The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

eCBOT fixed income futures have been rolled to DEC 07.

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	103.4438	103.142	3.984	1.88
ZF	107.2813	107.090	4.116	4.00
ZN	110.0156	110.005	4.212	5.92
2y	100.038	100.0120	3.975	1.87
5y	100.000	100.0000	4.128	4.44
10y	102.578	102.1850	4.424	7.85

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU07	94.348	5.653	4	0.010	SEP	White Pack
EDAZ07	95.100	4.900	95	0.260	DEC	
EDAH08	95.515	4.485	186	0.509	MAR	
EDAM08	95.645	4.355	277	0.758	JUN	
EDAU08	95.670	4.330	368	1.008	SEP	Red Pack
EDAZ08	95.645	4.355	459	1.257	DEC	
EDAH09	95.590	4.410	550	1.506	MAR	
EDAM09	95.520	4.480	641	1.756	JUN	
EDAU09	95.460	4.540	732	2.005	SEP	Green Pack
EDAZ09	95.385	4.615	823	2.254	DEC	
EDAH10	95.345	4.655	914	2.503	MAR	
EDAM10	95.310	4.690	1005	2.753	JUN	
EDAU10	95.270	4.730	1096	3.002	SEP	Blue Pack
EDAZ10	95.210	4.790	1187	3.251	DEC	
EDAH11	95.160	4.840	1278	3.501	MAR	
EDAM11	95.100	4.900	1369	3.750	JUN	
EDAU11	95.060	4.940	1467	4.019	SEP	Gold Pack
EDAZ11	94.995	5.005	1558	4.268	DEC	
EDAH12	94.950	5.050	1649	4.517	MAR	
EDAM12	94.890	5.110	1740	4.766	JUN	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.976	3.063	9515.250	Pack Prices
Q.ED.Red	4.504	-3.875	9560.625	
Q.ED.Green	4.744	-3.500	9537.500	
Q.ED.Blue		0.000	9518.875	
Q.ED.Gold		0.000	9496.750	
Q.ED.Purple		0.000	9496.750	

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.

Jim Goulding, jgoulding@ghco.com

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

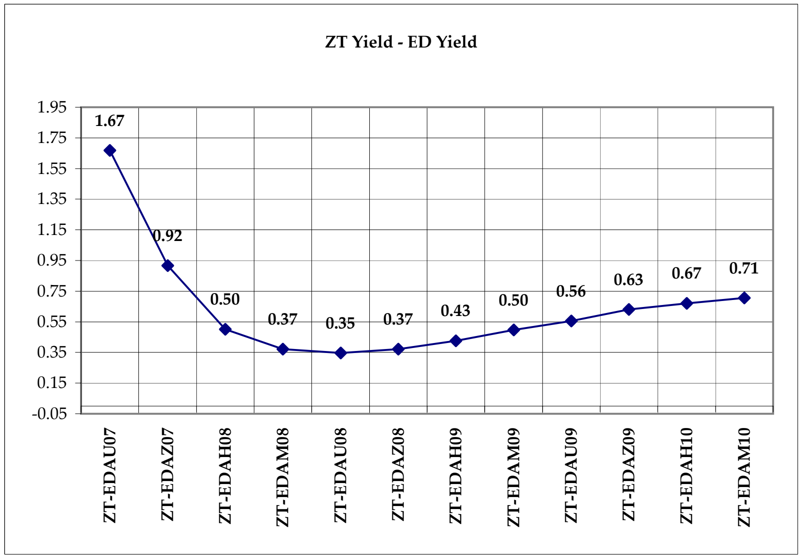
Eurodollar Color Codes for Individual Year Strips:

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

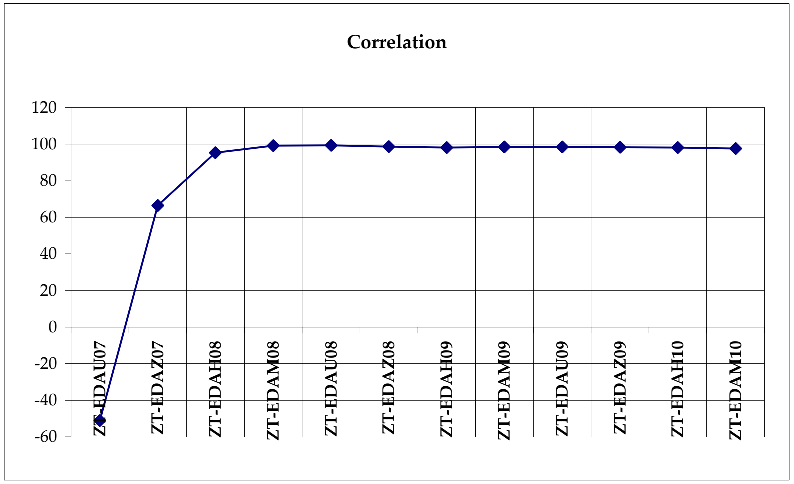
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	9.096	1.67	ZT-EDAU07	-51.099
EDAZ07	8.344	0.92	ZT-EDAZ07	66.507
EDAH08	7.929	0.50	ZT-EDAH08	95.282
EDAM08	7.799	0.37	ZT-EDAM08	99.244
EDAU08	7.774	0.35	ZT-EDAU08	99.396
EDAZ08	7.799	0.37	ZT-EDAZ08	98.606
EDAH09	7.854	0.43	ZT-EDAH09	98.157
EDAM09	7.924	0.50	ZT-EDAM09	98.426
EDAU09	7.984	0.56	ZT-EDAU09	98.490
EDAZ09	8.059	0.63	ZT-EDAZ09	98.354
EDAH10	8.099	0.67	ZT-EDAH10	98.120
EDAM10	8.134	0.71	ZT-EDAM10	97.619

