

## 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	102.5375	102.172	4.443	1.77	
ZF	105.5313	105.170	4.561	3.83	
ZN	107.5625	107.180	4.667	5.66	
2y	100.328	100.1050	4.440	1.85	
5y	100.288	100.0920	4.557	4.38	
10y	99.859	99.2750	4.766	7.89	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAU07	94.708	5.293	34	0.093	SEP	White Pack	
EDAZ07	95.025	4.975	125	0.342	DEC		
EDAH08	95.220	4.780	216	0.591	MAR		
EDAM08	95.265	4.735	307	0.840	JUN	Red Pack	
EDAU08	95.225	4.775	398	1.090	SEP		
EDAZ08	95.160	4.840	489	1.339	DEC		
EDAH09	95.090	4.910	580	1.588	MAR		
EDAM09	95.025	4.975	671	1.838	JUN	Green Pack	
EDAU09	94.950	5.050	762	2.087	SEP		
EDAZ09	94.870	5.130	853	2.336	DEC		
EDAH10	94.815	5.185	944	2.586	MAR		
EDAM10	94.750	5.250	1035	2.835	JUN	Blue Pack	
EDAU10	94.720	5.280	1126	3.084	SEP		
EDAZ10	94.650	5.350	1217	3.334	DEC		
EDAH11	94.670	5.330	1308	3.583	MAR		
EDAM11	94.560	5.440	1399	3.832	JUN	Gold Pack	
EDAU11	94.510	5.490	1497	4.101	SEP		
EDAZ11	94.460	5.540	1588	4.350	DEC		
EDAH12	94.430	5.570	1679	4.599	MAR		
EDAM12	94.380	5.620	1770	4.849	JUN		

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	5.077	-1.625	9505.438	Pack Prices
Q.ED.Red	5.004	-1.000	9512.500	
Q.ED.Green	5.294	-0.375	9484.625	
Q.ED.Blue		2.000	9464.500	
Q.ED.Gold		0.000	9444.125	
Q.ED.Purple		0.000	9444.125	

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

## Overview of Hedging

8/14/2007 5:38

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)

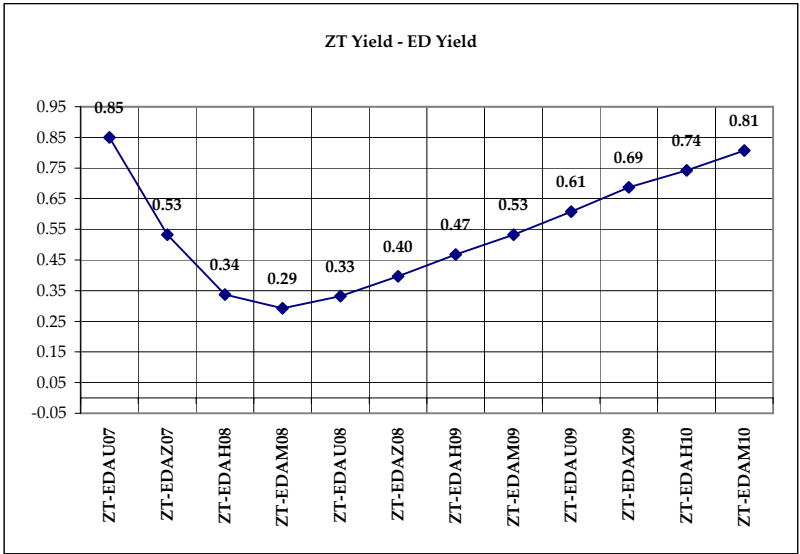
### Eurodollar Color Codes for Individual Year Strips:

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

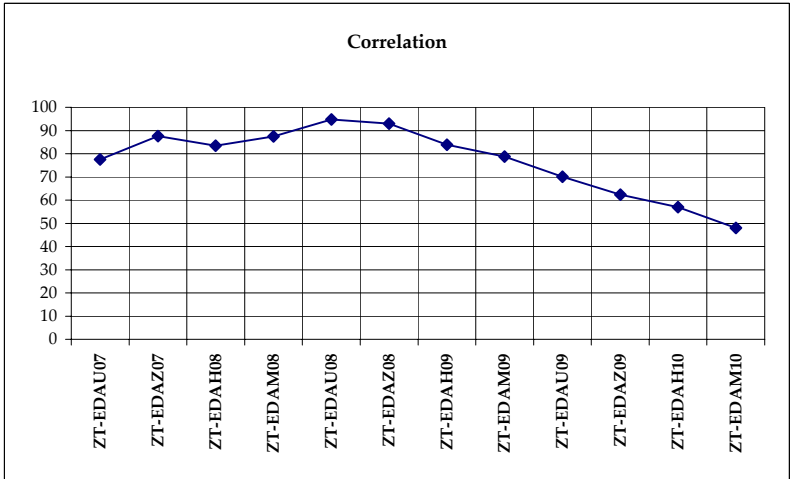
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	7.830	0.85	ZT-EDAU07	77.488
EDAZ07	7.512	0.53	ZT-EDAZ07	87.653
EDAH08	7.318	0.34	ZT-EDAH08	83.407
EDAM08	7.272	0.29	ZT-EDAM08	87.504
EDAU08	7.312	0.33	ZT-EDAU08	94.785
EDAZ08	7.378	0.40	ZT-EDAZ08	93.006
EDAH09	7.447	0.47	ZT-EDAH09	83.828
EDAM09	7.512	0.53	ZT-EDAM09	78.809
EDAU09	7.587	0.61	ZT-EDAU09	70.123
EDAZ09	7.667	0.69	ZT-EDAZ09	62.349
EDAH10	7.723	0.74	ZT-EDAH10	56.929
EDAM10	7.787	0.81	ZT-EDAM10	48.067

