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	107.3813	107.122	1.557	1.92
ZF	114.0938	114.030	2.387	4.07
ZN	117.9688	117.310	3.258	6.66
2y	100.750	100.2400	1.589	#VALUE!
5y	101.178	101.0570	2.479	#VALUE!
10y	99.797	99.2550	3.505	#VALUE!

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	97.268	2.733	3	0.008	MAR	White Pack
EDAM08	97.685	2.315	94	0.257	JUN	
EDAU08	97.795	2.205	185	0.506	SEP	
EDAZ08	97.775	2.225	276	0.756	DEC	
EDAH09	97.705	2.295	367	1.005	MAR	Red Pack
EDAM09	97.555	2.445	458	1.254	JUN	
EDAU09	97.345	2.655	549	1.503	SEP	
EDAZ09	97.100	2.900	640	1.753	DEC	
EDAH10	96.885	3.115	731	2.002	MAR	Green Pack
EDAM10	96.655	3.345	822	2.251	JUN	
EDAU10	96.450	3.550	913	2.501	SEP	
EDAZ10	96.260	3.740	1004	2.750	DEC	
EDAH11	96.090	3.910	1095	2.999	MAR	Blue Pack
EDAM11	95.935	4.065	1186	3.249	JUN	
EDAU11	95.795	4.205	1284	3.517	SEP	
EDAZ11	95.655	4.345	1375	3.766	DEC	
EDAH12	95.470	4.530	1466	4.016	MAR	Gold Pack
EDAM12	95.345	4.655	1557	4.265	JUN	
EDAU12	95.230	4.770	1648	4.514	SEP	
EDAU12	95.230	4.770	1648	4.514	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	2.417	-2.188	9763.063	Pack Prices
Q.ED.Red	2.627	2.625	9742.625	
Q.ED.Green	3.516	4.875	9656.250	
Q.ED.Blue	4.232	6.375	9586.875	
Q.ED.Gold	4.832	0.250	9529.000	

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

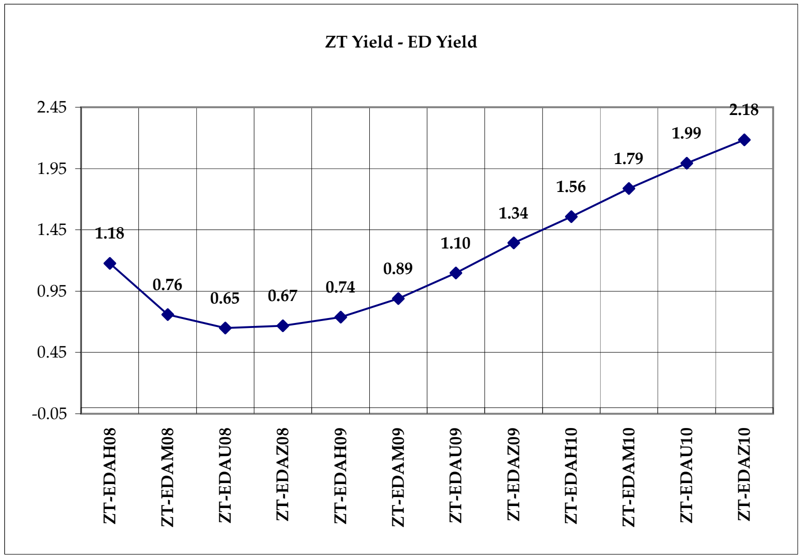
Eurodollar Color Codes for Individual Year Strips:

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

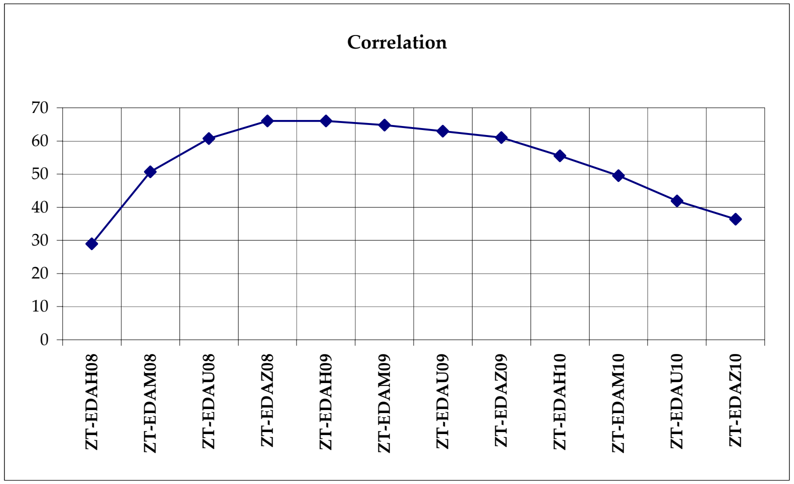
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	10.114	1.18	ZT-EDAH08	29.002
EDAM08	9.696	0.76	ZT-EDAM08	50.680
EDAU08	9.586	0.65	ZT-EDAU08	60.708
EDAZ08	9.606	0.67	ZT-EDAZ08	66.027
EDAH09	9.676	0.74	ZT-EDAH09	66.073
EDAM09	9.826	0.89	ZT-EDAM09	64.786
EDAU09	10.036	1.10	ZT-EDAU09	62.975
EDAZ09	10.281	1.34	ZT-EDAZ09	61.051
EDAH10	10.496	1.56	ZT-EDAH10	55.494
EDAM10	10.726	1.79	ZT-EDAM10	49.502
EDAU10	10.931	1.99	ZT-EDAU10	41.881
EDAZ10	11.121	2.18	ZT-EDAZ10	36.430

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	
EDAH08	0.008	1.92	1.92	ZT-EDAH08
EDAM08	0.257	1.92	1.67	ZT-EDAM08
EDAU08	0.506	1.92	1.42	ZT-EDAU08
EDAZ08	0.756	1.92	1.17	ZT-EDAZ08
EDAH09	1.005	1.92	0.92	ZT-EDAH09
EDAM09	1.254	1.92	0.67	ZT-EDAM09
EDAU09	1.503	1.92	0.42	ZT-EDAU09
EDAZ09	1.753	1.92	0.17	ZT-EDAZ09
EDAH10	2.002	1.92	(0.08)	ZT-EDAH10
EDAM10	2.251	1.92	(0.33)	ZT-EDAM10
EDAU10	2.501	1.92	(0.58)	ZT-EDAU10
EDAZ10	2.750	1.92	(0.83)	ZT-EDAZ10

