

## The Morning Email: TERM TEDS & Dirty TEDS

### Table of Contents

<b>PgA</b>	Quotes	<b>Pg9</b>	2y Basis TED Curve
<b>Pg1</b>	Dirty TED: ZT vs Eurodollar Contracts	<b>Pg10</b>	5y Basis TED Curve
<b>Pg2</b>	Dirty TED: ZF vs Eurodollar Contracts	<b>Pg11</b>	10y Basis TED Curve
<b>Pg3</b>	Dirty TED: ZN vs Eurodollar Contracts	<b>Pg12</b>	Packs
<b>Pg4</b>	TERM TED: 2y vs Eurodollar Contracts		
<b>Pg5</b>	TERM TED: 5y vs Eurodollar Contracts		
<b>Pg6</b>	TERM TED: 10y vs Eurodollar Contracts		
<b>Pg7</b>	Dirty TED Curve		
<b>Pg8</b>	TED Curve		

**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](mailto: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	104.7406	104.237	3.227	1.86	
ZF	109.5781	109.185	3.538	3.83	
ZN	112.8281	112.265	3.798	5.77	
2y	100.772	100.2470	3.211	1.77	
5y	101.288	101.0920	3.586	4.46	
10y	101.281	101.0900	4.090	8.08	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAZ07	95.078	4.923	27	0.073	DEC	White Pack	
EDAH08	95.660	4.340	118	0.323	MAR		
EDAM08	96.040	3.960	209	0.572	JUN		
EDAU08	96.230	3.770	300	0.821	SEP	Red Pack	
EDAZ08	96.280	3.720	391	1.071	DEC		
EDAH09	96.230	3.770	482	1.320	MAR		
EDAM09	96.100	3.900	573	1.569	JUN	Green Pack	
EDAU09	95.970	4.030	664	1.819	SEP		
EDAZ09	95.830	4.170	755	2.068	DEC		
EDAH10	95.710	4.290	846	2.317	MAR	Blue Pack	
EDAM10	95.600	4.400	937	2.566	JUN		
EDAU10	95.495	4.505	1028	2.816	SEP		
EDAZ10	95.395	4.605	1119	3.065	DEC	Gold Pack	
EDAH11	95.355	4.645	1210	3.314	MAR		
EDAM11	95.240	4.760	1301	3.564	JUN		
EDAU11	95.145	4.855	1399	3.832	SEP		
EDAZ11	95.070	4.930	1490	4.082	DEC		
EDAH12	95.030	4.970	1581	4.331	MAR		
EDAM12	94.945	5.055	1672	4.580	JUN		
EDAU12	94.840	5.160	1763	4.830	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	4.354	-3.750	9575.188	Pack Prices
Q.ED.Red	3.947	-3.125	9614.500	
Q.ED.Green	4.450	-3.000	9565.875	
Q.ED.Blue	-0.750	-0.750	9528.875	
Q.ED.Gold	0.000	0.000	9499.750	

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

11/20/2007 5:30

Page A

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](mailto:jgoulding@ghco.com)

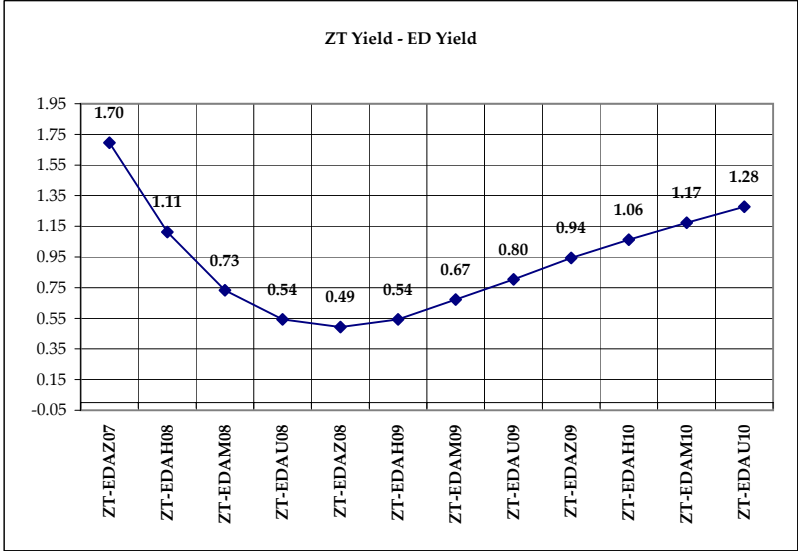
### Eurodollar Color Codes for Individual Year Strips:

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

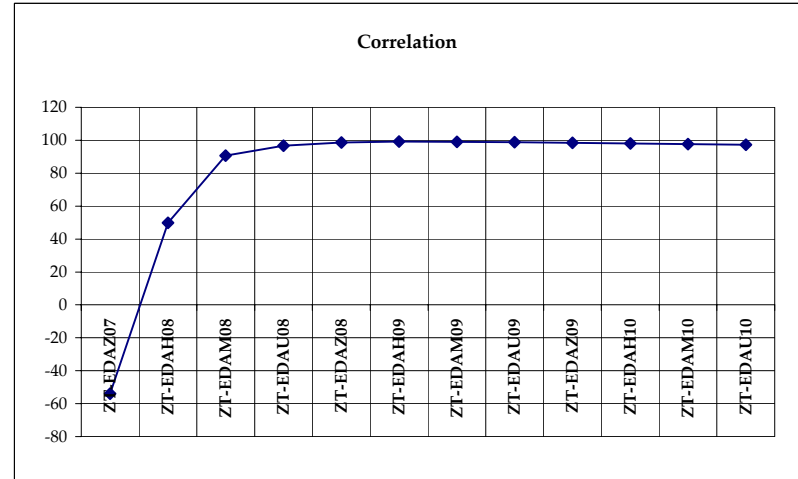
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	9.663	1.70	ZT-EDAZ07	-53.934
EDAH08	9.081	1.11	ZT-EDAH08	49.883
EDAM08	8.701	0.73	ZT-EDAM08	90.727
EDAU08	8.511	0.54	ZT-EDAU08	96.732
EDAZ08	8.461	0.49	ZT-EDAZ08	98.581
EDAH09	8.511	0.54	ZT-EDAH09	99.124
EDAM09	8.641	0.67	ZT-EDAM09	98.925
EDAU09	8.771	0.80	ZT-EDAU09	98.778
EDAZ09	8.911	0.94	ZT-EDAZ09	98.488
EDAH10	9.031	1.06	ZT-EDAH10	98.077
EDAM10	9.141	1.17	ZT-EDAM10	97.742
EDAU10	9.246	1.28	ZT-EDAU10	97.227