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



	GE Duration as Fraction of year	ZT Duration	Spread Duration	
EDAU07	0.010	1.88	1.87	ZT-EDAU07
EDAZ07	0.260	1.88	1.62	ZT-EDAZ07
EDAH08	0.509	1.88	1.37	ZT-EDAH08
EDAM08	0.758	1.88	1.12	ZT-EDAM08
EDAU08	1.008	1.88	0.88	ZT-EDAU08
EDAZ08	1.257	1.88	0.63	ZT-EDAZ08
EDAH09	1.506	1.88	0.38	ZT-EDAH09
EDAM09	1.756	1.88	0.13	ZT-EDAM09
EDAU09	2.005	1.88	(0.12)	ZT-EDAU09
EDAZ09	2.254	1.88	(0.37)	ZT-EDAZ09
EDAH10	2.503	1.88	(0.62)	ZT-EDAH10
EDAM10	2.753	1.88	(0.87)	ZT-EDAM10

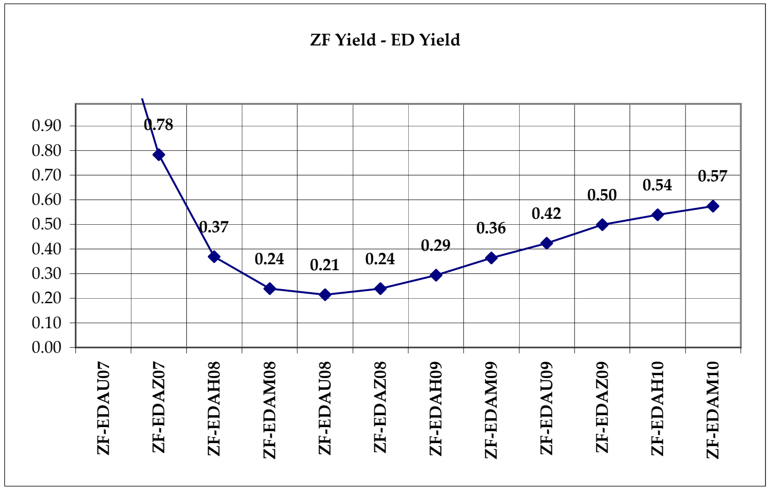
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

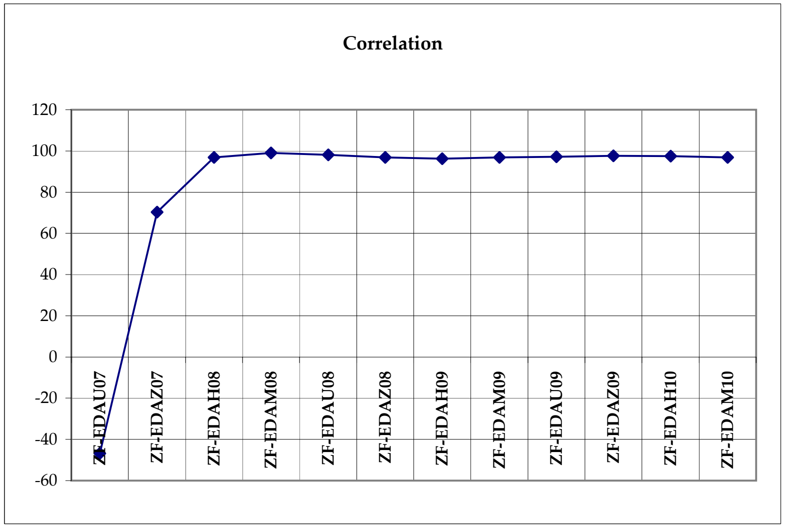
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	12.93	1.54	ZF-EDAU07	-46.846
EDAZ07	12.18	0.78	ZF-EDAZ07	70.249
EDAH08	11.77	0.37	ZF-EDAH08	96.907
EDAM08	11.64	0.24	ZF-EDAM08	98.960
EDAU08	11.61	0.21	ZF-EDAU08	98.094
EDAZ08	11.64	0.24	ZF-EDAZ08	96.895
EDAH09	11.69	0.29	ZF-EDAH09	96.299
EDAM09	11.76	0.36	ZF-EDAM09	96.810
EDAU09	11.82	0.42	ZF-EDAU09	97.191
EDAZ09	11.90	0.50	ZF-EDAZ09	97.561
EDAH10	11.94	0.54	ZF-EDAH10	97.503
EDAM10	11.97	0.57	ZF-EDAM10	96.811

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	
EDAU07	0.010	4.00	3.99	ZF-EDAU07
EDAZ07	0.260	4.00	3.74	ZF-EDAZ07
EDAH08	0.509	4.00	3.49	ZF-EDAH08
EDAM08	0.758	4.00	3.24	ZF-EDAM08
EDAU08	1.008	4.00	2.99	ZF-EDAU08
EDAZ08	1.257	4.00	2.74	ZF-EDAZ08
EDAH09	1.506	4.00	2.49	ZF-EDAH09
EDAM09	1.756	4.00	2.24	ZF-EDAM09
EDAU09	2.005	4.00	1.99	ZF-EDAU09
EDAZ09	2.254	4.00	1.74	ZF-EDAZ09
EDAH10	2.503	4.00	1.49	ZF-EDAH10
EDAM10	2.753	4.00	1.25	ZF-EDAM10

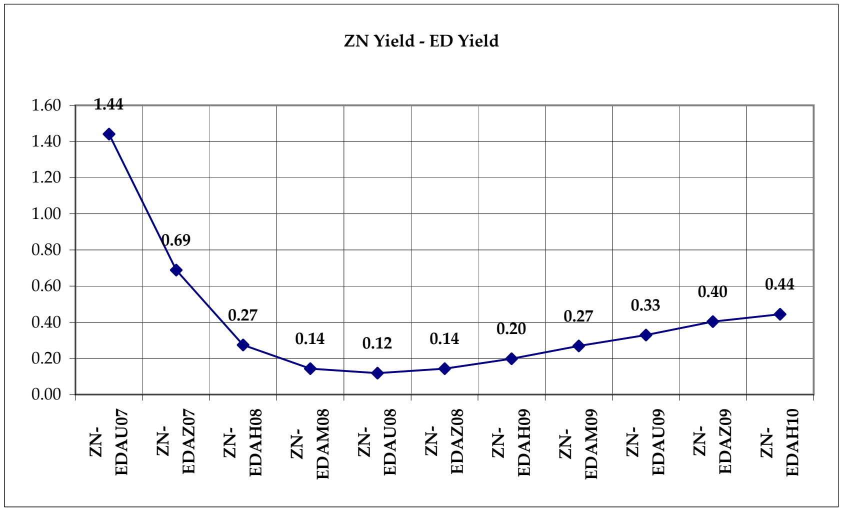
The farther away from 0 the spread duration is
the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

