

Fixed Income Securities

Topics to be Discussed

- Description of Fixed Income Securities
- Characteristics Used to Evaluate Securities
- Fixed Income Securities
 - Treasury Bonds
 - Agency Bonds
 - Municipal Bonds
 - Corporate Bonds
 - Institutional Bonds
- Evaluation of Bonds
- Preferred Stock

Description of Fixed Income Securities

Fixed income securities are a group of investment vehicles that offer a fixed periodic return

- ☛ Key forms of fixed income securities
 - bonds
 - preferred stock

Characteristics Used to Evaluate Fixed Income Securities

Manner of Payment

- ☛ many fixed income securities offer periodic payments (e.g. semiannual interest) and a specified amount payable at maturity
- ☛ some securities offer no periodic interest

Risk

- ☛ what is the nature of the security protecting the investor's investment

Yield

☛ current yield

- annual interest/current market value
- example

\$10,000, 22-years until maturity, 7 3/4% bond trading at 80.13

interest = \$10,000 x 7 3/4% = \$775

trading price = \$10,000 x 80.13% = \$8,013

current yield = \$775/\$8,013 = 9.67%

- this does not consider difference between purchase price and maturity value

☛ yield to maturity

- yield to maturity considers not only the periodic payments but also the difference between the purchase price and the maturity value
- yield reflects the earnings if investor holds security to maturity
- example

\$10,000, 22-years until maturity, 7 3/4% bond, trading at 80.13

present value tables

8,013 = present value of \$10,000 + present value of interest

What interest rate makes this equation true?

bond tables (see next page)

yield is 10% (not 9.67%)

☛ yield to call

- when fixed income security is callable prior to maturity, yield to maturity is not necessarily applicable
- if called, issuer will pay premium over 100% of face value
- similar to yield to maturity
- present value rate which makes all cash payments to call date equal to market value

Taxes on income

- ☛ interest on some debt instruments not subject to federal and/or state and local taxes

Liquidity

- ☛ degree of activity in secondary bond market will affect the price that can be obtained if and when a bond is sold

Bond Yield Table

7.75%	Years							
Yield	18.5	19.0	19.5	20.0	20.5	21.0	21.5	22.0
8.50%	93.07	92.99	92.92	92.85	92.78	92.71	92.65	92.59
8.60%	92.20	92.11	92.03	91.95	91.88	91.80	91.73	91.67
8.70%	91.34	91.25	91.16	91.07	90.99	90.91	90.83	90.76
8.80%	90.49	90.39	90.29	90.20	90.11	90.02	89.94	89.86
8.90%	89.66	89.55	89.44	89.34	89.25	89.15	89.07	88.98
9.00%	88.84	88.72	88.61	88.50	88.40	88.30	88.20	88.11
9.10%	88.02	87.90	87.78	87.67	87.56	87.45	87.35	87.26
9.20%	87.22	87.09	86.97	86.85	86.73	86.62	86.52	86.42
9.30%	86.43	86.30	86.16	86.04	85.92	85.80	85.69	85.59
9.40%	85.66	85.51	85.37	85.24	85.12	85.00	84.88	84.77
9.50%	84.89	84.74	84.59	84.46	84.33	84.20	84.08	83.97
9.60%	84.13	83.97	83.83	83.68	83.55	83.42	83.30	83.18
9.70%	83.38	83.22	83.07	82.92	82.78	82.65	82.52	82.40
9.80%	82.64	82.48	82.32	82.17	82.02	81.89	81.76	81.63
9.90%	81.92	81.75	81.58	81.43	81.28	81.14	81.00	80.87
10.00%	81.20	81.02	80.86	80.70	80.54	80.40	80.26	80.13
10.20%	79.79	79.61	79.43	79.26	79.11	78.95	78.81	78.67
10.40%	78.42	78.23	78.05	77.87	77.71	77.55	77.40	77.26
10.60%	77.09	76.89	76.70	76.52	76.35	76.19	76.03	75.88
10.80%	75.79	75.59	75.39	75.20	75.03	74.86	74.70	74.55
11.00%	74.53	74.32	74.12	73.93	73.74	73.57	73.41	73.26
11.20%	73.30	73.08	72.88	72.68	72.50	72.32	72.15	72.00
11.40%	72.10	71.88	71.67	71.47	71.28	71.10	70.93	70.78
11.60%	70.93	70.71	70.49	70.29	70.10	69.92	69.75	69.59
11.80%	69.79	69.56	69.35	69.14	68.95	68.77	68.60	68.43
12.00%	68.68	68.45	68.23	68.03	67.83	67.65	67.47	67.31

