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	105.0844	105.027	3.083	1.92
ZF	110.1875	110.060	3.405	3.96
ZN	113.2344	113.075	3.742	5.90
2y	100.319	100.1020	3.084	1.92
5y	100.688	100.2200	3.471	4.48
10y	101.531	101.1700	4.054	7.98

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	95.735	4.265	77	0.210	MAR	White Pack
EDAM08	96.230	3.770	168	0.460	JUN	
EDAU08	96.490	3.510	259	0.709	SEP	
EDAZ08	96.605	3.395	350	0.958	DEC	
EDAH09	96.595	3.405	441	1.208	MAR	Red Pack
EDAM09	96.475	3.525	532	1.457	JUN	
EDAU09	96.300	3.700	623	1.706	SEP	
EDAZ09	96.130	3.870	714	1.955	DEC	
EDAH10	95.975	4.025	805	2.205	MAR	Green Pack
EDAM10	95.810	4.190	896	2.454	JUN	
EDAU10	#VALUE!	#VALUE!	987	2.703	SEP	
EDAZ10	95.570	4.430	1078	2.953	DEC	
EDAH11	#VALUE!	#VALUE!	1169	3.202	MAR	Blue Pack
EDAM11	#VALUE!	#VALUE!	1260	3.451	JUN	
EDAU11	95.325	4.675	1358	3.720	SEP	
EDAZ11	#VALUE!	#VALUE!	1449	3.969	DEC	
EDAH12	95.190	4.810	1540	4.218	MAR	Gold Pack
EDAM12	95.095	4.905	1631	4.468	JUN	
EDAU12	95.050	4.950	1722	4.717	SEP	
EDAU12	95.050	4.950	1722	4.717	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	3.823	3.000	9626.500	Pack Prices
Q.ED.Red	3.709	3.625	9637.500	
Q.ED.Green		2.125	9575.250	
Q.ED.Blue		0.000	9533.500	
Q.ED.Gold		0.000	9504.875	

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

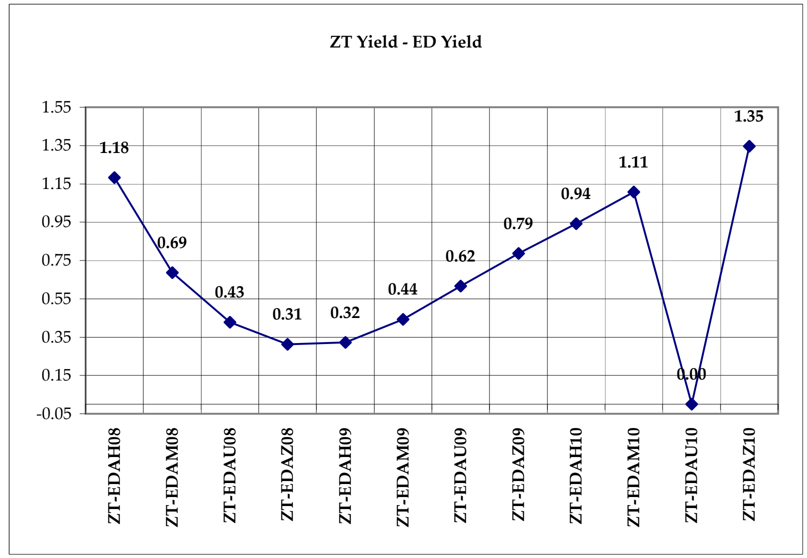
Eurodollar Color Codes for Individual Year Strips:

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

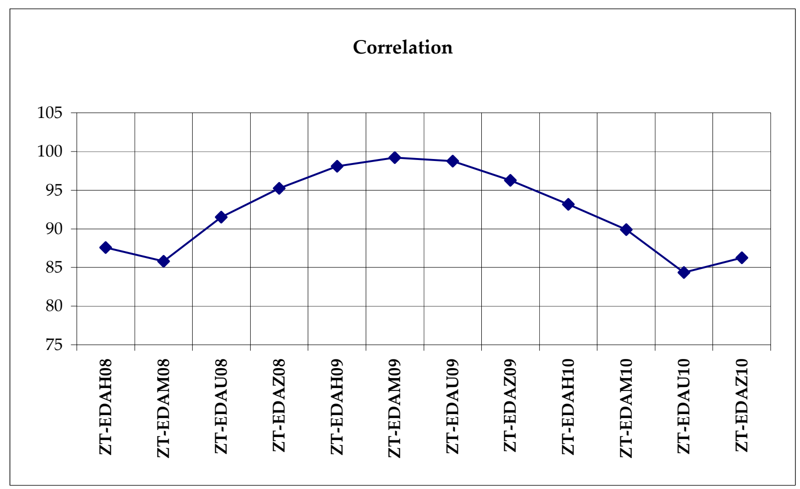
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	9.349	1.18	ZT-EDAH08	87.571
EDAM08	8.854	0.69	ZT-EDAM08	85.804
EDAU08	8.594	0.43	ZT-EDAU08	91.493
EDAZ08	8.479	0.31	ZT-EDAZ08	95.216
EDAH09	8.489	0.32	ZT-EDAH09	98.079
EDAM09	8.609	0.44	ZT-EDAM09	99.209
EDAU09	8.784	0.62	ZT-EDAU09	98.762
EDAZ09	8.954	0.79	ZT-EDAZ09	96.289
EDAH10	9.109	0.94	ZT-EDAH10	93.164
EDAM10	9.274	1.11	ZT-EDAM10	89.910
EDAU10	#VALUE!	#VALUE!	ZT-EDAU10	84.365
EDAZ10	9.514	1.35	ZT-EDAZ10	86.253

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	0.210	1.92	1.71	ZT-EDAH08
EDAM08	0.460	1.92	1.46	ZT-EDAM08
EDAU08	0.709	1.92	1.21	ZT-EDAU08
EDAZ08	0.958	1.92	0.96	ZT-EDAZ08
EDAH09	1.208	1.92	0.71	ZT-EDAH09
EDAM09	1.457	1.92	0.46	ZT-EDAM09
EDAU09	1.706	1.92	0.21	ZT-EDAU09
EDAZ09	1.955	1.92	(0.04)	ZT-EDAZ09
EDAH10	2.205	1.92	(0.28)	ZT-EDAH10
EDAM10	2.454	1.92	(0.53)	ZT-EDAM10
EDAU10	2.703	1.92	(0.78)	ZT-EDAU10
EDAZ10	2.953	1.92	(1.03)	ZT-EDAZ10

