

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	106.8656	106.277	1.977	1.75	
ZF	112.7656	112.245	2.784	3.84	
ZN	115.6250	115.200	3.396	5.79	
2y	100.178	100.0570	2.031	1.89	
5y	99.897	99.2870	2.899	4.57	
10y	96.906	96.2900	3.877	8.32	

Eurodollars (ED)							
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month		
EDAH08	97.063	2.938	26	0.071	MAR	White Pack	
EDAM08	97.395	2.605	117	0.320	JUN		
EDAU08	97.495	2.505	208	0.569	SEP		
EDAZ08	97.410	2.590	299	0.818	DEC	Red Pack	
EDAH09	97.230	2.770	390	1.068	MAR		
EDAM09	96.990	3.010	481	1.317	JUN		
EDAU09	96.740	3.260	572	1.566	SEP	Green Pack	
EDAZ09	96.505	3.495	663	1.816	DEC		
EDAH10	96.300	3.700	754	2.065	MAR		
EDAM10	96.110	3.890	845	2.314	JUN	Blue Pack	
EDAU10	95.920	4.080	936	2.564	SEP		
EDAZ10	95.740	4.260	1027	2.813	DEC		
EDAH11	95.590	4.410	1118	3.062	MAR	Gold Pack	
EDAM11	95.435	4.565	1209	3.312	JUN		
EDAU11	95.285	4.715	1307	3.580	SEP		
EDAZ11	95.160	4.840	1398	3.829	DEC		
EDAH12	95.015	4.985	1489	4.079	MAR		
EDAM12	94.935	5.065	1580	4.328	JUN		
EDAU12	94.890	5.110	1671	4.577	SEP		
EDAU12	94.890	5.110	1671	4.577	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	2.714	-0.438	9734.063	Pack Prices
Q.ED.Red	3.203	-0.625	9686.625	
Q.ED.Green	4.078	-0.375	9601.750	
Q.ED.Blue		0.000	9536.250	
Q.ED.Gold		0.000	9485.625	

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

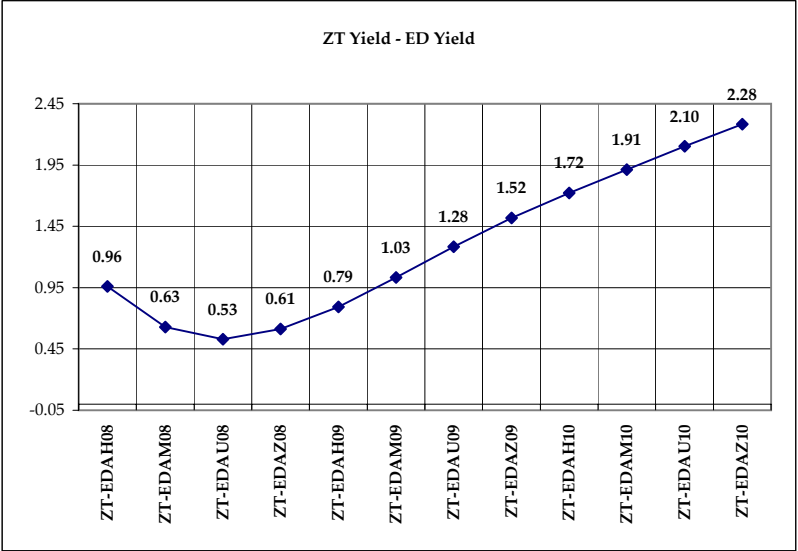
Eurodollar Color Codes for Individual Year Strips:

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

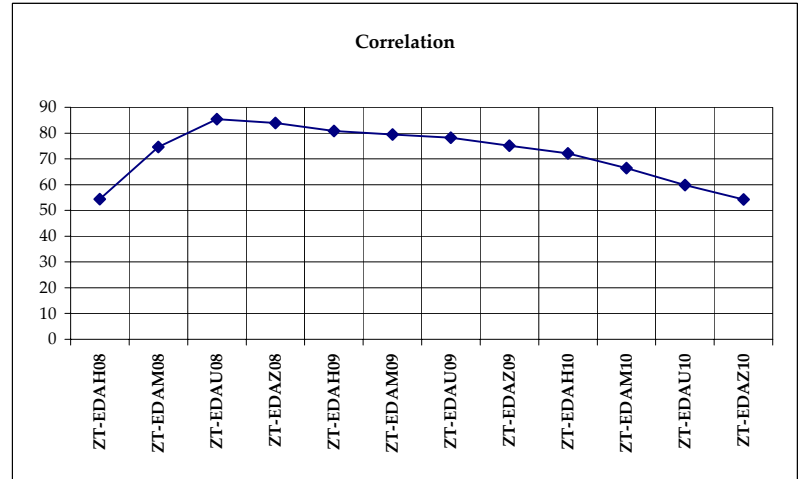
	ZT			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAH08	9.803	0.96	ZT-EDAH08	54.405
EDAM08	9.471	0.63	ZT-EDAM08	74.569
EDAU08	9.371	0.53	ZT-EDAU08	85.398
EDAZ08	9.456	0.61	ZT-EDAZ08	83.911
EDAH09	9.636	0.79	ZT-EDAH09	80.763
EDAM09	9.876	1.03	ZT-EDAM09	79.437
EDAU09	10.126	1.28	ZT-EDAU09	78.257
EDAZ09	10.361	1.52	ZT-EDAZ09	75.112
EDAH10	10.566	1.72	ZT-EDAH10	72.073
EDAM10	10.756	1.91	ZT-EDAM10	66.352
EDAU10	10.946	2.10	ZT-EDAU10	59.775
EDAZ10	11.126	2.28	ZT-EDAZ10	54.222

