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

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Quotes

	F.I. Futures and Cash			
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	107.5625	107.180	1.498	1.90
ZF	114.6000	114.192	2.283	4.08
ZN	118.5625	118.180	3.179	6.68
2y	100.928	100.2970	1.514	1.92
5y	101.709	101.2270	2.378	4.62
10y	100.734	100.2350	3.410	8.31

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	97.248	2.753	4	0.010	MAR	White Pack
EDAM08	97.690	2.310	95	0.260	JUN	
EDAU08	97.845	2.155	186	0.509	SEP	
EDAZ08	97.840	2.160	277	0.758	DEC	
EDAH09	97.775	2.225	368	1.008	MAR	Red Pack
EDAM09	97.625	2.375	459	1.257	JUN	
EDAU09	97.425	2.575	550	1.506	SEP	
EDAZ09	97.175	2.825	641	1.756	DEC	
EDAH10	96.940	3.060	732	2.005	MAR	Green Pack
EDAM10	96.705	3.295	823	2.254	JUN	
EDAU10	96.495	3.505	914	2.503	SEP	
EDAZ10	96.310	3.690	1005	2.753	DEC	
EDAH11	96.150	3.850	1096	3.002	MAR	Blue Pack
EDAM11	95.995	4.005	1187	3.251	JUN	
EDAU11	95.840	4.160	1285	3.520	SEP	
EDAZ11	95.685	4.315	1376	3.769	DEC	
EDAH12	95.555	4.445	1467	4.019	MAR	Gold Pack
EDAM12	95.435	4.565	1558	4.268	JUN	
EDAU12	95.315	4.685	1649	4.517	SEP	
EDAU12	95.315	4.685	1649	4.517	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	2.391	6.000	9765.563	Pack Prices
Q.ED.Red	2.551	11.375	9750.000	
Q.ED.Green	3.464	10.125	9661.250	
Q.ED.Blue	4.182	9.875	9591.750	
Q.ED.Gold	4.758	5.250	9536.125	

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

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

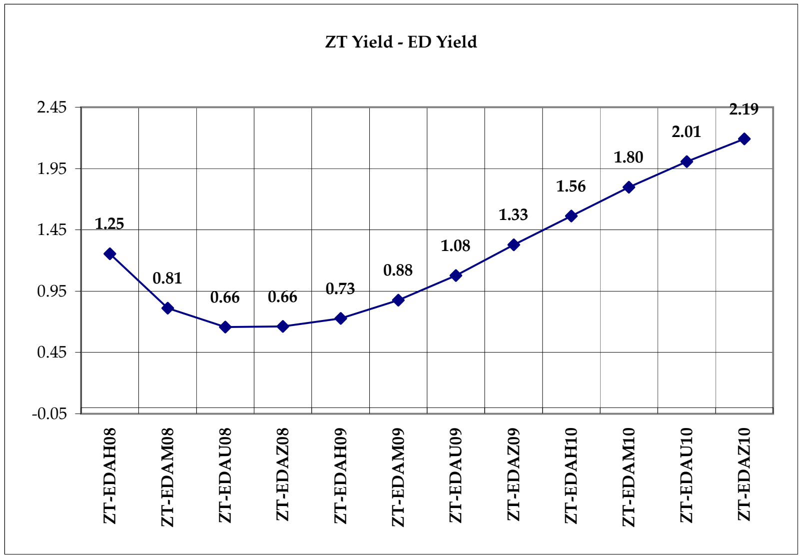
Eurodollar Color Codes for Individual Year Strips:

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

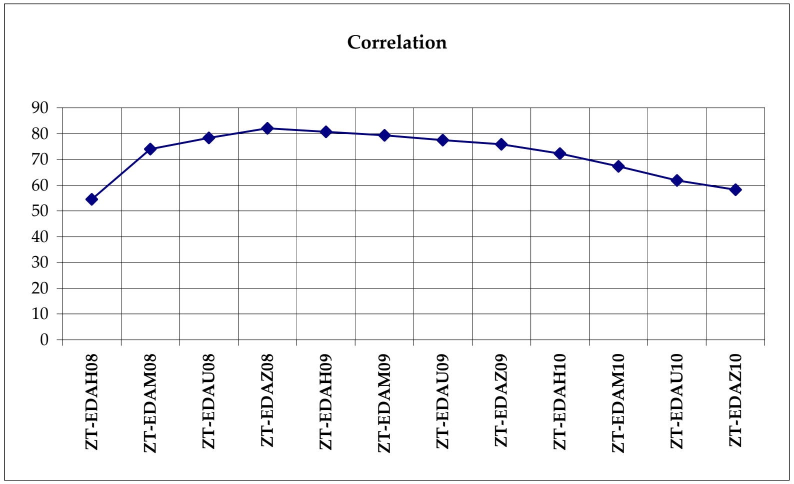
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	10.315	1.25	ZT-EDAH08	54.541
EDAM08	9.873	0.81	ZT-EDAM08	73.932
EDAU08	9.718	0.66	ZT-EDAU08	78.380
EDAZ08	9.723	0.66	ZT-EDAZ08	82.095
EDAH09	9.788	0.73	ZT-EDAH09	80.698
EDAM09	9.938	0.88	ZT-EDAM09	79.303
EDAU09	10.138	1.08	ZT-EDAU09	77.464
EDAZ09	10.388	1.33	ZT-EDAZ09	75.835
EDAH10	10.623	1.56	ZT-EDAH10	72.202
EDAM10	10.858	1.80	ZT-EDAM10	67.313
EDAU10	11.068	2.01	ZT-EDAU10	61.828
EDAZ10	11.253	2.19	ZT-EDAZ10	58.171

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	0.010	1.90	1.89	ZT-EDAH08
EDAM08	0.260	1.90	1.64	ZT-EDAM08
EDAU08	0.509	1.90	1.39	ZT-EDAU08
EDAZ08	0.758	1.90	1.14	ZT-EDAZ08
EDAH09	1.008	1.90	0.89	ZT-EDAH09
EDAM09	1.257	1.90	0.64	ZT-EDAM09
EDAU09	1.506	1.90	0.39	ZT-EDAU09
EDAZ09	1.756	1.90	0.14	ZT-EDAZ09
EDAH10	2.005	1.90	(0.11)	ZT-EDAH10
EDAM10	2.254	1.90	(0.36)	ZT-EDAM10
EDAU10	2.503	1.90	(0.61)	ZT-EDAU10
EDAZ10	2.753	1.90	(0.86)	ZT-EDAZ10

