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

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	F.I. Futures and Cash			
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	103.5625	103.180	3.935	1.90
ZF	107.0781	107.025	4.162	3.95
ZN	109.4219	109.135	4.356	5.87
2y	100.125	100.0400	3.935	1.90
5y	100.194	100.0620	4.207	4.46
10y	101.500	101.1600	4.559	7.79

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.200	4.800	80	0.219	DEC	White Pack
EDAH08	95.565	4.435	171	0.468	MAR	
EDAM08	95.700	4.300	262	0.717	JUN	
EDAU08	95.760	4.240	353	0.966	SEP	
EDAZ08	95.750	4.250	444	1.216	DEC	Red Pack
EDAH09	95.675	4.325	535	1.465	MAR	
EDAM09	95.560	4.440	626	1.714	JUN	
EDAU09	95.445	4.555	717	1.964	SEP	
EDAZ09	95.335	4.665	808	2.213	DEC	Green Pack
EDAH10	95.255	4.745	899	2.462	MAR	
EDAM10	95.170	4.830	990	2.712	JUN	
EDAU10	95.070	4.930	1081	2.961	SEP	
EDAZ10	94.980	5.020	1172	3.210	DEC	Blue Pack
EDAH11	94.950	5.050	1263	3.460	MAR	
EDAM11	94.880	5.120	1354	3.709	JUN	
EDAU11	94.810	5.190	1452	3.977	SEP	
EDAZ11	94.760	5.240	1543	4.227	DEC	Gold Pack
EDAH12	94.705	5.295	1634	4.476	MAR	
EDAM12	94.650	5.350	1725	4.725	JUN	
EDAU12	94.595	5.405	1816	4.975	SEP	

	Last Yield	Net Yield	Last Price
Q.ED.White	4.556	1.375	9555.625
Q.ED.Red	4.503	1.875	9560.750
Q.ED.Green	4.918	0.750	9520.750
Q.ED.Blue		-0.250	9490.375
Q.ED.Gold		0.000	9466.625

Pack Prices

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 10 yr proxy
Red pack/Gold pack is a 2/10 proxy
Blue/Gold is a 5/10 proxy

Jim Goulding, jgoulding@ghco.com

Overview of Hedging

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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

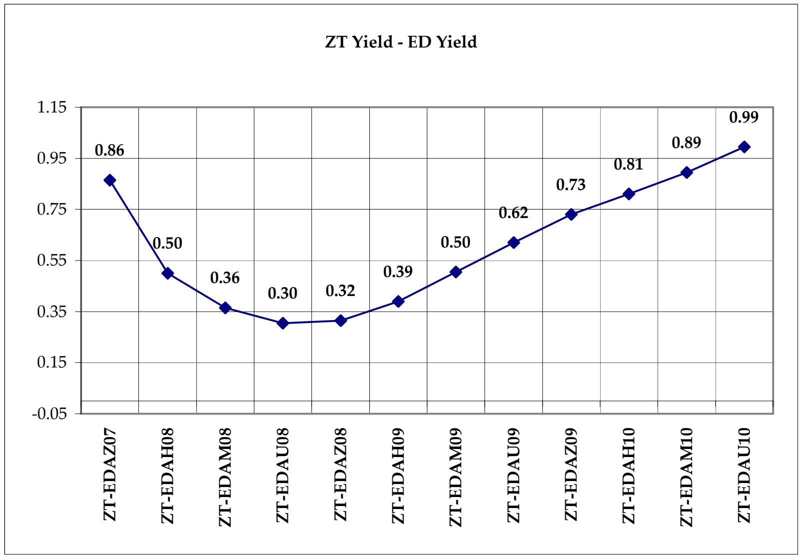
Eurodollar Color Codes for Individual Year Strips:

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

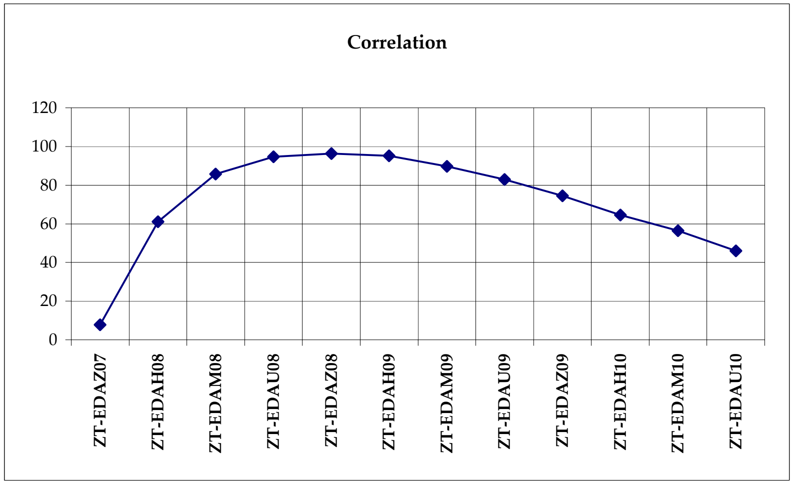
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.363	0.86	ZT-EDAZ07	7.724
EDAH08	7.998	0.50	ZT-EDAH08	61.116
EDAM08	7.863	0.36	ZT-EDAM08	85.685
EDAU08	7.803	0.30	ZT-EDAU08	94.675
EDAZ08	7.813	0.32	ZT-EDAZ08	96.376
EDAH09	7.888	0.39	ZT-EDAH09	95.177
EDAM09	8.003	0.50	ZT-EDAM09	89.782
EDAU09	8.118	0.62	ZT-EDAU09	83.004
EDAZ09	8.228	0.73	ZT-EDAZ09	74.471
EDAH10	8.308	0.81	ZT-EDAH10	64.512
EDAM10	8.393	0.89	ZT-EDAM10	56.432
EDAU10	8.493	0.99	ZT-EDAU10	46.052

