

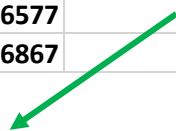


## Treasury Futures Performance is Dictated by Conversion Factor of Cheapest-to-Deliver Cash Treas

While all bonds in the delivery basket are eligible to be delivered, the Cheapest To Deliver (CTD) cash Treasury determines performance characteristics of the Treasury Future.

Conversion Factor 'converts' the Clean Price of a delivery-eligible cash Treasury into a futures price. The cash bond with the lowest converted invoice price will be cheapest to deliver.

Future				
149.9063				
Cash	CF	Invoice Px at Delivery		
98.64844	0.6577	149.990022	is CTD	
103.0781	0.6867	150.1064875		



Cash Security	Price	Source	Conven Yield	Conver Factor	Gro/B...↑ (32nds)	Implied Repo%	Actual Repo%	Net/Bas (32nds)
Adjust Value								
1) T 1 3/8 02/15/31	98-20 <sup>3</sup> / <sub>4</sub>	BGN	1.2771	0.6577	5.052	-0.742	0.050	2.155
2) T 1 5/8 05/15/31	103-02+	BGN	1.2867	0.6867	7.834	-1.210	0.050	3.597

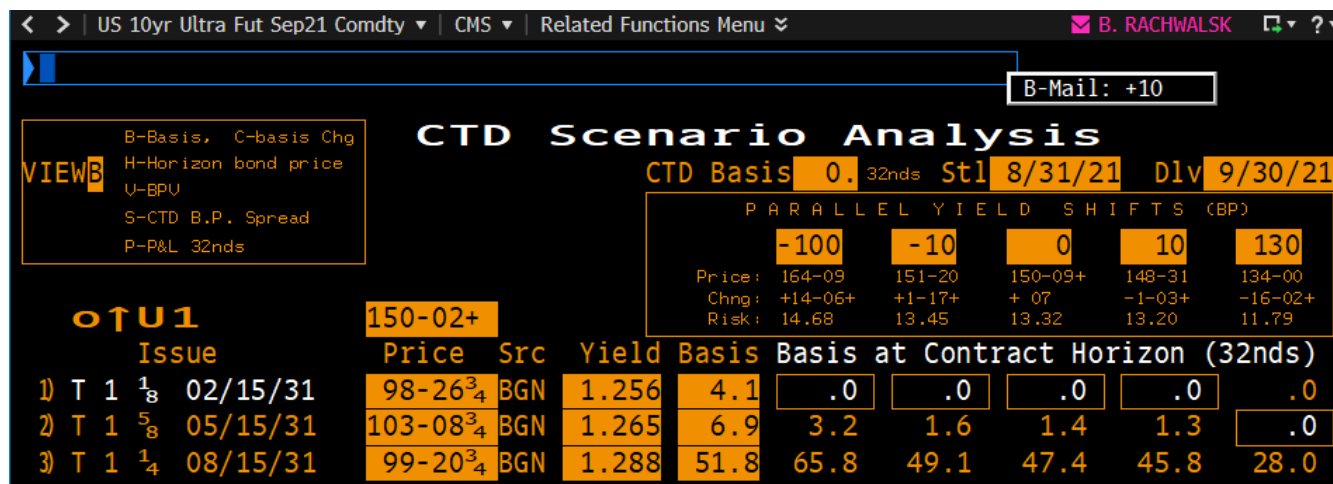
Since the Conversion Factor is the 'price standardizer' for delivery, the Conversion Factor also dictates the hedge ratio of Futures to each Cash Treasury.

Once we know the Cheapest to Deliver (CTD), we know the futures PRICE PERFORMANCE will be in line with the CTD\_price / CF.

Since the Futures Price performs at CTD\_price/CF, the dv'01 of the futures also performs at CTD\_dvo1/CF. Same for convexity behaving at the same ratio.

Finally, the CTD can change. In today's ultra-low rate environment, the shortest-to-maturity cash Treasury with the lowest coupon will tend to be CTD.

If rates were to move up higher (a lot), we could see a change in CTD:



For instance, up about 130bps, CTD would change to 1.625 5/31

JC, for The Fixed Income Group at RJO

Conversion Factor Calculation: [https://www.cmegroup.com/trading/interest-rates/files/Calculating U.S.Treasury Futures Conversion Factors.pdf](https://www.cmegroup.com/trading/interest-rates/files/Calculating_U.S.Treasury_Futures_Conversion_Factors.pdf)

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