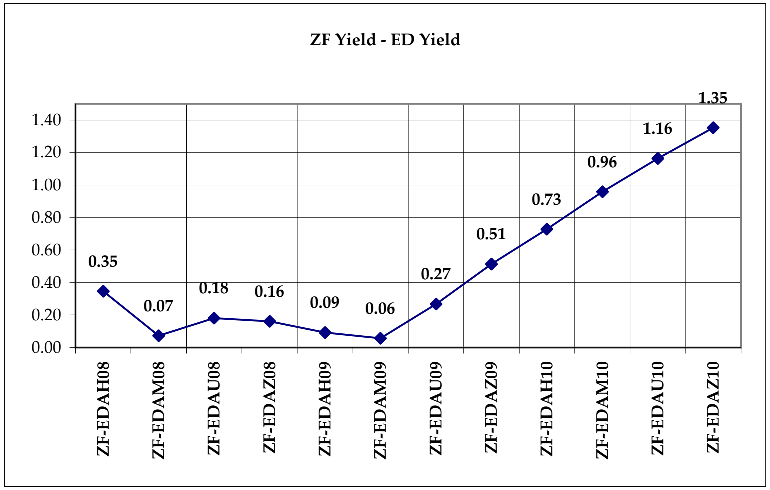
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

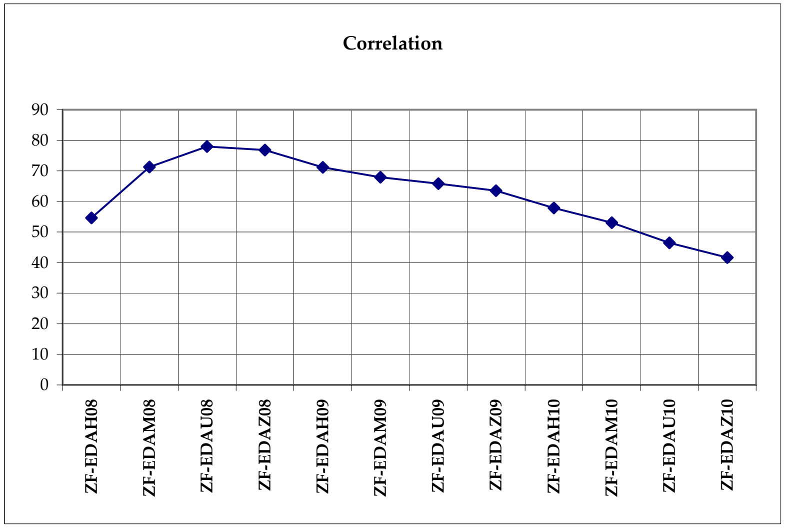
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	16.83	0.35	ZF-EDAH08	54.627
EDAM08	16.41	0.07	ZF-EDAM08	71.265
EDAU08	16.30	0.18	ZF-EDAU08	77.955
EDAZ08	16.32	0.16	ZF-EDAZ08	76.779
EDAH09	16.39	0.09	ZF-EDAH09	71.174
EDAM09	16.54	0.06	ZF-EDAM09	67.961
EDAU09	16.75	0.27	ZF-EDAU09	65.833
EDAZ09	16.99	0.51	ZF-EDAZ09	63.548
EDAH10	17.21	0.73	ZF-EDAH10	57.902
EDAM10	17.44	0.96	ZF-EDAM10	53.016
EDAU10	17.64	1.16	ZF-EDAU10	46.501
EDAZ10	17.83	1.35	ZF-EDAZ10	41.625

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	
EDAH08	0.008	4.07	4.07	ZF-EDAH08
EDAM08	0.257	4.07	3.82	ZF-EDAM08
EDAU08	0.506	4.07	3.57	ZF-EDAU08
EDAZ08	0.756	4.07	3.32	ZF-EDAZ08
EDAH09	1.005	4.07	3.07	ZF-EDAH09
EDAM09	1.254	4.07	2.82	ZF-EDAM09
EDAU09	1.503	4.07	2.57	ZF-EDAU09
EDAZ09	1.753	4.07	2.32	ZF-EDAZ09
EDAH10	2.002	4.07	2.07	ZF-EDAH10
EDAM10	2.251	4.07	1.82	ZF-EDAM10
EDAU10	2.501	4.07	1.57	ZF-EDAU10
EDAZ10	2.750	4.07	1.32	ZF-EDAZ10

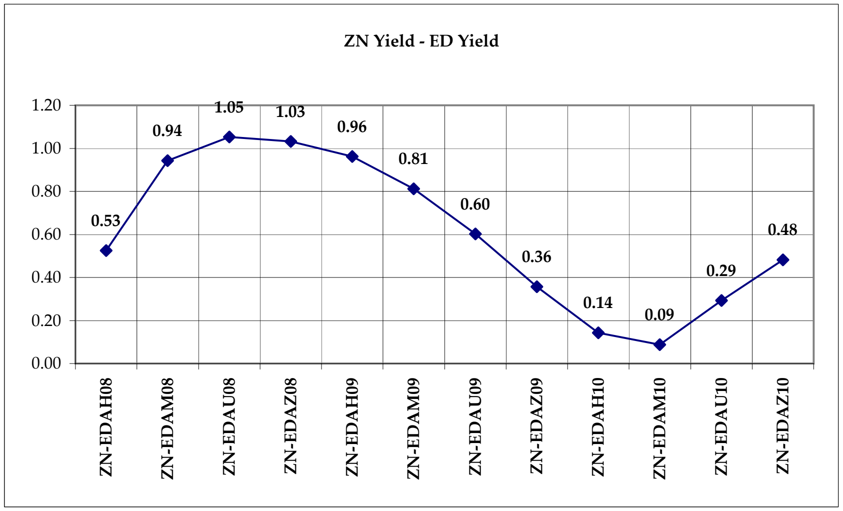
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

