The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

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

Quotes

F.I. Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	104.0844	104.027	3.620	1.90
ZF	108.4531	108.145	3.819	3.86
ZN	111.3906	111.125	4.065	5.79
2y	100.006	100.0020	3.621	1.81
5y	99.859	99.2750	3.907	4.49
10y	103.688	103.2200	4.282	7.73

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.215	4.785	42	0.114	DEC	White Pack
EDAH08	95.665	4.335	133	0.364	MAR	
EDAM08	95.860	4.140	224	0.613	JUN	
EDAU08	95.960	4.040	315	0.862	SEP	
EDAZ08	95.965	4.035	406	1.112	DEC	Red Pack
EDAH09	95.915	4.085	497	1.361	MAR	
EDAM09	95.810	4.190	588	1.610	JUN	
EDAU09	95.710	4.290	679	1.860	SEP	
EDAZ09	95.590	4.410	770	2.109	DEC	Green Pack
EDAH10	95.500	4.500	861	2.358	MAR	
EDAM10	95.410	4.590	952	2.608	JUN	
EDAU10	95.295	4.705	1043	2.857	SEP	
EDAZ10	#VALUE!	#VALUE!	1134	3.106	DEC	Blue Pack
EDAH11	#VALUE!	#VALUE!	1225	3.355	MAR	
EDAM11	#VALUE!	#VALUE!	1316	3.605	JUN	
EDAU11	95.015	4.985	1414	3.873	SEP	
EDAZ11	94.975	5.025	1505	4.123	DEC	Gold Pack
EDAH12	94.895	5.105	1596	4.372	MAR	
EDAM12	94.915	5.085	1687	4.621	JUN	
EDAU12	94.795	5.205	1778	4.871	SEP	

	Last Yield	Net Yield	Last Price
Q.ED.White	4.433	-0.750	9567.500
Q.ED.Red	4.252	0.625	9585.000
Q.ED.Green	4.668	-0.875	9544.875
Q.ED.Blue		0.000	9514.875
Q.ED.Gold		0.000	9491.125

Pack Prices

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

Notes
Futures use CTD for Last Yield
Mduration = Modified Macaulay Duration
#VALUE! = no quote being provided by exchange.

Overview of Hedging

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

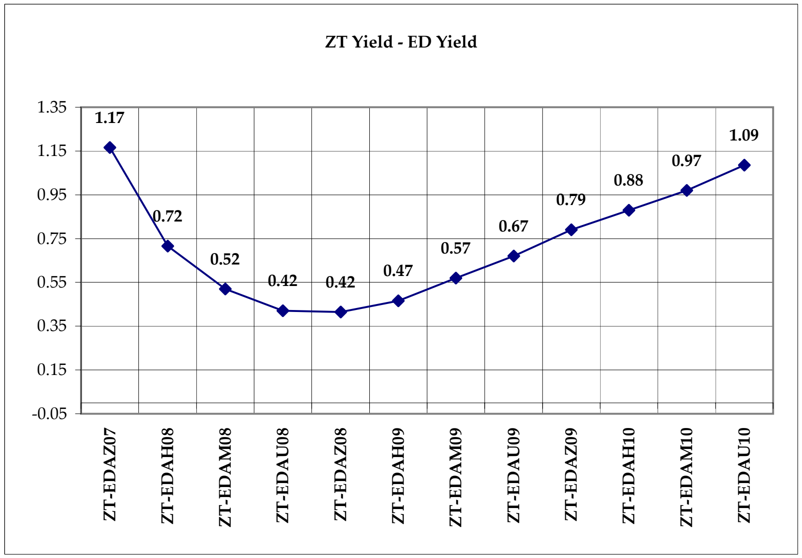
Eurodollar Color Codes for Individual Year Strips:

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

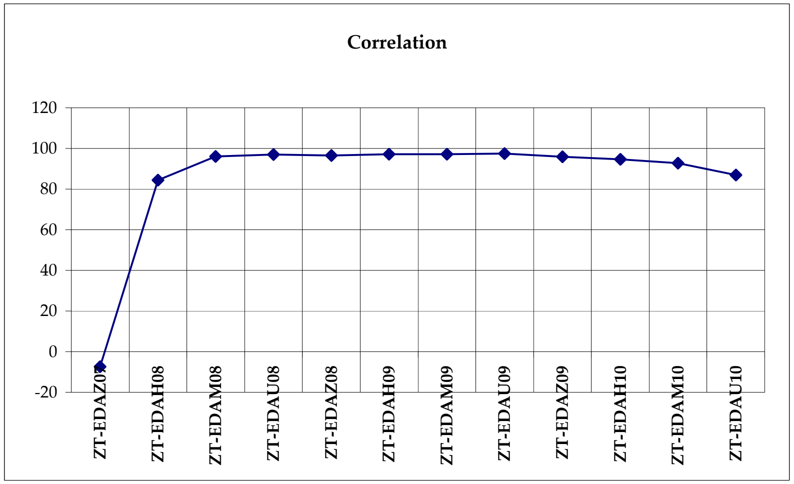
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.869	1.17	ZT-EDAZ07	-7.453
EDAH08	8.419	0.72	ZT-EDAH08	84.417
EDAM08	8.224	0.52	ZT-EDAM08	96.035
EDAU08	8.124	0.42	ZT-EDAU08	97.037
EDAZ08	8.119	0.42	ZT-EDAZ08	96.486
EDAH09	8.169	0.47	ZT-EDAH09	97.186
EDAM09	8.274	0.57	ZT-EDAM09	97.143
EDAU09	8.374	0.67	ZT-EDAU09	97.415
EDAZ09	8.494	0.79	ZT-EDAZ09	95.940
EDAH10	8.584	0.88	ZT-EDAH10	94.715
EDAM10	8.674	0.97	ZT-EDAM10	92.792
EDAU10	8.789	1.09	ZT-EDAU10	86.966

