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	104.7719	104.247	3.201	1.91
ZF	109.6719	109.215	3.517	3.99
ZN	112.5156	112.165	3.829	5.93
2y	99.828	99.2650	3.213	1.87
5y	99.234	99.0750	3.545	4.51
10y	100.766	100.2450	4.153	8.00

Eurodollars (ED)	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	95.600	4.400	90	0.246	MAR	White Pack
EDAM08	95.980	4.020	181	0.495	JUN	
EDAU08	96.215	3.785	272	0.745	SEP	
EDAZ08	96.315	3.685	363	0.994	DEC	
EDAH09	96.320	3.680	454	1.243	MAR	Red Pack
EDAM09	96.210	3.790	545	1.492	JUN	
EDAU09	96.080	3.920	636	1.742	SEP	
EDAZ09	95.940	4.060	727	1.991	DEC	
EDAH10	95.815	4.185	818	2.240	MAR	Green Pack
EDAM10	95.695	4.305	909	2.490	JUN	
EDAU10	95.595	4.405	1000	2.739	SEP	
EDAZ10	95.485	4.515	1091	2.988	DEC	
EDAH11	95.395	4.605	1182	3.238	MAR	Blue Pack
EDAM11	95.340	4.660	1273	3.487	JUN	
EDAU11	95.240	4.760	1371	3.756	SEP	
EDAZ11	95.160	4.840	1462	4.005	DEC	
EDAH12	95.075	4.925	1553	4.254	MAR	Gold Pack
EDAM12	95.020	4.980	1644	4.503	JUN	
EDAU12	94.960	5.040	1735	4.753	SEP	
EDAU12	94.960	5.040	1735	4.753	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.068	1.750	9602.750	Pack Prices
Q.ED.Red	3.954	2.000	9613.750	
Q.ED.Green	4.461	3.000	9564.750	
Q.ED.Blue		1.125	9525.125	
Q.ED.Gold		0.000	9494.125	

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

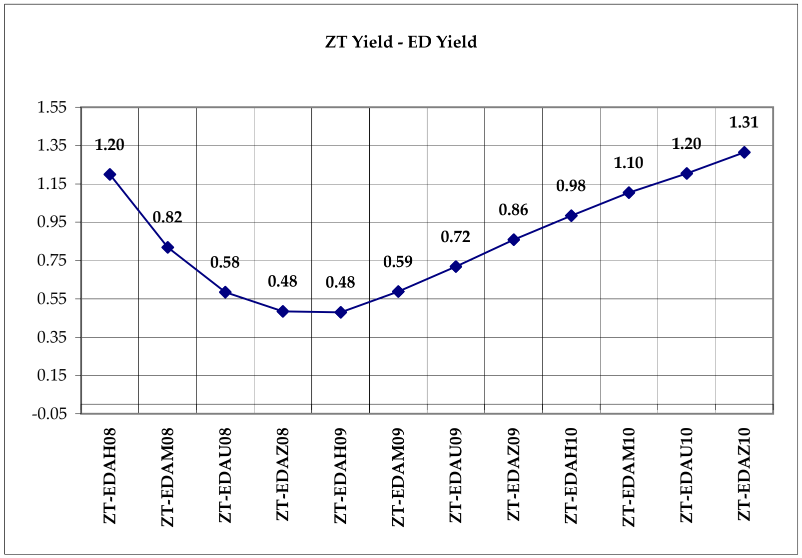
Eurodollar Color Codes for Individual Year Strips:

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

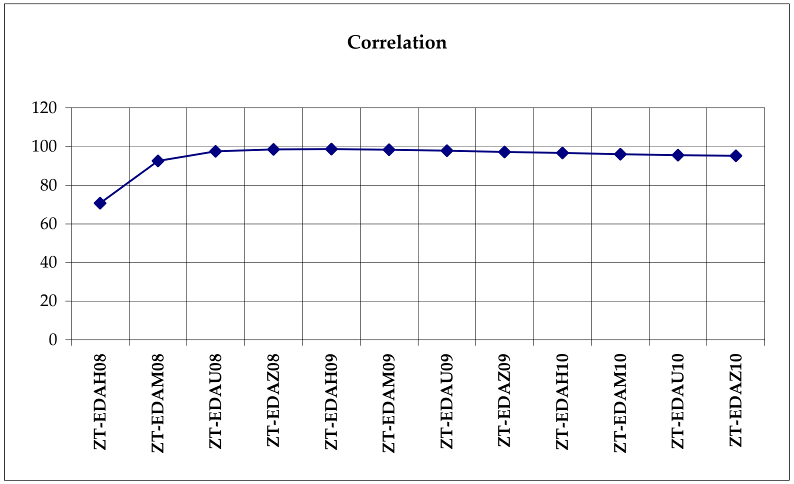
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	9.172	1.20	ZT-EDAH08	70.720
EDAM08	8.792	0.82	ZT-EDAM08	92.458
EDAU08	8.557	0.58	ZT-EDAU08	97.458
EDAZ08	8.457	0.48	ZT-EDAZ08	98.542
EDAH09	8.452	0.48	ZT-EDAH09	98.617
EDAM09	8.562	0.59	ZT-EDAM09	98.319
EDAU09	8.692	0.72	ZT-EDAU09	97.868
EDAZ09	8.832	0.86	ZT-EDAZ09	97.213
EDAH10	8.957	0.98	ZT-EDAH10	96.631
EDAM10	9.077	1.10	ZT-EDAM10	96.015
EDAU10	9.177	1.20	ZT-EDAU10	95.450
EDAZ10	9.287	1.31	ZT-EDAZ10	95.191