SOURCE: Reproduced from *Expanded Bond Value Tables*, Pub. 83, copyright 1970, page 844, Financial Publishing Co., Boston, MA

Types of Fixed Income Securities

Bonds

☛ Treasury Securities

- U.S. Savings Bonds

- ⇒ Series I

- ▶ issued at face value
- ▶ reach maturity thirty years from date of issue
- ▶ smallest denomination is \$50
- ▶ pays interest semiannually
- ▶ inflation adjusted interest rate (adjusted every 6 months)
- ▶ owners may defer reporting the earnings for Federal income tax purposes until they redeem the bonds

- ⇒ Series EE

- ▶ as of May 2005, bonds are issued at face value
- ▶ interest is fixed for 20 years, bonds mature in 30 years
- ▶ smallest denomination is \$50
- ▶ owners may defer reporting the earnings for Federal income tax purposes until they redeem the bonds

- ⇒ Series HH

- ▶ issued at face amount
- ▶ reach maturity twenty years from date of issue
- ▶ smallest denomination is \$500
- ▶ pays interest semiannually
- ▶ interest that is paid on Series HH bonds is subject to Federal income tax in the year in which it is received. Interest is exempt from state and local taxes.
- ▶ as of August 31, 2004 no longer sold or convertible to other Savings Bonds

- ⇒ advantages

- ▶ easy to buy
- ▶ safe; principal and interest guaranteed by full faith and credit of the United States
- ▶ market based interest
- ▶ no fees or commissions
- ▶ if lost, replaced free of charge
- ▶ federal taxes deferred
- ▶ no state or local taxes
- liquid long-term investment – can cash EE or I bonds anytime after 12 months. However there is a 3 month penalty if bonds cashed in before 5 years

- ⇒ disadvantages

- ▶ limited purchase: \$30,000 face value in one year per person
- ▶ other vehicles may pay higher rates
- ▶ no secondary market

- Additional Treasury Obligations
 - ⇒ interest bearing bonds
 - ▶ original maturity of more than ten years
 - ▶ minimum denomination \$1,000
 - ⇒ interest bearing notes
 - ▶ original maturity of one to ten years
 - ▶ minimum denomination \$1,000
 - ⇒ non-interest bearing bills
 - ▶ original maturity of one year or less
 - ▶ minimum denomination \$10,000
 - ⇒ treasury holds weekly auctions for treasury bills
 - ⇒ at various times treasury will auction notes and bonds
 - ⇒ securities backed by full faith and credit of U.S. government; considered “risk free”
 - ⇒ interest not subject to state and local taxation
 - ⇒ there is a secondary market

DEPARTMENT OF THE TREASURY

TREASURY



NEWS

OFFICE OF PUBLIC AFFAIRS • 1500 PENNSYLVANIA AVENUE, N.W. • WASHINGTON, D.C. • 20220 • (202) 622-2960

EMBARGOED UNTIL 11:00 A.M.
January 7, 2008

Contact: Office of Financing
202/504-3550

TREASURY OFFERS 4-WEEK BILLS

The Treasury will auction 4-week Treasury bills totaling \$15,000 million to refund an estimated \$23,000 million of publicly held 4-week Treasury bills maturing January 10, 2008, and to pay down approximately \$8,000 million. Tenders for 4-week Treasury bills to be held on the book-entry records of Legacy Treasury Direct will not be accepted. However, tenders for 4-week Treasury bills to be held on the book-entry records of TreasuryDirect will be accepted.