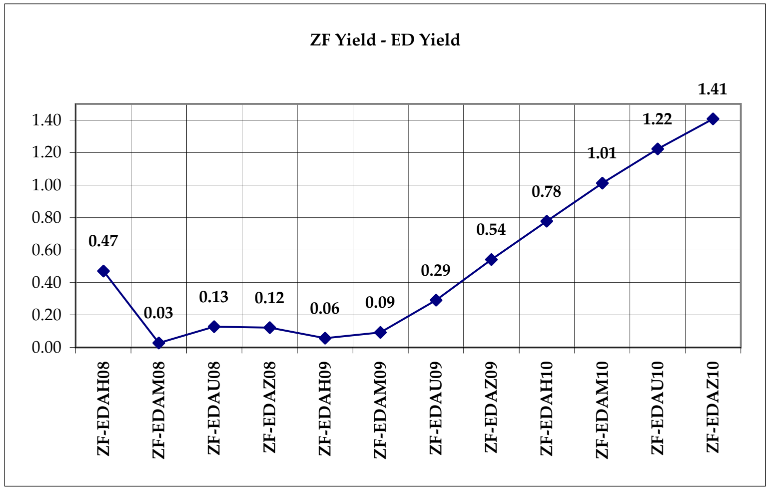
The farther away from 0 the spread duration is
the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

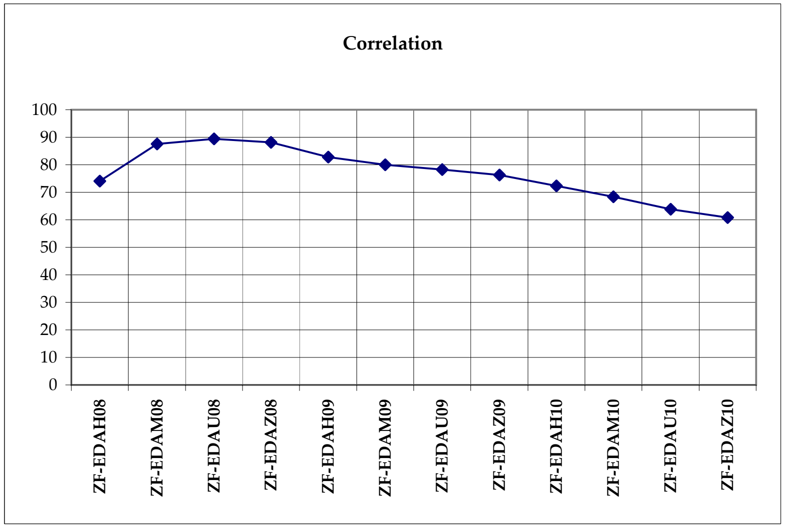
	ZF				
	Spread Price	Spread Yield	Spread Name		Correlation* (percent)
EDAH08	17.35	0.47	ZF-EDAH08		74.063
EDAM08	16.91	0.03	ZF-EDAM08		87.503
EDAU08	16.76	0.13	ZF-EDAU08		89.388
EDAZ08	16.76	0.12	ZF-EDAZ08		88.103
EDAH09	16.83	0.06	ZF-EDAH09		82.773
EDAM09	16.98	0.09	ZF-EDAM09		80.011
EDAU09	17.18	0.29	ZF-EDAU09		78.228
EDAZ09	17.43	0.54	ZF-EDAZ09		76.268
EDAH10	17.66	0.78	ZF-EDAH10		72.305
EDAM10	17.90	1.01	ZF-EDAM10		68.317
EDAU10	18.11	1.22	ZF-EDAU10		63.800
EDAZ10	18.29	1.41	ZF-EDAZ10		60.846

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	0.010	4.08	4.07	ZF-EDAH08
EDAM08	0.260	4.08	3.82	ZF-EDAM08
EDAU08	0.509	4.08	3.57	ZF-EDAU08
EDAZ08	0.758	4.08	3.33	ZF-EDAZ08
EDAH09	1.008	4.08	3.08	ZF-EDAH09
EDAM09	1.257	4.08	2.83	ZF-EDAM09
EDAU09	1.506	4.08	2.58	ZF-EDAU09
EDAZ09	1.756	4.08	2.33	ZF-EDAZ09
EDAH10	2.005	4.08	2.08	ZF-EDAH10
EDAM10	2.254	4.08	1.83	ZF-EDAM10
EDAU10	2.503	4.08	1.58	ZF-EDAU10
EDAZ10	2.753	4.08	1.33	ZF-EDAZ10

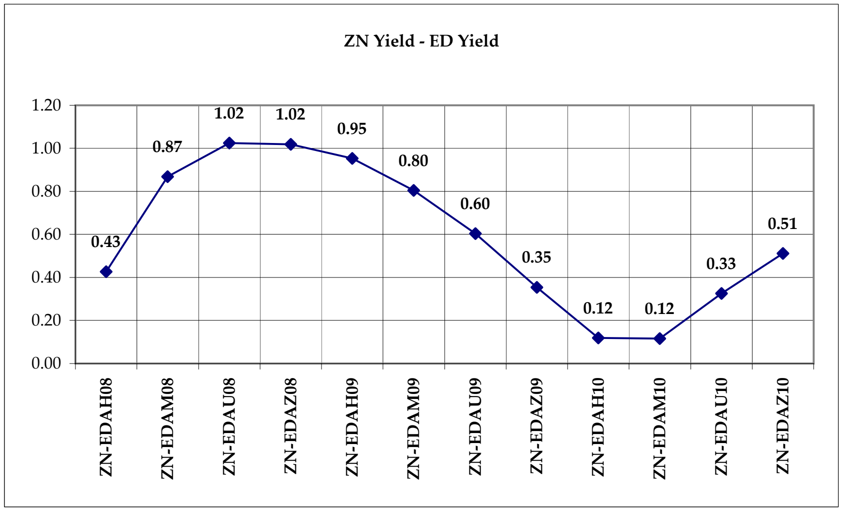
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	21.32	0.43	ZN-EDAH08	90.91
EDAM08	20.87	0.87	ZN-EDAM08	87.31
EDAU08	20.72	1.02	ZN-EDAU08	86.78
EDAZ08	20.72	1.02	ZN-EDAZ08	80.88
EDAH09	20.79	0.95	ZN-EDAH09	71.99
EDAM09	20.94	0.80	ZN-EDAM09	67.85
EDAU09	21.14	0.60	ZN-EDAU09	66.55
EDAZ09	21.39	0.35	ZN-EDAZ09	64.47
EDAH10	21.62	0.12	ZN-EDAH10	72.30
EDAM10	21.86	0.12	ZN-EDAM10	68.32
EDAU10	22.07	0.33	ZN-EDAU10	63.80
EDAZ10	22.25	0.51	ZN-EDAZ10	60.85