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	0.071	1.75	1.68	ZT-EDAH08
EDAM08	0.320	1.75	1.43	ZT-EDAM08
EDAU08	0.569	1.75	1.18	ZT-EDAU08
EDAZ08	0.818	1.75	0.93	ZT-EDAZ08
EDAH09	1.068	1.75	0.68	ZT-EDAH09
EDAM09	1.317	1.75	0.43	ZT-EDAM09
EDAU09	1.566	1.75	0.18	ZT-EDAU09
EDAZ09	1.816	1.75	(0.07)	ZT-EDAZ09
EDAH10	2.065	1.75	(0.32)	ZT-EDAH10
EDAM10	2.314	1.75	(0.57)	ZT-EDAM10
EDAU10	2.564	1.75	(0.82)	ZT-EDAU10
EDAZ10	2.813	1.75	(1.07)	ZT-EDAZ10

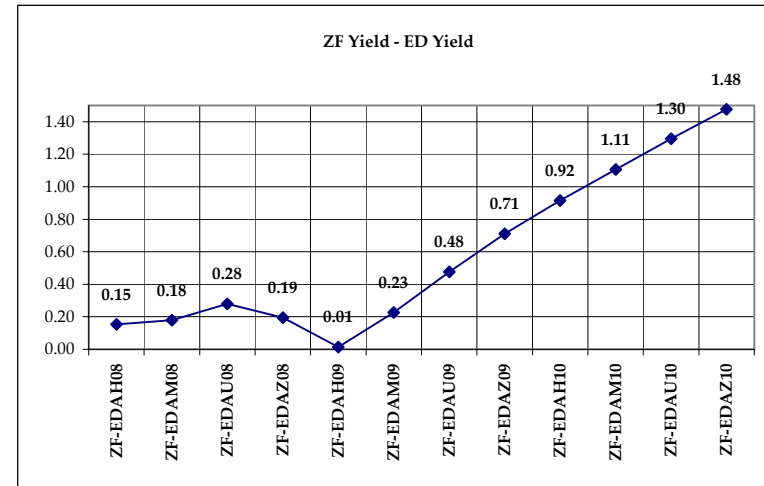
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	15.70	0.15	ZF-EDAH08	92.704
EDAM08	15.37	0.18	ZF-EDAM08	95.772
EDAU08	15.27	0.28	ZF-EDAU08	91.598
EDAZ08	15.36	0.19	ZF-EDAZ08	93.222
EDAH09	15.54	0.01	ZF-EDAH09	95.643
EDAM09	15.78	0.23	ZF-EDAM09	96.678
EDAU09	16.03	0.48	ZF-EDAU09	96.951
EDAZ09	16.26	0.71	ZF-EDAZ09	97.169
EDAH10	16.47	0.92	ZF-EDAH10	97.137
EDAM10	16.66	1.11	ZF-EDAM10	96.361
EDAU10	16.85	1.30	ZF-EDAU10	94.928
EDAZ10	17.03	1.48	ZF-EDAZ10	93.298

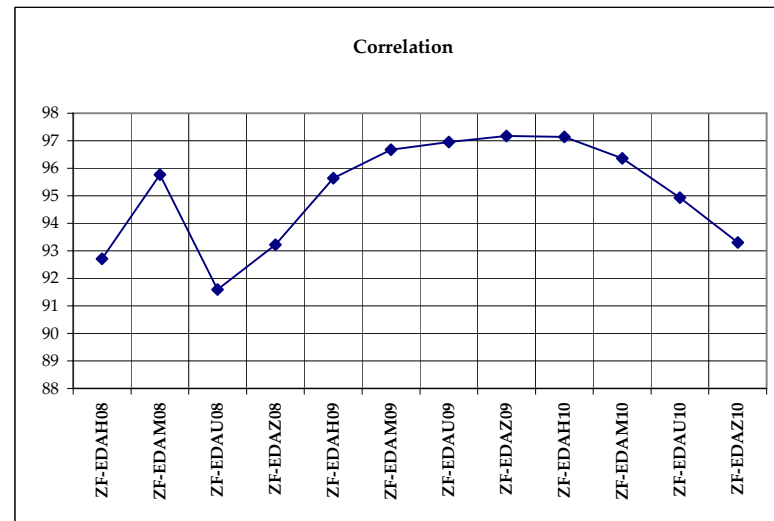
Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	GE Duration as Fraction of year	ZF Duration	Spread Duration	
EDAH08	0.071	3.84	3.77	ZF-EDAH08
EDAM08	0.320	3.84	3.52	ZF-EDAM08
EDAU08	0.569	3.84	3.27	ZF-EDAU08
EDAZ08	0.818	3.84	3.02	ZF-EDAZ08
EDAH09	1.068	3.84	2.77	ZF-EDAH09
EDAM09	1.317	3.84	2.53	ZF-EDAM09
EDAU09	1.566	3.84	2.28	ZF-EDAU09
EDAZ09	1.816	3.84	2.03	ZF-EDAZ09
EDAH10	2.065	3.84	1.78	ZF-EDAH10
EDAM10	2.314	3.84	1.53	ZF-EDAM10
EDAU10	2.564	3.84	1.28	ZF-EDAU10
EDAZ10	2.813	3.84	1.03	ZF-EDAZ10

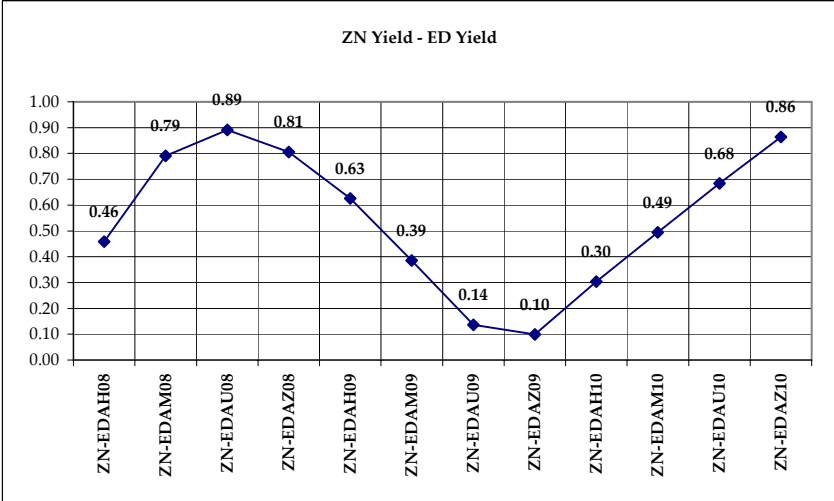
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Dirty TED: ZN vs Eurodollar Contracts

