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

Quotes

	F.I. Futures and Cash			
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	102.9531	102.305	4.206	1.76
ZF	106.3750	106.120	4.331	3.83
ZN	108.5938	108.190	4.510	5.66
2y	100.772	100.2470	4.208	1.85
5y	101.156	101.0500	4.361	4.38
10y	100.781	100.2500	4.647	7.90

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU07	94.755	5.245	32	0.087	SEP	White Pack
EDAZ07	95.175	4.825	123	0.336	DEC	
EDAH08	95.460	4.540	214	0.586	MAR	
EDAM08	95.500	4.500	305	0.835	JUN	
EDAU08	95.425	4.575	396	1.084	SEP	Red Pack
EDAZ08	95.330	4.670	487	1.334	DEC	
EDAH09	95.250	4.750	578	1.583	MAR	
EDAM09	95.175	4.825	669	1.832	JUN	
EDAU09	95.090	4.910	760	2.082	SEP	Green Pack
EDAZ09	94.995	5.005	851	2.331	DEC	
EDAH10	94.925	5.075	942	2.580	MAR	
EDAM10	94.860	5.140	1033	2.829	JUN	
EDAU10	94.765	5.235	1124	3.079	SEP	Blue Pack
EDAZ10	94.700	5.300	1215	3.328	DEC	
EDAH11	94.650	5.350	1306	3.577	MAR	
EDAM11	94.590	5.410	1397	3.827	JUN	
EDAU11	94.580	5.420	1495	4.095	SEP	Gold Pack
EDAZ11	94.530	5.470	1586	4.345	DEC	
EDAH12	94.490	5.510	1677	4.594	MAR	
EDAM12	94.445	5.555	1768	4.843	JUN	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.903	5.812	9522.250	Pack Prices
Q.ED.Red	4.827	5.750	9529.500	
Q.ED.Green	5.167	2.375	9496.750	
Q.ED.Blue		0.000	9469.625	
Q.ED.Gold		0.000	9449.250	
Q.ED.Purple		0.000	9449.250	

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

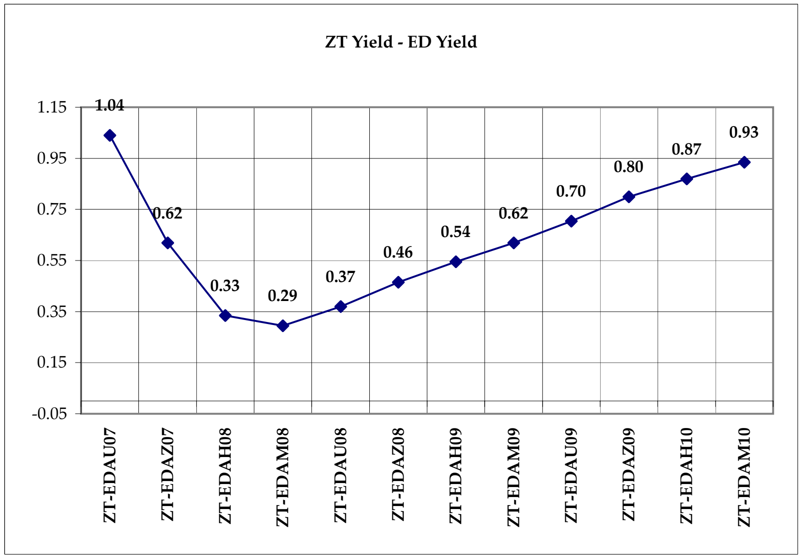
Eurodollar Color Codes for Individual Year Strips:

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

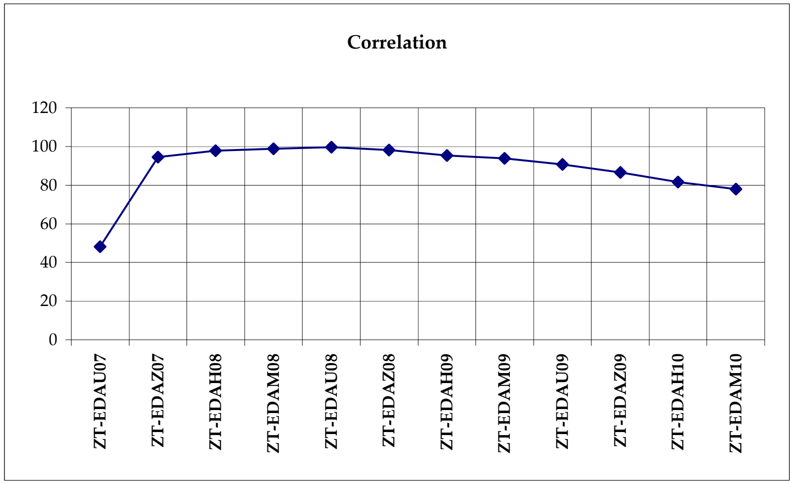
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	8.198	1.04	ZT-EDAU07	48.090
EDAZ07	7.778	0.62	ZT-EDAZ07	94.495
EDAH08	7.493	0.33	ZT-EDAH08	97.774
EDAM08	7.453	0.29	ZT-EDAM08	98.752
EDAU08	7.528	0.37	ZT-EDAU08	99.692
EDAZ08	7.623	0.46	ZT-EDAZ08	98.169
EDAH09	7.703	0.54	ZT-EDAH09	95.377
EDAM09	7.778	0.62	ZT-EDAM09	93.878
EDAU09	7.863	0.70	ZT-EDAU09	90.628
EDAZ09	7.958	0.80	ZT-EDAZ09	86.506
EDAH10	8.028	0.87	ZT-EDAH10	81.598
EDAM10	8.093	0.93	ZT-EDAM10	77.978

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	0.087	1.76	1.68	ZT-EDAU07
EDAZ07	0.336	1.76	1.43	ZT-EDAZ07
EDAH08	0.586	1.76	1.18	ZT-EDAH08
EDAM08	0.835	1.76	0.93	ZT-EDAM08
EDAU08	1.084	1.76	0.68	ZT-EDAU08
EDAZ08	1.334	1.76	0.43	ZT-EDAZ08
EDAH09	1.583	1.76	0.18	ZT-EDAH09
EDAM09	1.832	1.76	(0.07)	ZT-EDAM09
EDAU09	2.082	1.76	(0.32)	ZT-EDAU09
EDAZ09	2.331	1.76	(0.57)	ZT-EDAZ09
EDAH10	2.580	1.76	(0.82)	ZT-EDAH10
EDAM10	2.829	1.76	(1.07)	ZT-EDAM10