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	0.219	1.90	1.68	ZT-EDAZ07
EDAH08	0.468	1.90	1.43	ZT-EDAH08
EDAM08	0.717	1.90	1.18	ZT-EDAM08
EDAU08	0.966	1.90	0.94	ZT-EDAU08
EDAZ08	1.216	1.90	0.69	ZT-EDAZ08
EDAH09	1.465	1.90	0.44	ZT-EDAH09
EDAM09	1.714	1.90	0.19	ZT-EDAM09
EDAU09	1.964	1.90	(0.06)	ZT-EDAU09
EDAZ09	2.213	1.90	(0.31)	ZT-EDAZ09
EDAH10	2.462	1.90	(0.56)	ZT-EDAH10
EDAM10	2.712	1.90	(0.81)	ZT-EDAM10
EDAU10	2.961	1.90	(1.06)	ZT-EDAU10

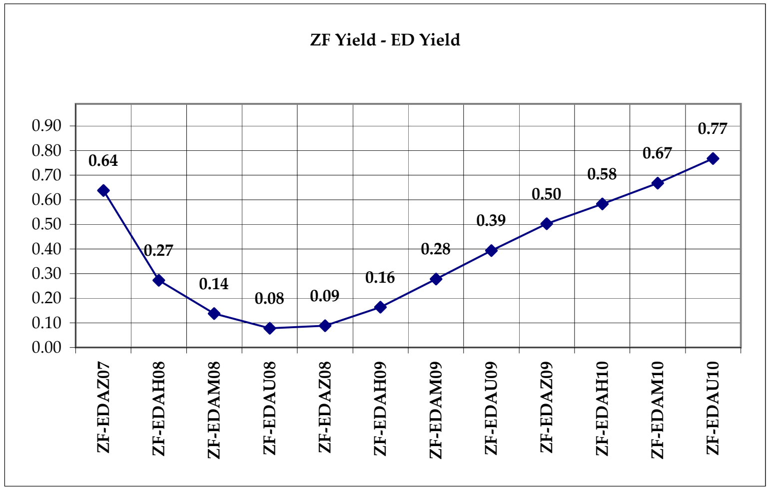
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

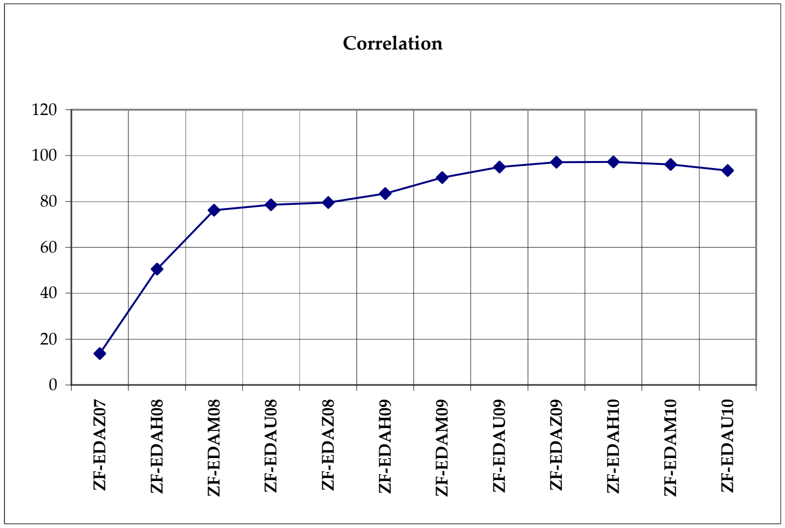
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	11.88	0.64	ZF-EDAZ07	13.625
EDAH08	11.51	0.27	ZF-EDAH08	50.573
EDAM08	11.38	0.14	ZF-EDAM08	76.222
EDAU08	11.32	0.08	ZF-EDAU08	78.571
EDAZ08	11.33	0.09	ZF-EDAZ08	79.595
EDAH09	11.40	0.16	ZF-EDAH09	83.471
EDAM09	11.52	0.28	ZF-EDAM09	90.473
EDAU09	11.63	0.39	ZF-EDAU09	95.056
EDAZ09	11.74	0.50	ZF-EDAZ09	97.061
EDAH10	11.82	0.58	ZF-EDAH10	97.229
EDAM10	11.91	0.67	ZF-EDAM10	96.155
EDAU10	12.01	0.77	ZF-EDAU10	93.535

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	0.219	3.95	3.73	ZF-EDAZ07
EDAH08	0.468	3.95	3.48	ZF-EDAH08
EDAM08	0.717	3.95	3.23	ZF-EDAM08
EDAU08	0.966	3.95	2.98	ZF-EDAU08
EDAZ08	1.216	3.95	2.74	ZF-EDAZ08
EDAH09	1.465	3.95	2.49	ZF-EDAH09
EDAM09	1.714	3.95	2.24	ZF-EDAM09
EDAU09	1.964	3.95	1.99	ZF-EDAU09
EDAZ09	2.213	3.95	1.74	ZF-EDAZ09
EDAH10	2.462	3.95	1.49	ZF-EDAH10
EDAM10	2.712	3.95	1.24	ZF-EDAM10
EDAU10	2.961	3.95	0.99	ZF-EDAU10

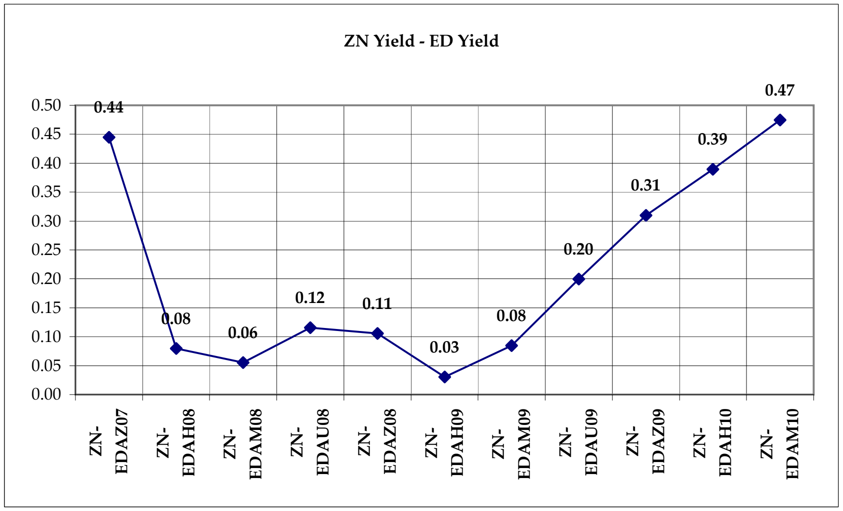
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