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	0.010	6.68	6.67	ZN-EDAH08
EDAM08	0.260	6.68	6.42	ZN-EDAM08
EDAU08	0.509	6.68	6.17	ZN-EDAU08
EDAZ08	0.758	6.68	5.92	ZN-EDAZ08
EDAH09	1.008	6.68	5.67	ZN-EDAH09
EDAM09	1.257	6.68	5.42	ZN-EDAM09
EDAU09	1.506	6.68	5.17	ZN-EDAU09
EDAZ09	1.756	6.68	4.92	ZN-EDAZ09
EDAH10	2.005	6.68	4.67	ZN-EDAH10
EDAM10	2.254	6.68	4.42	ZN-EDAM10
EDAU10	2.503	6.68	4.17	ZN-EDAU10
EDAZ10	2.753	6.68	3.92	ZN-EDAZ10

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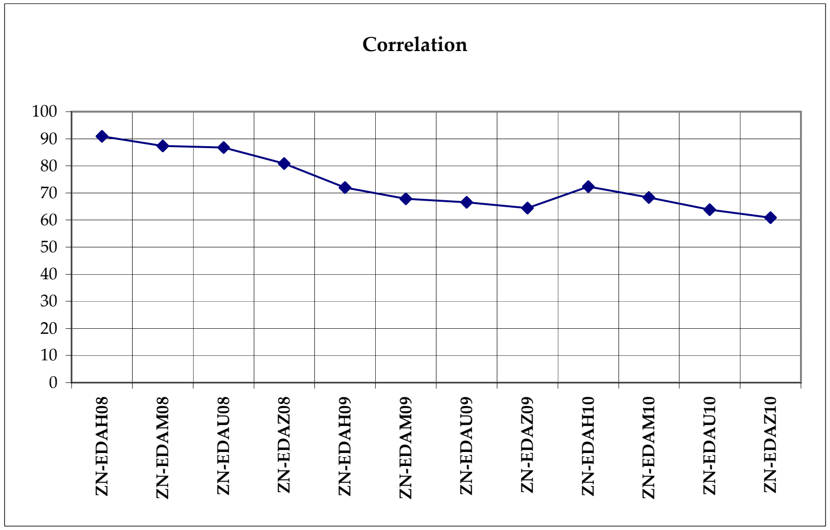
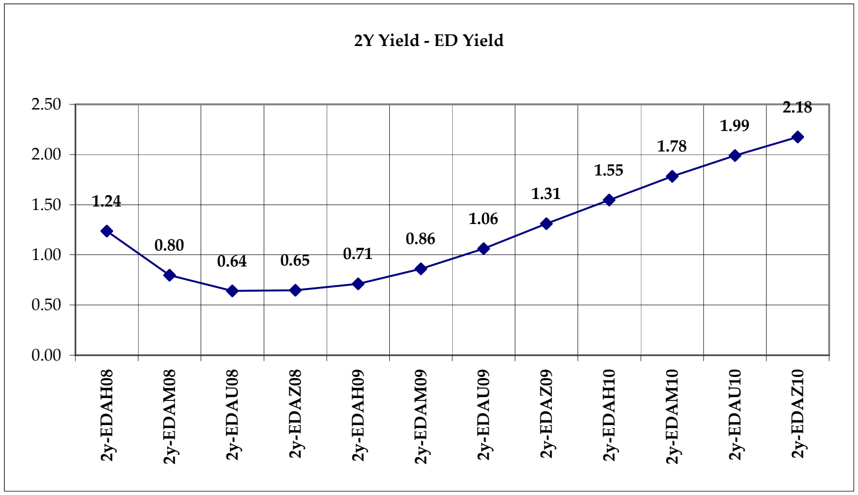


TERM TED: 2y vs Eurodollar Contracts

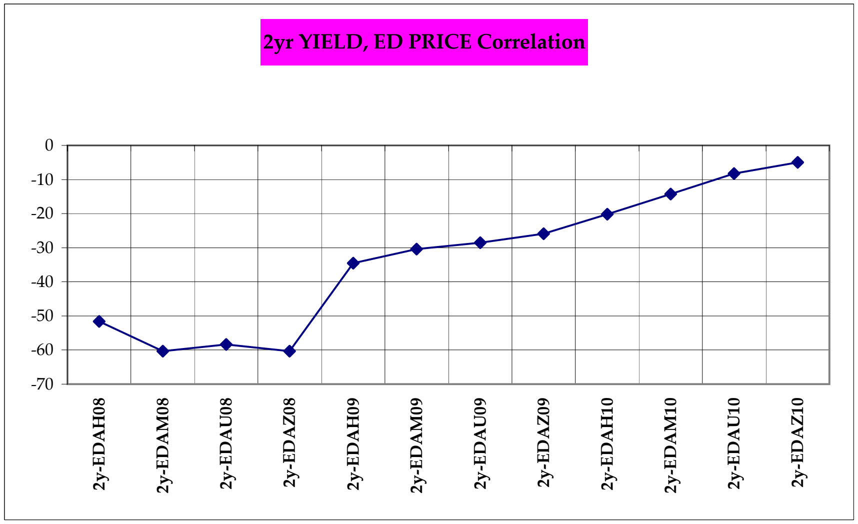
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.68	1.24	2y-EDAH08	-51.576
EDAM08	3.24	0.80	2y-EDAM08	-60.313
EDAU08	3.08	0.64	2y-EDAU08	-58.396
EDAZ08	3.09	0.65	2y-EDAZ08	-60.313
EDAH09	3.15	0.71	2y-EDAH09	-34.526
EDAM09	3.30	0.86	2y-EDAM09	-30.398
EDAU09	3.50	1.06	2y-EDAU09	-28.506
EDAZ09	3.75	1.31	2y-EDAZ09	-25.937
EDAH10	3.99	1.55	2y-EDAH10	-20.166
EDAM10	4.22	1.78	2y-EDAM10	-14.289
EDAU10	4.43	1.99	2y-EDAU10	-8.273
EDAZ10	4.62	2.18	2y-EDAZ10	-4.989

