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	103.1781	103.057	4.142	1.87
ZF	106.3750	106.120	4.341	3.92
ZN	108.6094	108.195	4.490	5.83
2y	99.725	99.2320	4.142	1.87
5y	99.428	99.1370	4.377	4.43
10y	100.750	100.2400	4.653	7.75

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	94.945	5.055	68	0.186	DEC	White Pack
EDAH08	95.195	4.805	159	0.435	MAR	
EDAM08	95.355	4.645	250	0.684	JUN	
EDAU08	95.435	4.565	341	0.934	SEP	
EDAZ08	95.440	4.560	432	1.183	DEC	Red Pack
EDAH09	95.395	4.605	523	1.432	MAR	
EDAM09	95.315	4.685	614	1.682	JUN	
EDAU09	95.220	4.780	705	1.931	SEP	
EDAZ09	95.130	4.870	796	2.180	DEC	Green Pack
EDAH10	95.070	4.930	887	2.429	MAR	
EDAM10	95.000	5.000	978	2.679	JUN	
EDAU10	94.940	5.060	1069	2.928	SEP	
EDAZ10	94.885	5.115	1160	3.177	DEC	Blue Pack
EDAH11	94.840	5.160	1251	3.427	MAR	
EDAM11	94.780	5.220	1342	3.676	JUN	
EDAU11	94.730	5.270	1440	3.945	SEP	
EDAZ11	94.680	5.320	1531	4.194	DEC	Gold Pack
EDAH12	94.660	5.340	1622	4.443	MAR	
EDAM12	94.610	5.390	1713	4.692	JUN	
EDAU12	94.575	5.425	1804	4.942	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.892	-1.625	9523.250	Pack Prices
Q.ED.Red	4.778	-2.500	9534.250	
Q.ED.Green	5.097	-1.000	9503.500	
Q.ED.Blue		0.000	9480.500	
Q.ED.Gold		0.000	9460.750	

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

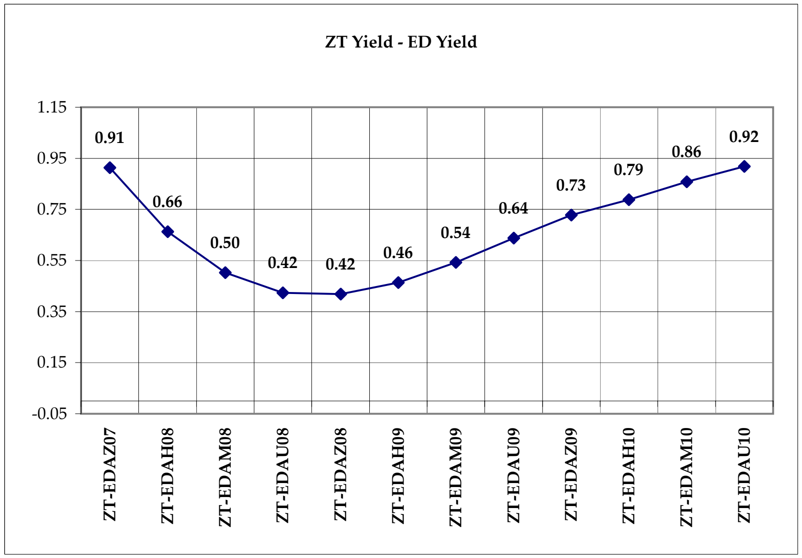
Eurodollar Color Codes for Individual Year Strips:

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

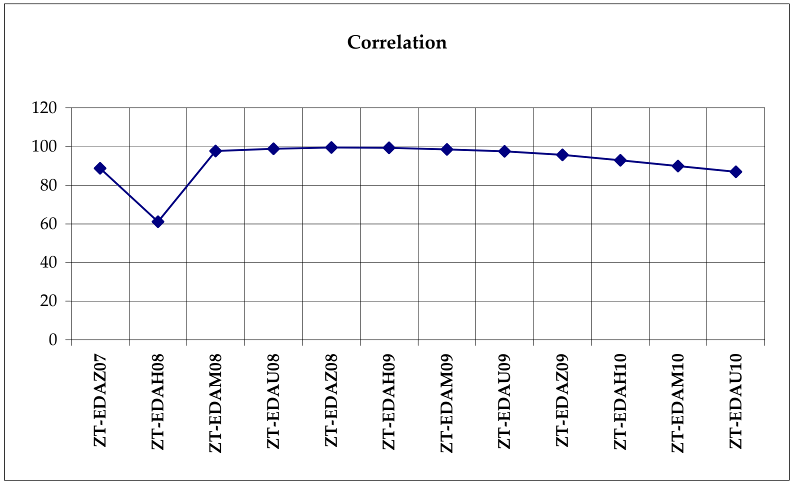
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.233	0.91	ZT-EDAZ07	88.770
EDAH08	7.983	0.66	ZT-EDAH08	61.116
EDAM08	7.823	0.50	ZT-EDAM08	97.666
EDAU08	7.743	0.42	ZT-EDAU08	98.887
EDAZ08	7.738	0.42	ZT-EDAZ08	99.428
EDAH09	7.783	0.46	ZT-EDAH09	99.345
EDAM09	7.863	0.54	ZT-EDAM09	98.416
EDAU09	7.958	0.64	ZT-EDAU09	97.438
EDAZ09	8.048	0.73	ZT-EDAZ09	95.729
EDAH10	8.108	0.79	ZT-EDAH10	92.850
EDAM10	8.178	0.86	ZT-EDAM10	89.928
EDAU10	8.238	0.92	ZT-EDAU10	86.904

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	0.186	1.87	1.69	ZT-EDAZ07
EDAH08	0.435	1.87	1.44	ZT-EDAH08
EDAM08	0.684	1.87	1.19	ZT-EDAM08
EDAU08	0.934	1.87	0.94	ZT-EDAU08
EDAZ08	1.183	1.87	0.69	ZT-EDAZ08
EDAH09	1.432	1.87	0.44	ZT-EDAH09
EDAM09	1.682	1.87	0.19	ZT-EDAM09
EDAU09	1.931	1.87	(0.06)	ZT-EDAU09
EDAZ09	2.180	1.87	(0.31)	ZT-EDAZ09
EDAH10	2.429	1.87	(0.56)	ZT-EDAH10
EDAM10	2.679	1.87	(0.81)	ZT-EDAM10
EDAU10	2.928	1.87	(1.06)	ZT-EDAU10

