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	105.7969	105.255	2.713	1.90
ZF	111.7500	111.240	3.049	3.95
ZN	115.3750	115.120	3.439	5.90
2y	101.031	101.0100	2.710	1.90
5y	102.391	102.1250	3.101	4.46
10y	103.563	103.1800	3.810	7.98

Eurodollars (ED)	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	96.115	3.885	68	0.186	MAR	White Pack
EDAM08	96.565	3.435	159	0.435	JUN	
EDAU08	96.800	3.200	250	0.684	SEP	
EDAZ08	96.915	3.085	341	0.934	DEC	
EDAH09	96.930	3.070	432	1.183	MAR	Red Pack
EDAM09	96.860	3.140	523	1.432	JUN	
EDAU09	96.750	3.250	614	1.682	SEP	
EDAZ09	96.620	3.380	705	1.931	DEC	
EDAH10	96.480	3.520	796	2.180	MAR	Green Pack
EDAM10	96.315	3.685	887	2.430	JUN	
EDAU10	96.165	3.835	978	2.679	SEP	
EDAZ10	96.035	3.965	1069	2.928	DEC	
EDAH11	95.905	4.095	1160	3.177	MAR	Blue Pack
EDAM11	95.795	4.205	1251	3.427	JUN	
EDAU11	95.680	4.320	1349	3.695	SEP	
EDAZ11	95.560	4.440	1440	3.945	DEC	
EDAH12	95.480	4.520	1531	4.194	MAR	Gold Pack
EDAM12	95.390	4.610	1622	4.443	JUN	
EDAU12	95.355	4.645	1713	4.693	SEP	
EDAU12	95.355	4.645	1713	4.693	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	3.478	2.750	9659.875	Pack Prices
Q.ED.Red	3.281	3.000	9679.000	
Q.ED.Green	3.839	3.875	9624.875	
Q.ED.Blue		0.000	9573.250	
Q.ED.Gold		0.000	9536.625	

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

<u>Notes</u>

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

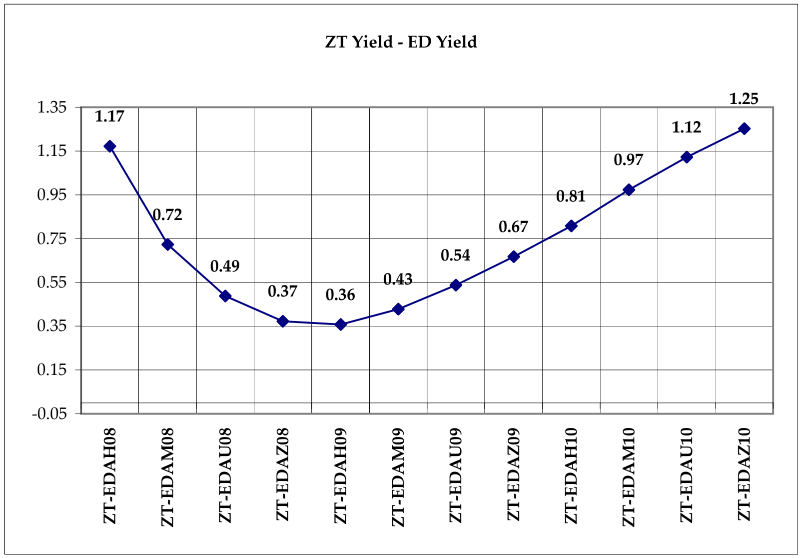
Eurodollar Color Codes for Individual Year Strips:

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

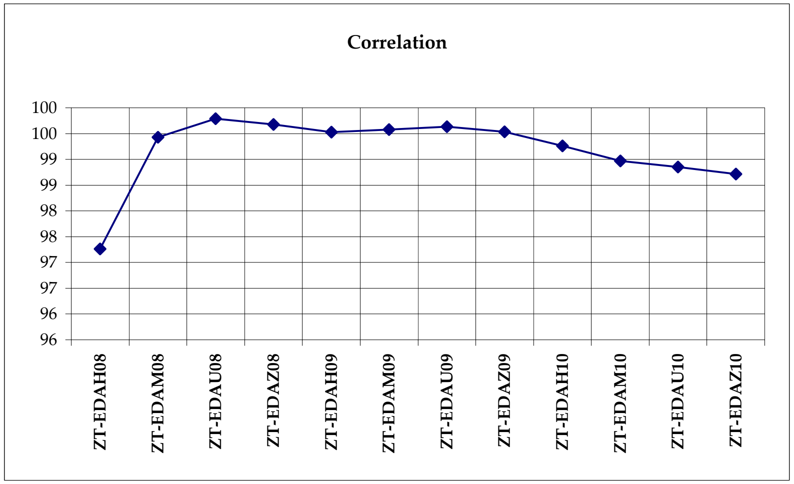
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	9.682	1.17	ZT-EDAH08	97.263
EDAM08	9.232	0.72	ZT-EDAM08	99.430
EDAU08	8.997	0.49	ZT-EDAU08	99.789
EDAZ08	8.882	0.37	ZT-EDAZ08	99.678
EDAH09	8.867	0.36	ZT-EDAH09	99.528
EDAM09	8.937	0.43	ZT-EDAM09	99.577
EDAU09	9.047	0.54	ZT-EDAU09	99.634
EDAZ09	9.177	0.67	ZT-EDAZ09	99.532
EDAH10	9.317	0.81	ZT-EDAH10	99.260
EDAM10	9.482	0.97	ZT-EDAM10	98.972
EDAU10	9.632	1.12	ZT-EDAU10	98.851
EDAZ10	9.762	1.25	ZT-EDAZ10	98.716

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	0.186	1.90	1.71	ZT-EDAH08
EDAM08	0.435	1.90	1.46	ZT-EDAM08
EDAU08	0.684	1.90	1.22	ZT-EDAU08
EDAZ08	0.934	1.90	0.97	ZT-EDAZ08
EDAH09	1.183	1.90	0.72	ZT-EDAH09
EDAM09	1.432	1.90	0.47	ZT-EDAM09
EDAU09	1.682	1.90	0.22	ZT-EDAU09
EDAZ09	1.931	1.90	(0.03)	ZT-EDAZ09
EDAH10	2.180	1.90	(0.28)	ZT-EDAH10
EDAM10	2.430	1.90	(0.53)	ZT-EDAM10
EDAU10	2.679	1.90	(0.78)	ZT-EDAU10
EDAZ10	2.928	1.90	(1.03)	ZT-EDAZ10

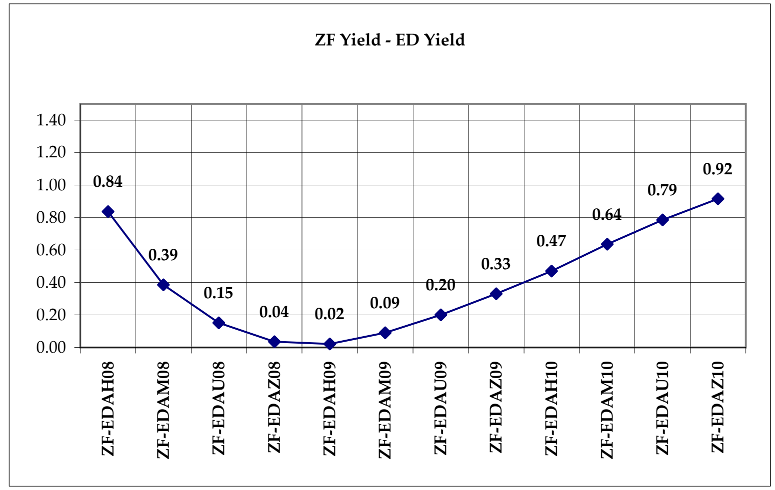
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	15.64	0.84	ZF-EDAH08	97.953
EDAM08	15.19	0.39	ZF-EDAM08	99.556
EDAU08	14.95	0.15	ZF-EDAU08	99.734
EDAZ08	14.84	0.04	ZF-EDAZ08	99.655
EDAH09	14.82	0.02	ZF-EDAH09	99.630
EDAM09	14.89	0.09	ZF-EDAM09	99.771
EDAU09	15.00	0.20	ZF-EDAU09	99.860
EDAZ09	15.13	0.33	ZF-EDAZ09	99.809
EDAH10	15.27	0.47	ZF-EDAH10	99.638
EDAM10	15.44	0.64	ZF-EDAM10	99.524
EDAU10	15.59	0.79	ZF-EDAU10	99.529
EDAZ10	15.72	0.92	ZF-EDAZ10	99.522