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	0.010	1.92	1.91	2y-EDAH08
EDAM08	0.260	1.92	1.66	2y-EDAM08
EDAU08	0.509	1.92	1.41	2y-EDAU08
EDAZ08	0.758	1.92	1.16	2y-EDAZ08
EDAH09	1.008	1.92	0.91	2y-EDAH09
EDAM09	1.257	1.92	0.66	2y-EDAM09
EDAU09	1.506	1.92	0.41	2y-EDAU09
EDAZ09	1.756	1.92	0.16	2y-EDAZ09
EDAH10	2.005	1.92	(0.09)	2y-EDAH10
EDAM10	2.254	1.92	(0.34)	2y-EDAM10
EDAU10	2.503	1.92	(0.59)	2y-EDAU10
EDAZ10	2.753	1.92	(0.83)	2y-EDAZ10

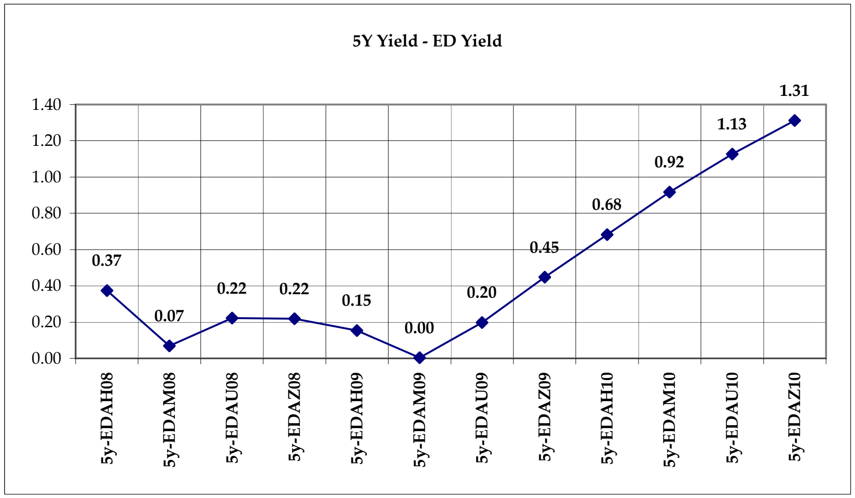
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

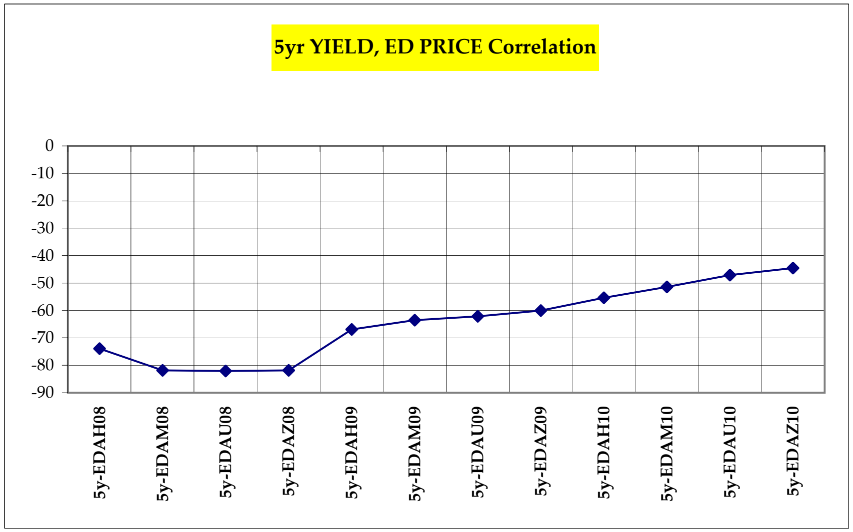
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.46	0.37	5y-EDAH08	-73.893
EDAM08	4.02	0.07	5y-EDAM08	-81.810
EDAU08	3.86	0.22	5y-EDAU08	-82.078
EDAZ08	3.87	0.22	5y-EDAZ08	-81.810
EDAH09	3.93	0.15	5y-EDAH09	-66.892
EDAM09	4.08	0.00	5y-EDAM09	-63.502
EDAU09	4.28	0.20	5y-EDAU09	-62.128
EDAZ09	4.53	0.45	5y-EDAZ09	-60.022
EDAH10	4.77	0.68	5y-EDAH10	-55.409
EDAM10	5.00	0.92	5y-EDAM10	-51.439
EDAU10	5.21	1.13	5y-EDAU10	-47.104
EDAZ10	5.40	1.31	5y-EDAZ10	-44.499

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	0.010	4.62	4.61	5y-EDAH08
EDAM08	0.260	4.62	4.36	5y-EDAM08
EDAU08	0.509	4.62	4.11	5y-EDAU08
EDAZ08	0.758	4.62	3.86	5y-EDAZ08
EDAH09	1.008	4.62	3.61	5y-EDAH09
EDAM09	1.257	4.62	3.36	5y-EDAM09
EDAU09	1.506	4.62	3.11	5y-EDAU09
EDAZ09	1.756	4.62	2.86	5y-EDAZ09
EDAH10	2.005	4.62	2.61	5y-EDAH10
EDAM10	2.254	4.62	2.36	5y-EDAM10
EDAU10	2.503	4.62	2.11	5y-EDAU10
EDAZ10	2.753	4.62	1.86	5y-EDAZ10

