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	103.6094	103.195	3.890	1.84
ZF	107.5156	107.165	4.071	3.89
ZN	110.2031	110.065	4.241	5.81
2y	100.194	100.0620	3.890	1.84
5y	100.600	100.1920	4.112	4.40
10y	102.438	102.1400	4.440	7.74

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.260	4.740	55	0.150	DEC	White Pack
EDAH08	95.525	4.475	146	0.399	MAR	
EDAM08	95.680	4.320	237	0.649	JUN	
EDAU08	95.765	4.235	328	0.898	SEP	
EDAZ08	95.775	4.225	419	1.147	DEC	Red Pack
EDAH09	95.715	4.285	510	1.397	MAR	
EDAM09	95.615	4.385	601	1.646	JUN	
EDAU09	95.520	4.480	692	1.895	SEP	
EDAZ09	95.425	4.575	783	2.145	DEC	Green Pack
EDAH10	95.355	4.645	874	2.394	MAR	
EDAM10	95.280	4.720	965	2.643	JUN	
EDAU10	95.210	4.790	1056	2.892	SEP	
EDAZ10	95.165	4.835	1147	3.142	DEC	Blue Pack
EDAH11	95.100	4.900	1238	3.391	MAR	
EDAM11	95.035	4.965	1329	3.640	JUN	
EDAU11	94.975	5.025	1427	3.909	SEP	
EDAZ11	94.915	5.085	1518	4.158	DEC	Gold Pack
EDAH12	94.890	5.110	1609	4.408	MAR	
EDAM12	94.835	5.165	1700	4.657	JUN	
EDAU12	94.795	5.205	1791	4.906	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.555	-5.125	9555.750	Pack Prices
Q.ED.Red	4.452	-4.250	9565.625	
Q.ED.Green	4.804	-3.625	9531.750	
Q.ED.Blue		0.000	9509.000	
Q.ED.Gold		0.000	9487.500	

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

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

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

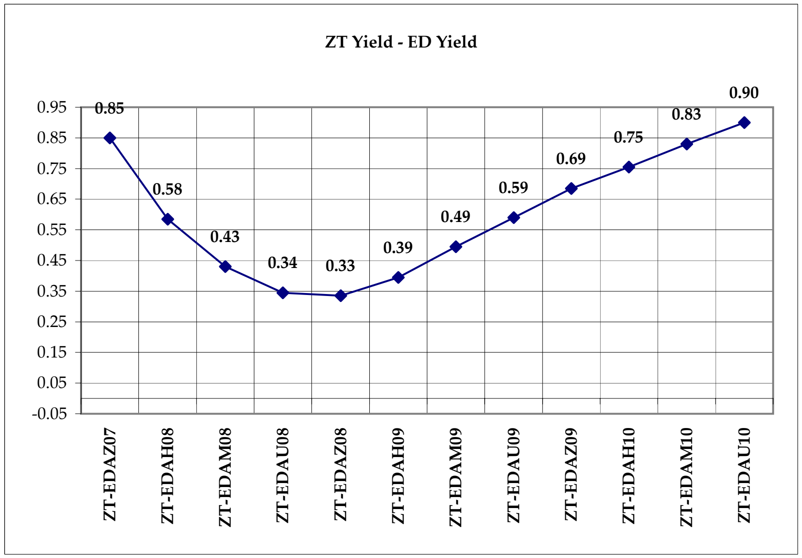
Eurodollar Color Codes for Individual Year Strips:

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

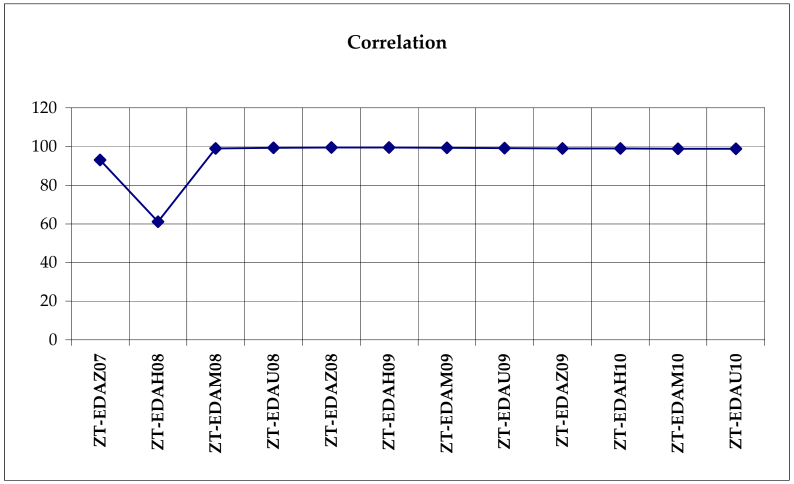
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.349	0.85	ZT-EDAZ07	93.101
EDAH08	8.084	0.58	ZT-EDAH08	61.116
EDAM08	7.929	0.43	ZT-EDAM08	98.908
EDAU08	7.844	0.34	ZT-EDAU08	99.338
EDAZ08	7.834	0.33	ZT-EDAZ08	99.472
EDAH09	7.894	0.39	ZT-EDAH09	99.480
EDAM09	7.994	0.49	ZT-EDAM09	99.356
EDAU09	8.089	0.59	ZT-EDAU09	99.138
EDAZ09	8.184	0.69	ZT-EDAZ09	99.055
EDAH10	8.254	0.75	ZT-EDAH10	98.901
EDAM10	8.329	0.83	ZT-EDAM10	98.800
EDAU10	8.399	0.90	ZT-EDAU10	98.866

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	0.150	1.84	1.69	ZT-EDAZ07
EDAH08	0.399	1.84	1.44	ZT-EDAH08
EDAM08	0.649	1.84	1.19	ZT-EDAM08
EDAU08	0.898	1.84	0.94	ZT-EDAU08
EDAZ08	1.147	1.84	0.69	ZT-EDAZ08
EDAH09	1.397	1.84	0.44	ZT-EDAH09
EDAM09	1.646	1.84	0.19	ZT-EDAM09
EDAU09	1.895	1.84	(0.05)	ZT-EDAU09
EDAZ09	2.145	1.84	(0.30)	ZT-EDAZ09
EDAH10	2.394	1.84	(0.55)	ZT-EDAH10
EDAM10	2.643	1.84	(0.80)	ZT-EDAM10
EDAU10	2.892	1.84	(1.05)	ZT-EDAU10