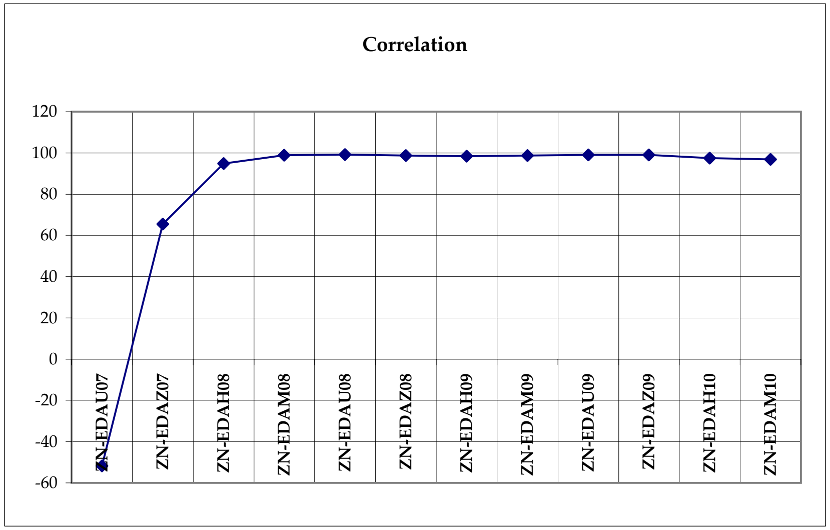
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	15.67	1.44	ZN-EDAU07	-51.82
EDAZ07	14.92	0.69	ZN-EDAZ07	65.52
EDAH08	14.50	0.27	ZN-EDAH08	94.90
EDAM08	14.37	0.14	ZN-EDAM08	98.81
EDAU08	14.35	0.12	ZN-EDAU08	99.21
EDAZ08	14.37	0.14	ZN-EDAZ08	98.73
EDAH09	14.43	0.20	ZN-EDAH09	98.39
EDAM09	14.50	0.27	ZN-EDAM09	98.74
EDAU09	14.56	0.33	ZN-EDAU09	99.00
EDAZ09	14.63	0.40	ZN-EDAZ09	99.10
EDAH10	14.67	0.44	ZN-EDAH10	97.50
EDAM10	14.71	0.48	ZN-EDAM10	96.81

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	
EDAU07	0.010	5.92	5.91	ZN-EDAU07
EDAZ07	0.260	5.92	5.66	ZN-EDAZ07
EDAH08	0.509	5.92	5.41	ZN-EDAH08
EDAM08	0.758	5.92	5.16	ZN-EDAM08
EDAU08	1.008	5.92	4.91	ZN-EDAU08
EDAZ08	1.257	5.92	4.66	ZN-EDAZ08
EDAH09	1.506	5.92	4.42	ZN-EDAH09
EDAM09	1.756	5.92	4.17	ZN-EDAM09
EDAU09	2.005	5.92	3.92	ZN-EDAU09
EDAZ09	2.254	5.92	3.67	ZN-EDAZ09
EDAH10	2.503	5.92	3.42	ZN-EDAH10
EDAM10	2.753	5.92	3.17	ZN-EDAM10

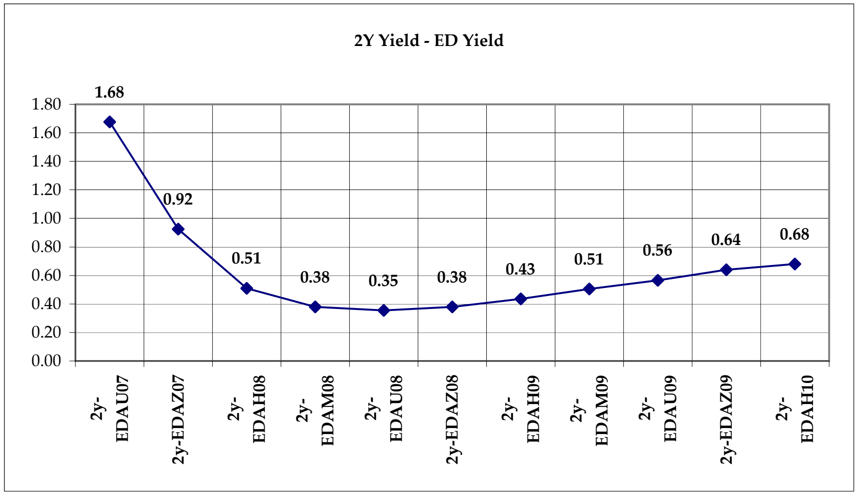
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.69	1.68	2y-EDAU07	53.076
EDAZ07	4.94	0.92	2y-EDAZ07	-65.778
EDAH08	4.52	0.51	2y-EDAH08	-94.615
EDAM08	4.39	0.38	2y-EDAM08	-98.152
EDAU08	4.37	0.35	2y-EDAU08	-98.246
EDAZ08	4.39	0.38	2y-EDAZ08	-98.152
EDAH09	4.45	0.43	2y-EDAH09	-97.334
EDAM09	4.52	0.51	2y-EDAM09	-97.782
EDAU09	4.58	0.56	2y-EDAU09	-97.939
EDAZ09	4.65	0.64	2y-EDAZ09	-98.098
EDAH10	4.69	0.68	2y-EDAH10	-97.979
EDAM10	4.73	0.71	2y-EDAM10	-97.599

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.