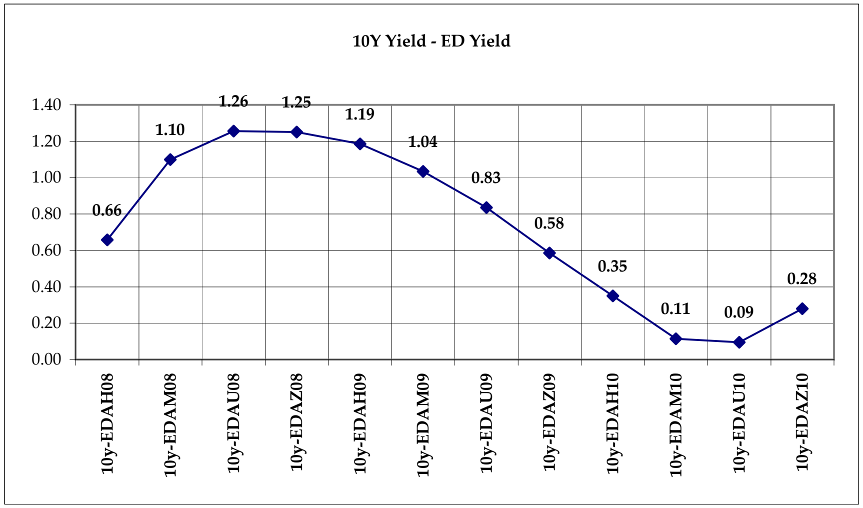
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.46	0.66	10y-EDAH08	-87.682
EDAM08	4.02	1.10	10y-EDAM08	-82.686
EDAU08	3.86	1.26	10y-EDAU08	-80.808
EDAZ08	3.87	1.25	10y-EDAZ08	-82.686
EDAH09	3.93	1.19	10y-EDAH09	-69.796
EDAM09	4.08	1.04	10y-EDAM09	-67.812
EDAU09	4.28	0.83	10y-EDAU09	-68.137
EDAZ09	4.53	0.58	10y-EDAZ09	-66.549
EDAH10	4.77	0.35	10y-EDAH10	-63.496
EDAM10	5.00	0.11	10y-EDAM10	-62.674
EDAU10	5.21	0.09	10y-EDAU10	-61.968
EDAZ10	5.40	0.28	10y-EDAZ10	-61.498

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	0.010	8.31	8.30	10y-EDAH08
EDAM08	0.260	8.31	8.05	10y-EDAM08
EDAU08	0.509	8.31	7.80	10y-EDAU08
EDAZ08	0.758	8.31	7.55	10y-EDAZ08
EDAH09	1.008	8.31	7.30	10y-EDAH09
EDAM09	1.257	8.31	7.05	10y-EDAM09
EDAU09	1.506	8.31	6.80	10y-EDAU09
EDAZ09	1.756	8.31	6.56	10y-EDAZ09
EDAH10	2.005	8.31	6.31	10y-EDAH10
EDAM10	2.254	8.31	6.06	10y-EDAM10
EDAU10	2.503	8.31	5.81	10y-EDAU10
EDAZ10	2.753	8.31	5.56	10y-EDAZ10

The farther away from 0 the spread duration is
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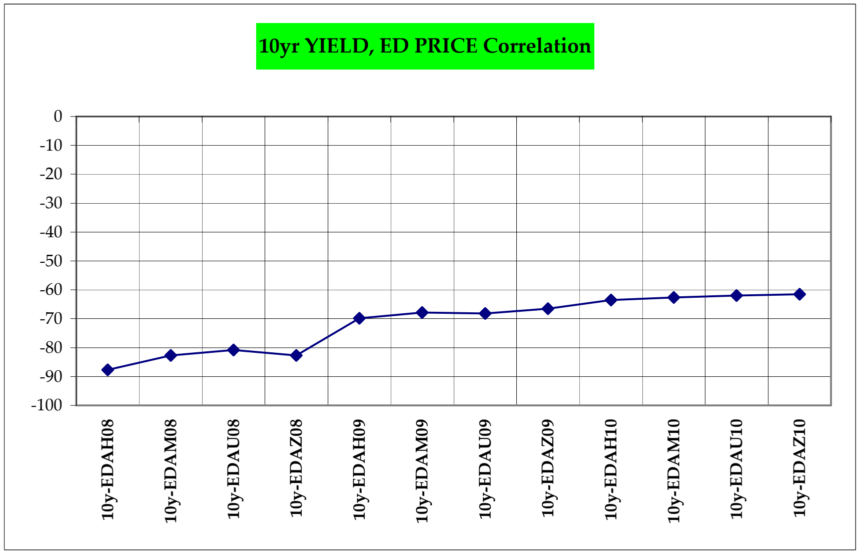
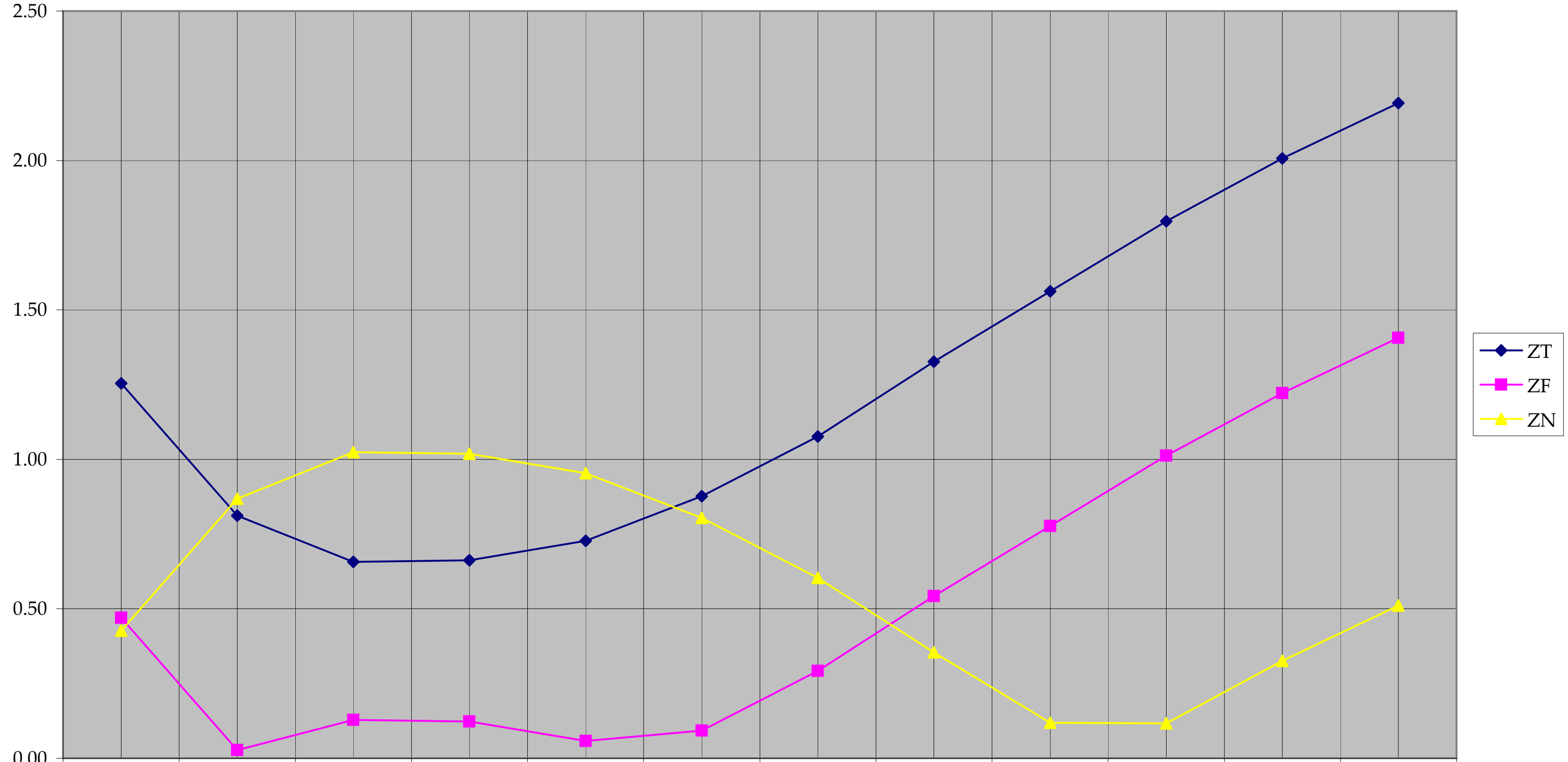