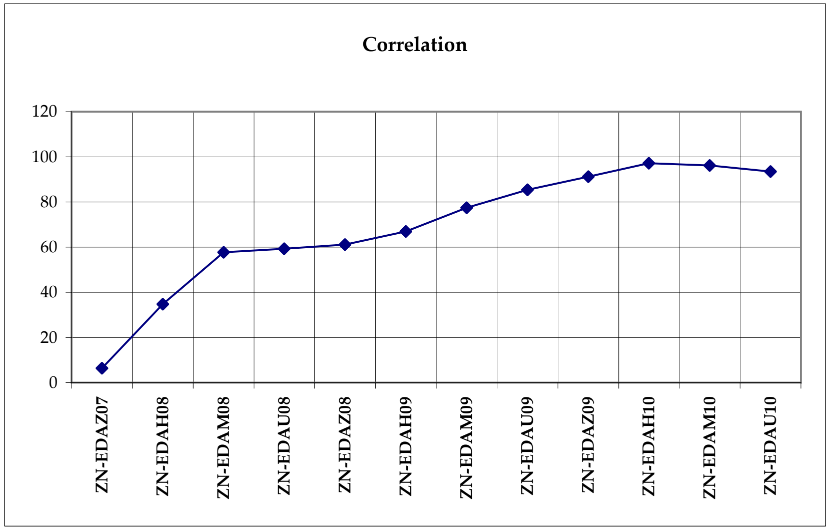
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.22	0.44	ZN-EDAZ07	6.39
EDAH08	13.86	0.08	ZN-EDAH08	34.74
EDAM08	13.72	0.06	ZN-EDAM08	57.69
EDAU08	13.66	0.12	ZN-EDAU08	59.31
EDAZ08	13.67	0.11	ZN-EDAZ08	61.15
EDAH09	13.75	0.03	ZN-EDAH09	66.93
EDAM09	13.86	0.08	ZN-EDAM09	77.49
EDAU09	13.98	0.20	ZN-EDAU09	85.39
EDAZ09	14.09	0.31	ZN-EDAZ09	91.19
EDAH10	14.17	0.39	ZN-EDAH10	97.23
EDAM10	14.25	0.47	ZN-EDAM10	96.16
EDAU10	14.35	0.57	ZN-EDAU10	93.53

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	0.219	5.87	5.65	ZN-EDAZ07
EDAH08	0.468	5.87	5.40	ZN-EDAH08
EDAM08	0.717	5.87	5.15	ZN-EDAM08
EDAU08	0.966	5.87	4.90	ZN-EDAU08
EDAZ08	1.216	5.87	4.65	ZN-EDAZ08
EDAH09	1.465	5.87	4.40	ZN-EDAH09
EDAM09	1.714	5.87	4.15	ZN-EDAM09
EDAU09	1.964	5.87	3.91	ZN-EDAU09
EDAZ09	2.213	5.87	3.66	ZN-EDAZ09
EDAH10	2.462	5.87	3.41	ZN-EDAH10
EDAM10	2.712	5.87	3.16	ZN-EDAM10
EDAU10	2.961	5.87	2.91	ZN-EDAU10

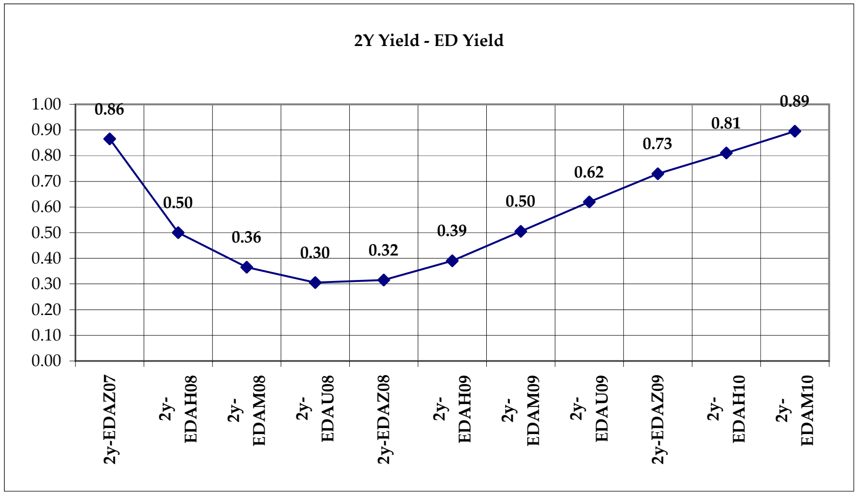
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.93	0.86	2y-EDAZ07	-4.514
EDAH08	4.56	0.50	2y-EDAH08	-52.064
EDAM08	4.43	0.36	2y-EDAM08	-84.976
EDAU08	4.37	0.30	2y-EDAU08	-94.836
EDAZ08	4.38	0.32	2y-EDAZ08	-84.976
EDAH09	4.45	0.39	2y-EDAH09	-93.558
EDAM09	4.57	0.50	2y-EDAM09	-86.546
EDAU09	4.68	0.62	2y-EDAU09	-78.870
EDAZ09	4.79	0.73	2y-EDAZ09	-69.794
EDAH10	4.87	0.81	2y-EDAH10	-59.506
EDAM10	4.96	0.89	2y-EDAM10	-51.189
EDAU10	5.06	0.99	2y-EDAU10	-41.025

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.