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	0.186	3.95	3.76	ZF-EDAH08
EDAM08	0.435	3.95	3.51	ZF-EDAM08
EDAU08	0.684	3.95	3.26	ZF-EDAU08
EDAZ08	0.934	3.95	3.01	ZF-EDAZ08
EDAH09	1.183	3.95	2.77	ZF-EDAH09
EDAM09	1.432	3.95	2.52	ZF-EDAM09
EDAU09	1.682	3.95	2.27	ZF-EDAU09
EDAZ09	1.931	3.95	2.02	ZF-EDAZ09
EDAH10	2.180	3.95	1.77	ZF-EDAH10
EDAM10	2.430	3.95	1.52	ZF-EDAM10
EDAU10	2.679	3.95	1.27	ZF-EDAU10
EDAZ10	2.928	3.95	1.02	ZF-EDAZ10

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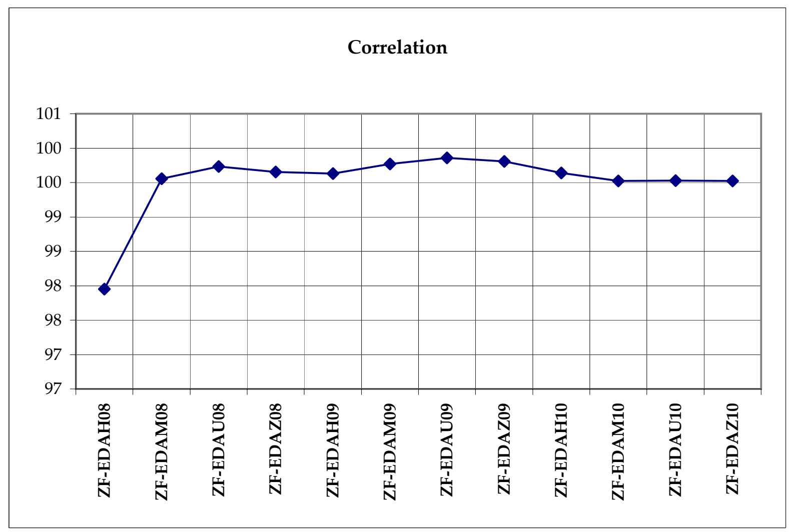

Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	19.26	0.45	ZN-EDAH08	98.10
EDAM08	18.81	0.00	ZN-EDAM08	99.43
EDAU08	18.58	0.24	ZN-EDAU08	99.45
EDAZ08	18.46	0.35	ZN-EDAZ08	99.32
EDAH09	18.45	0.37	ZN-EDAH09	99.33
EDAM09	18.52	0.30	ZN-EDAM09	99.53
EDAU09	18.63	0.19	ZN-EDAU09	99.69
EDAZ09	18.76	0.06	ZN-EDAZ09	99.71
EDAH10	18.90	0.08	ZN-EDAH10	99.64
EDAM10	19.06	0.25	ZN-EDAM10	99.52
EDAU10	19.21	0.40	ZN-EDAU10	99.53
EDAZ10	19.34	0.53	ZN-EDAZ10	99.52