Dirty TED Curve

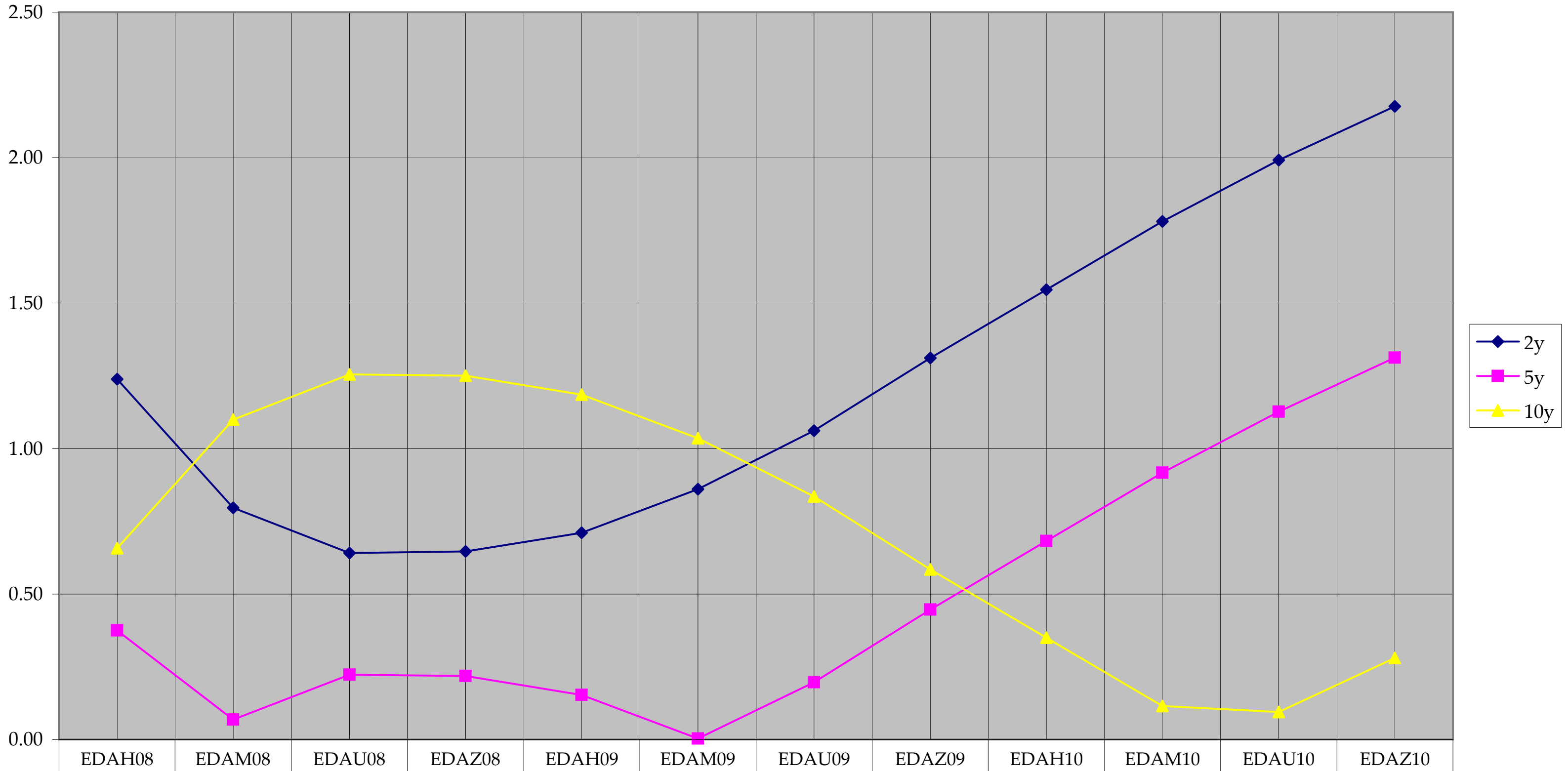
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.25	0.81	0.66	0.66	0.73	0.88	1.08	1.33	1.56	1.80	2.01	2.19
ZF	0.47	0.03	0.13	0.12	0.06	0.09	0.29	0.54	0.78	1.01	1.22	1.41
ZN	0.43	0.87	1.02	1.02	0.95	0.80	0.60	0.35	0.12	0.12	0.33	0.51