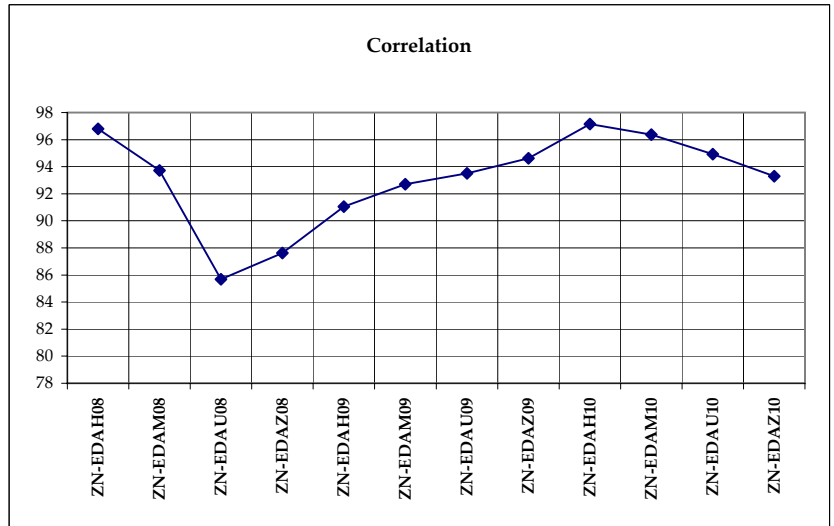
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	18.56	0.46	ZN-EDAH08	96.80
EDAM08	18.23	0.79	ZN-EDAM08	93.71
EDAU08	18.13	0.89	ZN-EDAU08	85.69
EDAZ08	18.22	0.81	ZN-EDAZ08	87.63
EDAH09	18.40	0.63	ZN-EDAH09	91.06
EDAM09	18.64	0.39	ZN-EDAM09	92.71
EDAU09	18.89	0.14	ZN-EDAU09	93.51
EDAZ09	19.12	0.10	ZN-EDAZ09	94.61
EDAH10	19.33	0.30	ZN-EDAH10	97.14
EDAM10	19.52	0.49	ZN-EDAM10	96.36
EDAU10	19.71	0.68	ZN-EDAU10	94.93
EDAZ10	19.89	0.86	ZN-EDAZ10	93.30

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	0.071	5.79	5.72	ZN-EDAH08
EDAM08	0.320	5.79	5.47	ZN-EDAM08
EDAU08	0.569	5.79	5.22	ZN-EDAU08
EDAZ08	0.818	5.79	4.97	ZN-EDAZ08
EDAH09	1.068	5.79	4.72	ZN-EDAH09
EDAM09	1.317	5.79	4.47	ZN-EDAM09
EDAU09	1.566	5.79	4.22	ZN-EDAU09
EDAZ09	1.816	5.79	3.97	ZN-EDAZ09
EDAH10	2.065	5.79	3.72	ZN-EDAH10
EDAM10	2.314	5.79	3.47	ZN-EDAM10
EDAU10	2.564	5.79	3.22	ZN-EDAU10
EDAZ10	2.813	5.79	2.97	ZN-EDAZ10

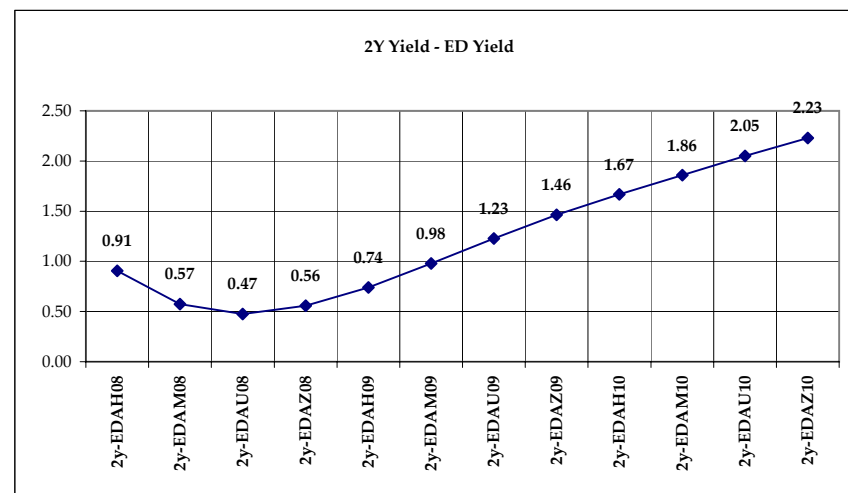
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.12	0.91	2y-EDAH08	-60.692
EDAM08	2.78	0.57	2y-EDAM08	-74.115
EDAU08	2.68	0.47	2y-EDAU08	-82.203
EDAZ08	2.77	0.56	2y-EDAZ08	-74.115
EDAH09	2.95	0.74	2y-EDAH09	-77.100
EDAM09	3.19	0.98	2y-EDAM09	-75.526
EDAU09	3.44	1.23	2y-EDAU09	-74.218
EDAZ09	3.67	1.46	2y-EDAZ09	-71.278
EDAH10	3.88	1.67	2y-EDAH10	-68.594
EDAM10	4.07	1.86	2y-EDAM10	-64.079
EDAU10	4.26	2.05	2y-EDAU10	-58.870
EDAZ10	4.44	2.23	2y-EDAZ10	-54.103

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.

