

## 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	107.0313	107.010	1.890	1.77	
ZF	113.6250	113.200	2.556	3.87	
ZN	117.1563	117.050	3.152	5.83	
2y	100.344	100.1100	1.943	1.92	
5y	100.875	100.2800	2.682	4.60	
10y	98.828	98.2650	3.639	8.22	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAH08	97.140	2.860	35	0.095	MAR	} White Pack	
EDAM08	97.590	2.410	126	0.345	JUN		
EDAU08	97.685	2.315	217	0.594	SEP		
EDAZ08	97.635	2.365	308	0.843	DEC	} Red Pack	
EDAH09	97.490	2.510	399	1.092	MAR		
EDAM09	97.275	2.725	490	1.342	JUN		
EDAU09	97.060	2.940	581	1.591	SEP	} Green Pack	
EDAZ09	96.855	3.145	672	1.840	DEC		
EDAH10	96.675	3.325	763	2.090	MAR		
EDAM10	96.485	3.515	854	2.339	JUN	} Blue Pack	
EDAU10	96.335	3.665	945	2.588	SEP		
EDAZ10	96.145	3.855	1036	2.838	DEC		
EDAH11	96.060	3.940	1127	3.087	MAR	} Gold Pack	
EDAM11	95.910	4.090	1218	3.336	JUN		
EDAU11	#VALUE!	#VALUE!	1316	3.605	SEP		
EDAZ11	#VALUE!	#VALUE!	1407	3.854	DEC	} Gold Pack	
EDAH12	#VALUE!	#VALUE!	1498	4.103	MAR		
EDAM12	#VALUE!	#VALUE!	1589	4.353	JUN		
EDAU12	#VALUE!	#VALUE!	1680	4.602	SEP		
EDAU12	#VALUE!	#VALUE!	1680	4.602	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	2.538	-0.750	9751.250	} Pack Prices
Q.ED.Red	2.890	-1.125	9717.000	
Q.ED.Green	3.673	0.625	9641.000	
Q.ED.Blue		2.875	9581.625	
Q.ED.Gold		0.000	9528.875	

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

2/11/2008 5:45

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)

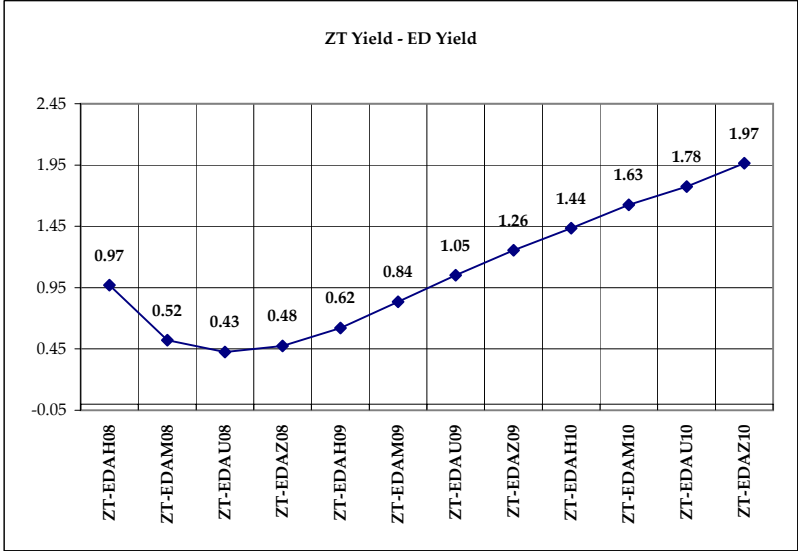
### Eurodollar Color Codes for Individual Year Strips:

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			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAH08	9.891	0.97	ZT-EDAH08	74.238
EDAM08	9.441	0.52	ZT-EDAM08	82.536
EDAU08	9.346	0.43	ZT-EDAU08	93.858
EDAZ08	9.396	0.48	ZT-EDAZ08	97.554
EDAH09	9.541	0.62	ZT-EDAH09	96.215
EDAM09	9.756	0.84	ZT-EDAM09	93.106
EDAU09	9.971	1.05	ZT-EDAU09	87.508
EDAZ09	10.176	1.26	ZT-EDAZ09	77.505
EDAH10	10.356	1.44	ZT-EDAH10	64.372
EDAM10	10.546	1.63	ZT-EDAM10	50.044
EDAU10	10.696	1.78	ZT-EDAU10	38.840
EDAZ10	10.886	1.97	ZT-EDAZ10	14.983

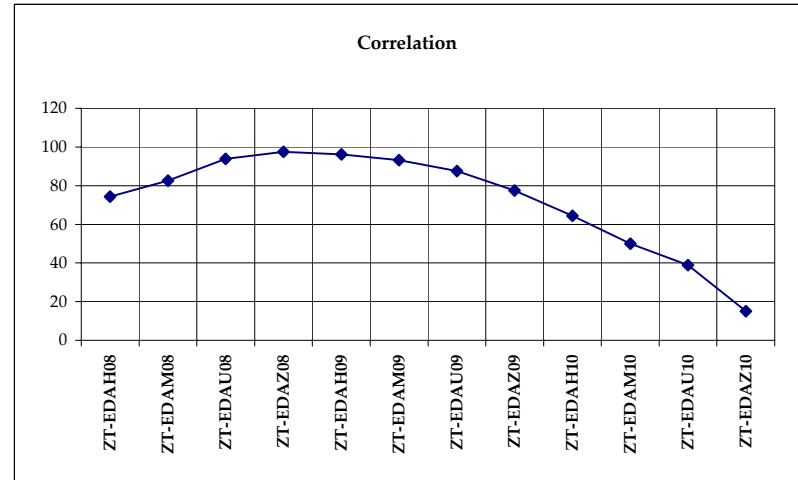
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	ZT Duration	Spread Duration	
EDAH08	0.095	1.77	ZT-EDAH08
EDAM08	0.345	1.77	ZT-EDAM08
EDAU08	0.594	1.77	ZT-EDAU08
EDAZ08	0.843	1.77	ZT-EDAZ08
EDAH09	1.092	1.77	ZT-EDAH09
EDAM09	1.342	1.77	ZT-EDAM09
EDAU09	1.591	1.77	ZT-EDAU09
EDAZ09	1.840	1.77	ZT-EDAZ09
EDAH10	2.090	1.77	ZT-EDAH10
EDAM10	2.339	1.77	ZT-EDAM10
EDAU10	2.588	1.77	ZT-EDAU10
EDAZ10	2.838	1.77	ZT-EDAZ10