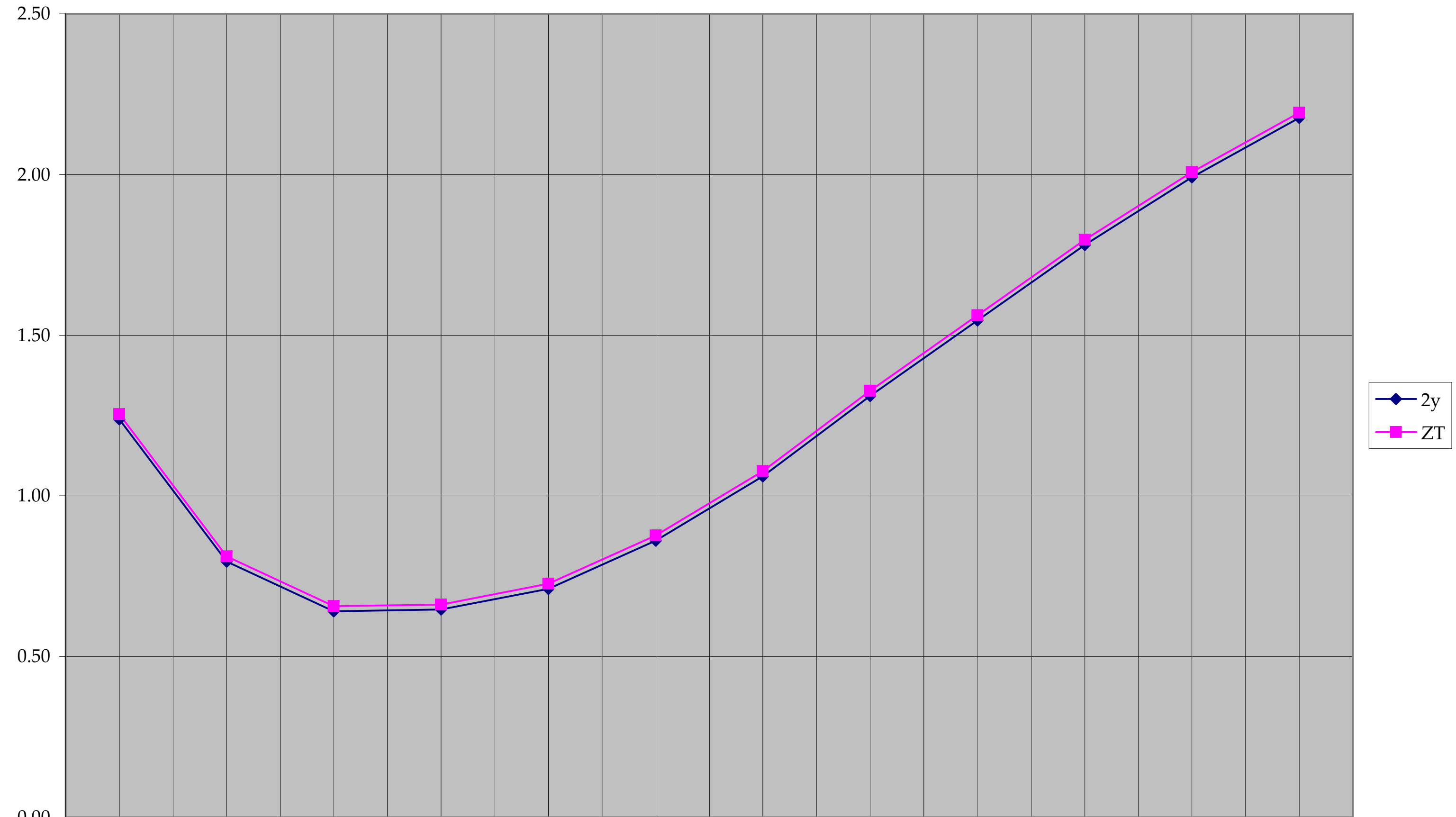
TED Curve

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.



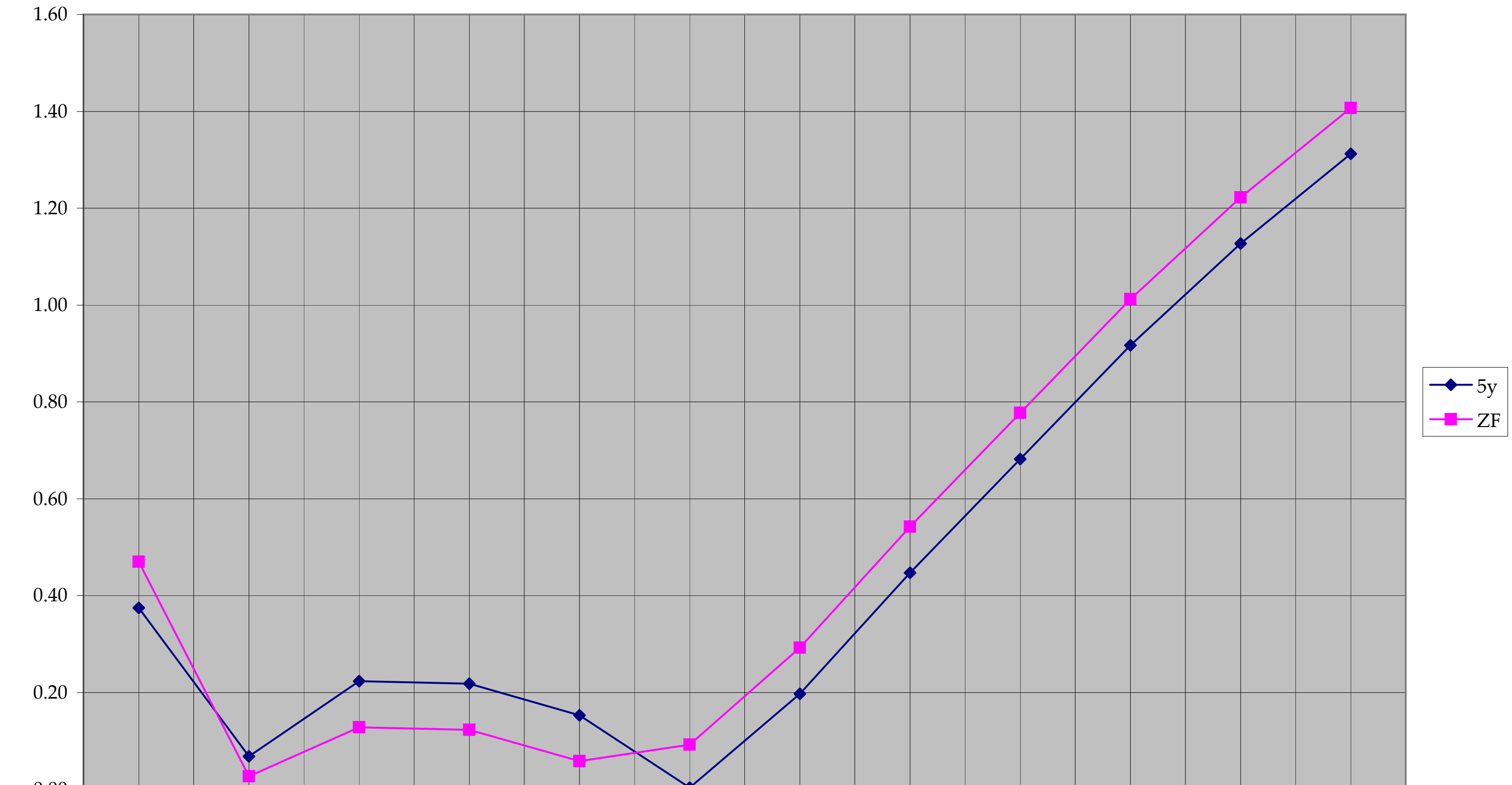
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.24	0.80	0.64	0.65	0.71	0.86	1.06	1.31	1.55	1.78	1.99	2.18
5y	0.37	0.07	0.22	0.22	0.15	0.00	0.20	0.45	0.68	0.92	1.13	1.31
10y	0.66	1.10	1.26	1.25	1.19	1.04	0.83	0.58	0.35	0.11	0.09	0.28