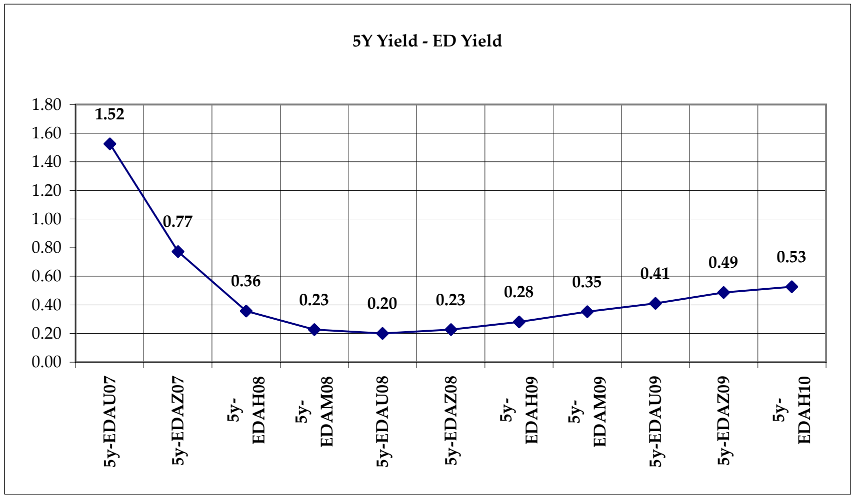
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU07	0.010	1.87	1.86	2y-EDAU07
EDAZ07	0.260	1.87	1.61	2y-EDAZ07
EDAH08	0.509	1.87	1.36	2y-EDAH08
EDAM08	0.758	1.87	1.11	2y-EDAM08
EDAU08	1.008	1.87	0.86	2y-EDAU08
EDAZ08	1.257	1.87	0.61	2y-EDAZ08
EDAH09	1.506	1.87	0.36	2y-EDAH09
EDAM09	1.756	1.87	0.11	2y-EDAM09
EDAU09	2.005	1.87	(0.14)	2y-EDAU09
EDAZ09	2.254	1.87	(0.39)	2y-EDAZ09
EDAH10	2.503	1.87	(0.64)	2y-EDAH10
EDAM10	2.753	1.87	(0.89)	2y-EDAM10

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

TERM TED: 5y vs Eurodollar Contracts

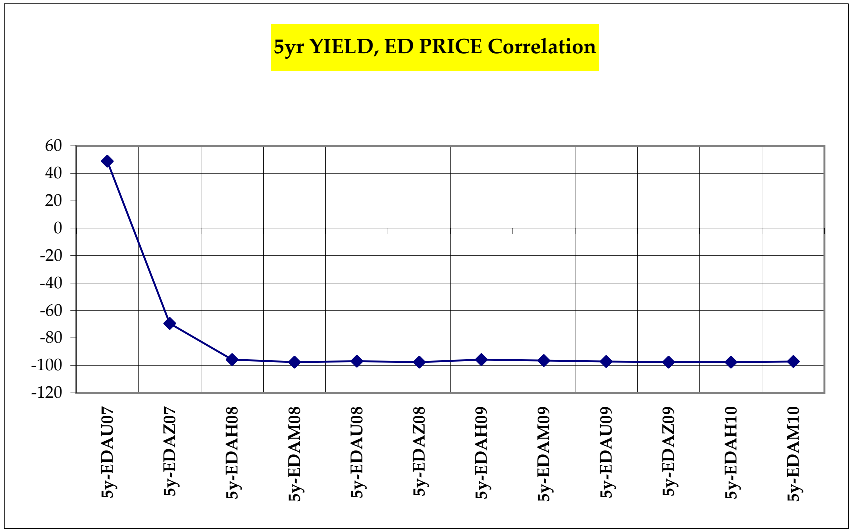
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.65	1.52	5y-EDAU07	48.719
EDAZ07	4.90	0.77	5y-EDAZ07	-69.308
EDAH08	4.49	0.36	5y-EDAH08	-95.653
EDAM08	4.36	0.23	5y-EDAM08	-97.615
EDAU08	4.33	0.20	5y-EDAU08	-97.002
EDAZ08	4.36	0.23	5y-EDAZ08	-97.615
EDAH09	4.41	0.28	5y-EDAH09	-95.708
EDAM09	4.48	0.35	5y-EDAM09	-96.446
EDAU09	4.54	0.41	5y-EDAU09	-97.083
EDAZ09	4.61	0.49	5y-EDAZ09	-97.631
EDAH10	4.66	0.53	5y-EDAH10	-97.670
EDAM10	4.69	0.56	5y-EDAM10	-97.233

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	
EDAU07	0.010	4.44	4.43	5y-EDAU07
EDAZ07	0.260	4.44	4.18	5y-EDAZ07
EDAH08	0.509	4.44	3.93	5y-EDAH08
EDAM08	0.758	4.44	3.68	5y-EDAM08
EDAU08	1.008	4.44	3.43	5y-EDAU08
EDAZ08	1.257	4.44	3.18	5y-EDAZ08
EDAH09	1.506	4.44	2.93	5y-EDAH09
EDAM09	1.756	4.44	2.68	5y-EDAM09
EDAU09	2.005	4.44	2.43	5y-EDAU09
EDAZ09	2.254	4.44	2.18	5y-EDAZ09
EDAH10	2.503	4.44	1.94	5y-EDAH10
EDAM10	2.753	4.44	1.69	5y-EDAM10

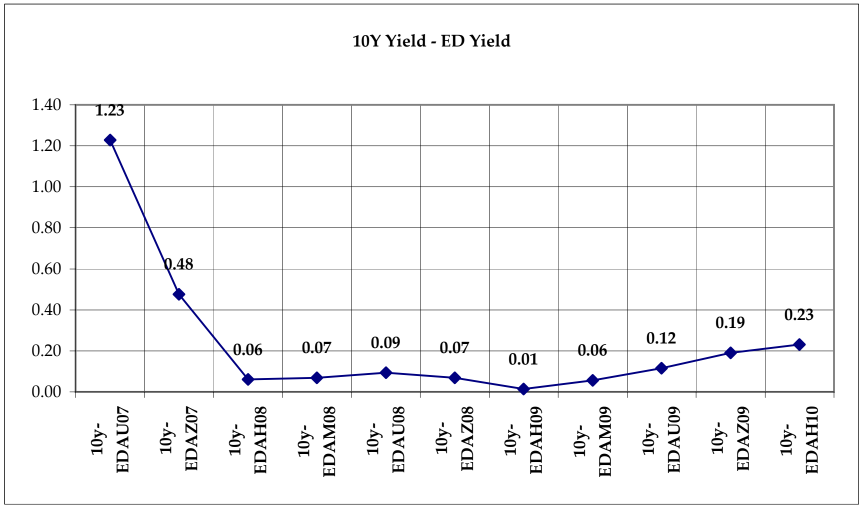
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