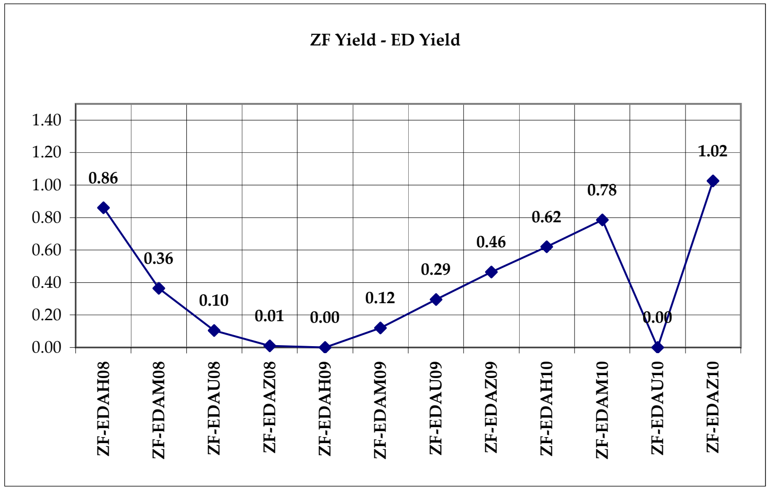
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

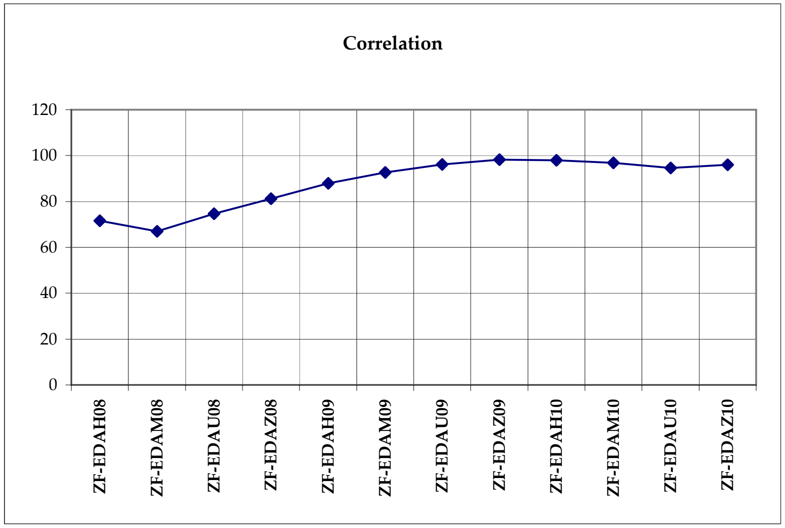
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	14.45	0.86	ZF-EDAH08	71.556
EDAM08	13.96	0.36	ZF-EDAM08	66.988
EDAU08	13.70	0.10	ZF-EDAU08	74.698
EDAZ08	13.58	0.01	ZF-EDAZ08	81.174
EDAH09	13.59	0.00	ZF-EDAH09	87.875
EDAM09	13.71	0.12	ZF-EDAM09	92.588
EDAU09	13.89	0.29	ZF-EDAU09	96.163
EDAZ09	14.06	0.46	ZF-EDAZ09	98.255
EDAH10	14.21	0.62	ZF-EDAH10	97.948
EDAM10	14.38	0.78	ZF-EDAM10	96.886
EDAU10	#VALUE!	#VALUE!	ZF-EDAU10	94.590
EDAZ10	14.62	1.02	ZF-EDAZ10	96.050

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	0.210	3.96	3.75	ZF-EDAH08
EDAM08	0.460	3.96	3.50	ZF-EDAM08
EDAU08	0.709	3.96	3.25	ZF-EDAU08
EDAZ08	0.958	3.96	3.00	ZF-EDAZ08
EDAH09	1.208	3.96	2.75	ZF-EDAH09
EDAM09	1.457	3.96	2.51	ZF-EDAM09
EDAU09	1.706	3.96	2.26	ZF-EDAU09
EDAZ09	1.955	3.96	2.01	ZF-EDAZ09
EDAH10	2.205	3.96	1.76	ZF-EDAH10
EDAM10	2.454	3.96	1.51	ZF-EDAM10
EDAU10	2.703	3.96	1.26	ZF-EDAU10
EDAZ10	2.953	3.96	1.01	ZF-EDAZ10

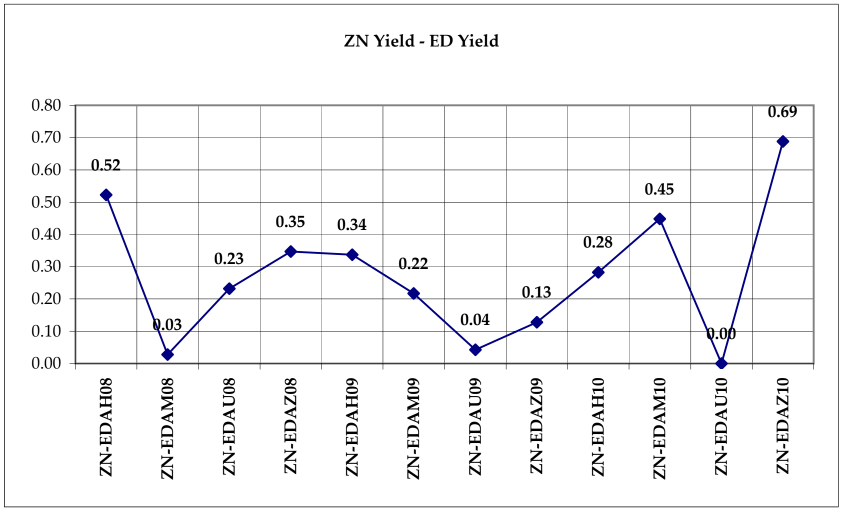
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