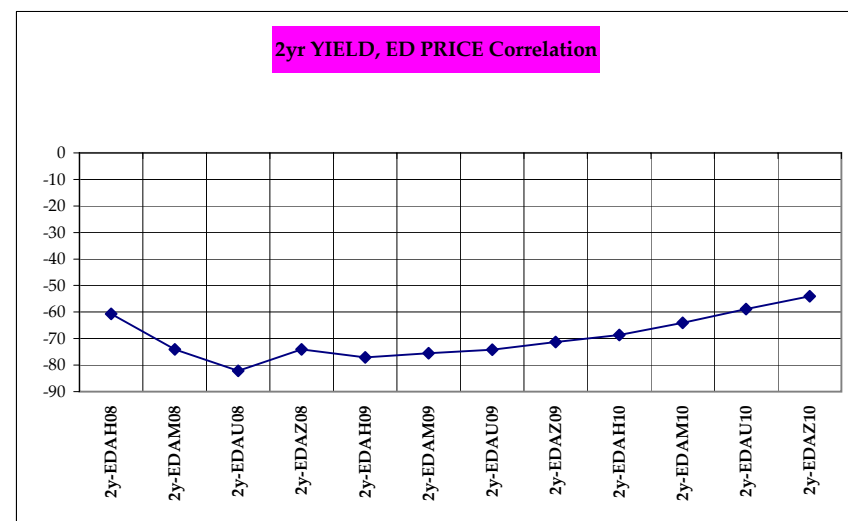


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAH08	0.071	1.89	2y-EDAH08
EDAM08	0.320	1.89	2y-EDAM08
EDAU08	0.569	1.89	2y-EDAU08
EDAZ08	0.818	1.89	2y-EDAZ08
EDAH09	1.068	1.89	2y-EDAH09
EDAM09	1.317	1.89	2y-EDAM09
EDAU09	1.566	1.89	2y-EDAU09
EDAZ09	1.816	1.89	2y-EDAZ09
EDAH10	2.065	1.89	2y-EDAH10
EDAM10	2.314	1.89	2y-EDAM10
EDAU10	2.564	1.89	2y-EDAU10
EDAZ10	2.813	1.89	2y-EDAZ10

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

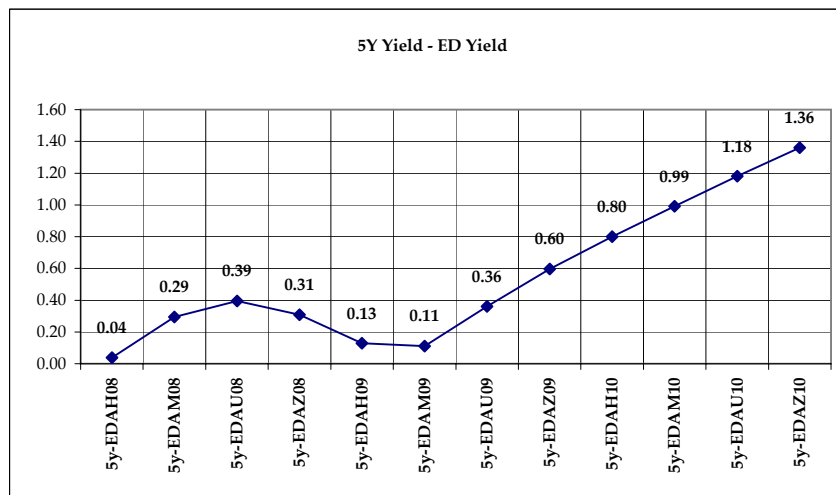
2yr YIELD, ED PRICE Correlation



TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	2.83	0.04	5y-EDAH08	-86.920
EDAM08	2.50	0.29	5y-EDAM08	-88.753
EDAU08	2.40	0.39	5y-EDAU08	-87.359
EDAZ08	2.49	0.31	5y-EDAZ08	-88.753
EDAH09	2.67	0.13	5y-EDAH09	-90.431
EDAM09	2.91	0.11	5y-EDAM09	-91.621
EDAU09	3.16	0.36	5y-EDAU09	-92.260
EDAZ09	3.39	0.60	5y-EDAZ09	-92.621
EDAH10	3.60	0.80	5y-EDAH10	-92.745
EDAM10	3.79	0.99	5y-EDAM10	-92.465
EDAU10	3.98	1.18	5y-EDAU10	-91.295
EDAZ10	4.16	1.36	5y-EDAZ10	-89.619

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.

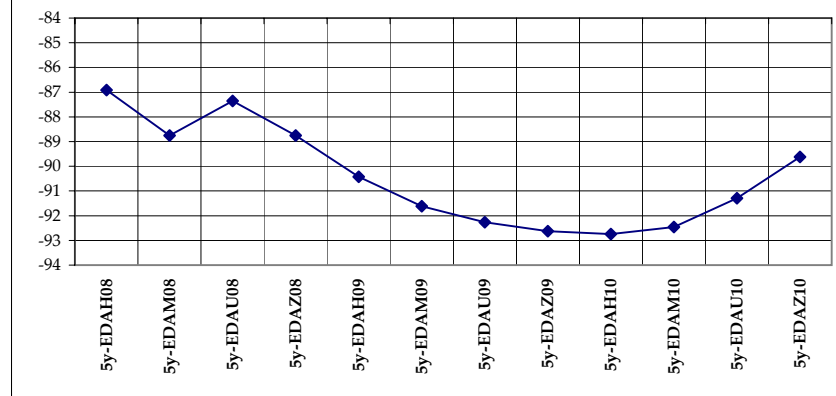


GE Duration as Fraction of year

	5Y Duration	Spread Duration	
EDAH08	0.071	4.57	4.50 5y-EDAH08
EDAM08	0.320	4.57	4.25 5y-EDAM08
EDAU08	0.569	4.57	4.00 5y-EDAU08
EDAZ08	0.818	4.57	3.75 5y-EDAZ08
EDAH09	1.068	4.57	3.50 5y-EDAH09
EDAM09	1.317	4.57	3.25 5y-EDAM09
EDAU09	1.566	4.57	3.00 5y-EDAU09
EDAZ09	1.816	4.57	2.75 5y-EDAZ09
EDAH10	2.065	4.57	2.50 5y-EDAH10
EDAM10	2.314	4.57	2.25 5y-EDAM10
EDAU10	2.564	4.57	2.01 5y-EDAU10
EDAZ10	2.813	4.57	1.76 5y-EDAZ10