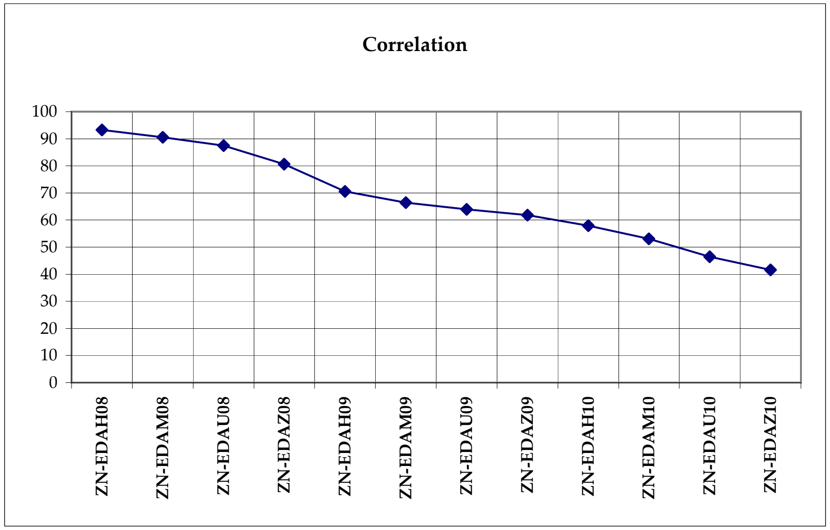
	ZN Spread Price	ZN Spread Yield	ZN Spread Name	Correlation* (percent)
EDAH08	20.70	0.53	ZN-EDAH08	93.22
EDAM08	20.28	0.94	ZN-EDAM08	90.59
EDAU08	20.17	1.05	ZN-EDAU08	87.43
EDAZ08	20.19	1.03	ZN-EDAZ08	80.60
EDAH09	20.26	0.96	ZN-EDAH09	70.57
EDAM09	20.41	0.81	ZN-EDAM09	66.39
EDAU09	20.62	0.60	ZN-EDAU09	63.93
EDAZ09	20.87	0.36	ZN-EDAZ09	61.87
EDAH10	21.08	0.14	ZN-EDAH10	57.90
EDAM10	21.31	0.09	ZN-EDAM10	53.02
EDAU10	21.52	0.29	ZN-EDAU10	46.50
EDAZ10	21.71	0.48	ZN-EDAZ10	41.62

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	
EDAH08	0.008	6.66	6.65	ZN-EDAH08
EDAM08	0.257	6.66	6.40	ZN-EDAM08
EDAU08	0.506	6.66	6.15	ZN-EDAU08
EDAZ08	0.756	6.66	5.91	ZN-EDAZ08
EDAH09	1.005	6.66	5.66	ZN-EDAH09
EDAM09	1.254	6.66	5.41	ZN-EDAM09
EDAU09	1.503	6.66	5.16	ZN-EDAU09
EDAZ09	1.753	6.66	4.91	ZN-EDAZ09
EDAH10	2.002	6.66	4.66	ZN-EDAH10
EDAM10	2.251	6.66	4.41	ZN-EDAM10
EDAU10	2.501	6.66	4.16	ZN-EDAU10
EDAZ10	2.750	6.66	3.91	ZN-EDAZ10

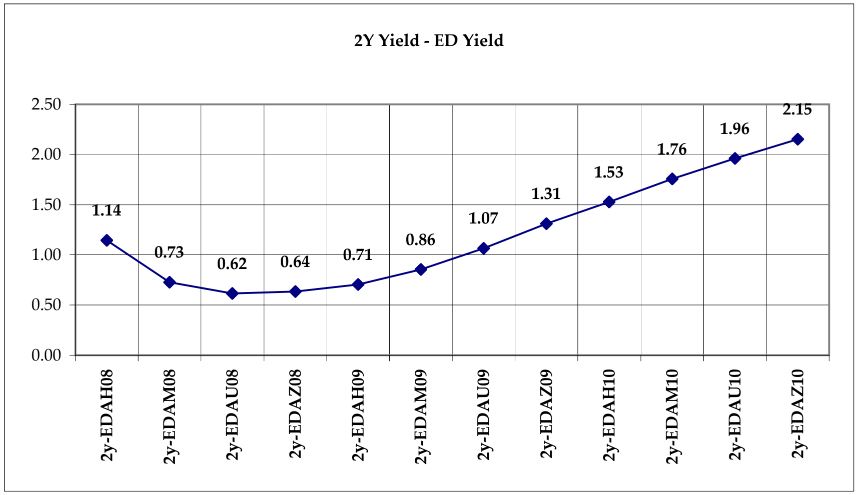
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

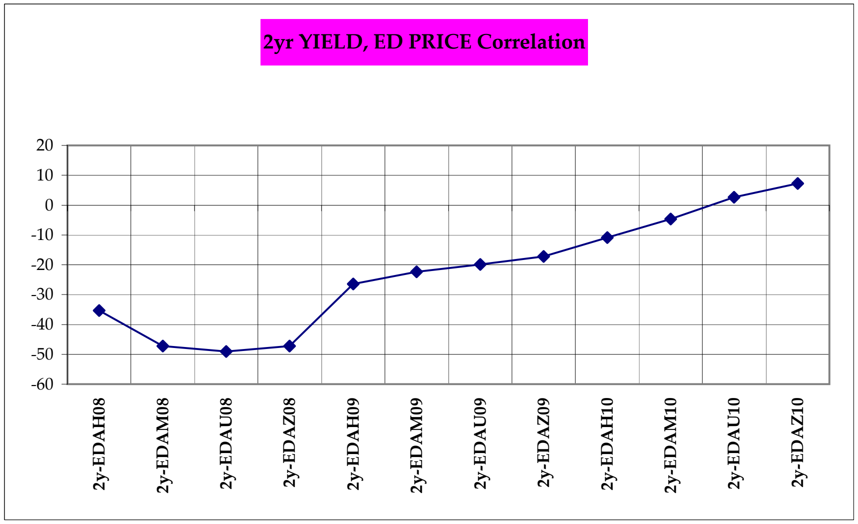
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.48	1.14	2y-EDAH08	-35.369
EDAM08	3.07	0.73	2y-EDAM08	-47.269
EDAU08	2.96	0.62	2y-EDAU08	-49.037
EDAZ08	2.98	0.64	2y-EDAZ08	-47.269
EDAH09	3.05	0.71	2y-EDAH09	-26.403
EDAM09	3.20	0.86	2y-EDAM09	-22.372
EDAU09	3.41	1.07	2y-EDAU09	-19.925
EDAZ09	3.65	1.31	2y-EDAZ09	-17.206
EDAH10	3.87	1.53	2y-EDAH10	-10.926
EDAM10	4.10	1.76	2y-EDAM10	-4.631
EDAU10	4.30	1.96	2y-EDAU10	2.605
EDAZ10	4.49	2.15	2y-EDAZ10	7.216