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	0.114	1.90	1.78	ZT-EDAZ07
EDAH08	0.364	1.90	1.53	ZT-EDAH08
EDAM08	0.613	1.90	1.28	ZT-EDAM08
EDAU08	0.862	1.90	1.03	ZT-EDAU08
EDAZ08	1.112	1.90	0.78	ZT-EDAZ08
EDAH09	1.361	1.90	0.54	ZT-EDAH09
EDAM09	1.610	1.90	0.29	ZT-EDAM09
EDAU09	1.860	1.90	0.04	ZT-EDAU09
EDAZ09	2.109	1.90	(0.21)	ZT-EDAZ09
EDAH10	2.358	1.90	(0.46)	ZT-EDAH10
EDAM10	2.608	1.90	(0.71)	ZT-EDAM10
EDAU10	2.857	1.90	(0.96)	ZT-EDAU10

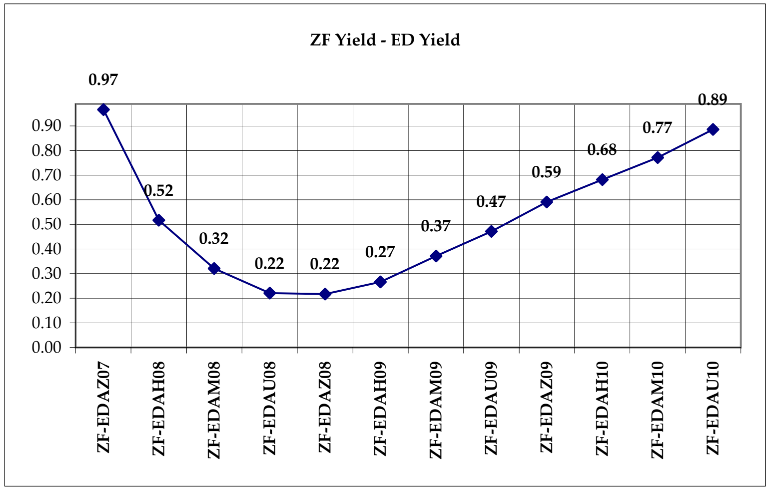
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

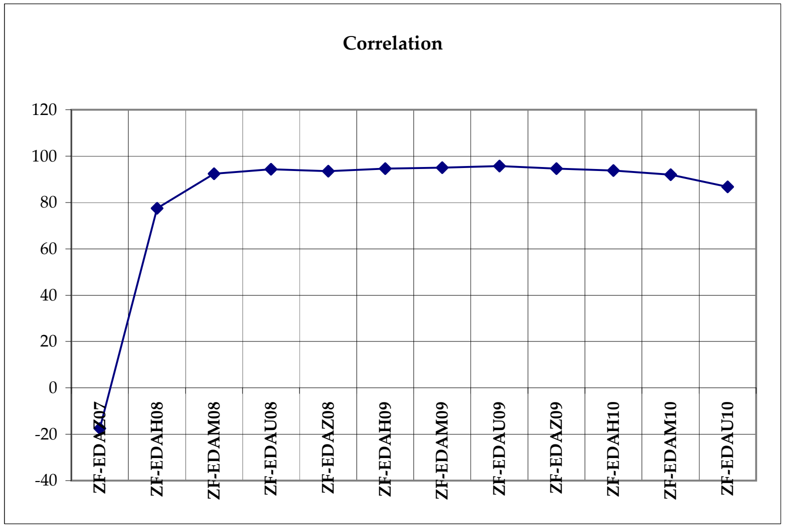
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	13.24	0.97	ZF-EDAZ07	-17.515
EDAH08	12.79	0.52	ZF-EDAH08	77.451
EDAM08	12.59	0.32	ZF-EDAM08	92.439
EDAU08	12.49	0.22	ZF-EDAU08	94.277
EDAZ08	12.49	0.22	ZF-EDAZ08	93.516
EDAH09	12.54	0.27	ZF-EDAH09	94.615
EDAM09	12.64	0.37	ZF-EDAM09	94.946
EDAU09	12.74	0.47	ZF-EDAU09	95.652
EDAZ09	12.86	0.59	ZF-EDAZ09	94.638
EDAH10	12.95	0.68	ZF-EDAH10	93.744
EDAM10	13.04	0.77	ZF-EDAM10	92.010
EDAU10	13.16	0.89	ZF-EDAU10	86.667

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	0.114	3.86	3.75	ZF-EDAZ07
EDAH08	0.364	3.86	3.50	ZF-EDAH08
EDAM08	0.613	3.86	3.25	ZF-EDAM08
EDAU08	0.862	3.86	3.00	ZF-EDAU08
EDAZ08	1.112	3.86	2.75	ZF-EDAZ08
EDAH09	1.361	3.86	2.50	ZF-EDAH09
EDAM09	1.610	3.86	2.25	ZF-EDAM09
EDAU09	1.860	3.86	2.00	ZF-EDAU09
EDAZ09	2.109	3.86	1.75	ZF-EDAZ09
EDAH10	2.358	3.86	1.51	ZF-EDAH10
EDAM10	2.608	3.86	1.26	ZF-EDAM10
EDAU10	2.857	3.86	1.01	ZF-EDAU10

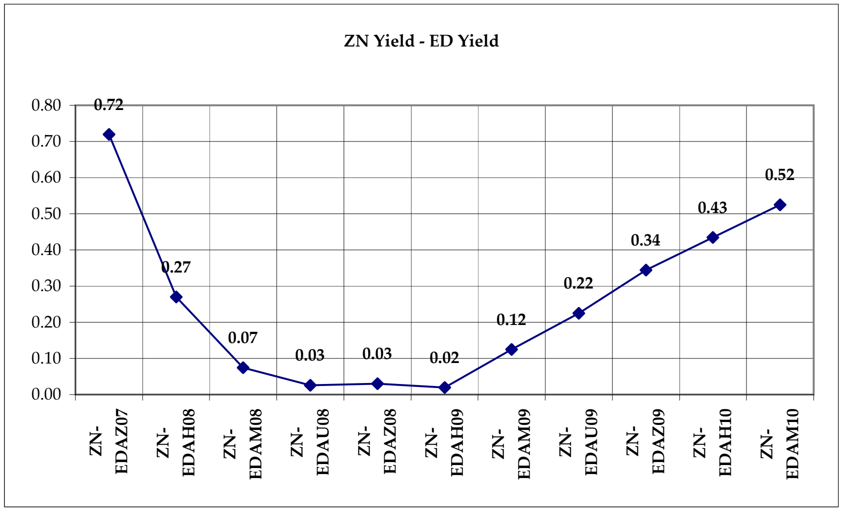
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