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	0.073	1.86	1.79	ZT-EDAZ07
EDAH08	0.323	1.86	1.54	ZT-EDAH08
EDAM08	0.572	1.86	1.29	ZT-EDAM08
EDAU08	0.821	1.86	1.04	ZT-EDAU08
EDAZ08	1.071	1.86	0.79	ZT-EDAZ08
EDAH09	1.320	1.86	0.54	ZT-EDAH09
EDAM09	1.569	1.86	0.29	ZT-EDAM09
EDAU09	1.819	1.86	0.04	ZT-EDAU09
EDAZ09	2.068	1.86	(0.21)	ZT-EDAZ09
EDAH10	2.317	1.86	(0.46)	ZT-EDAH10
EDAM10	2.566	1.86	(0.71)	ZT-EDAM10
EDAU10	2.816	1.86	(0.96)	ZT-EDAU10

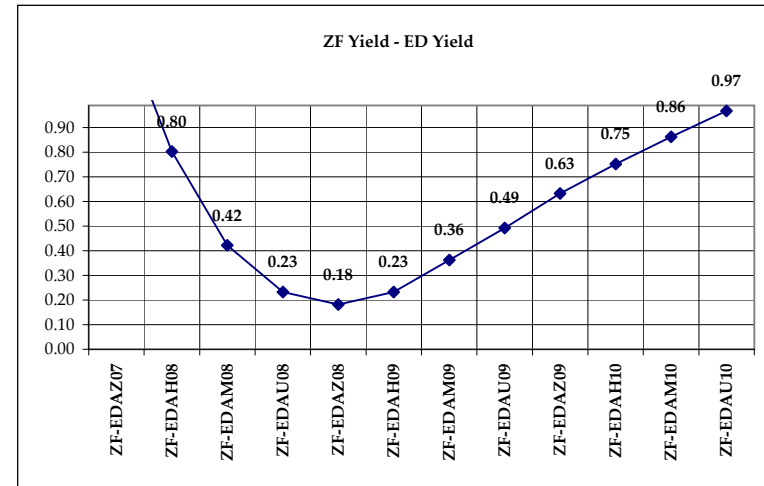
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.50	1.38	ZF-EDAZ07	-50.298
EDAH08	13.92	0.80	ZF-EDAH08	54.910
EDAM08	13.54	0.42	ZF-EDAM08	92.653
EDAU08	13.35	0.23	ZF-EDAU08	97.659
EDAZ08	13.30	0.18	ZF-EDAZ08	98.859
EDAH09	13.35	0.23	ZF-EDAH09	99.006
EDAM09	13.48	0.36	ZF-EDAM09	98.758
EDAU09	13.61	0.49	ZF-EDAU09	98.687
EDAZ09	13.75	0.63	ZF-EDAZ09	98.648
EDAH10	13.87	0.75	ZF-EDAH10	98.445
EDAM10	13.98	0.86	ZF-EDAM10	98.274
EDAU10	14.08	0.97	ZF-EDAU10	97.897

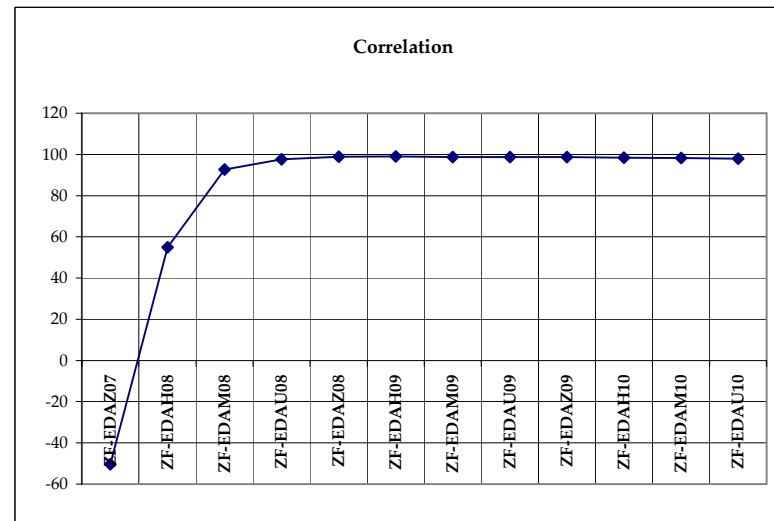
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	ZF Duration	Spread Duration	
EDAZ07	0.073	3.76	ZF-EDAZ07
EDAH08	0.323	3.51	ZF-EDAH08
EDAM08	0.572	3.26	ZF-EDAM08
EDAU08	0.821	3.01	ZF-EDAU08
EDAZ08	1.071	2.76	ZF-EDAZ08
EDAH09	1.320	2.51	ZF-EDAH09
EDAM09	1.569	2.26	ZF-EDAM09
EDAU09	1.819	2.01	ZF-EDAU09
EDAZ09	2.068	1.76	ZF-EDAZ09
EDAH10	2.317	1.51	ZF-EDAH10
EDAM10	2.566	1.26	ZF-EDAM10
EDAU10	2.816	1.02	ZF-EDAU10

