

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	104.5688	104.182	3.338	1.86	
ZF	109.2969	109.095	3.628	3.83	
ZN	112.4531	112.145	3.898	5.76	
2y	100.563	100.1800	3.320	1.77	
5y	100.891	100.2850	3.676	4.46	
10y	100.781	100.2500	4.150	8.08	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAZ07	95.120	4.880	28	0.076	DEC	White Pack	
EDAH08	95.685	4.315	119	0.325	MAR		
EDAM08	96.045	3.955	210	0.575	JUN		
EDAU08	96.210	3.790	301	0.824	SEP	Red Pack	
EDAZ08	96.240	3.760	392	1.073	DEC		
EDAH09	96.160	3.840	483	1.323	MAR		
EDAM09	96.025	3.975	574	1.572	JUN	Green Pack	
EDAU09	95.895	4.105	665	1.821	SEP		
EDAZ09	95.760	4.240	756	2.071	DEC		
EDAH10	95.660	4.340	847	2.320	MAR	Blue Pack	
EDAM10	95.550	4.450	938	2.569	JUN		
EDAU10	95.445	4.555	1029	2.819	SEP		
EDAZ10	#VALUE!	#VALUE!	1120	3.068	DEC	Gold Pack	
EDAH11	#VALUE!	#VALUE!	1211	3.317	MAR		
EDAM11	95.180	4.820	1302	3.566	JUN		
EDAU11	95.100	4.900	1400	3.835	SEP	Gold Pack	
EDAZ11	95.025	4.975	1491	4.084	DEC		
EDAH12	94.975	5.025	1582	4.334	MAR		
EDAM12	94.905	5.095	1673	4.583	JUN		
EDAU12	94.850	5.150	1764	4.832	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		-2.500	9576.500	Pack Prices
Q.ED.Red	4.014	-0.375	9608.000	
Q.ED.Green	4.507	-0.250	9560.375	
Q.ED.Blue		0.000	9523.375	
Q.ED.Gold		0.000	9495.375	

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

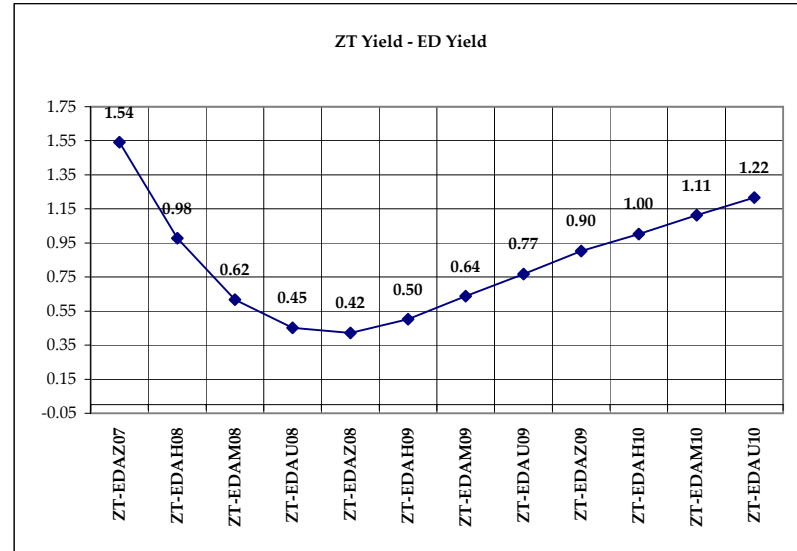
Eurodollar Color Codes for Individual Year Strips:

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)
EDAZ07	9.449	1.54	ZT-EDAZ07	-19.628
EDAH08	8.884	0.98	ZT-EDAH08	81.044
EDAM08	8.524	0.62	ZT-EDAM08	97.532
EDAU08	8.359	0.45	ZT-EDAU08	98.826
EDAZ08	8.329	0.42	ZT-EDAZ08	99.065
EDAH09	8.409	0.50	ZT-EDAH09	98.744
EDAM09	8.544	0.64	ZT-EDAM09	97.989
EDAU09	8.674	0.77	ZT-EDAU09	97.394
EDAZ09	8.809	0.90	ZT-EDAZ09	96.624
EDAH10	8.909	1.00	ZT-EDAH10	95.787
EDAM10	9.019	1.11	ZT-EDAM10	94.868
EDAU10	9.124	1.22	ZT-EDAU10	93.278

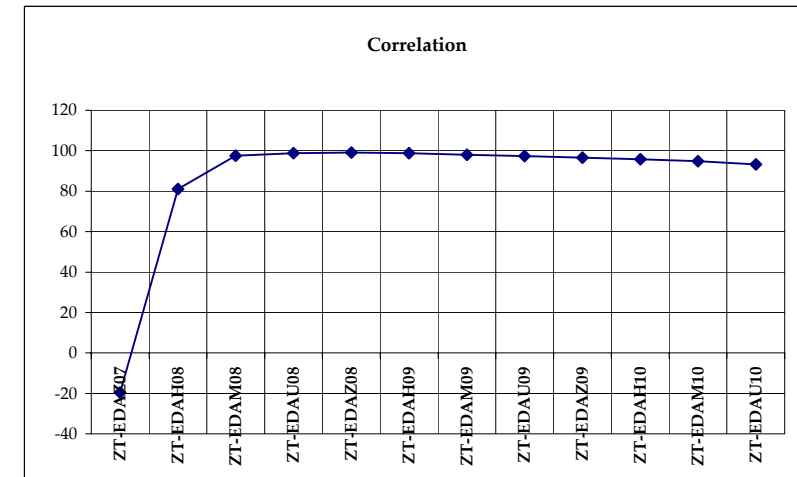
Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	ZT Duration	Spread Duration	
EDAZ07	0.076	1.79	ZT-EDAZ07
EDAH08	0.325	1.54	ZT-EDAH08
EDAM08	0.575	1.29	ZT-EDAM08
EDAU08	0.824	1.04	ZT-EDAU08
EDAZ08	1.073	0.79	ZT-EDAZ08
EDAH09	1.323	0.54	ZT-EDAH09
EDAM09	1.572	0.29	ZT-EDAM09
EDAU09	1.821	0.04	ZT-EDAU09
EDAZ09	2.071	(0.21)	ZT-EDAZ09
EDAH10	2.320	(0.46)	ZT-EDAH10
EDAM10	2.569	(0.71)	ZT-EDAM10
EDAU10	2.819	(0.96)	ZT-EDAU10