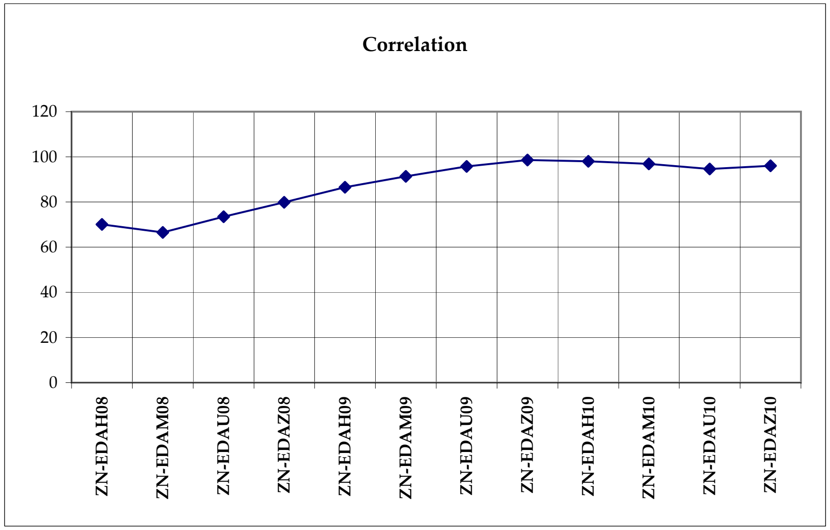
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	17.50	0.52	ZN-EDAH08	70.14
EDAM08	17.00	0.03	ZN-EDAM08	66.46
EDAU08	16.74	0.23	ZN-EDAU08	73.55
EDAZ08	16.63	0.35	ZN-EDAZ08	79.84
EDAH09	16.64	0.34	ZN-EDAH09	86.49
EDAM09	16.76	0.22	ZN-EDAM09	91.34
EDAU09	16.93	0.04	ZN-EDAU09	95.71
EDAZ09	17.10	0.13	ZN-EDAZ09	98.64
EDAH10	17.26	0.28	ZN-EDAH10	97.95
EDAM10	17.42	0.45	ZN-EDAM10	96.89
EDAU10	#VALUE!	#VALUE!	ZN-EDAU10	94.59
EDAZ10	17.66	0.69	ZN-EDAZ10	96.05

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	0.210	5.90	5.69	ZN-EDAH08
EDAM08	0.460	5.90	5.44	ZN-EDAM08
EDAU08	0.709	5.90	5.20	ZN-EDAU08
EDAZ08	0.958	5.90	4.95	ZN-EDAZ08
EDAH09	1.208	5.90	4.70	ZN-EDAH09
EDAM09	1.457	5.90	4.45	ZN-EDAM09
EDAU09	1.706	5.90	4.20	ZN-EDAU09
EDAZ09	1.955	5.90	3.95	ZN-EDAZ09
EDAH10	2.205	5.90	3.70	ZN-EDAH10
EDAM10	2.454	5.90	3.45	ZN-EDAM10
EDAU10	2.703	5.90	3.20	ZN-EDAU10
EDAZ10	2.953	5.90	2.95	ZN-EDAZ10

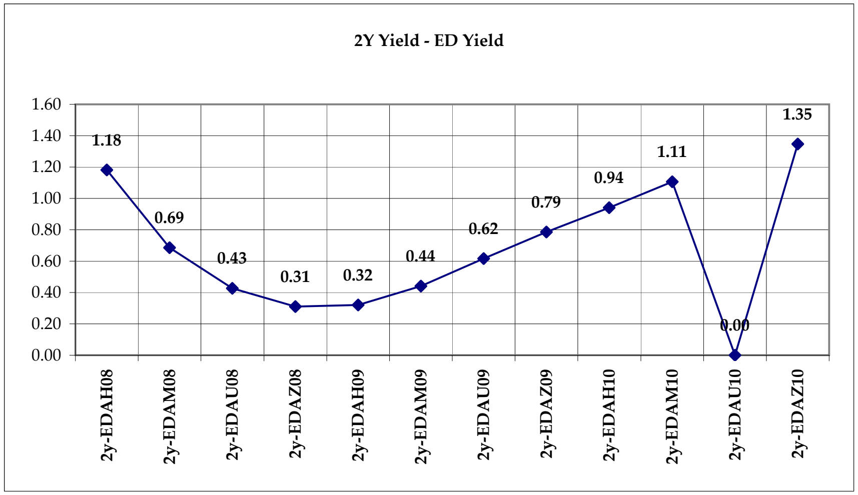
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

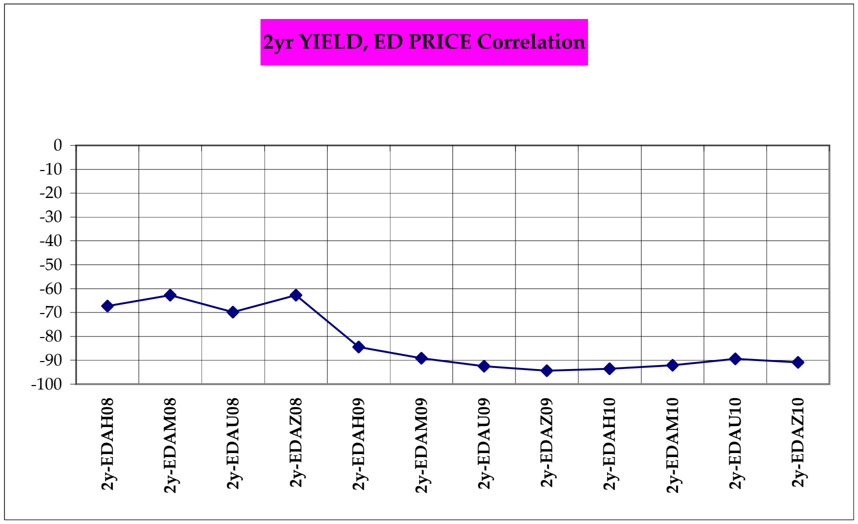
	2y Spread Price	2y Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.58	1.18	2y-EDAH08	-67.331
EDAM08	4.09	0.69	2y-EDAM08	-62.734
EDAU08	3.83	0.43	2y-EDAU08	-69.866
EDAZ08	3.71	0.31	2y-EDAZ08	-62.734
EDAH09	3.72	0.32	2y-EDAH09	-84.404
EDAM09	3.84	0.44	2y-EDAM09	-89.129
EDAU09	4.02	0.62	2y-EDAU09	-92.542
EDAZ09	4.19	0.79	2y-EDAZ09	-94.333
EDAH10	4.34	0.94	2y-EDAH10	-93.524
EDAM10	4.51	1.11	2y-EDAM10	-92.073
EDAU10	#VALUE!	#VALUE!	2y-EDAU10	-89.365
EDAZ10	4.75	1.35	2y-EDAZ10	-90.828