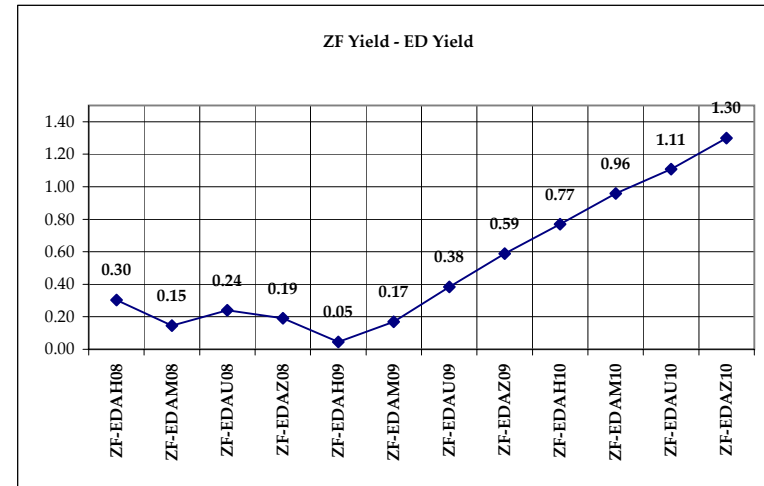
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	16.49	0.30	ZF-EDAH08	63.079
EDAM08	16.04	0.15	ZF-EDAM08	75.657
EDAU08	15.94	0.24	ZF-EDAU08	88.365
EDAZ08	15.99	0.19	ZF-EDAZ08	92.516
EDAH09	16.14	0.05	ZF-EDAH09	93.138
EDAM09	16.35	0.17	ZF-EDAM09	93.081
EDAU09	16.57	0.38	ZF-EDAU09	91.774
EDAZ09	16.77	0.59	ZF-EDAZ09	87.352
EDAH10	16.95	0.77	ZF-EDAH10	79.297
EDAM10	17.14	0.96	ZF-EDAM10	69.189
EDAU10	17.29	1.11	ZF-EDAU10	60.964
EDAZ10	17.48	1.30	ZF-EDAZ10	40.887

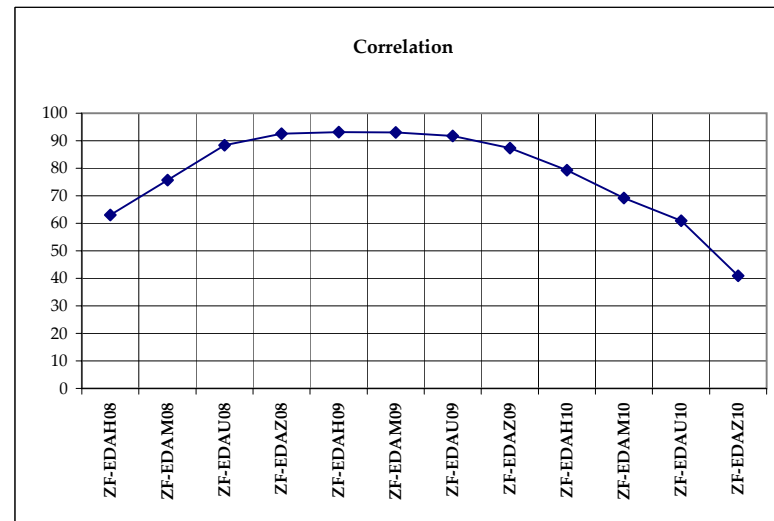
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	GE Duration as Fraction of year	ZF Duration	Spread Duration	
EDAH08	0.095	3.87	3.78	ZF-EDAH08
EDAM08	0.345	3.87	3.53	ZF-EDAM08
EDAU08	0.594	3.87	3.28	ZF-EDAU08
EDAZ08	0.843	3.87	3.03	ZF-EDAZ08
EDAH09	1.092	3.87	2.78	ZF-EDAH09
EDAM09	1.342	3.87	2.53	ZF-EDAM09
EDAU09	1.591	3.87	2.28	ZF-EDAU09
EDAZ09	1.840	3.87	2.03	ZF-EDAZ09
EDAH10	2.090	3.87	1.78	ZF-EDAH10
EDAM10	2.339	3.87	1.53	ZF-EDAM10
EDAU10	2.588	3.87	1.28	ZF-EDAU10
EDAZ10	2.838	3.87	1.04	ZF-EDAZ10

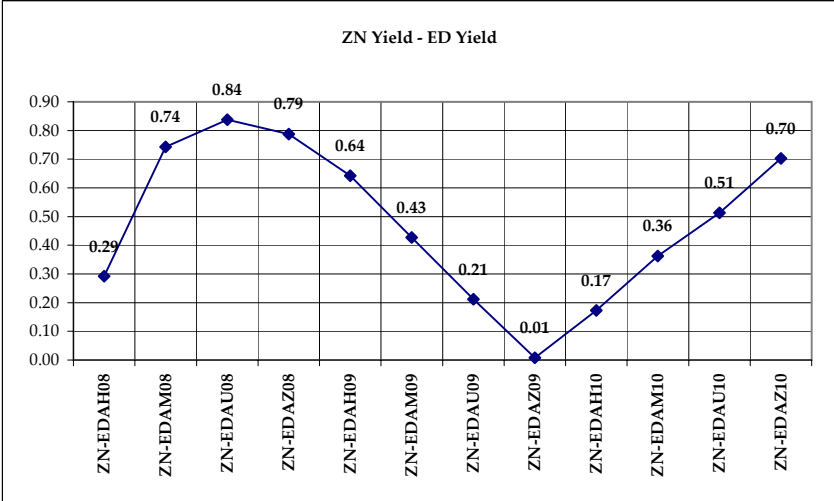
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