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

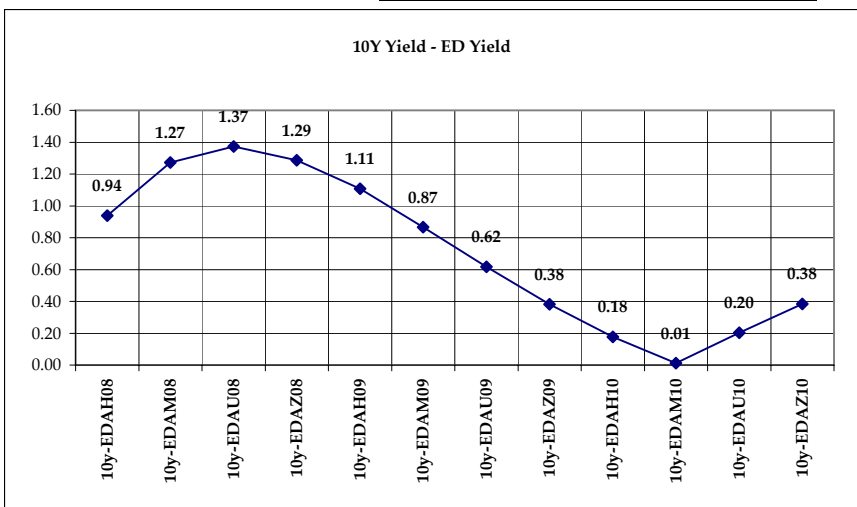
5yr YIELD, ED PRICE Correlation



TERM TED: 10y vs Eurodollar Contracts

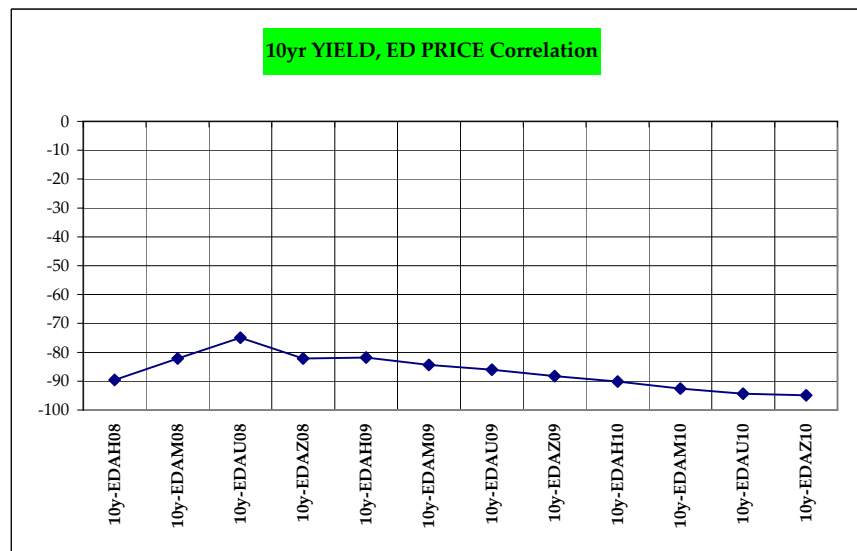
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	2.83	0.94	10y-EDAH08	-89.593
EDAM08	2.50	1.27	10y-EDAM08	-82.205
EDAU08	2.40	1.37	10y-EDAU08	-74.899
EDAZ08	2.49	1.29	10y-EDAZ08	-82.205
EDAH09	2.67	1.11	10y-EDAH09	-81.837
EDAM09	2.91	0.87	10y-EDAM09	-84.399
EDAU09	3.16	0.62	10y-EDAU09	-86.045
EDAZ09	3.39	0.38	10y-EDAZ09	-88.268
EDAH10	3.60	0.18	10y-EDAH10	-90.157
EDAM10	3.79	0.01	10y-EDAM10	-92.625
EDAU10	3.98	0.20	10y-EDAU10	-94.344
EDAZ10	4.16	0.38	10y-EDAZ10	-94.926