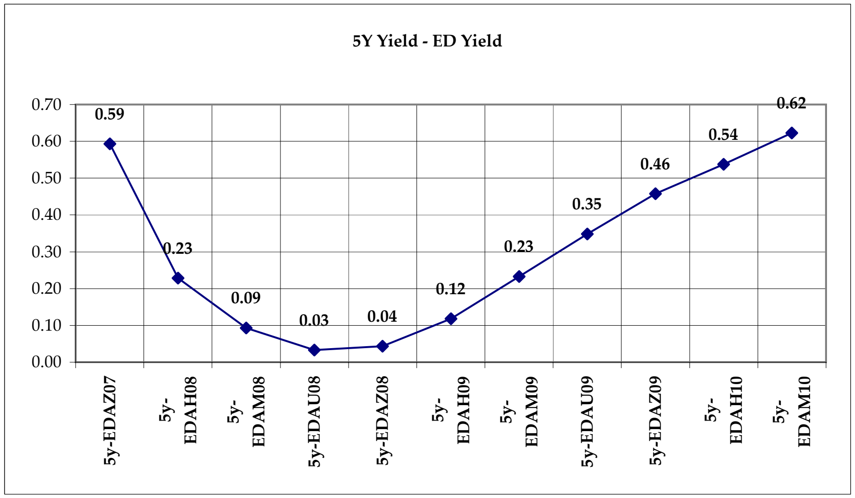
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.219	1.90	1.68	2y-EDAZ07
EDAH08	0.468	1.90	1.43	2y-EDAH08
EDAM08	0.717	1.90	1.18	2y-EDAM08
EDAU08	0.966	1.90	0.94	2y-EDAU08
EDAZ08	1.216	1.90	0.69	2y-EDAZ08
EDAH09	1.465	1.90	0.44	2y-EDAH09
EDAM09	1.714	1.90	0.19	2y-EDAM09
EDAU09	1.964	1.90	(0.06)	2y-EDAU09
EDAZ09	2.213	1.90	(0.31)	2y-EDAZ09
EDAH10	2.462	1.90	(0.56)	2y-EDAH10
EDAM10	2.712	1.90	(0.81)	2y-EDAM10
EDAU10	2.961	1.90	(1.06)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

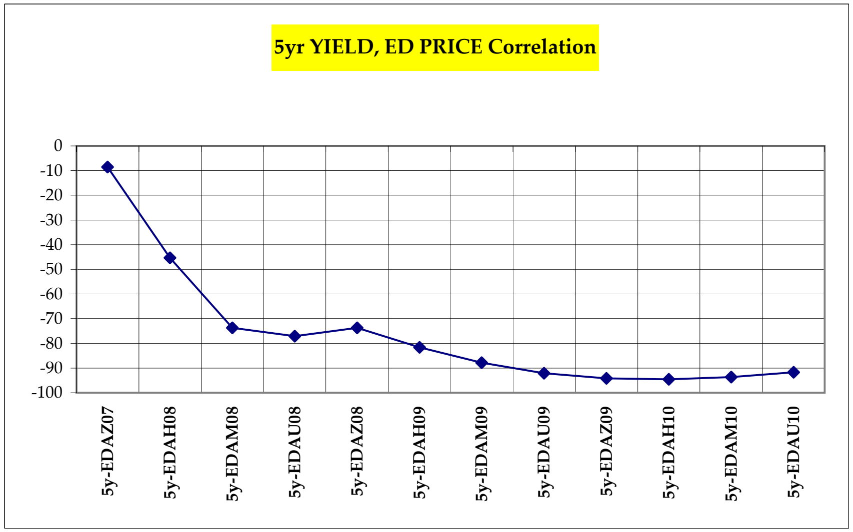
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.99	0.59	5y-EDAZ07	-8.515
EDAH08	4.63	0.23	5y-EDAH08	-45.380
EDAM08	4.49	0.09	5y-EDAM08	-73.720
EDAU08	4.43	0.03	5y-EDAU08	-77.114
EDAZ08	4.44	0.04	5y-EDAZ08	-73.720
EDAH09	4.52	0.12	5y-EDAH09	-81.575
EDAM09	4.63	0.23	5y-EDAM09	-87.824
EDAU09	4.75	0.35	5y-EDAU09	-92.148
EDAZ09	4.86	0.46	5y-EDAZ09	-94.217
EDAH10	4.94	0.54	5y-EDAH10	-94.585
EDAM10	5.02	0.62	5y-EDAM10	-93.694
EDAU10	5.12	0.72	5y-EDAU10	-91.655

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	0.219	4.46	4.24	5y-EDAZ07
EDAH08	0.468	4.46	3.99	5y-EDAH08
EDAM08	0.717	4.46	3.74	5y-EDAM08
EDAU08	0.966	4.46	3.49	5y-EDAU08
EDAZ08	1.216	4.46	3.25	5y-EDAZ08
EDAH09	1.465	4.46	3.00	5y-EDAH09
EDAM09	1.714	4.46	2.75	5y-EDAM09
EDAU09	1.964	4.46	2.50	5y-EDAU09
EDAZ09	2.213	4.46	2.25	5y-EDAZ09
EDAH10	2.462	4.46	2.00	5y-EDAH10
EDAM10	2.712	4.46	1.75	5y-EDAM10
EDAU10	2.961	4.46	1.50	5y-EDAU10

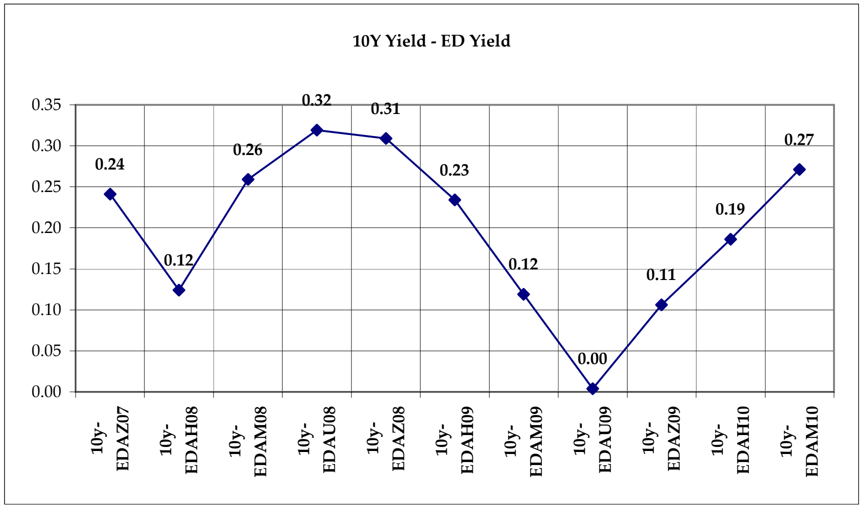
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

