

The Morning Email: TERM TEDS & Dirty TEDS

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Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days.

Want something added? Let me know: jgoulding@ghco.com

Disclaimer: All information within this newsletter is meant for internal use at GH Trader's LLC, only. All information has been recorded to the best of my ability. This material is based upon information that I consider reliable, but I do not represent that it is accurate or complete.

Quotes

F.I. Futures and Cash					
	Last Decimal	Last 32	Last Yield*	MDuration	
ZT	104.8188	104.262	3.153	1.89	
ZF	109.5469	109.175	3.535	3.98	
ZN	112.3906	112.125	3.835	5.92	
2y	99.913	99.2920	3.171	1.86	
5y	99.078	99.0250	3.581	4.49	
10y	100.641	100.2050	4.170	7.98	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAH08	95.660	4.340	84	0.229	MAR	} White Pack	
EDAM08	96.105	3.895	175	0.479	JUN		
EDAU08	96.330	3.670	266	0.728	SEP		
EDAZ08	96.420	3.580	357	0.977	DEC		
EDAH09	96.385	3.615	448	1.227	MAR	} Red Pack	
EDAM09	96.255	3.745	539	1.476	JUN		
EDAU09	96.115	3.885	630	1.725	SEP		
EDAZ09	95.975	4.025	721	1.975	DEC		
EDAH10	95.840	4.160	812	2.224	MAR	} Green Pack	
EDAM10	95.720	4.280	903	2.473	JUN		
EDAU10	95.595	4.405	994	2.723	SEP		
EDAZ10	#VALUE!	#VALUE!	1085	2.972	DEC		
EDAH11	95.405	4.595	1176	3.221	MAR	} Blue Pack	
EDAM11	95.340	4.660	1267	3.471	JUN		
EDAU11	95.255	4.745	1365	3.739	SEP		
EDAZ11	95.230	4.770	1456	3.988	DEC		
EDAH12	95.070	4.930	1547	4.238	MAR	} Gold Pack	
EDAM12	95.090	4.910	1638	4.487	JUN		
EDAU12	94.935	5.065	1729	4.736	SEP		
EDAU12	94.935	5.065	1729	4.736	SEP		

Notes

Futures use CTD for Last Yield

Mduration = Modified Macaulay Duration

#VALUE! = no quote being provided by exchange.

	Last Yield	Net Yield	Last Price	
Q.ED.White	3.964	-1.500	9612.875	} Pack Prices
Q.ED.Red	3.908	-2.375	9618.250	
Q.ED.Green		-1.250	9566.250	
Q.ED.Blue		0.000	9527.000	
Q.ED.Gold		0.000	9496.500	

Red pack is a 2yr proxy
 Gold pack is a 10yr proxy
 Red /Gold is a 2/10 proxy
 Blue pack is a 5yr proxy
 Blue/Gold is a 5/10 proxy

Overview of Hedging

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How many ways can you hedge the TED? Let me count...there's lots and lots, like:

- 1 Regression
 - 2 Engineered
 - 3 Strip with and without Stubs
 - 4 Convexity Bias
 - 5 Weighted
 - 6 Unweighted
- and more...

Most of us are interested in the *unweighted hedge* which is simply a curve trade hedge. There are so many ways to hedge the TED trade that I can't possibly list them all.

If you email me and ask for a specific hedge, I'll get it to you.

jgoulding@ghco.com

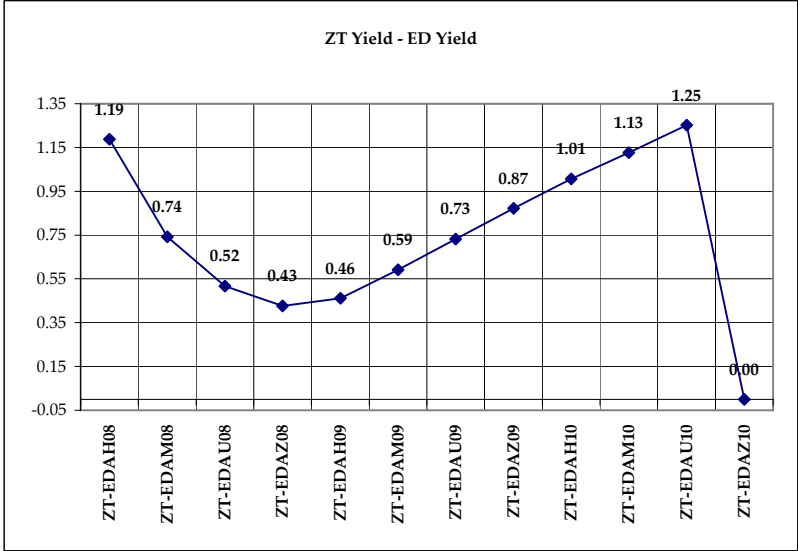
Eurodollar Color Codes for Individual Year Strips:

Color	Year	Contracts
White	One	1 – 4
Red	Two	5 – 8
Green	Three	9 – 12
Blue	Four	13 – 16
Gold	Five	17 – 20
Purple	Six	21 – 24
Orange	Seven	25 – 28
Pink	Eight	29 – 32
Silver	Nine	33 – 36
Copper	Ten	37 – 40

Dirty TED: ZT vs Eurodollar Contracts

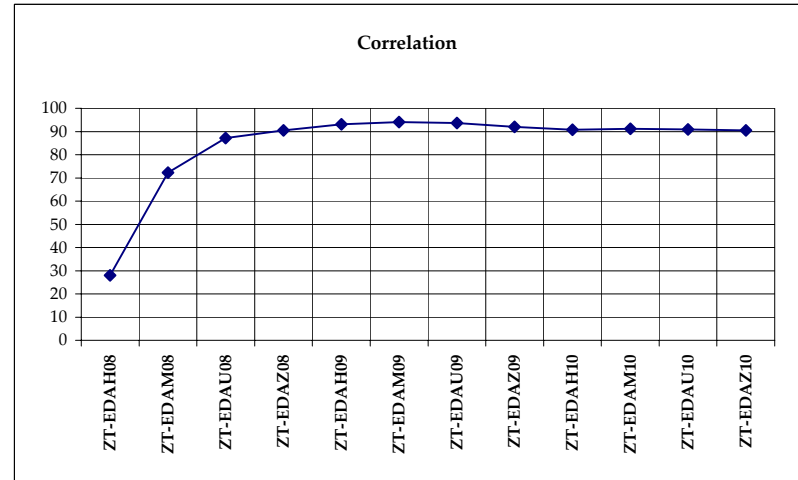
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	9.159	1.19	ZT-EDAH08	27.946
EDAM08	8.714	0.74	ZT-EDAM08	72.300
EDAU08	8.489	0.52	ZT-EDAU08	87.175
EDAZ08	8.399	0.43	ZT-EDAZ08	90.518
EDAH09	8.434	0.46	ZT-EDAH09	93.123
EDAM09	8.564	0.59	ZT-EDAM09	94.082
EDAU09	8.704	0.73	ZT-EDAU09	93.668
EDAZ09	8.844	0.87	ZT-EDAZ09	91.952
EDAH10	8.979	1.01	ZT-EDAH10	90.739
EDAM10	9.099	1.13	ZT-EDAM10	91.177
EDAU10	9.224	1.25	ZT-EDAU10	90.897
EDAZ10	#VALUE!	#VALUE!	ZT-EDAZ10	90.511