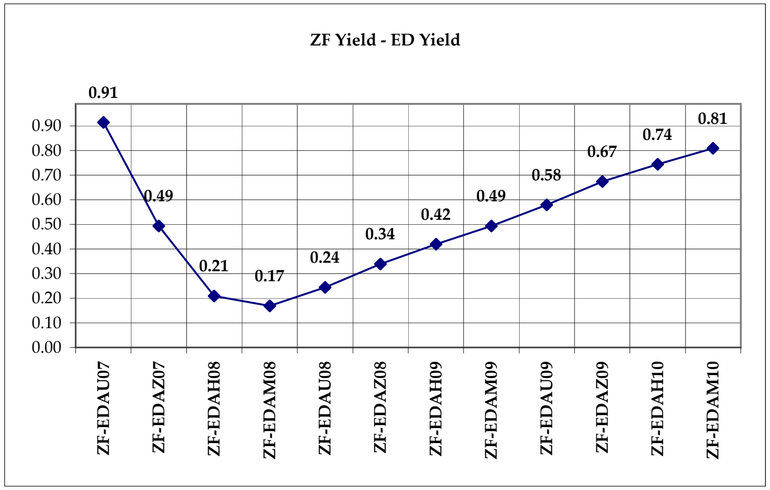
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

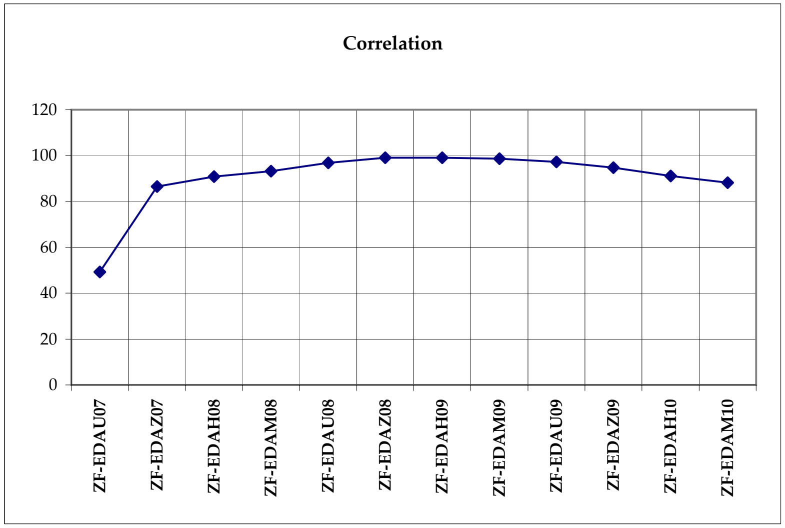
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	11.62	0.91	ZF-EDAU07	49.235
EDAZ07	11.20	0.49	ZF-EDAZ07	86.523
EDAH08	10.92	0.21	ZF-EDAH08	90.772
EDAM08	10.88	0.17	ZF-EDAM08	93.271
EDAU08	10.95	0.24	ZF-EDAU08	96.822
EDAZ08	11.05	0.34	ZF-EDAZ08	99.044
EDAH09	11.13	0.42	ZF-EDAH09	99.010
EDAM09	11.20	0.49	ZF-EDAM09	98.712
EDAU09	11.29	0.58	ZF-EDAU09	97.298
EDAZ09	11.38	0.67	ZF-EDAZ09	94.685
EDAH10	11.45	0.74	ZF-EDAH10	91.080
EDAM10	11.52	0.81	ZF-EDAM10	88.213

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	0.087	3.83	3.74	ZF-EDAU07
EDAZ07	0.336	3.83	3.49	ZF-EDAZ07
EDAH08	0.586	3.83	3.24	ZF-EDAH08
EDAM08	0.835	3.83	2.99	ZF-EDAM08
EDAU08	1.084	3.83	2.74	ZF-EDAU08
EDAZ08	1.334	3.83	2.50	ZF-EDAZ08
EDAH09	1.583	3.83	2.25	ZF-EDAH09
EDAM09	1.832	3.83	2.00	ZF-EDAM09
EDAU09	2.082	3.83	1.75	ZF-EDAU09
EDAZ09	2.331	3.83	1.50	ZF-EDAZ09
EDAH10	2.580	3.83	1.25	ZF-EDAH10
EDAM10	2.829	3.83	1.00	ZF-EDAM10

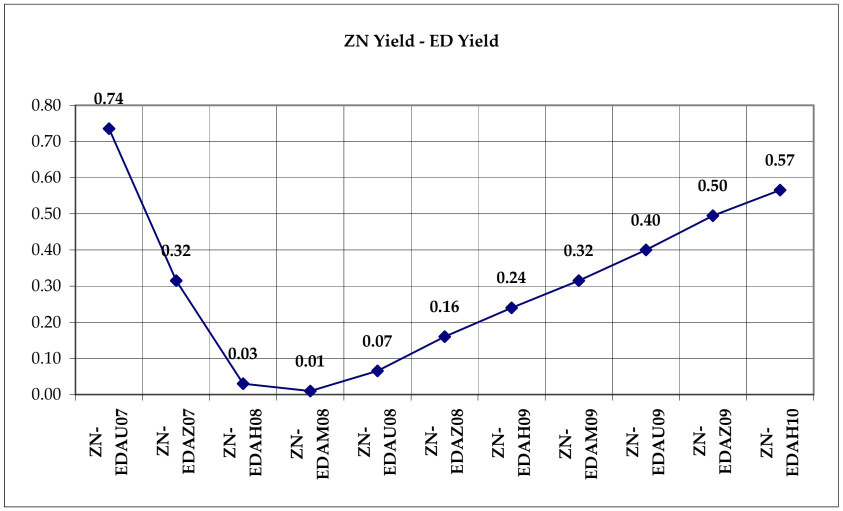
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