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	0.246	1.91	1.66	ZT-EDAH08
EDAM08	0.495	1.91	1.41	ZT-EDAM08
EDAU08	0.745	1.91	1.16	ZT-EDAU08
EDAZ08	0.994	1.91	0.91	ZT-EDAZ08
EDAH09	1.243	1.91	0.66	ZT-EDAH09
EDAM09	1.492	1.91	0.42	ZT-EDAM09
EDAU09	1.742	1.91	0.17	ZT-EDAU09
EDAZ09	1.991	1.91	(0.08)	ZT-EDAZ09
EDAH10	2.240	1.91	(0.33)	ZT-EDAH10
EDAM10	2.490	1.91	(0.58)	ZT-EDAM10
EDAU10	2.739	1.91	(0.83)	ZT-EDAU10
EDAZ10	2.988	1.91	(1.08)	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	14.07	0.88	ZF-EDAH08	68.513
EDAM08	13.69	0.50	ZF-EDAM08	89.926
EDAU08	13.46	0.27	ZF-EDAU08	95.906
EDAZ08	13.36	0.17	ZF-EDAZ08	97.808
EDAH09	13.35	0.16	ZF-EDAH09	98.292
EDAM09	13.46	0.27	ZF-EDAM09	97.868
EDAU09	13.59	0.40	ZF-EDAU09	97.490
EDAZ09	13.73	0.54	ZF-EDAZ09	96.895
EDAH10	13.86	0.67	ZF-EDAH10	96.466
EDAM10	13.98	0.79	ZF-EDAM10	96.097
EDAU10	14.08	0.89	ZF-EDAU10	95.613
EDAZ10	14.19	1.00	ZF-EDAZ10	95.339

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS(Proxy Yield - Implied Euro Contract yield)
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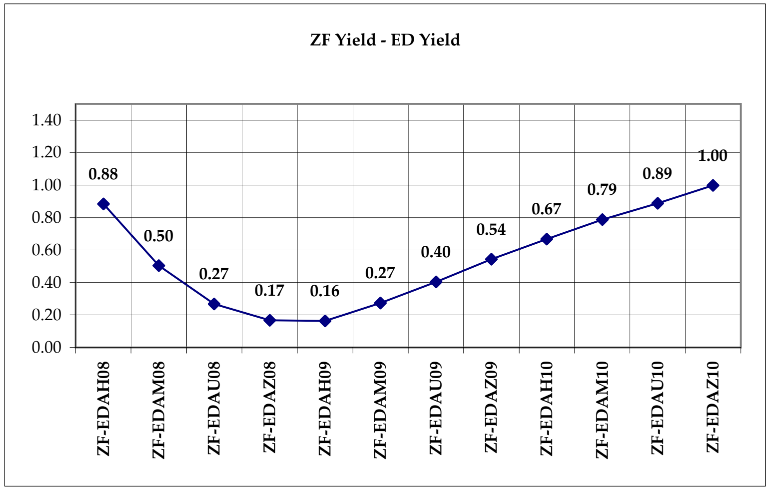
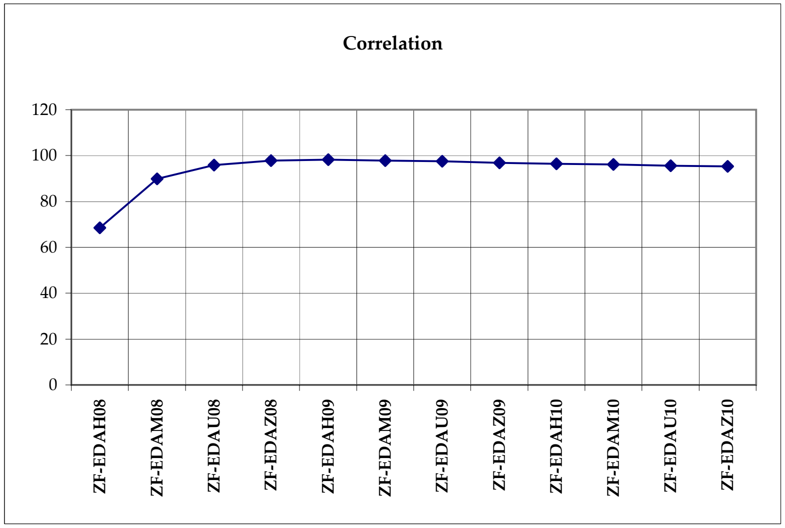


	GE Duration as Fraction of year	**ZF Duration**	**Spread Duration**	
EDAH08	0.246	3.99	3.75	ZF-EDAH08
EDAM08	0.495	3.99	3.50	ZF-EDAM08
EDAU08	0.745	3.99	3.25	ZF-EDAU08
EDAZ08	0.994	3.99	3.00	ZF-EDAZ08
EDAH09	1.243	3.99	2.75	ZF-EDAH09
EDAM09	1.492	3.99	2.50	ZF-EDAM09
EDAU09	1.742	3.99	2.25	ZF-EDAU09
EDAZ09	1.991	3.99	2.00	ZF-EDAZ09
EDAH10	2.240	3.99	1.75	ZF-EDAH10
EDAM10	2.490	3.99	1.50	ZF-EDAM10
EDAU10	2.739	3.99	1.25	ZF-EDAU10
EDAZ10	2.988	3.99	1.01	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	16.92	0.57	ZN-EDAH08	70.05
EDAM08	16.54	0.19	ZN-EDAM08	90.01
EDAU08	16.30	0.04	ZN-EDAU08	95.83
EDAZ08	16.20	0.14	ZN-EDAZ08	97.86
EDAH09	16.20	0.15	ZN-EDAH09	98.38
EDAM09	16.31	0.04	ZN-EDAM09	97.91
EDAU09	16.44	0.09	ZN-EDAU09	97.58
EDAZ09	16.58	0.23	ZN-EDAZ09	97.09
EDAH10	16.70	0.36	ZN-EDAH10	96.47
EDAM10	16.82	0.48	ZN-EDAM10	96.10
EDAU10	16.92	0.58	ZN-EDAU10	95.61
EDAZ10	17.03	0.69	ZN-EDAZ10	95.34