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year				
	ZT Duration	Spread Duration		
EDAH08	0.229	1.89	1.66	ZT-EDAH08
EDAM08	0.479	1.89	1.41	ZT-EDAM08
EDAU08	0.728	1.89	1.16	ZT-EDAU08
EDAZ08	0.977	1.89	0.91	ZT-EDAZ08
EDAH09	1.227	1.89	0.67	ZT-EDAH09
EDAM09	1.476	1.89	0.42	ZT-EDAM09
EDAU09	1.725	1.89	0.17	ZT-EDAU09
EDAZ09	1.975	1.89	(0.08)	ZT-EDAZ09
EDAH10	2.224	1.89	(0.33)	ZT-EDAH10
EDAM10	2.473	1.89	(0.58)	ZT-EDAM10
EDAU10	2.723	1.89	(0.83)	ZT-EDAU10
EDAZ10	2.972	1.89	(1.08)	ZT-EDAZ10

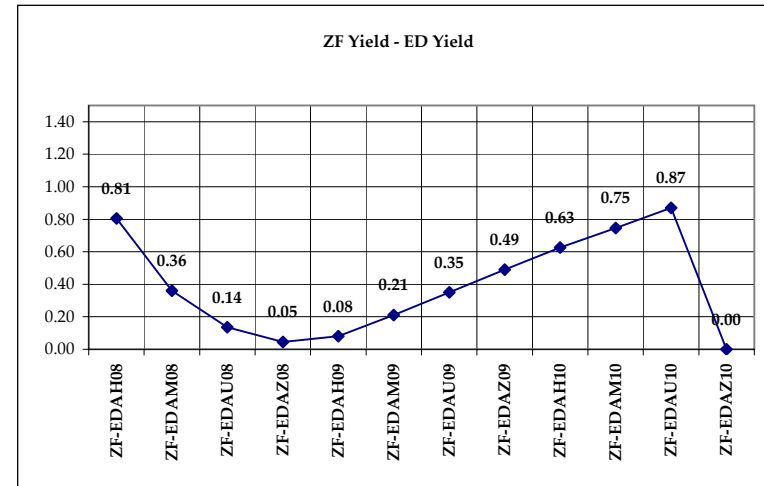
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	13.89	0.81	ZF-EDAH08	22.724
EDAM08	13.44	0.36	ZF-EDAM08	64.181
EDAU08	13.22	0.14	ZF-EDAU08	80.720
EDAZ08	13.13	0.05	ZF-EDAZ08	85.591
EDAH09	13.16	0.08	ZF-EDAH09	90.372
EDAM09	13.29	0.21	ZF-EDAM09	92.894
EDAU09	13.43	0.35	ZF-EDAU09	92.972
EDAZ09	13.57	0.49	ZF-EDAZ09	92.171
EDAH10	13.71	0.63	ZF-EDAH10	91.835
EDAM10	13.83	0.75	ZF-EDAM10	91.681
EDAU10	13.95	0.87	ZF-EDAU10	92.877
EDAZ10	#VALUE!	#VALUE!	ZF-EDAZ10	92.440

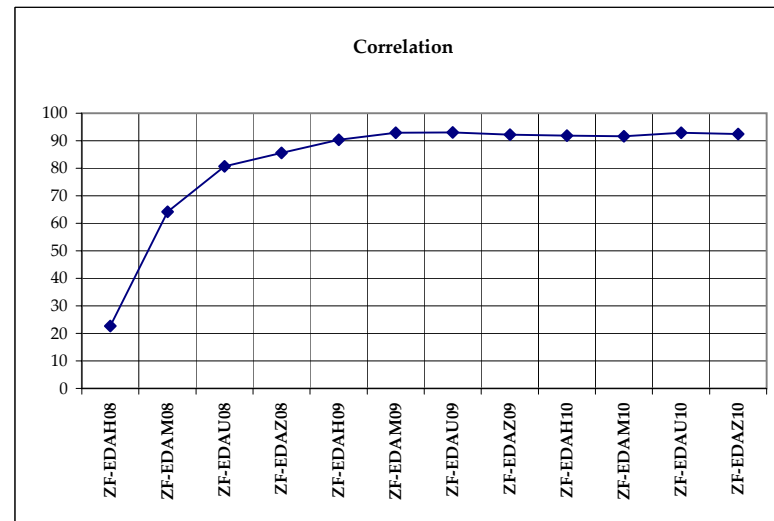
Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	GE Duration as Fraction of year	ZF Duration	Spread Duration	
EDAH08	0.229	3.98	3.75	ZF-EDAH08
EDAM08	0.479	3.98	3.50	ZF-EDAM08
EDAU08	0.728	3.98	3.25	ZF-EDAU08
EDAZ08	0.977	3.98	3.00	ZF-EDAZ08
EDAH09	1.227	3.98	2.75	ZF-EDAH09
EDAM09	1.476	3.98	2.50	ZF-EDAM09
EDAU09	1.725	3.98	2.25	ZF-EDAU09
EDAZ09	1.975	3.98	2.00	ZF-EDAZ09
EDAH10	2.224	3.98	1.75	ZF-EDAH10
EDAM10	2.473	3.98	1.50	ZF-EDAM10
EDAU10	2.723	3.98	1.25	ZF-EDAU10
EDAZ10	2.972	3.98	1.01	ZF-EDAZ10