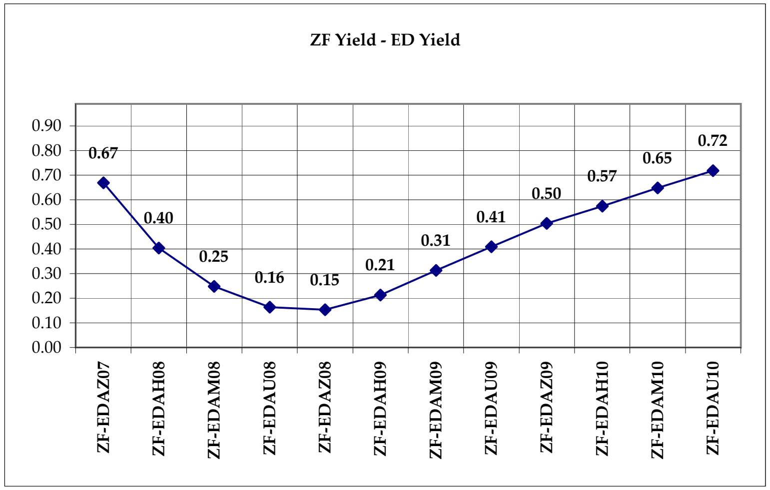
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

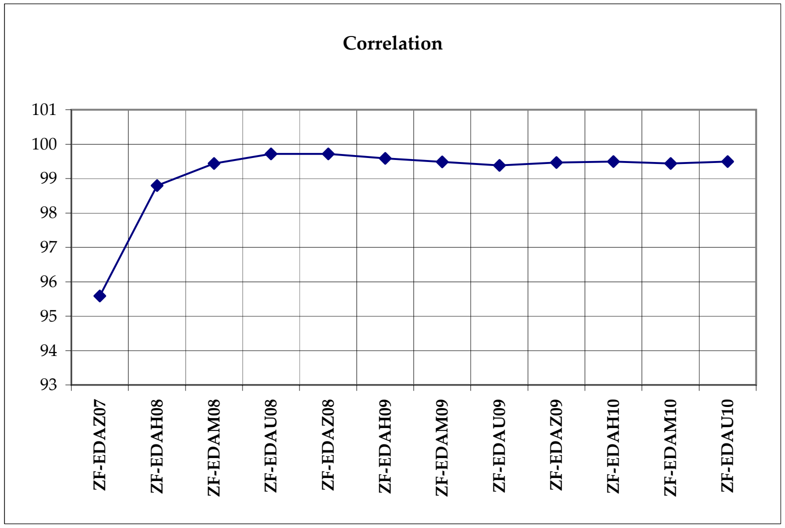
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	12.26	0.67	ZF-EDAZ07	95.589
EDAH08	11.99	0.40	ZF-EDAH08	98.799
EDAM08	11.84	0.25	ZF-EDAM08	99.441
EDAU08	11.75	0.16	ZF-EDAU08	99.713
EDAZ08	11.74	0.15	ZF-EDAZ08	99.721
EDAH09	11.80	0.21	ZF-EDAH09	99.591
EDAM09	11.90	0.31	ZF-EDAM09	99.480
EDAU09	12.00	0.41	ZF-EDAU09	99.379
EDAZ09	12.09	0.50	ZF-EDAZ09	99.461
EDAH10	12.16	0.57	ZF-EDAH10	99.490
EDAM10	12.24	0.65	ZF-EDAM10	99.434
EDAU10	12.31	0.72	ZF-EDAU10	99.489

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	0.150	3.89	3.74	ZF-EDAZ07
EDAH08	0.399	3.89	3.49	ZF-EDAH08
EDAM08	0.649	3.89	3.24	ZF-EDAM08
EDAU08	0.898	3.89	2.99	ZF-EDAU08
EDAZ08	1.147	3.89	2.74	ZF-EDAZ08
EDAH09	1.397	3.89	2.49	ZF-EDAH09
EDAM09	1.646	3.89	2.25	ZF-EDAM09
EDAU09	1.895	3.89	2.00	ZF-EDAU09
EDAZ09	2.145	3.89	1.75	ZF-EDAZ09
EDAH10	2.394	3.89	1.50	ZF-EDAH10
EDAM10	2.643	3.89	1.25	ZF-EDAM10
EDAU10	2.892	3.89	1.00	ZF-EDAU10

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

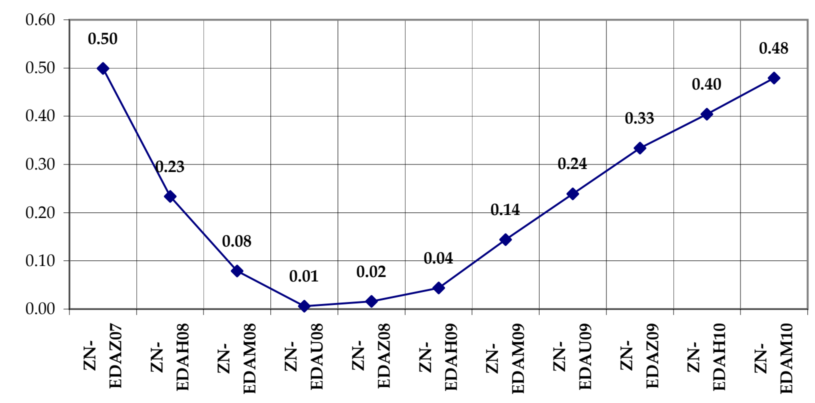


Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.94	0.50	ZN-EDAZ07	95.91
EDAH08	14.68	0.23	ZN-EDAH08	98.41
EDAM08	14.52	0.08	ZN-EDAM08	98.96
EDAU08	14.44	0.01	ZN-EDAU08	99.38
EDAZ08	14.43	0.02	ZN-EDAZ08	99.56
EDAH09	14.49	0.04	ZN-EDAH09	99.56
EDAM09	14.59	0.14	ZN-EDAM09	99.53
EDAU09	14.68	0.24	ZN-EDAU09	99.57
EDAZ09	14.78	0.33	ZN-EDAZ09	99.72
EDAH10	14.85	0.40	ZN-EDAH10	99.49
EDAM10	14.92	0.48	ZN-EDAM10	99.43
EDAU10	14.99	0.55	ZN-EDAU10	99.49