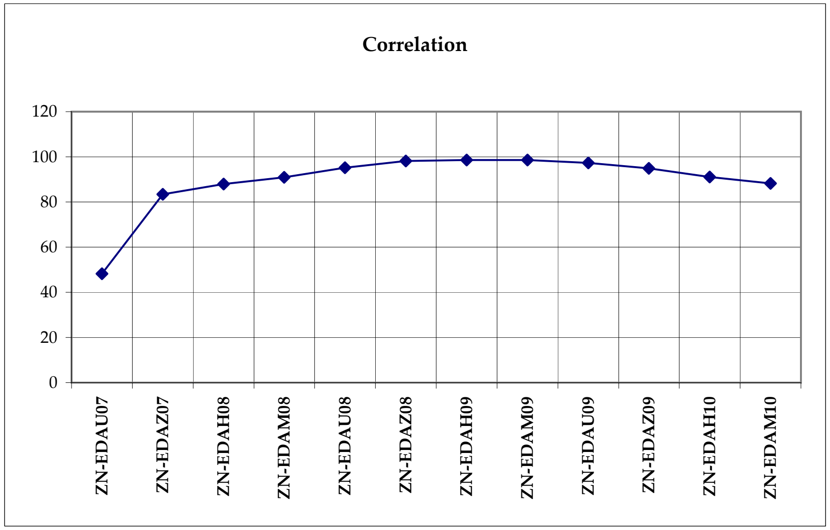
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	13.84	0.74	ZN-EDAU07	48.17
EDAZ07	13.42	0.32	ZN-EDAZ07	83.45
EDAH08	13.13	0.03	ZN-EDAH08	87.94
EDAM08	13.09	0.01	ZN-EDAM08	90.89
EDAU08	13.17	0.07	ZN-EDAU08	95.17
EDAZ08	13.26	0.16	ZN-EDAZ08	98.14
EDAH09	13.34	0.24	ZN-EDAH09	98.61
EDAM09	13.42	0.32	ZN-EDAM09	98.60
EDAU09	13.50	0.40	ZN-EDAU09	97.33
EDAZ09	13.60	0.50	ZN-EDAZ09	94.83
EDAH10	13.67	0.57	ZN-EDAH10	91.08
EDAM10	13.73	0.63	ZN-EDAM10	88.21

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	0.087	5.66	5.57	ZN-EDAU07
EDAZ07	0.336	5.66	5.33	ZN-EDAZ07
EDAH08	0.586	5.66	5.08	ZN-EDAH08
EDAM08	0.835	5.66	4.83	ZN-EDAM08
EDAU08	1.084	5.66	4.58	ZN-EDAU08
EDAZ08	1.334	5.66	4.33	ZN-EDAZ08
EDAH09	1.583	5.66	4.08	ZN-EDAH09
EDAM09	1.832	5.66	3.83	ZN-EDAM09
EDAU09	2.082	5.66	3.58	ZN-EDAU09
EDAZ09	2.331	5.66	3.33	ZN-EDAZ09
EDAH10	2.580	5.66	3.08	ZN-EDAH10
EDAM10	2.829	5.66	2.83	ZN-EDAM10

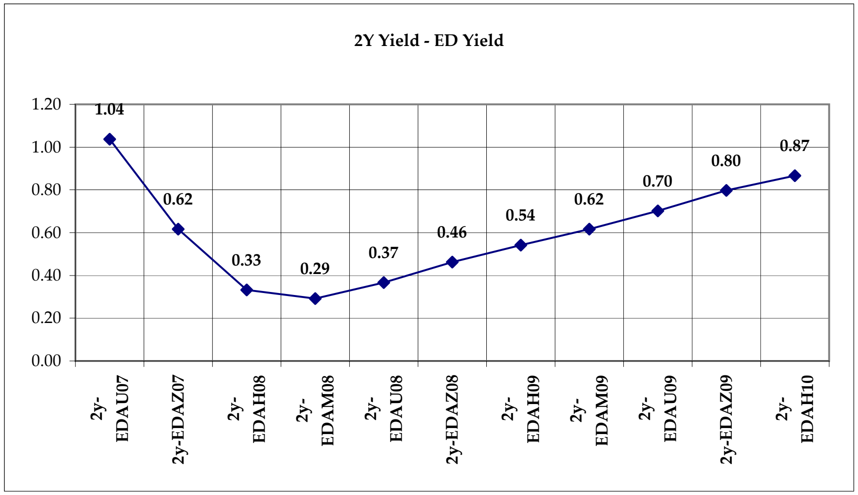
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

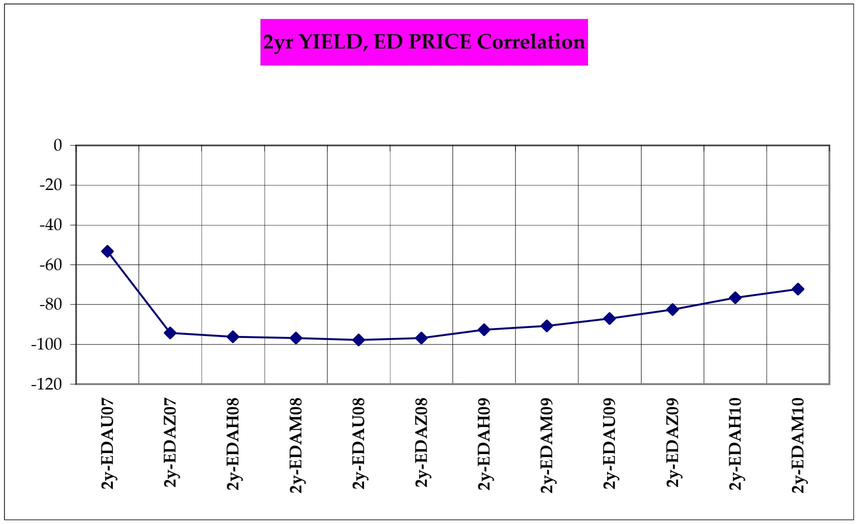
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	6.02	1.04	2y-EDAU07	-53.224
EDAZ07	5.60	0.62	2y-EDAZ07	-94.217
EDAH08	5.31	0.33	2y-EDAH08	-96.121
EDAM08	5.27	0.29	2y-EDAM08	-96.856
EDAU08	5.35	0.37	2y-EDAU08	-97.859
EDAZ08	5.44	0.46	2y-EDAZ08	-96.856
EDAH09	5.52	0.54	2y-EDAH09	-92.714
EDAM09	5.60	0.62	2y-EDAM09	-90.804
EDAU09	5.68	0.70	2y-EDAU09	-87.017
EDAZ09	5.78	0.80	2y-EDAZ09	-82.497
EDAH10	5.85	0.87	2y-EDAH10	-76.531
EDAM10	5.91	0.93	2y-EDAM10	-72.229

