Bond Details

Settlement	10-Jun-16
Denomination	1,000
Par	100.0000%
Clean Price[1]	139.0469%
Coupon	6.0000%
Frequency	2
Maturity	15-Feb-26	9.69

Current Coupon

Accrued Days	116
Remaining	66
Total	182
Accrued Fraction	0.63736
Coupon Fraction	0.36264

Yield to Maturity (YTM)

Initial guess[2]	1.648686%
YTM Used	1.624644%
Shift Size	-0.0100%

Invoice[3]

Face	1,000,000.00
Coupons Due	1,600,000.00
Principal	1,390,468.75
Accrued	19,120.88
Total PV	1,409,589.63
DV01[4]	1,085.48

Bond Cash Flows

Coupon	Start	End
1	2/15/16	8/15/16
2	8/15/16	2/15/17
3	2/15/17	8/15/17
4	8/15/17	2/15/18
5	2/15/18	8/15/18
6	8/15/18	2/15/19
7	2/15/19	8/15/19
8	8/15/19	2/15/20
9	2/15/20	8/15/20
10	8/15/20	2/15/21
11	2/15/21	8/15/21
12	8/15/21	2/15/22
13	2/15/22	8/15/22
14	8/15/22	2/15/23
15	2/15/23	8/15/23
16	8/15/23	2/15/24
17	2/15/24	8/15/24
18	8/15/24	2/15/25
19	2/15/25	8/15/25
20	8/15/25	2/15/26

Bond Price

Clean Price	139.0469%
Accrued	1.9121%
Dirty Price	140.9590%

[1] UST Bond Price Quotes

US Treasuries quote a clean price in 1/32nds. Additionally a '+' or '-' is suffixed to indicate to add or su
Therefore, 139-01+ means the price is 139 1/32 + 1/64 = 139 3/64 = 139.046875

[2] Low Latency YTM Initial Guess Formula (Reduces Solver Iterations)

Fair guess would be to use the coupon for bonds trading near par, although sometimes coupons are z
Therefore, use the below formula. For Intuition consider that each year we earn interest plus we gain,
on average between initial and maturity price.

$$Initial\ Guess = \left(Coupon + \left(\frac{Par - Clean\ Price}{Time\ to\ Maturity} \right) \right) \Big/ \left(\frac{Par + Clean\ Price}{2} \right)$$

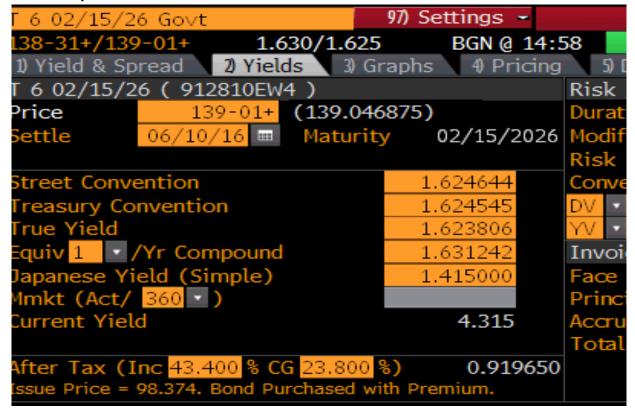| Days	Coupon	DiscFact	PV	Shifted DF	Shifted PV
182	30.00	0.99707	29.91	0.99709	29.91
184	30.00	0.98904	29.67	0.98910	29.67
181	30.00	0.98107	29.43	0.98118	29.44
184	30.00	0.97316	29.19	0.97332	29.20
181	30.00	0.96532	28.96	0.96553	28.97
184	30.00	0.95754	28.73	0.95780	28.73
181	30.00	0.94983	28.49	0.95013	28.50
184	30.00	0.94217	28.27	0.94252	28.28
182	30.00	0.93458	28.04	0.93497	28.05
184	30.00	0.92705	27.81	0.92748	27.82
181	30.00	0.91958	27.59	0.92005	27.60
184	30.00	0.91217	27.37	0.91268	27.38
181	30.00	0.90482	27.14	0.90538	27.16
184	30.00	0.89753	26.93	0.89812	26.94
181	30.00	0.89030	26.71	0.89093	26.73
184	30.00	0.88312	26.49	0.88380	26.51
182	30.00	0.87601	26.28	0.87672	26.30
184	30.00	0.86895	26.07	0.86970	26.09
181	30.00	0.86195	25.86	0.86273	25.88
184	1,030.00	0.85500	880.65	0.85582	881.50

Total Coupons	Total PV	Shifted Total PV
1,600.00	1,409.59	1,410.68
Based on Denomination	(Dirty)	(Dirty)

Numerical DV01[4]

1.08548

Based on Denomination

btract 1/64 to the price.

ero and often bonds trade far from par.
/lose on bond price, which we accrue

US Treasury Bond

Solve for Yield to Maturity   **Dirty Price Target**   **Tolerance**

Dirty Price Target	Tolerance
1,409.58963	1.00E-08

Iteration: 3

X_{n+1}	X_n	X_0	$f(X_n)$	$f'(X_n)$	Epsilon
1.624644%	1.62464%	1.64869%	0.00000	-10,854.77	7.37E-11

Iteration Results

X_0	X_1	X_2	X_3	X_4	X_5
1.648686%	1.624628%	1.624644%	1.624644%		

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}$$

Show Iterations

FALSE

Yield and Spread Analysis

Description   6) Custom

ion	7.760
ied Duration	7.697
	10.850
exity	0.719
01 on 1MM	1,085
0.031	0.00288

ce

	1,000 M
ipal	1,390,468.75
ed (116 Days)	19,120.88
(USD)	1,409,589.63

X_6	X_7	X_8	X_9	X_{10}