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

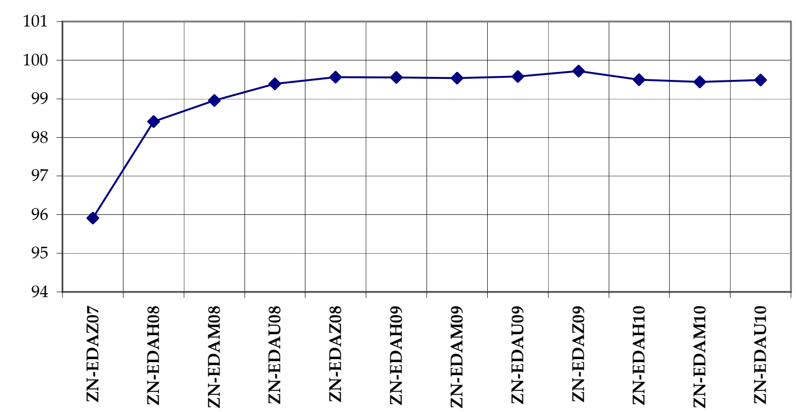
ZN Yield - ED Yield



	GE Duration as Fraction of year	ZN Duration	Spread Duration	
EDAZ07	0.150	5.81	5.66	ZN-EDAZ07
EDAH08	0.399	5.81	5.42	ZN-EDAH08
EDAM08	0.649	5.81	5.17	ZN-EDAM08
EDAU08	0.898	5.81	4.92	ZN-EDAU08
EDAZ08	1.147	5.81	4.67	ZN-EDAZ08
EDAH09	1.397	5.81	4.42	ZN-EDAH09
EDAM09	1.646	5.81	4.17	ZN-EDAM09
EDAU09	1.895	5.81	3.92	ZN-EDAU09
EDAZ09	2.145	5.81	3.67	ZN-EDAZ09
EDAH10	2.394	5.81	3.42	ZN-EDAH10
EDAM10	2.643	5.81	3.17	ZN-EDAM10
EDAU10	2.892	5.81	2.92	ZN-EDAU10

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

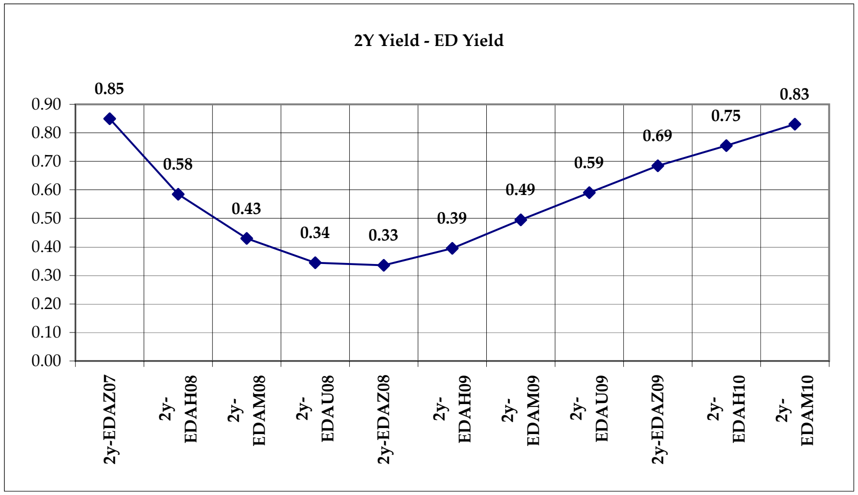
Correlation



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.93	0.85	2y-EDAZ07	-92.654
EDAH08	4.67	0.58	2y-EDAH08	-97.499
EDAM08	4.51	0.43	2y-EDAM08	-98.687
EDAU08	4.43	0.34	2y-EDAU08	-98.919
EDAZ08	4.42	0.33	2y-EDAZ08	-98.687
EDAH09	4.48	0.39	2y-EDAH09	-98.894
EDAM09	4.58	0.49	2y-EDAM09	-98.679
EDAU09	4.67	0.59	2y-EDAU09	-98.509
EDAZ09	4.77	0.69	2y-EDAZ09	-98.347
EDAH10	4.84	0.75	2y-EDAH10	-98.186
EDAM10	4.91	0.83	2y-EDAM10	-98.095
EDAU10	4.98	0.90	2y-EDAU10	-98.241

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.



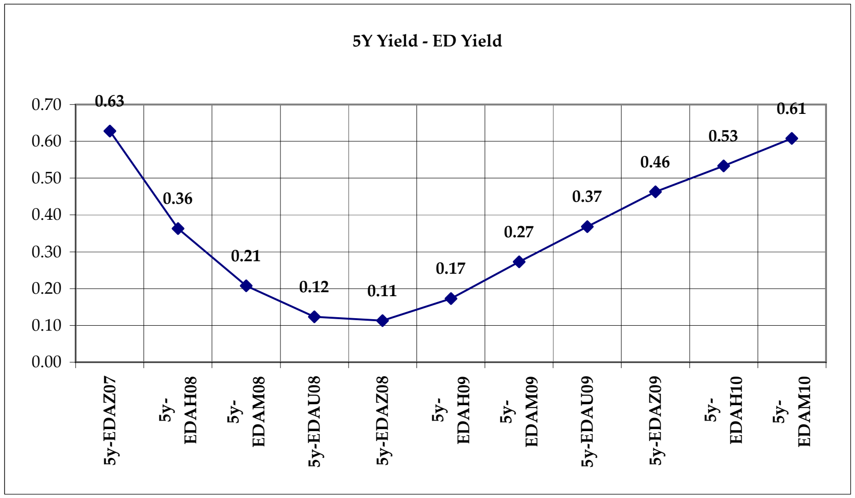
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.150	1.84	1.69	2y-EDAZ07
EDAH08	0.399	1.84	1.44	2y-EDAH08
EDAM08	0.649	1.84	1.19	2y-EDAM08
EDAU08	0.898	1.84	0.94	2y-EDAU08
EDAZ08	1.147	1.84	0.69	2y-EDAZ08
EDAH09	1.397	1.84	0.44	2y-EDAH09
EDAM09	1.646	1.84	0.19	2y-EDAM09
EDAU09	1.895	1.84	(0.05)	2y-EDAU09
EDAZ09	2.145	1.84	(0.30)	2y-EDAZ09
EDAH10	2.394	1.84	(0.55)	2y-EDAH10
EDAM10	2.643	1.84	(0.80)	2y-EDAM10
EDAU10	2.892	1.84	(1.05)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