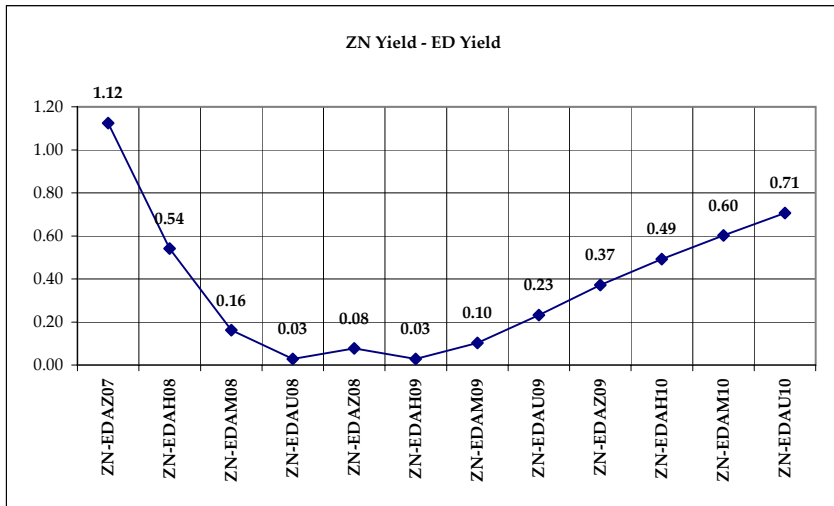
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

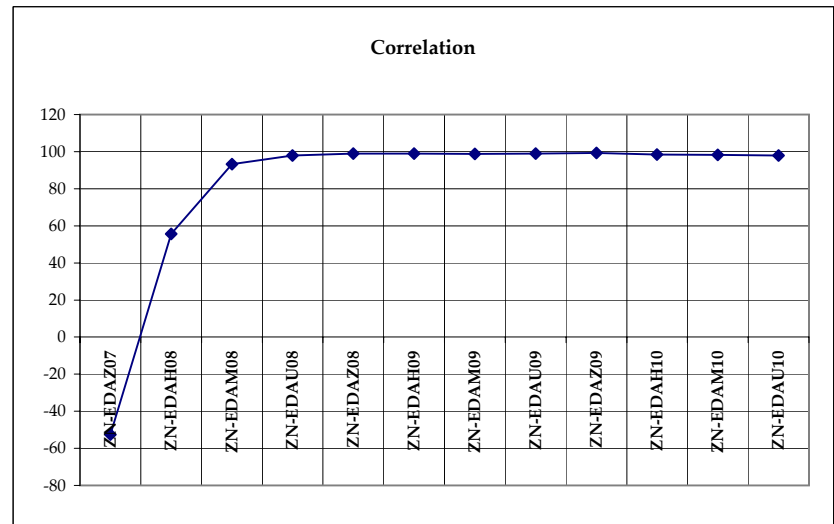
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	17.75	1.12	ZN-EDAZ07	-52.60
EDAH08	17.17	0.54	ZN-EDAH08	55.61
EDAM08	16.79	0.16	ZN-EDAM08	93.17
EDAU08	16.60	0.03	ZN-EDAU08	97.94
EDAZ08	16.55	0.08	ZN-EDAZ08	98.89
EDAH09	16.60	0.03	ZN-EDAH09	98.94
EDAM09	16.73	0.10	ZN-EDAM09	98.84
EDAU09	16.86	0.23	ZN-EDAU09	99.02
EDAZ09	17.00	0.37	ZN-EDAZ09	99.25
EDAH10	17.12	0.49	ZN-EDAH10	98.45
EDAM10	17.23	0.60	ZN-EDAM10	98.27
EDAU10	17.33	0.71	ZN-EDAU10	97.90

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	0.073	5.77	5.69	ZN-EDAZ07
EDAH08	0.323	5.77	5.44	ZN-EDAH08
EDAM08	0.572	5.77	5.19	ZN-EDAM08
EDAU08	0.821	5.77	4.94	ZN-EDAU08
EDAZ08	1.071	5.77	4.70	ZN-EDAZ08
EDAH09	1.320	5.77	4.45	ZN-EDAH09
EDAM09	1.569	5.77	4.20	ZN-EDAM09
EDAU09	1.819	5.77	3.95	ZN-EDAU09
EDAZ09	2.068	5.77	3.70	ZN-EDAZ09
EDAH10	2.317	5.77	3.45	ZN-EDAH10
EDAM10	2.566	5.77	3.20	ZN-EDAM10
EDAU10	2.816	5.77	2.95	ZN-EDAU10

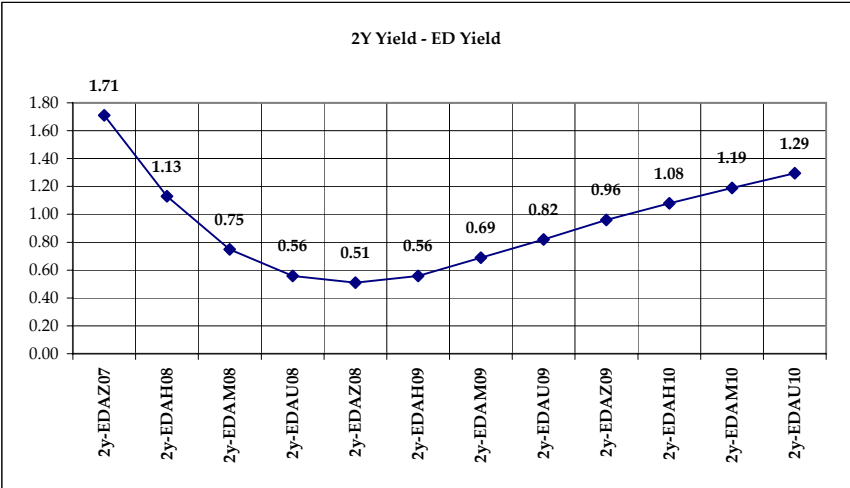
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.69	1.71	2y-EDAZ07	51.317
EDAH08	5.11	1.13	2y-EDAH08	-52.125
EDAM08	4.73	0.75	2y-EDAM08	-90.283
EDAU08	4.54	0.56	2y-EDAU08	-95.471
EDAZ08	4.49	0.51	2y-EDAZ08	-90.283
EDAH09	4.54	0.56	2y-EDAH09	-97.023
EDAM09	4.67	0.69	2y-EDAM09	-96.838
EDAU09	4.80	0.82	2y-EDAU09	-96.785
EDAZ09	4.94	0.96	2y-EDAZ09	-96.668
EDAH10	5.06	1.08	2y-EDAH10	-96.446
EDAM10	5.17	1.19	2y-EDAM10	-96.305
EDAU10	5.28	1.29	2y-EDAU10	-96.018

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.