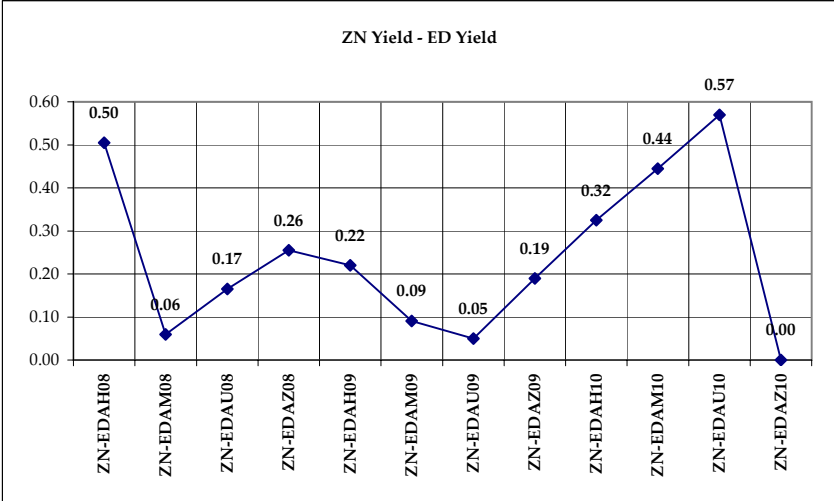
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

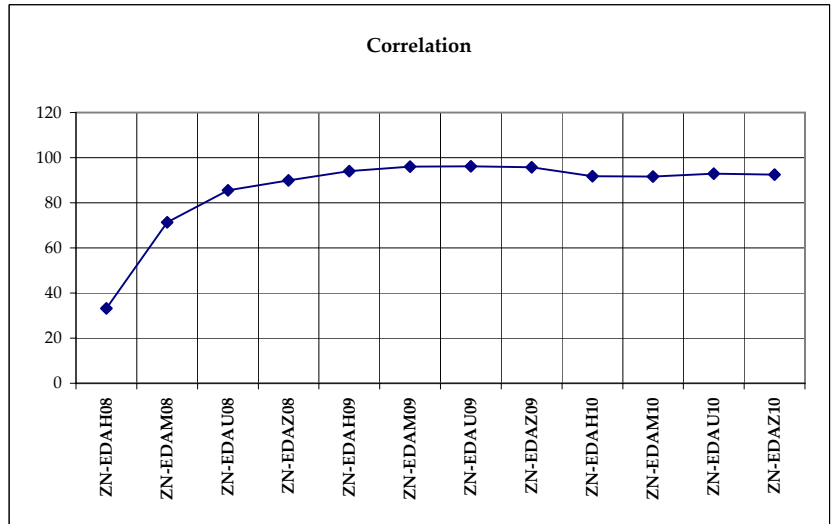
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	16.73	0.50	ZN-EDAH08	33.19
EDAM08	16.29	0.06	ZN-EDAM08	71.32
EDAU08	16.06	0.17	ZN-EDAU08	85.57
EDAZ08	15.97	0.26	ZN-EDAZ08	89.96
EDAH09	16.01	0.22	ZN-EDAH09	94.10
EDAM09	16.14	0.09	ZN-EDAM09	96.07
EDAU09	16.28	0.05	ZN-EDAU09	96.18
EDAZ09	16.42	0.19	ZN-EDAZ09	95.75
EDAH10	16.55	0.32	ZN-EDAH10	91.84
EDAM10	16.67	0.44	ZN-EDAM10	91.68
EDAU10	16.80	0.57	ZN-EDAU10	92.88
EDAZ10	#VALUE!	#VALUE!	ZN-EDAZ10	92.44

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



	GE Duration as Fraction of year	ZN Duration	Spread Duration	
EDAH08	0.229	5.92	5.69	ZN-EDAH08
EDAM08	0.479	5.92	5.44	ZN-EDAM08
EDAU08	0.728	5.92	5.19	ZN-EDAU08
EDAZ08	0.977	5.92	4.94	ZN-EDAZ08
EDAH09	1.227	5.92	4.69	ZN-EDAH09
EDAM09	1.476	5.92	4.44	ZN-EDAM09
EDAU09	1.725	5.92	4.19	ZN-EDAU09
EDAZ09	1.975	5.92	3.94	ZN-EDAZ09
EDAH10	2.224	5.92	3.69	ZN-EDAH10
EDAM10	2.473	5.92	3.44	ZN-EDAM10
EDAU10	2.723	5.92	3.19	ZN-EDAU10
EDAZ10	2.972	5.92	2.95	ZN-EDAZ10

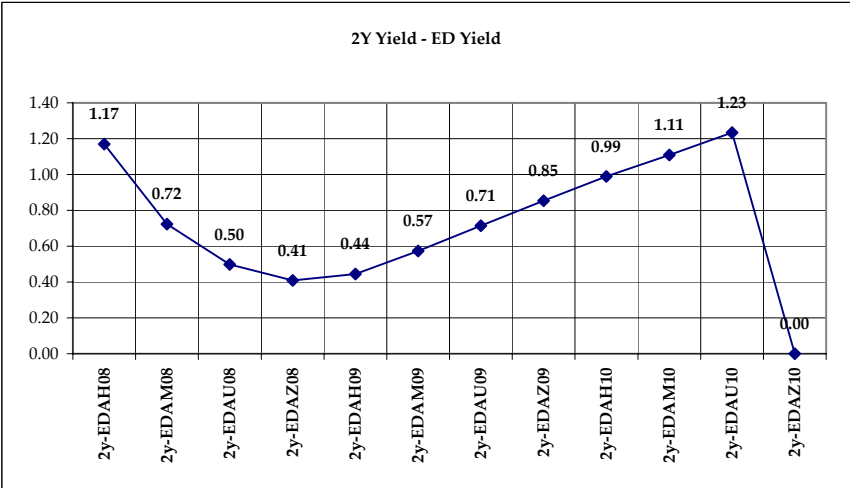
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.25	1.17	2y-EDAH08	-2.513
EDAM08	3.81	0.72	2y-EDAM08	-51.837
EDAU08	3.58	0.50	2y-EDAU08	-70.364
EDAZ08	3.49	0.41	2y-EDAZ08	-51.837
EDAH09	3.53	0.44	2y-EDAH09	-79.318
EDAM09	3.66	0.57	2y-EDAM09	-79.580
EDAU09	3.80	0.71	2y-EDAU09	-78.409
EDAZ09	3.94	0.85	2y-EDAZ09	-75.786
EDAH10	4.07	0.99	2y-EDAH10	-74.024
EDAM10	4.19	1.11	2y-EDAM10	-74.112
EDAU10	4.32	1.23	2y-EDAU10	-73.844
EDAZ10	#VALUE!	#VALUE!	2y-EDAZ10	-73.191

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days.
 These are measuring YIELD correlations.