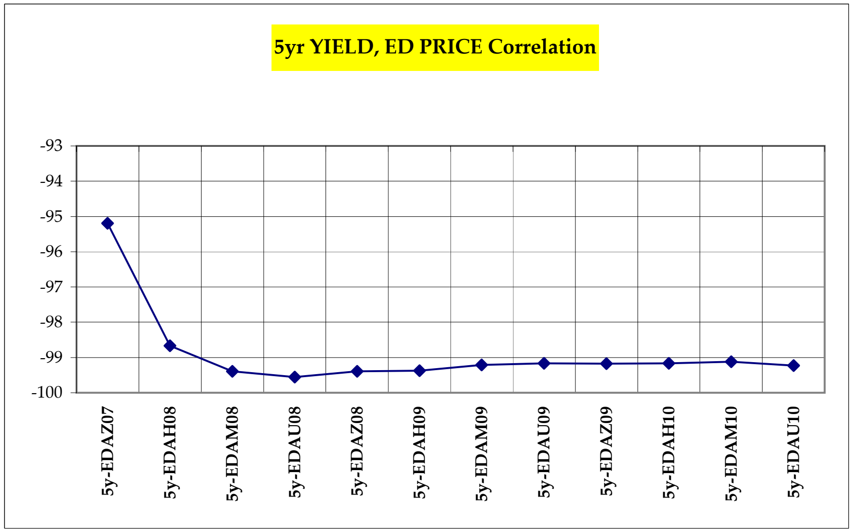
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.34	0.63	5y-EDAZ07	-95.198
EDAH08	5.08	0.36	5y-EDAH08	-98.670
EDAM08	4.92	0.21	5y-EDAM08	-99.391
EDAU08	4.84	0.12	5y-EDAU08	-99.552
EDAZ08	4.83	0.11	5y-EDAZ08	-99.391
EDAH09	4.89	0.17	5y-EDAH09	-99.378
EDAM09	4.99	0.27	5y-EDAM09	-99.208
EDAU09	5.08	0.37	5y-EDAU09	-99.167
EDAZ09	5.18	0.46	5y-EDAZ09	-99.176
EDAH10	5.25	0.53	5y-EDAH10	-99.163
EDAM10	5.32	0.61	5y-EDAM10	-99.124
EDAU10	5.39	0.68	5y-EDAU10	-99.229

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	0.150	4.40	4.25	5y-EDAZ07
EDAH08	0.399	4.40	4.00	5y-EDAH08
EDAM08	0.649	4.40	3.75	5y-EDAM08
EDAU08	0.898	4.40	3.50	5y-EDAU08
EDAZ08	1.147	4.40	3.26	5y-EDAZ08
EDAH09	1.397	4.40	3.01	5y-EDAH09
EDAM09	1.646	4.40	2.76	5y-EDAM09
EDAU09	1.895	4.40	2.51	5y-EDAU09
EDAZ09	2.145	4.40	2.26	5y-EDAZ09
EDAH10	2.394	4.40	2.01	5y-EDAH10
EDAM10	2.643	4.40	1.76	5y-EDAM10
EDAU10	2.892	4.40	1.51	5y-EDAU10

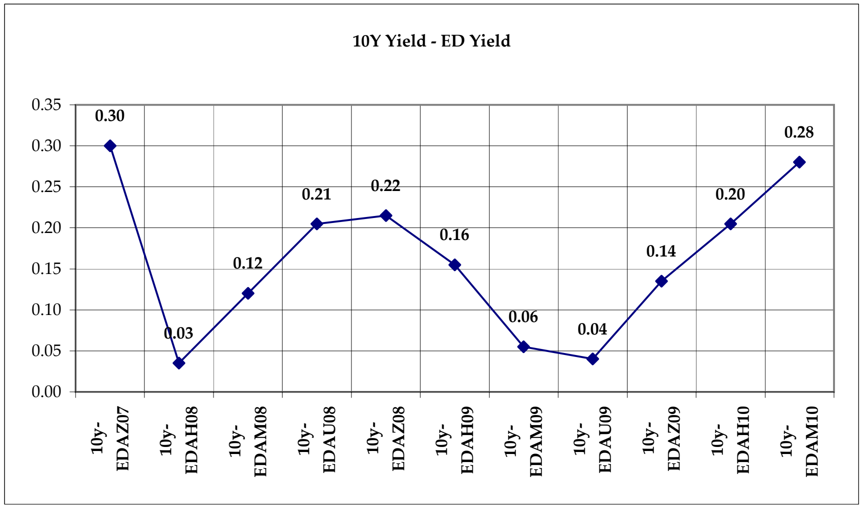
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