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	
EDAH08	0.008	#VALUE!	#VALUE!	2y-EDAH08
EDAM08	0.257	#VALUE!	#VALUE!	2y-EDAM08
EDAU08	0.506	#VALUE!	#VALUE!	2y-EDAU08
EDAZ08	0.756	#VALUE!	#VALUE!	2y-EDAZ08
EDAH09	1.005	#VALUE!	#VALUE!	2y-EDAH09
EDAM09	1.254	#VALUE!	#VALUE!	2y-EDAM09
EDAU09	1.503	#VALUE!	#VALUE!	2y-EDAU09
EDAZ09	1.753	#VALUE!	#VALUE!	2y-EDAZ09
EDAH10	2.002	#VALUE!	#VALUE!	2y-EDAH10
EDAM10	2.251	#VALUE!	#VALUE!	2y-EDAM10
EDAU10	2.501	#VALUE!	#VALUE!	2y-EDAU10
EDAZ10	2.750	#VALUE!	#VALUE!	2y-EDAZ10

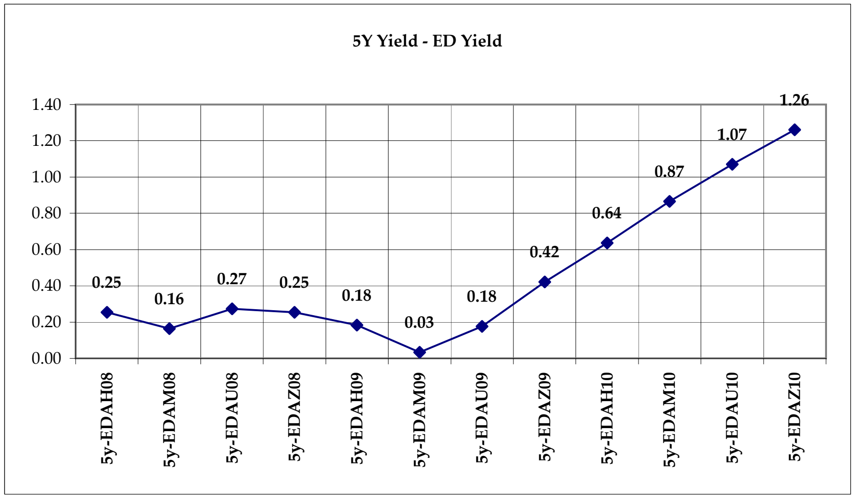
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

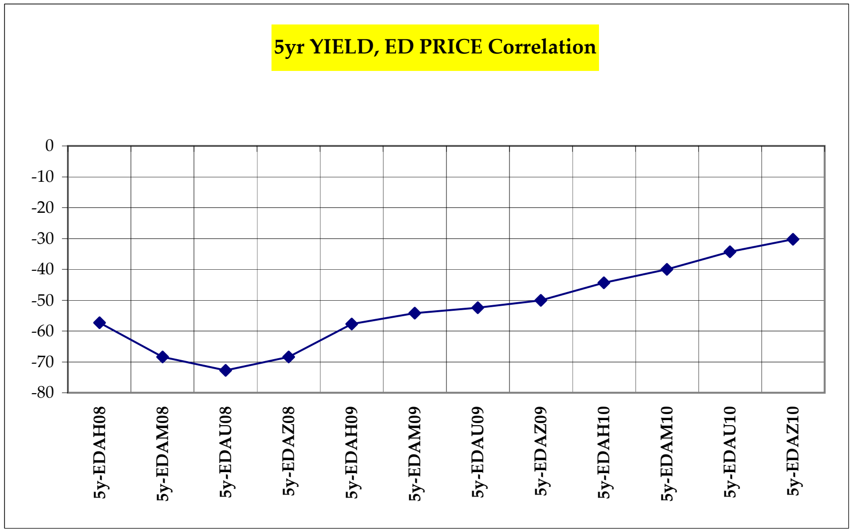
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.91	0.25	5y-EDAH08	-57.310
EDAM08	3.49	0.16	5y-EDAM08	-68.444
EDAU08	3.38	0.27	5y-EDAU08	-72.763
EDAZ08	3.40	0.25	5y-EDAZ08	-68.444
EDAH09	3.47	0.18	5y-EDAH09	-57.770
EDAM09	3.62	0.03	5y-EDAM09	-54.150
EDAU09	3.83	0.18	5y-EDAU09	-52.466
EDAZ09	4.08	0.42	5y-EDAZ09	-50.096
EDAH10	4.29	0.64	5y-EDAH10	-44.361
EDAM10	4.52	0.87	5y-EDAM10	-39.988
EDAU10	4.73	1.07	5y-EDAU10	-34.270
EDAZ10	4.92	1.26	5y-EDAZ10	-30.290

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	
EDAH08	0.008	#VALUE!	#VALUE!	5y-EDAH08
EDAM08	0.257	#VALUE!	#VALUE!	5y-EDAM08
EDAU08	0.506	#VALUE!	#VALUE!	5y-EDAU08
EDAZ08	0.756	#VALUE!	#VALUE!	5y-EDAZ08
EDAH09	1.005	#VALUE!	#VALUE!	5y-EDAH09
EDAM09	1.254	#VALUE!	#VALUE!	5y-EDAM09
EDAU09	1.503	#VALUE!	#VALUE!	5y-EDAU09
EDAZ09	1.753	#VALUE!	#VALUE!	5y-EDAZ09
EDAH10	2.002	#VALUE!	#VALUE!	5y-EDAH10
EDAM10	2.251	#VALUE!	#VALUE!	5y-EDAM10
EDAU10	2.501	#VALUE!	#VALUE!	5y-EDAU10
EDAZ10	2.750	#VALUE!	#VALUE!	5y-EDAZ10