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		
EDAU07	0.093	1.77	1.67	ZT-EDAU07
EDAZ07	0.342	1.77	1.42	ZT-EDAZ07
EDAH08	0.591	1.77	1.17	ZT-EDAH08
EDAM08	0.840	1.77	0.93	ZT-EDAM08
EDAU08	1.090	1.77	0.68	ZT-EDAU08
EDAZ08	1.339	1.77	0.43	ZT-EDAZ08
EDAH09	1.588	1.77	0.18	ZT-EDAH09
EDAM09	1.838	1.77	(0.07)	ZT-EDAM09
EDAU09	2.087	1.77	(0.32)	ZT-EDAU09
EDAZ09	2.336	1.77	(0.57)	ZT-EDAZ09
EDAH10	2.586	1.77	(0.82)	ZT-EDAH10
EDAM10	2.835	1.77	(1.07)	ZT-EDAM10

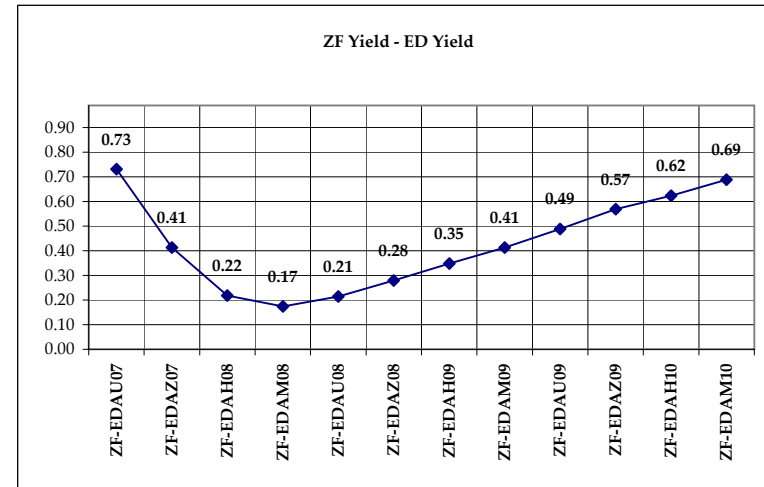
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	10.82	0.73	ZF-EDAU07	77.666
EDAZ07	10.51	0.41	ZF-EDAZ07	62.838
EDAH08	10.31	0.22	ZF-EDAH08	57.776
EDAM08	10.27	0.17	ZF-EDAM08	65.620
EDAU08	10.31	0.21	ZF-EDAU08	82.364
EDAZ08	10.37	0.28	ZF-EDAZ08	94.188
EDAH09	10.44	0.35	ZF-EDAH09	95.098
EDAM09	10.51	0.41	ZF-EDAM09	94.157
EDAU09	10.58	0.49	ZF-EDAU09	89.925
EDAZ09	10.66	0.57	ZF-EDAZ09	83.428
EDAH10	10.72	0.62	ZF-EDAH10	78.186
EDAM10	10.78	0.69	ZF-EDAM10	69.903

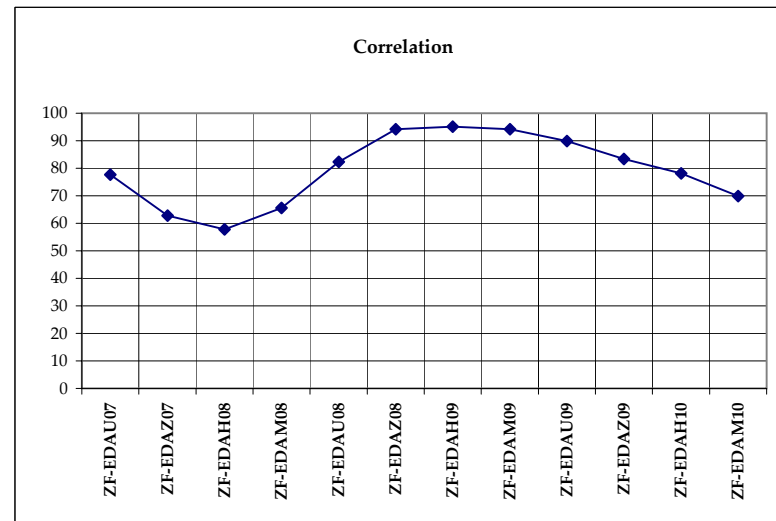
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	GE Duration as Fraction of year	ZF Duration	Spread Duration	
EDAU07	0.093	3.83	3.74	ZF-EDAU07
EDAZ07	0.342	3.83	3.49	ZF-EDAZ07
EDAH08	0.591	3.83	3.24	ZF-EDAH08
EDAM08	0.840	3.83	2.99	ZF-EDAM08
EDAU08	1.090	3.83	2.74	ZF-EDAU08
EDAZ08	1.339	3.83	2.49	ZF-EDAZ08
EDAH09	1.588	3.83	2.24	ZF-EDAH09
EDAM09	1.838	3.83	1.99	ZF-EDAM09
EDAU09	2.087	3.83	1.74	ZF-EDAU09
EDAZ09	2.336	3.83	1.49	ZF-EDAZ09
EDAH10	2.586	3.83	1.24	ZF-EDAH10
EDAM10	2.835	3.83	0.99	ZF-EDAM10

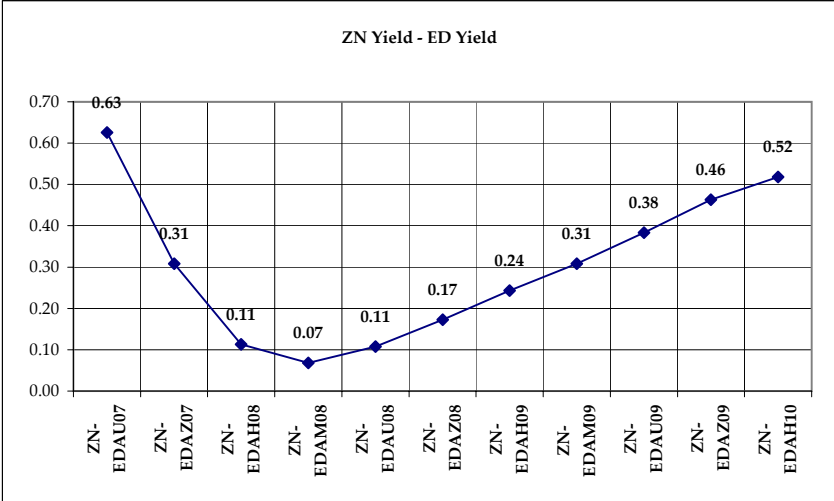
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