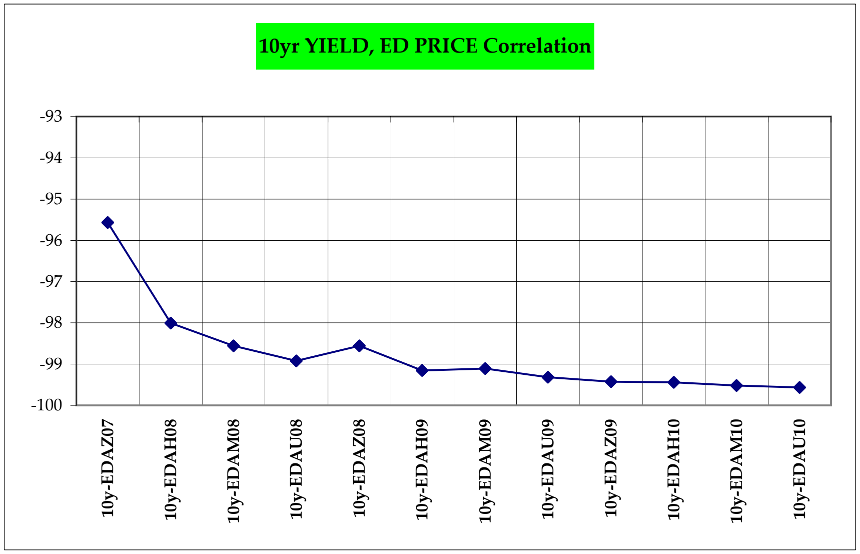
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.34	0.30	10y-EDAZ07	-95.572
EDAH08	5.08	0.03	10y-EDAH08	-98.008
EDAM08	4.92	0.12	10y-EDAM08	-98.556
EDAU08	4.84	0.21	10y-EDAU08	-98.921
EDAZ08	4.83	0.22	10y-EDAZ08	-98.556
EDAH09	4.89	0.16	10y-EDAH09	-99.157
EDAM09	4.99	0.06	10y-EDAM09	-99.111
EDAU09	5.08	0.04	10y-EDAU09	-99.314
EDAZ09	5.18	0.14	10y-EDAZ09	-99.428
EDAH10	5.25	0.20	10y-EDAH10	-99.440
EDAM10	5.32	0.28	10y-EDAM10	-99.518
EDAU10	5.39	0.35	10y-EDAU10	-99.566

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.



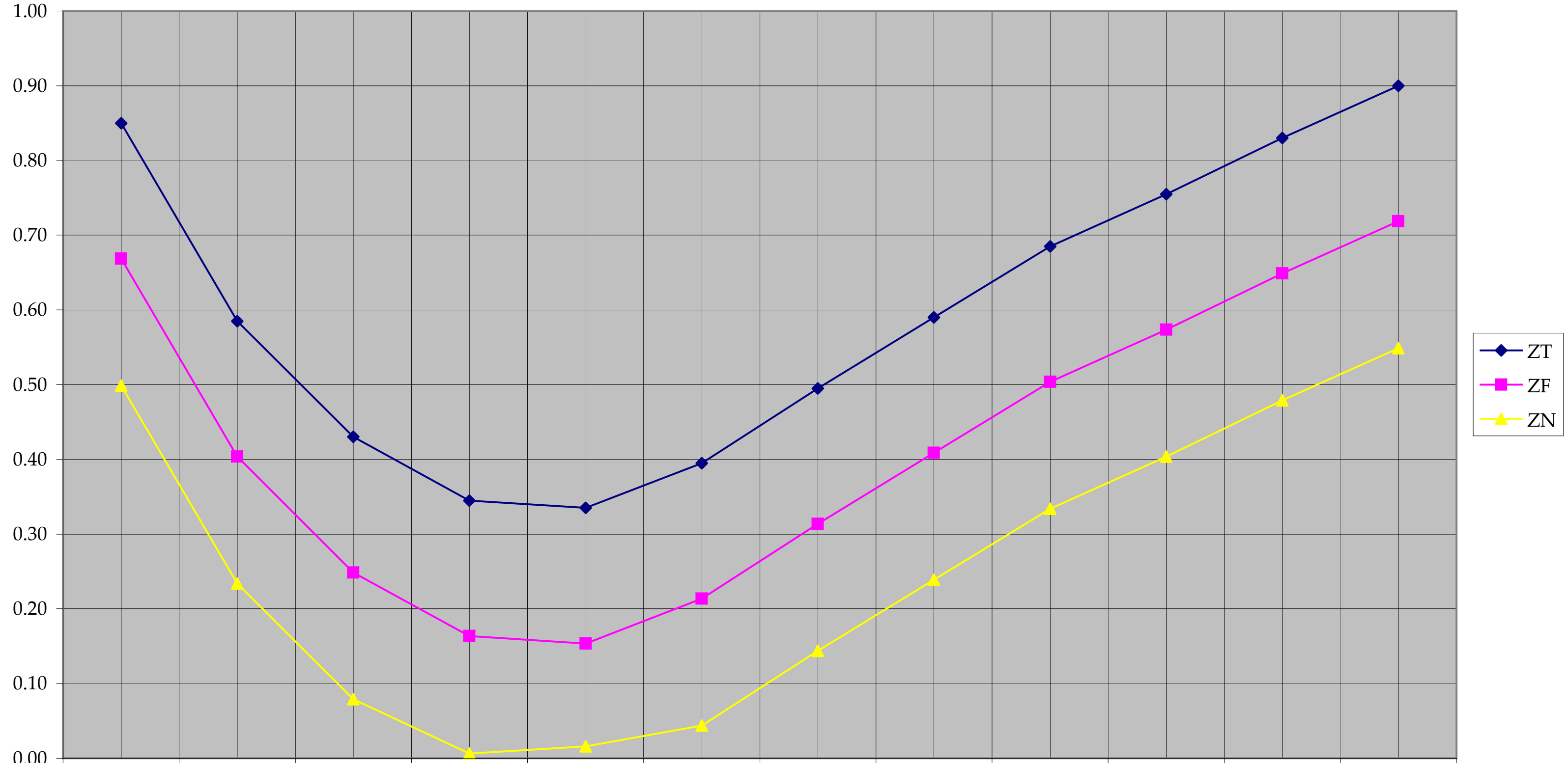
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.150	7.74	7.59	10y-EDAZ07
EDAH08	0.399	7.74	7.34	10y-EDAH08
EDAM08	0.649	7.74	7.09	10y-EDAM08
EDAU08	0.898	7.74	6.84	10y-EDAU08
EDAZ08	1.147	7.74	6.59	10y-EDAZ08
EDAH09	1.397	7.74	6.34	10y-EDAH09
EDAM09	1.646	7.74	6.09	10y-EDAM09
EDAU09	1.895	7.74	5.85	10y-EDAU09
EDAZ09	2.145	7.74	5.60	10y-EDAZ09
EDAH10	2.394	7.74	5.35	10y-EDAH10
EDAM10	2.643	7.74	5.10	10y-EDAM10
EDAU10	2.892	7.74	4.85	10y-EDAU10