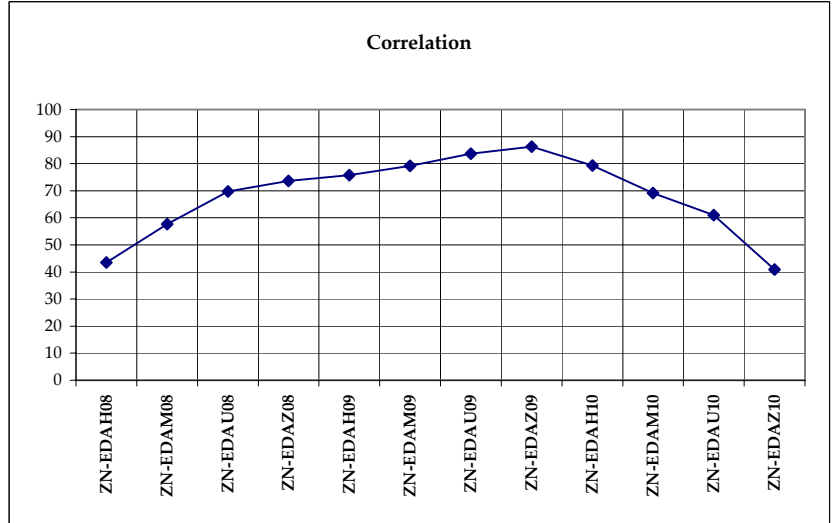
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	20.02	0.29	ZN-EDAH08	43.54
EDAM08	19.57	0.74	ZN-EDAM08	57.65
EDAU08	19.47	0.84	ZN-EDAU08	69.79
EDAZ08	19.52	0.79	ZN-EDAZ08	73.59
EDAH09	19.67	0.64	ZN-EDAH09	75.78
EDAM09	19.88	0.43	ZN-EDAM09	79.25
EDAU09	20.10	0.21	ZN-EDAU09	83.67
EDAZ09	20.30	0.01	ZN-EDAZ09	86.25
EDAH10	20.48	0.17	ZN-EDAH10	79.30
EDAM10	20.67	0.36	ZN-EDAM10	69.19
EDAU10	20.82	0.51	ZN-EDAU10	60.96
EDAZ10	21.01	0.70	ZN-EDAZ10	40.89

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	0.095	5.83	5.73	ZN-EDAH08
EDAM08	0.345	5.83	5.48	ZN-EDAM08
EDAU08	0.594	5.83	5.23	ZN-EDAU08
EDAZ08	0.843	5.83	4.98	ZN-EDAZ08
EDAH09	1.092	5.83	4.73	ZN-EDAH09
EDAM09	1.342	5.83	4.48	ZN-EDAM09
EDAU09	1.591	5.83	4.23	ZN-EDAU09
EDAZ09	1.840	5.83	3.99	ZN-EDAZ09
EDAH10	2.090	5.83	3.74	ZN-EDAH10
EDAM10	2.339	5.83	3.49	ZN-EDAM10
EDAU10	2.588	5.83	3.24	ZN-EDAU10
EDAZ10	2.838	5.83	2.99	ZN-EDAZ10

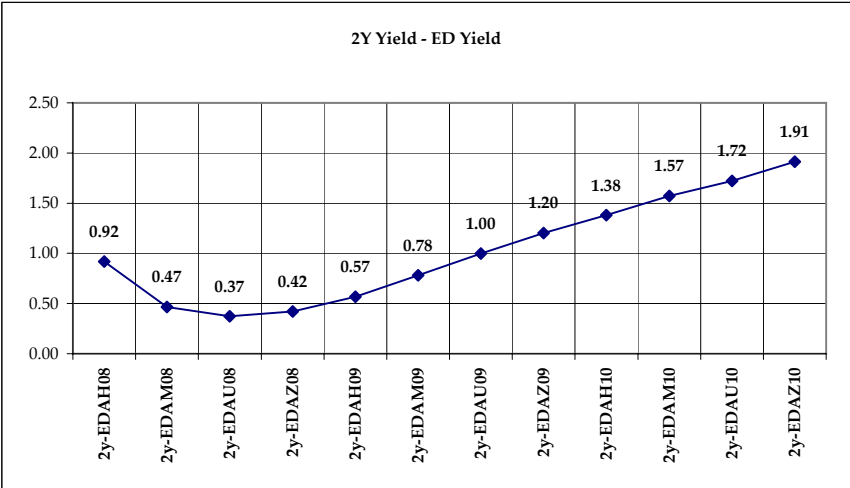
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.20	0.92	2y-EDAH08	-75.512
EDAM08	2.75	0.47	2y-EDAM08	-83.782
EDAU08	2.66	0.37	2y-EDAU08	-92.866
EDAZ08	2.71	0.42	2y-EDAZ08	-83.782
EDAH09	2.85	0.57	2y-EDAH09	-89.985
EDAM09	3.07	0.78	2y-EDAM09	-87.173
EDAU09	3.28	1.00	2y-EDAU09	-83.633
EDAZ09	3.49	1.20	2y-EDAZ09	-76.408
EDAH10	3.67	1.38	2y-EDAH10	-65.661
EDAM10	3.86	1.57	2y-EDAM10	-54.140
EDAU10	4.01	1.72	2y-EDAU10	-45.678
EDAZ10	4.20	1.91	2y-EDAZ10	-25.631

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.