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	0.210	1.92	1.71	2y-EDAH08
EDAM08	0.460	1.92	1.46	2y-EDAM08
EDAU08	0.709	1.92	1.21	2y-EDAU08
EDAZ08	0.958	1.92	0.96	2y-EDAZ08
EDAH09	1.208	1.92	0.71	2y-EDAH09
EDAM09	1.457	1.92	0.46	2y-EDAM09
EDAU09	1.706	1.92	0.21	2y-EDAU09
EDAZ09	1.955	1.92	(0.04)	2y-EDAZ09
EDAH10	2.205	1.92	(0.28)	2y-EDAH10
EDAM10	2.454	1.92	(0.53)	2y-EDAM10
EDAU10	2.703	1.92	(0.78)	2y-EDAU10
EDAZ10	2.953	1.92	(1.03)	2y-EDAZ10

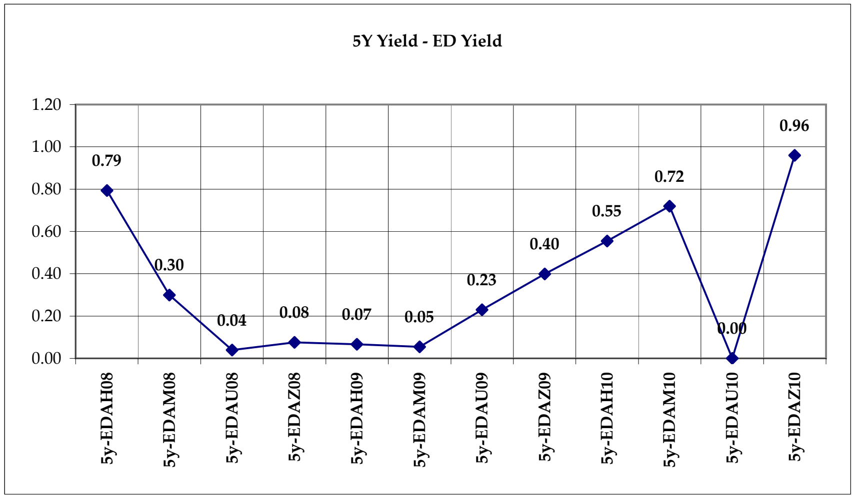
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

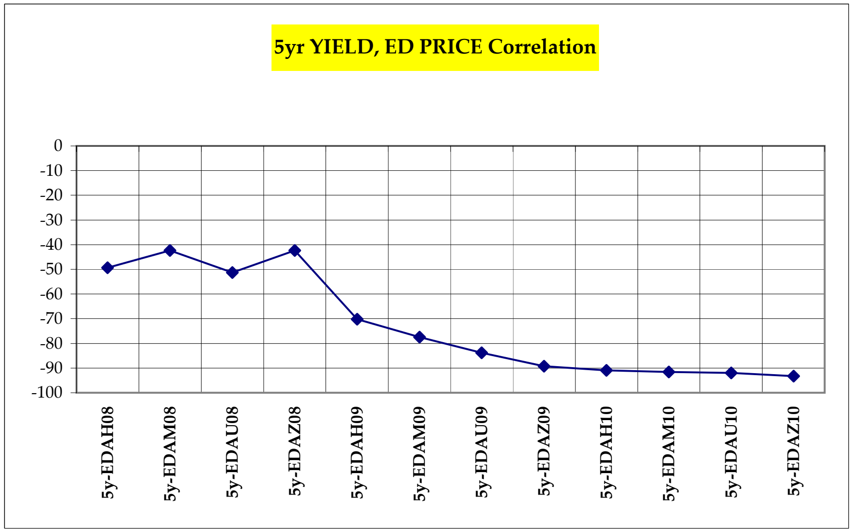
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.95	0.79	5y-EDAH08	-49.328
EDAM08	4.46	0.30	5y-EDAM08	-42.383
EDAU08	4.20	0.04	5y-EDAU08	-51.300
EDAZ08	4.08	0.08	5y-EDAZ08	-42.383
EDAH09	4.09	0.07	5y-EDAH09	-70.186
EDAM09	4.21	0.05	5y-EDAM09	-77.519
EDAU09	4.39	0.23	5y-EDAU09	-83.786
EDAZ09	4.56	0.40	5y-EDAZ09	-89.243
EDAH10	4.71	0.55	5y-EDAH10	-90.978
EDAM10	4.88	0.72	5y-EDAM10	-91.533
EDAU10	#VALUE!	#VALUE!	5y-EDAU10	-91.938
EDAZ10	5.12	0.96	5y-EDAZ10	-93.242

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	0.210	4.48	4.27	5y-EDAH08
EDAM08	0.460	4.48	4.02	5y-EDAM08
EDAU08	0.709	4.48	3.77	5y-EDAU08
EDAZ08	0.958	4.48	3.52	5y-EDAZ08
EDAH09	1.208	4.48	3.27	5y-EDAH09
EDAM09	1.457	4.48	3.02	5y-EDAM09
EDAU09	1.706	4.48	2.77	5y-EDAU09
EDAZ09	1.955	4.48	2.52	5y-EDAZ09
EDAH10	2.205	4.48	2.27	5y-EDAH10
EDAM10	2.454	4.48	2.02	5y-EDAM10
EDAU10	2.703	4.48	1.77	5y-EDAU10
EDAZ10	2.953	4.48	1.52	5y-EDAZ10