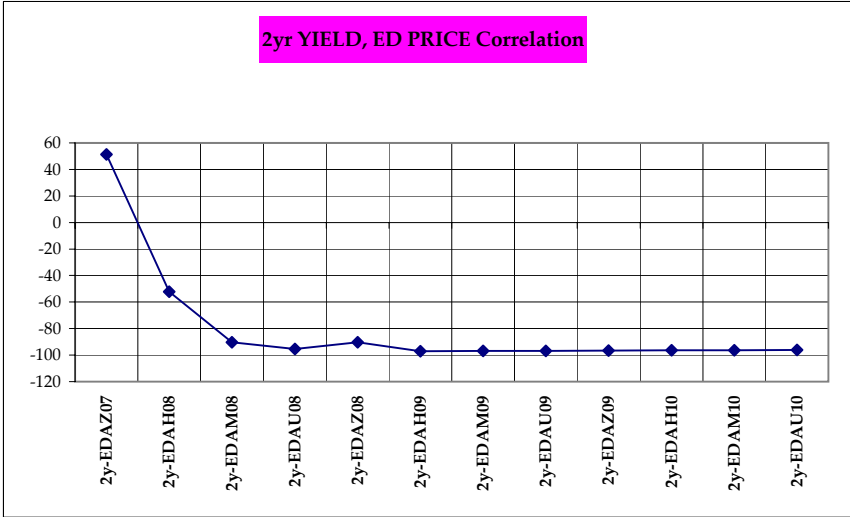


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAZ07	0.073	1.77	1.70
EDAH08	0.323	1.77	1.45
EDAM08	0.572	1.77	1.20
EDAU08	0.821	1.77	0.95
EDAZ08	1.071	1.77	0.70
EDAH09	1.320	1.77	0.45
EDAM09	1.569	1.77	0.20
EDAU09	1.819	1.77	(0.05)
EDAZ09	2.068	1.77	(0.30)
EDAH10	2.317	1.77	(0.55)
EDAM10	2.566	1.77	(0.79)
EDAU10	2.816	1.77	(1.04)

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

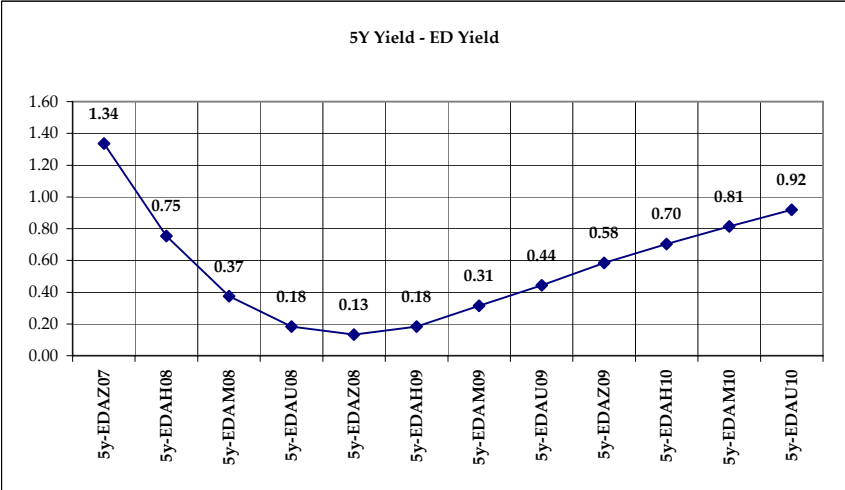
2yr YIELD, ED PRICE Correlation



**TERM TED: 5y vs Eurodollar Contracts**

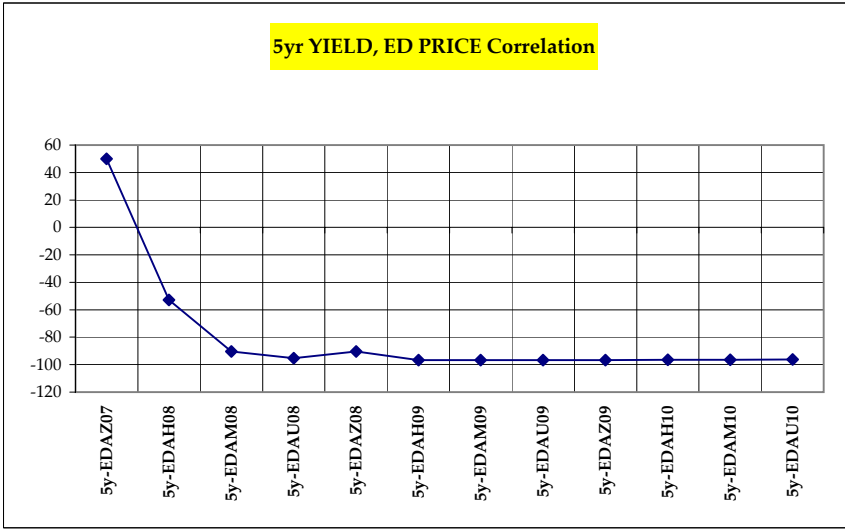
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	6.21	1.34	5y-EDAZ07	50.045
EDAH08	5.63	0.75	5y-EDAH08	-52.824
EDAM08	5.25	0.37	5y-EDAM08	-90.283
EDAU08	5.06	0.18	5y-EDAU08	-95.334
EDAZ08	5.01	0.13	5y-EDAZ08	-90.283
EDAH09	5.06	0.18	5y-EDAH09	-96.785
EDAM09	5.19	0.31	5y-EDAM09	-96.632
EDAU09	5.32	0.44	5y-EDAU09	-96.707
EDAZ09	5.46	0.58	5y-EDAZ09	-96.670
EDAH10	5.58	0.70	5y-EDAH10	-96.564
EDAM10	5.69	0.81	5y-EDAM10	-96.494
EDAU10	5.79	0.92	5y-EDAU10	-96.206