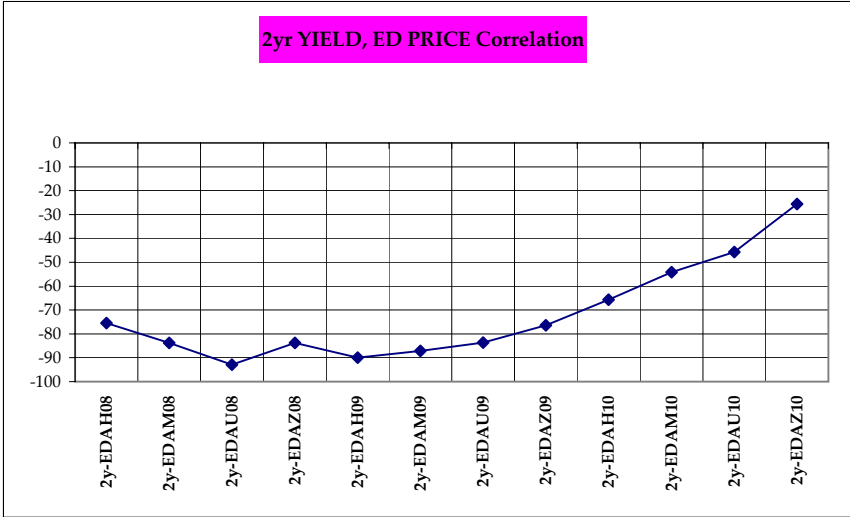


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAH08	0.095	1.92	2y-EDAH08
EDAM08	0.345	1.92	2y-EDAM08
EDAU08	0.594	1.92	2y-EDAU08
EDAZ08	0.843	1.92	2y-EDAZ08
EDAH09	1.092	1.92	2y-EDAH09
EDAM09	1.342	1.92	2y-EDAM09
EDAU09	1.591	1.92	2y-EDAU09
EDAZ09	1.840	1.92	2y-EDAZ09
EDAH10	2.090	1.92	2y-EDAH10
EDAM10	2.339	1.92	2y-EDAM10
EDAU10	2.588	1.92	2y-EDAU10
EDAZ10	2.838	1.92	2y-EDAZ10

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

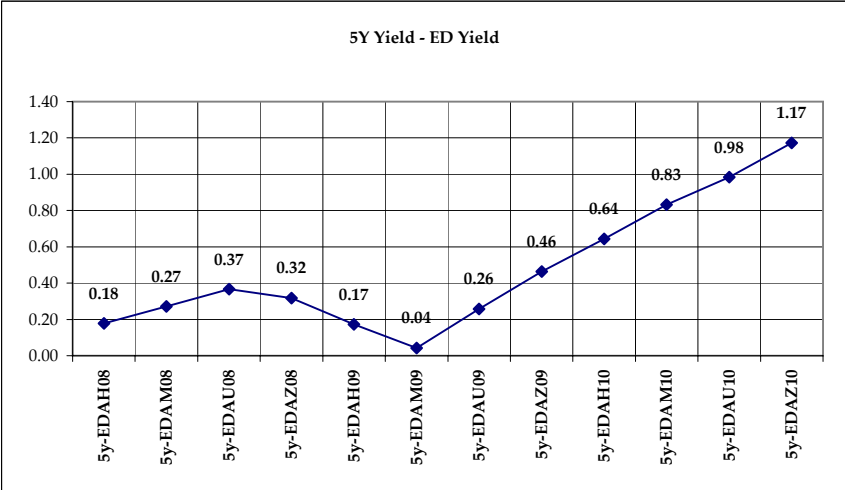
2yr YIELD, ED PRICE Correlation



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

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.74	0.18	5y-EDAH08	-59.478
EDAM08	3.29	0.27	5y-EDAM08	-71.041
EDAU08	3.19	0.37	5y-EDAU08	-79.681
EDAZ08	3.24	0.32	5y-EDAZ08	-71.041
EDAH09	3.38	0.17	5y-EDAH09	-77.576
EDAM09	3.60	0.04	5y-EDAM09	-77.967
EDAU09	3.82	0.26	5y-EDAU09	-79.432
EDAZ09	4.02	0.46	5y-EDAZ09	-78.910
EDAH10	4.20	0.64	5y-EDAH10	-74.710
EDAM10	4.39	0.83	5y-EDAM10	-69.043
EDAU10	4.54	0.98	5y-EDAU10	-65.450
EDAZ10	4.73	1.17	5y-EDAZ10	-51.128

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.

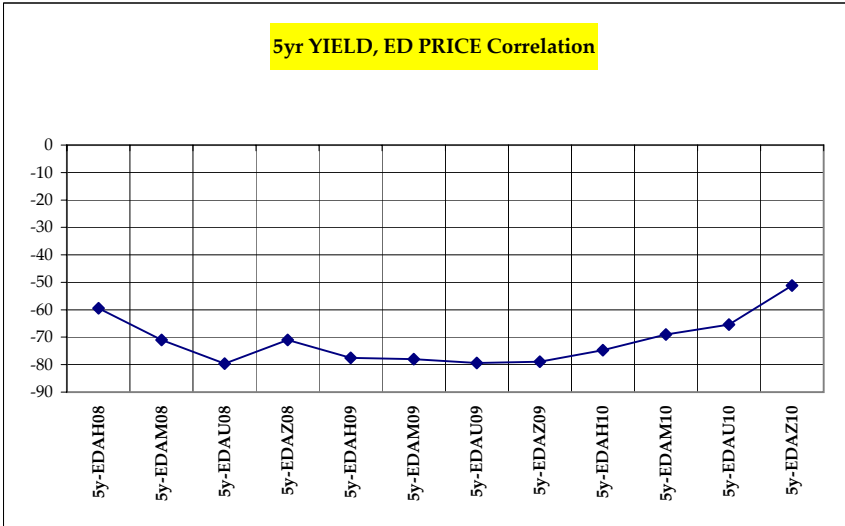


**GE Duration as Fraction of year**

	5Y Duration	Spread Duration	
EDAH08	0.095	4.60	4.50 5y-EDAH08
EDAM08	0.345	4.60	4.26 5y-EDAM08
EDAU08	0.594	4.60	4.01 5y-EDAU08
EDAZ08	0.843	4.60	3.76 5y-EDAZ08
EDAH09	1.092	4.60	3.51 5y-EDAH09
EDAM09	1.342	4.60	3.26 5y-EDAM09
EDAU09	1.591	4.60	3.01 5y-EDAU09
EDAZ09	1.840	4.60	2.76 5y-EDAZ09
EDAH10	2.090	4.60	2.51 5y-EDAH10
EDAM10	2.339	4.60	2.26 5y-EDAM10
EDAU10	2.588	4.60	2.01 5y-EDAU10
EDAZ10	2.838	4.60	1.76 5y-EDAZ10