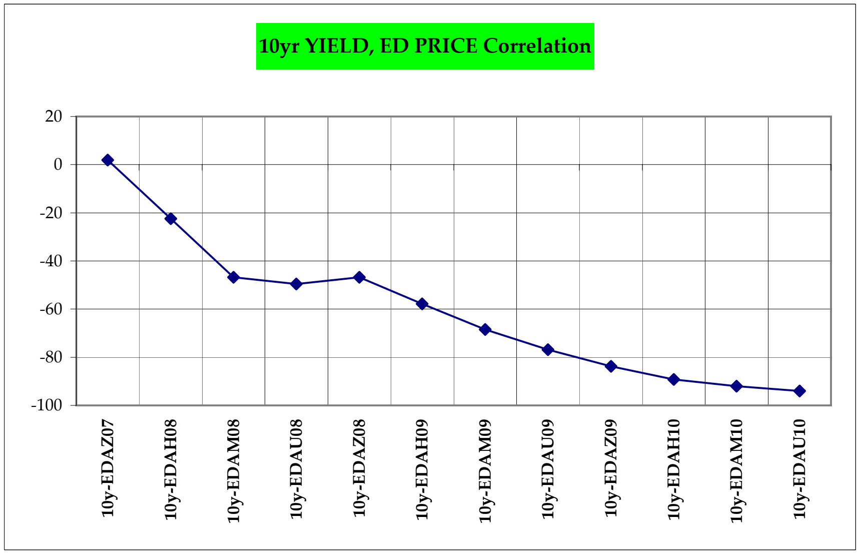
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.99	0.24	10y-EDAZ07	1.857
EDAH08	4.63	0.12	10y-EDAH08	-22.434
EDAM08	4.49	0.26	10y-EDAM08	-46.778
EDAU08	4.43	0.32	10y-EDAU08	-49.559
EDAZ08	4.44	0.31	10y-EDAZ08	-46.778
EDAH09	4.52	0.23	10y-EDAH09	-57.844
EDAM09	4.63	0.12	10y-EDAM09	-68.501
EDAU09	4.75	0.00	10y-EDAU09	-76.884
EDAZ09	4.86	0.11	10y-EDAZ09	-83.761
EDAH10	4.94	0.19	10y-EDAH10	-89.186
EDAM10	5.02	0.27	10y-EDAM10	-91.972
EDAU10	5.12	0.37	10y-EDAU10	-94.069

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.



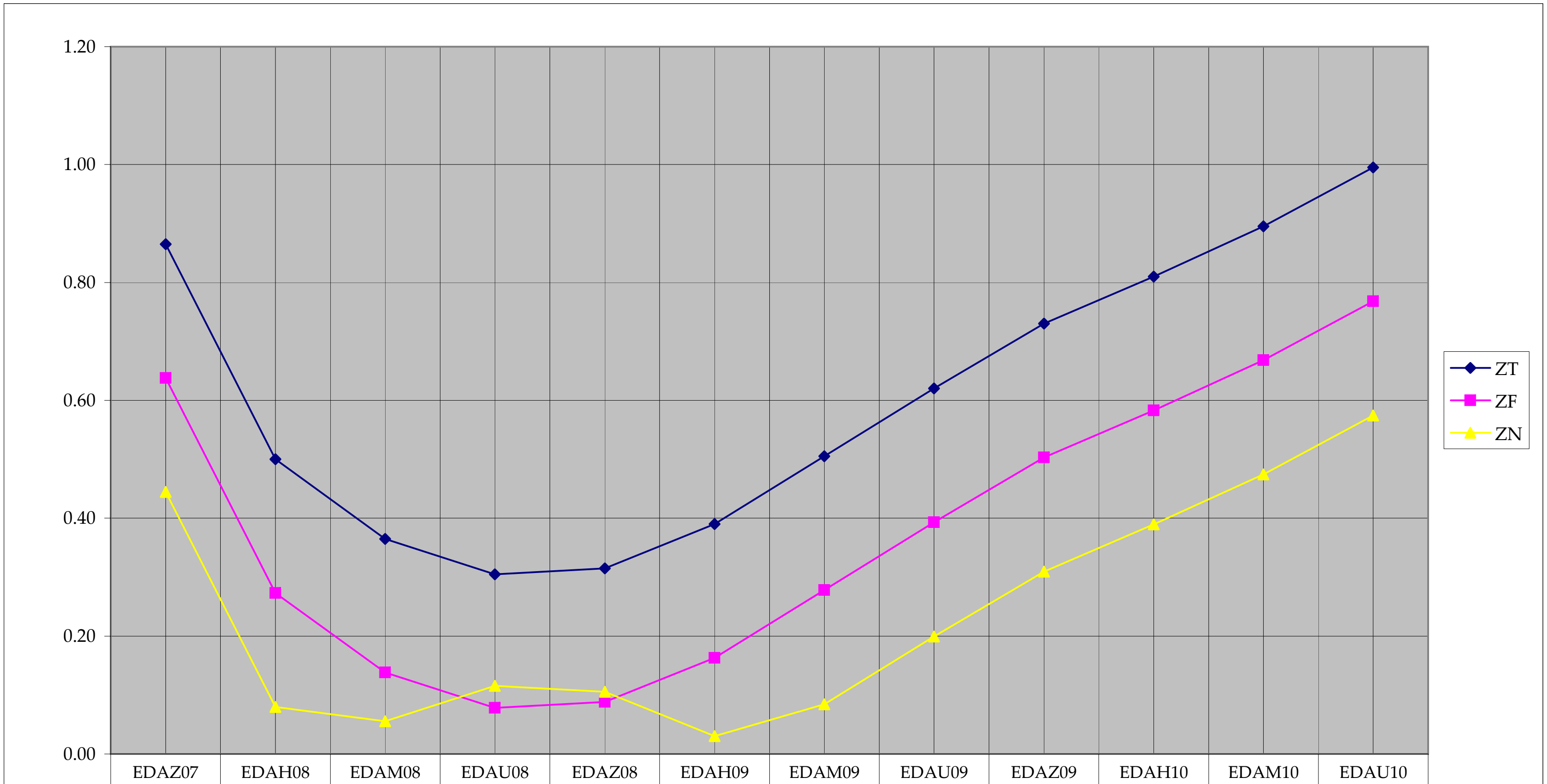
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.219	7.79	7.57	10y-EDAZ07
EDAH08	0.468	7.79	7.32	10y-EDAH08
EDAM08	0.717	7.79	7.07	10y-EDAM08
EDAU08	0.966	7.79	6.82	10y-EDAU08
EDAZ08	1.216	7.79	6.57	10y-EDAZ08
EDAH09	1.465	7.79	6.32	10y-EDAH09
EDAM09	1.714	7.79	6.07	10y-EDAM09
EDAU09	1.964	7.79	5.82	10y-EDAU09
EDAZ09	2.213	7.79	5.57	10y-EDAZ09
EDAH10	2.462	7.79	5.32	10y-EDAH10
EDAM10	2.712	7.79	5.08	10y-EDAM10
EDAU10	2.961	7.79	4.83	10y-EDAU10