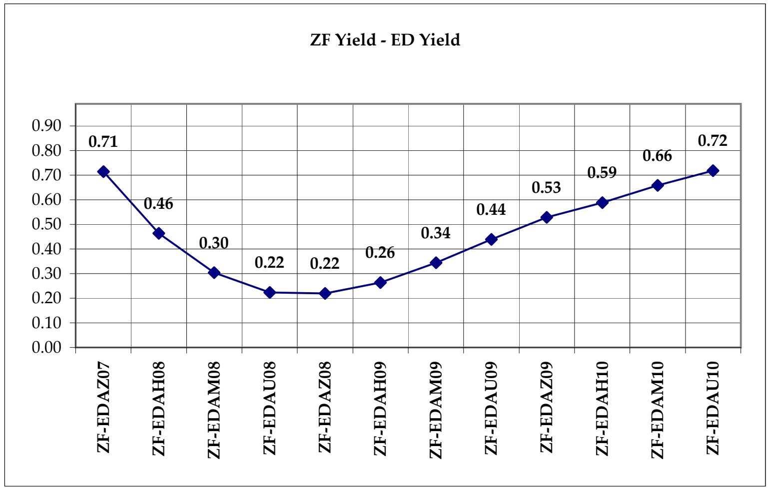
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

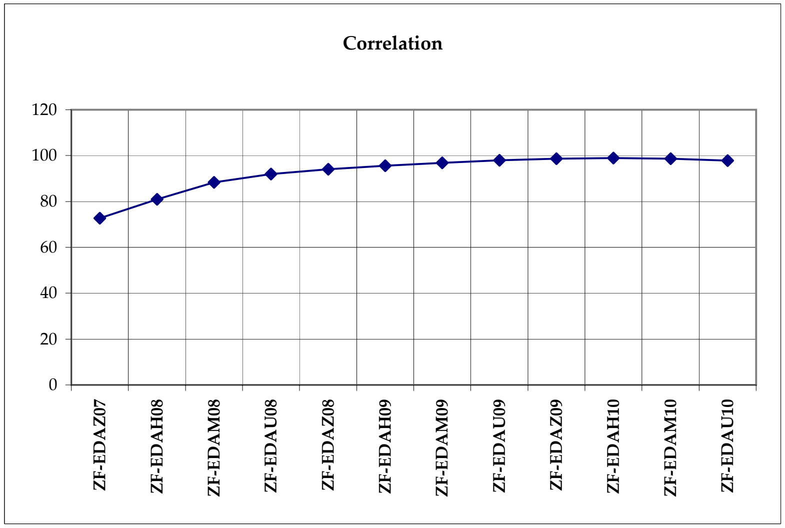
	ZF				
	Spread Price	Spread Yield	Spread Name		Correlation* (percent)
EDAZ07	11.43	0.71	ZF-EDAZ07		72.732
EDAH08	11.18	0.46	ZF-EDAH08		80.997
EDAM08	11.02	0.30	ZF-EDAM08		88.316
EDAU08	10.94	0.22	ZF-EDAU08		91.925
EDAZ08	10.94	0.22	ZF-EDAZ08		94.025
EDAH09	10.98	0.26	ZF-EDAH09		95.580
EDAM09	11.06	0.34	ZF-EDAM09		96.858
EDAU09	11.16	0.44	ZF-EDAU09		97.906
EDAZ09	11.25	0.53	ZF-EDAZ09		98.720
EDAH10	11.31	0.59	ZF-EDAH10		98.930
EDAM10	11.38	0.66	ZF-EDAM10		98.615
EDAU10	11.44	0.72	ZF-EDAU10		97.840

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	0.186	3.92	3.73	ZF-EDAZ07
EDAH08	0.435	3.92	3.48	ZF-EDAH08
EDAM08	0.684	3.92	3.23	ZF-EDAM08
EDAU08	0.934	3.92	2.99	ZF-EDAU08
EDAZ08	1.183	3.92	2.74	ZF-EDAZ08
EDAH09	1.432	3.92	2.49	ZF-EDAH09
EDAM09	1.682	3.92	2.24	ZF-EDAM09
EDAU09	1.931	3.92	1.99	ZF-EDAU09
EDAZ09	2.180	3.92	1.74	ZF-EDAZ09
EDAH10	2.429	3.92	1.49	ZF-EDAH10
EDAM10	2.679	3.92	1.24	ZF-EDAM10
EDAU10	2.928	3.92	0.99	ZF-EDAU10

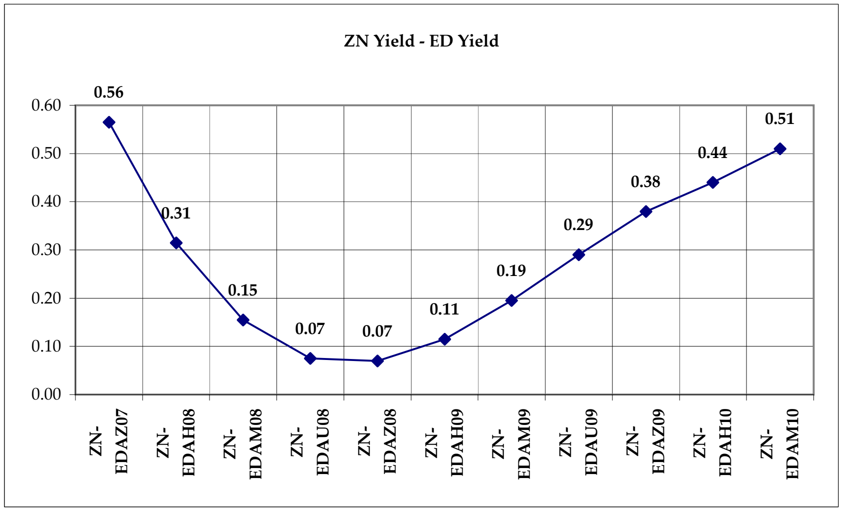
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