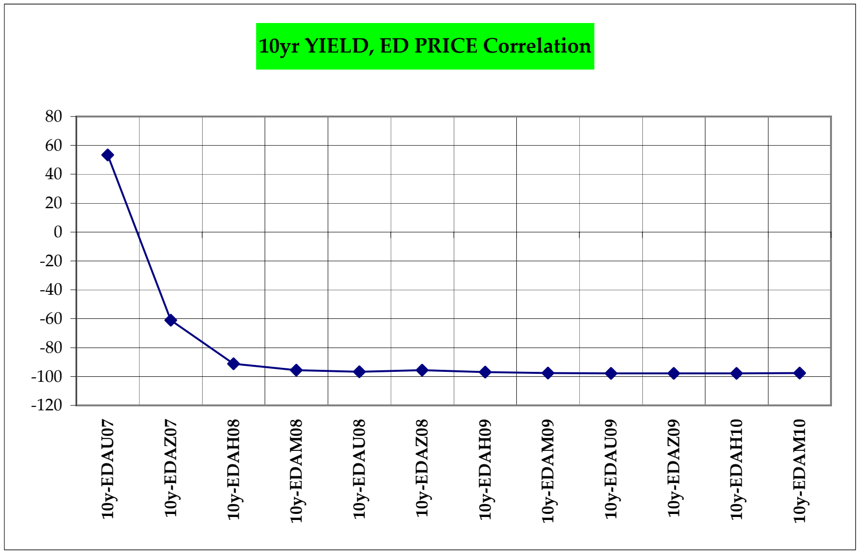
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	5.65	1.23	10y-EDAU07	53.286
EDAZ07	4.90	0.48	10y-EDAZ07	-61.064
EDAH08	4.49	0.06	10y-EDAH08	-91.258
EDAM08	4.36	0.07	10y-EDAM08	-95.632
EDAU08	4.33	0.09	10y-EDAU08	-96.712
EDAZ08	4.36	0.07	10y-EDAZ08	-95.632
EDAH09	4.41	0.01	10y-EDAH09	-96.990
EDAM09	4.48	0.06	10y-EDAM09	-97.518
EDAU09	4.54	0.12	10y-EDAU09	-97.844
EDAZ09	4.61	0.19	10y-EDAZ09	-97.907
EDAH10	4.66	0.23	10y-EDAH10	-97.867
EDAM10	4.69	0.27	10y-EDAM10	-97.542

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.



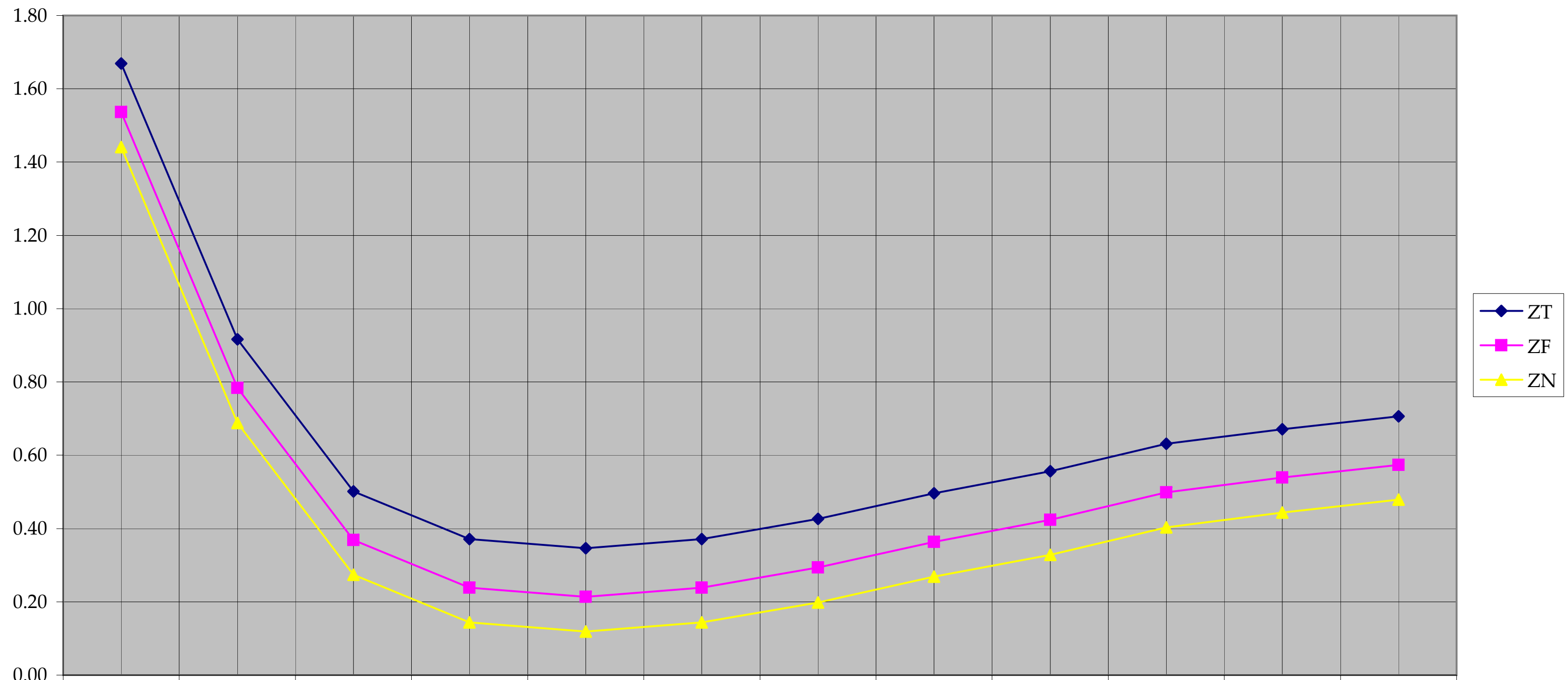
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU07	0.010	7.85	7.84	10y-EDAU07
EDAZ07	0.260	7.85	7.59	10y-EDAZ07
EDAH08	0.509	7.85	7.34	10y-EDAH08
EDAM08	0.758	7.85	7.09	10y-EDAM08
EDAU08	1.008	7.85	6.84	10y-EDAU08
EDAZ08	1.257	7.85	6.59	10y-EDAZ08
EDAH09	1.506	7.85	6.34	10y-EDAH09
EDAM09	1.756	7.85	6.09	10y-EDAM09
EDAU09	2.005	7.85	5.84	10y-EDAU09
EDAZ09	2.254	7.85	5.59	10y-EDAZ09
EDAH10	2.503	7.85	5.35	10y-EDAH10
EDAM10	2.753	7.85	5.10	10y-EDAM10