The Federal Reserve System holds \$12,408 million of the Treasury bills maturing on January 10, 2008, in the System Open Market Account (SOMA). This amount may be refunded at the highest discount rate of accepted competitive tenders in this auction up to the balance of the amount not awarded in today's 13-week and 26-week Treasury bill auctions. Amounts awarded to SOMA will be in addition to the offering amount.

Up to \$1,000 million in noncompetitive bids from Foreign and International Monetary Authority (FIMA) accounts bidding through the Federal Reserve Bank of New York will be included within the offering amount of the auction. These noncompetitive bids will have a limit of \$100 million per account and will be accepted in the order of smallest to largest, up to the aggregate award limit of \$1,000 million.

The allocation percentage applied to bids awarded at the highest discount rate will be rounded up to the next hundredth of a whole percentage point, e.g., 17.13%.

This offering of Treasury securities is governed by the terms and conditions set forth in the Uniform Offering Circular for the Sale and Issue of Marketable Book-Entry Treasury Bills, Notes, and Bonds (31 CFR Part 356, as amended).

Details about the new security are given in the attached offering highlights.

oOo

Attachment

PUBLIC DEBT NEWS

Department of the Treasury • Bureau of the Public Debt • Washington, DC 20239



TREASURY SECURITY AUCTION RESULTS
BUREAU OF THE PUBLIC DEBT - WASHINGTON DC

FOR IMMEDIATE RELEASE
January 08, 2008

CONTACT: Office of Financing
202-504-3550

RESULTS OF TREASURY'S AUCTION OF 4-WEEK BILLS

Term: 28-Day Bill
Issue Date: January 10, 2008
Maturity Date: February 07, 2008
CUSIP Number: 912795C66

High Rate: 3.240% Investment Rate 1/: 3.302% Price: 99.748000

All noncompetitive and successful competitive bidders were awarded securities at the high rate. Tenders at the high discount rate were allotted 18.41%. All tenders at lower rates were accepted in full.

AMOUNTS TENDERED AND ACCEPTED (in thousands)

Tender Type	Tendered	Accepted
Competitive	\$ 41,417,500	\$ 14,648,985
Noncompetitive	341,091	341,091
FIMA (noncompetitive)	10,000	10,000
SUBTOTAL	41,768,591	15,000,076 2/
Federal Reserve	1,006,130	1,006,130
TOTAL	\$ 42,774,721	\$ 16,006,206

Median rate 3.150%: 50% of the amount of accepted competitive tenders was tendered at or below that rate. Low rate 3.100%: 5% of the amount of accepted competitive tenders was tendered at or below that rate.

Bid-to-Cover Ratio = 41,768,591 / 15,000,076 = 2.78

1/ Equivalent coupon-issue yield.

2/ Awards to TREASURY DIRECT = \$168,092,000

Treasury Quotes

Source: <http://online.wsj.com/public/resources/documents/tsyquotefree.htm>

U.S. Government Bonds and Notes

Representative Over-the-Counter quotation based on transactions of \$1 million or more. Treasury bond, note and bill quotes are from midafternoon. Colons in bond and note bid-and-asked quotes represent 32nds; 101:01 means 101 1/32. Net change in 32nds. n-Treasury Note. i-Inflation-indexed issue. Treasury bill quotes in hundredths, quoted in terms of a rate of discount. Days to maturity calculated from settlement date. All yields are to maturity and based on the asked quote. For bonds callable prior to maturity, yields are computed to the earliest call date for issues quoted above par and to the maturity date for issues quoted below par.

*-When issued. Daily change expressed in basis points.

Bonds and Notes

Rate	Maturity Mo/Yr	Bid	Asked	Chg	Asked Yield
4 3/8	Jan 08 n	100:00	100:01	....	3.06
3	Feb 08 n	99:30	99:31	....	3.04
5 1/2	Feb 08 n	100:04	100:05	....	3.04
3 3/8	Feb 08 n	100:00	100:00	....	3.04
4 5/8	Feb 08 n	100:04	100:05	....	2.86
4 5/8	Mar 08 n	100:08	100:09	....	2.93
4 7/8	Apr 08 n	100:15	100:16	....	2.88
2 5/8	May 08 n	99:27	99:28	+1	2.99