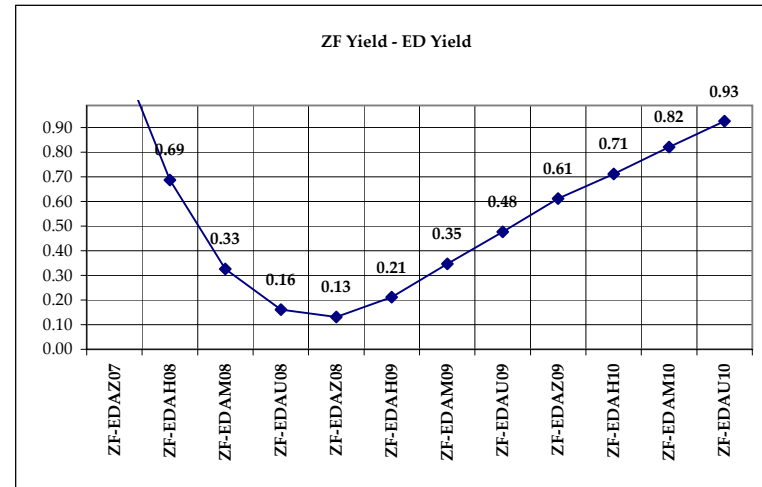
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

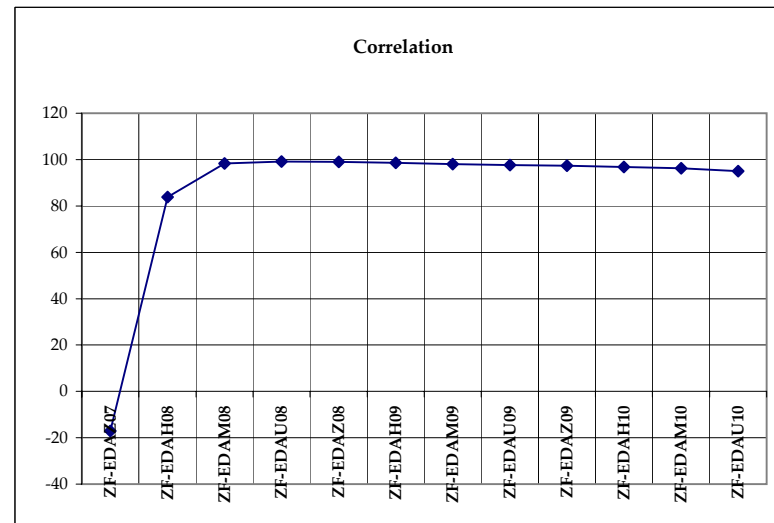
ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.18	1.25	ZF-EDAZ07	-17.118
EDAH08	13.61	0.69	ZF-EDAH08	83.821
EDAM08	13.25	0.33	ZF-EDAM08	98.302
EDAU08	13.09	0.16	ZF-EDAU08	99.142
EDAZ08	13.06	0.13	ZF-EDAZ08	98.985
EDAH09	13.14	0.21	ZF-EDAH09	98.588
EDAM09	13.27	0.35	ZF-EDAM09	98.014
EDAU09	13.40	0.48	ZF-EDAU09	97.701
EDAZ09	13.54	0.61	ZF-EDAZ09	97.374
EDAH10	13.64	0.71	ZF-EDAH10	96.795
EDAM10	13.75	0.82	ZF-EDAM10	96.225
EDAU10	13.85	0.93	ZF-EDAU10	94.999

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				
	ZF Duration	Spread Duration		
EDAZ07	0.076	3.83	3.76	ZF-EDAZ07
EDAH08	0.325	3.83	3.51	ZF-EDAH08
EDAM08	0.575	3.83	3.26	ZF-EDAM08
EDAU08	0.824	3.83	3.01	ZF-EDAU08
EDAZ08	1.073	3.83	2.76	ZF-EDAZ08
EDAH09	1.323	3.83	2.51	ZF-EDAH09
EDAM09	1.572	3.83	2.26	ZF-EDAM09
EDAU09	1.821	3.83	2.01	ZF-EDAU09
EDAZ09	2.071	3.83	1.76	ZF-EDAZ09
EDAH10	2.320	3.83	1.51	ZF-EDAH10
EDAM10	2.569	3.83	1.26	ZF-EDAM10
EDAU10	2.819	3.83	1.01	ZF-EDAU10

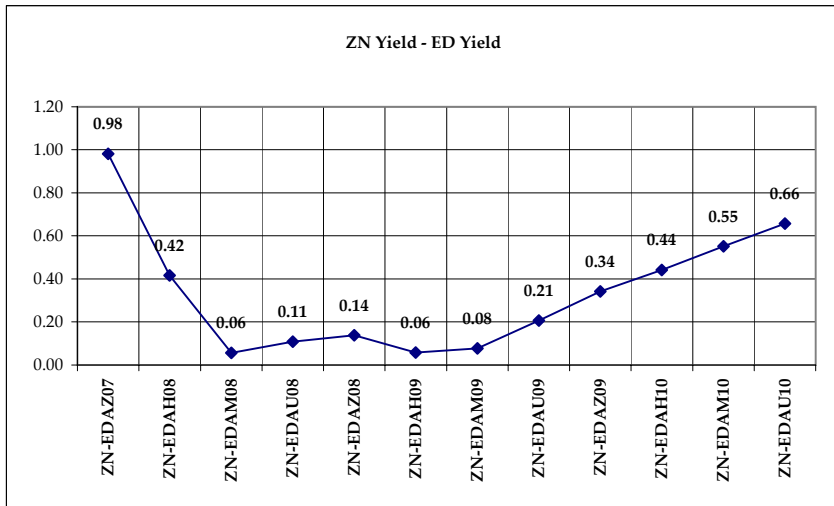
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