Price = Outright Decimal Price - Euro Contract Price
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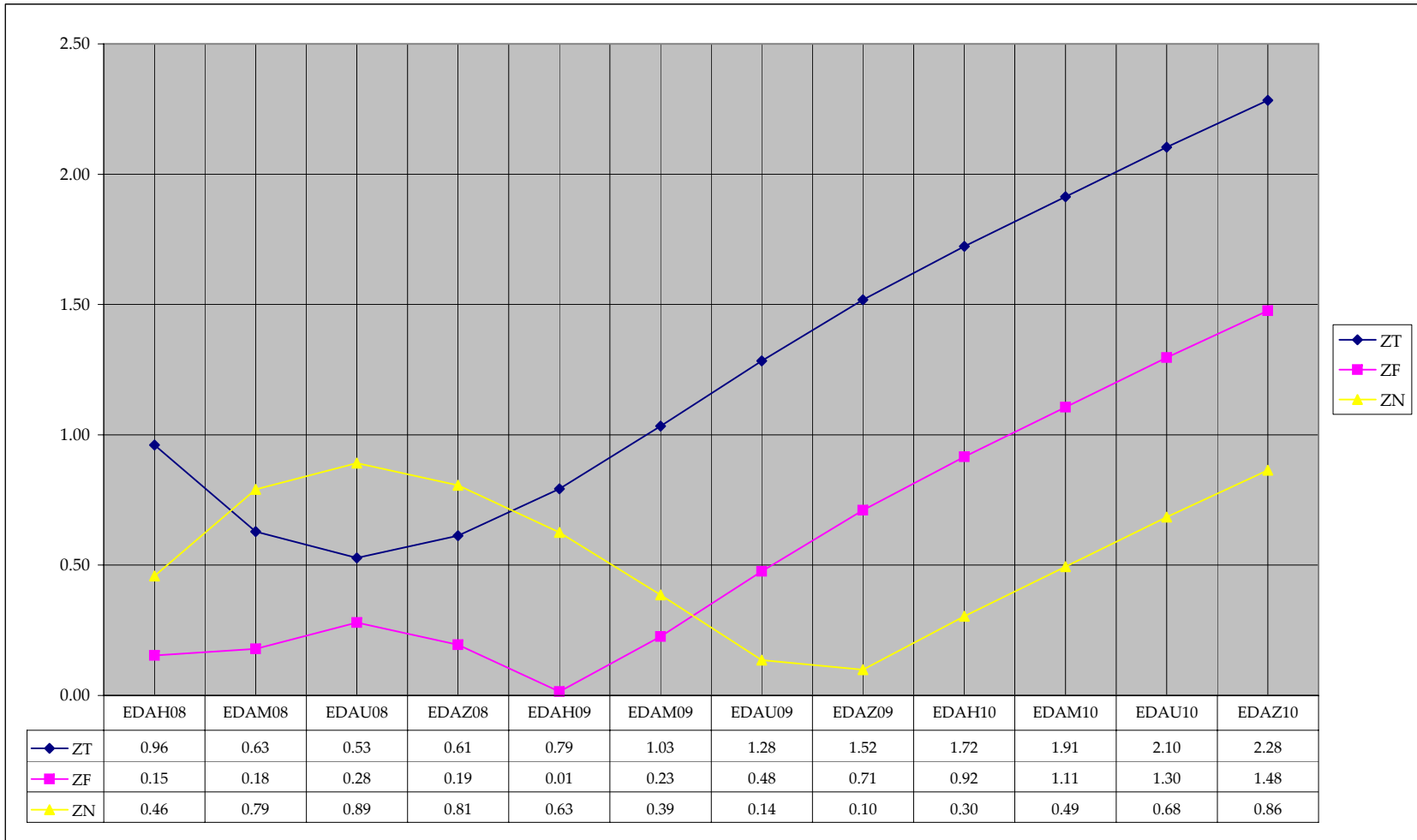
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAH08	0.071	8.32	8.25	10y-EDAH08
EDAM08	0.320	8.32	8.00	10y-EDAM08
EDAU08	0.569	8.32	7.75	10y-EDAU08
EDAZ08	0.818	8.32	7.50	10y-EDAZ08
EDAH09	1.068	8.32	7.25	10y-EDAH09
EDAM09	1.317	8.32	7.00	10y-EDAM09
EDAU09	1.566	8.32	6.75	10y-EDAU09
EDAZ09	1.816	8.32	6.50	10y-EDAZ09
EDAH10	2.065	8.32	6.25	10y-EDAH10
EDAM10	2.314	8.32	6.00	10y-EDAM10
EDAU10	2.564	8.32	5.75	10y-EDAU10
EDAZ10	2.813	8.32	5.50	10y-EDAZ10

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



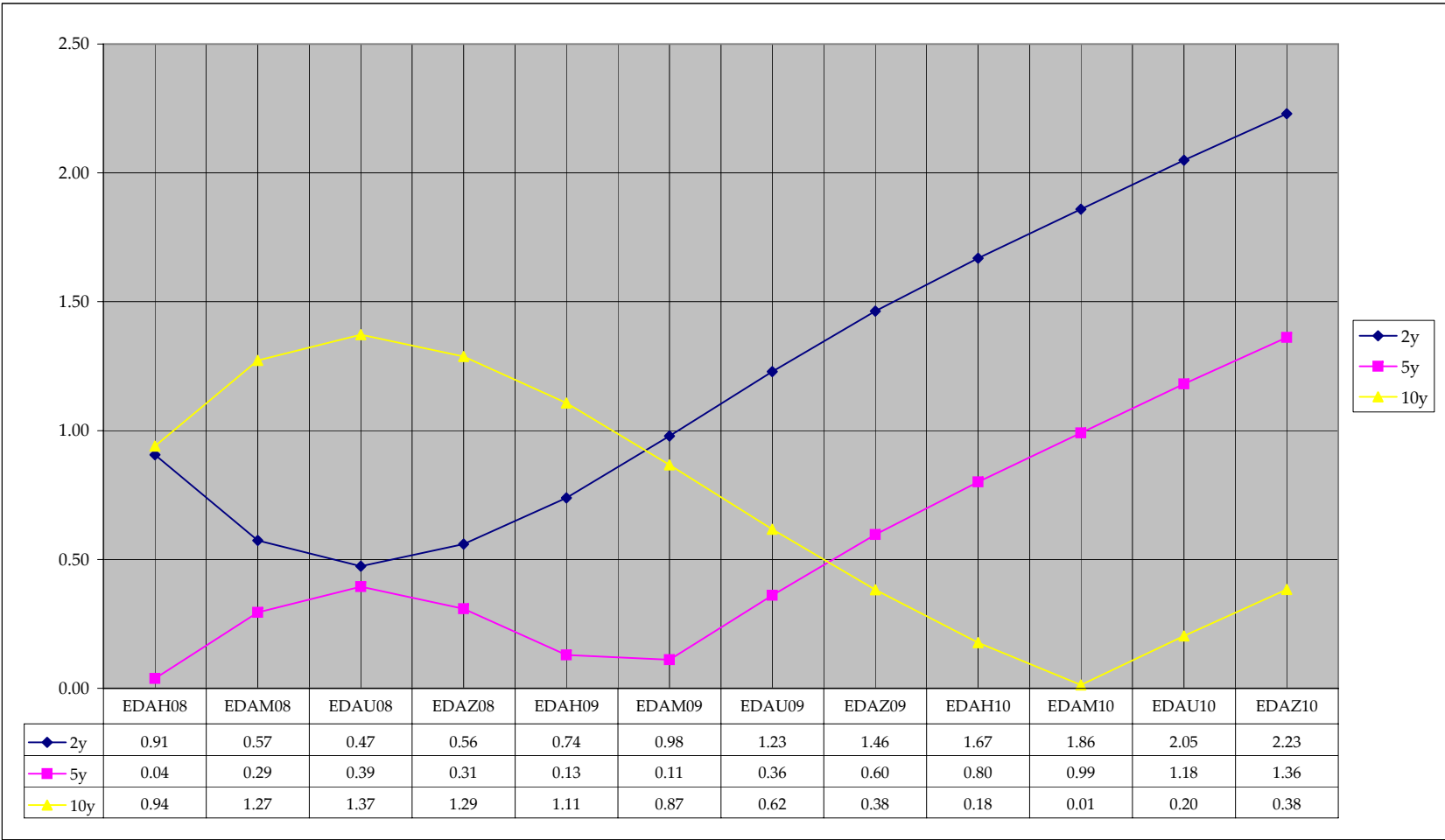
Dirty TED Curve

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.