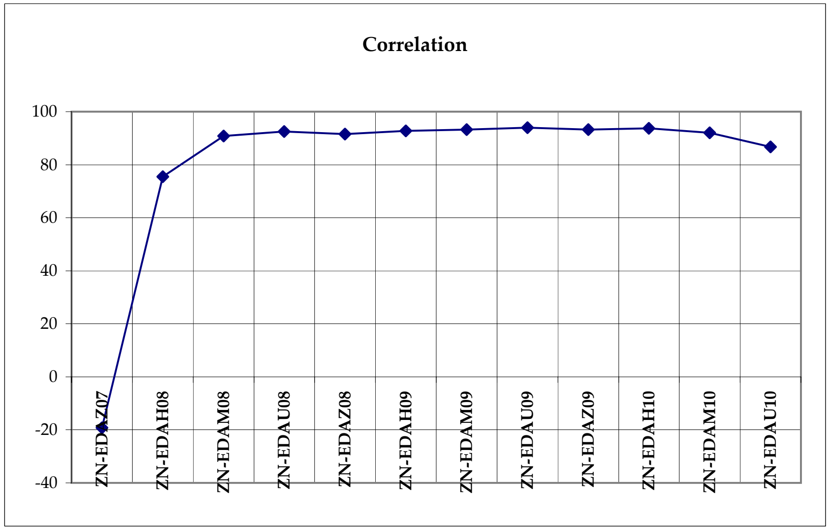
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	16.18	0.72	ZN-EDAZ07	-19.17
EDAH08	15.73	0.27	ZN-EDAH08	75.44
EDAM08	15.53	0.07	ZN-EDAM08	90.87
EDAU08	15.43	0.03	ZN-EDAU08	92.49
EDAZ08	15.43	0.03	ZN-EDAZ08	91.57
EDAH09	15.48	0.02	ZN-EDAH09	92.78
EDAM09	15.58	0.12	ZN-EDAM09	93.18
EDAU09	15.68	0.22	ZN-EDAU09	93.99
EDAZ09	15.80	0.34	ZN-EDAZ09	93.25
EDAH10	15.89	0.43	ZN-EDAH10	93.74
EDAM10	15.98	0.52	ZN-EDAM10	92.01
EDAU10	16.10	0.64	ZN-EDAU10	86.67

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	0.114	5.79	5.68	ZN-EDAZ07
EDAH08	0.364	5.79	5.43	ZN-EDAH08
EDAM08	0.613	5.79	5.18	ZN-EDAM08
EDAU08	0.862	5.79	4.93	ZN-EDAU08
EDAZ08	1.112	5.79	4.68	ZN-EDAZ08
EDAH09	1.361	5.79	4.43	ZN-EDAH09
EDAM09	1.610	5.79	4.18	ZN-EDAM09
EDAU09	1.860	5.79	3.93	ZN-EDAU09
EDAZ09	2.109	5.79	3.68	ZN-EDAZ09
EDAH10	2.358	5.79	3.43	ZN-EDAH10
EDAM10	2.608	5.79	3.18	ZN-EDAM10
EDAU10	2.857	5.79	2.93	ZN-EDAU10

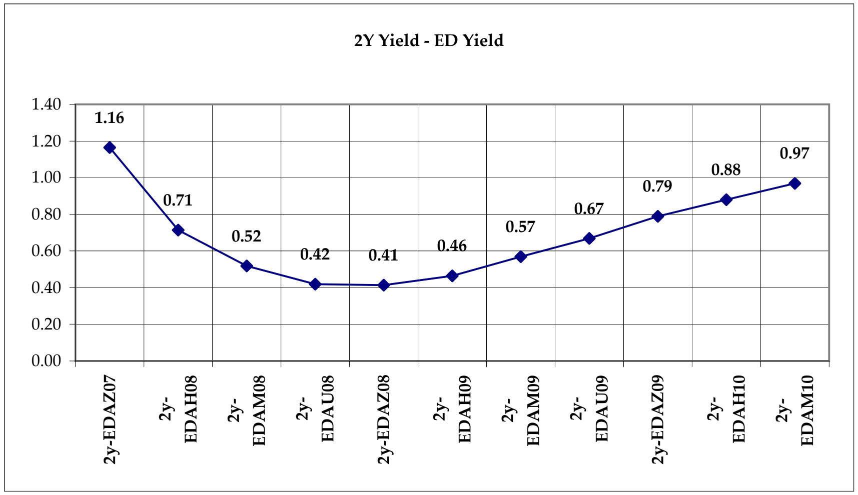
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.79	1.16	2y-EDAZ07	23.976
EDAH08	4.34	0.71	2y-EDAH08	-69.475
EDAM08	4.15	0.52	2y-EDAM08	-86.095
EDAU08	4.05	0.42	2y-EDAU08	-88.318
EDAZ08	4.04	0.41	2y-EDAZ08	-86.095
EDAH09	4.09	0.46	2y-EDAH09	-88.540
EDAM09	4.20	0.57	2y-EDAM09	-88.408
EDAU09	4.30	0.67	2y-EDAU09	-89.298
EDAZ09	4.42	0.79	2y-EDAZ09	-87.351
EDAH10	4.51	0.88	2y-EDAH10	-86.203
EDAM10	4.60	0.97	2y-EDAM10	-84.301
EDAU10	4.71	1.08	2y-EDAU10	-77.184

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.