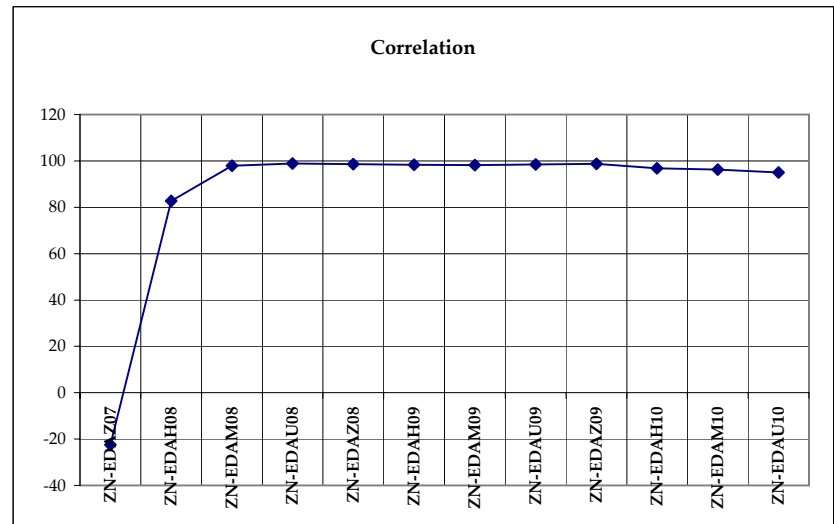
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	17.33	0.98	ZN-EDAZ07	-22.51
EDAH08	16.77	0.42	ZN-EDAH08	82.79
EDAM08	16.41	0.06	ZN-EDAM08	97.87
EDAU08	16.24	0.11	ZN-EDAU08	98.84
EDAZ08	16.21	0.14	ZN-EDAZ08	98.61
EDAH09	16.29	0.06	ZN-EDAH09	98.37
EDAM09	16.43	0.08	ZN-EDAM09	98.25
EDAU09	16.56	0.21	ZN-EDAU09	98.51
EDAZ09	16.69	0.34	ZN-EDAZ09	98.76
EDAH10	16.79	0.44	ZN-EDAH10	96.79
EDAM10	16.90	0.55	ZN-EDAM10	96.23
EDAU10	17.01	0.66	ZN-EDAU10	95.00

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	
EDAZ07	0.076	5.76	5.69	ZN-EDAZ07
EDAH08	0.325	5.76	5.44	ZN-EDAH08
EDAM08	0.575	5.76	5.19	ZN-EDAM08
EDAU08	0.824	5.76	4.94	ZN-EDAU08
EDAZ08	1.073	5.76	4.69	ZN-EDAZ08
EDAH09	1.323	5.76	4.44	ZN-EDAH09
EDAM09	1.572	5.76	4.19	ZN-EDAM09
EDAU09	1.821	5.76	3.94	ZN-EDAU09
EDAZ09	2.071	5.76	3.69	ZN-EDAZ09
EDAH10	2.320	5.76	3.44	ZN-EDAH10
EDAM10	2.569	5.76	3.19	ZN-EDAM10
EDAU10	2.819	5.76	2.94	ZN-EDAU10

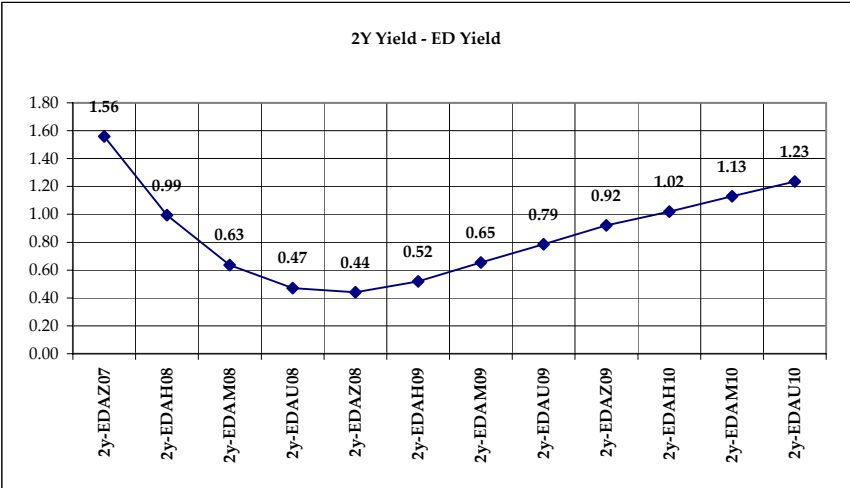
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.44	1.56	2y-EDAZ07	15.459
EDAH08	4.88	0.99	2y-EDAH08	-82.731
EDAM08	4.52	0.63	2y-EDAM08	-96.136
EDAU08	4.35	0.47	2y-EDAU08	-96.466
EDAZ08	4.32	0.44	2y-EDAZ08	-96.136
EDAH09	4.40	0.52	2y-EDAH09	-95.251
EDAM09	4.54	0.65	2y-EDAM09	-94.387
EDAU09	4.67	0.79	2y-EDAU09	-93.815
EDAZ09	4.80	0.92	2y-EDAZ09	-93.182
EDAH10	4.90	1.02	2y-EDAH10	-92.408
EDAM10	5.01	1.13	2y-EDAM10	-91.713
EDAU10	5.12	1.23	2y-EDAU10	-90.364

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.