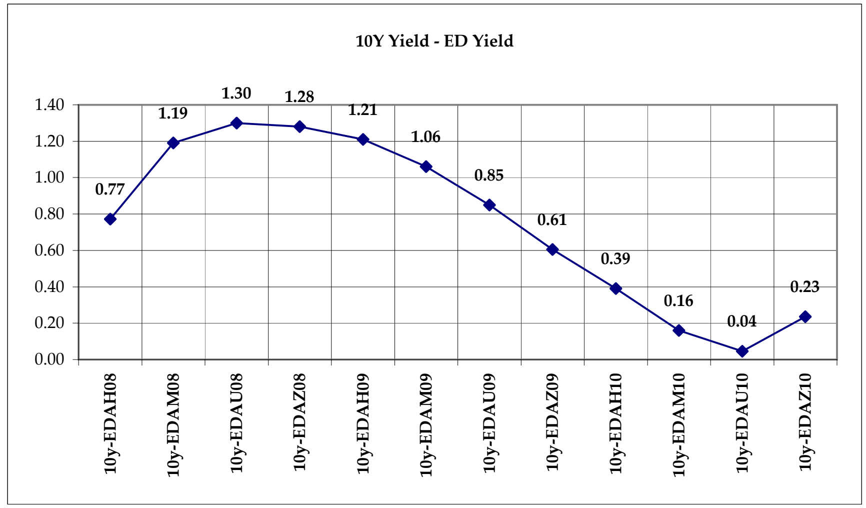
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

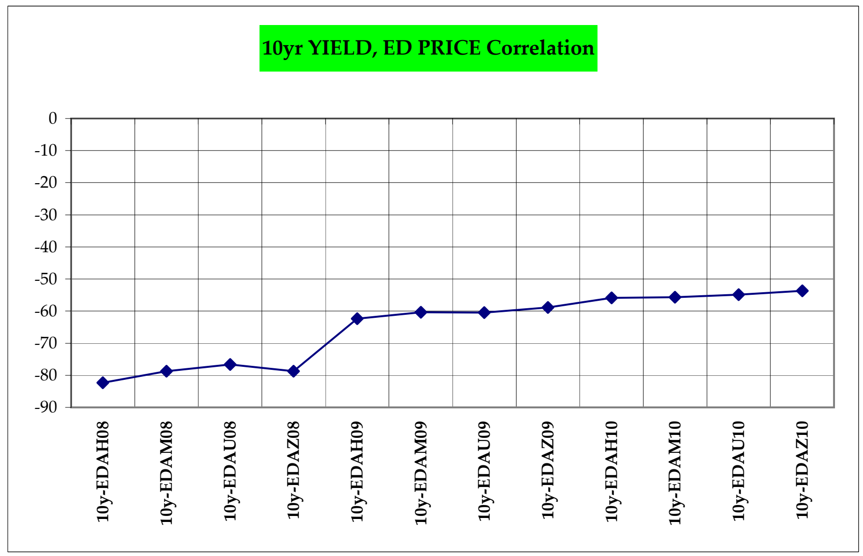
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.91	0.77	10y-EDAH08	-82.293
EDAM08	3.49	1.19	10y-EDAM08	-78.717
EDAU08	3.38	1.30	10y-EDAU08	-76.650
EDAZ08	3.40	1.28	10y-EDAZ08	-78.717
EDAH09	3.47	1.21	10y-EDAH09	-62.335
EDAM09	3.62	1.06	10y-EDAM09	-60.323
EDAU09	3.83	0.85	10y-EDAU09	-60.476
EDAZ09	4.08	0.61	10y-EDAZ09	-58.888
EDAH10	4.29	0.39	10y-EDAH10	-55.838
EDAM10	4.52	0.16	10y-EDAM10	-55.677
EDAU10	4.73	0.04	10y-EDAU10	-54.849
EDAZ10	4.92	0.23	10y-EDAZ10	-53.662

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.



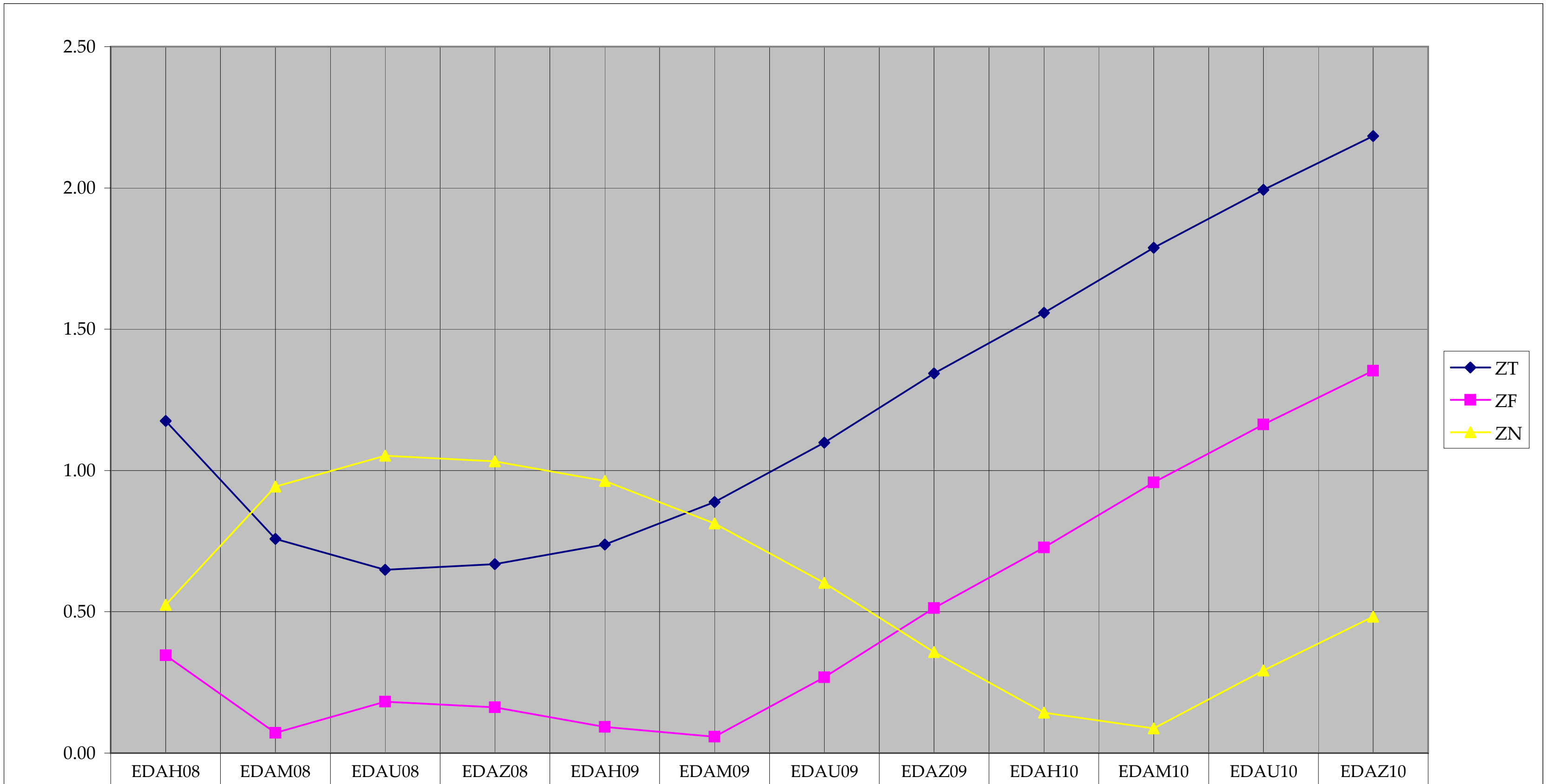
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAH08	0.008	#VALUE!	#VALUE!	10y-EDAH08
EDAM08	0.257	#VALUE!	#VALUE!	10y-EDAM08
EDAU08	0.506	#VALUE!	#VALUE!	10y-EDAU08
EDAZ08	0.756	#VALUE!	#VALUE!	10y-EDAZ08
EDAH09	1.005	#VALUE!	#VALUE!	10y-EDAH09
EDAM09	1.254	#VALUE!	#VALUE!	10y-EDAM09
EDAU09	1.503	#VALUE!	#VALUE!	10y-EDAU09
EDAZ09	1.753	#VALUE!	#VALUE!	10y-EDAZ09
EDAH10	2.002	#VALUE!	#VALUE!	10y-EDAH10
EDAM10	2.251	#VALUE!	#VALUE!	10y-EDAM10
EDAU10	2.501	#VALUE!	#VALUE!	10y-EDAU10
EDAZ10	2.750	#VALUE!	#VALUE!	10y-EDAZ10

