.94	4.04
2004	10.79	4.87	5.92	7.35	4.21	3.14
2003	30.62	1.25	29.37	8.00	4.26	3.74
2002	(1.53)	14.66	(16.19)	12.38	3.82	8.56
2001	5.44	4.01	1.43	12.31	5.04	7.27
2000	(5.68)	14.45	(20.13)	14.56	5.12	9.44
1999	1.73	(8.41)	10.14	11.41	6.44	4.97
1998	4.04	12.77	(8.73)	10.04	4.65	5.39
1997	14.27	11.16	3.11	9.20	5.75	3.45
1996	11.24	6.04	11.20	9.58	6.42	3.16
1995	22.40	23.58	(1.18)	9.76	5.58	4.18
1994	(2.55)	(8.29)	5.74	11.50	7.83	3.67
1993	18.33	12.08	6.25	9.08	5.80	3.28
1992	18.22	6.50	11.79	10.44	6.69	3.75
1991	43.23	17.18	26.05	12.56	6.70	5.86
1990	(8.46)	6.88	(15.34)	18.57	8.07	10.50
1989	1.98	16.72	(14.74)	15.17	7.93	7.24
1988	15.25	6.34	8.91	13.70	9.15	4.55
1987	4.57	(2.67)	7.24	13.89	8.83	5.06
1986	16.50	24.08	(7.58)	12.67	7.21	5.46
1985	26.08	31.54	(5.46)	13.50	8.99	4.51
1984	8.50	14.82	(6.32)	14.97	11.87	3.10
1983	21.80	2.23	19.57	15.74	10.70	5.04
1982	32.45	42.08	(9.63)	17.84	13.86	3.98
1981	7.56	0.48	7.08	16.97	12.08	3.69
1980	(1.00)	(2.96)	1.96	13.46	10.23	3.23
1979	3.69	(0.86)	4.55	12.07	9.13	2.94
1978	7.57	(1.11)	8.68	10.92	8.11	2.81
Arithmetic Annual Average						
1978–2004	11.37	9.02	2.36	12.47	7.57	4.90
Std dev.	12.45	11.92	12.34	2.85	2.61	2.06

Realized return for HYB

Spread varies over time

Spread varies over time

Recovery Ratings

- ✓ While credit ratings provide guidance for the likelihood of default and recovery given default, the market needed better recovery information for specific bond issues.
- ✓ Fitch and Standard & Poor's, developed *recovery rating systems* for corporate bonds.
- ✓ S&P recovery ratings for secured debt are given in Exhibit 7-10 and the FitchRating recovery rating system is given in Exhibit 7-11

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Exhibit 7-10 S&P Recovery Ratings for Secured Debt

Recovery Rate	Ultimate Recovery of Principal	Indicative Recovery Expectation
1+	Highest expectation of full recovery of principal	100% of principal
1	High expectation of full recovery of principal	100% of principal
2	Substantial recovery of principal	80%–100% of principal
3	Meaningful recovery of principal	50%–80% of principal
4	Marginal recovery of principal	25%–50% of principal
5	Negligible recovery of principal	0%–25% of principal

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Exhibit 7-11 FitchRating Recovery Rating System

Recovery Rating	Recovery Prospect	Recovery Band
R1	Outstanding	91%–100%
R2	Superior	71%–90%
R3	Good	51%–70%
R4	Average	31%–50%
R5	Below	11%–30%
R6	Poor	0%–10%

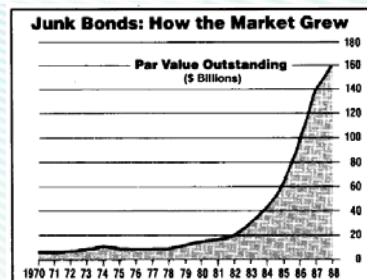
7-30

The Story of Michael Milken

- As underwriter and marketer, Milken's junk bond group has assisted at the issuance of billions of dollars in high-yield debt
- Milken created a network of individuals, corporations, and institutions willing to buy junk bonds on his recommendation
- Milken's success in creating his market was his ability to convince new players that he and Drexel were making a reliable market



King Milken



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Secondary Market

- ✓ The principal second market for corporate bonds is the over-the-counter (OTC) market.
- ✓ To increase price transparency:
- ✓ In 2002, the National Association of Securities Dealers (NASD) report secondary market transactions for corporate bonds.
 - ✓ The Trade Reporting and Compliance Engine ("TRACE") requires that all broker/dealers who are NASD member firms report transactions in corporate bonds to them.
- ✓ Traditionally, corporate bond trading has been an OTC market conducted via telephone and based on broker-dealer trading desks.
- ✓ **Electronic bond trading** now makes up about 30% of corporate bond trading.