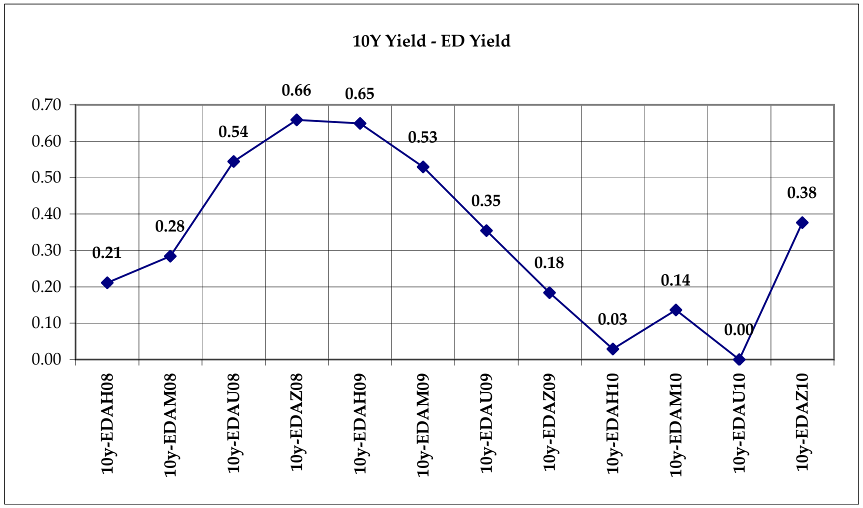
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

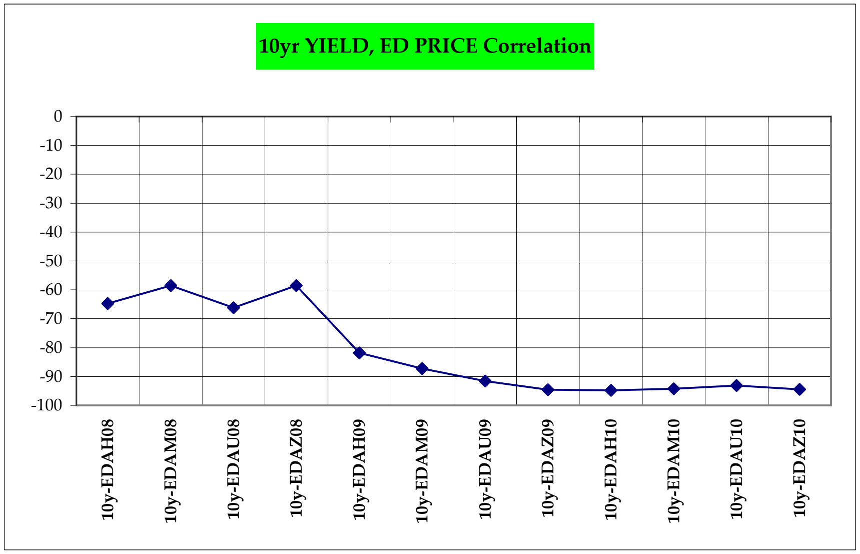
	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAH08	4.95	0.21	10y-EDAH08	-64.693
EDAM08	4.46	0.28	10y-EDAM08	-58.530
EDAU08	4.20	0.54	10y-EDAU08	-66.225
EDAZ08	4.08	0.66	10y-EDAZ08	-58.530
EDAH09	4.09	0.65	10y-EDAH09	-81.808
EDAM09	4.21	0.53	10y-EDAM09	-87.257
EDAU09	4.39	0.35	10y-EDAU09	-91.528
EDAZ09	4.56	0.18	10y-EDAZ09	-94.519
EDAH10	4.71	0.03	10y-EDAH10	-94.754
EDAM10	4.88	0.14	10y-EDAM10	-94.202
EDAU10	#VALUE!	#VALUE!	10y-EDAU10	-93.095
EDAZ10	5.12	0.38	10y-EDAZ10	-94.453

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.



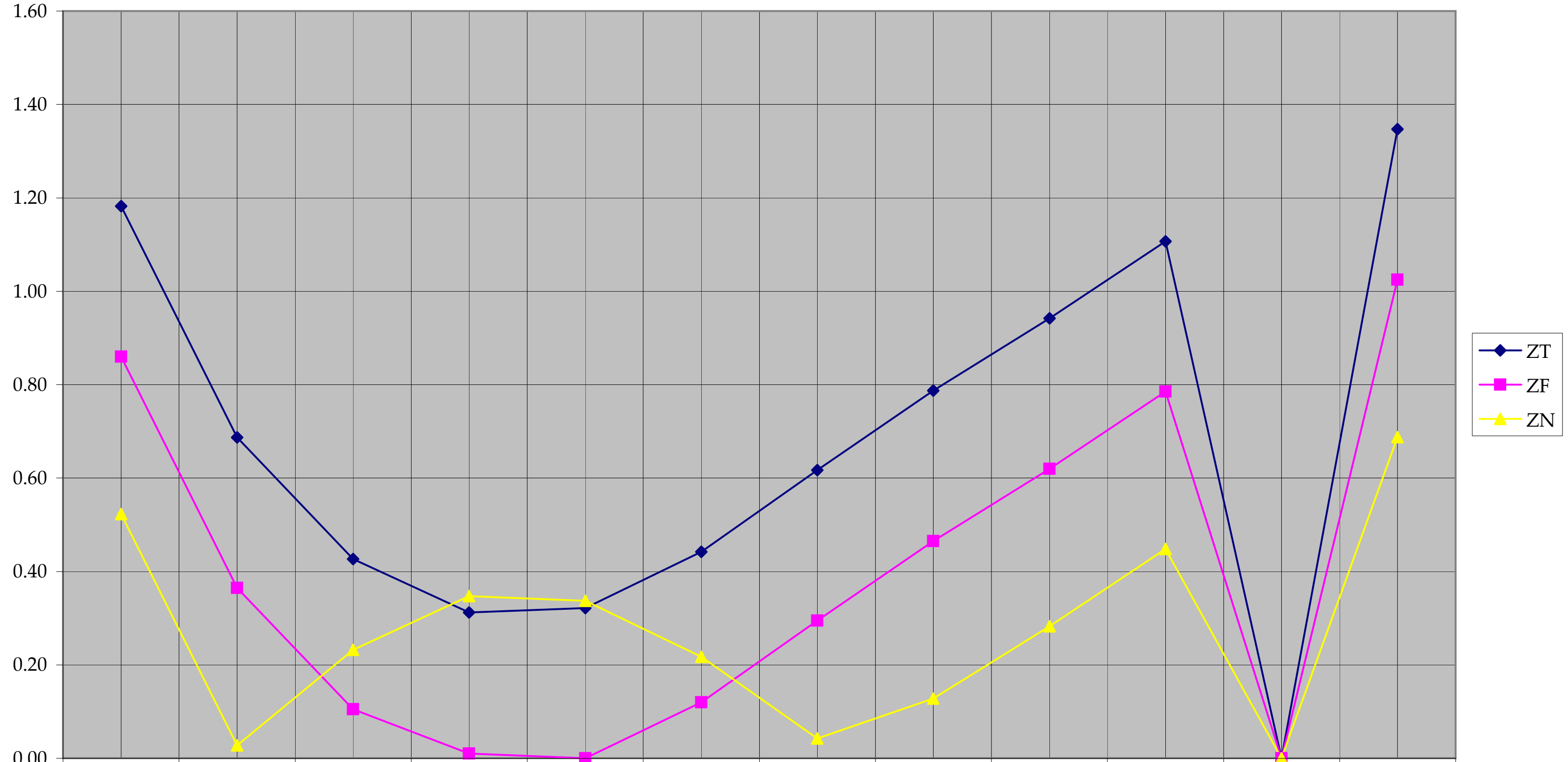
	GE Duration as Fraction of year	**10Y Duration**	**Spread Duration**	
EDAH08	0.210	7.98	7.77	10y-EDAH08
EDAM08	0.460	7.98	7.52	10y-EDAM08
EDAU08	0.709	7.98	7.27	10y-EDAU08
EDAZ08	0.958	7.98	7.02	10y-EDAZ08
EDAH09	1.208	7.98	6.77	10y-EDAH09
EDAM09	1.457	7.98	6.52	10y-EDAM09
EDAU09	1.706	7.98	6.27	10y-EDAU09
EDAZ09	1.955	7.98	6.02	10y-EDAZ09
EDAH10	2.205	7.98	5.77	10y-EDAH10
EDAM10	2.454	7.98	5.52	10y-EDAM10
EDAU10	2.703	7.98	5.27	10y-EDAU10
EDAZ10	2.953	7.98	5.02	10y-EDAZ10