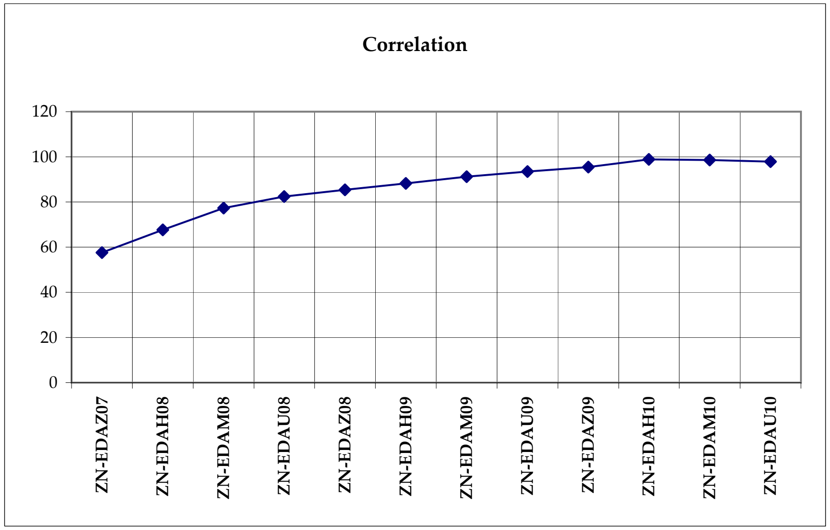
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	13.66	0.56	ZN-EDAZ07	57.59
EDAH08	13.41	0.31	ZN-EDAH08	67.66
EDAM08	13.25	0.15	ZN-EDAM08	77.25
EDAU08	13.17	0.07	ZN-EDAU08	82.35
EDAZ08	13.17	0.07	ZN-EDAZ08	85.44
EDAH09	13.21	0.11	ZN-EDAH09	88.25
EDAM09	13.29	0.19	ZN-EDAM09	91.19
EDAU09	13.39	0.29	ZN-EDAU09	93.45
EDAZ09	13.48	0.38	ZN-EDAZ09	95.52
EDAH10	13.54	0.44	ZN-EDAH10	98.93
EDAM10	13.61	0.51	ZN-EDAM10	98.61
EDAU10	13.67	0.57	ZN-EDAU10	97.84

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	0.186	5.83	5.65	ZN-EDAZ07
EDAH08	0.435	5.83	5.40	ZN-EDAH08
EDAM08	0.684	5.83	5.15	ZN-EDAM08
EDAU08	0.934	5.83	4.90	ZN-EDAU08
EDAZ08	1.183	5.83	4.65	ZN-EDAZ08
EDAH09	1.432	5.83	4.40	ZN-EDAH09
EDAM09	1.682	5.83	4.15	ZN-EDAM09
EDAU09	1.931	5.83	3.90	ZN-EDAU09
EDAZ09	2.180	5.83	3.65	ZN-EDAZ09
EDAH10	2.429	5.83	3.40	ZN-EDAH10
EDAM10	2.679	5.83	3.16	ZN-EDAM10
EDAU10	2.928	5.83	2.91	ZN-EDAU10

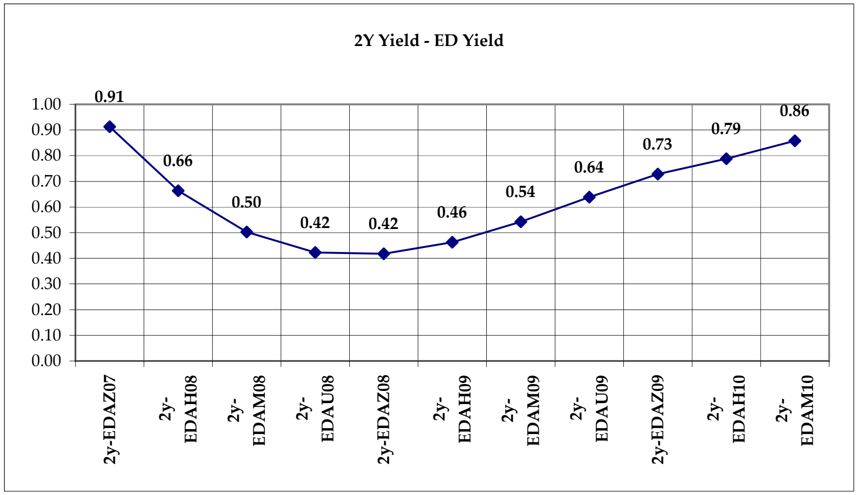
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ07	4.78	0.91	2y-EDAZ07	-87.570
EDAH08	4.53	0.66	2y-EDAH08	-93.089
EDAM08	4.37	0.50	2y-EDAM08	-96.686
EDAU08	4.29	0.42	2y-EDAU08	-97.892
EDAZ08	4.29	0.42	2y-EDAZ08	-96.686
EDAH09	4.33	0.46	2y-EDAH09	-98.426
EDAM09	4.41	0.54	2y-EDAM09	-97.820
EDAU09	4.51	0.64	2y-EDAU09	-96.480
EDAZ09	4.60	0.73	2y-EDAZ09	-94.448
EDAH10	4.65	0.79	2y-EDAH10	-91.663
EDAM10	4.72	0.86	2y-EDAM10	-88.686
EDAU10	4.79	0.92	2y-EDAU10	-85.941

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.