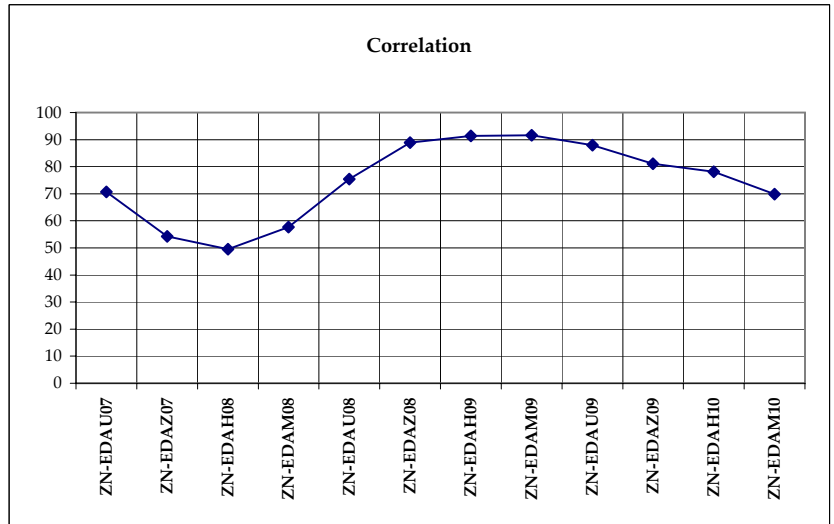
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	12.86	0.63	ZN-EDAU07	70.74
EDAZ07	12.54	0.31	ZN-EDAZ07	54.26
EDAH08	12.34	0.11	ZN-EDAH08	49.49
EDAM08	12.30	0.07	ZN-EDAM08	57.72
EDAU08	12.34	0.11	ZN-EDAU08	75.46
EDAZ08	12.40	0.17	ZN-EDAZ08	88.92
EDAH09	12.47	0.24	ZN-EDAH09	91.32
EDAM09	12.54	0.31	ZN-EDAM09	91.56
EDAU09	12.61	0.38	ZN-EDAU09	87.93
EDAZ09	12.69	0.46	ZN-EDAZ09	81.10
EDAH10	12.75	0.52	ZN-EDAH10	78.19
EDAM10	12.81	0.58	ZN-EDAM10	69.90

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	
EDAU07	0.093	5.66	5.56	ZN-EDAU07
EDAZ07	0.342	5.66	5.32	ZN-EDAZ07
EDAH08	0.591	5.66	5.07	ZN-EDAH08
EDAM08	0.840	5.66	4.82	ZN-EDAM08
EDAU08	1.090	5.66	4.57	ZN-EDAU08
EDAZ08	1.339	5.66	4.32	ZN-EDAZ08
EDAH09	1.588	5.66	4.07	ZN-EDAH09
EDAM09	1.838	5.66	3.82	ZN-EDAM09
EDAU09	2.087	5.66	3.57	ZN-EDAU09
EDAZ09	2.336	5.66	3.32	ZN-EDAZ09
EDAH10	2.586	5.66	3.07	ZN-EDAH10
EDAM10	2.835	5.66	2.82	ZN-EDAM10

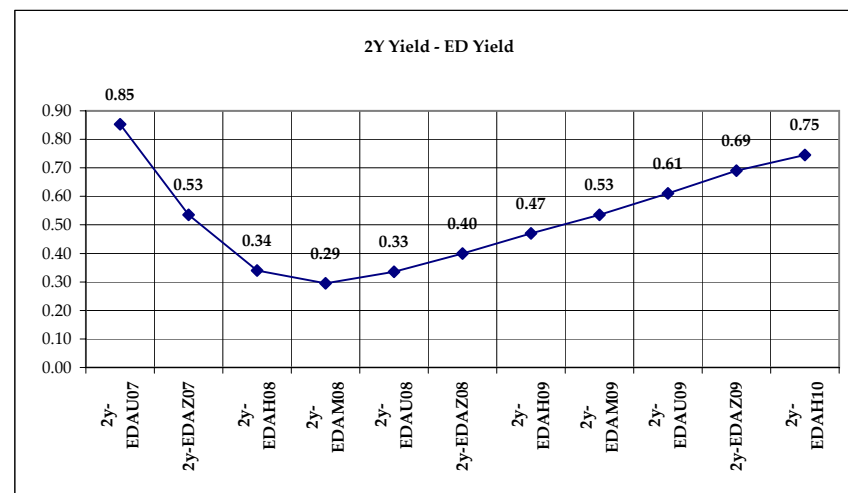
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.62	0.85	2y-EDAU07	-61.123
EDAZ07	5.30	0.53	2y-EDAZ07	-90.782
EDAH08	5.11	0.34	2y-EDAH08	-92.059
EDAM08	5.06	0.29	2y-EDAM08	-94.222
EDAU08	5.10	0.33	2y-EDAU08	-95.116
EDAZ08	5.17	0.40	2y-EDAZ08	-94.222
EDAH09	5.24	0.47	2y-EDAH09	-70.600
EDAM09	5.30	0.53	2y-EDAM09	-67.463
EDAU09	5.38	0.61	2y-EDAU09	-63.311
EDAZ09	5.46	0.69	2y-EDAZ09	-58.424
EDAH10	5.51	0.75	2y-EDAH10	-56.061
EDAM10	5.58	0.81	2y-EDAM10	-50.220

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.