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



Dirty TED Curve

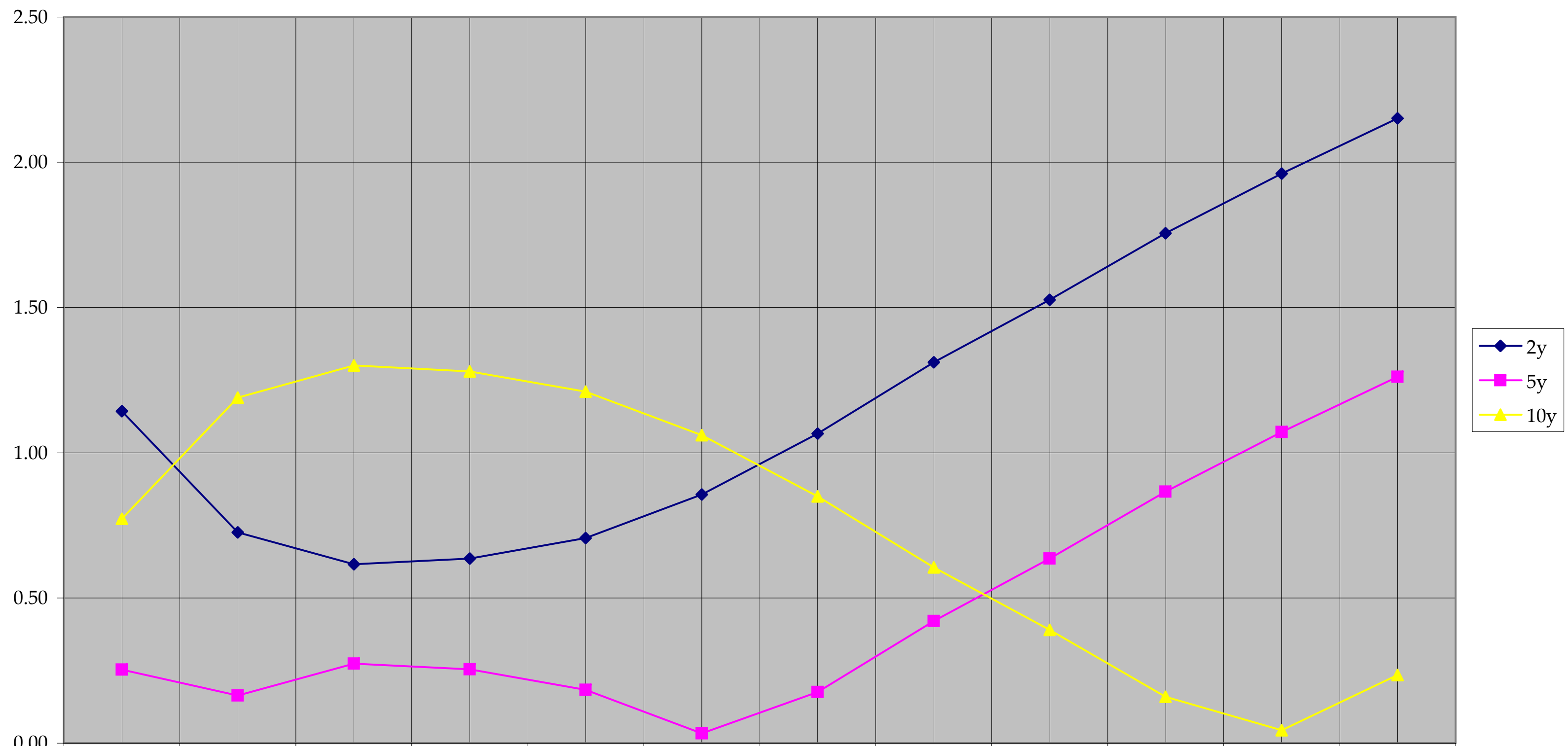
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.18	0.76	0.65	0.67	0.74	0.89	1.10	1.34	1.56	1.79	1.99	2.18
ZF	0.35	0.07	0.18	0.16	0.09	0.06	0.27	0.51	0.73	0.96	1.16	1.35
ZN	0.53	0.94	1.05	1.03	0.96	0.81	0.60	0.36	0.14	0.09	0.29	0.48