Price = Outright Decimal Price - Euro Contract Price
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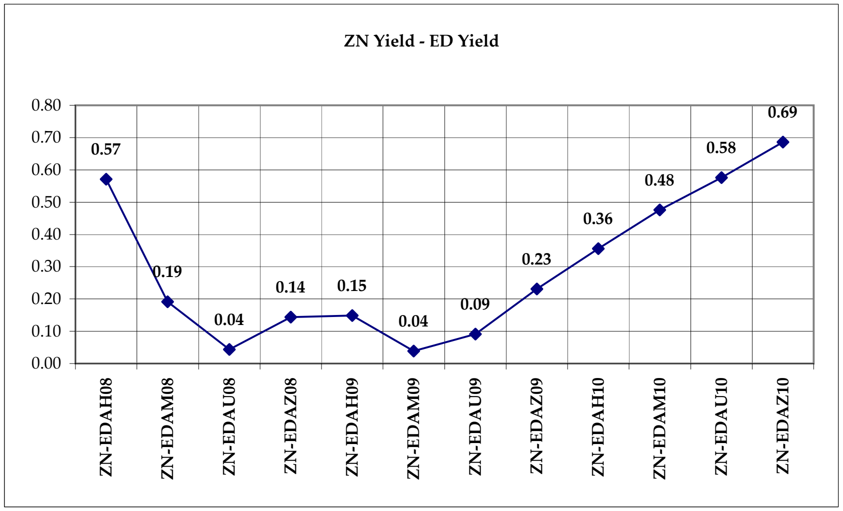
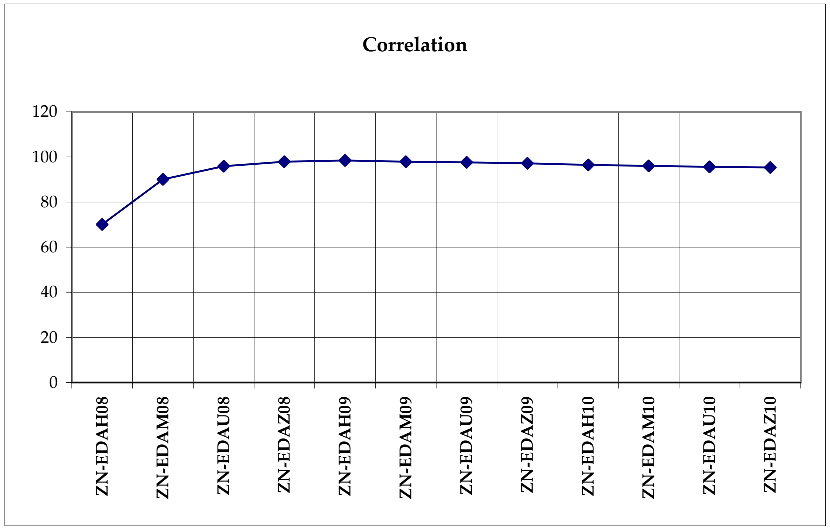


	GE Duration as Fraction of year	ZN Duration	Spread Duration	
EDAH08	0.246	5.93	5.69	ZN-EDAH08
EDAM08	0.495	5.93	5.44	ZN-EDAM08
EDAU08	0.745	5.93	5.19	ZN-EDAU08
EDAZ08	0.994	5.93	4.94	ZN-EDAZ08
EDAH09	1.243	5.93	4.69	ZN-EDAH09
EDAM09	1.492	5.93	4.44	ZN-EDAM09
EDAU09	1.742	5.93	4.19	ZN-EDAU09
EDAZ09	1.991	5.93	3.94	ZN-EDAZ09
EDAH10	2.240	5.93	3.69	ZN-EDAH10
EDAM10	2.490	5.93	3.44	ZN-EDAM10
EDAU10	2.739	5.93	3.19	ZN-EDAU10
EDAZ10	2.988	5.93	2.95	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	4.23	1.19	2y-EDAH08	-50.580
EDAM08	3.85	0.81	2y-EDAM08	-79.288
EDAU08	3.61	0.57	2y-EDAU08	-87.728
EDAZ08	3.51	0.47	2y-EDAZ08	-79.288
EDAH09	3.51	0.47	2y-EDAH09	-90.800
EDAM09	3.62	0.58	2y-EDAM09	-90.123
EDAU09	3.75	0.71	2y-EDAU09	-89.122
EDAZ09	3.89	0.85	2y-EDAZ09	-87.835
EDAH10	4.01	0.97	2y-EDAH10	-86.651
EDAM10	4.13	1.09	2y-EDAM10	-85.375
EDAU10	4.23	1.19	2y-EDAU10	-84.330
EDAZ10	4.34	1.30	2y-EDAZ10	-83.840

Price = Outright Decimal Price - Euro Contract Price
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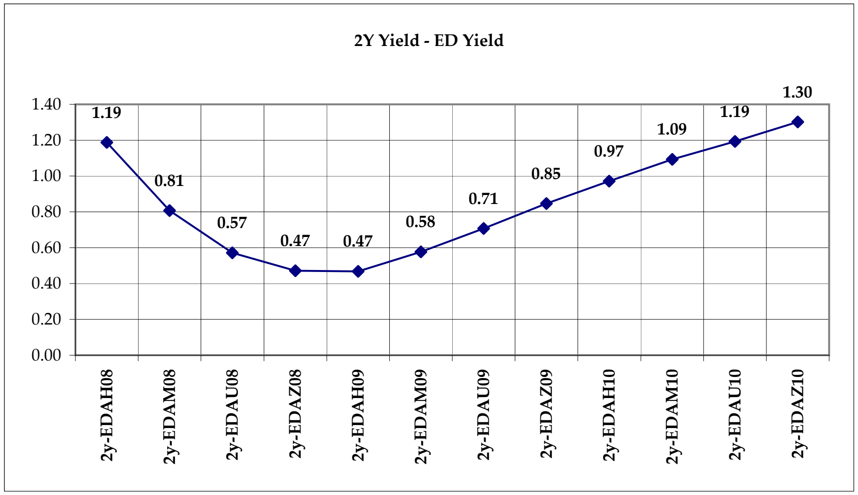
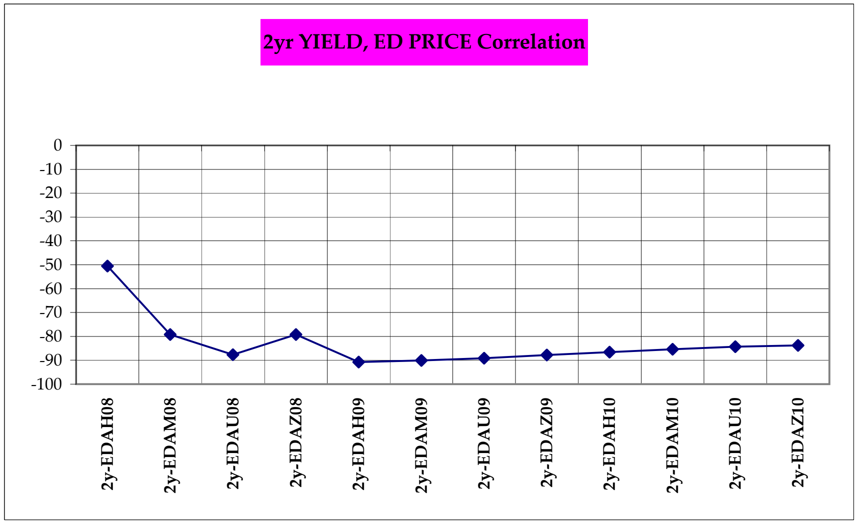