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



Dirty TED Curve

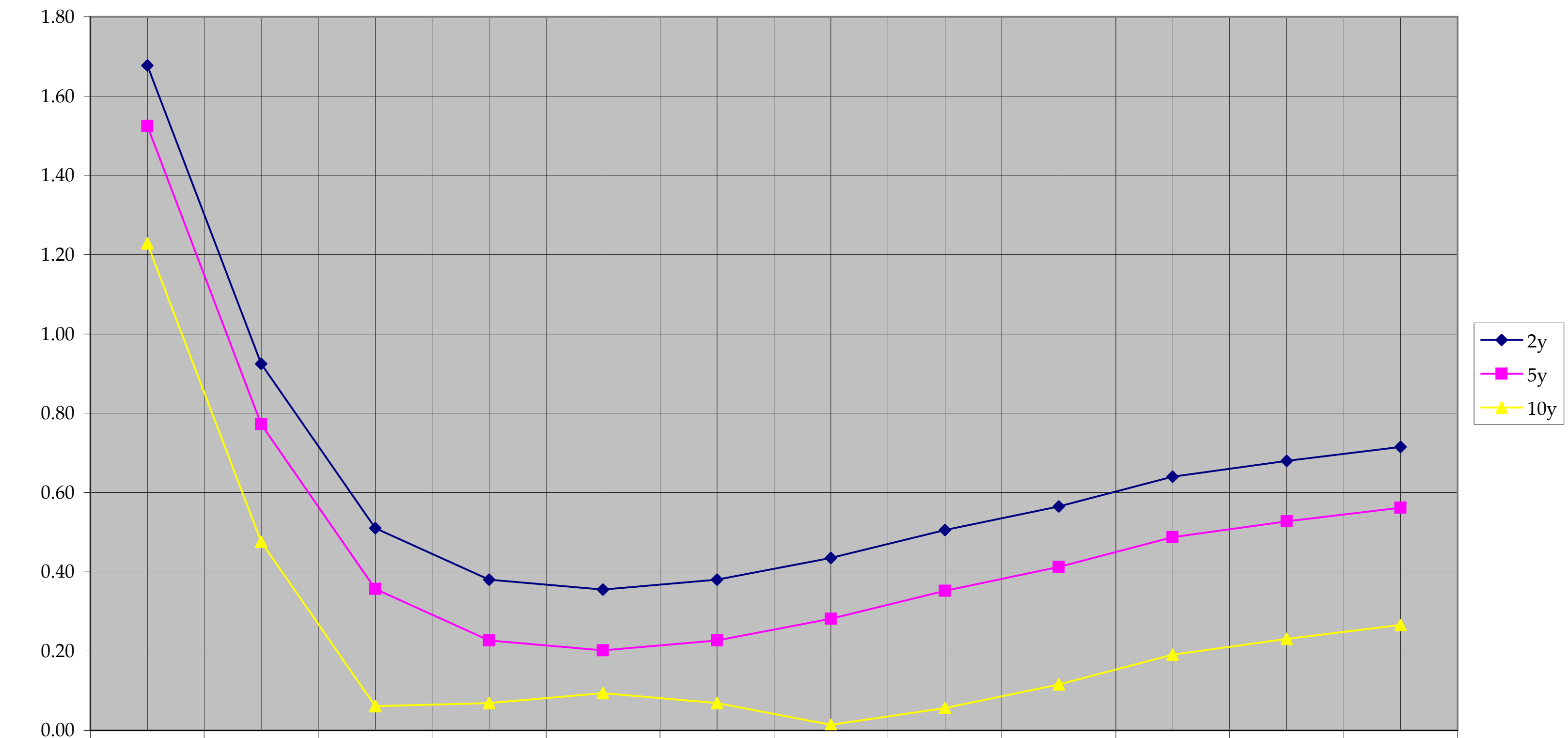
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
ZT	1.67	0.92	0.50	0.37	0.35	0.37	0.43	0.50	0.56	0.63	0.67	0.71
ZF	1.54	0.78	0.37	0.24	0.21	0.24	0.29	0.36	0.42	0.50	0.54	0.57
ZN	1.44	0.69	0.27	0.14	0.12	0.14	0.20	0.27	0.33	0.40	0.44	0.48