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

**5yr YIELD, ED PRICE Correlation**

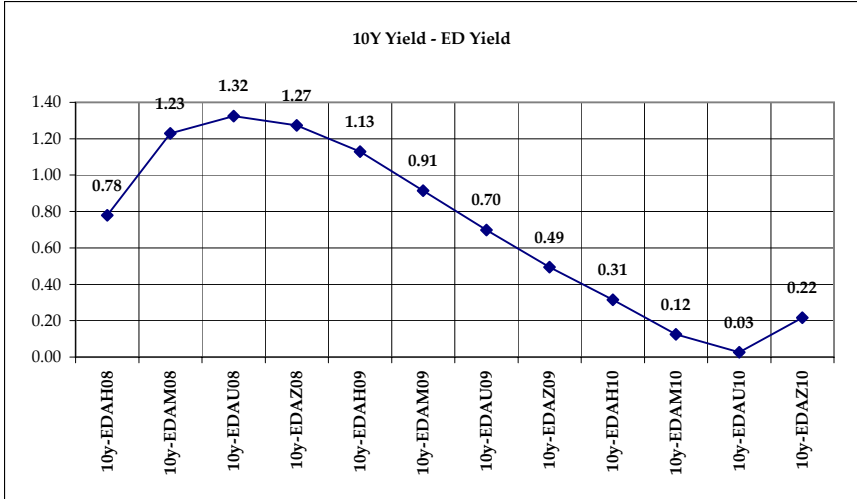




**TERM TED: 10y vs Eurodollar Contracts**

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.74	0.78	10y-EDAH08	3.234
EDAM08	3.29	1.23	10y-EDAM08	-5.645
EDAU08	3.19	1.32	10y-EDAU08	-9.618
EDAZ08	3.24	1.27	10y-EDAZ08	-5.645
EDAH09	3.38	1.13	10y-EDAH09	-6.883
EDAM09	3.60	0.91	10y-EDAM09	-12.094
EDAU09	3.82	0.70	10y-EDAU09	-21.827
EDAZ09	4.02	0.49	10y-EDAZ09	-32.459
EDAH10	4.20	0.31	10y-EDAH10	-40.024
EDAM10	4.39	0.12	10y-EDAM10	-47.558
EDAU10	4.54	0.03	10y-EDAU10	-54.011
EDAZ10	4.73	0.22	10y-EDAZ10	-60.766

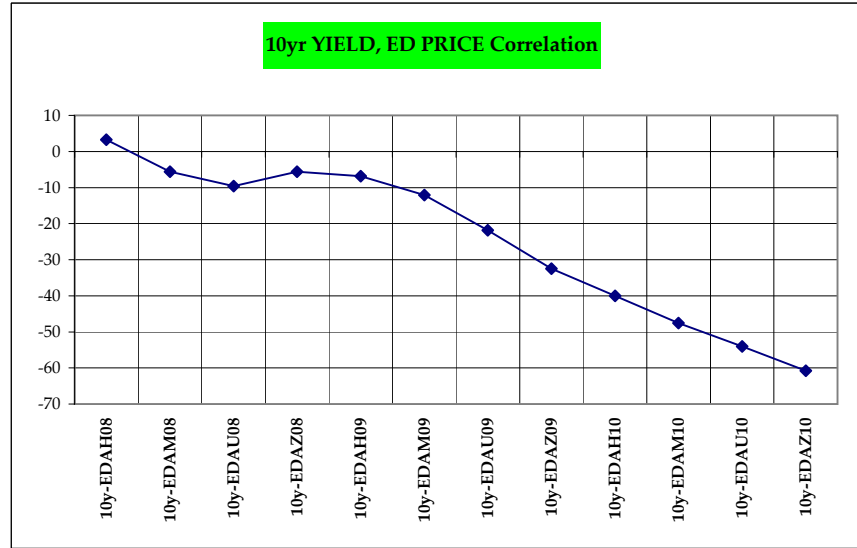
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days  
 These are measuring YIELD correlations.