	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAH08	0.246	1.87	1.63	2y-EDAH08
EDAM08	0.495	1.87	1.38	2y-EDAM08
EDAU08	0.745	1.87	1.13	2y-EDAU08
EDAZ08	0.994	1.87	0.88	2y-EDAZ08
EDAH09	1.243	1.87	0.63	2y-EDAH09
EDAM09	1.492	1.87	0.38	2y-EDAM09
EDAU09	1.742	1.87	0.13	2y-EDAU09
EDAZ09	1.991	1.87	(0.12)	2y-EDAZ09
EDAH10	2.240	1.87	(0.37)	2y-EDAH10
EDAM10	2.490	1.87	(0.62)	2y-EDAM10
EDAU10	2.739	1.87	(0.87)	2y-EDAU10
EDAZ10	2.988	1.87	(1.12)	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	3.63	0.85	5y-EDAH08	-54.469
EDAM08	3.25	0.47	5y-EDAM08	-80.284
EDAU08	3.02	0.24	5y-EDAU08	-88.915
EDAZ08	2.92	0.14	5y-EDAZ08	-80.284
EDAH09	2.91	0.13	5y-EDAH09	-92.950
EDAM09	3.02	0.24	5y-EDAM09	-92.215
EDAU09	3.15	0.38	5y-EDAU09	-91.475
EDAZ09	3.29	0.52	5y-EDAZ09	-90.647
EDAH10	3.42	0.64	5y-EDAH10	-89.925
EDAM10	3.54	0.76	5y-EDAM10	-89.105
EDAU10	3.64	0.86	5y-EDAU10	-88.214
EDAZ10	3.75	0.97	5y-EDAZ10	-87.820

Price = Outright Decimal Price - Euro Contract Price
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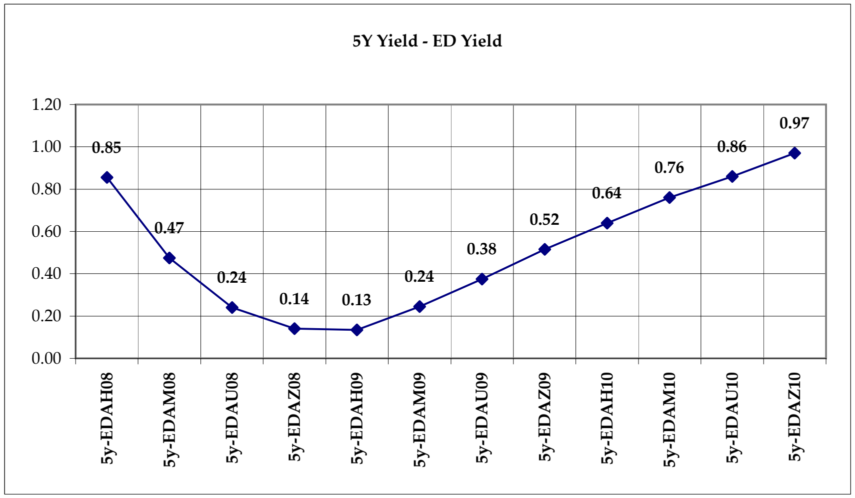
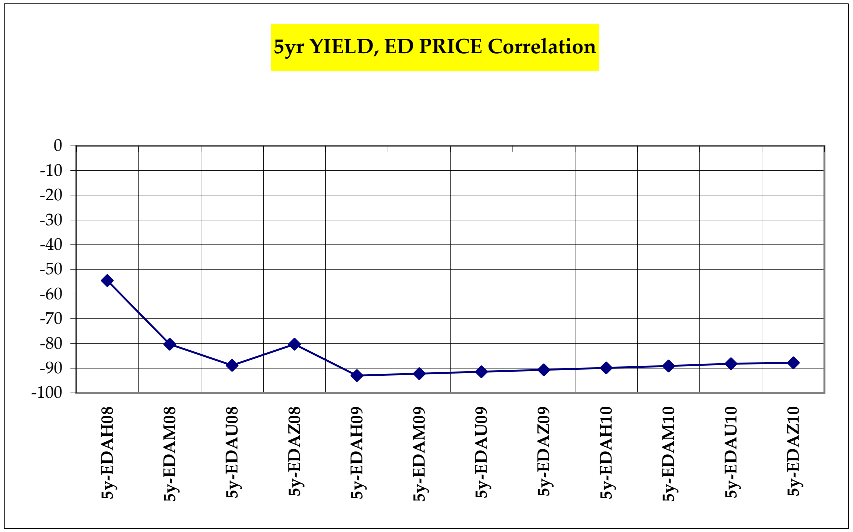
***Correlation = ED Correlation to Treasury Future over 10 days**
These are measuring YIELD correlations.



	GE Duration as Fraction of year	5Y Duration	Spread Duration	
EDAH08	0.246	4.51	4.26	5y-EDAH08
EDAM08	0.495	4.51	4.01	5y-EDAM08
EDAU08	0.745	4.51	3.76	5y-EDAU08
EDAZ08	0.994	4.51	3.52	5y-EDAZ08
EDAH09	1.243	4.51	3.27	5y-EDAH09
EDAM09	1.492	4.51	3.02	5y-EDAM09
EDAU09	1.742	4.51	2.77	5y-EDAU09
EDAZ09	1.991	4.51	2.52	5y-EDAZ09
EDAH10	2.240	4.51	2.27	5y-EDAH10
EDAM10	2.490	4.51	2.02	5y-EDAM10
EDAU10	2.739	4.51	1.77	5y-EDAU10
EDAZ10	2.988	4.51	1.52	5y-EDAZ10