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	0.073	4.46	4.39	5y-EDAZ07
EDAH08	0.323	4.46	4.14	5y-EDAH08
EDAM08	0.572	4.46	3.89	5y-EDAM08
EDAU08	0.821	4.46	3.64	5y-EDAU08
EDAZ08	1.071	4.46	3.39	5y-EDAZ08
EDAH09	1.320	4.46	3.14	5y-EDAH09
EDAM09	1.569	4.46	2.89	5y-EDAM09
EDAU09	1.819	4.46	2.64	5y-EDAU09
EDAZ09	2.068	4.46	2.39	5y-EDAZ09
EDAH10	2.317	4.46	2.14	5y-EDAH10
EDAM10	2.566	4.46	1.89	5y-EDAM10
EDAU10	2.816	4.46	1.64	5y-EDAU10

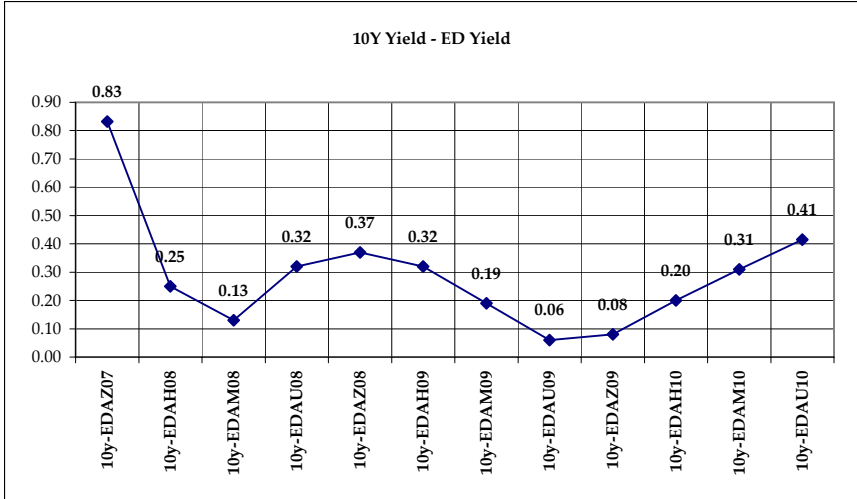
The farther away from 0 the spread duration is the riskier the trade.



**TERM TED: 10y vs Eurodollar Contracts**

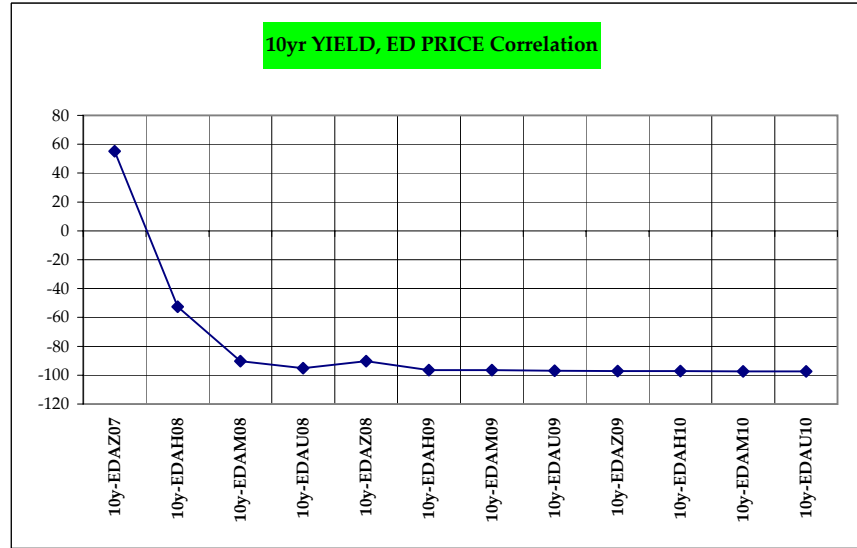
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	6.21	0.83	10y-EDAZ07	55.183
EDAH08	5.63	0.25	10y-EDAH08	-52.497
EDAM08	5.25	0.13	10y-EDAM08	-90.318
EDAU08	5.06	0.32	10y-EDAU08	-95.205
EDAZ08	5.01	0.37	10y-EDAZ08	-90.318
EDAH09	5.06	0.32	10y-EDAH09	-96.548
EDAM09	5.19	0.19	10y-EDAM09	-96.608
EDAU09	5.32	0.06	10y-EDAU09	-96.864
EDAZ09	5.46	0.08	10y-EDAZ09	-97.091
EDAH10	5.58	0.20	10y-EDAH10	-97.231
EDAM10	5.69	0.31	10y-EDAM10	-97.337
EDAU10	5.79	0.41	10y-EDAU10	-97.312

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.