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Market Data

Investors > Market Data

Last Updated: 7/6/2012

Market Data

Search: Equity

Welcome to FINRA's Market Data Center. This comprehensive tool is designed to assist investors with market and investment research, both through the market data information provided as well as through the FINRA Investor Education material and tools.

Market Indices

Select market/indices to update chart



Bonds Search

Bond data for Kraft Food

Corporate Bond Search Results

ADD TO WATCHLIST

Include in Watchlist	Bond Symbol	Issuer Name	Coupon	Maturity	Callable	Ratings			Last Sale	
						Moody's	S&P	Fitch	Price	Yield
<input type="checkbox"/>	KFT.GO	Kraft Foods	6.00	02/11/2013	No	Baa2	BBB-	BBB-	103.130	0.615
<input type="checkbox"/>	KFT.GY	Kraft Foods	2.63	05/08/2013	No	Baa2	BBB-	BBB-	101.648	0.618
<input type="checkbox"/>	KFT.AA	Kraft Foods	-	07/10/2013	Yes	Baa2	BBB-	BBB-	100.000	-
<input type="checkbox"/>	KFT.GJ	Kraft Foods	5.25	10/01/2013	No	Baa2	BBB-	BBB-	105.249	0.920
<input type="checkbox"/>	KFT.GV	Kraft Foods	6.75	02/19/2014	No	Baa2	BBB-	BBB-	109.566	0.763
<input type="checkbox"/>	MO.GD	Nabisco	7.55	06/15/2015	No	Baa2	BBB	BBB-	117.884	1.303
<input type="checkbox"/>	KFT.GW	Kraft Foods	4.13	02/09/2016	No	Baa2	BBB-	BBB-	109.326	1.440
<input type="checkbox"/>	KFT.CQ	Kraft Foods	6.50	09/11/2017	No	Daa2	DD-	DD-	122.003	1.933
<input type="checkbox"/>	KFT.GR	Kraft Foods	6.13	02/01/2018	No	Baa2	BBB-	BBB-	120.429	2.198
<input type="checkbox"/>	KFT.GT	Kraft Foods	6.13	08/23/2018	No	Baa2	BBB-	BBB-	121.806	2.284
<input type="checkbox"/>	KFT.GX	Kraft Foods	5.38	02/10/2020	No	Baa2	BBB-	BBB-	117.962	2.734
<input type="checkbox"/>	KFT.GE	Kraft Foods	6.50	11/01/2031	No	Baa2	BBB-	BBB-	124.705	4.560

Private-Placement Market for Corporate Bonds

- ✓ Exempt from the registration with the SEC because they are issued in transactions that do not involve a public offering.
- ✓ SEC Rule 144A in 1990,
 - ✓ allows the trading of privately placed securities among qualified institutional buyers.
- ✓ Unlike publicly issued bonds, the issuers of privately placed issues tend to be less well known.
- ✓ Yields on privately placed debt issues are higher than those on publicly offered bonds.

Medium-term Notes (MTNs)

- (Traditional Def.) Debt with a maturity from 1y to 15 years.
 - It can be longer or shorter now.
- A corporate debt instrument that offered continuously in relatively small amounts to investors by an agent of the issuer
 - Corporate bonds are sold in large, discrete offerings
 - The terms of notes are flexible and are often customized
 - Investors can select from several maturity ranges: 9m-1y, 1y-18m, 18m-2y, up to 30 years
 - Gives a corporation the maximum flexibility for issuing securities
- Example
 - Merrill Lynch as a agent for the MTN issued by Ford Motor Credit
- Issuers' decision between MTNs and bonds
 - The cost of registration and distribution the securities (MTNs are more costly)
 - The flexibility in structuring the offering (MTNs are more flexible)
 - Fixed- or floating-rate coupon, foreign denomination,