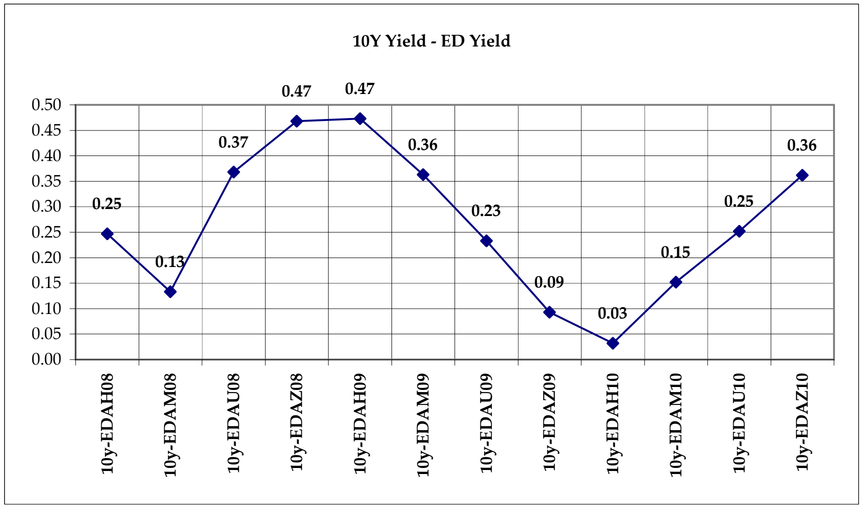
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	3.63	0.25	10y-EDAH08	-60.368
EDAM08	3.25	0.13	10y-EDAM08	-84.315
EDAU08	3.02	0.37	10y-EDAU08	-91.455
EDAZ08	2.92	0.47	10y-EDAZ08	-84.315
EDAH09	2.91	0.47	10y-EDAH09	-94.411
EDAM09	3.02	0.36	10y-EDAM09	-93.743
EDAU09	3.15	0.23	10y-EDAU09	-93.029
EDAZ09	3.29	0.09	10y-EDAZ09	-92.085
EDAH10	3.42	0.03	10y-EDAH10	-91.338
EDAM10	3.54	0.15	10y-EDAM10	-90.619
EDAU10	3.64	0.25	10y-EDAU10	-89.943
EDAZ10	3.75	0.36	10y-EDAZ10	-89.568

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	0.246	8.00	7.75	10y-EDAH08
EDAM08	0.495	8.00	7.50	10y-EDAM08
EDAU08	0.745	8.00	7.25	10y-EDAU08
EDAZ08	0.994	8.00	7.00	10y-EDAZ08
EDAH09	1.243	8.00	6.76	10y-EDAH09
EDAM09	1.492	8.00	6.51	10y-EDAM09
EDAU09	1.742	8.00	6.26	10y-EDAU09
EDAZ09	1.991	8.00	6.01	10y-EDAZ09
EDAH10	2.240	8.00	5.76	10y-EDAH10
EDAM10	2.490	8.00	5.51	10y-EDAM10
EDAU10	2.739	8.00	5.26	10y-EDAU10
EDAZ10	2.988	8.00	5.01	10y-EDAZ10

The farther away from 0 the spread duration is
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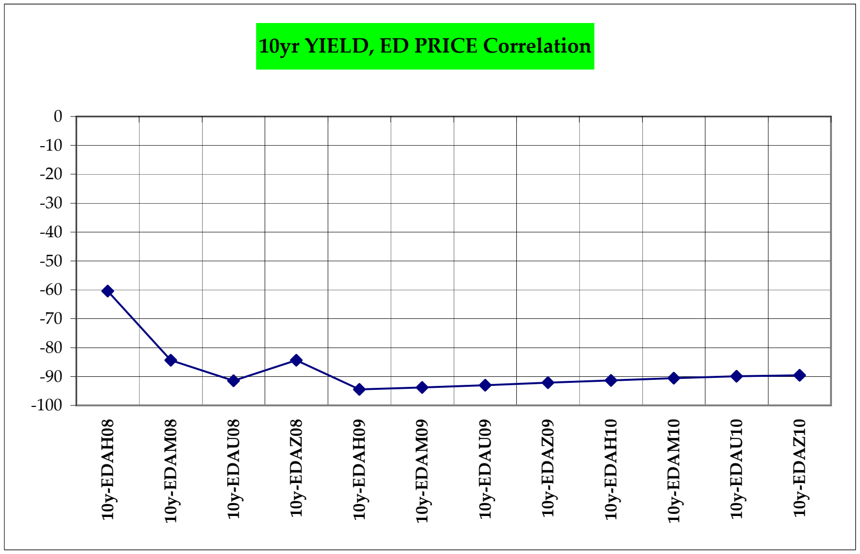
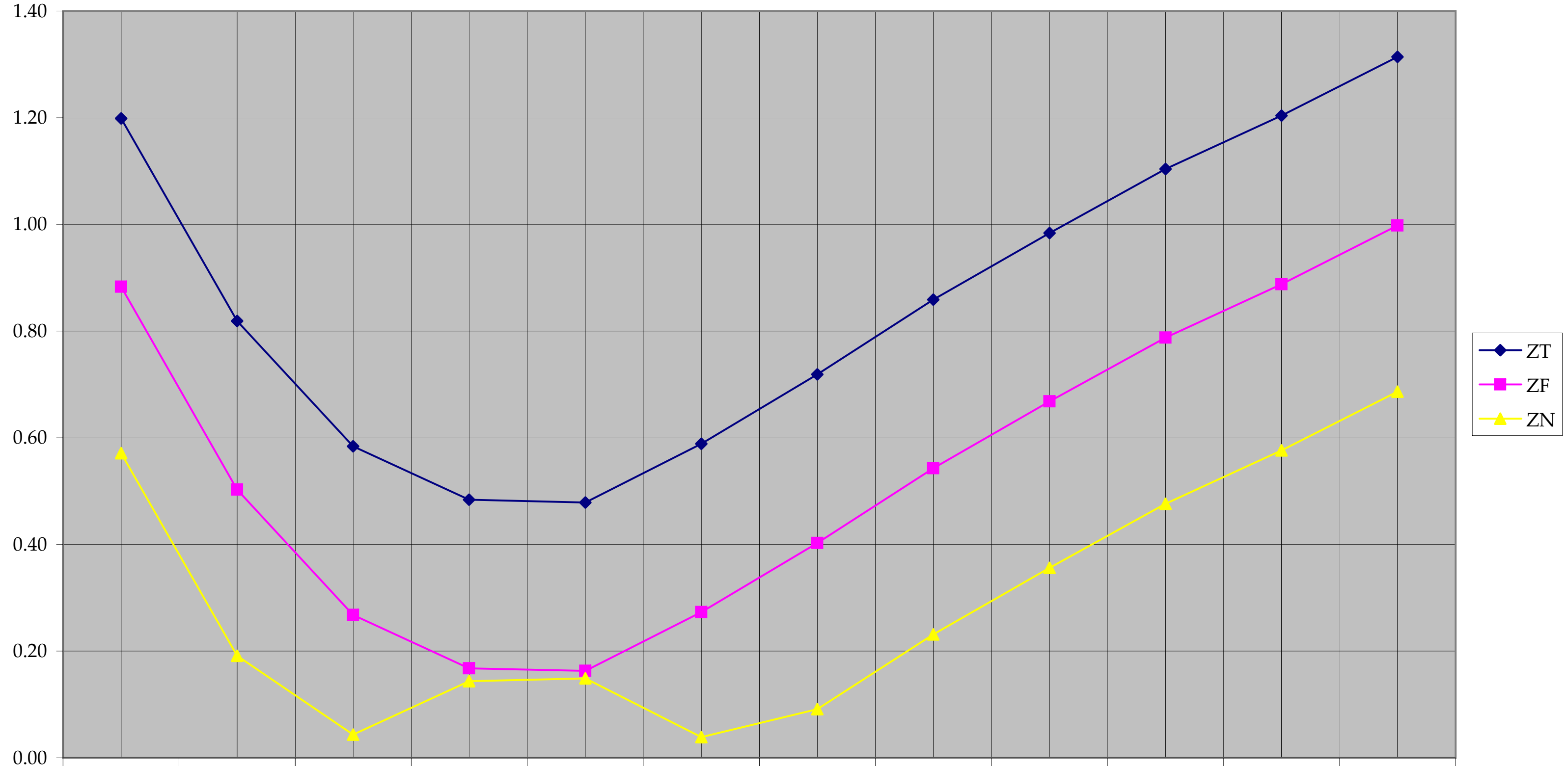