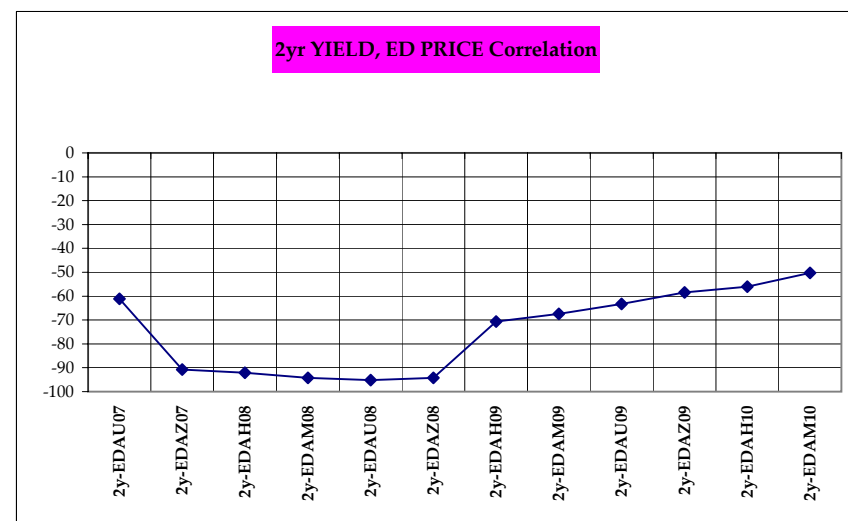


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAU07	0.093	1.76	2y-EDAU07
EDAZ07	0.342	1.51	2y-EDAZ07
EDAH08	0.591	1.26	2y-EDAH08
EDAM08	0.840	1.01	2y-EDAM08
EDAU08	1.090	0.76	2y-EDAU08
EDAZ08	1.339	0.51	2y-EDAZ08
EDAH09	1.588	0.26	2y-EDAH09
EDAM09	1.838	0.01	2y-EDAM09
EDAU09	2.087	(0.24)	2y-EDAU09
EDAZ09	2.336	(0.48)	2y-EDAZ09
EDAH10	2.586	(0.73)	2y-EDAH10
EDAM10	2.835	(0.98)	2y-EDAM10

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

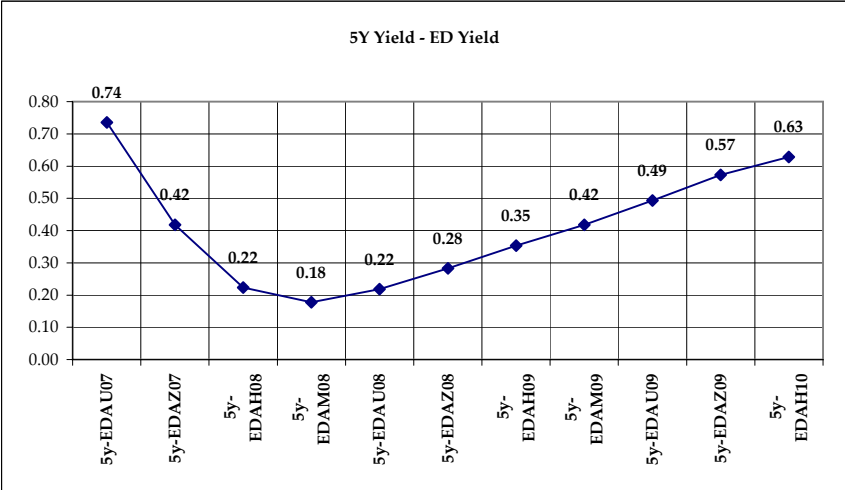
2yr YIELD, ED PRICE Correlation



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

5y				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.58	0.74	5y-EDAU07	-67.946
EDAZ07	5.26	0.42	5y-EDAZ07	-72.134
EDAH08	5.07	0.22	5y-EDAH08	-71.482
EDAM08	5.02	0.18	5y-EDAM08	-77.893
EDAU08	5.06	0.22	5y-EDAU08	-88.778
EDAZ08	5.13	0.28	5y-EDAZ08	-77.893
EDAH09	5.20	0.35	5y-EDAH09	-86.341
EDAM09	5.26	0.42	5y-EDAM09	-85.616
EDAU09	5.34	0.49	5y-EDAU09	-82.446
EDAZ09	5.42	0.57	5y-EDAZ09	-76.046
EDAH10	5.47	0.63	5y-EDAH10	-71.588
EDAM10	5.54	0.69	5y-EDAM10	-64.321

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.

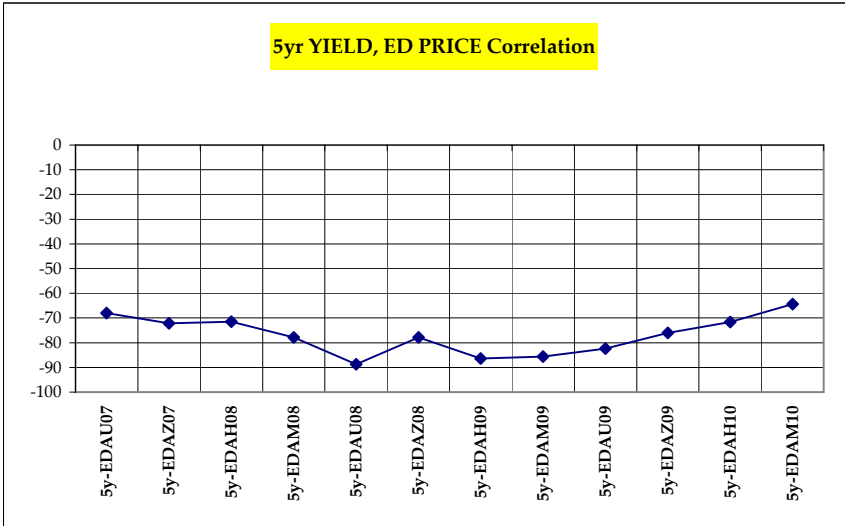


**GE Duration as Fraction of year**

	5Y Duration	Spread Duration	
EDAU07	0.093	4.38	4.29 5y-EDAU07
EDAZ07	0.342	4.38	4.04 5y-EDAZ07
EDAH08	0.591	4.38	3.79 5y-EDAH08
EDAM08	0.840	4.38	3.54 5y-EDAM08
EDAU08	1.090	4.38	3.29 5y-EDAU08
EDAZ08	1.339	4.38	3.04 5y-EDAZ08
EDAH09	1.588	4.38	2.79 5y-EDAH09
EDAM09	1.838	4.38	2.54 5y-EDAM09
EDAU09	2.087	4.38	2.29 5y-EDAU09
EDAZ09	2.336	4.38	2.04 5y-EDAZ09
EDAH10	2.586	4.38	1.80 5y-EDAH10
EDAM10	2.835	4.38	1.55 5y-EDAM10