Medium-term Notes (MTNs)

- Structured notes
 - MTNs coupled with transactions in the derivative markets (option, futures, swaps,...)
 - Issuers simultaneously transact in the derivative markets
- Examples:
 - An MTNs with coupon reset formula based on a benchmark interest rate/stock index/individual stock price
 - A bond plus a call or put on a stock index/individual stock
- Purposes
 - To create interesting risk-return features
 - To satisfy the investment objectives of institutional investors
 - **Bypass the trading restrictions** imposed to institutional investors
 - The investor bought equity-linked notes is participating in the equity market without owning common stock
 - Reverse inquiring
 - Customers (institutions) inquire the issuers or their agents to design a security that fit the special needs

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新金融時代最精緻的聰明投資 高收益組合式產品 ~與您攜手邁入理財新紀元~

貳、股權連結商品 (Equity-Linked Notes) 產品設計

股權連結商品相當於零息債券與賣出選擇權的結合，投資人藉由賣出選擇權的權利金收入來提升股權連結商品的收益，故若到期選擇權無履約價值則投資人即可領到比一般貨幣市場工具為高的收益，故也有人稱此商品為「高收益票據」(High Yield Note 或簡稱 HYN)。

●股票連結型票券

一、何謂股票連結型票券

股票連結型票券又稱為高收益股票型票券(High Yield Equity Note以下簡稱高收益票券或HYN)，為一種包含股票型態並以高年息收益為主的一種組合式證券，投資期間較短(期間多為1~3個月)，其設計是使投資人可獲得較一般固定收益證券為高的回收保證，其收益率較高於一般貨幣市場產品所提供的無風險利率。高收益票券共有三種設計型式：看多、看空及盤整三種型式，本文僅以看多型高收益票券為例作一介紹。投資看多型高收益票券的最佳時機點在於股市呈現短期區間盤整或股價處於相對低檔時，該時點投資風險也相對減少。

看多型高收益票券(以下簡稱高收益票券)之結構為一零息債券(zero coupon bond)加上賣出相關標的證券選擇權(short stock option)的組合，在到期日時，若標的證券價格等於或高於履約價格，投資人可領回票券面額；若標的證券價格低於執行價格，投資人則須依約定承接相當於履約比例數量之標的證券，其持有成本亦較當時買入便宜。

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Commercial paper

- A short-term unsecured note
 - Range from 1 day to 270 days
 - Register is required for maturity>270 days
 - Issuers typically have high credit ratings
- To provide short-term funds for seasonal and working capital needs
- Bridge finance
 - Short-term finance in connecting the gap between long term funds
- ✓ Ex: Suppose that a corporation needs long-term funds to build a plant
- ✓ Rather than raising long-term funds immediately, the corporation may postpone the offering until favorable market conditions prevail.
- ✓ The funds raised by issuing *commercial paper* are used until longer-term securities are sold.
- Commercial paper is traded mainly in the primary market
- Opportunities for resale in the secondary market are more limited
- Commercial paper is rated *prime*, *desirable*, or *satisfactory*, depending on the credit standing of the issuing company.
- *Rolling over* short-term paper:
 - Issue new papers to finance the payout of old ones.

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Issuers of Commercial Paper

- ✓ Corporate issuers of *commercial paper* can be divided into
 - ✓ financial companies
 - ✓ nonfinancial companies.
- ✓ Although the issuers of *commercial paper* typically have high credit ratings, smaller and less well-known companies with lower credit ratings have been able to issue *commercial paper*.
 - They have been able to do so by means of:
 - i. credit support from a firm with a high credit rating (such paper is called *credit-supported commercial paper*)
 - ii. collateralizing the issue with high-quality assets (such paper is called *asset-backed commercial paper*).