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	2Y Duration	Spread Duration	
EDAU07	0.087	1.85	1.76	2y-EDAU07
EDAZ07	0.336	1.85	1.51	2y-EDAZ07
EDAH08	0.586	1.85	1.26	2y-EDAH08
EDAM08	0.835	1.85	1.01	2y-EDAM08
EDAU08	1.084	1.85	0.76	2y-EDAU08
EDAZ08	1.334	1.85	0.51	2y-EDAZ08
EDAH09	1.583	1.85	0.27	2y-EDAH09
EDAM09	1.832	1.85	0.02	2y-EDAM09
EDAU09	2.082	1.85	(0.23)	2y-EDAU09
EDAZ09	2.331	1.85	(0.48)	2y-EDAZ09
EDAH10	2.580	1.85	(0.73)	2y-EDAH10
EDAM10	2.829	1.85	(0.98)	2y-EDAM10

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



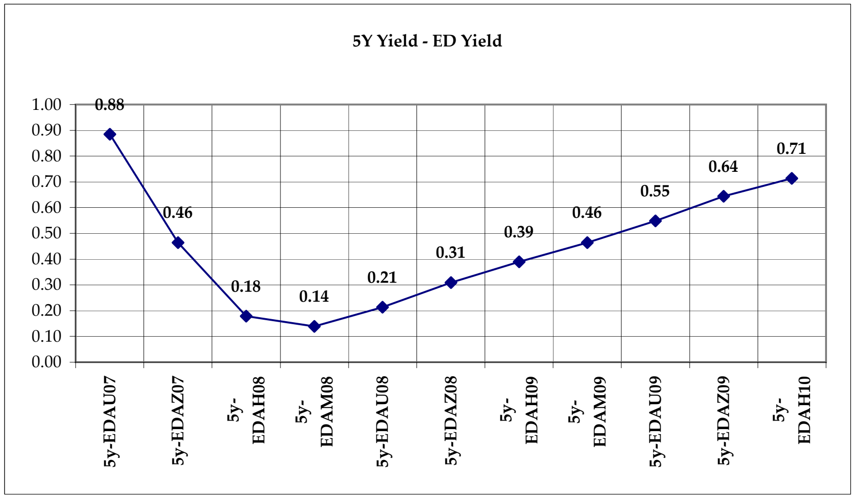
TERM TED: 5y vs Eurodollar Contracts

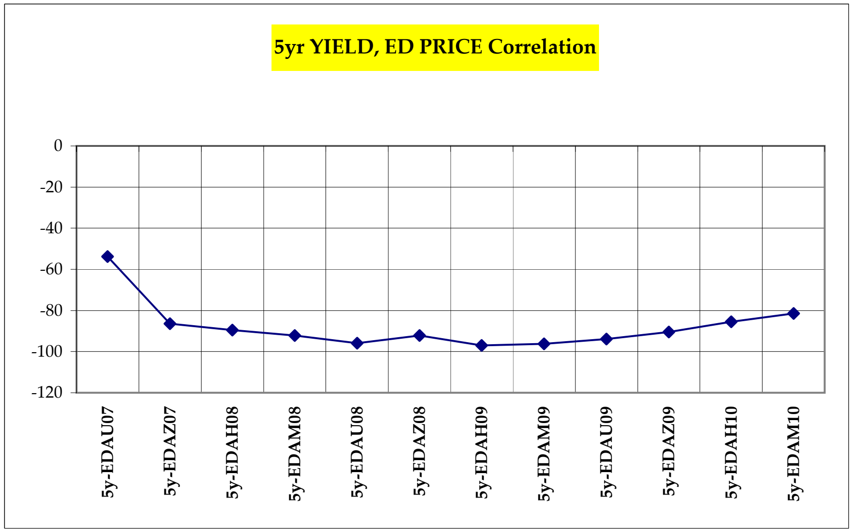
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	6.40	0.88	5y-EDAU07	-53.755
EDAZ07	5.98	0.46	5y-EDAZ07	-86.462
EDAH08	5.70	0.18	5y-EDAH08	-89.600
EDAM08	5.66	0.14	5y-EDAM08	-92.141
EDAU08	5.73	0.21	5y-EDAU08	-95.895
EDAZ08	5.83	0.31	5y-EDAZ08	-92.141
EDAH09	5.91	0.39	5y-EDAH09	-96.970
EDAM09	5.98	0.46	5y-EDAM09	-96.172
EDAU09	6.07	0.55	5y-EDAU09	-93.820
EDAZ09	6.16	0.64	5y-EDAZ09	-90.442
EDAH10	6.23	0.71	5y-EDAH10	-85.420
EDAM10	6.30	0.78	5y-EDAM10	-81.455

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	0.087	4.38	4.30	5y-EDAU07
EDAZ07	0.336	4.38	4.05	5y-EDAZ07
EDAH08	0.586	4.38	3.80	5y-EDAH08
EDAM08	0.835	4.38	3.55	5y-EDAM08
EDAU08	1.084	4.38	3.30	5y-EDAU08
EDAZ08	1.334	4.38	3.05	5y-EDAZ08
EDAH09	1.583	4.38	2.80	5y-EDAH09
EDAM09	1.832	4.38	2.55	5y-EDAM09
EDAU09	2.082	4.38	2.30	5y-EDAU09
EDAZ09	2.331	4.38	2.05	5y-EDAZ09
EDAH10	2.580	4.38	1.80	5y-EDAH10
EDAM10	2.829	4.38	1.55	5y-EDAM10