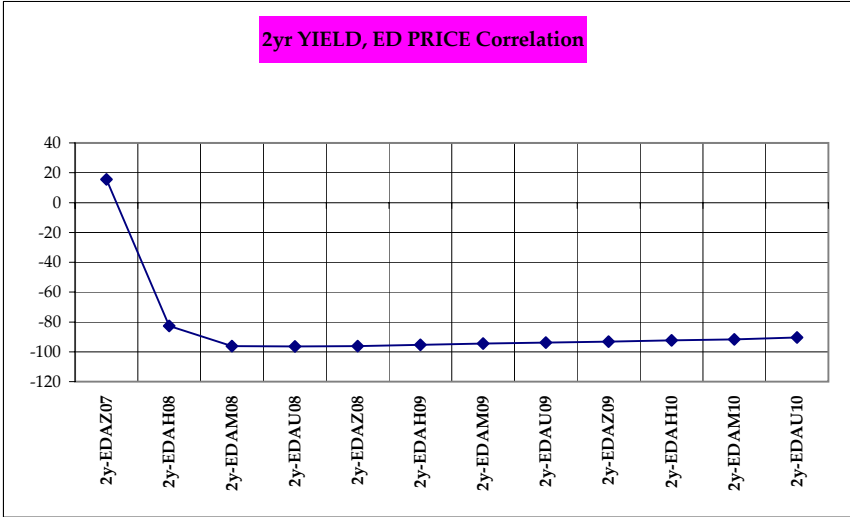


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAZ07	0.076	1.77	2y-EDAZ07
EDAH08	0.325	1.77	2y-EDAH08
EDAM08	0.575	1.77	2y-EDAM08
EDAU08	0.824	1.77	2y-EDAU08
EDAZ08	1.073	1.77	2y-EDAZ08
EDAH09	1.323	1.77	2y-EDAH09
EDAM09	1.572	1.77	2y-EDAM09
EDAU09	1.821	1.77	2y-EDAU09
EDAZ09	2.071	1.77	2y-EDAZ09
EDAH10	2.320	1.77	2y-EDAH10
EDAM10	2.569	1.77	2y-EDAM10
EDAU10	2.819	1.77	2y-EDAU10

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

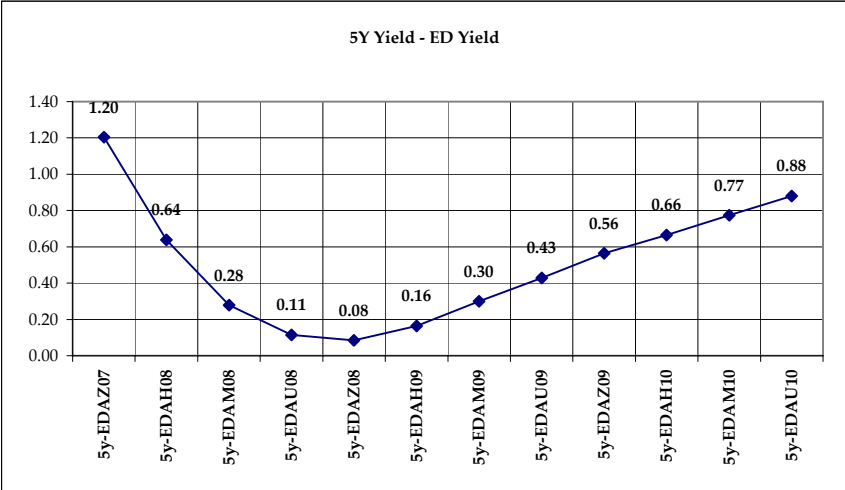
2yr YIELD, ED PRICE Correlation



TERM TED: 5y vs Eurodollar Contracts

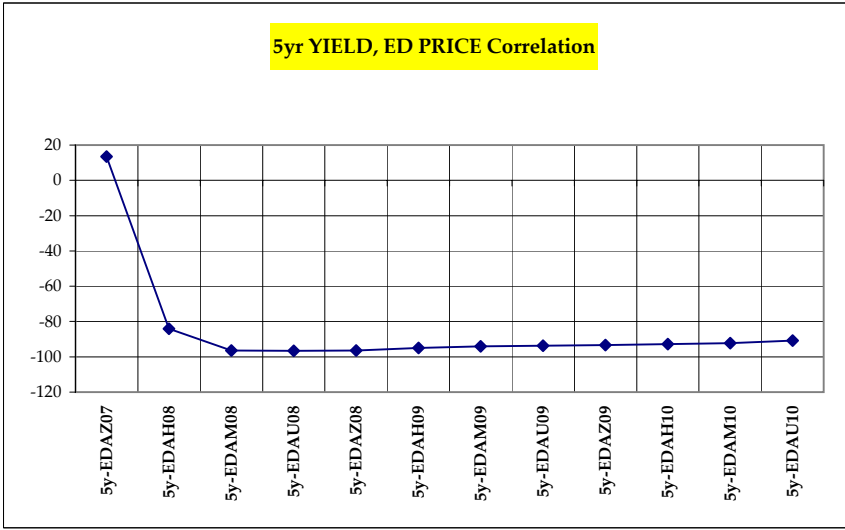
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.77	1.20	5y-EDAZ07	13.509
EDAH08	5.21	0.64	5y-EDAH08	-84.048
EDAM08	4.85	0.28	5y-EDAM08	-96.489
EDAU08	4.68	0.11	5y-EDAU08	-96.546
EDAZ08	4.65	0.08	5y-EDAZ08	-96.489
EDAH09	4.73	0.16	5y-EDAH09	-95.002
EDAM09	4.87	0.30	5y-EDAM09	-94.155
EDAU09	5.00	0.43	5y-EDAU09	-93.772
EDAZ09	5.13	0.56	5y-EDAZ09	-93.291
EDAH10	5.23	0.66	5y-EDAH10	-92.749
EDAM10	5.34	0.77	5y-EDAM10	-92.169
EDAU10	5.45	0.88	5y-EDAU10	-90.839

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	
EDAZ07	0.076			4.46	4.38	5y-EDAZ07
EDAH08	0.325			4.46	4.13	5y-EDAH08
EDAM08	0.575			4.46	3.88	5y-EDAM08
EDAU08	0.824			4.46	3.63	5y-EDAU08
EDAZ08	1.073			4.46	3.39	5y-EDAZ08
EDAH09	1.323			4.46	3.14	5y-EDAH09
EDAM09	1.572			4.46	2.89	5y-EDAM09
EDAU09	1.821			4.46	2.64	5y-EDAU09
EDAZ09	2.071			4.46	2.39	5y-EDAZ09
EDAH10	2.320			4.46	2.14	5y-EDAH10
EDAM10	2.569			4.46	1.89	5y-EDAM10
EDAU10	2.819			4.46	1.64	5y-EDAU10