2y Basis TED Curve



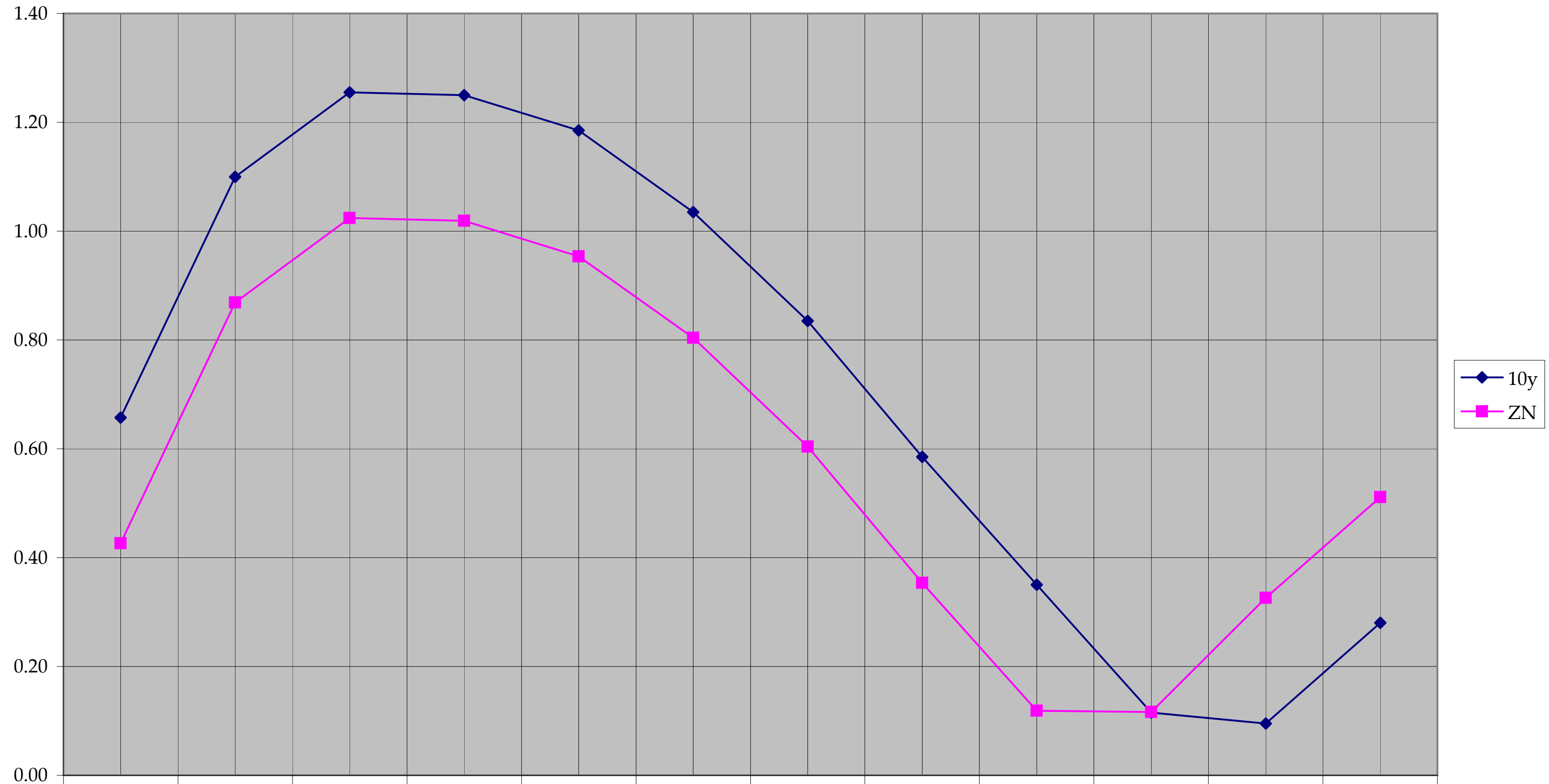
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.24	0.80	0.64	0.65	0.71	0.86	1.06	1.31	1.55	1.78	1.99	2.18
ZT	1.25	0.81	0.66	0.66	0.73	0.88	1.08	1.33	1.56	1.80	2.01	2.19

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.37	0.07	0.22	0.22	0.15	0.00	0.20	0.45	0.68	0.92	1.13	1.31
ZF	0.47	0.03	0.13	0.12	0.06	0.09	0.29	0.54	0.78	1.01	1.22	1.41

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.66	1.10	1.26	1.25	1.19	1.04	0.83	0.58	0.35	0.11	0.09	0.28
ZN	0.43	0.87	1.02	1.02	0.95	0.80	0.60	0.35	0.12	0.12	0.33	0.51

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	2.391	6.000	9765.563
Q.ED.Red	2.551	11.375	9750.000
Q.ED.Green	3.464	10.125	9661.250
Q.ED.Blue	4.182	9.875	9591.750
Q.ED.Gold	4.758	5.250	9536.125