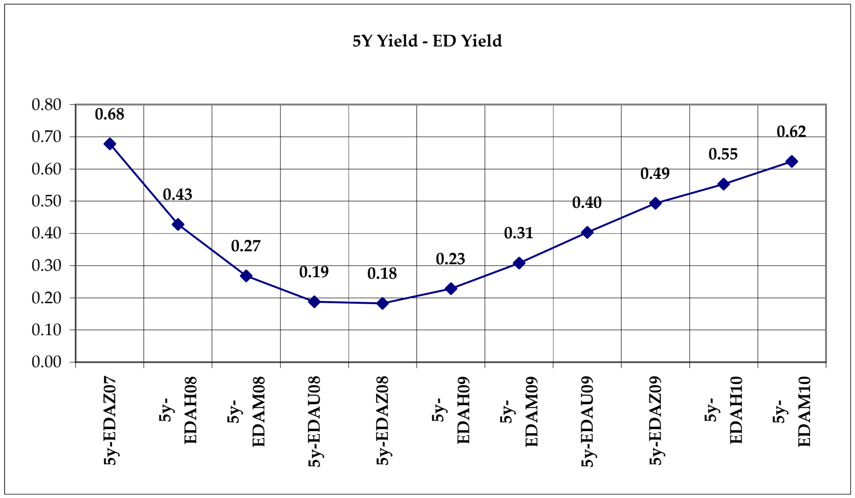
	GE Duration as Fraction of year	**2Y Duration**	**Spread Duration**	
EDAZ07	0.186	1.87	1.69	2y-EDAZ07
EDAH08	0.435	1.87	1.44	2y-EDAH08
EDAM08	0.684	1.87	1.19	2y-EDAM08
EDAU08	0.934	1.87	0.94	2y-EDAU08
EDAZ08	1.183	1.87	0.69	2y-EDAZ08
EDAH09	1.432	1.87	0.44	2y-EDAH09
EDAM09	1.682	1.87	0.19	2y-EDAM09
EDAU09	1.931	1.87	(0.06)	2y-EDAU09
EDAZ09	2.180	1.87	(0.31)	2y-EDAZ09
EDAH10	2.429	1.87	(0.56)	2y-EDAH10
EDAM10	2.679	1.87	(0.81)	2y-EDAM10
EDAU10	2.928	1.87	(1.06)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

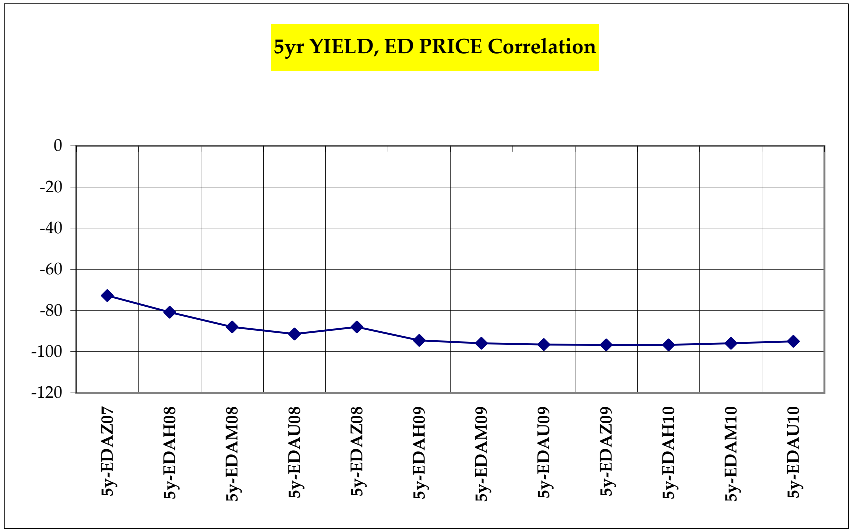
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.48	0.68	5y-EDAZ07	-72.708
EDAH08	4.23	0.43	5y-EDAH08	-80.863
EDAM08	4.07	0.27	5y-EDAM08	-88.039
EDAU08	3.99	0.19	5y-EDAU08	-91.419
EDAZ08	3.99	0.18	5y-EDAZ08	-88.039
EDAH09	4.03	0.23	5y-EDAH09	-94.571
EDAM09	4.11	0.31	5y-EDAM09	-95.856
EDAU09	4.21	0.40	5y-EDAU09	-96.452
EDAZ09	4.30	0.49	5y-EDAZ09	-96.697
EDAH10	4.36	0.55	5y-EDAH10	-96.642
EDAM10	4.43	0.62	5y-EDAM10	-95.831
EDAU10	4.49	0.68	5y-EDAU10	-94.932

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	0.186	4.43	4.24	5y-EDAZ07
EDAH08	0.435	4.43	3.99	5y-EDAH08
EDAM08	0.684	4.43	3.74	5y-EDAM08
EDAU08	0.934	4.43	3.49	5y-EDAU08
EDAZ08	1.183	4.43	3.25	5y-EDAZ08
EDAH09	1.432	4.43	3.00	5y-EDAH09
EDAM09	1.682	4.43	2.75	5y-EDAM09
EDAU09	1.931	4.43	2.50	5y-EDAU09
EDAZ09	2.180	4.43	2.25	5y-EDAZ09
EDAH10	2.429	4.43	2.00	5y-EDAH10
EDAM10	2.679	4.43	1.75	5y-EDAM10
EDAU10	2.928	4.43	1.50	5y-EDAU10

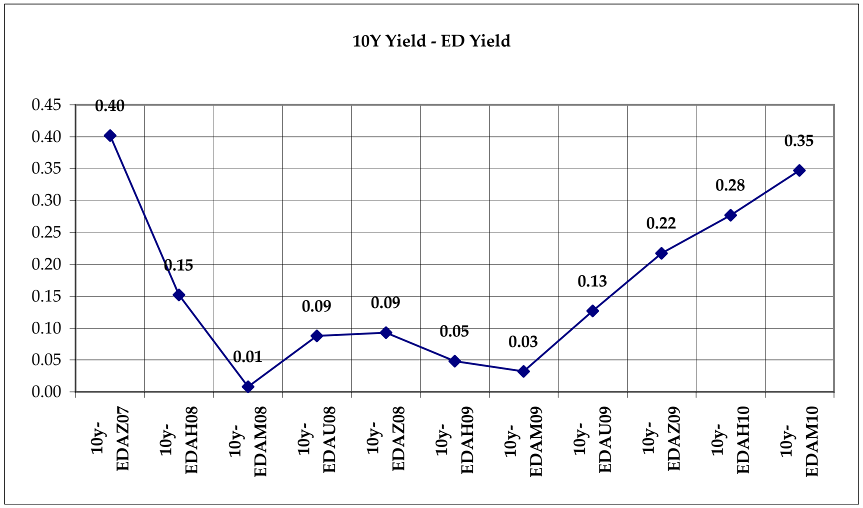
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