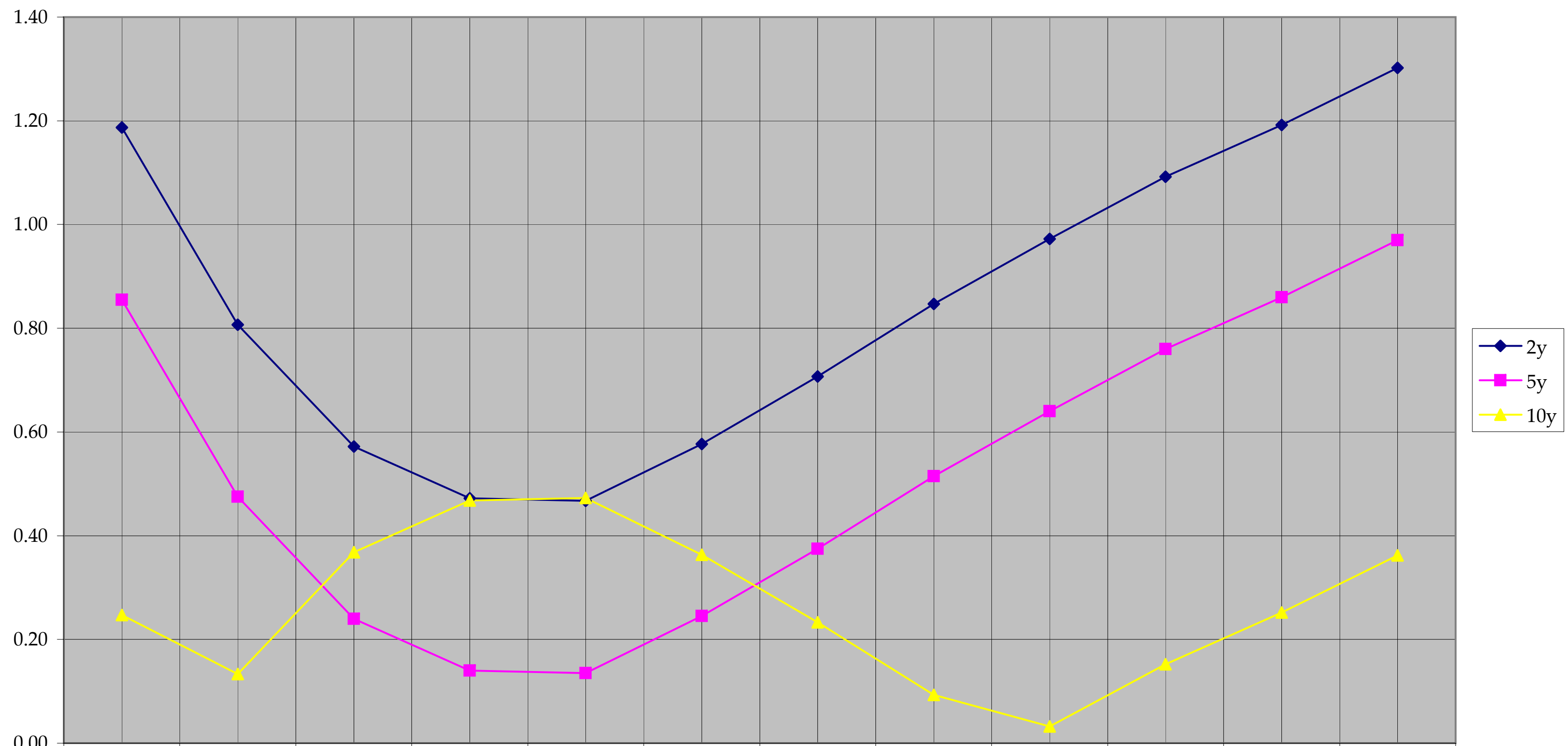
Dirty TED Curve

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.