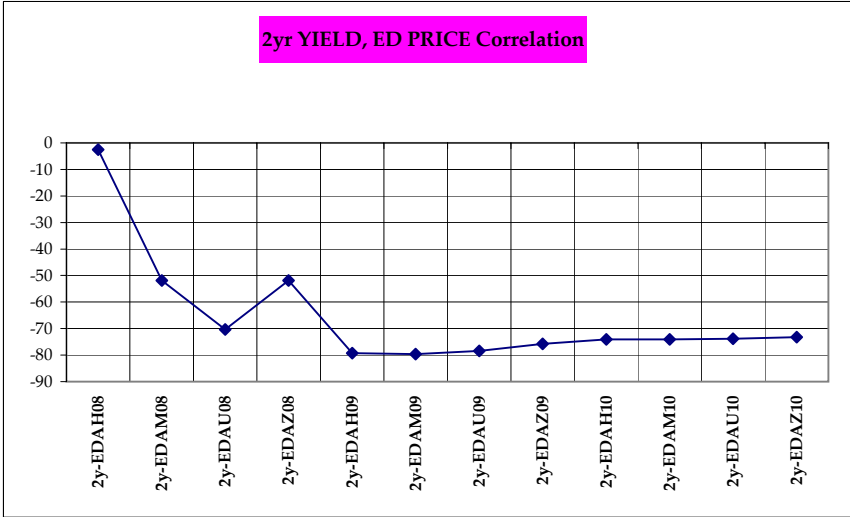


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAH08	0.229	1.86	2y-EDAH08
EDAM08	0.479	1.86	2y-EDAM08
EDAU08	0.728	1.86	2y-EDAU08
EDAZ08	0.977	1.86	2y-EDAZ08
EDAH09	1.227	1.86	2y-EDAH09
EDAM09	1.476	1.86	2y-EDAM09
EDAU09	1.725	1.86	2y-EDAU09
EDAZ09	1.975	1.86	2y-EDAZ09
EDAH10	2.224	1.86	2y-EDAH10
EDAM10	2.473	1.86	2y-EDAM10
EDAU10	2.723	1.86	2y-EDAU10
EDAZ10	2.972	1.86	2y-EDAZ10

The farther away from 0 the spread duration is the riskier the trade.

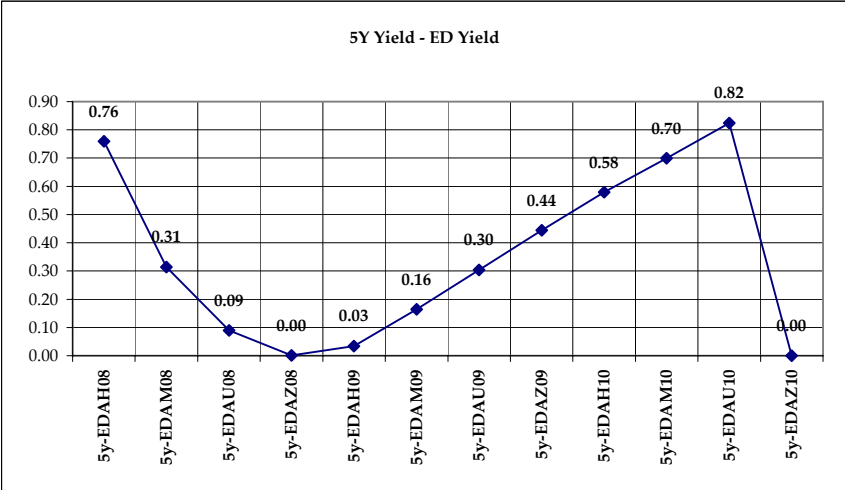
2yr YIELD, ED PRICE Correlation



TERM TED: 5y vs Eurodollar Contracts

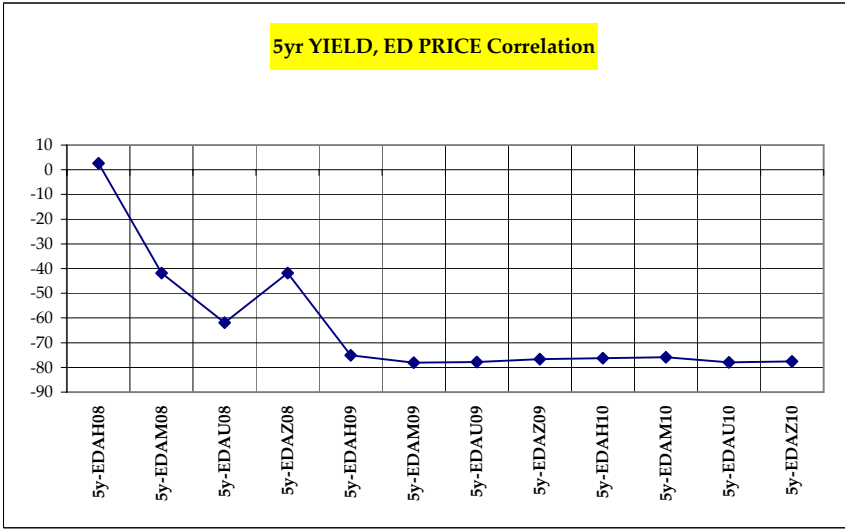
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.42	0.76	5y-EDAH08	2.601
EDAM08	2.97	0.31	5y-EDAM08	-41.813
EDAU08	2.75	0.09	5y-EDAU08	-61.862
EDAZ08	2.66	0.00	5y-EDAZ08	-41.813
EDAH09	2.69	0.03	5y-EDAH09	-75.078
EDAM09	2.82	0.16	5y-EDAM09	-78.075
EDAU09	2.96	0.30	5y-EDAU09	-77.831
EDAZ09	3.10	0.44	5y-EDAZ09	-76.684
EDAH10	3.24	0.58	5y-EDAH10	-76.283
EDAM10	3.36	0.70	5y-EDAM10	-75.837
EDAU10	3.48	0.82	5y-EDAU10	-77.998
EDAZ10	#VALUE!	#VALUE!	5y-EDAZ10	-77.501

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days
 These are measuring YIELD correlations.



