

Arbitrage Opportunity in Zeros?

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The table on the next page shows a partial list of US government bond strip quotations on September 13, 2017, from the Wall Street Journal's online data page. The quotes reflect prices at 3pm for September 13, 2017. The quotes are for US Treasury Strips held in the Federal Reserve's book entry system and represent claims to payments by the U.S Treasury. They are generic zero coupon bonds in contrast with the older CATS and TGRS that were put into separate trusts by the investment banks, Salomon Inc. and Merrill Lynch, respectively. However, the table has two sets of quotes, one set for strips that came from a note's principal (the first set of quotes) and one set for strips coming from a note's coupon payments (the second set of quotes).

The last line (underlined in bold) in each set of quotes refers to a strip payment that is due on November 15, 2026. Each quote refers to a \$100 face value payment by the US Treasury. The asked (offer) price for the coupon strip (in the bottom half of the table) is 81.273, which means you can buy that \$100 strip payment for \$81.273. The last line in the upper half of the table shows a bid price of 81.776 for a \$100 strip coming from the principal of the note. An arbitrageur should buy the 'cheap' strip for \$81.273 and sell the 'expensive' strip for \$81.776 and pocket the 50.3 cents per \$100 face value. This may not sound like much but if done for \$100 million face value of strips would produce a nice profit of \$503,000. Note that this arbitrage opportunity is after the transactions costs embedded in the bid-ask spread because you bought from the dealer's asked price on the coupon strip and sold to her bid price of the principal strip. How can this 'simple' arbitrage remain available long enough to appear online in the WSJ (and remain there for month's at a time)?

U.S. Treasury Strips

Wednesday, September 13, 2017

U.S. zero-coupon STRIPS allow investors to hold the interest and principal components of eligible Treasury notes and bonds as separate securities. STRIPS offer no interest payment; investors receive payment only at maturity.

Quotes are as of 3 p.m. Eastern time based on transactions of \$1 million or more. Yields calculated on the ask quote.

Maturity	Bid	Asked	Chg	Asked yield
Treasury Note, Stripped Principal				
2023 Apr 30	89.887	89.937	-0.087	1.89
2023 May 15	89.850	89.900	-0.122	1.89
2023 Aug 15	89.337	89.389	-0.101	1.90
2023 Aug 31	89.321	89.374	-0.092	1.89
2023 Oct 31	88.927	88.981	-0.094	1.91
2023 Nov 15	88.804	88.858	-0.115	1.92
2023 Nov 30	88.741	88.796	-0.095	1.92
2023 Dec 31	88.500	88.555	-0.096	1.94
2024 Feb 15	88.110	88.166	-0.126	1.97
2024 May 15	87.509	87.567	-0.142	2.00
2024 Aug 15	86.959	87.019	-0.150	2.02
2024 Nov 15	86.378	86.439	-0.142	2.04
2025 Feb 15	85.770	85.832	-0.136	2.07
2025 May 15	85.193	85.258	-0.154	2.09
2025 Aug 15	84.586	84.652	-0.168	2.12
2025 Nov 15	84.019	84.087	-0.173	2.13
2026 May 15	82.896	82.967	-0.177	2.17
2026 Aug 15	82.359	82.432	-0.185	2.18
2026 Nov 15	<u>81.776</u>	<u>81.850</u>	<u>-0.186</u>	<u>2.20</u>

Stripped Coupon Interest

2023 Feb 15	89.991	90.039	-0.112	1.95
2023 May 15	89.428	89.478	-0.117	1.97
2023 Aug 15	88.881	88.933	-0.113	1.99
2023 Oct 31	88.658	88.712	-0.093	1.96
2023 Nov 15	88.304	88.358	-0.118	2.02
2023 Dec 31	88.500	88.555	-0.096	1.94
2024 Feb 15	87.707	87.763	-0.122	2.04
2024 May 15	87.174	87.231	-0.125	2.06
2024 Aug 15	86.593	86.653	-0.100	2.08
2024 Nov 15	86.083	86.144	-0.103	2.09
2025 Feb 15	85.439	85.502	-0.157	2.12
2025 May 15	84.794	84.859	-0.161	2.15
2025 Aug 15	84.178	84.244	-0.191	2.18
2025 Nov 15	83.519	83.587	-0.196	2.21
2026 Feb 15	82.903	82.972	-0.204	2.23
2026 May 15	82.407	82.478	-0.210	2.23
2026 Aug 15	81.806	81.878	-0.186	2.25
2026 Nov 15	<u>81.200</u>	<u>81.273</u>	<u>-0.173</u>	<u>2.27</u>