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

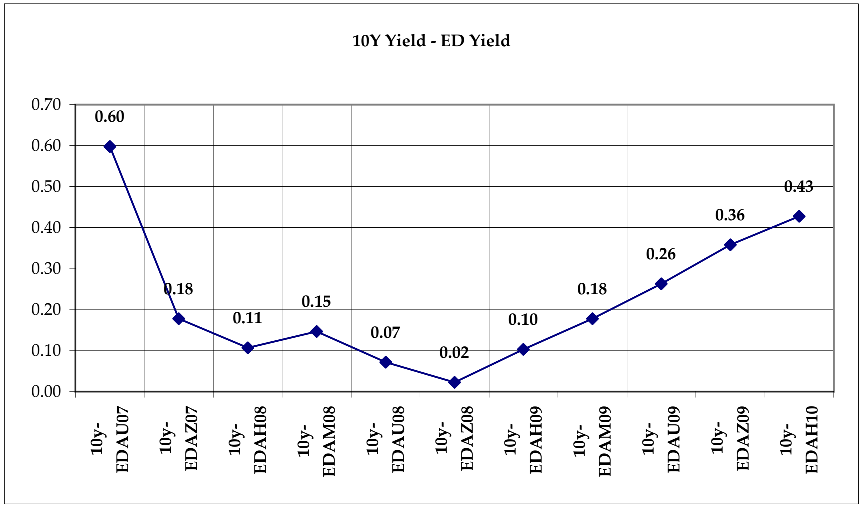




TERM TED: 10y vs Eurodollar Contracts

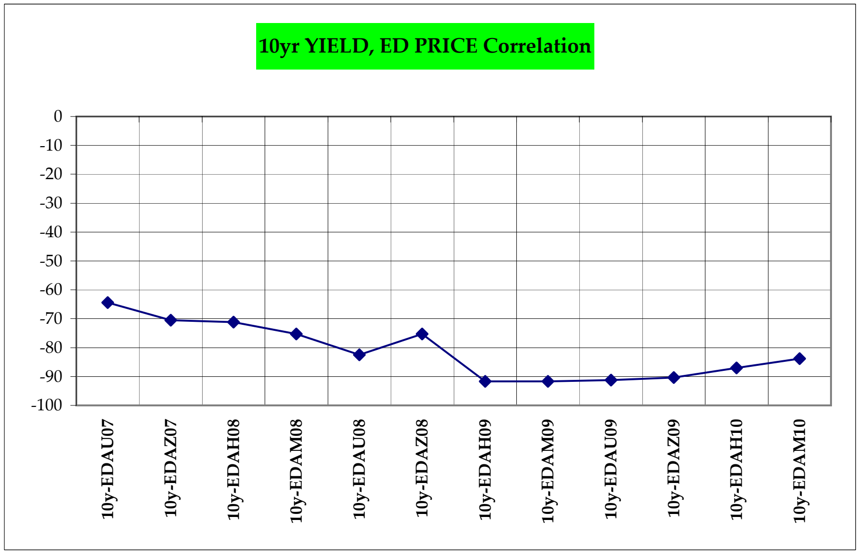
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	6.40	0.60	10y-EDAU07	-64.458
EDAZ07	5.98	0.18	10y-EDAZ07	-70.554
EDAH08	5.70	0.11	10y-EDAH08	-71.196
EDAM08	5.66	0.15	10y-EDAM08	-75.253
EDAU08	5.73	0.07	10y-EDAU08	-82.523
EDAZ08	5.83	0.02	10y-EDAZ08	-75.253
EDAH09	5.91	0.10	10y-EDAH09	-91.694
EDAM09	5.98	0.18	10y-EDAM09	-91.722
EDAU09	6.07	0.26	10y-EDAU09	-91.212
EDAZ09	6.16	0.36	10y-EDAZ09	-90.305
EDAH10	6.23	0.43	10y-EDAH10	-86.981
EDAM10	6.30	0.49	10y-EDAM10	-83.844

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.



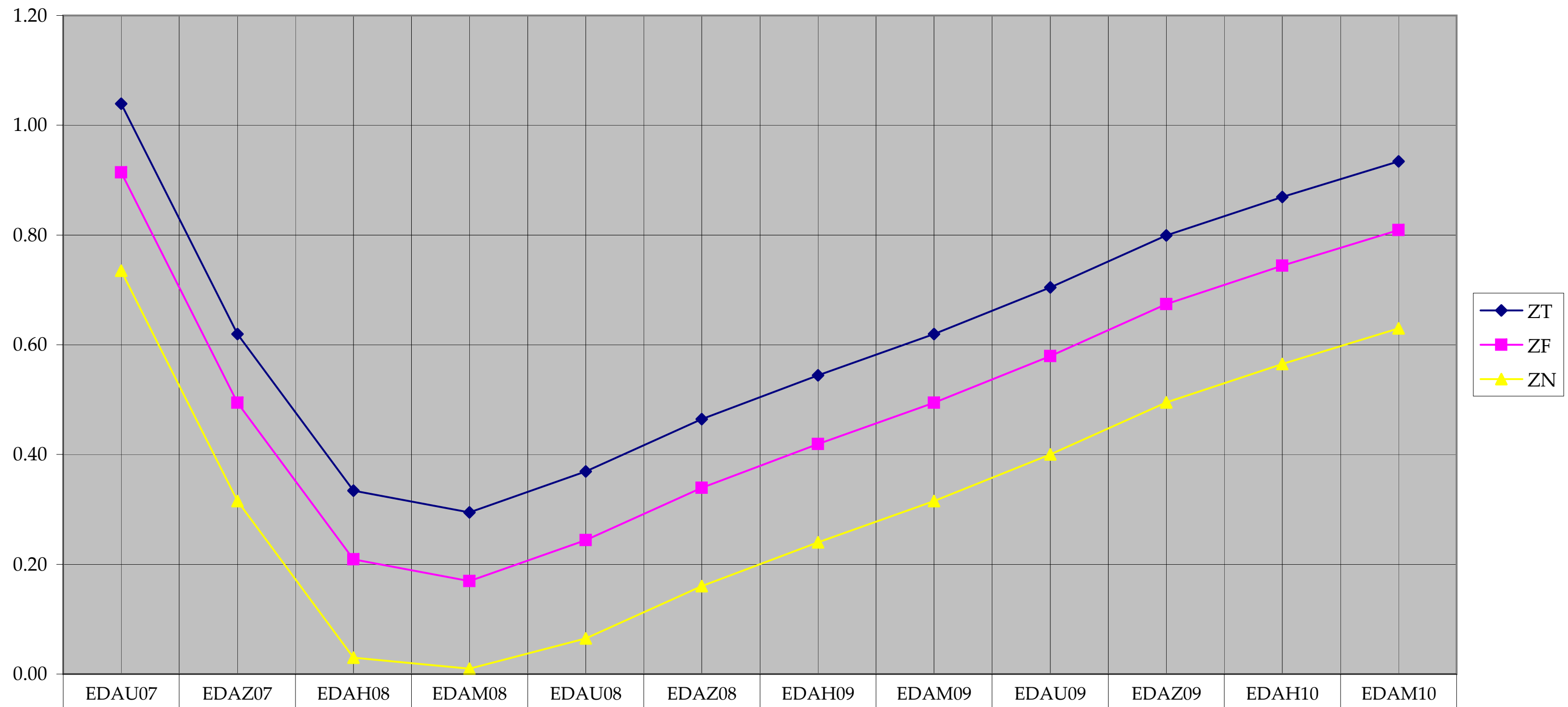
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU07	0.087	7.90	7.81	10y-EDAU07
EDAZ07	0.336	7.90	7.56	10y-EDAZ07
EDAH08	0.586	7.90	7.31	10y-EDAH08
EDAM08	0.835	7.90	7.06	10y-EDAM08
EDAU08	1.084	7.90	6.81	10y-EDAU08
EDAZ08	1.334	7.90	6.56	10y-EDAZ08
EDAH09	1.583	7.90	6.31	10y-EDAH09
EDAM09	1.832	7.90	6.06	10y-EDAM09
EDAU09	2.082	7.90	5.81	10y-EDAU09
EDAZ09	2.331	7.90	5.56	10y-EDAZ09
EDAH10	2.580	7.90	5.32	10y-EDAH10
EDAM10	2.829	7.90	5.07	10y-EDAM10