	GE Duration as Fraction of year	5Y Duration	Spread Duration	
EDAH08	0.229	4.49	4.26	5y-EDAH08
EDAM08	0.479	4.49	4.01	5y-EDAM08
EDAU08	0.728	4.49	3.76	5y-EDAU08
EDAZ08	0.977	4.49	3.51	5y-EDAZ08
EDAH09	1.227	4.49	3.27	5y-EDAH09
EDAM09	1.476	4.49	3.02	5y-EDAM09
EDAU09	1.725	4.49	2.77	5y-EDAU09
EDAZ09	1.975	4.49	2.52	5y-EDAZ09
EDAH10	2.224	4.49	2.27	5y-EDAH10
EDAM10	2.473	4.49	2.02	5y-EDAM10
EDAU10	2.723	4.49	1.77	5y-EDAU10
EDAZ10	2.972	4.49	1.52	5y-EDAZ10

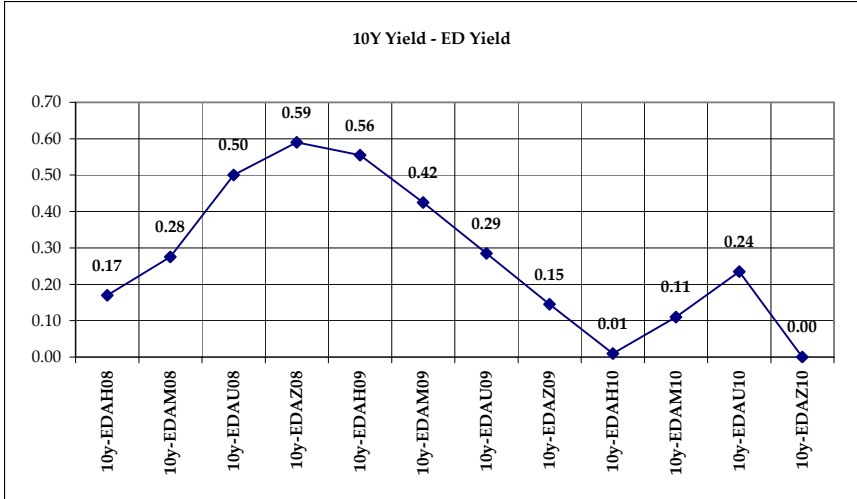
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

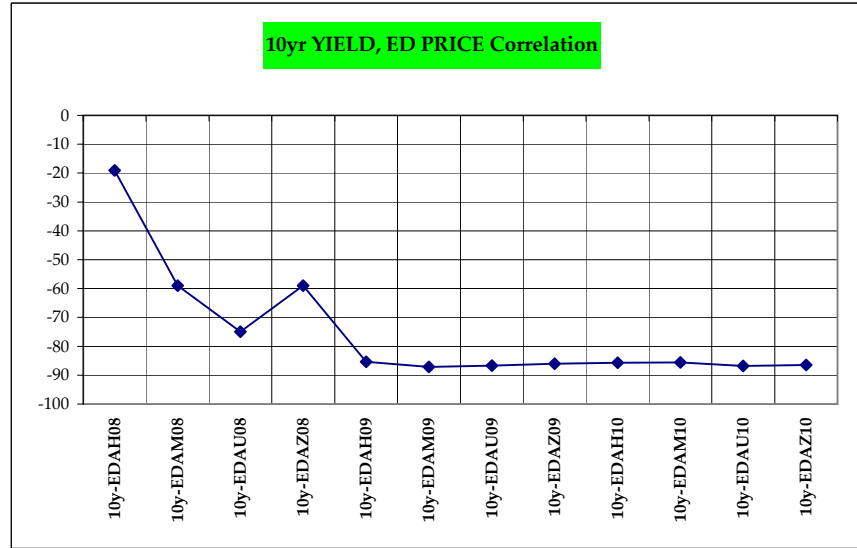
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.42	0.17	10y-EDAH08	-19.087
EDAM08	2.97	0.28	10y-EDAM08	-58.964
EDAU08	2.75	0.50	10y-EDAU08	-74.959
EDAZ08	2.66	0.59	10y-EDAZ08	-58.964
EDAH09	2.69	0.56	10y-EDAH09	-85.378
EDAM09	2.82	0.42	10y-EDAM09	-87.091
EDAU09	2.96	0.29	10y-EDAU09	-86.736
EDAZ09	3.10	0.15	10y-EDAZ09	-86.018
EDAH10	3.24	0.01	10y-EDAH10	-85.682
EDAM10	3.36	0.11	10y-EDAM10	-85.551
EDAU10	3.48	0.24	10y-EDAU10	-86.795
EDAZ10	#VALUE!	#VALUE!	10y-EDAZ10	-86.520

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days
 These are measuring YIELD correlations.



	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAH08	0.229	7.98	7.75	10y-EDAH08
EDAM08	0.479	7.98	7.50	10y-EDAM08
EDAU08	0.728	7.98	7.25	10y-EDAU08
EDAZ08	0.977	7.98	7.00	10y-EDAZ08
EDAH09	1.227	7.98	6.75	10y-EDAH09
EDAM09	1.476	7.98	6.50	10y-EDAM09
EDAU09	1.725	7.98	6.25	10y-EDAU09
EDAZ09	1.975	7.98	6.01	10y-EDAZ09
EDAH10	2.224	7.98	5.76	10y-EDAH10
EDAM10	2.473	7.98	5.51	10y-EDAM10
EDAU10	2.723	7.98	5.26	10y-EDAU10
EDAZ10	2.972	7.98	5.01	10y-EDAZ10

The farther away from 0 the spread duration is the riskier the trade.