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

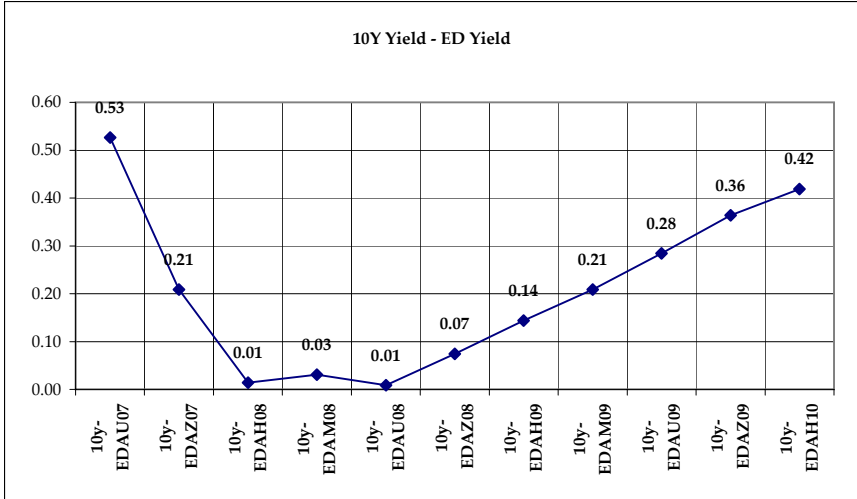
5yr YIELD, ED PRICE Correlation



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

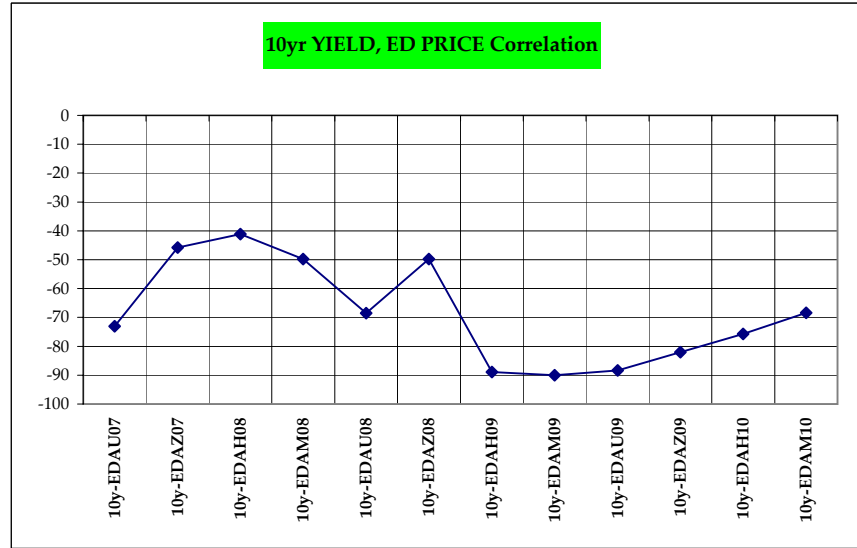
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.58	0.53	10y-EDAU07	-73.093
EDAZ07	5.26	0.21	10y-EDAZ07	-45.812
EDAH08	5.07	0.01	10y-EDAH08	-41.124
EDAM08	5.02	0.03	10y-EDAM08	-49.757
EDAU08	5.06	0.01	10y-EDAU08	-68.569
EDAZ08	5.13	0.07	10y-EDAZ08	-49.757
EDAH09	5.20	0.14	10y-EDAH09	-88.878
EDAM09	5.26	0.21	10y-EDAM09	-90.064
EDAU09	5.34	0.28	10y-EDAU09	-88.367
EDAZ09	5.42	0.36	10y-EDAZ09	-82.042
EDAH10	5.47	0.42	10y-EDAH10	-75.775
EDAM10	5.54	0.48	10y-EDAM10	-68.441

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.