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



Dirty TED Curve

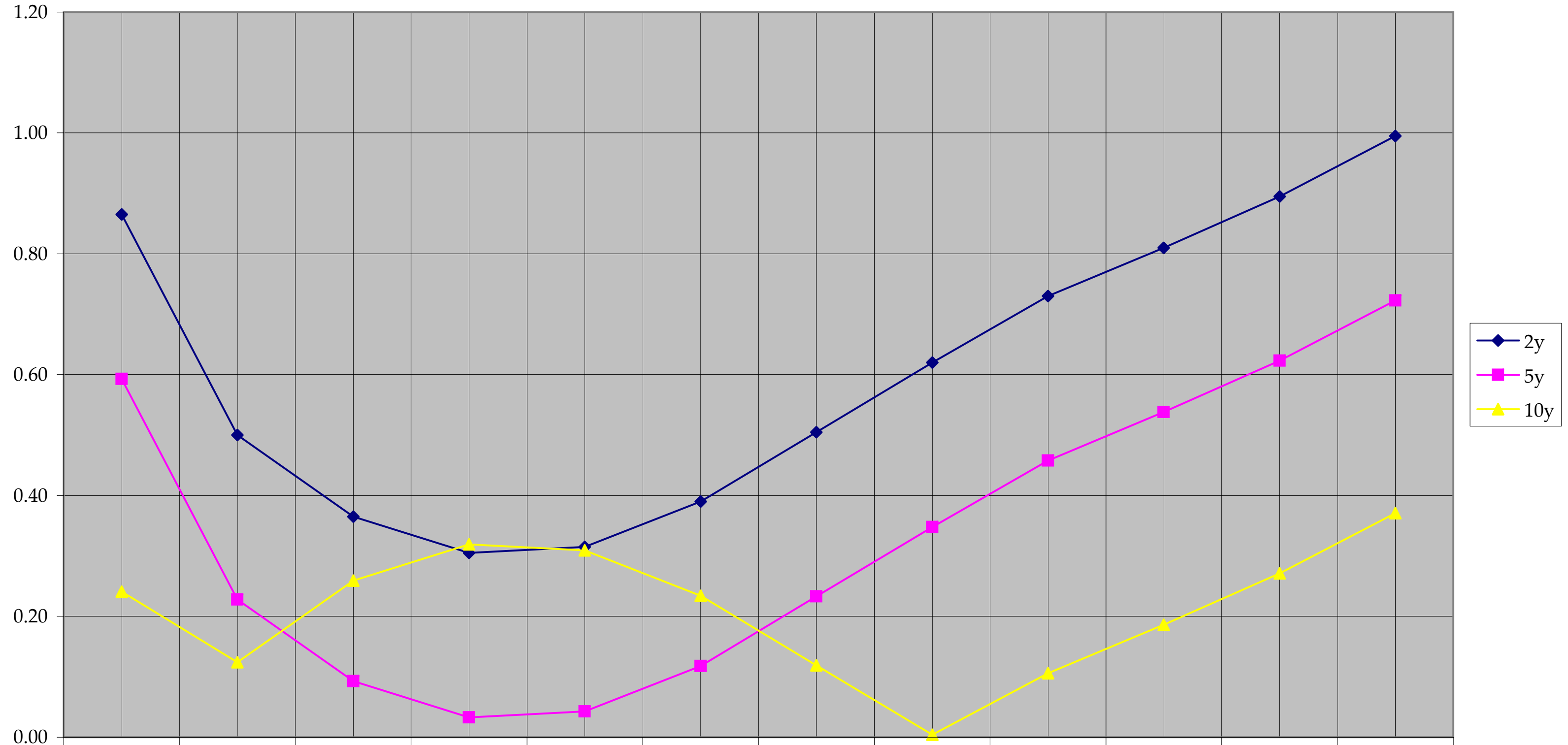
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	0.86	0.50	0.36	0.30	0.32	0.39	0.50	0.62	0.73	0.81	0.89	0.99
ZF	0.64	0.27	0.14	0.08	0.09	0.16	0.28	0.39	0.50	0.58	0.67	0.77
ZN	0.44	0.08	0.06	0.12	0.11	0.03	0.08	0.20	0.31	0.39	0.47	0.57