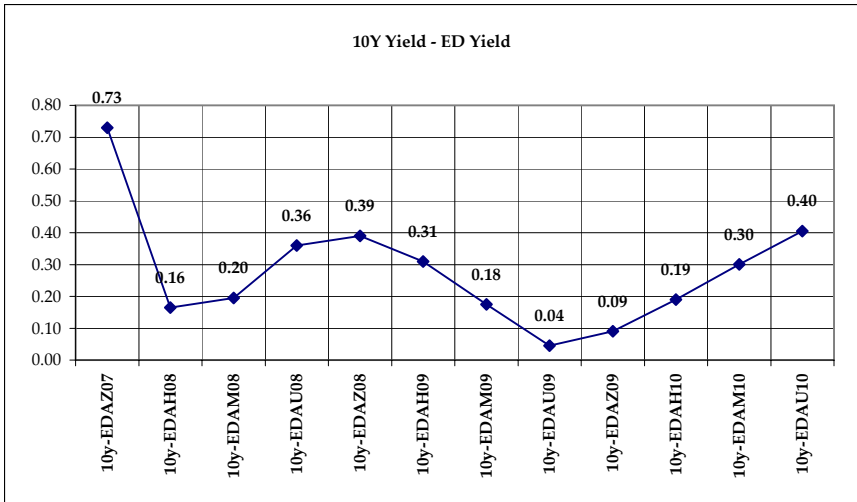
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.77	0.73	10y-EDAZ07	25.123
EDAH08	5.21	0.16	10y-EDAH08	-79.943
EDAM08	4.85	0.20	10y-EDAM08	-94.661
EDAU08	4.68	0.36	10y-EDAU08	-95.465
EDAZ08	4.65	0.39	10y-EDAZ08	-94.661
EDAH09	4.73	0.31	10y-EDAH09	-94.934
EDAM09	4.87	0.18	10y-EDAM09	-94.909
EDAU09	5.00	0.04	10y-EDAU09	-95.146
EDAZ09	5.13	0.09	10y-EDAZ09	-95.328
EDAH10	5.23	0.19	10y-EDAH10	-95.361
EDAM10	5.34	0.30	10y-EDAM10	-95.318
EDAU10	5.45	0.40	10y-EDAU10	-94.854

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.

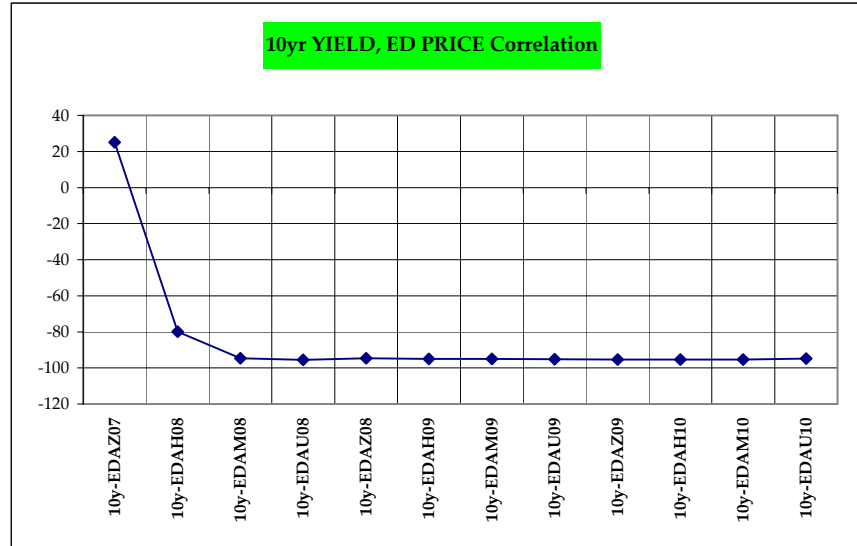


GE Duration as Fraction of year

	10Y Duration	Spread Duration		
EDAZ07	0.076	8.08	8.00	10y-EDAZ07
EDAH08	0.325	8.08	7.75	10y-EDAH08
EDAM08	0.575	8.08	7.50	10y-EDAM08
EDAU08	0.824	8.08	7.25	10y-EDAU08
EDAZ08	1.073	8.08	7.00	10y-EDAZ08
EDAH09	1.323	8.08	6.75	10y-EDAH09
EDAM09	1.572	8.08	6.50	10y-EDAM09
EDAU09	1.821	8.08	6.26	10y-EDAU09
EDAZ09	2.071	8.08	6.01	10y-EDAZ09
EDAH10	2.320	8.08	5.76	10y-EDAH10
EDAM10	2.569	8.08	5.51	10y-EDAM10
EDAU10	2.819	8.08	5.26	10y-EDAU10