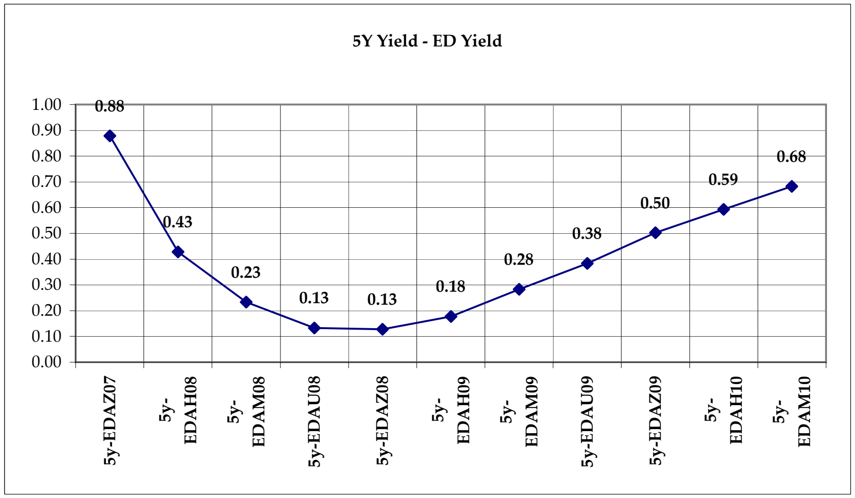
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.114	1.81	1.69	2y-EDAZ07
EDAH08	0.364	1.81	1.44	2y-EDAH08
EDAM08	0.613	1.81	1.20	2y-EDAM08
EDAU08	0.862	1.81	0.95	2y-EDAU08
EDAZ08	1.112	1.81	0.70	2y-EDAZ08
EDAH09	1.361	1.81	0.45	2y-EDAH09
EDAM09	1.610	1.81	0.20	2y-EDAM09
EDAU09	1.860	1.81	(0.05)	2y-EDAU09
EDAZ09	2.109	1.81	(0.30)	2y-EDAZ09
EDAH10	2.358	1.81	(0.55)	2y-EDAH10
EDAM10	2.608	1.81	(0.80)	2y-EDAM10
EDAU10	2.857	1.81	(1.05)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

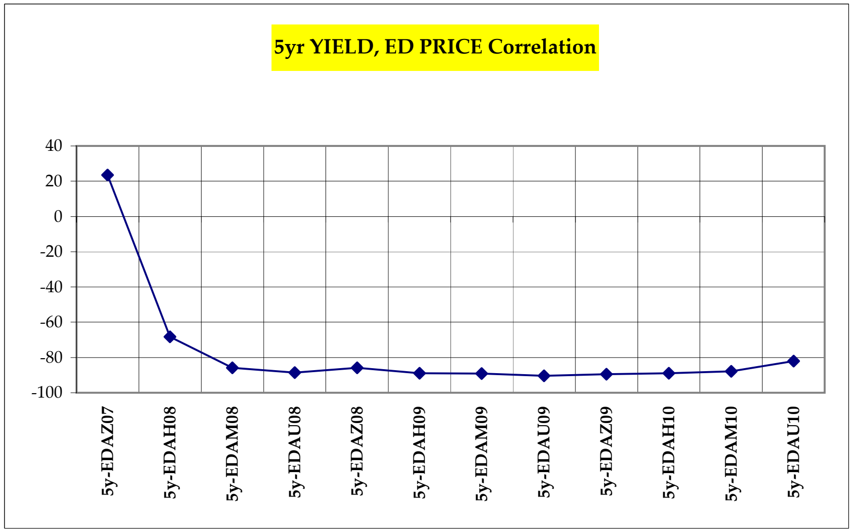
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.64	0.88	5y-EDAZ07	23.562
EDAH08	4.19	0.43	5y-EDAH08	-68.203
EDAM08	4.00	0.23	5y-EDAM08	-85.895
EDAU08	3.90	0.13	5y-EDAU08	-88.552
EDAZ08	3.89	0.13	5y-EDAZ08	-85.895
EDAH09	3.94	0.18	5y-EDAH09	-88.951
EDAM09	4.05	0.28	5y-EDAM09	-89.181
EDAU09	4.15	0.38	5y-EDAU09	-90.343
EDAZ09	4.27	0.50	5y-EDAZ09	-89.491
EDAH10	4.36	0.59	5y-EDAH10	-89.005
EDAM10	4.45	0.68	5y-EDAM10	-87.806
EDAU10	4.56	0.80	5y-EDAU10	-82.055

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	0.114	4.49	4.37	5y-EDAZ07
EDAH08	0.364	4.49	4.13	5y-EDAH08
EDAM08	0.613	4.49	3.88	5y-EDAM08
EDAU08	0.862	4.49	3.63	5y-EDAU08
EDAZ08	1.112	4.49	3.38	5y-EDAZ08
EDAH09	1.361	4.49	3.13	5y-EDAH09
EDAM09	1.610	4.49	2.88	5y-EDAM09
EDAU09	1.860	4.49	2.63	5y-EDAU09
EDAZ09	2.109	4.49	2.38	5y-EDAZ09
EDAH10	2.358	4.49	2.13	5y-EDAH10
EDAM10	2.608	4.49	1.88	5y-EDAM10
EDAU10	2.857	4.49	1.63	5y-EDAU10

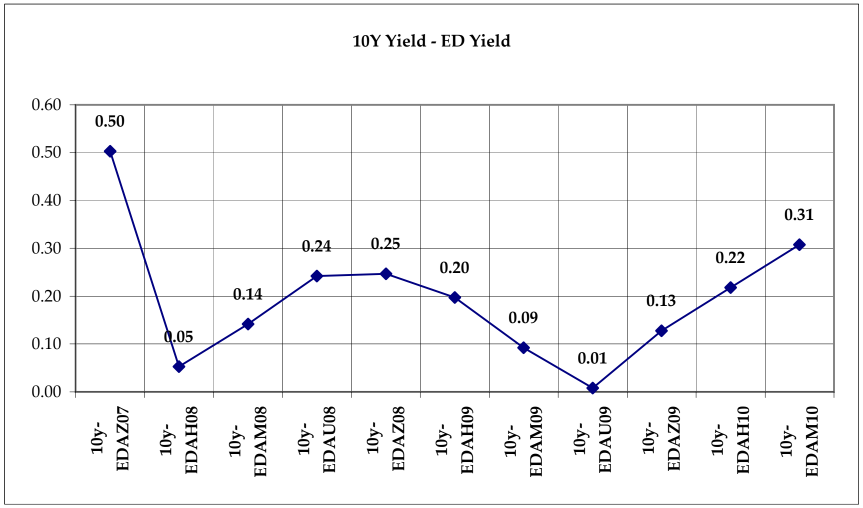
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