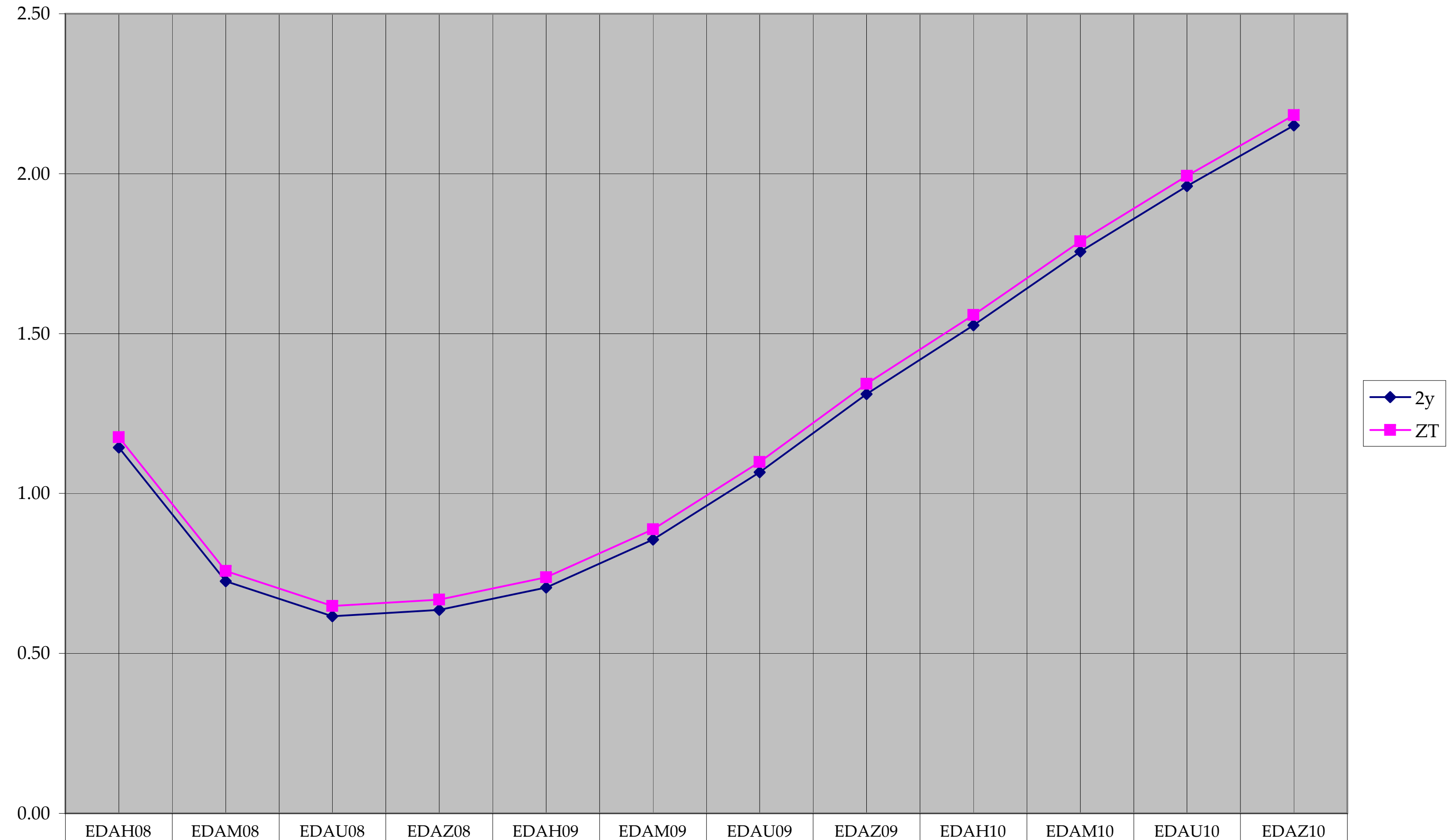
TED Curve

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.



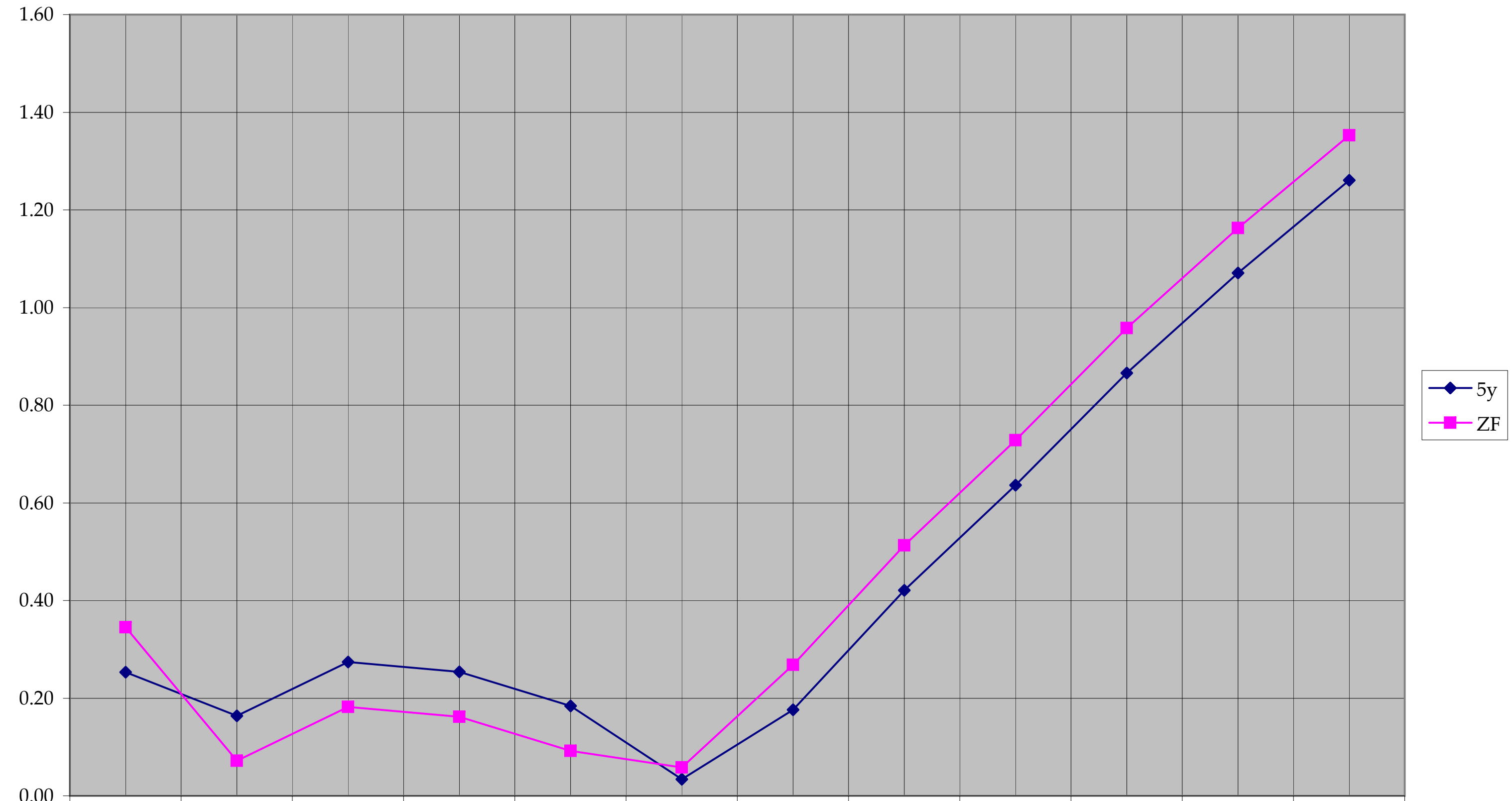
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.14	0.73	0.62	0.64	0.71	0.86	1.07	1.31	1.53	1.76	1.96	2.15
5y	0.25	0.16	0.27	0.25	0.18	0.03	0.18	0.42	0.64	0.87	1.07	1.26
10y	0.77	1.19	1.30	1.28	1.21	1.06	0.85	0.61	0.39	0.16	0.04	0.23