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



Dirty TED Curve

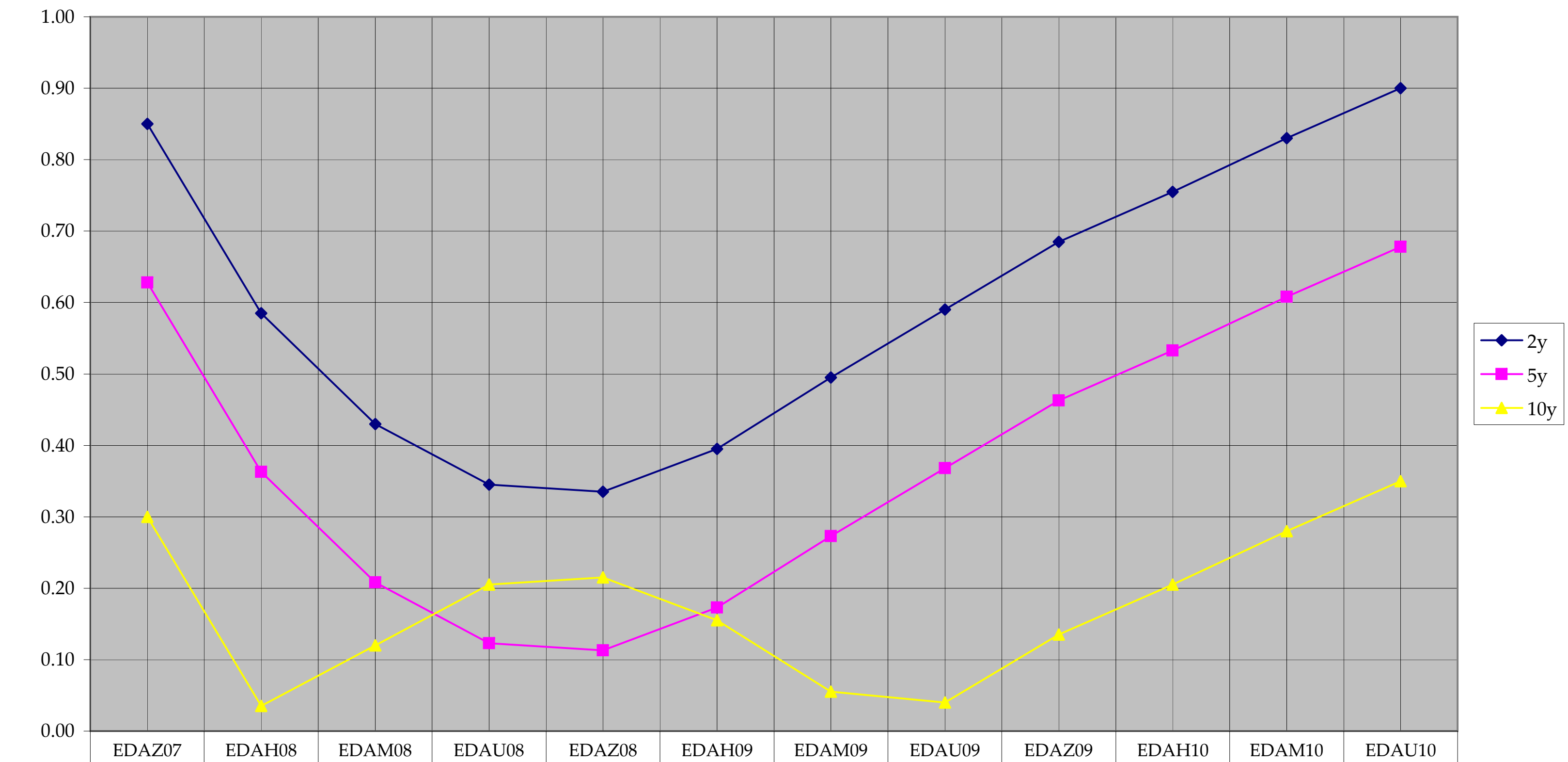
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	0.85	0.58	0.43	0.34	0.33	0.39	0.49	0.59	0.69	0.75	0.83	0.90
ZF	0.67	0.40	0.25	0.16	0.15	0.21	0.31	0.41	0.50	0.57	0.65	0.72
ZN	0.50	0.23	0.08	0.01	0.02	0.04	0.14	0.24	0.33	0.40	0.48	0.55

