

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 ¾% bond trading at 80.13

interest = \$10,000 x 7 ¾% = \$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 ¾% 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

- ▶ http://www.treasurydirect.gov/indiv/products/prod_ibonds_glance.htm
- ▶ issued at face value
- ▶ reach maturity thirty years from date of issue
- ▶ smallest denomination is \$50 (\$25 when purchased electronically)
- ▶ current rate: 5.64% through April 30, 2009
- ▶ inflation adjusted interest rate (adjusted every May and November)

⇒ Series EE

- ▶ http://www.treasurydirect.gov/indiv/products/prod_eebonds_glance.htm
- ▶ as of May 2005, bonds are issued at 50% discount to face value (bonds issued electronically issued at face value)
- ▶ pays interest equal to 90% of the average 5-year Treasury securities yield for the preceding six months.
- ▶ interest is fixed for 20 years, bonds mature in 30 years
- ▶ smallest denomination is \$50

⇒ Series HH

- ▶ 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 until redeemed; can be exempt from federal tax if used to pay college expenses
- ▶ 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

PUBLIC DEBT NEWS

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



Embargoed Until 11:00 A.M.
January 15, 2009

CONTACT: Office of Financing
202-504-3550

TREASURY OFFERING ANNOUNCEMENT ¹

Term and Type of Security	91-Day Bill
Security Description	13-Week Bill
Offering Amount	\$27,000,000,000
Currently Outstanding	\$26,003,000,000
CUSIP Number	912795L58
Auction Date	January 20, 2009
Original Issue Date	October 23, 2008
Issue Date	January 22, 2009
Maturity Date	April 23, 2009
Maximum Award	\$9,450,000,000
Maximum Recognized Bid at a Single Rate	\$9,450,000,000
NLP Reporting Threshold	\$9,450,000,000
NLP Exclusion Amount	\$9,200,000,000
Scheduled Purchases in Treasury Direct	\$1,107,000,000
Minimum Bid Amount and Multiples	\$100
Competitive Bid Rate Increments ²	0.005%
Maximum Noncompetitive Award	\$5,000,000
Eligible for Holding in Treasury Direct	Yes
Eligible for Holding in Legacy Treasury Direct	Yes
Estimated Amount of Maturing Bills Held by the Public	\$130,016,000,000
Maturing Date	January 22, 2009
SOMA Holdings Maturing	\$3,782,000,000
SOMA Amounts Included in Offering Amount	No
FIMA Amounts Included in Offering Amount ³	Yes
Noncompetitive Closing Time	11:00 a.m. ET
Competitive Closing Time	11:30 a.m. ET

¹Governed 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), and this offering announcement. Treasury bills will be issued at a discount or at par.

²Must be expressed as a discount rate with three decimals in increments of 0.005%, e.g., 7.100%, 7.105%.

³FIMA up to \$1,000 million in noncompetitive bids from Foreign and International Monetary Authority not to exceed \$100 million per account.

PUBLIC DEBT NEWS

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



For Immediate Release
January 20, 2009

CONTACT: Office of Financing
202-504-3550

TREASURY AUCTION RESULTS

Term and Type of Security	91-Day Bill	
CUSIP Number	912795L58	
High Rate ¹	0.140%	
Allotted at High	53.11%	
Price	99.964611	
Investment Rate ²	0.142%	
Median Rate ³	0.080%	
Low Rate ⁴	0.000%	
Issue Date	January 22, 2009	
Maturity Date	April 23, 2009	
	Tendered	Accepted
Competitive	\$80,591,935,000	\$24,982,675,000
Noncompetitive	\$1,717,659,400	\$1,717,659,400
FIMA (Noncompetitive)	\$300,000,000	\$300,000,000
Subtotal⁵	\$82,609,594,400	\$27,000,334,400⁶
SOMA	\$0	\$0
Total	\$82,609,594,400	\$27,000,334,400
	Tendered	Accepted
Primary Dealer ⁷	\$66,790,000,000	\$17,341,195,000
Direct Bidder ⁸	\$230,000,000	\$230,000,000
Indirect Bidder ⁹	\$13,571,935,000	\$7,411,480,000
Total Competitive	\$80,591,935,000	\$24,982,675,000

¹ All tenders at lower rates were accepted in full.