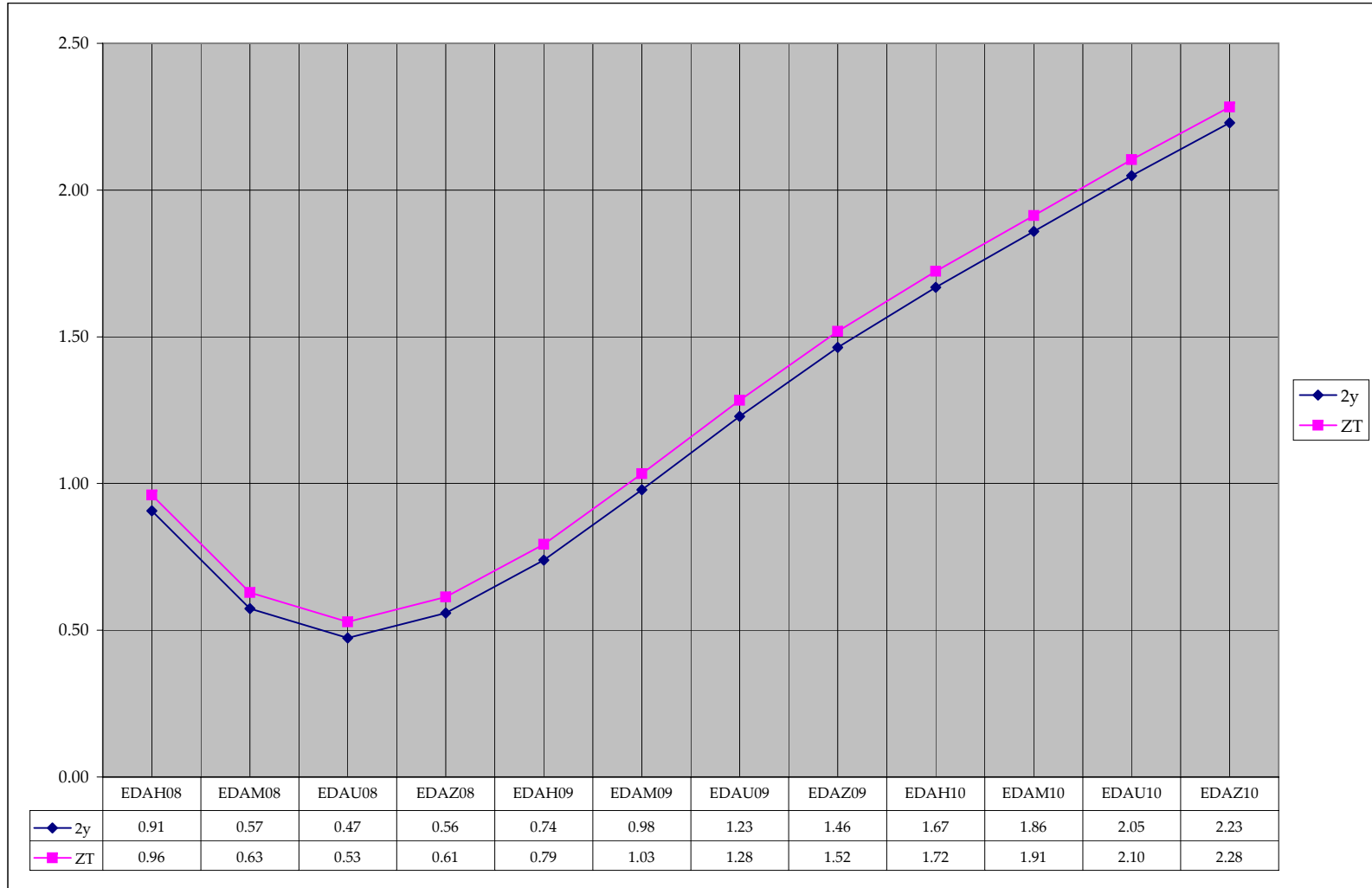


TED Curve

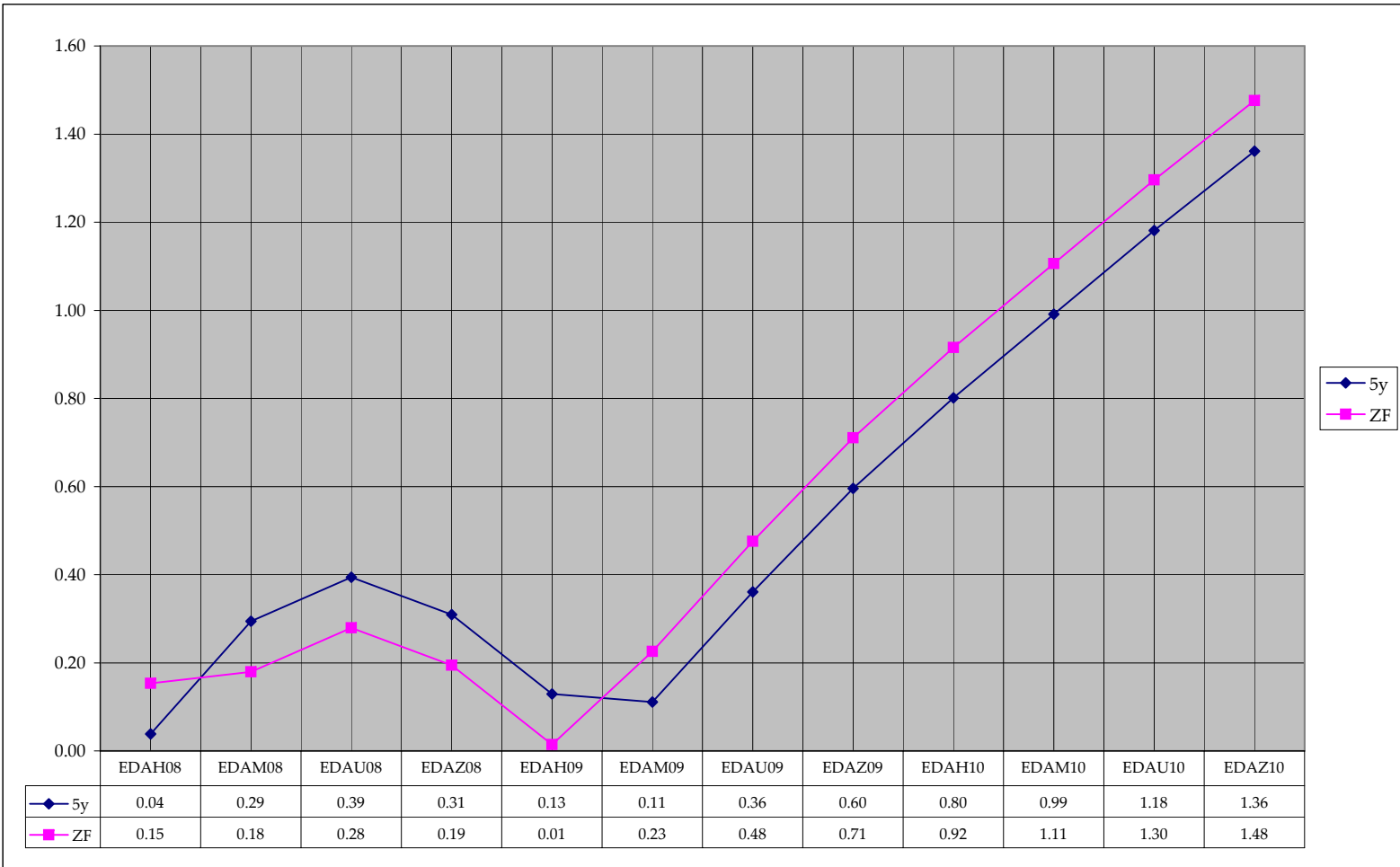
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



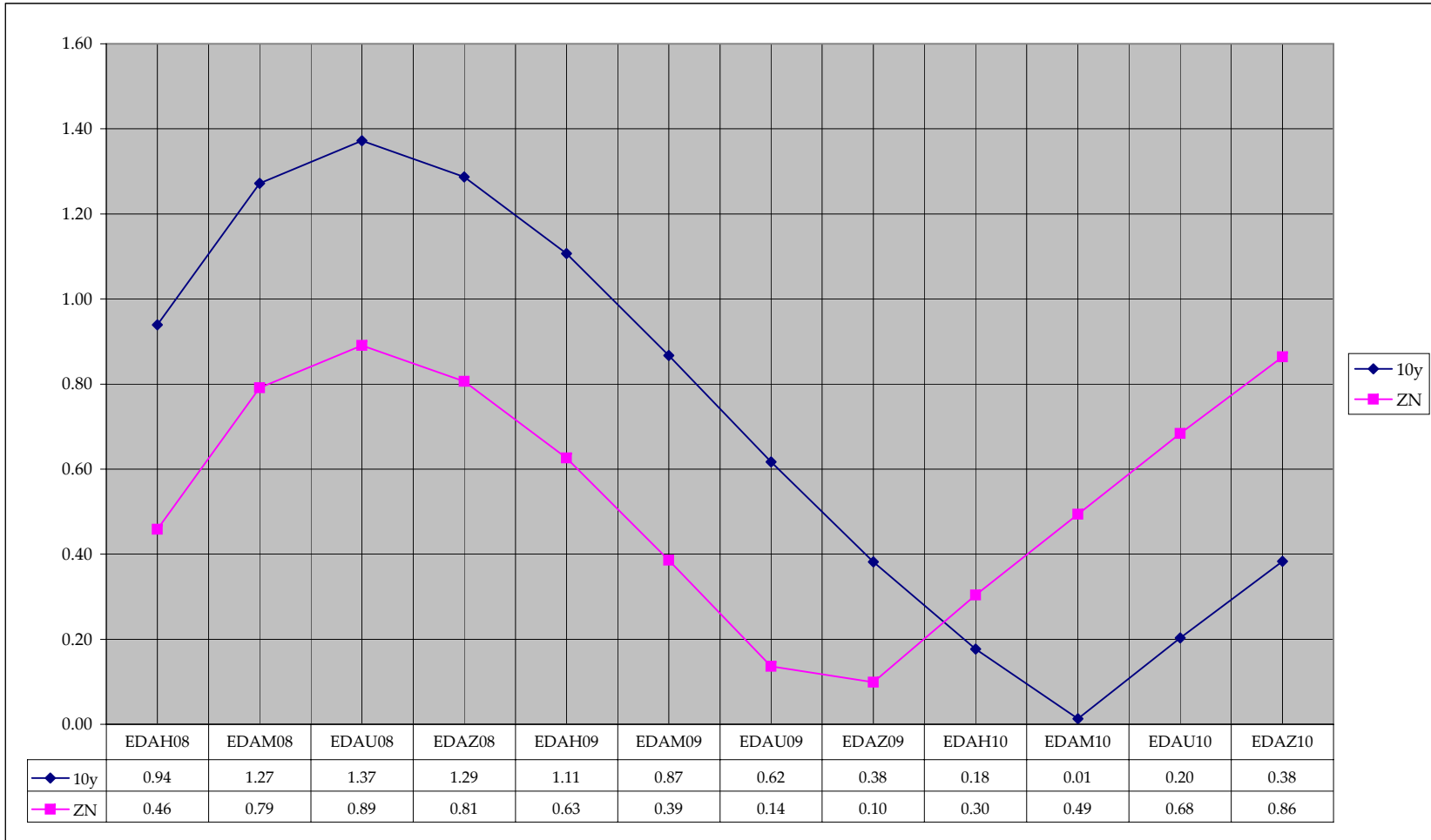
2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	2.714	-0.438	9734.063
Q.ED.Red	3.203	-0.625	9686.625
Q.ED.Green	4.078	-0.375	9601.750
Q.ED.Blue		0.000	9536.250
Q.ED.Gold		0.000	9485.625