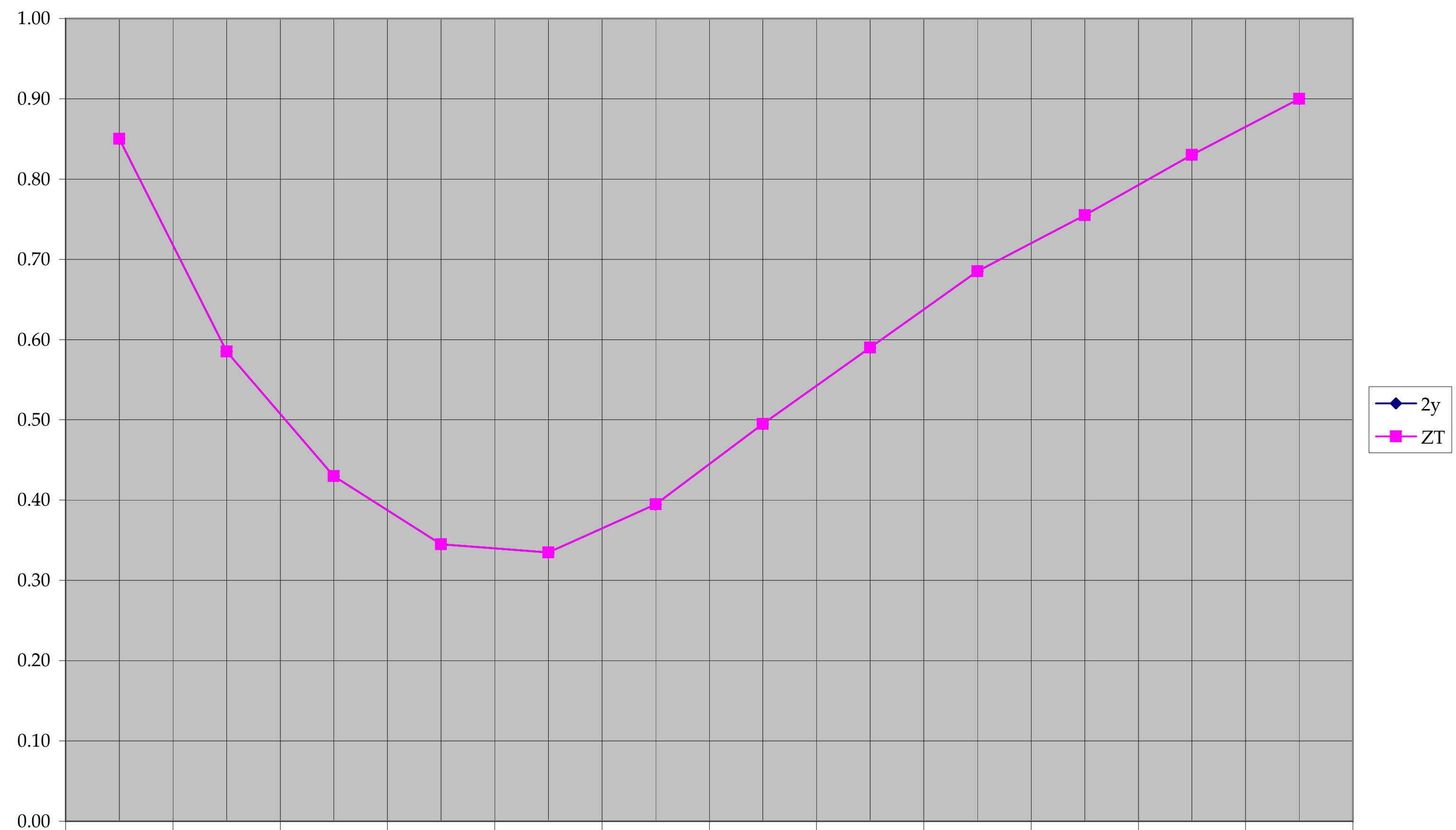
TED Curve

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.



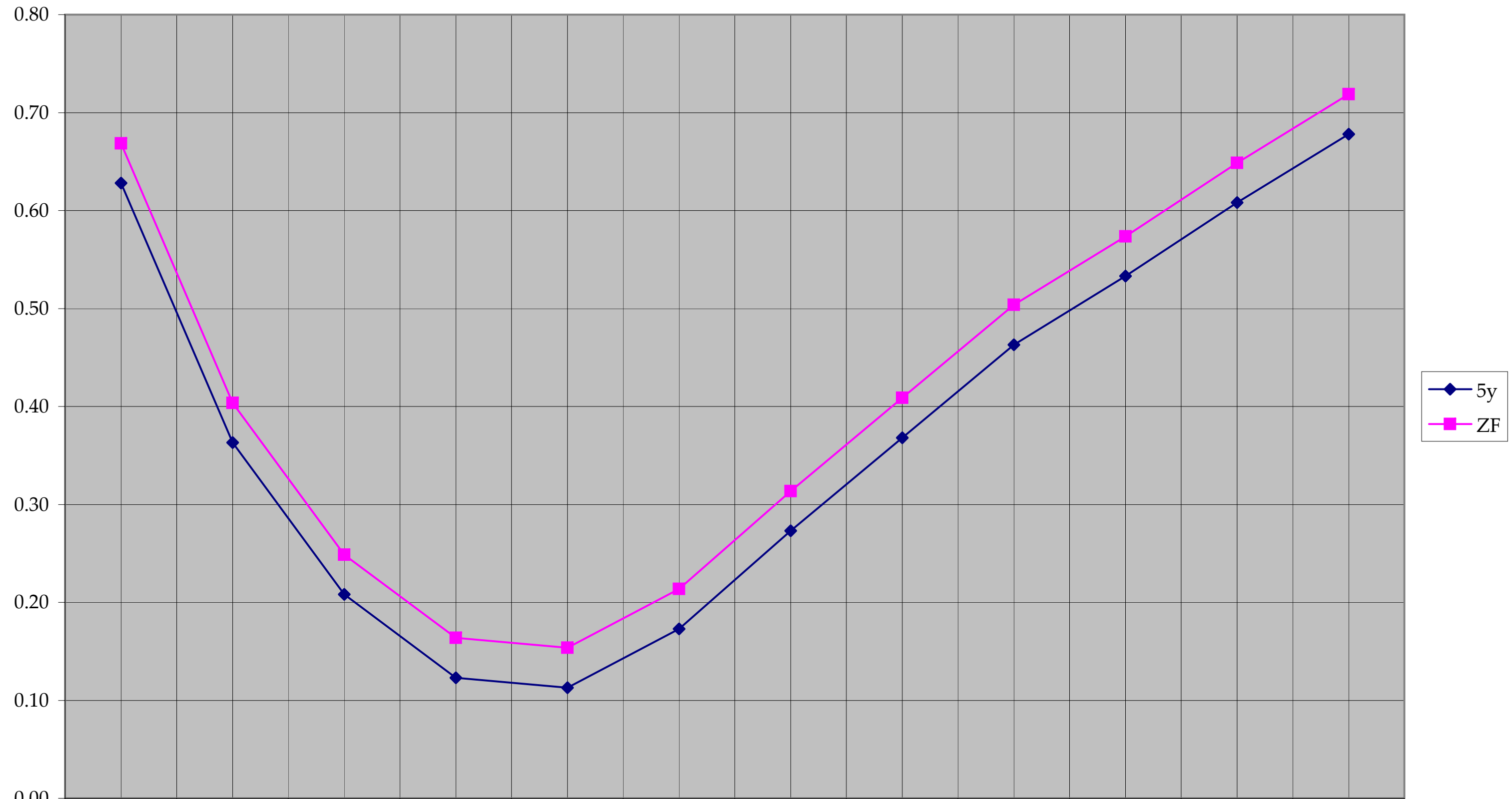
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.85	0.58	0.43	0.34	0.33	0.39	0.49	0.59	0.69	0.75	0.83	0.90
5y	0.63	0.36	0.21	0.12	0.11	0.17	0.27	0.37	0.46	0.53	0.61	0.68
10y	0.30	0.03	0.12	0.21	0.22	0.16	0.06	0.04	0.14	0.20	0.28	0.35