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



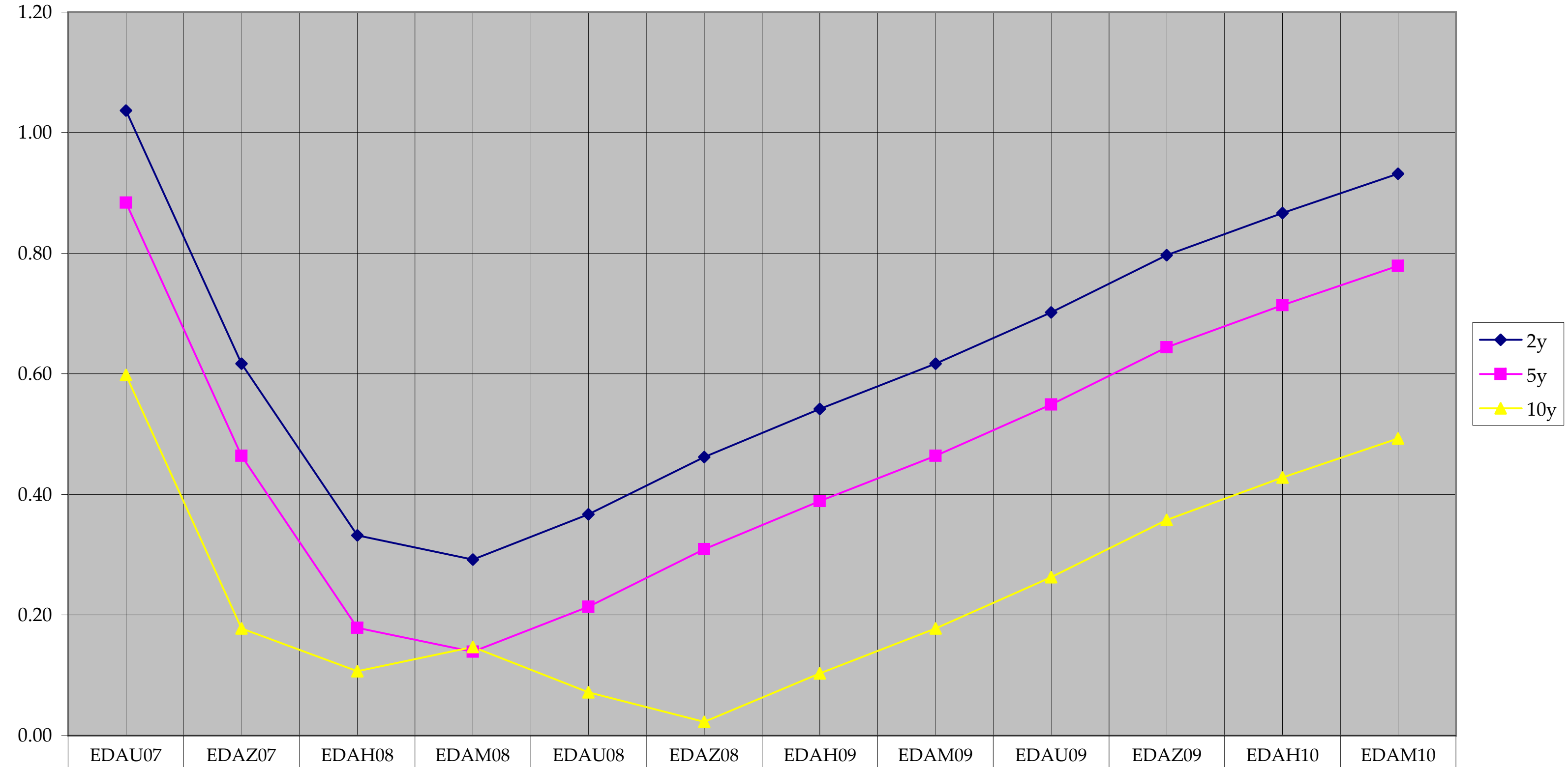
Dirty TED Curve

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.