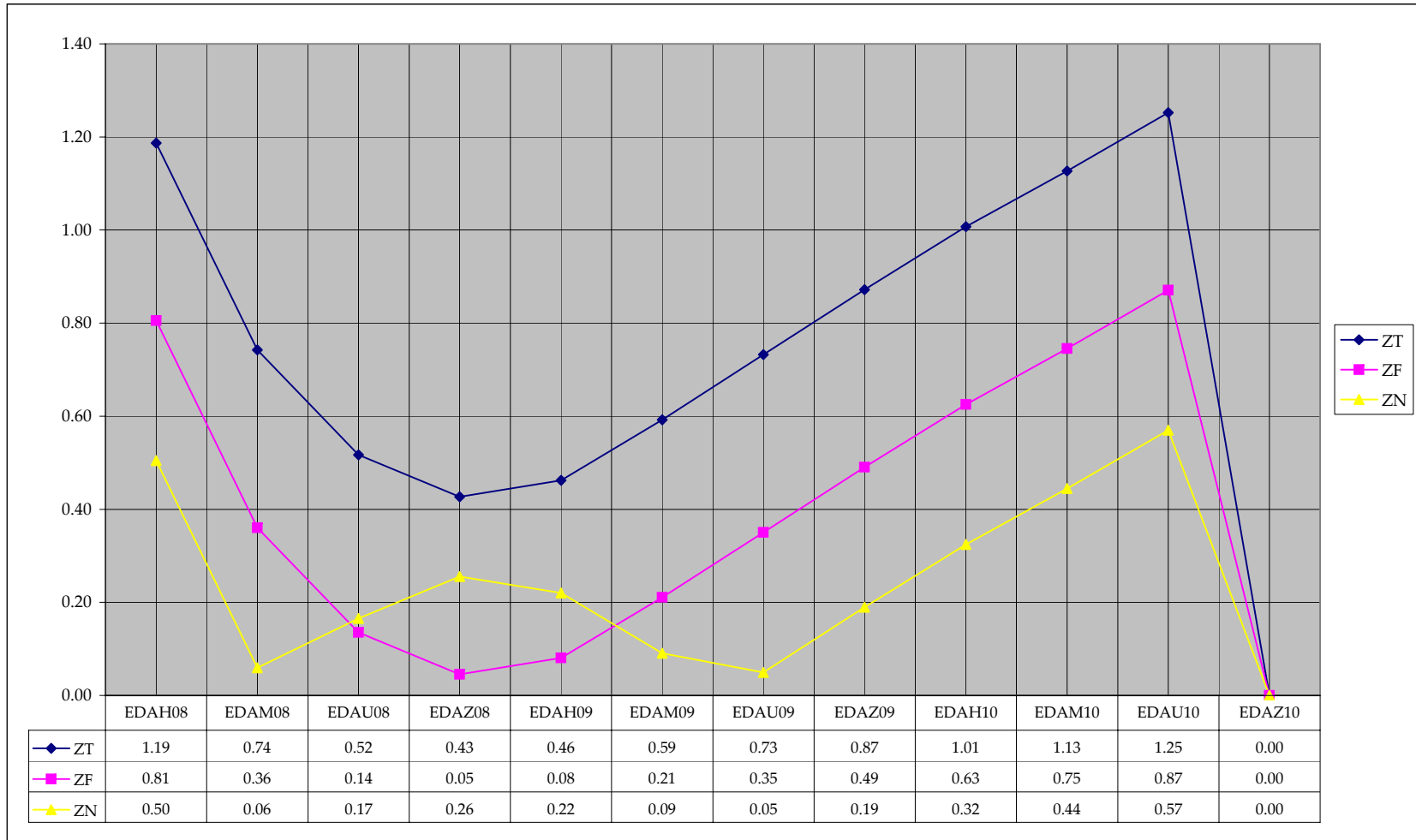


Dirty TED Curve

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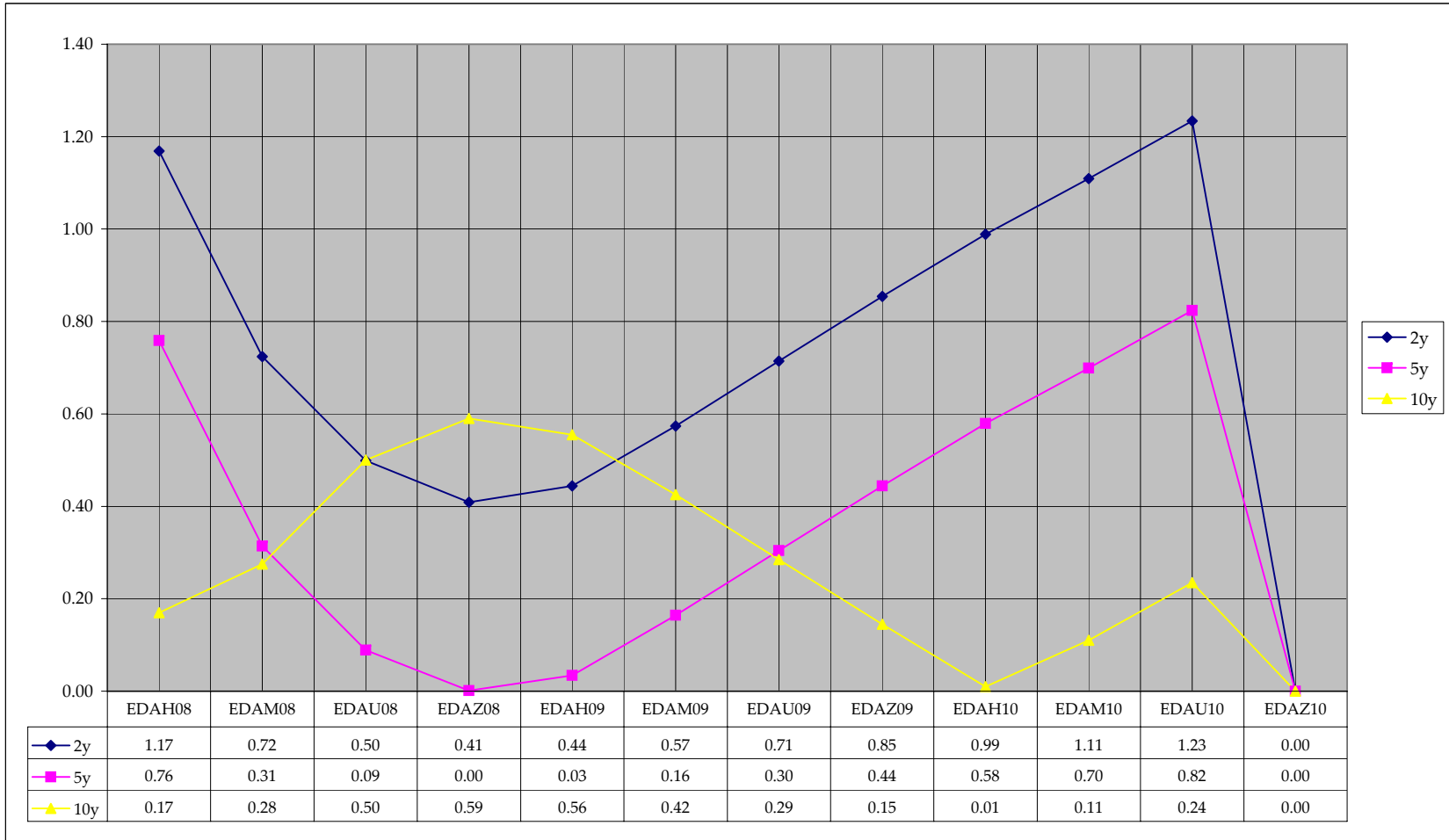
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Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