² Equivalent coupon-issue yield.

³ 50% of the amount of accepted competitive tenders was tendered at or below that rate.

⁴ 5% of the amount of accepted competitive tenders was tendered at or below that rate.

⁵ Bid-to-Cover Ratio: \$82,609,594,400/\$27,000,334,400 = 3.06

⁶ Awards to combined Treasury Direct systems = \$1,314,839,000.

⁷ Primary dealers as submitters bidding for their own house accounts.

⁸ Non-Primary dealer submitters bidding for their own house accounts.

⁹ Customers placing competitive bids through a direct submitter, including Foreign and International Monetary Authorities placing bids through the Federal Reserve Bank of New York.

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 7/8	May 08 n	100:02	100:03	1.04
5 1/8	Jun 08 n	100:11	100:12	-1	1.37
5	Jul 08 n	100:19	100:20	-1	1.61
3 1/4	Aug 08 n	100:10	100:11	1.79
4 1/8	Aug 08 n	100:16	100:17	-1	1.69
4 7/8	Aug 08 n	100:25	100:26	-1	1.79
3 1/8	Sep 08 n	100:11	100:12	-1	1.87

Bills

Maturity	Days to Mat.	Bid	Asked	Chg	Ask Yield
Feb 14 08	6	1.75	1.74	-0.01	1.76
Feb 21 08	13	2.10	2.09	+0.24	2.12
Feb 28 08	20	2.13	2.12	+0.15	2.15
Mar 06 08	27	2.14	2.13	+0.06	2.16
Mar 13 08	34	2.14	2.13	+0.08	2.16
Mar 20 08	41	2.12	2.11	+0.09	2.14

☛ 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.), 2007

	<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	\$9,724	\$486	558	28	17.4
February	\$9,167	\$482	380	20	24.1
March	\$11,923	\$542	441	20	27.0
April	\$10,028	\$501	350	18	28.7
May	\$7,940	\$361	284	13	28.0
June	\$8,163	\$389	262	12	31.2
July	\$9,275	\$442	239	11	38.8
August	\$4,974	\$216	197	9	25.2
September	\$3,312	\$174	159	8	20.8
October	\$5,324	\$231	191	8	27.9
November	\$5,546	\$264	178	8	31.2
December	\$4,643	\$232	226	11	20.5
2007	\$90,019	\$359	3,465	14	26.0

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

Tracking Bond Benchmarks								
Friday, January 23, 2009								
Closing index values, return on investment and yields paid to investors compared with 52-week highs and lows for different types as "n.a." will update around 12p.m. the following business day.								
Index	Close	% Chg	YTD total return	52-wk % Chg	YIELD (%), 52-WEEK RANGE			
					Latest	Low	High	
Broad Market Lehman Brothers								
U.S. Government/Credit	1546.61	-0.18	-1.08	1.74	3.810	3.540	5.170	
Aggregate Lehman	1346.47	-0.10	-0.52	2.18	4.040	3.540	5.670	
Hourly Treasury Indexes Lehman Brothers								
Composite (Price Return)	1441.19	-0.30	-2.26	4.67	1.810	1.420	3.720	
Composite (Total Return)	11356.11	-0.29	-2.03	9.17	1.810	1.420	3.720	
Intermediate (Price Return)	1290.32	-0.18	-1.01	3.97	1.400	1.050	3.460	
Intermediate (Total Return)	9700.08	-0.17	-0.79	8.19	1.400	1.050	3.460	
Long-Term (Price Return)	1968.67	-0.80	-7.10	7.48	3.510	2.780	4.780	
Long-Term (Total Return)	17744.08	-0.78	-6.82	13.12	3.510	2.780	4.780	
U.S. Corporate Indexes Lehman Brothers								
U.S. Corporate	1492.02	-0.19	0.03	-6.54	7.360	5.430	9.090	
Intermediate	1538.25	-0.05	1.28	-5.76	7.230	5.040	9.030	
Long-term	1638.44	-0.63	-3.62	-8.81	7.750	6.480	9.420	
Double-A-rated (AA)	337.87	-0.47	-1.26	-1.83	5.420	4.740	7.610	
Triple-B-rated (Baa)	302.51	0.05	1.49	-9.44	9.220	5.990	10.220	

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