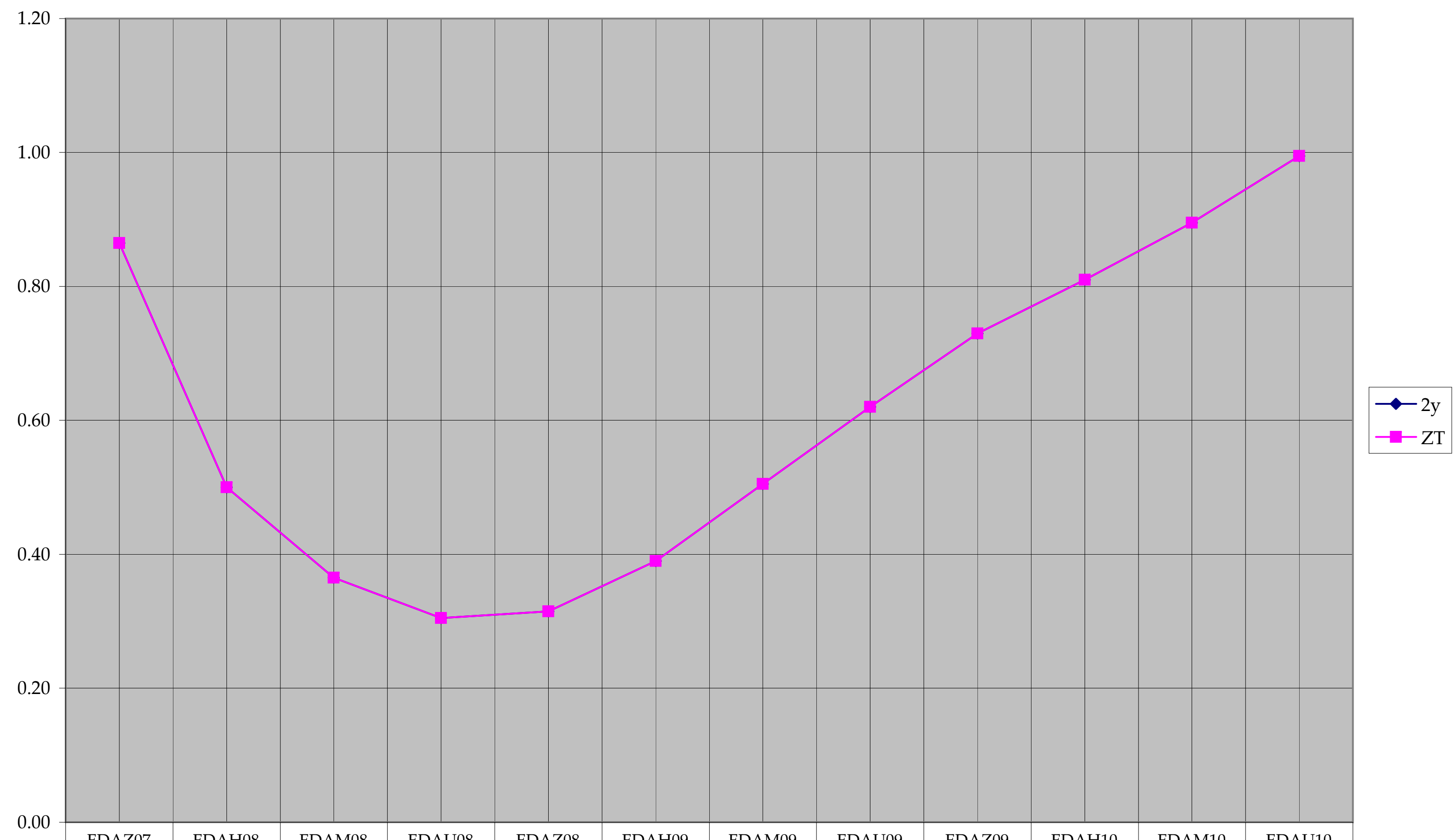
TED Curve

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.



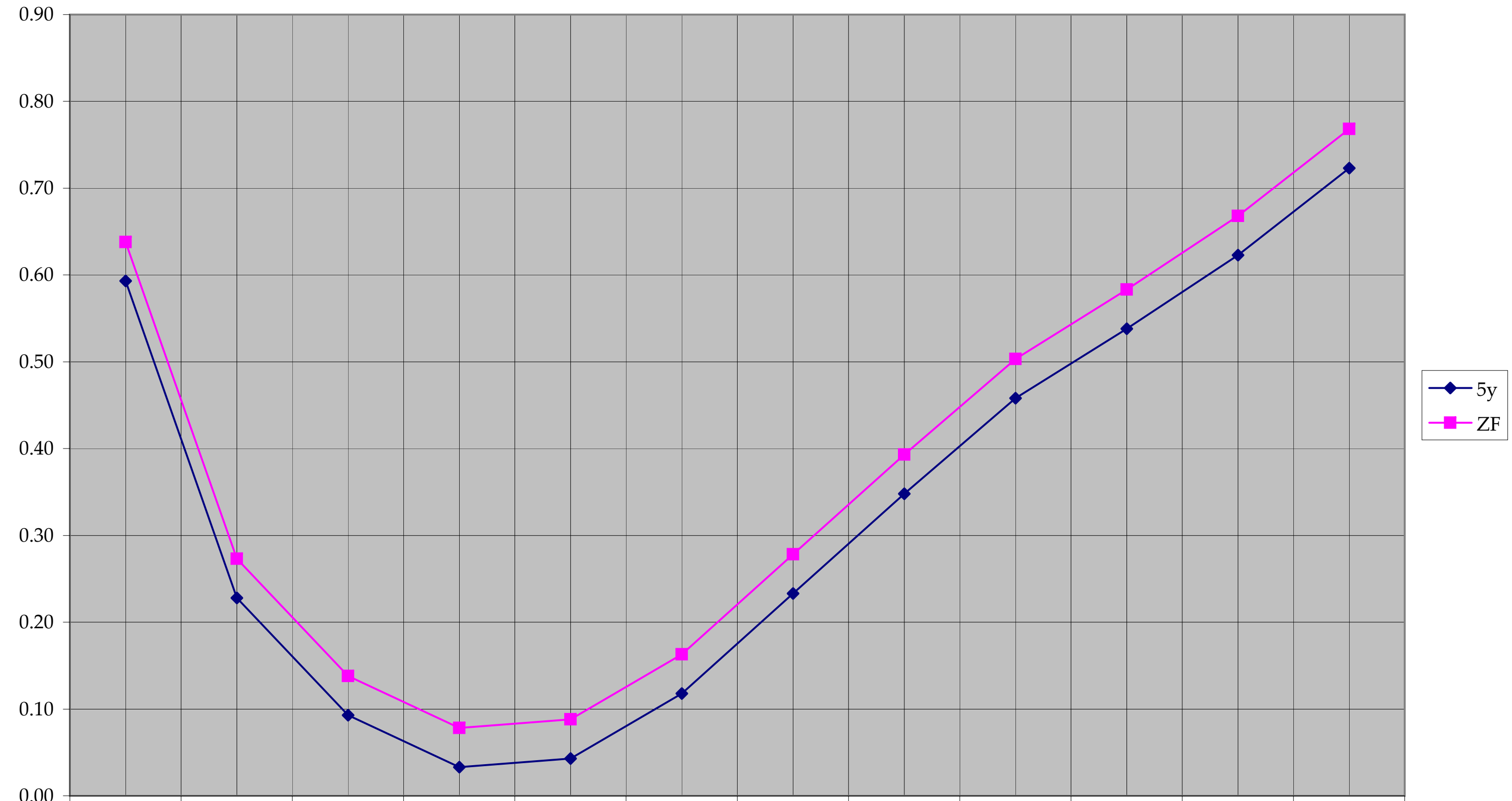
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.86	0.50	0.36	0.30	0.32	0.39	0.50	0.62	0.73	0.81	0.89	0.99
5y	0.59	0.23	0.09	0.03	0.04	0.12	0.23	0.35	0.46	0.54	0.62	0.72
10y	0.24	0.12	0.26	0.32	0.31	0.23	0.12	0.00	0.11	0.19	0.27	0.37