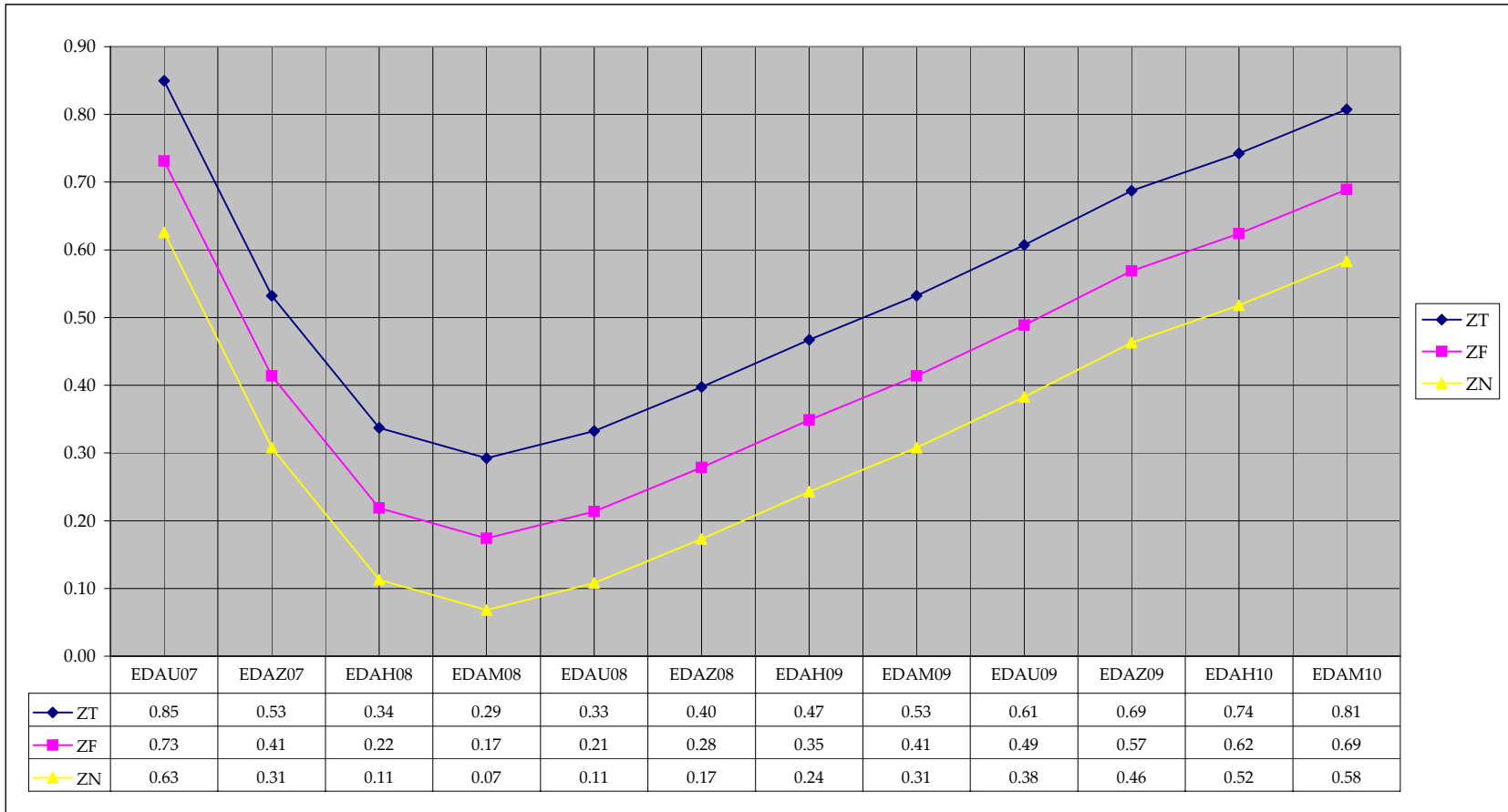
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU07	0.093	7.89	7.79	10y-EDAU07
EDAZ07	0.342	7.89	7.54	10y-EDAZ07
EDAH08	0.591	7.89	7.29	10y-EDAH08
EDAM08	0.840	7.89	7.04	10y-EDAM08
EDAU08	1.090	7.89	6.80	10y-EDAU08
EDAZ08	1.339	7.89	6.55	10y-EDAZ08
EDAH09	1.588	7.89	6.30	10y-EDAH09
EDAM09	1.838	7.89	6.05	10y-EDAM09
EDAU09	2.087	7.89	5.80	10y-EDAU09
EDAZ09	2.336	7.89	5.55	10y-EDAZ09
EDAH10	2.586	7.89	5.30	10y-EDAH10
EDAM10	2.835	7.89	5.05	10y-EDAM10

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



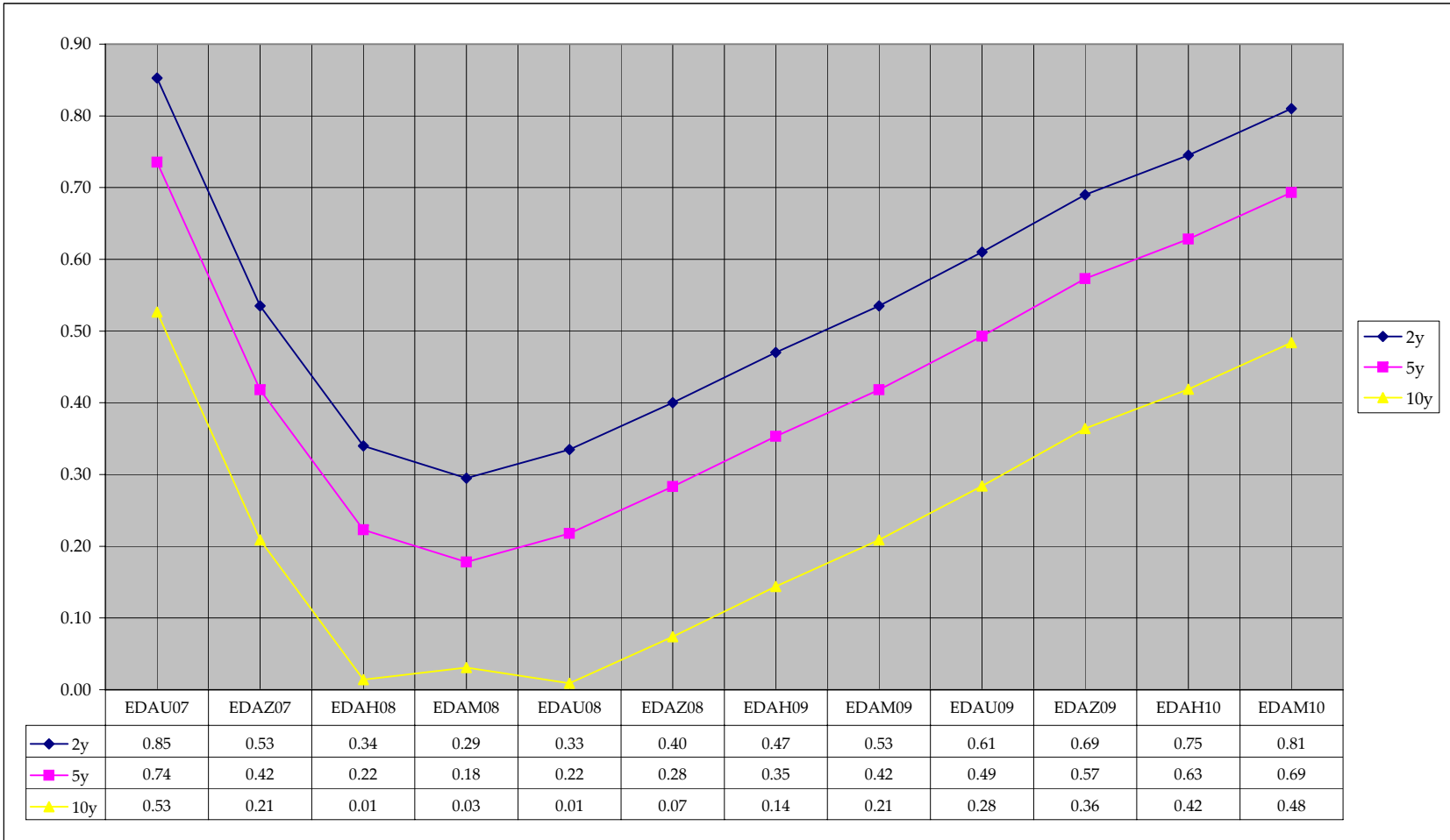
**Dirty TED Curve**

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.