**GE Duration as**

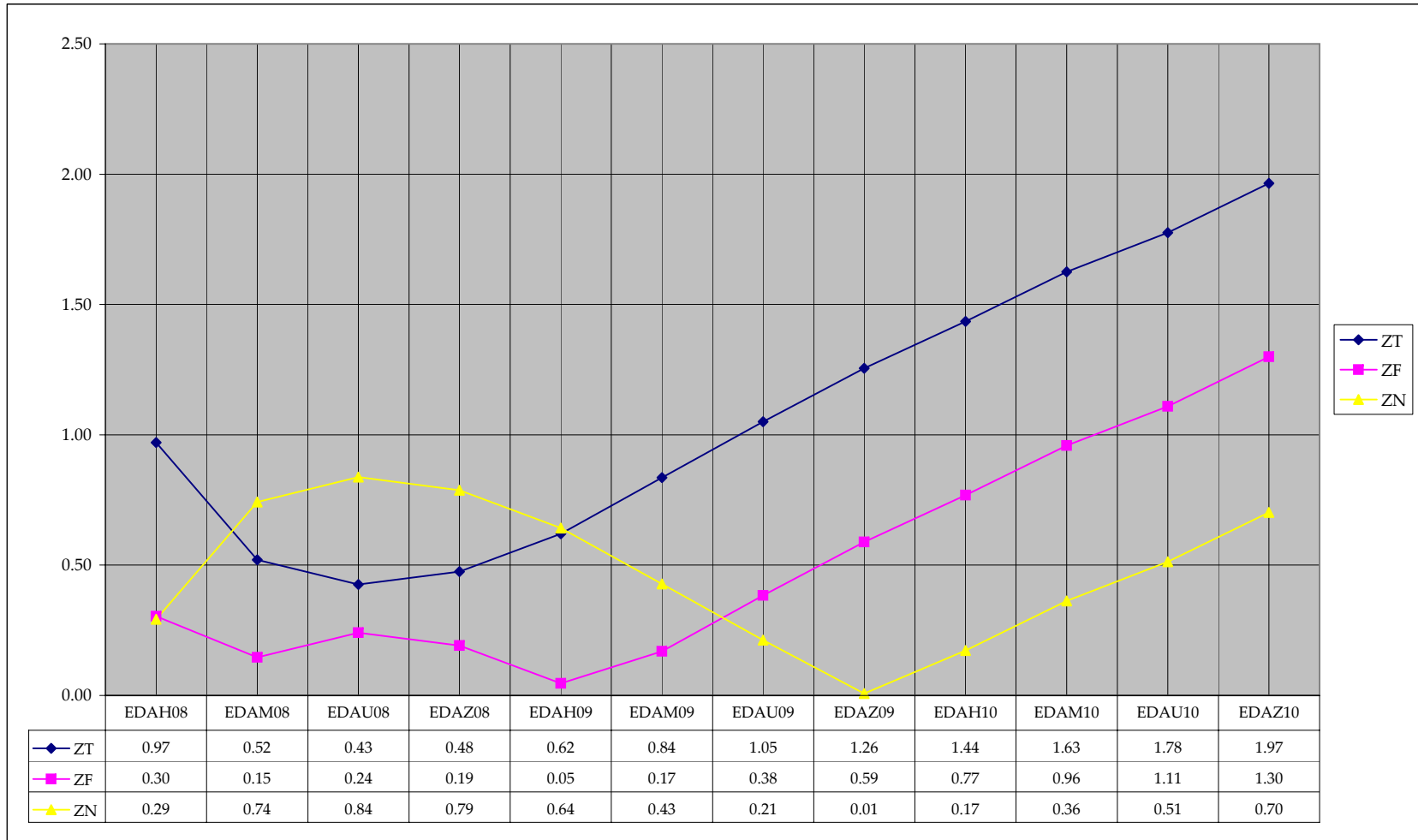
	Fraction of year	10Y Duration	Spread Duration	
EDAH08	0.095	8.22	8.13	10y-EDAH08
EDAM08	0.345	8.22	7.88	10y-EDAM08
EDAU08	0.594	8.22	7.63	10y-EDAU08
EDAZ08	0.843	8.22	7.38	10y-EDAZ08
EDAH09	1.092	8.22	7.13	10y-EDAH09
EDAM09	1.342	8.22	6.88	10y-EDAM09
EDAU09	1.591	8.22	6.63	10y-EDAU09
EDAZ09	1.840	8.22	6.38	10y-EDAZ09
EDAH10	2.090	8.22	6.13	10y-EDAH10
EDAM10	2.339	8.22	5.88	10y-EDAM10
EDAU10	2.588	8.22	5.63	10y-EDAU10
EDAZ10	2.838	8.22	5.39	10y-EDAZ10

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



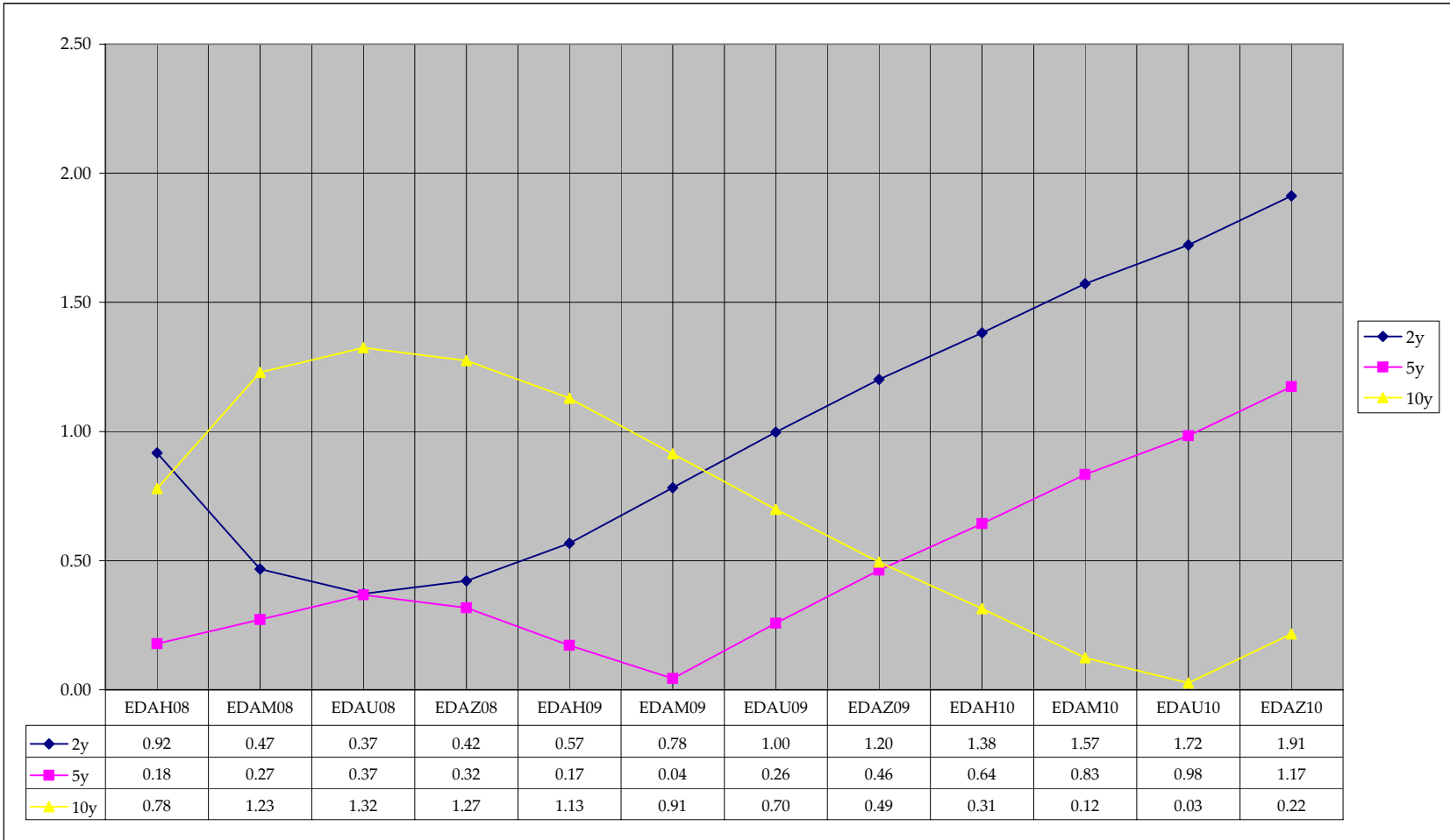
**Dirty TED Curve**

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.