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

10yr YIELD, ED PRICE Correlation

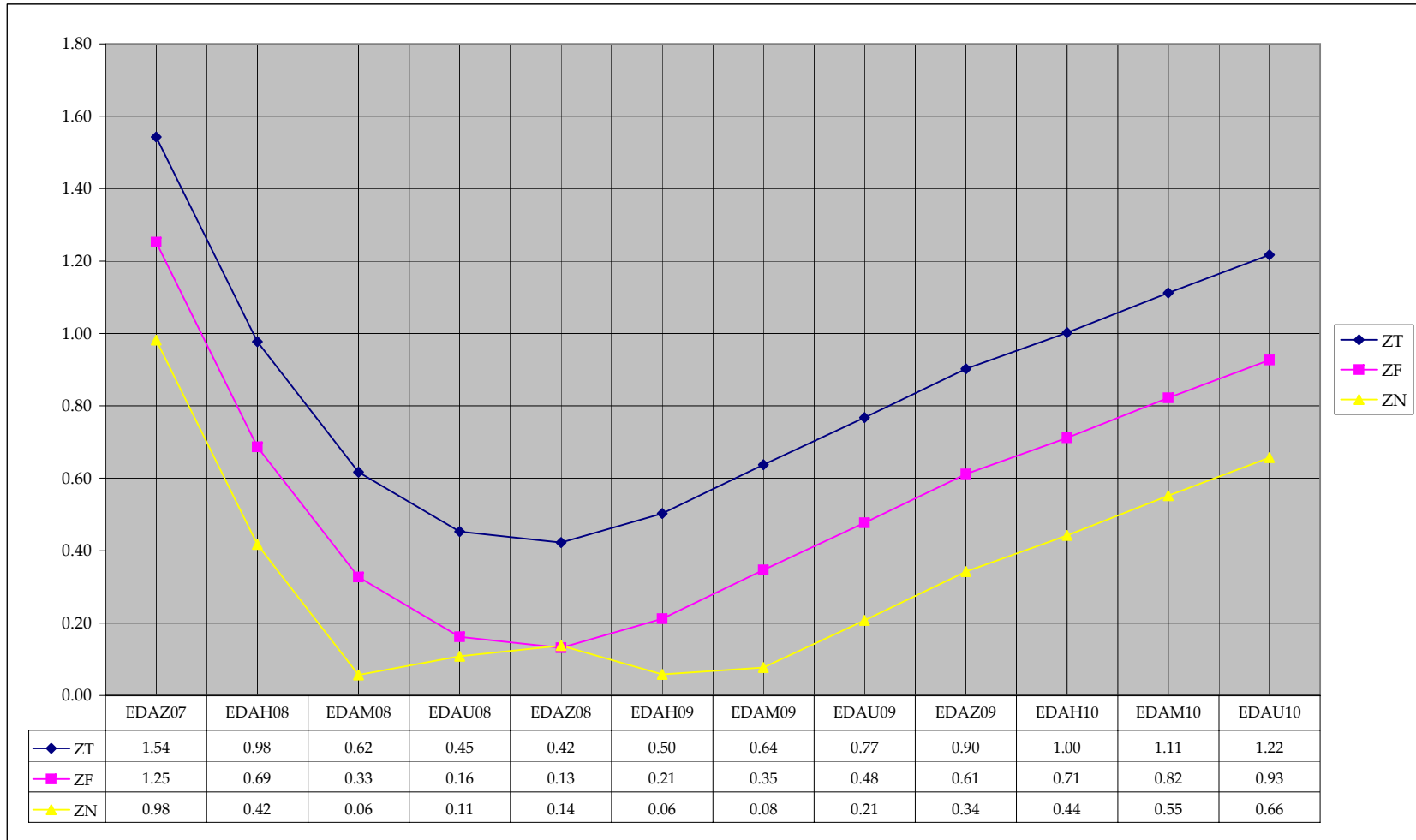


Dirty TED Curve

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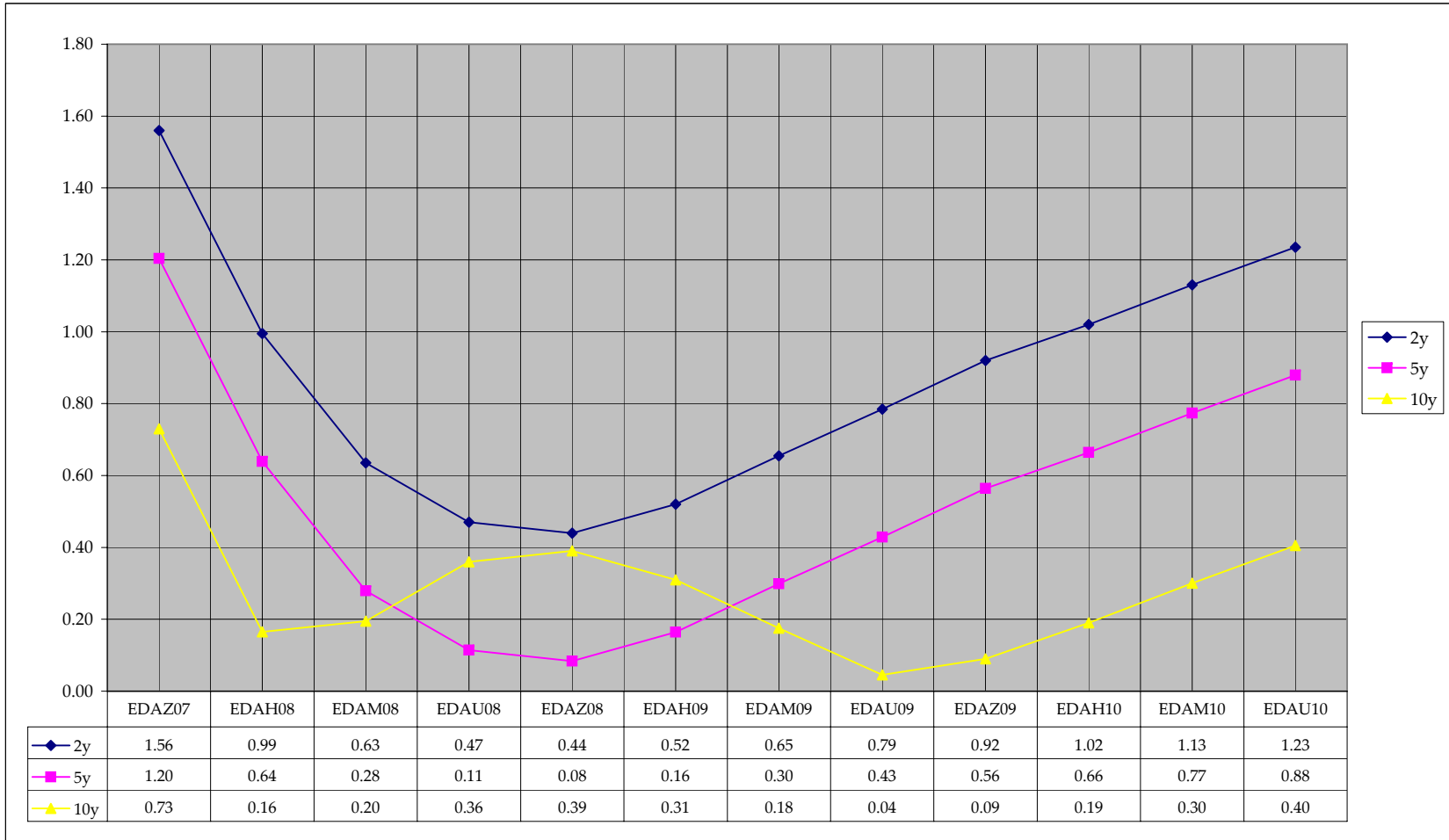
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Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis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