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Default Risk and Credit Ratings of Commercial Paper

- ✓ With one exception, between 1971 and mid-1989 there were no defaults on *commercial paper*.
- The ratings assigned by these three rating companies are shown in Exhibit 7-12 (*see next slide*).
- As with the ratings on other securities, *commercial paper* ratings are categorized as either
 - *investment grade*
 - *non-investment grade*.
- As with corporate bond ratings, rating agencies publish rating transition matrices for *commercial paper* ratings.

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Exhibit 7-12 Commercial Paper Ratings

Category	Fitch	Moody's	S&P
Investment grade	F-1+		A-1+
	F-1	P-1	A-1
	F-2	P-2	A-2
	F-3	P-3	A-3
Noninvestment grade	F-S	NP (not prime)	B
			C
			D
In default	D		D

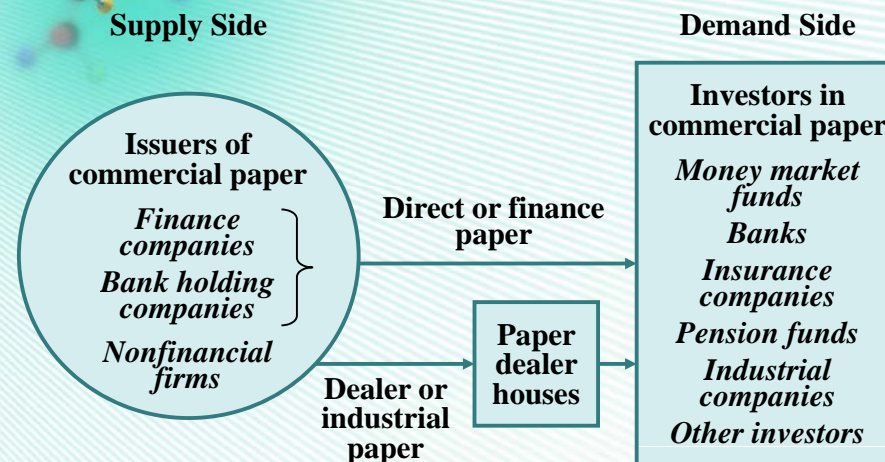
7-42

Directly Placed Versus Dealer-Placed Paper

- ✓ *Commercial paper* is classified as either direct paper or dealer-placed paper.
 - i. *Directly placed paper* is sold by the issuing firm directly to investors without the help of an agent or an intermediary.
 - ii. *Dealer-placed commercial paper* requires the services of an agent to sell an issuer's *commercial paper*

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Structure of the Commercial Paper Market



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Tier 1 and Tier 2 Papers

- ✓ A major investor in *commercial paper* is money market mutual funds.
- ✓ However, there are restrictions imposed on money market mutual funds by the SEC to invest “eligible *commercial paper*”.
- ✓ To be eligible *commercial paper*, the issue must carry one of the two highest ratings (“Tier-1” or “Tier-2”) from at least two of the nationally recognized statistical ratings agencies. (See Exhibit 7-12)

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Maturities & Rate of Return

- Maturities of U.S. commercial paper range from three days (“weekend paper”) to nine months.
- Most commercial paper is issued at a discount from par, and yields to the investor are calculated by the bank discount method, just like Treasury bills
- ✓ The *commercial paper* rate is higher than the T-bill rate for the same maturity.
 - i. The investor in *commercial paper* is exposed to credit risk.
 - ii. The interest earned from investing in Treasury bills is exempt from state and local income taxes.
 - iii. *Commercial paper* is less liquid than Treasury bills.

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Bank Loans

- Bank loans to corporate borrowers are divided into:
 - investment-grade loans (borrowers have investment-grade ratings.)
 - leveraged loans. (below-investment-grade)
- *Syndicated bank loan*:
 - a group (or syndicate) of banks provides funds to the borrower.
 - Used by borrowers who seek to raise a large amount of funds in the loan market.
 - called *senior bank loans* because of their priority over subordinated lenders (bondholders)
- *Bullet loans*:
 - No repayment of the principal is made until the maturity date

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Bank Loans (continued)

- Syndicated loans are distributed by two methods: *assignment* or *participation*.
 - ✓ The method of assignment is more desirable
 - ✓ The holder of a loan who sells a portion can do so by passing the interest in the loan by the *method of assignment*.
 - The seller transfers all rights completely to the holder of the assignment, now called the *assignee*.
 - The assignee is said to have *privity of contract* with the borrower.
 - ✓ A *participation* involves a holder of a loan “participating out” a portion of the holding in that particular loan.
 - ✓ Does not grant privity of the contract