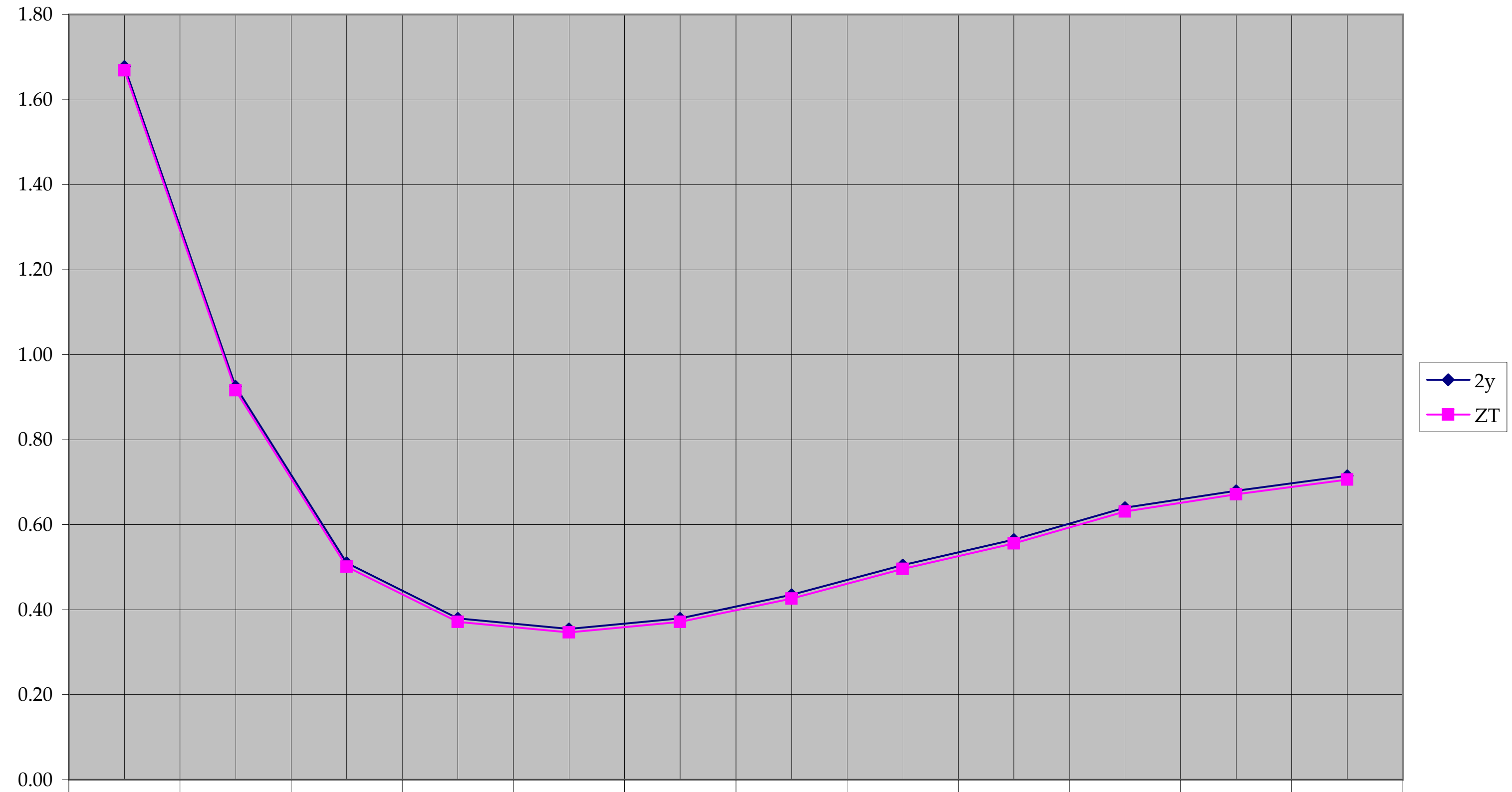
TED Curve

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.



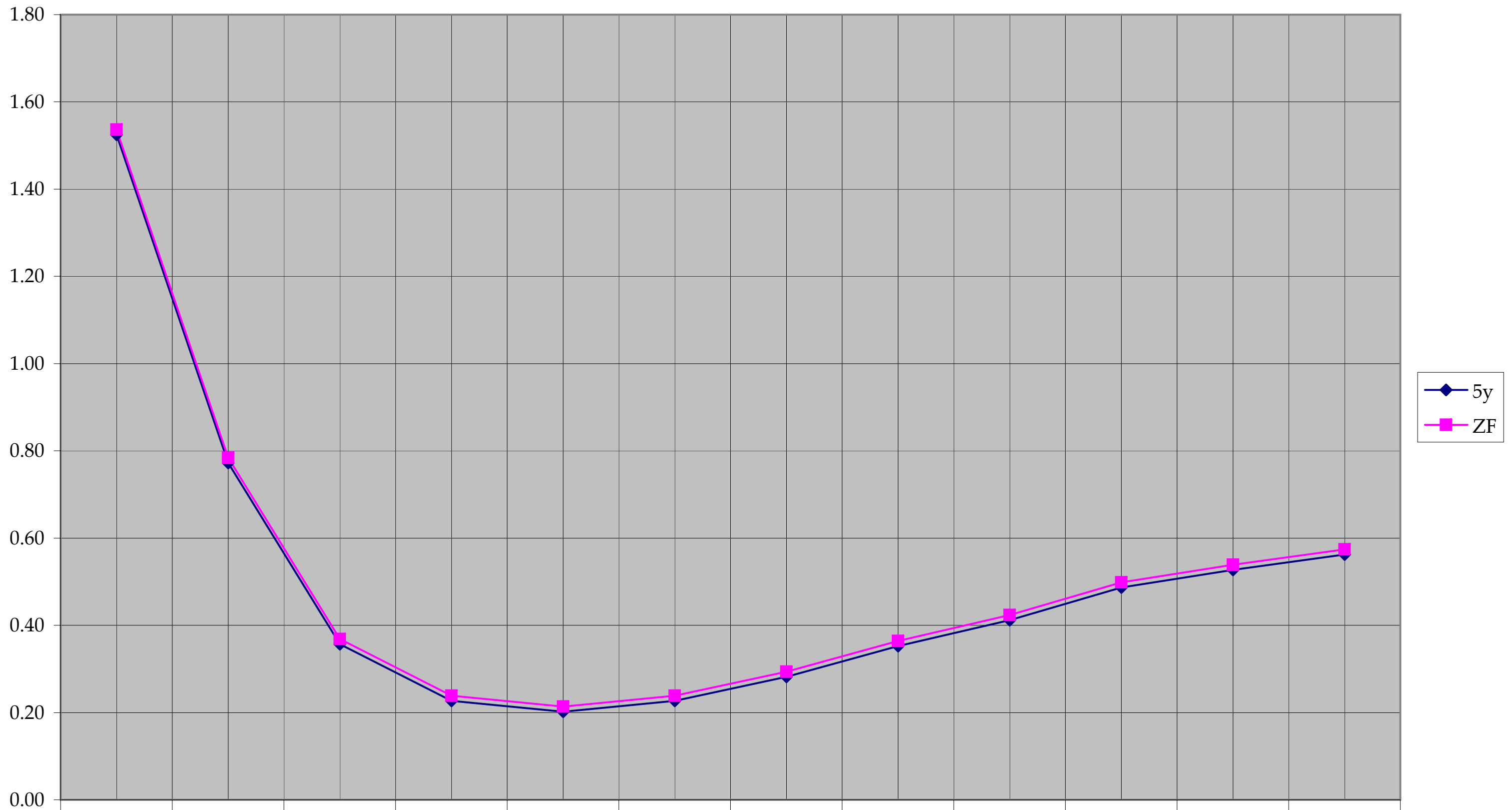
	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	1.68	0.92	0.51	0.38	0.35	0.38	0.43	0.51	0.56	0.64	0.68	0.71
5y	1.52	0.77	0.36	0.23	0.20	0.23	0.28	0.35	0.41	0.49	0.53	0.56
10y	1.23	0.48	0.06	0.07	0.09	0.07	0.01	0.06	0.12	0.19	0.23	0.27