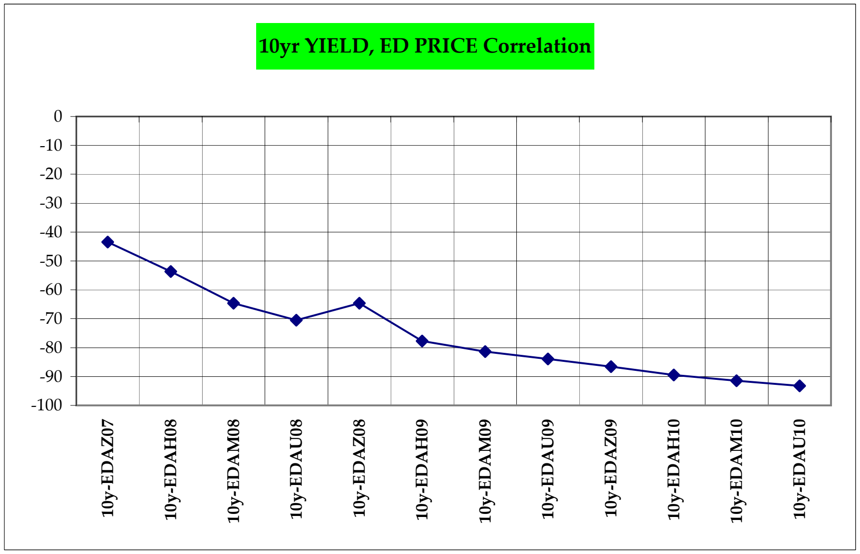
	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ07	4.48	0.40	10y-EDAZ07	-43.406
EDAH08	4.23	0.15	10y-EDAH08	-53.633
EDAM08	4.07	0.01	10y-EDAM08	-64.619
EDAU08	3.99	0.09	10y-EDAU08	-70.521
EDAZ08	3.99	0.09	10y-EDAZ08	-64.619
EDAH09	4.03	0.05	10y-EDAH09	-77.699
EDAM09	4.11	0.03	10y-EDAM09	-81.405
EDAU09	4.21	0.13	10y-EDAU09	-83.918
EDAZ09	4.30	0.22	10y-EDAZ09	-86.578
EDAH10	4.36	0.28	10y-EDAH10	-89.441
EDAM10	4.43	0.35	10y-EDAM10	-91.488
EDAU10	4.49	0.41	10y-EDAU10	-93.193

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.



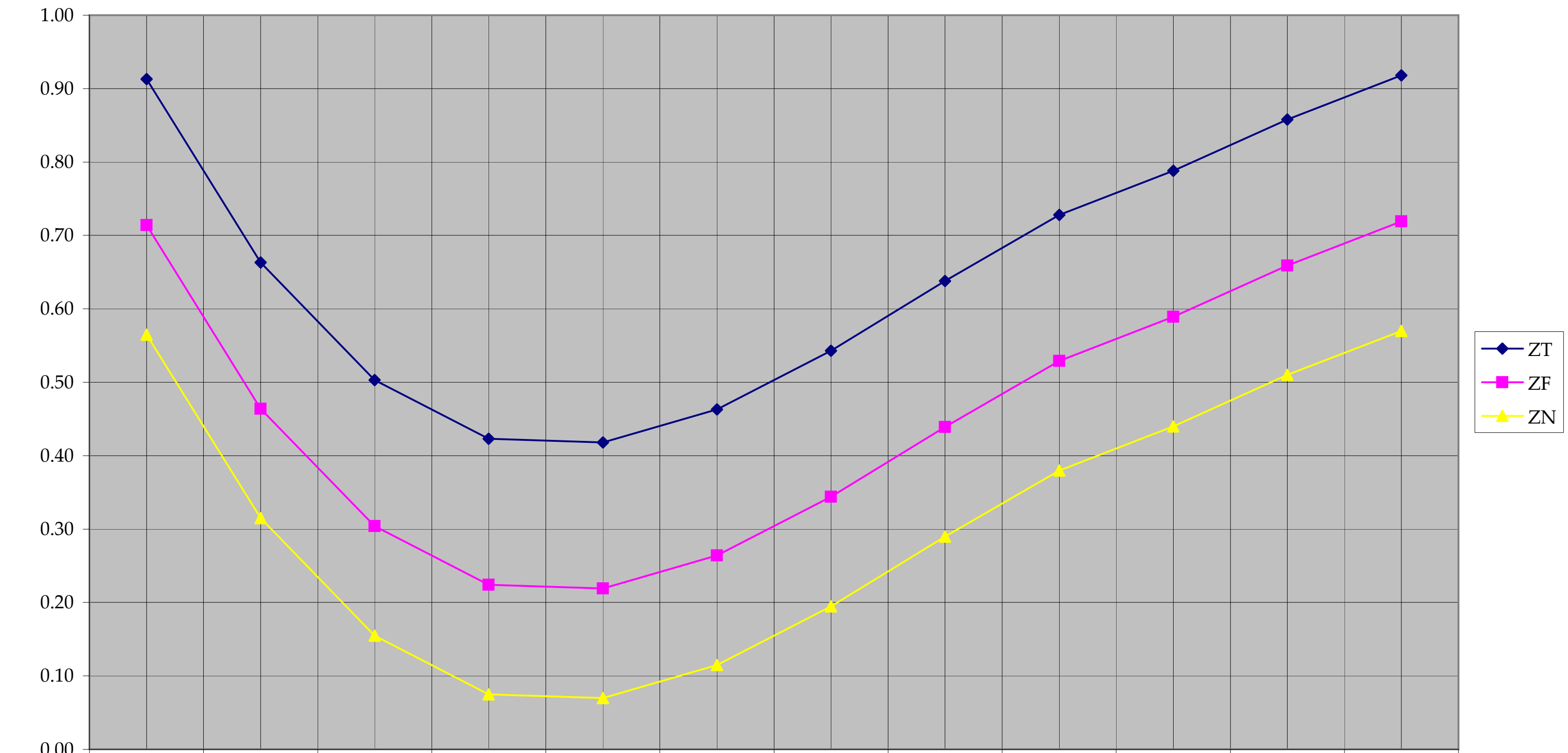
	GE Duration as Fraction of year	**10Y Duration**	**Spread Duration**	
EDAZ07	0.186	7.75	7.56	10y-EDAZ07
EDAH08	0.435	7.75	7.31	10y-EDAH08
EDAM08	0.684	7.75	7.06	10y-EDAM08
EDAU08	0.934	7.75	6.81	10y-EDAU08
EDAZ08	1.183	7.75	6.57	10y-EDAZ08
EDAH09	1.432	7.75	6.32	10y-EDAH09
EDAM09	1.682	7.75	6.07	10y-EDAM09
EDAU09	1.931	7.75	5.82	10y-EDAU09
EDAZ09	2.180	7.75	5.57	10y-EDAZ09
EDAH10	2.429	7.75	5.32	10y-EDAH10
EDAM10	2.679	7.75	5.07	10y-EDAM10
EDAU10	2.928	7.75	4.82	10y-EDAU10