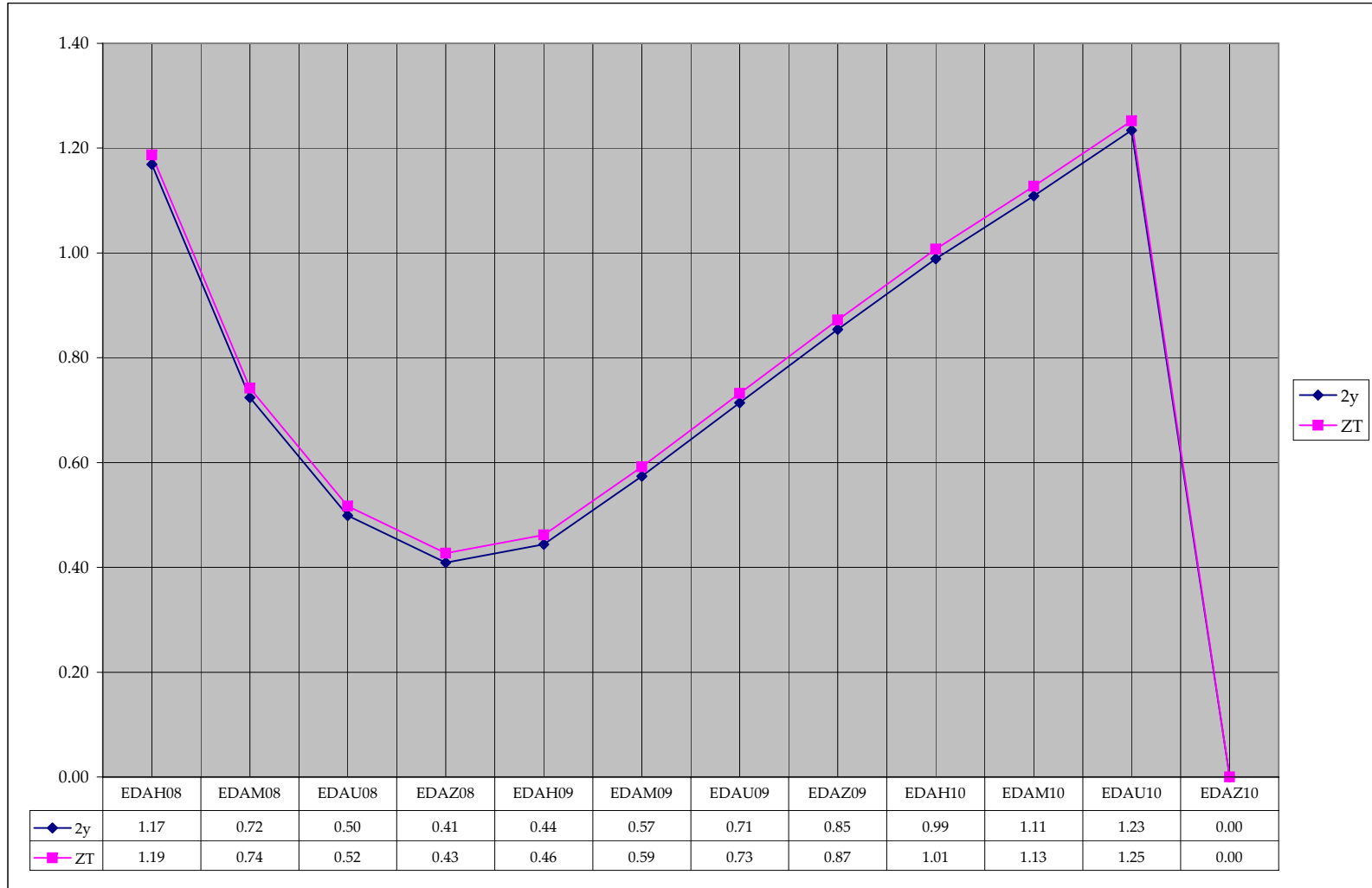


TED Curve

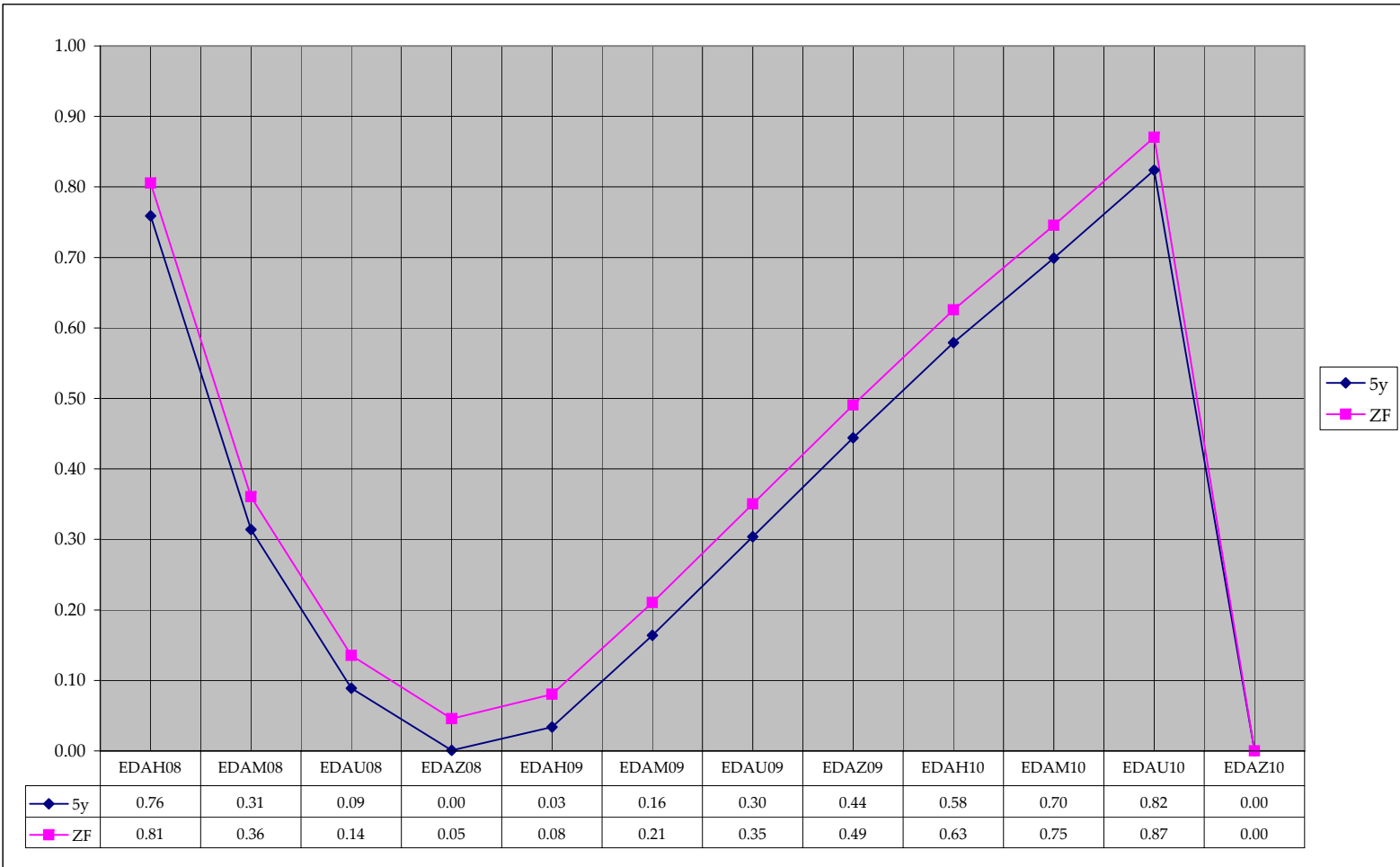
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



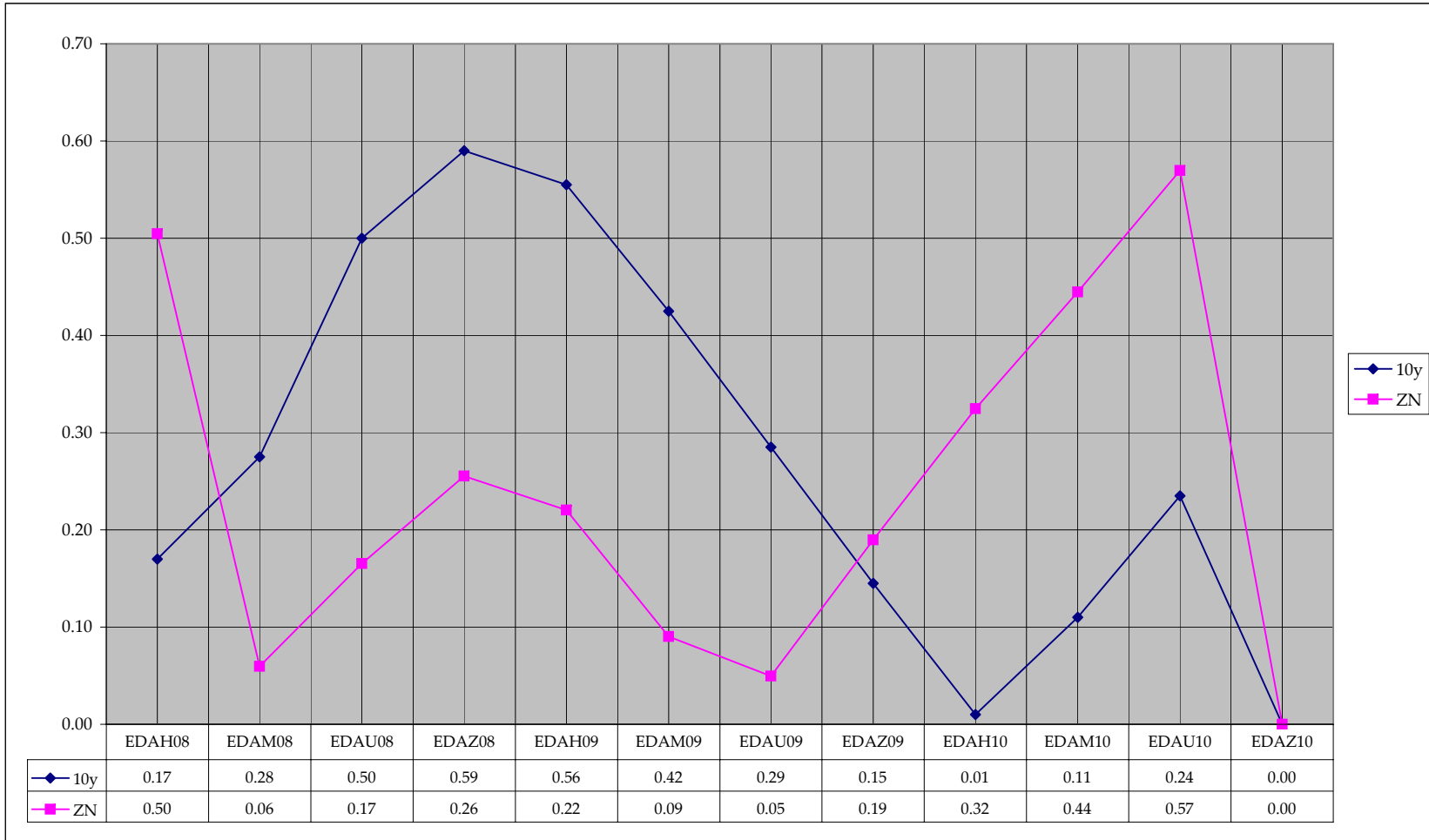
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



Packs

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	last Yield	Net Last Yield	Last Price
Q.ED.White	3.964	-1.500	9612.875
Q.ED.Red	3.908	-2.375	9618.250
Q.ED.Green		-1.250	9566.250
Q.ED.Blue		0.000	9527.000
Q.ED.Gold		0.000	9496.500