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



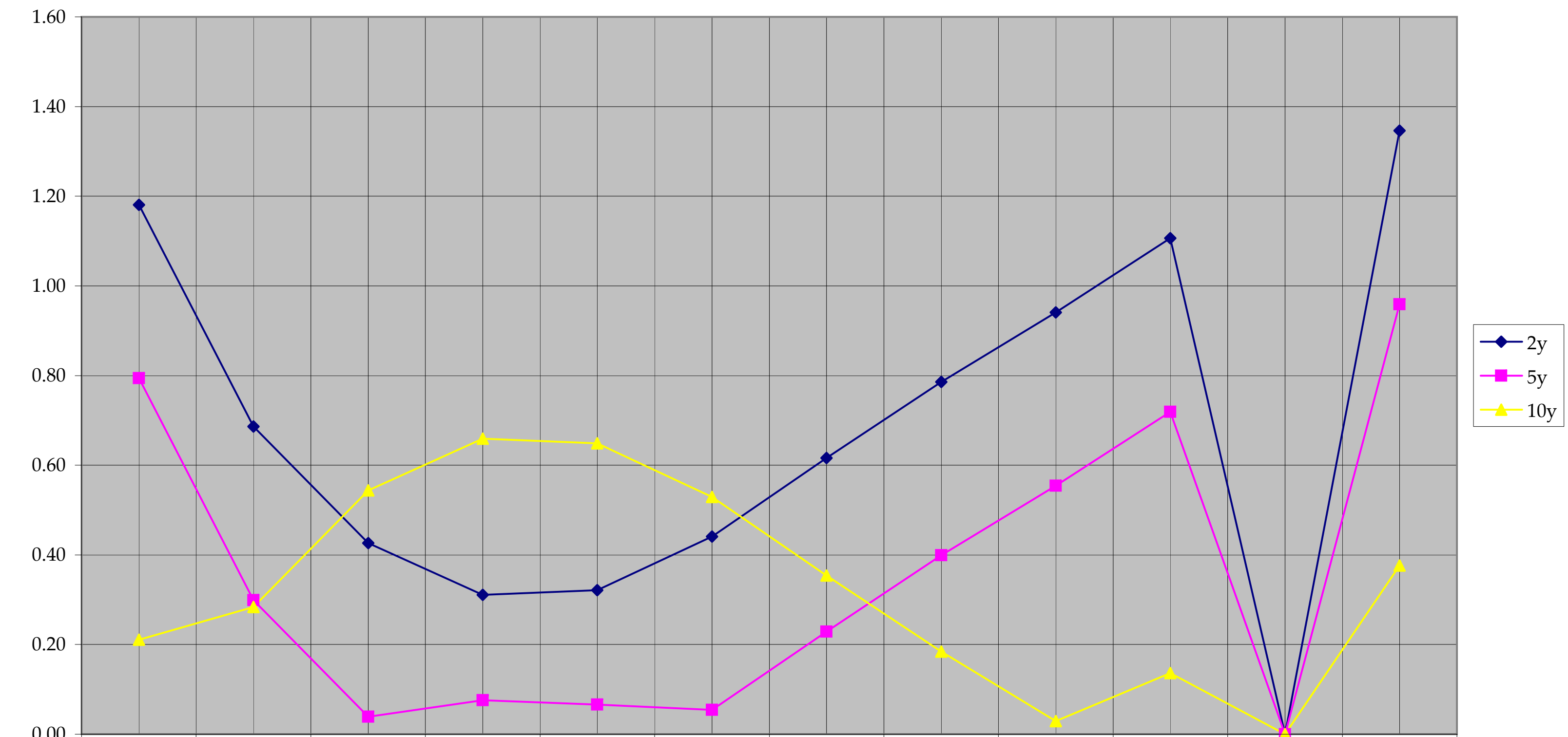
Dirty TED Curve

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.