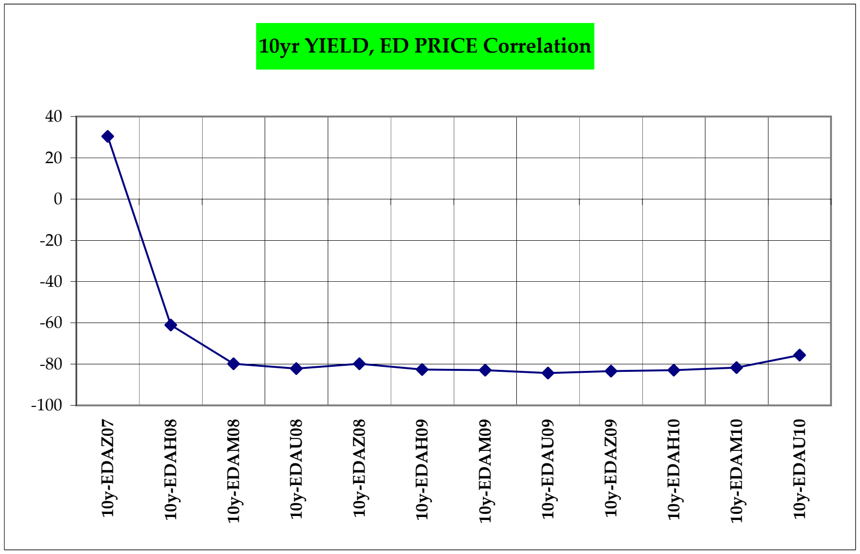
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.64	0.50	10y-EDAZ07	30.308
EDAH08	4.19	0.05	10y-EDAH08	-61.103
EDAM08	4.00	0.14	10y-EDAM08	-79.747
EDAU08	3.90	0.24	10y-EDAU08	-82.100
EDAZ08	3.89	0.25	10y-EDAZ08	-79.747
EDAH09	3.94	0.20	10y-EDAH09	-82.597
EDAM09	4.05	0.09	10y-EDAM09	-82.964
EDAU09	4.15	0.01	10y-EDAU09	-84.288
EDAZ09	4.27	0.13	10y-EDAZ09	-83.415
EDAH10	4.36	0.22	10y-EDAH10	-82.943
EDAM10	4.45	0.31	10y-EDAM10	-81.651
EDAU10	4.56	0.42	10y-EDAU10	-75.631

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.



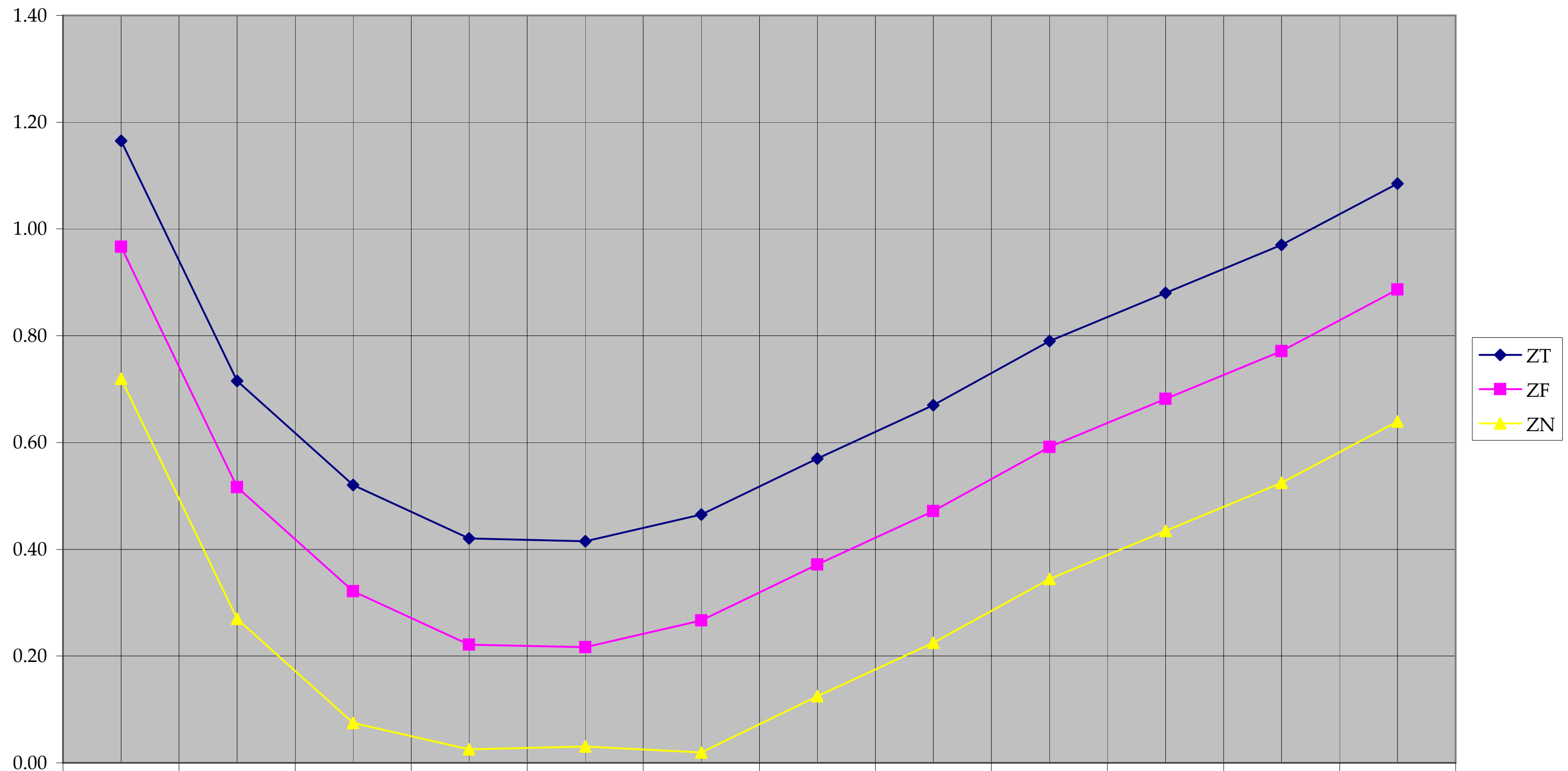
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.114	7.73	7.61	10y-EDAZ07
EDAH08	0.364	7.73	7.36	10y-EDAH08
EDAM08	0.613	7.73	7.11	10y-EDAM08
EDAU08	0.862	7.73	6.86	10y-EDAU08
EDAZ08	1.112	7.73	6.61	10y-EDAZ08
EDAH09	1.361	7.73	6.36	10y-EDAH09
EDAM09	1.610	7.73	6.12	10y-EDAM09
EDAU09	1.860	7.73	5.87	10y-EDAU09
EDAZ09	2.109	7.73	5.62	10y-EDAZ09
EDAH10	2.358	7.73	5.37	10y-EDAH10
EDAM10	2.608	7.73	5.12	10y-EDAM10
EDAU10	2.857	7.73	4.87	10y-EDAU10