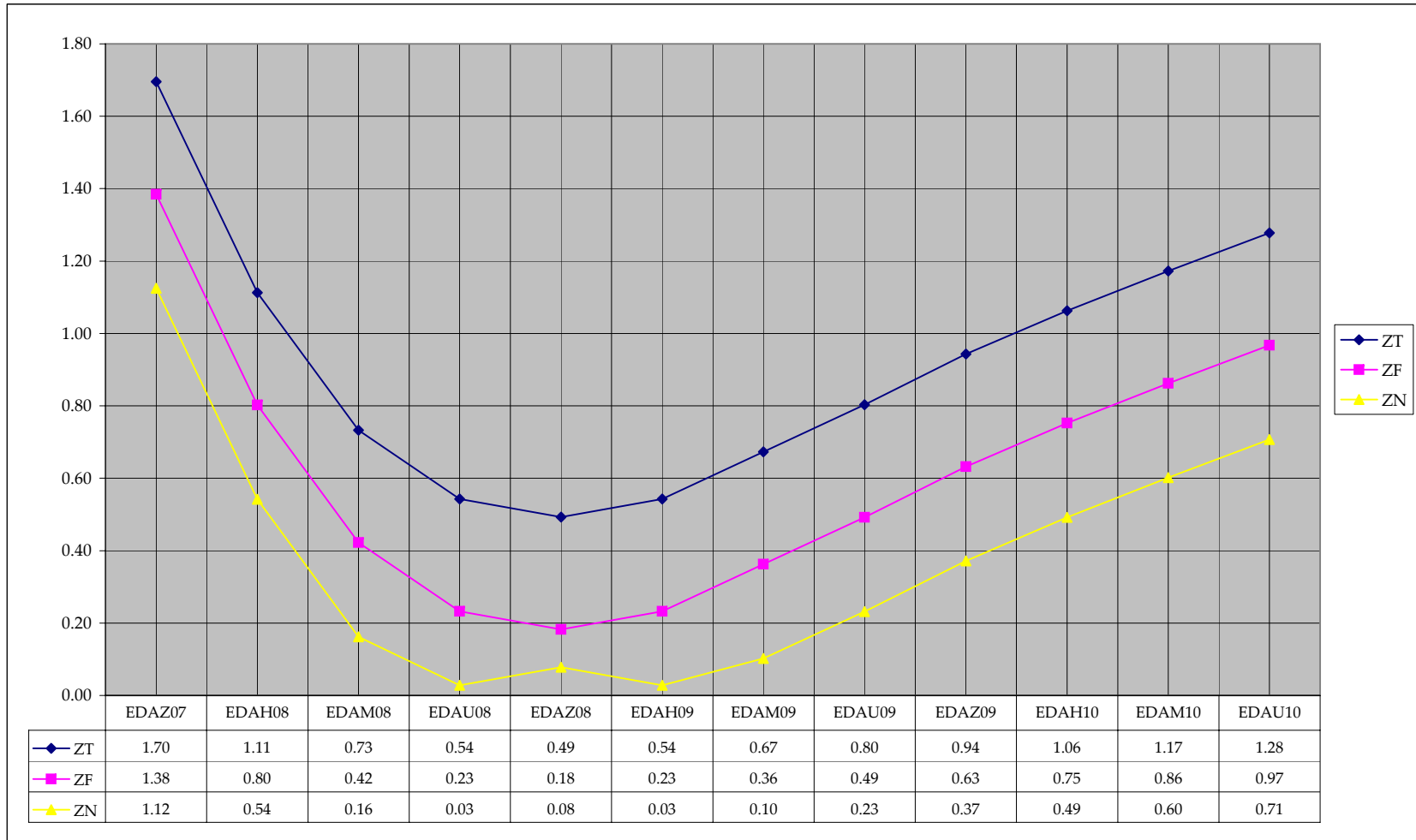
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.073	8.08	8.01	10y-EDAZ07
EDAH08	0.323	8.08	7.76	10y-EDAH08
EDAM08	0.572	8.08	7.51	10y-EDAM08
EDAU08	0.821	8.08	7.26	10y-EDAU08
EDAZ08	1.071	8.08	7.01	10y-EDAZ08
EDAH09	1.320	8.08	6.76	10y-EDAH09
EDAM09	1.569	8.08	6.51	10y-EDAM09
EDAU09	1.819	8.08	6.26	10y-EDAU09
EDAZ09	2.068	8.08	6.01	10y-EDAZ09
EDAH10	2.317	8.08	5.76	10y-EDAH10
EDAM10	2.566	8.08	5.51	10y-EDAM10
EDAU10	2.816	8.08	5.27	10y-EDAU10

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



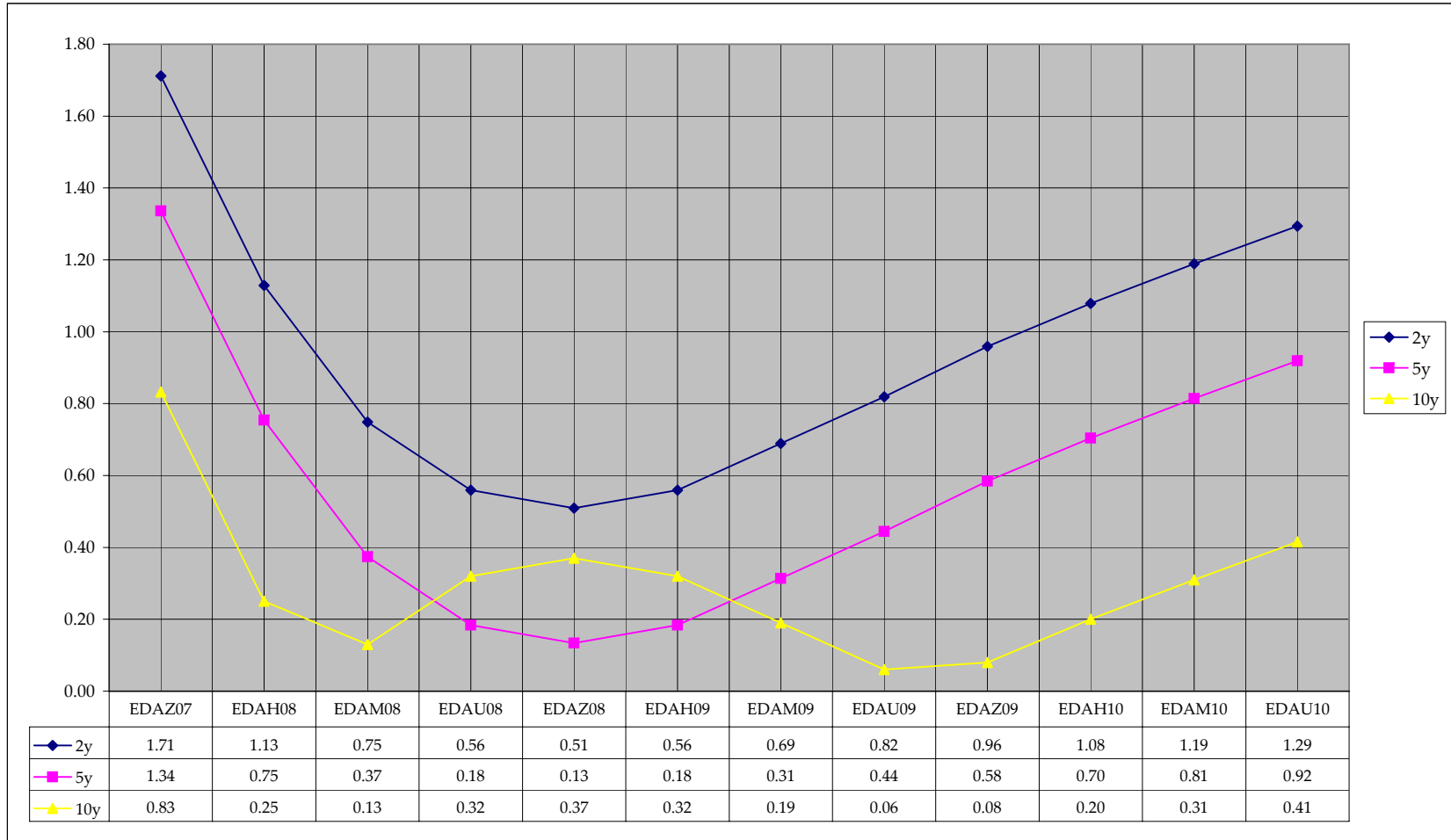
**Dirty TED Curve**

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.