Bills

Maturity	Days to Mat.	Bid	Asked	Chg	Ask Yield
Jan 24 08	2	2.55	2.54	-0.44	2.58
Jan 31 08	9	2.66	2.65	-0.43	2.69
Feb 07 08	16	2.58	2.57	-0.45	2.61
Feb 14 08	23	2.57	2.56	-0.45	2.60
Feb 21 08	30	2.64	2.63	-0.38	2.67
Feb 28 08	37	2.67	2.66	-0.35	2.70

Agency Bonds

- bonds issued by political subdivisions of the U.S. government
- some backed by full faith and credit of U.S.; others guaranteed by issuing agency
- historically, agency issues have offered higher yields than treasury obligations
- many are exempt from state and local taxes
- secondary (OTC) market for agency bonds

☛ Municipal Bonds

- bonds are the issue of states, counties, cities, and other political subdivisions such as school districts and water and sewer districts
- two broad classes of bonds: general obligation and revenue
- interest immune from federal income tax (capital gains are taxable)
- due to tax advantage, interest rates on municipal bonds less than other comparable taxable bonds
- secondary (OTC) market for municipal bonds

☛ Corporate Bonds

- terms of corporate bonds vary as to security, risk, yield, and maturity
- usual denomination \$1,000
- usual term 25 to 40 years
- interest usually paid semiannually
- secondary market (OTC and exchanges)

☛ Institutional Bonds

- smallest segment of bond market
- obligations marketed by variety of private, non-profit institutions
 - ⇒ schools, hospitals, churches
- secondary market almost nonexistent

New York Exchange Bonds

Reported bond volume and trades on NYSE (par value in thous.), 2006

	<u>Par value total</u>	<u>Par value avg. daily</u>	<u>No. of trades</u>	<u>Avg. daily trades</u>	<u>Avg. trade size (1000s)</u>
January	\$52,370	\$2,619	1,644	82	31.9
February	\$34,014	\$1,790	1,232	65	27.6
March	\$82,408	\$3,583	2,006	87	41.1
April	\$61,813	\$3,253	1,526	80	40.5
May	\$41,288	\$1,877	1,522	69	27.1
June	\$27,370	\$1,244	1,008	46	27.2
July	\$23,463	\$1,173	829	41	28.3
August	\$28,466	\$1,238	926	40	30.7
September	\$21,906	\$1,095	740	37	29.6
October	\$17,564	\$798	665	30	26.4
November	\$14,939	\$711	552	26	27.1
December	\$12,515	\$626	529	26	23.7
2006	\$418,116	\$1,666	13,179	53	\$31.7

Source: http://www.nysedata.com/nysedata/asp/factbook/viewer_edition.asp?mode=table&key=2932&category=1

☛ Evaluation of Bonds

- Bond rating agencies
 - ⇒ Moody's
 - ⇒ Standard & Poors

BOND RATINGS

Moody's	S&P	Definition
Aaa	AAA	High-grade investment bonds. The highest rating assigned, denoting extremely strong capacity to pay principal and interest. Often called "gilt edge" securities.
Aa	AA	High-grade investment bonds. High quality by all standards, but rated lower primarily because the margins of protection are not quite as strong.
A	A	Medium-grade investment bonds. Many favorable investment attributes, but elements may be present which suggest susceptibility to adverse economic changes.
Baa	BBB	Medium-grade investment bonds. Adequate capacity to pay principal and interest but possibly lacking certain protective elements against adverse economic conditions
Ba	BB	Speculative issues. Only moderate protection of principal and interest in varied economic times.
B	B	Speculative issues. Generally lacking desirable characteristics of investment bonds. Assurance of principal and interest may be small.
Caa	CCC	Default. Poor-quality issues that may be in default or in danger of default.
Ca	CC	Default. Highly speculative issues, often in default or possessing other market shortcomings.
C		Default. These issues may be regarded as extremely poor in investment quality.
	C	Default. Rating given to income bonds on which no interest is paid.
	D	Default. Issues actually in default, with principal or interest in arrears.