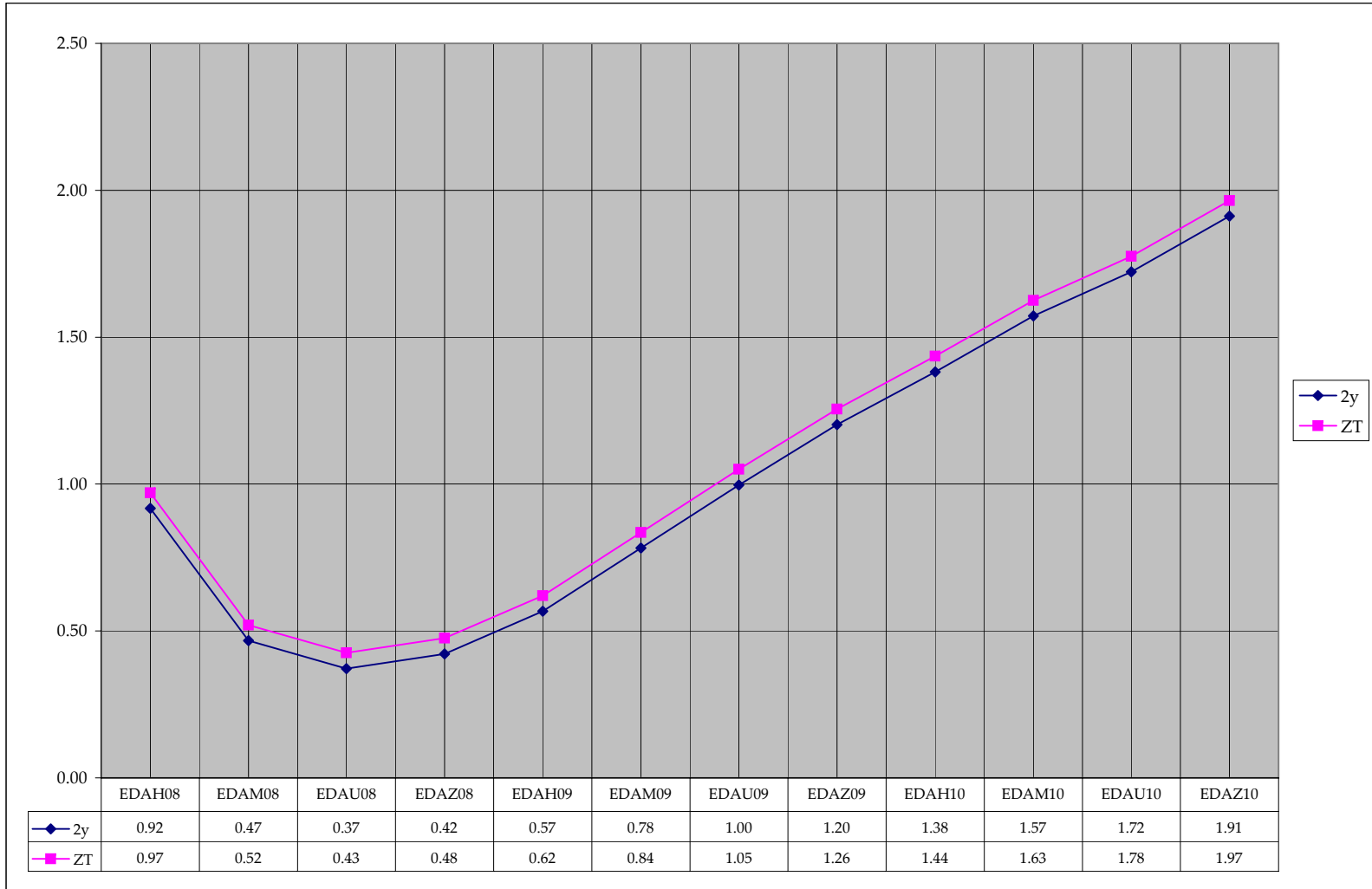


TED Curve

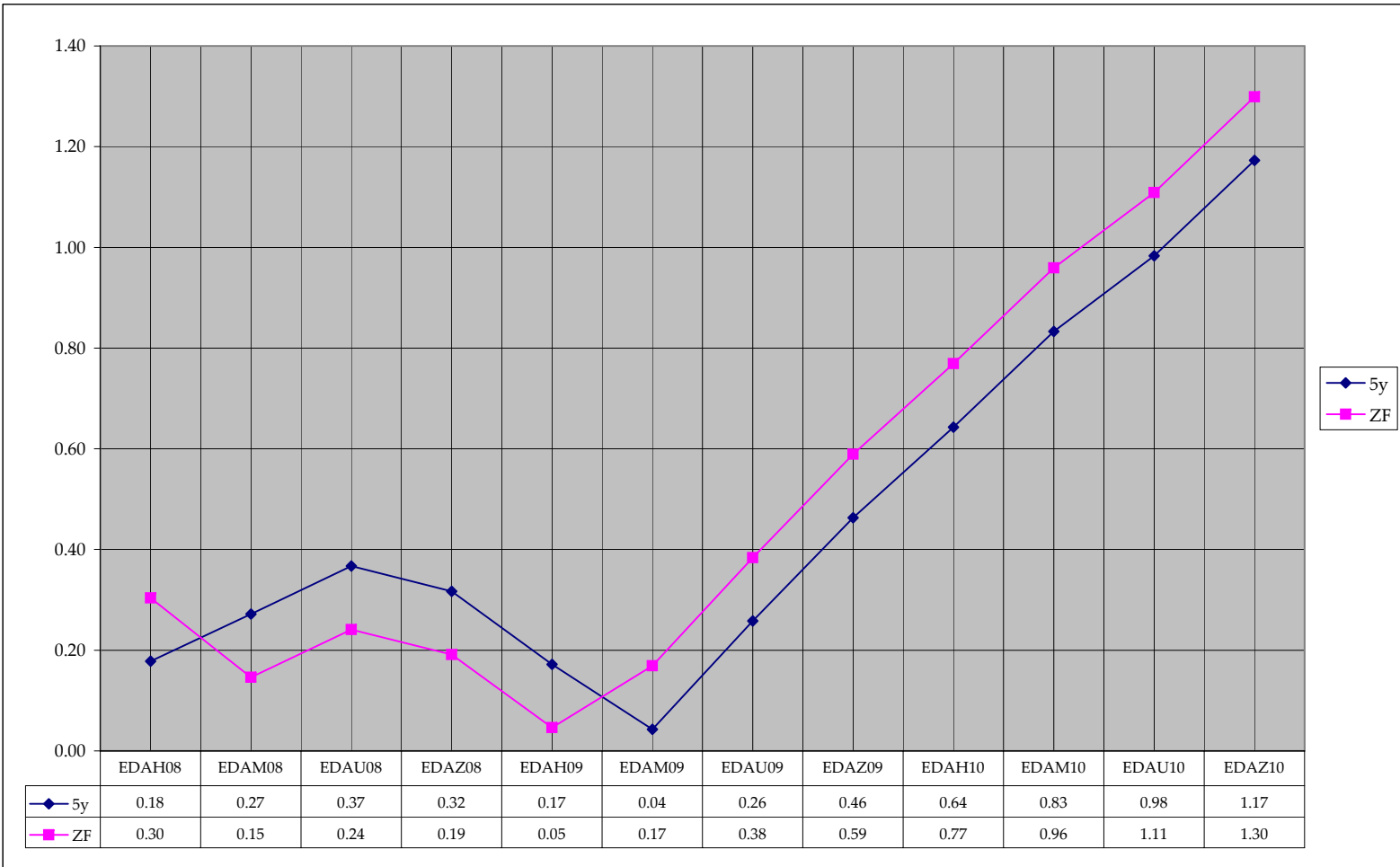
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



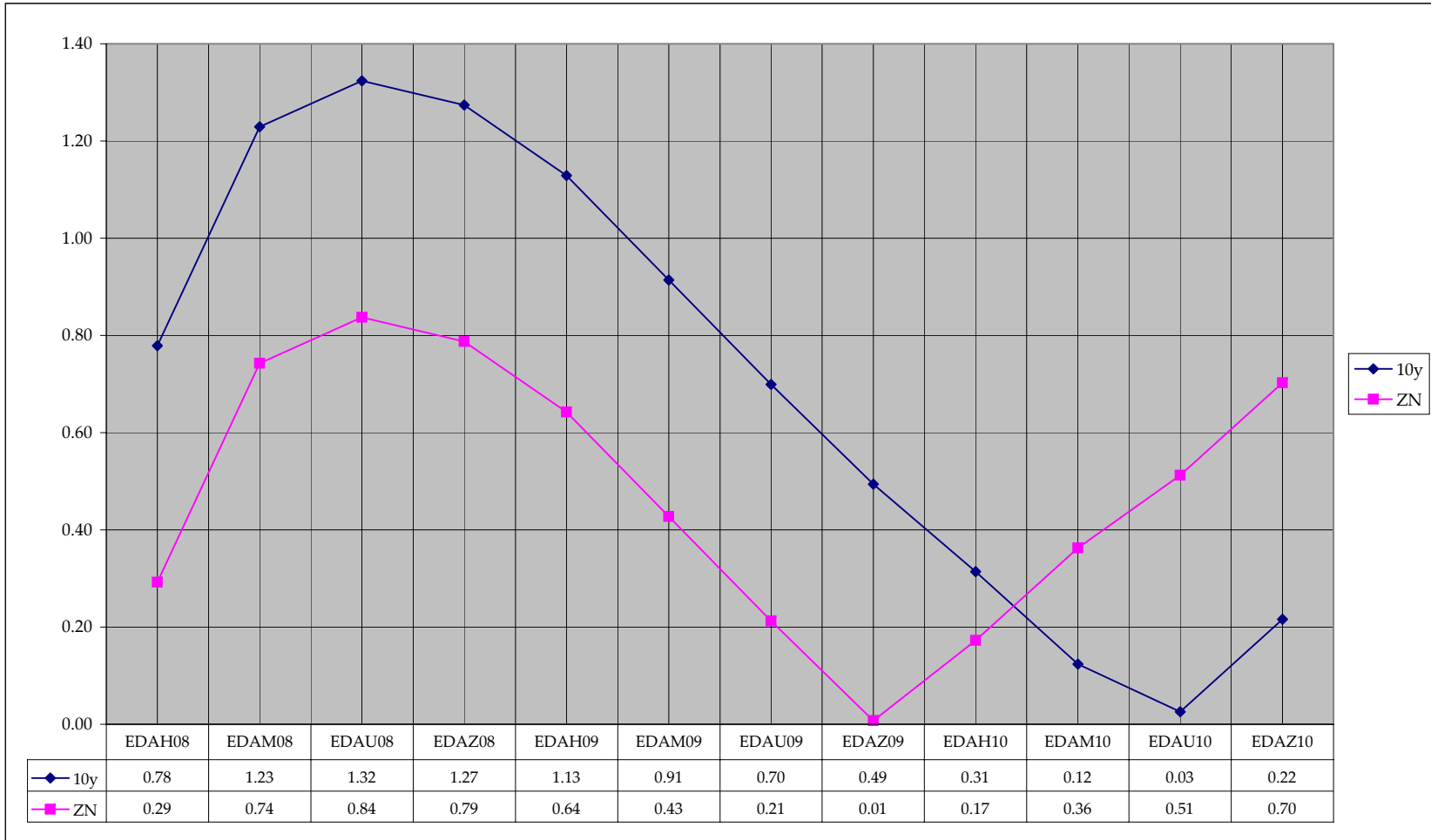
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



# Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	2.538	-0.750	9751.250
Q.ED.Red	2.890	-1.125	9717.000
Q.ED.Green	3.673	0.625	9641.000
Q.ED.Blue	2.875		9581.625
Q.ED.Gold		0.000	9528.875