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



Dirty TED Curve

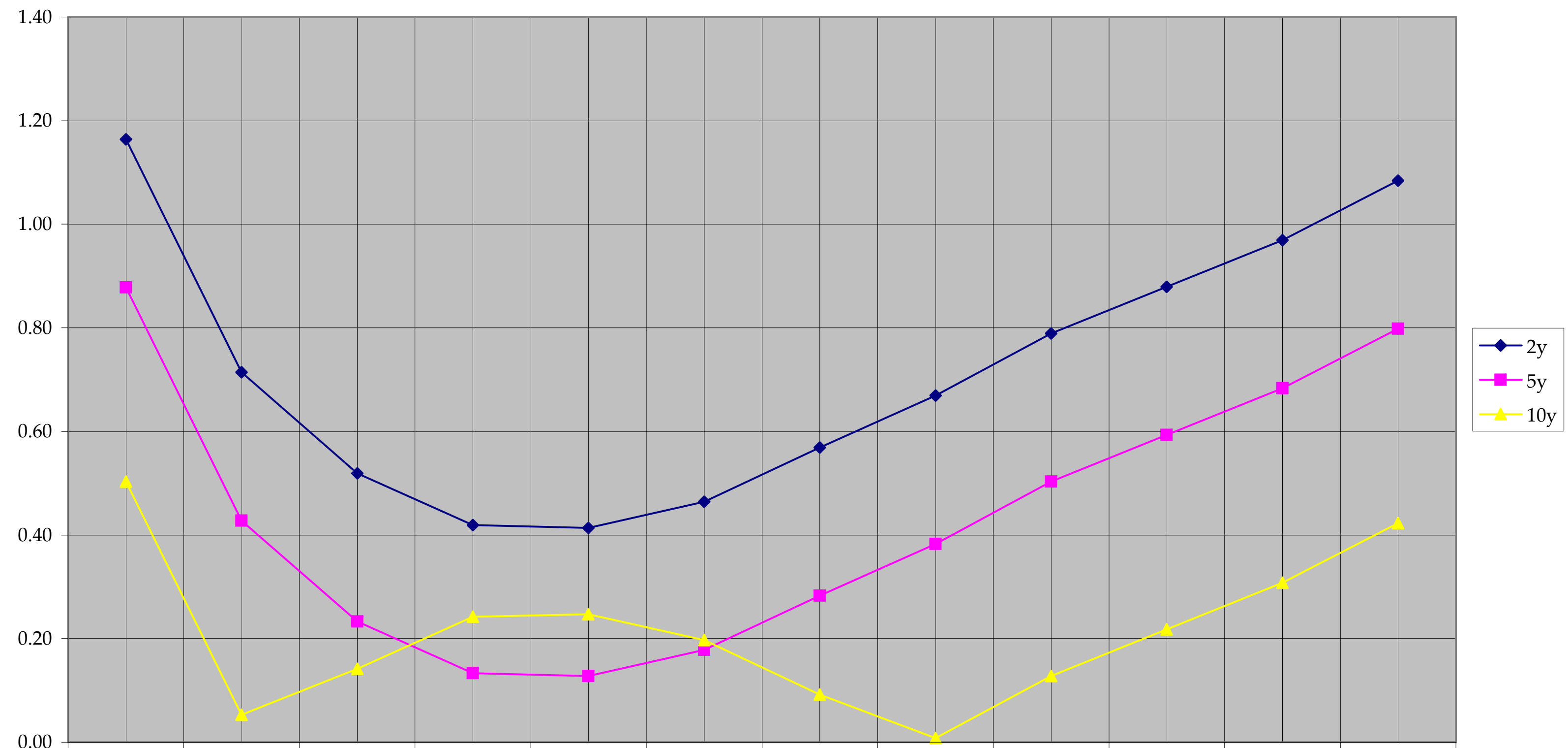
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	1.17	0.72	0.52	0.42	0.42	0.47	0.57	0.67	0.79	0.88	0.97	1.09
ZF	0.97	0.52	0.32	0.22	0.22	0.27	0.37	0.47	0.59	0.68	0.77	0.89
ZN	0.72	0.27	0.07	0.03	0.03	0.02	0.12	0.22	0.34	0.43	0.52	0.64