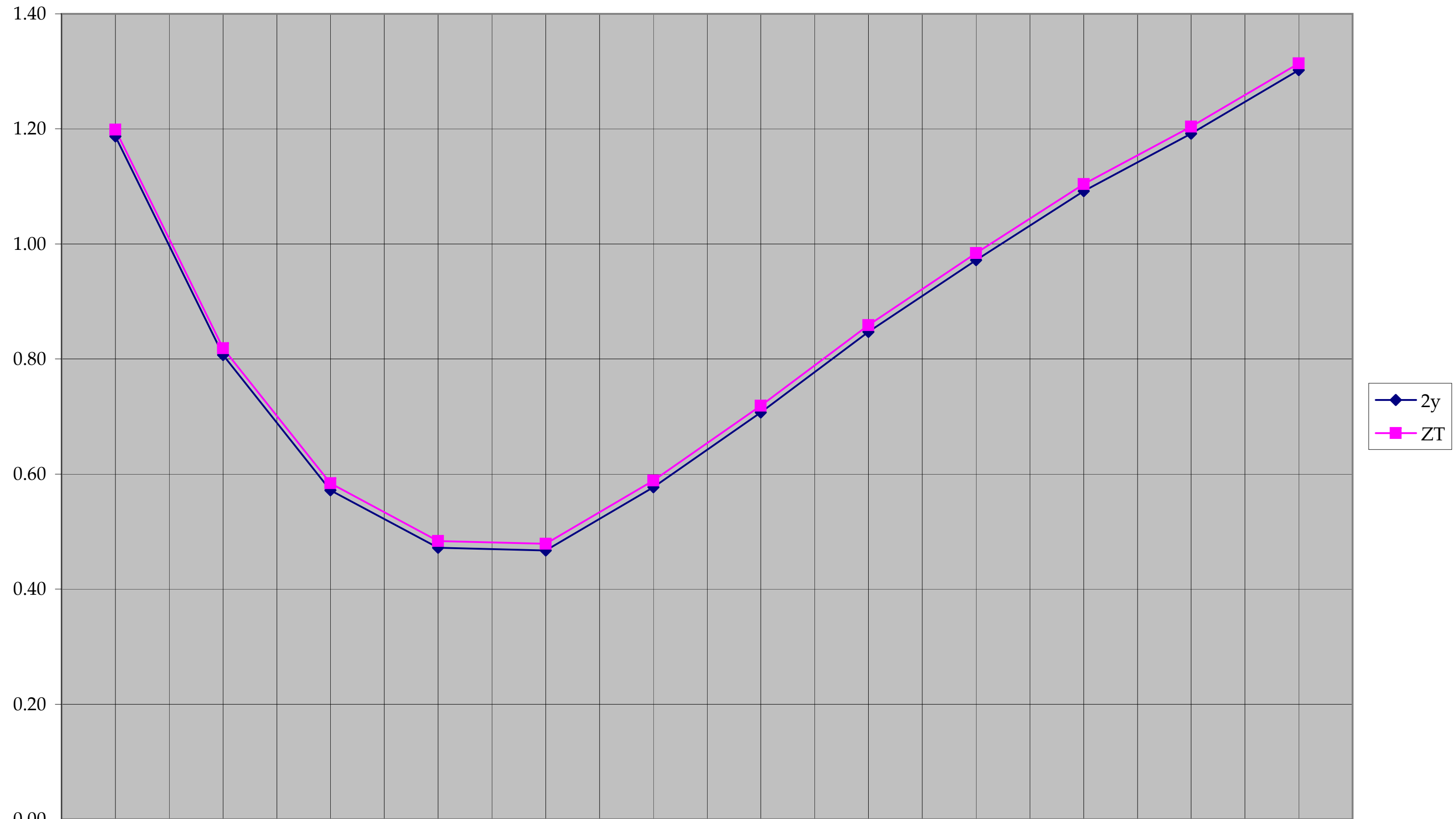
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.20	0.82	0.58	0.48	0.48	0.59	0.72	0.86	0.98	1.10	1.20	1.31
ZF	0.88	0.50	0.27	0.17	0.16	0.27	0.40	0.54	0.67	0.79	0.89	1.00
ZN	0.57	0.19	0.04	0.14	0.15	0.04	0.09	0.23	0.36	0.48	0.58	0.69

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.



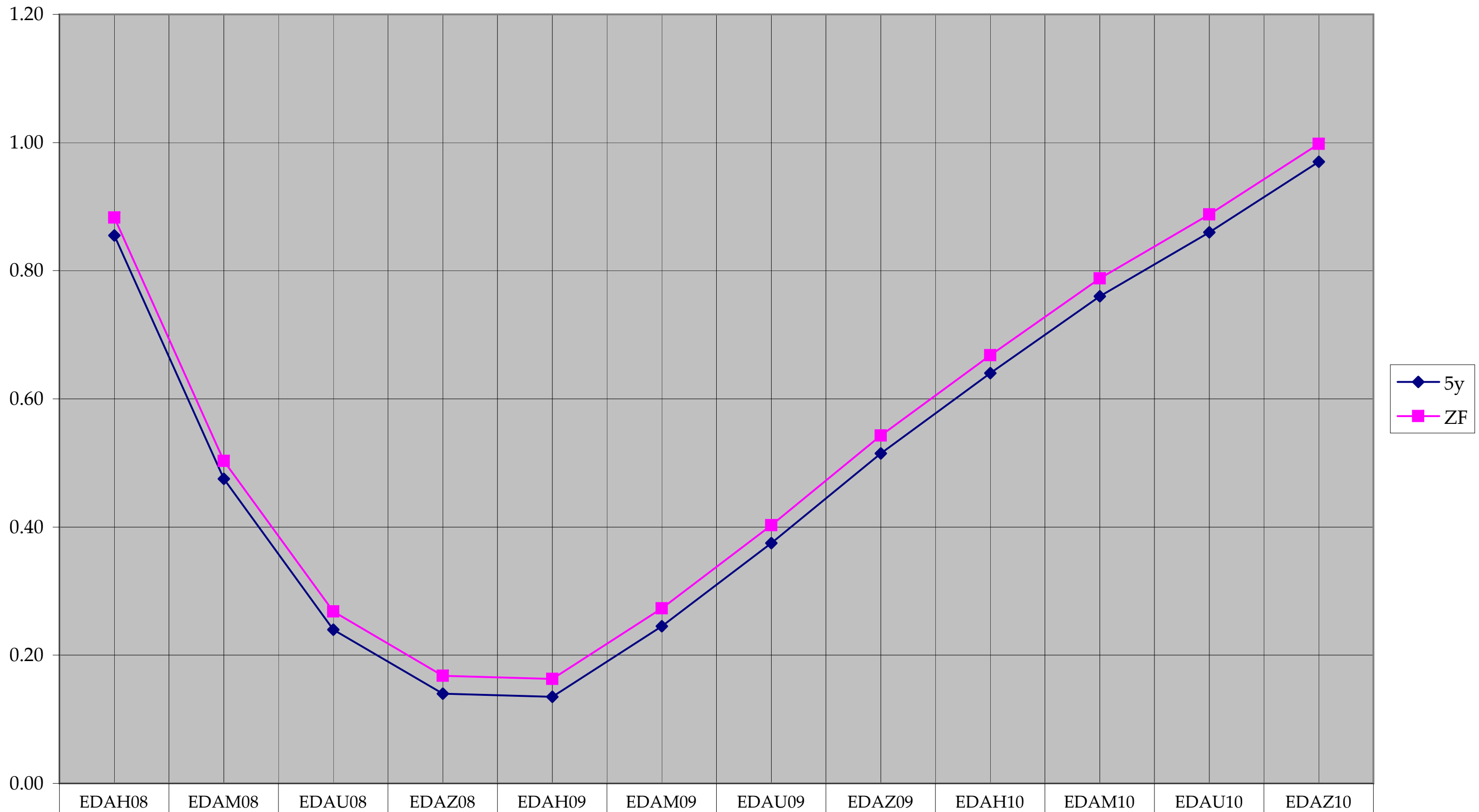
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.19	0.81	0.57	0.47	0.47	0.58	0.71	0.85	0.97	1.09	1.19	1.30
5y	0.85	0.47	0.24	0.14	0.13	0.24	0.38	0.52	0.64	0.76	0.86	0.97
10y	0.25	0.13	0.37	0.47	0.47	0.36	0.23	0.09	0.03	0.15	0.25	0.36