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



Dirty TED Curve

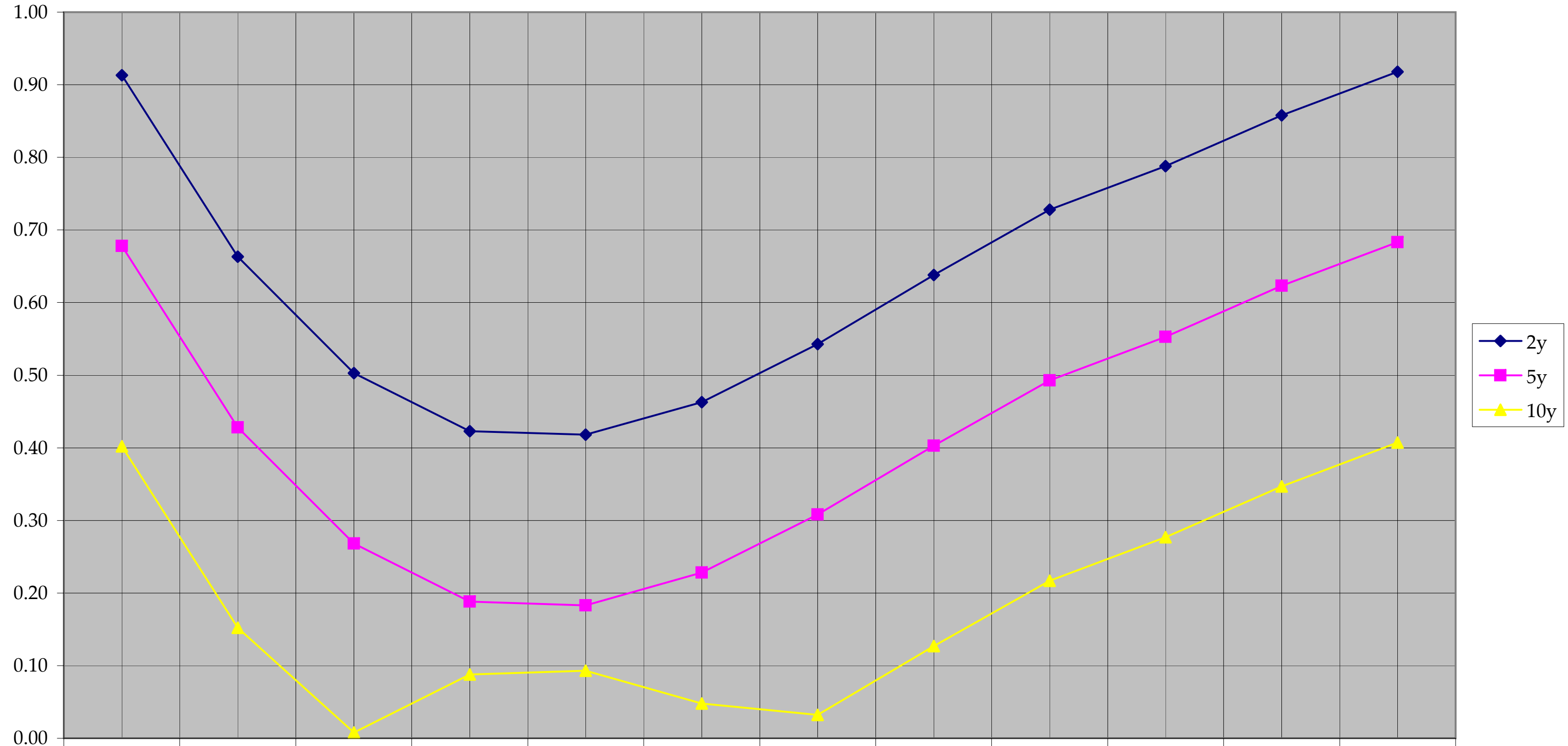
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	0.91	0.66	0.50	0.42	0.42	0.46	0.54	0.64	0.73	0.79	0.86	0.92
ZF	0.71	0.46	0.30	0.22	0.22	0.26	0.34	0.44	0.53	0.59	0.66	0.72
ZN	0.56	0.31	0.15	0.07	0.07	0.11	0.19	0.29	0.38	0.44	0.51	0.57