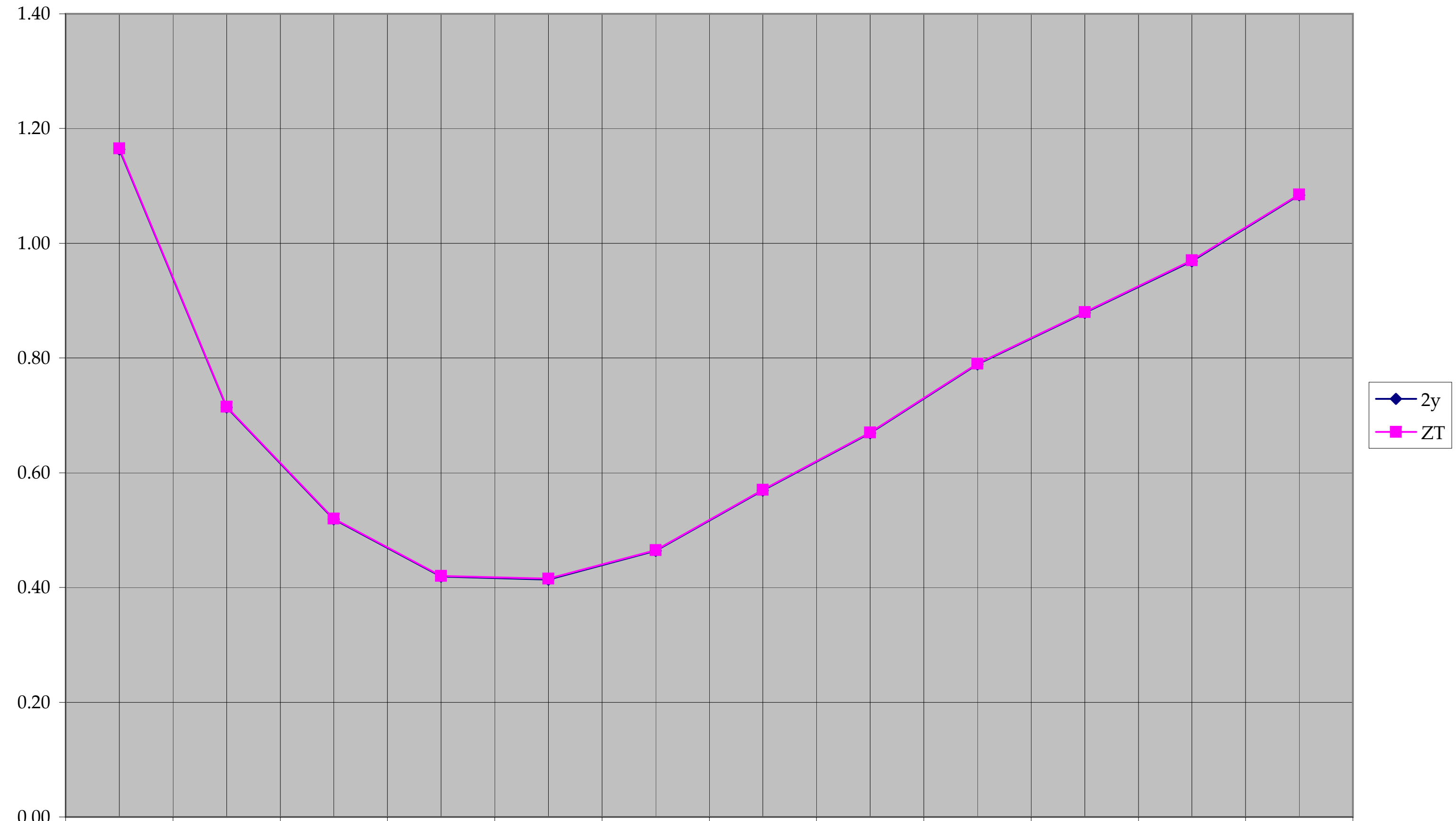
TED Curve

Chart values show the differences between ED contract and Treasury Cash conctract. 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.



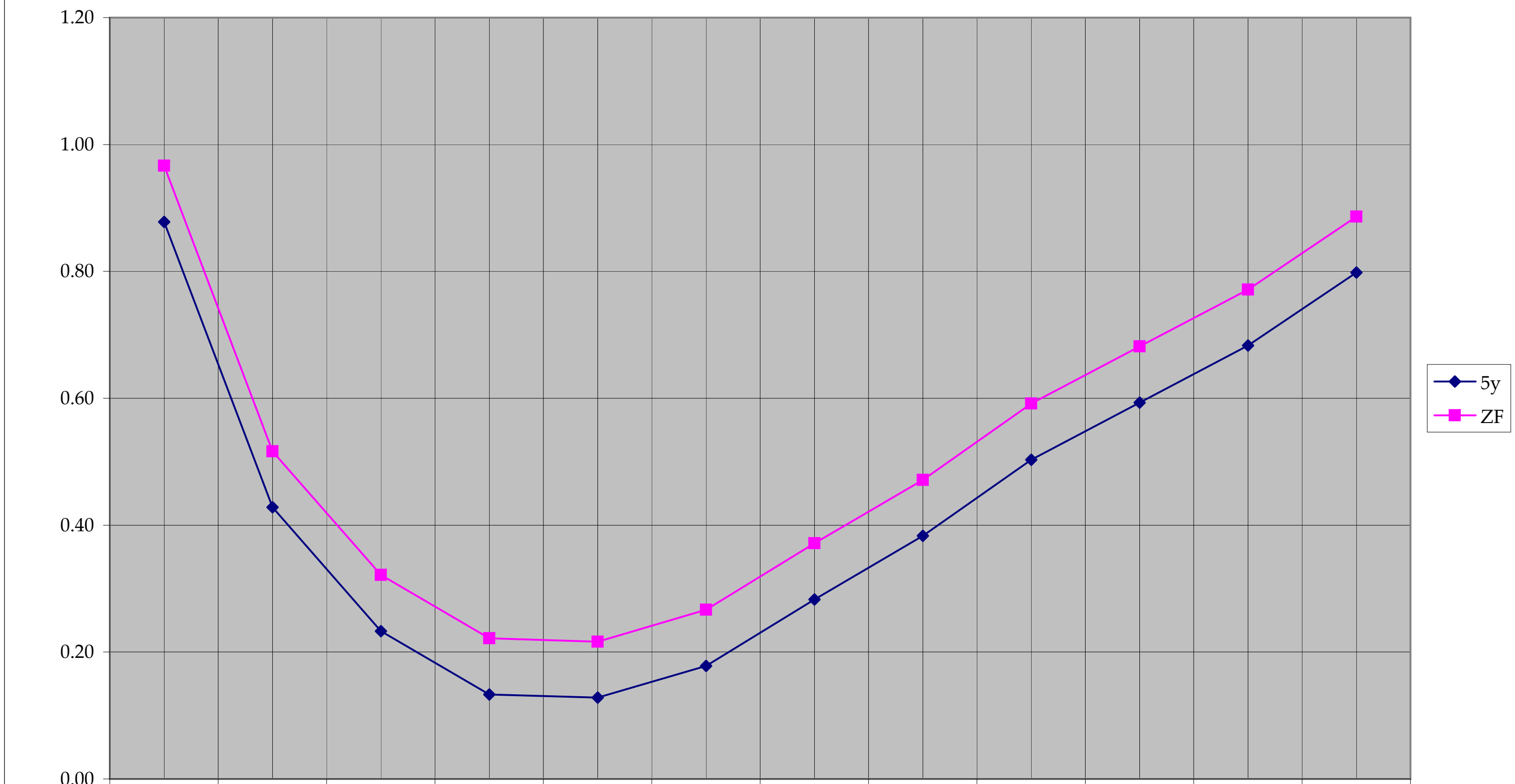
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.16	0.71	0.52	0.42	0.41	0.46	0.57	0.67	0.79	0.88	0.97	1.08
5y	0.88	0.43	0.23	0.13	0.13	0.18	0.28	0.38	0.50	0.59	0.68	0.80
10y	0.50	0.05	0.14	0.24	0.25	0.20	0.09	0.01	0.13	0.22	0.31	0.42