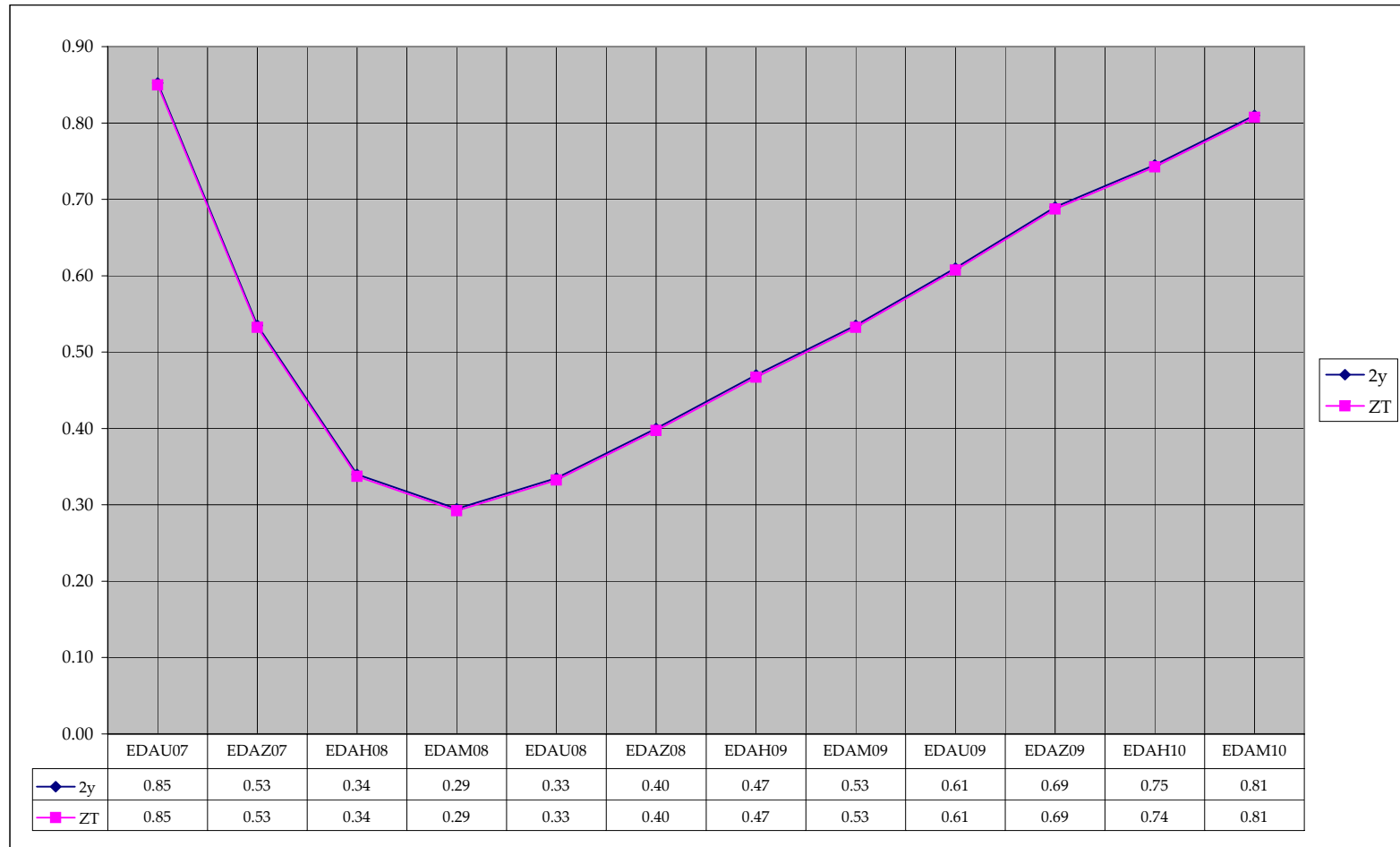


TED Curve

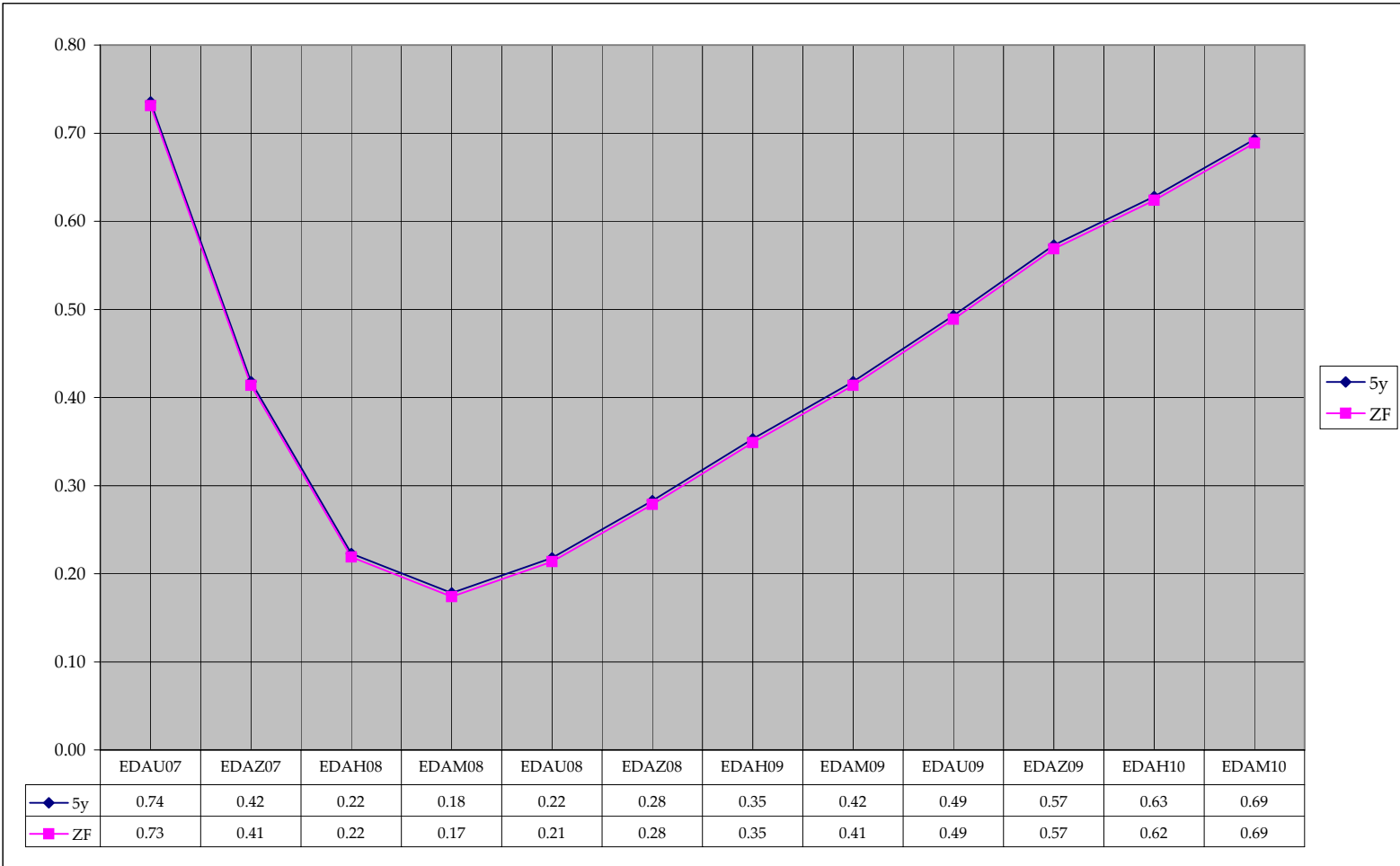
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