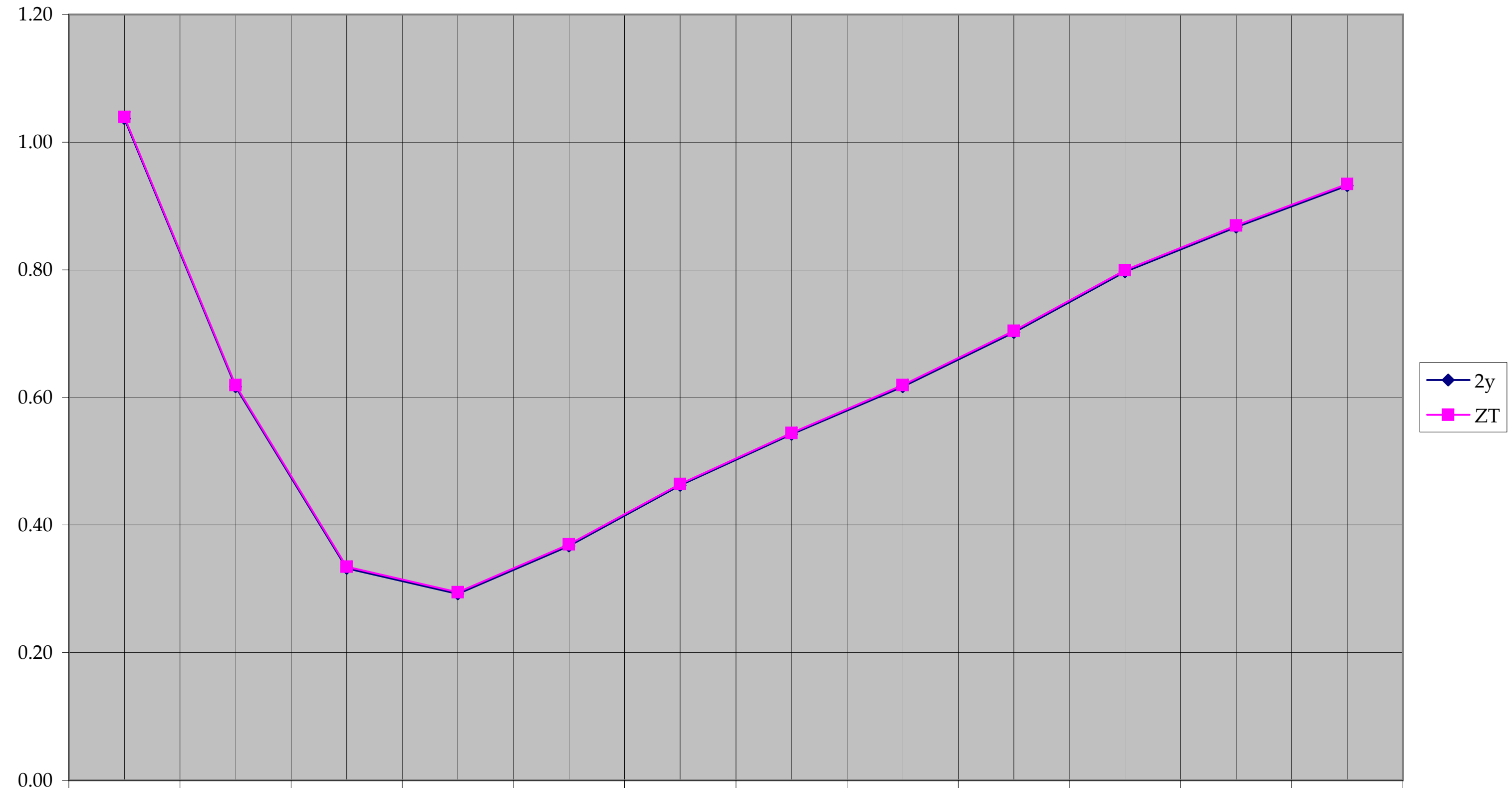
	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
ZT	1.04	0.62	0.33	0.29	0.37	0.46	0.54	0.62	0.70	0.80	0.87	0.93
ZF	0.91	0.49	0.21	0.17	0.24	0.34	0.42	0.49	0.58	0.67	0.74	0.81
ZN	0.74	0.32	0.03	0.01	0.07	0.16	0.24	0.32	0.40	0.50	0.57	0.63

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.



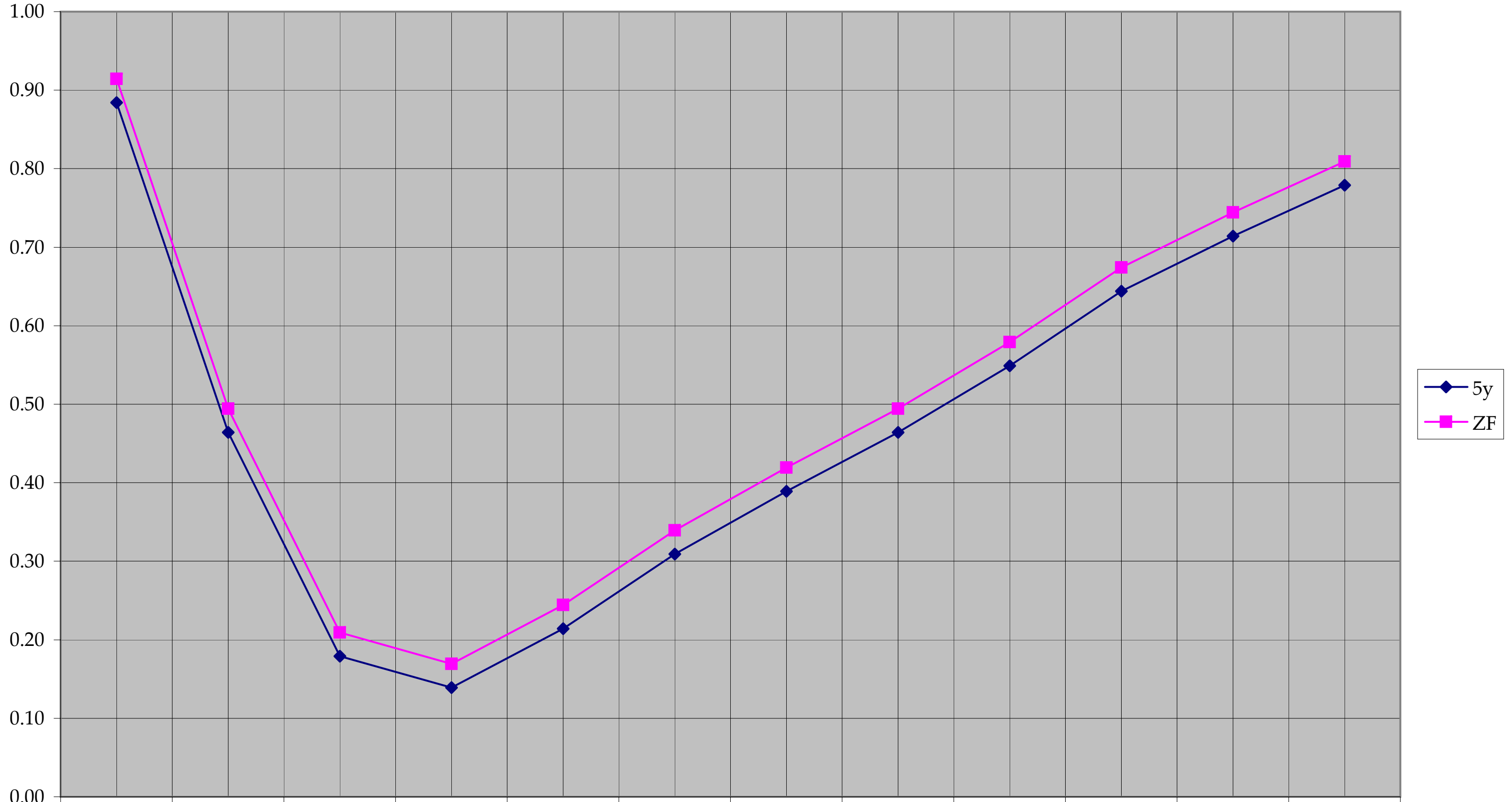
	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	1.04	0.62	0.33	0.29	0.37	0.46	0.54	0.62	0.70	0.80	0.87	0.93
5y	0.88	0.46	0.18	0.14	0.21	0.31	0.39	0.46	0.55	0.64	0.71	0.78
10y	0.60	0.18	0.11	0.15	0.07	0.02	0.10	0.18	0.26	0.36	0.43	0.49