2y Basis TED Curve



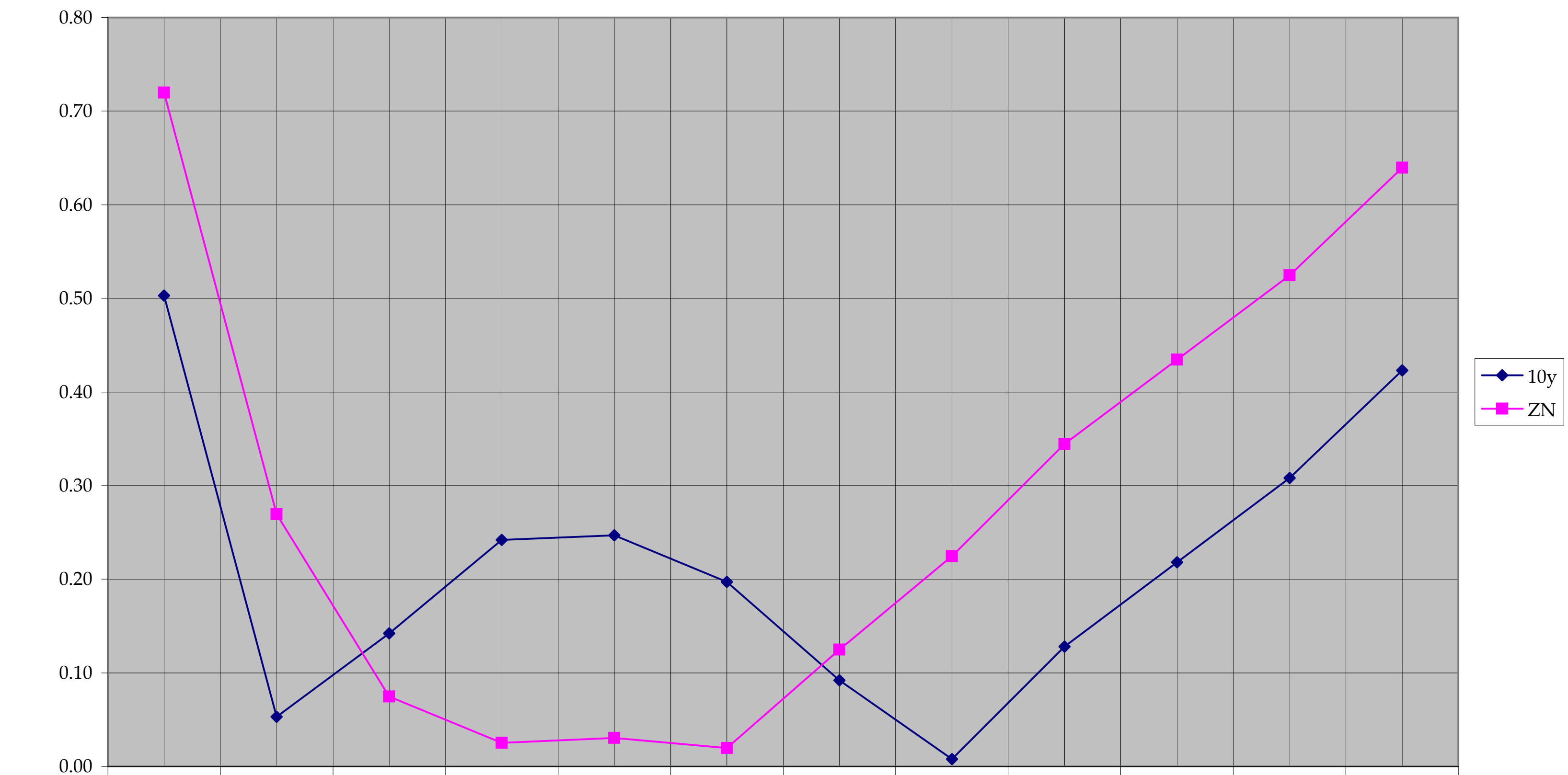
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.16	0.71	0.52	0.42	0.41	0.46	0.57	0.67	0.79	0.88	0.97	1.08
ZT	1.17	0.72	0.52	0.42	0.42	0.47	0.57	0.67	0.79	0.88	0.97	1.09

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.88	0.43	0.23	0.13	0.13	0.18	0.28	0.38	0.50	0.59	0.68	0.80
ZF	0.97	0.52	0.32	0.22	0.22	0.27	0.37	0.47	0.59	0.68	0.77	0.89

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.50	0.05	0.14	0.24	0.25	0.20	0.09	0.01	0.13	0.22	0.31	0.42
ZN	0.72	0.27	0.07	0.03	0.03	0.02	0.12	0.22	0.34	0.43	0.52	0.64

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.433	-0.750	9567.500
Q.ED.Red	4.252	0.625	9585.000
Q.ED.Green	4.668	-0.875	9544.875
Q.ED.Blue		0.000	9514.875
Q.ED.Gold		0.000	9491.125