Source: Moody's Bond Record and Standard & Poor's Bond Guide

Evaluation of Bonds (continued)

- ☛ Inadequacy of ratings
 - every bond in a category not necessarily of equal quality
 - rating agencies sometimes differ in evaluation of some issues
 - raters are too slow in changing ratings
- ☛ Deficiencies of historical rate of returns
 - studies of investment returns must have beginning and closing date. Choice of these dates may influence results
 - historical rate of return cannot be taken as indicative of future rate of return
 - your investments are in specific securities, not “average security”; rates of return for specific securities vary greatly

THE WALL STREET JOURNAL.

BONDS

Tracking Bond Benchmarks

Return on investment and spreads over Treasuries and/or yields paid to investors compared with 52-week highs and lows for different types of bonds

Total return dose	YTD total return (%)	Index	Latest	Low	YIELD (%), 52-WEEK RANGE					High
					0	3	6	9	12	15
1281.53	7.0%	Broad market Lehman Aggregate	4,910	4,790						5,850
1574.25	4.6	U.S. Corporate Lehman Brothers	5,790	5,440						6,200
n.a.	n.a.	Intermediate	n.a.	5,170						6,010
n.a.	n.a.	Long term	n.a.	5,290						6,730
n.a.	n.a.	Double-A-rated	n.a.	5,100						5,920
n.a.	n.a.	Triple-B-rated	n.a.	5,700						6,460
n.a.	n.a.	High Yield Constrained Merrill Lynch	n.a.	7,380						9,467
n.a.	n.a.	Triple-C-rated	n.a.	9,243						12,797
n.a.	n.a.	High Yield 100	n.a.	6,865						8,639
n.a.	n.a.	Global High Yield Constrained	n.a.	7,239						9,396
n.a.	n.a.	Europe High Yield Constrained	n.a.	6,036						9,175
1213.21	7.9	U.S. Agency Lehman	4,150	4,130						5,560
1119.59	7.8	10-20 years	4,050	4,040						5,520
1814.41	8.9	20-plus years	5,080	4,970						5,970
1330.09	7.0	Mortgage-Backed Lehman	5,400	5,290						6,190
1309.65	7.0	Ginnie Mae (GNMA)	5,430	5,280						6,210
765.87	7.0	Fannie mae (FNMA)	5,380	5,270						6,180
1196.09	7.0	Freddie Mae (FHLMC)	5,410	5,320						6,200
n.a.	n.a.	Muni Master Merrill Lynch	n.a.	3,786						4,294
230.10	4.9	7-12 year	3,720	3,695						4,256
247.40	3.3	12-22 year	4,310	3,970						4,733
237.24	0.8	22-plus year	4,900	4,197						5,154
1536.10	7.1	Yankee Lehman	5,020	4,840						5,890
375.97	4.0	Global Government J.P. Morgan	3,460	3,350						4,050
522.82	4.9	Canada	4,030	3,950						4,680
231.22	1.8	EMU	4,490	4,030						4,790
434.65	1.7	France	4,410	3,960						4,730
326.56	2.0	Germany	4,360	3,940						4,700
229.55	2.7	Japan	1,470	1,430						1,870
349.49	2.0	Netherlands	4,400	3,950						4,730
514.48	5.1	U.K.	4,440	4,420						5,160
408.61	6.3	Emerging Markets **	6,635	6,336						7,235

* Constrained indexes limit individual issuer concentrations to 2%; the High Yield 100 are the 100 largest bonds
 ** ENBI Global Index
 In U.S. - dollar terms Euro-zone bonds
 Sources: Dow Jones Indexes; Merrill Lynch; Lehman Brothers; J.P.Morgan

Preferred Stock

- ☛ Compared to bonds
 - dividend amount fixed, but may be skipped (rarely)
 - dividends on preferred stock lower claim than interest to bondholders

- ☛ Compared to common stock
 - dividends on preferred higher claim than dividends to common stockholders
 - safer -- prior claim on assets
 - unless participating stock, cannot provide access to higher earnings
 - lacks substantial capital gains potential

- ☛ Attraction to individual
 - lower unit cost than bonds
 - more frequent dividend payments (quarterly) than bond interest (semiannually)

- ☛ Attraction to corporation
 - substantial (70%) tax exemption