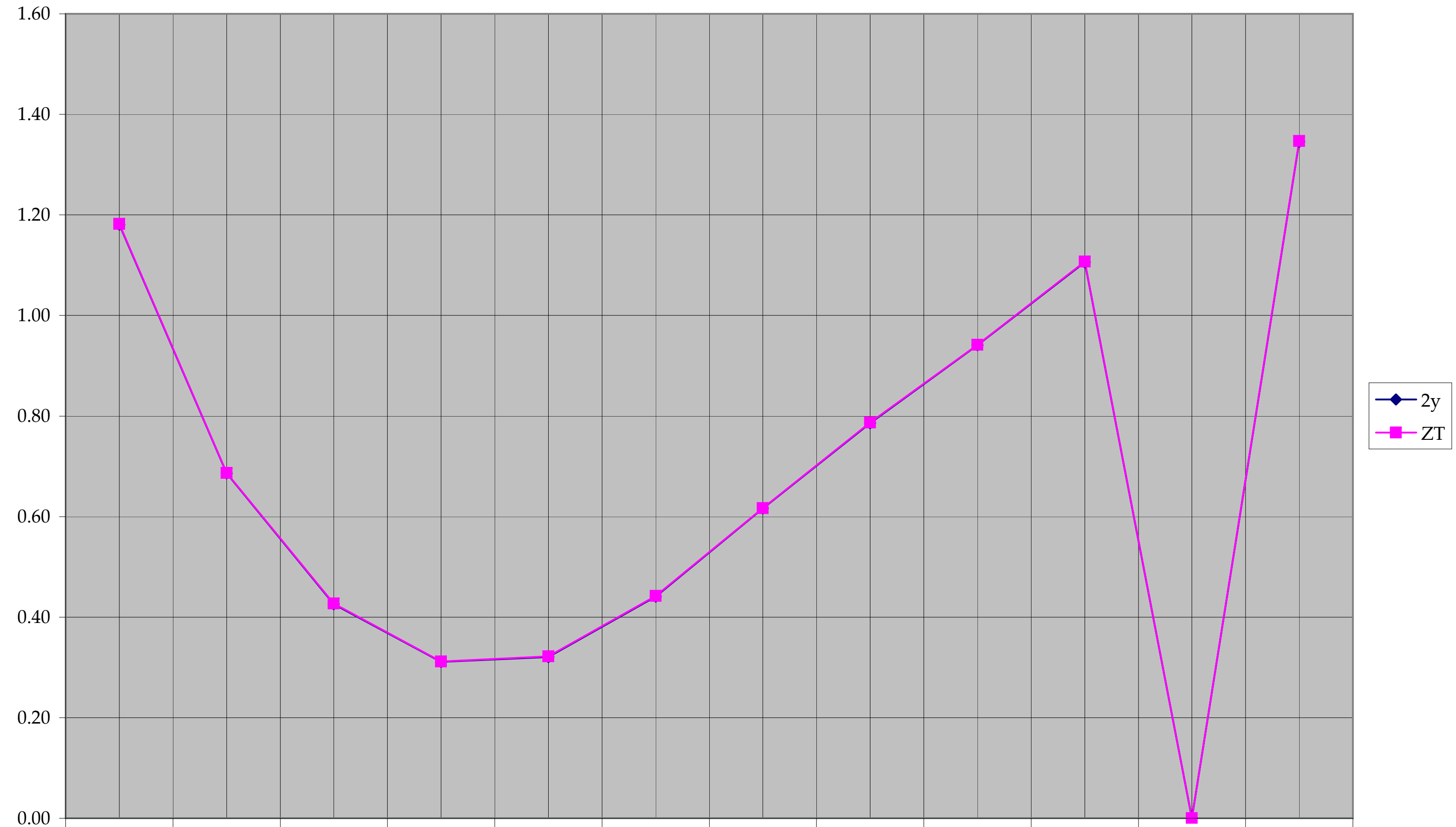
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.18	0.69	0.43	0.31	0.32	0.44	0.62	0.79	0.94	1.11	0.00	1.35
ZF	0.86	0.36	0.10	0.01	0.00	0.12	0.29	0.46	0.62	0.78	0.00	1.02
ZN	0.52	0.03	0.23	0.35	0.34	0.22	0.04	0.13	0.28	0.45	0.00	0.69

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.



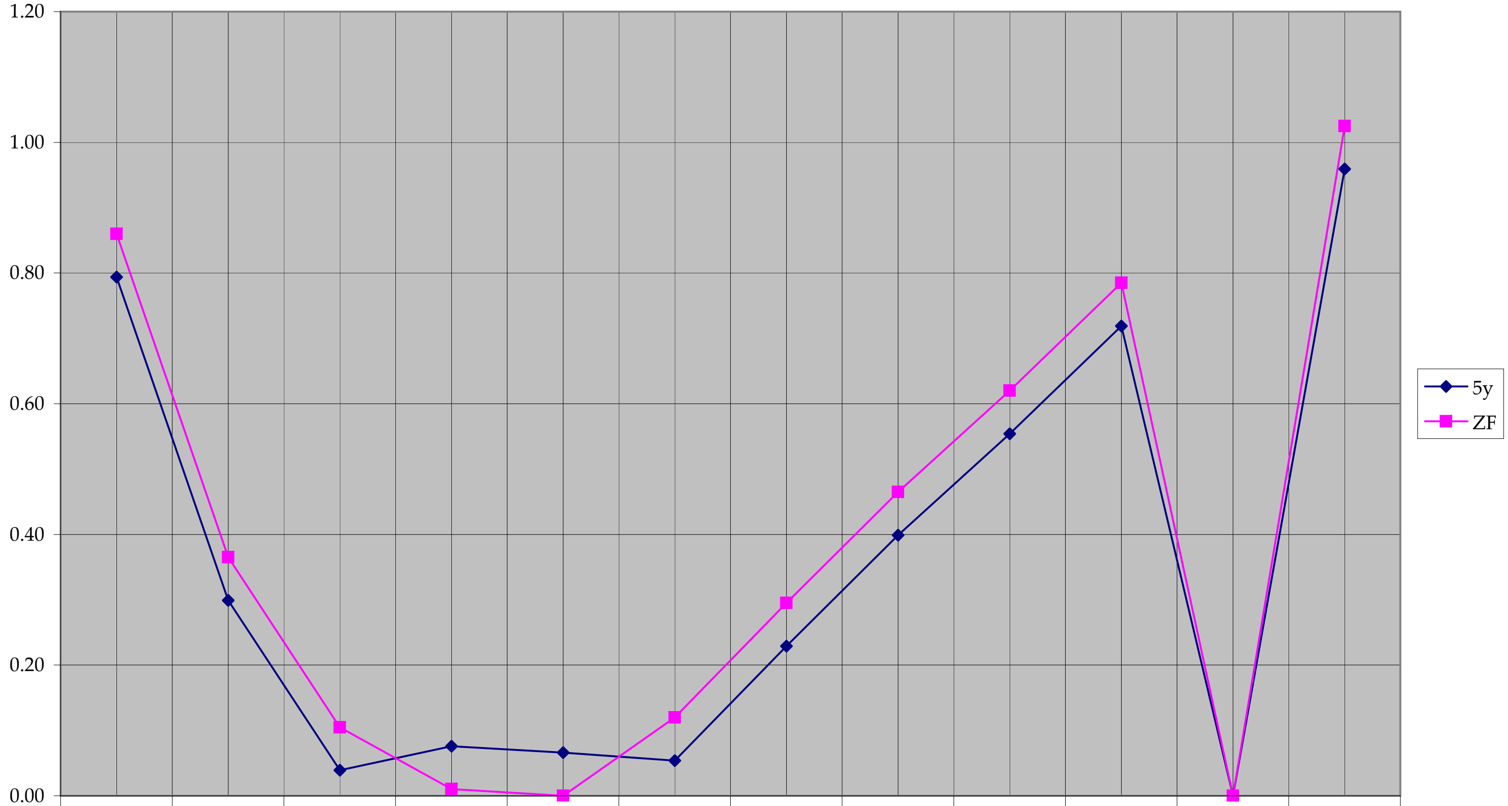
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.18	0.69	0.43	0.31	0.32	0.44	0.62	0.79	0.94	1.11	0.00	1.35
5y	0.79	0.30	0.04	0.08	0.07	0.05	0.23	0.40	0.55	0.72	0.00	0.96
10y	0.21	0.28	0.54	0.66	0.65	0.53	0.35	0.18	0.03	0.14	0.00	0.38