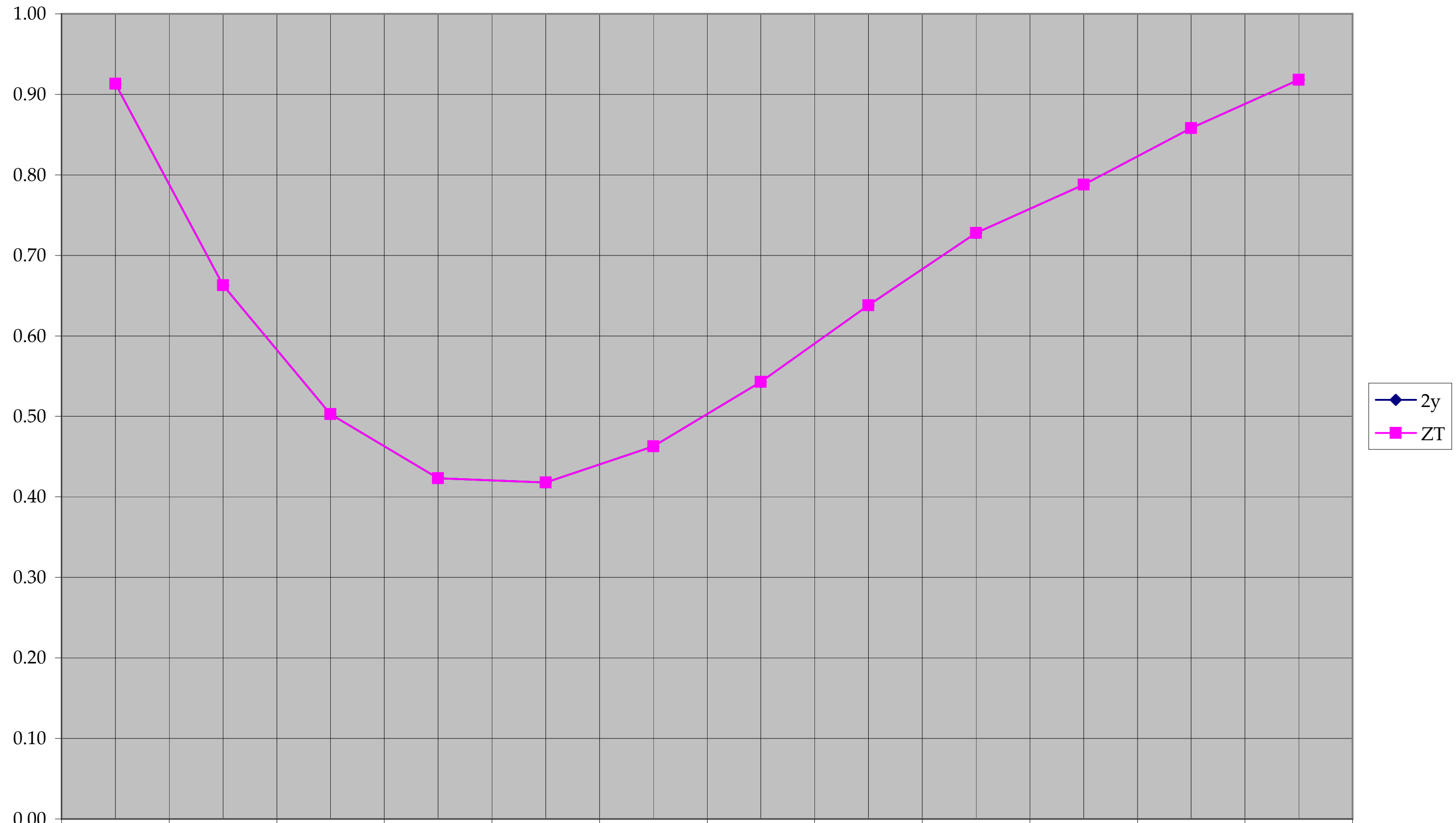
TED Curve

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.



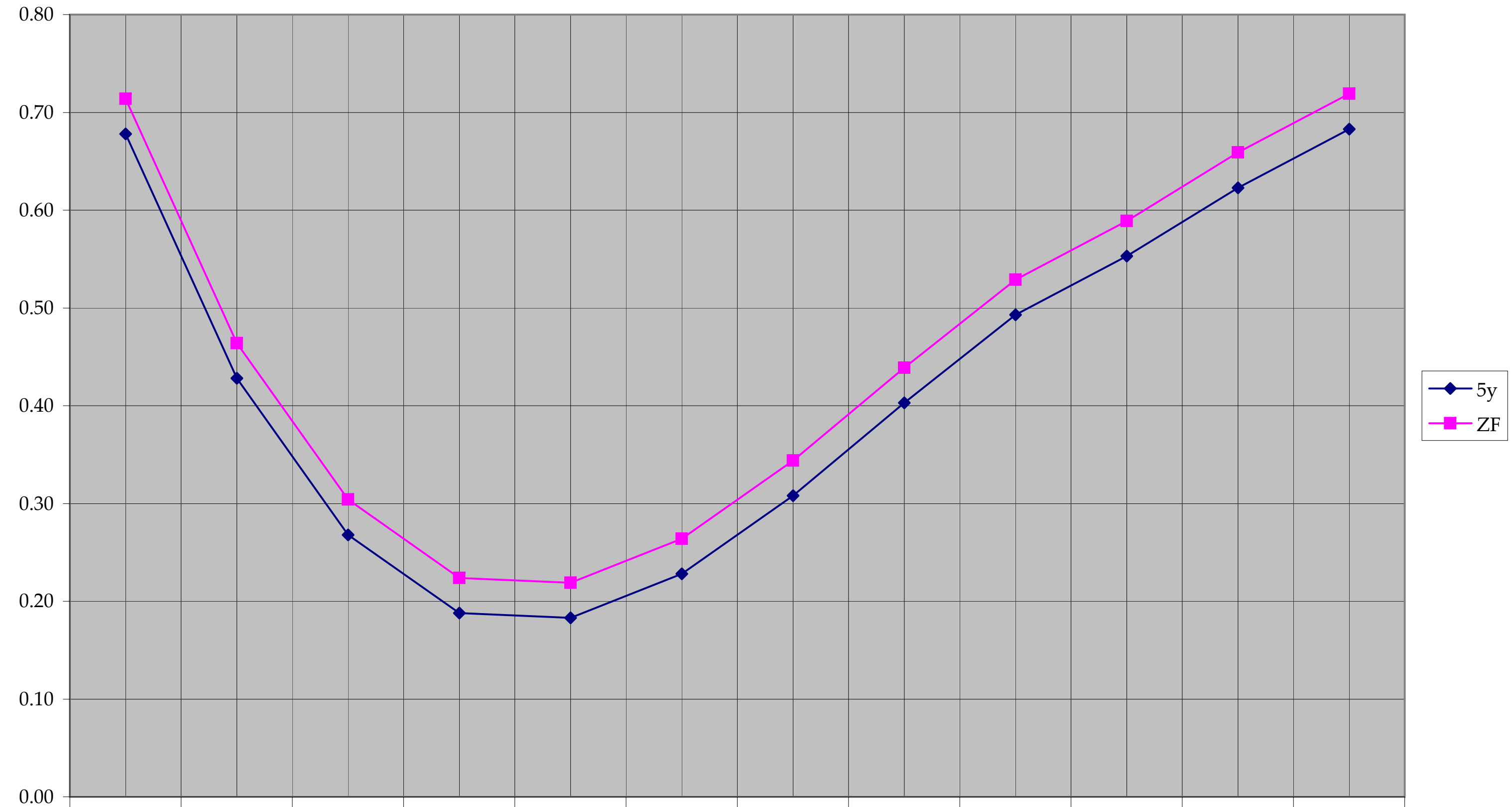
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.91	0.66	0.50	0.42	0.42	0.46	0.54	0.64	0.73	0.79	0.86	0.92
5y	0.68	0.43	0.27	0.19	0.18	0.23	0.31	0.40	0.49	0.55	0.62	0.68
10y	0.40	0.15	0.01	0.09	0.09	0.05	0.03	0.13	0.22	0.28	0.35	0.41