2y Basis TED Curve



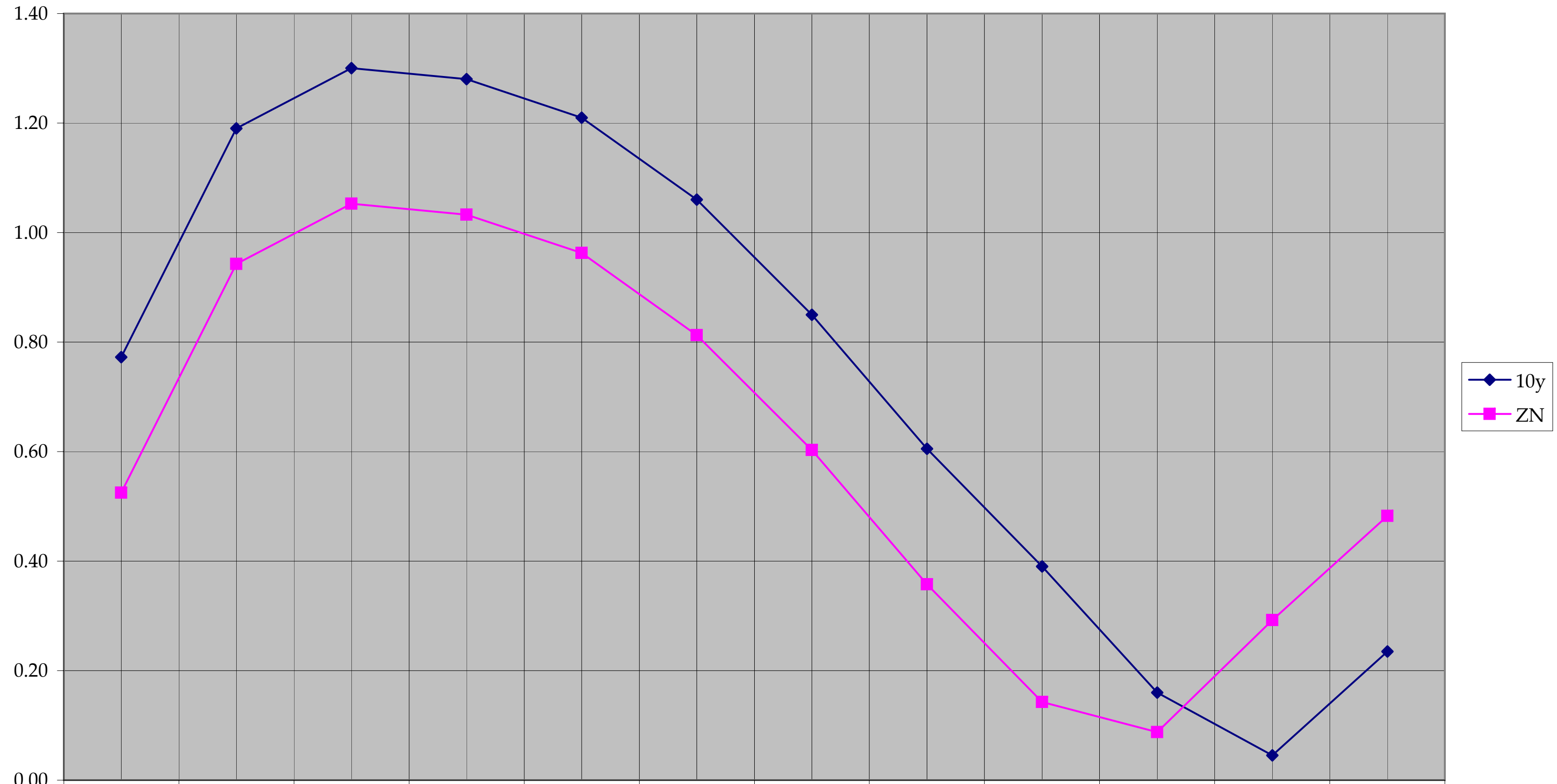
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.14	0.73	0.62	0.64	0.71	0.86	1.07	1.31	1.53	1.76	1.96	2.15
ZT	1.18	0.76	0.65	0.67	0.74	0.89	1.10	1.34	1.56	1.79	1.99	2.18

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.25	0.16	0.27	0.25	0.18	0.03	0.18	0.42	0.64	0.87	1.07	1.26
ZF	0.35	0.07	0.18	0.16	0.09	0.06	0.27	0.51	0.73	0.96	1.16	1.35

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.77	1.19	1.30	1.28	1.21	1.06	0.85	0.61	0.39	0.16	0.04	0.23
ZN	0.53	0.94	1.05	1.03	0.96	0.81	0.60	0.36	0.14	0.09	0.29	0.48

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	2.417	-2.188	9763.063
Q.ED.Red	2.627	2.625	9742.625
Q.ED.Green	3.516	4.875	9656.250
Q.ED.Blue	4.232	6.375	9586.875
Q.ED.Gold	4.832	0.250	9529.000