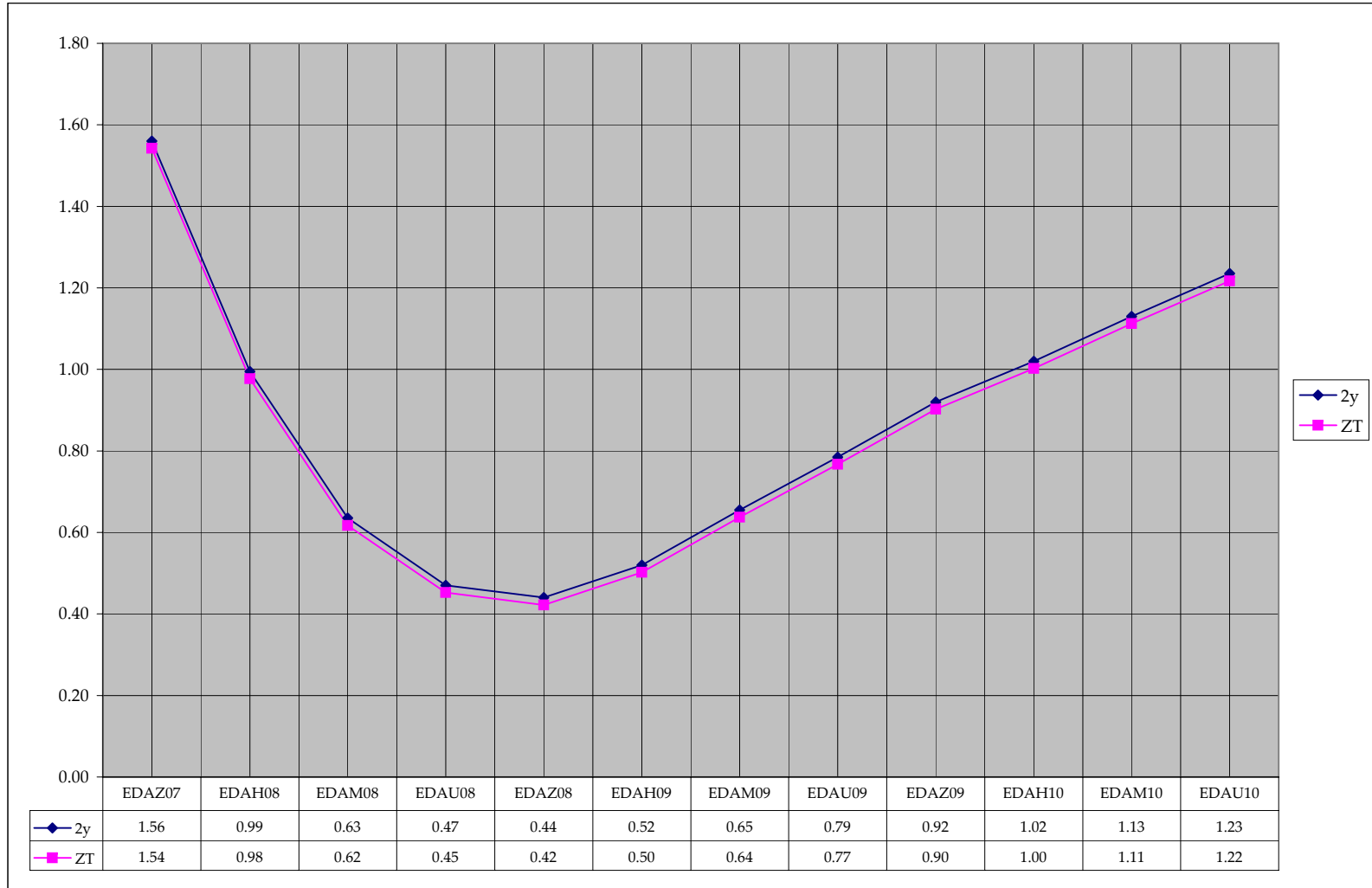


TED Curve

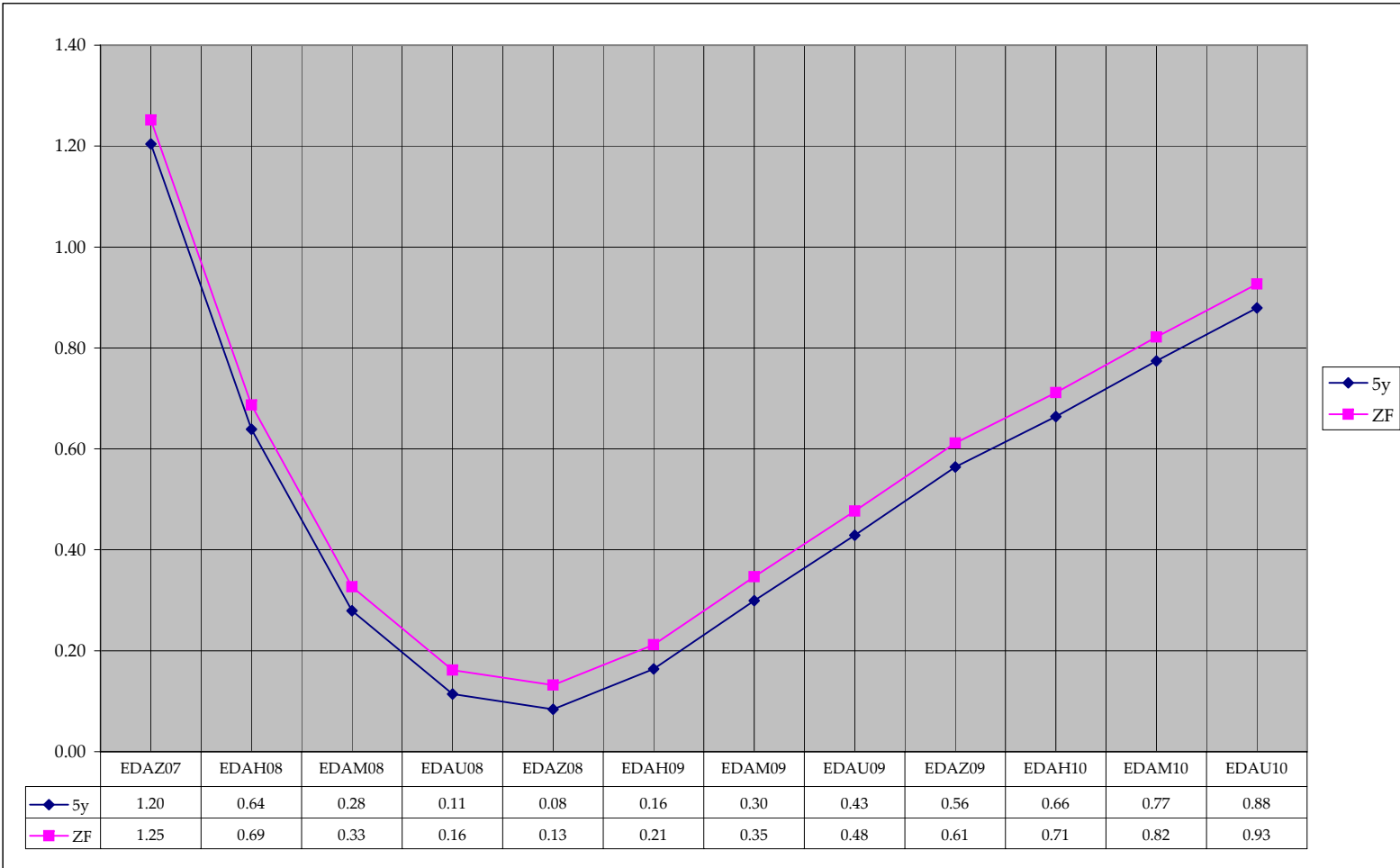
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



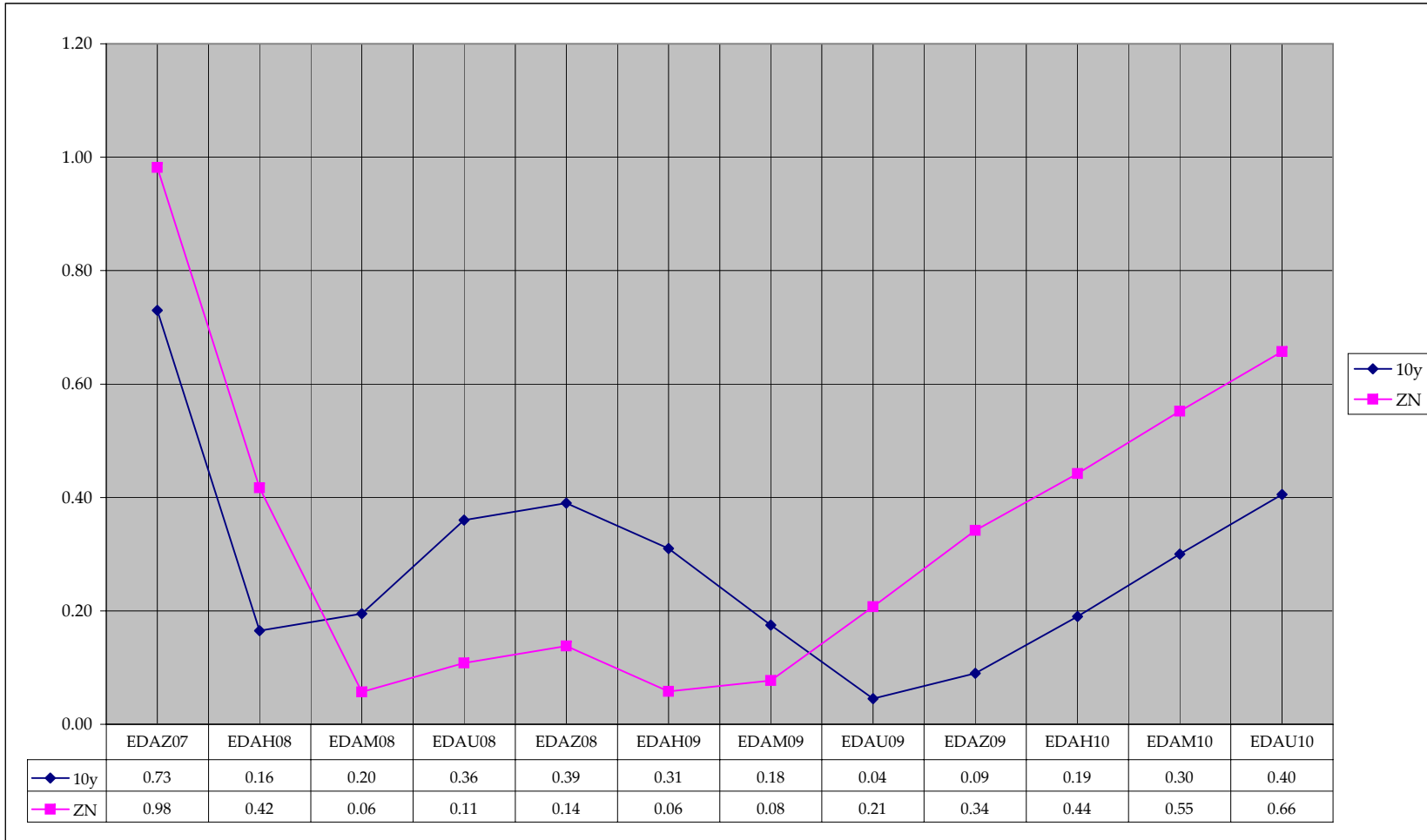
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



Packs

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	last Yield	Net Last Yield	Last Price
Q.ED.White		-2.500	9576.500
Q.ED.Red	4.014	-0.375	9608.000
Q.ED.Green	4.507	-0.250	9560.375
Q.ED.Blue	0.000		9523.375
Q.ED.Gold		0.000	9495.375