2y Basis TED Curve



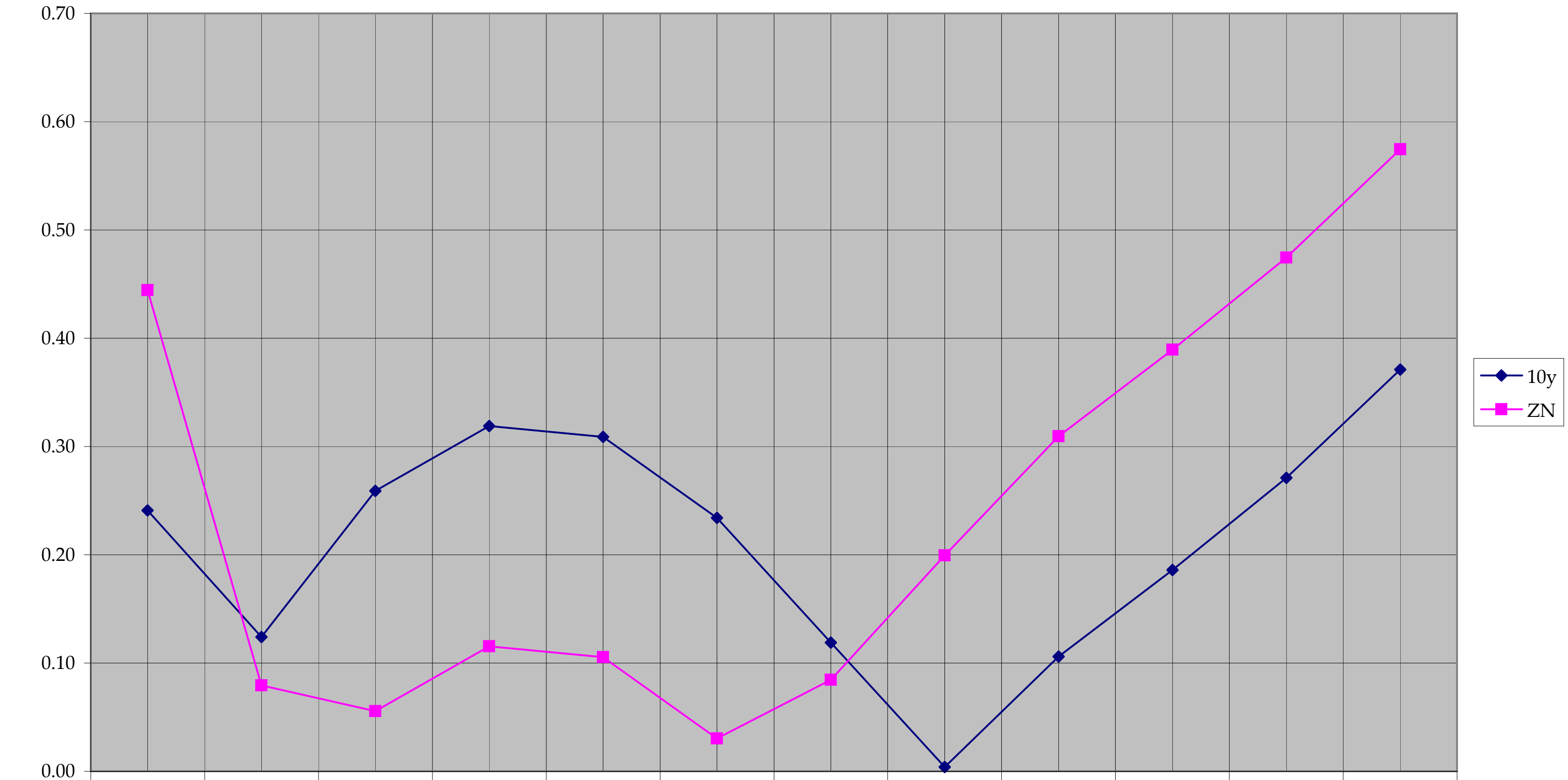
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.86	0.50	0.36	0.30	0.32	0.39	0.50	0.62	0.73	0.81	0.89	0.99
ZT	0.86	0.50	0.36	0.30	0.32	0.39	0.50	0.62	0.73	0.81	0.89	0.99

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.59	0.23	0.09	0.03	0.04	0.12	0.23	0.35	0.46	0.54	0.62	0.72
ZF	0.64	0.27	0.14	0.08	0.09	0.16	0.28	0.39	0.50	0.58	0.67	0.77

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.24	0.12	0.26	0.32	0.31	0.23	0.12	0.00	0.11	0.19	0.27	0.37
ZN	0.44	0.08	0.06	0.12	0.11	0.03	0.08	0.20	0.31	0.39	0.47	0.57

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.556	1.375	9555.625
Q.ED.Red	4.503	1.875	9560.750
Q.ED.Green	4.918	0.750	9520.750
Q.ED.Blue		-0.250	9490.375
Q.ED.Gold		0.000	9466.625