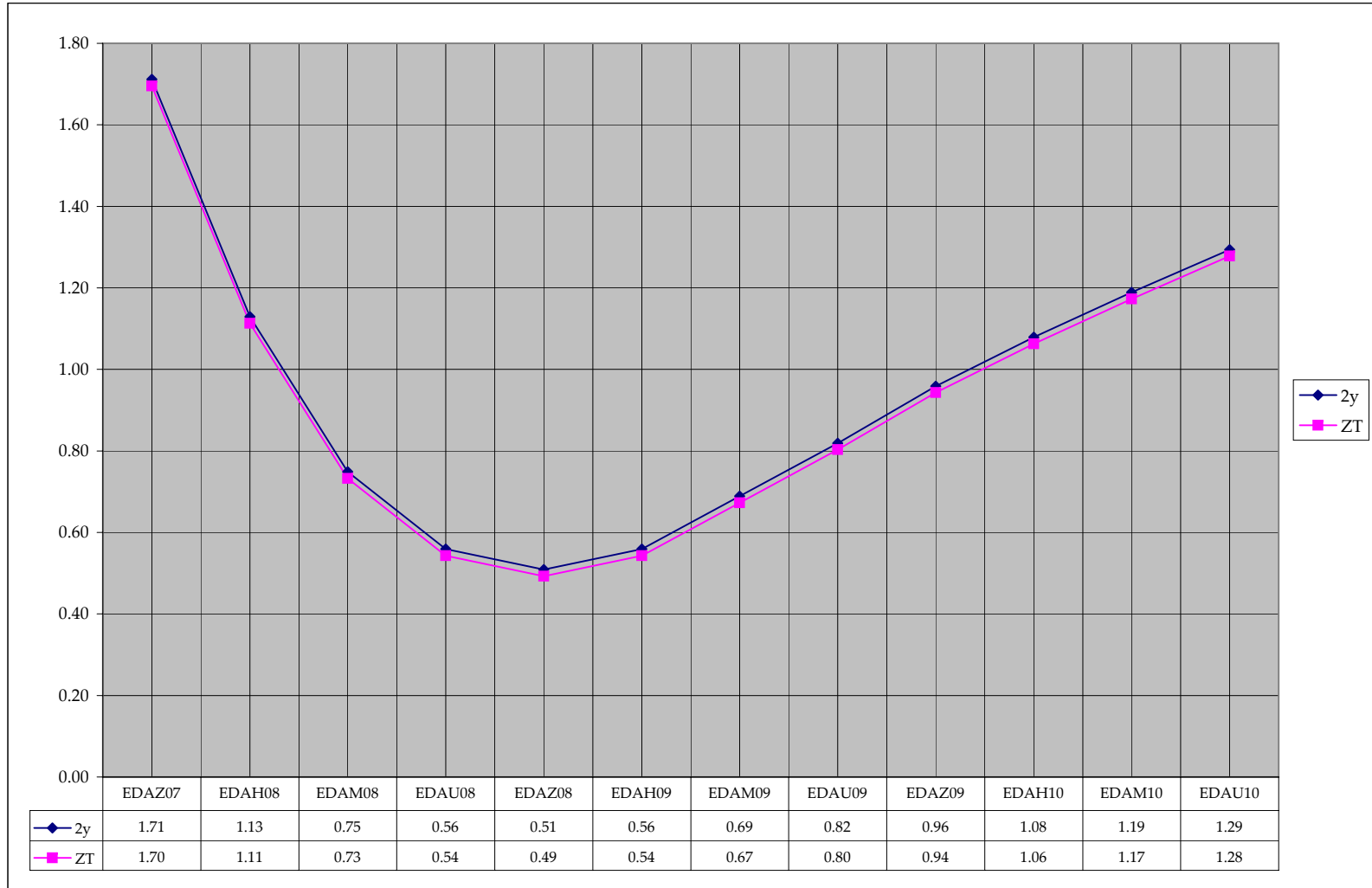


TED Curve

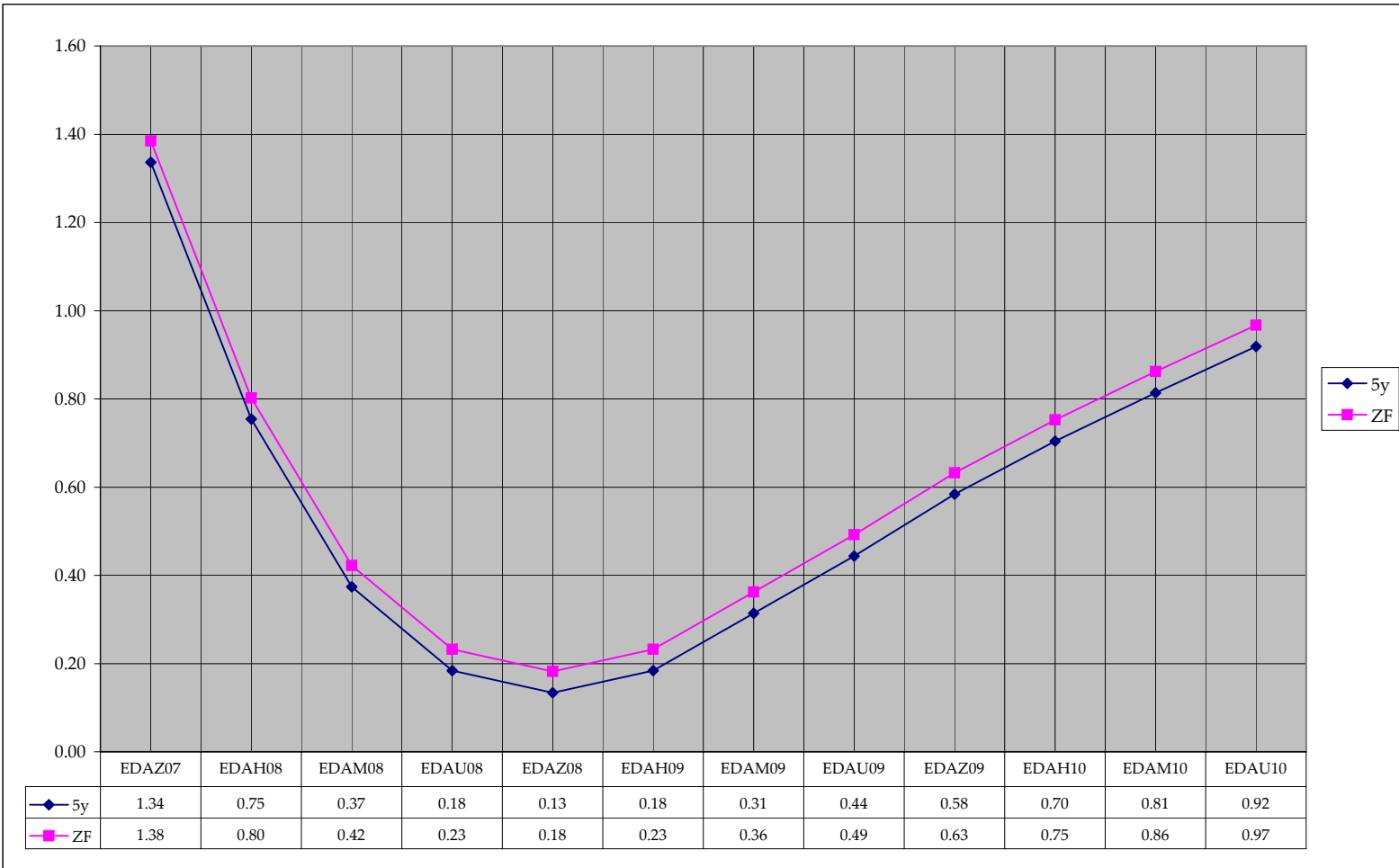
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



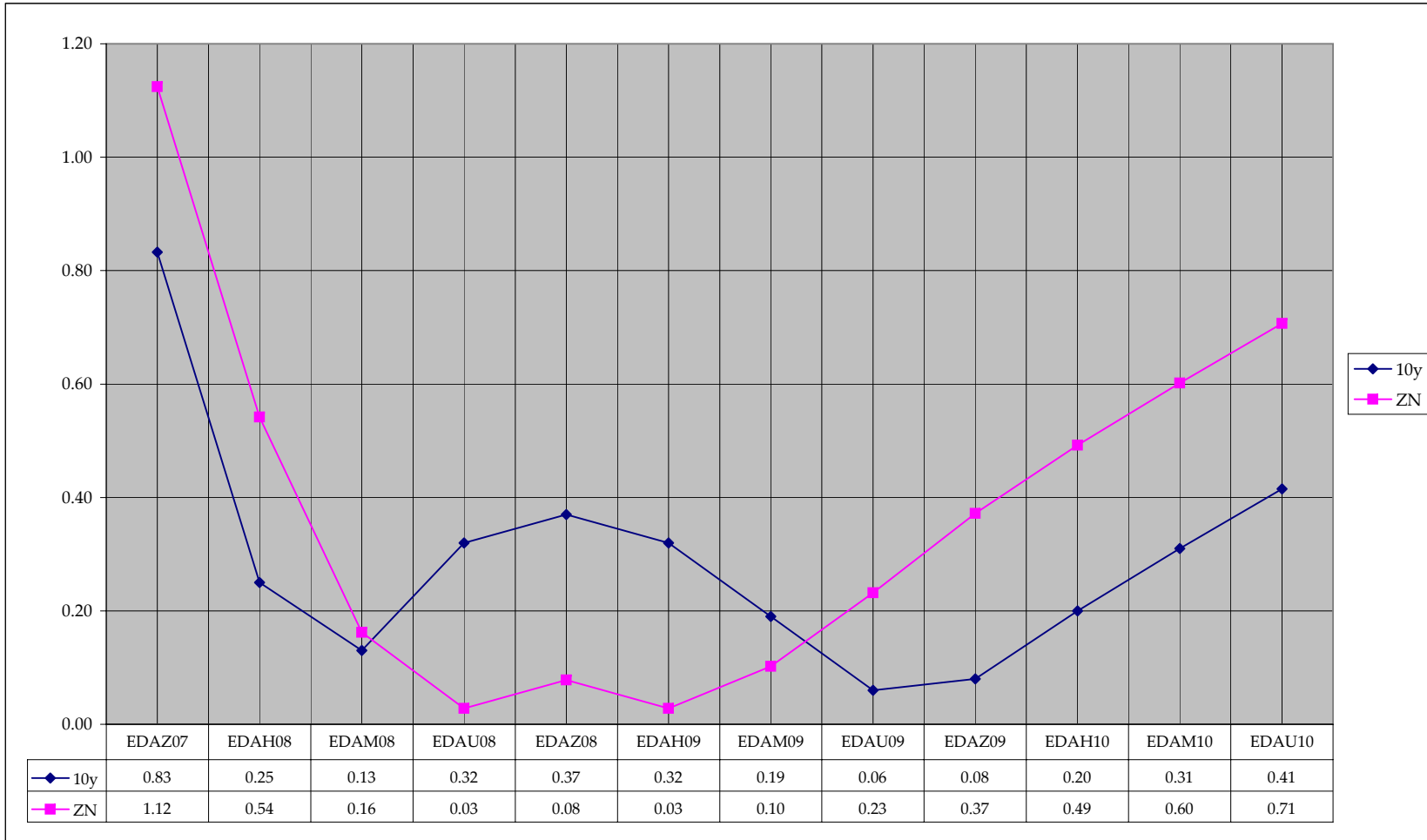
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



# Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.354	-3.750	9575.188
Q.ED.Red	3.947	-3.125	9614.500
Q.ED.Green	4.450	-3.000	9565.875
Q.ED.Blue		-0.750	9528.875
Q.ED.Gold		0.000	9499.750