2y Basis TED Curve



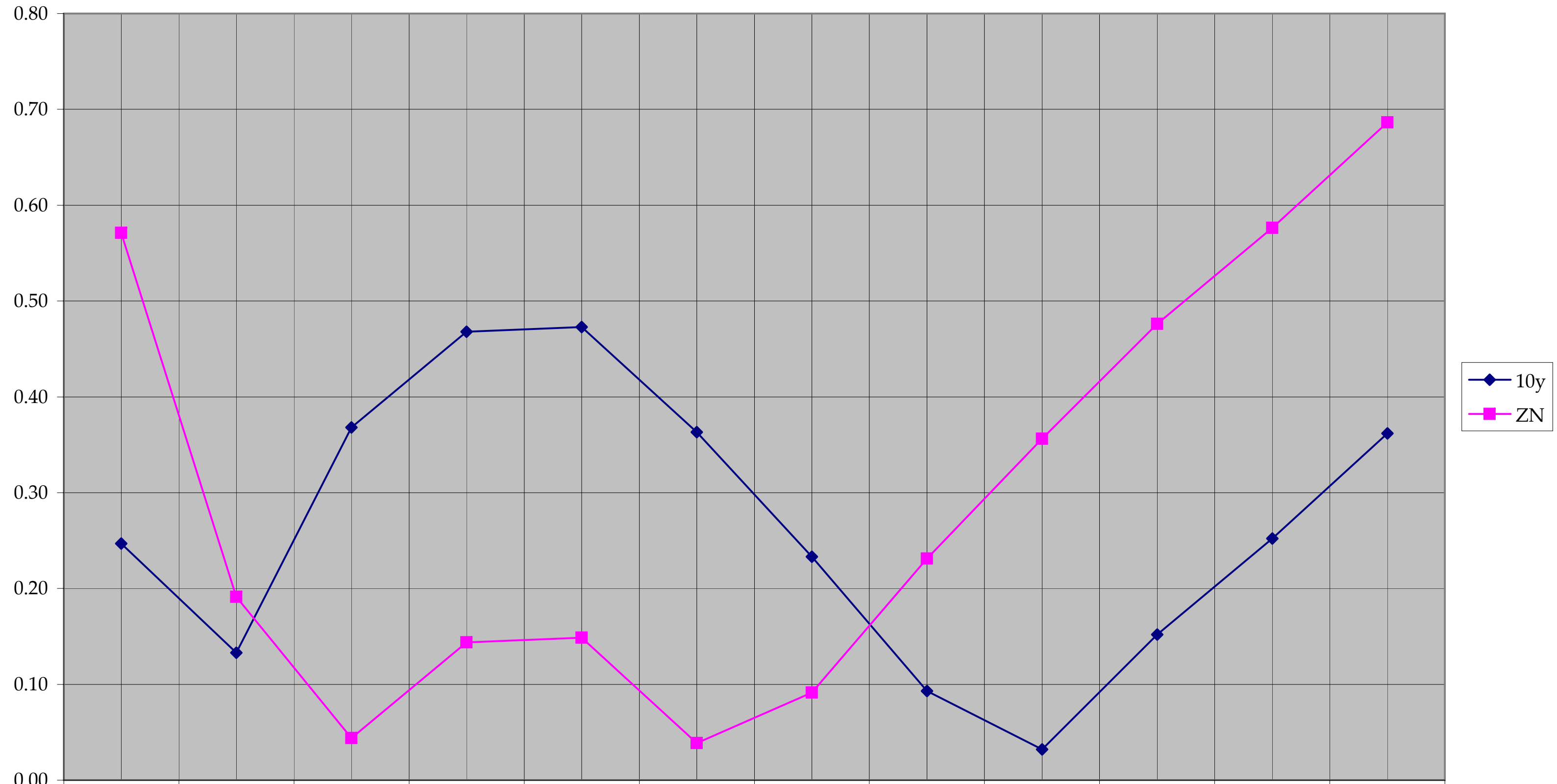
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.19	0.81	0.57	0.47	0.47	0.58	0.71	0.85	0.97	1.09	1.19	1.30
ZT	1.20	0.82	0.58	0.48	0.48	0.59	0.72	0.86	0.98	1.10	1.20	1.31

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.85	0.47	0.24	0.14	0.13	0.24	0.38	0.52	0.64	0.76	0.86	0.97
ZF	0.88	0.50	0.27	0.17	0.16	0.27	0.40	0.54	0.67	0.79	0.89	1.00

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.25	0.13	0.37	0.47	0.47	0.36	0.23	0.09	0.03	0.15	0.25	0.36
ZN	0.57	0.19	0.04	0.14	0.15	0.04	0.09	0.23	0.36	0.48	0.58	0.69

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.068	1.750	9602.750
Q.ED.Red	3.954	2.000	9613.750
Q.ED.Green	4.461	3.000	9564.750
Q.ED.Blue		1.125	9525.125
Q.ED.Gold		0.000	9494.125