2y Basis TED Curve



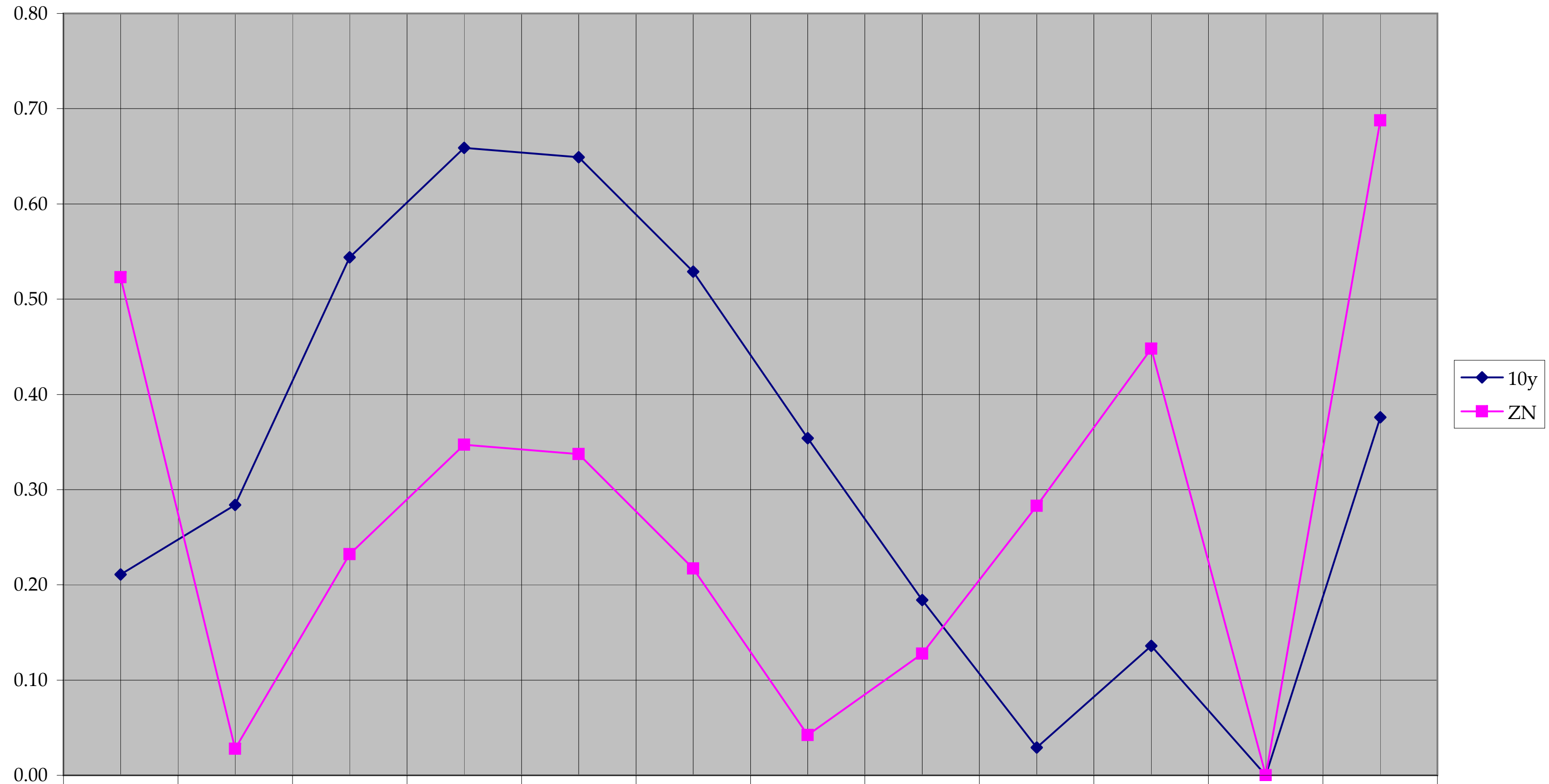
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.18	0.69	0.43	0.31	0.32	0.44	0.62	0.79	0.94	1.11	0.00	1.35
ZT	1.18	0.69	0.43	0.31	0.32	0.44	0.62	0.79	0.94	1.11	0.00	1.35

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.79	0.30	0.04	0.08	0.07	0.05	0.23	0.40	0.55	0.72	0.00	0.96
ZF	0.86	0.36	0.10	0.01	0.00	0.12	0.29	0.46	0.62	0.78	0.00	1.02

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.21	0.28	0.54	0.66	0.65	0.53	0.35	0.18	0.03	0.14	0.00	0.38
ZN	0.52	0.03	0.23	0.35	0.34	0.22	0.04	0.13	0.28	0.45	0.00	0.69

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	3.823	3.000	9626.500
Q.ED.Red	3.709	3.625	9637.500
Q.ED.Green		2.125	9575.250
Q.ED.Blue		0.000	9533.500
Q.ED.Gold		0.000	9504.875