2y Basis TED Curve



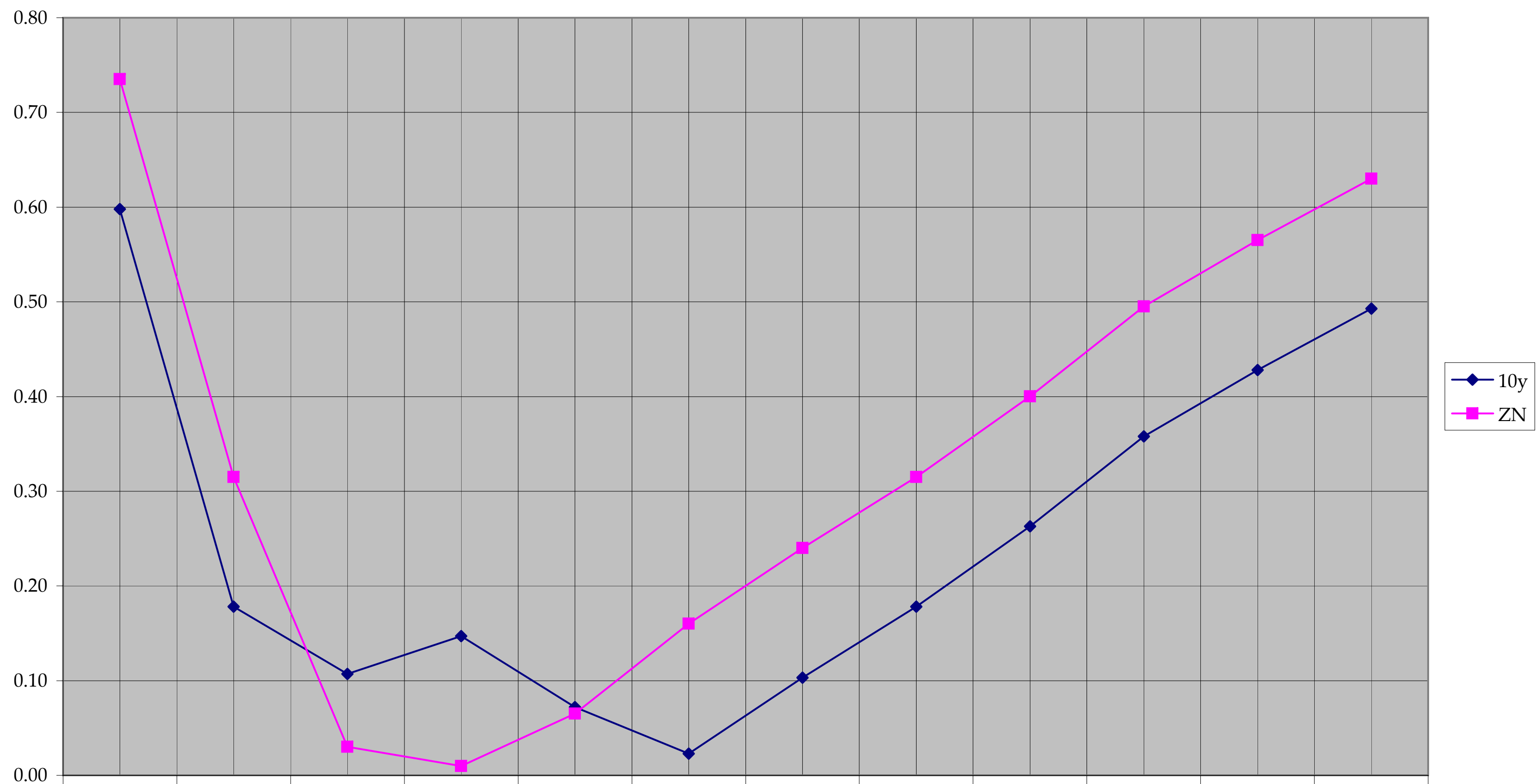
	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	1.04	0.62	0.33	0.29	0.37	0.46	0.54	0.62	0.70	0.80	0.87	0.93
ZT	1.04	0.62	0.33	0.29	0.37	0.46	0.54	0.62	0.70	0.80	0.87	0.93

5y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
5y	0.88	0.46	0.18	0.14	0.21	0.31	0.39	0.46	0.55	0.64	0.71	0.78
ZF	0.91	0.49	0.21	0.17	0.24	0.34	0.42	0.49	0.58	0.67	0.74	0.81

10y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
10y	0.60	0.18	0.11	0.15	0.07	0.02	0.10	0.18	0.26	0.36	0.43	0.49
ZN	0.74	0.32	0.03	0.01	0.07	0.16	0.24	0.32	0.40	0.50	0.57	0.63

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.903	5.812	9522.250
Q.ED.Red	4.827	5.750	9529.500
Q.ED.Green	5.167	2.375	9496.750
Q.ED.Blue		0.000	9469.625
Q.ED.Gold		0.000	9449.250
Q.ED.Purple		0.000	9449.250