2y Basis TED Curve



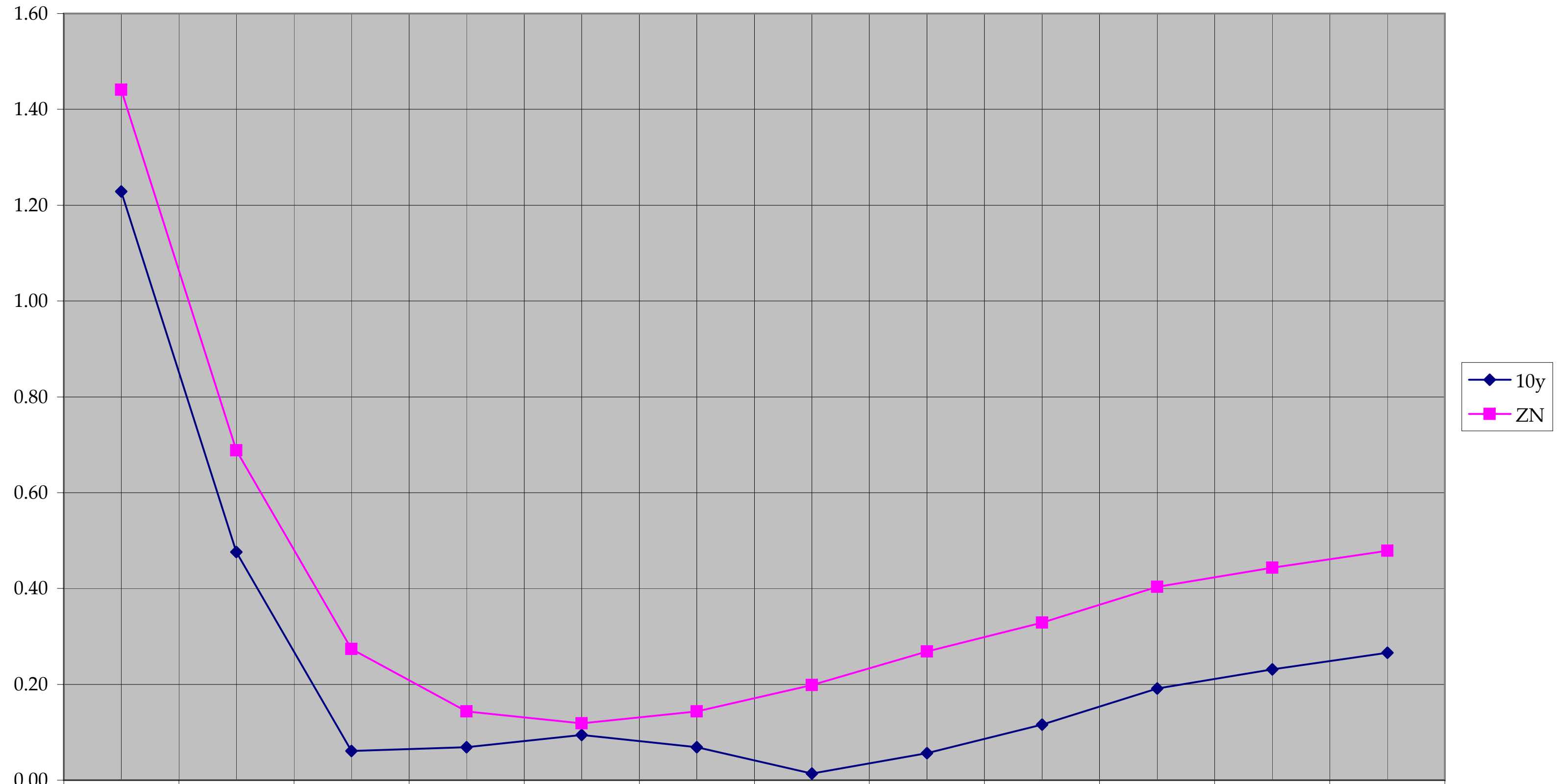
	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	1.68	0.92	0.51	0.38	0.35	0.38	0.43	0.51	0.56	0.64	0.68	0.71
ZT	1.67	0.92	0.50	0.37	0.35	0.37	0.43	0.50	0.56	0.63	0.67	0.71

5y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
5y	1.52	0.77	0.36	0.23	0.20	0.23	0.28	0.35	0.41	0.49	0.53	0.56
ZF	1.54	0.78	0.37	0.24	0.21	0.24	0.29	0.36	0.42	0.50	0.54	0.57

10y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
10y	1.23	0.48	0.06	0.07	0.09	0.07	0.01	0.06	0.12	0.19	0.23	0.27
ZN	1.44	0.69	0.27	0.14	0.12	0.14	0.20	0.27	0.33	0.40	0.44	0.48

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.976	3.063	9515.250
Q.ED.Red	4.504	-3.875	9560.625
Q.ED.Green	4.744	-3.500	9537.500
Q.ED.Blue		0.000	9518.875
Q.ED.Gold		0.000	9496.750
Q.ED.Purple		0.000	9496.750