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Bank Loans (continued)

➤ Secondary Market for Syndicated Bank Loans

- ✓ In old days,
 - ✓ retained loans in their portfolio,
- ✓ Now,
 - ✓ traded in the secondary market
 - ✓ securitized to create collateralized loan obligations

➤ High-Yield Bond versus Leveraged Loans

- ✓ Leveraged loans are bank loans in which the borrower is a non-investment-grade borrower.
- ✓ Hence, leverage loans and high-yield bonds are alternative sources of debt by noninvestment- grade borrowers.

Bankruptcy and Creditor Rights

➤ Priority:

- bank loan > corporate bond > equity
- The law governing bankruptcy in the United States is the Bankruptcy Reform Act of 1978.
 - ✓ The *liquidation* of a corporation means that all the assets will be distributed to the holders of claims of the corporation and no corporate entity will survive.
 - ✓ In a *reorganization*, a new corporate entity will result.

Absolute Priority: Theory and Practice

- ✓ Senior creditors are paid in full before junior creditors are paid anything. Hypothesis to explain why absolute priority is violated.
- ✓ *Incentive hypothesis* :
 - ✓ The longer the negotiation process
 - ✓ The greater the bankruptcy costs and the smaller the amount to be distributed
 - ✓ bond holders distribute the value to investors to shorten the negotiation.
- ✓ *Recontracting process hypothesis* :
 - ✓ The violation of absolute priority reflects a recontracting process between stockholders and senior creditors
 - ✓ Preserve value on behalf of stockholders.
- ✓ *Stockholders' influence on the reorganization plan hypothesis* :
 - ✓ creditors are less informed about the true economic operating conditions of the firm than management.
- ✓ *Strategic bargaining process hypothesis* :
 - ✓ Increasing complexity of firms that declare bankruptcy will emphasize the negotiating process and result in an even higher incidence of violation of the absolute priority rule.

國內票券市場

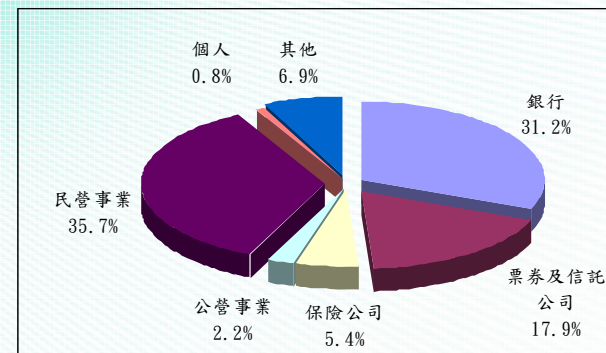
- 國內本票種類
 - 交易性商業本票、第一類商業本票
 - 基於實際交易而產生之票據
 - 發票人多半會開立禁止背書轉讓之交易性商業本票
 - 致使交易性商業本票佔市場比重及交易意願皆不高
 - 融資性商業本票、第二類商業本票
 - 企業為籌措短期週轉資金而發行之票據
 - 發行期限最長為一年
 - 接受信用評等
- 市場參與者
 - 初級市場參與者
 - 公營企業及民營企業：發行票券籌資
 - 次級市場參與者
 - 銀行：購買票券可充當流動準備
 - 民營事業：日常短期資金調度
 - 票券公司：短期票券簽證、承銷、保證、背書、經紀等業務

國內票券市場發行額及交易

	年	合計	國庫券	商業本票	承兌匯票	可轉讓定存單
發行額	2000	103,246	950	90,327	462	11,508
	2001	99,015	850	89,268	361	8,536
	2002	83,781	1,800	75,251	401	6,329
	年	合計	國庫券	商業本票	承兌匯票	可轉讓定存單
交易額	2000	639,153	6,853	569,423	1,758	61,118
	2001	580,594	1,907	502,166	1,097	75,424
	2002	530,483	35,611	431,220	1,872	61,780

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票券次級市場參與者



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