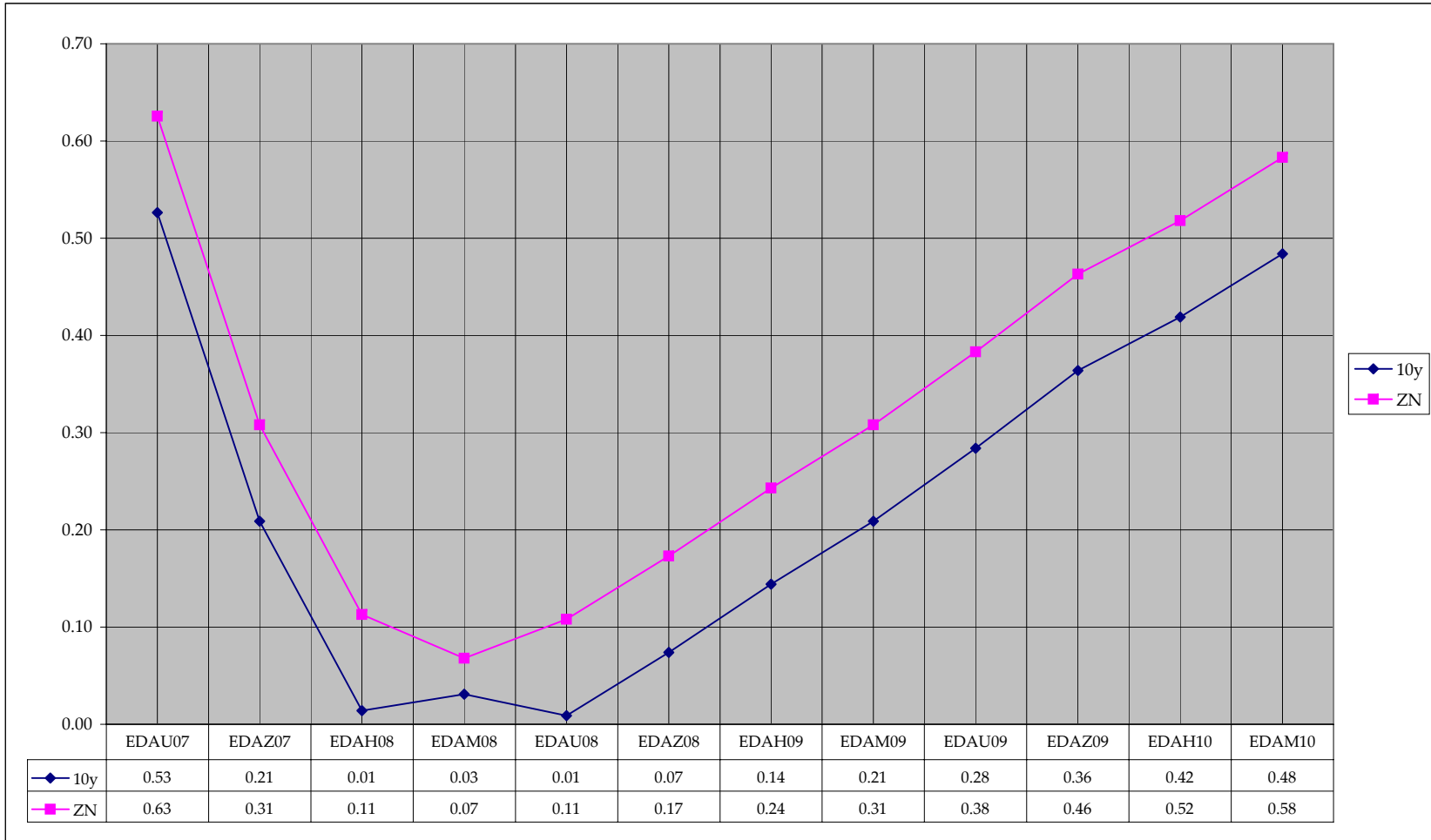
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



# Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	5.077	-1.625	9505.438
Q.ED.Red	5.004	-1.000	9512.500
Q.ED.Green	5.294	-0.375	9484.625
Q.ED.Blue		2.000	9464.500
Q.ED.Gold		0.000	9444.125
Q.ED.Purple		0.000	9444.125