2y Basis TED Curve



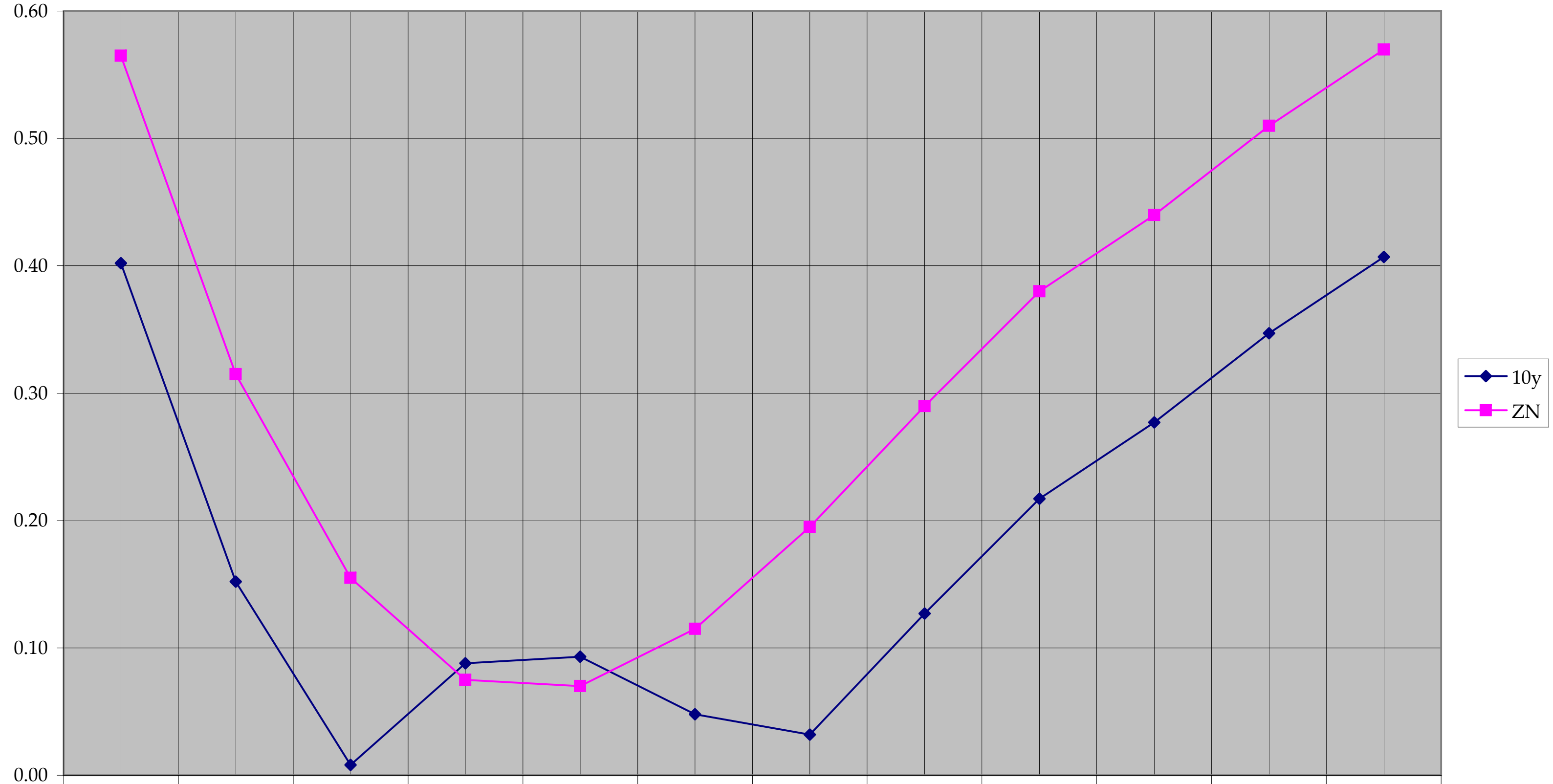
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.91	0.66	0.50	0.42	0.42	0.46	0.54	0.64	0.73	0.79	0.86	0.92
ZT	0.91	0.66	0.50	0.42	0.42	0.46	0.54	0.64	0.73	0.79	0.86	0.92

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.68	0.43	0.27	0.19	0.18	0.23	0.31	0.40	0.49	0.55	0.62	0.68
ZF	0.71	0.46	0.30	0.22	0.22	0.26	0.34	0.44	0.53	0.59	0.66	0.72

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.40	0.15	0.01	0.09	0.09	0.05	0.03	0.13	0.22	0.28	0.35	0.41
ZN	0.56	0.31	0.15	0.07	0.07	0.11	0.19	0.29	0.38	0.44	0.51	0.57

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.892	-1.625	9523.250
Q.ED.Red	4.778	-2.500	9534.250
Q.ED.Green	5.097	-1.000	9503.500
Q.ED.Blue		0.000	9480.500
Q.ED.Gold		0.000	9460.750