2y Basis TED Curve



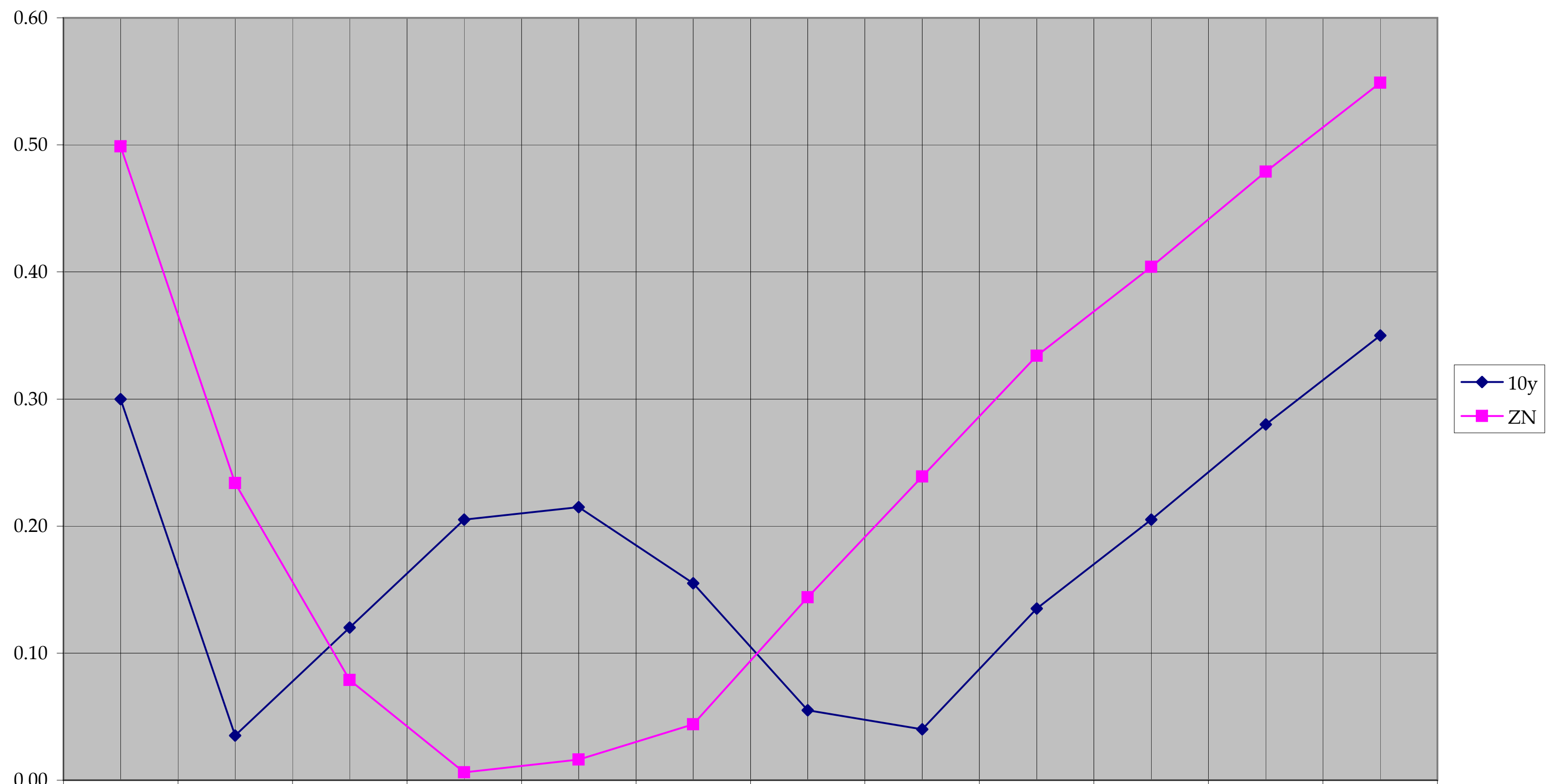
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.85	0.58	0.43	0.34	0.33	0.39	0.49	0.59	0.69	0.75	0.83	0.90
ZT	0.85	0.58	0.43	0.34	0.33	0.39	0.49	0.59	0.69	0.75	0.83	0.90

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.63	0.36	0.21	0.12	0.11	0.17	0.27	0.37	0.46	0.53	0.61	0.68
ZF	0.67	0.40	0.25	0.16	0.15	0.21	0.31	0.41	0.50	0.57	0.65	0.72

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.30	0.03	0.12	0.21	0.22	0.16	0.06	0.04	0.14	0.20	0.28	0.35
ZN	0.50	0.23	0.08	0.01	0.02	0.04	0.14	0.24	0.33	0.40	0.48	0.55

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.555	-5.125	9555.750
Q.ED.Red	4.452	-4.250	9565.625
Q.ED.Green	4.804	-3.625	9531.750
Q.ED.Blue		0.000	9509.000
Q.ED.Gold		0.000	9487.500