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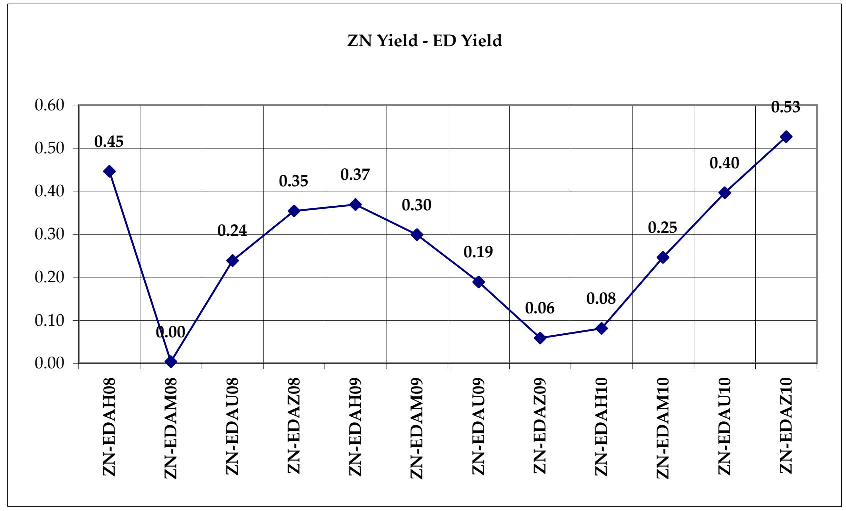
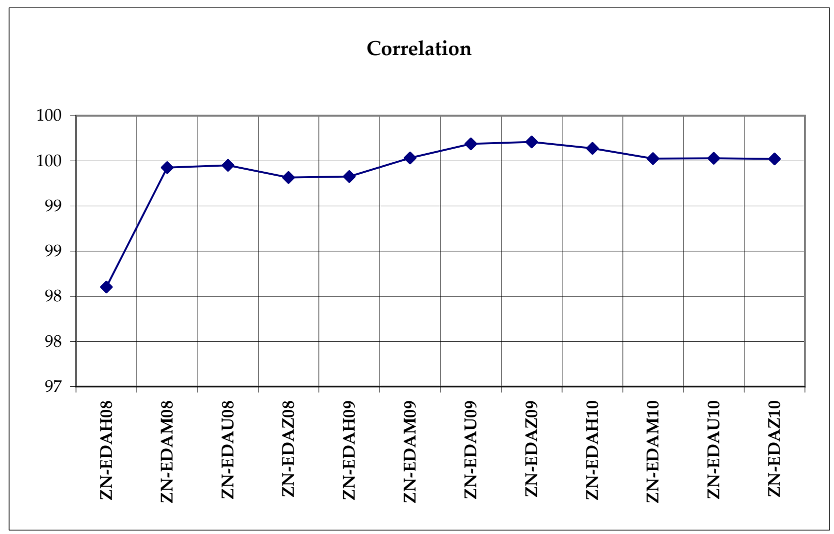


	GE Duration as Fraction of year	ZN Duration	Spread Duration	
EDAH08	0.186	5.90	5.71	ZN-EDAH08
EDAM08	0.435	5.90	5.46	ZN-EDAM08
EDAU08	0.684	5.90	5.21	ZN-EDAU08
EDAZ08	0.934	5.90	4.96	ZN-EDAZ08
EDAH09	1.183	5.90	4.72	ZN-EDAH09
EDAM09	1.432	5.90	4.47	ZN-EDAM09
EDAU09	1.682	5.90	4.22	ZN-EDAU09
EDAZ09	1.931	5.90	3.97	ZN-EDAZ09
EDAH10	2.180	5.90	3.72	ZN-EDAH10
EDAM10	2.430	5.90	3.47	ZN-EDAM10
EDAU10	2.679	5.90	3.22	ZN-EDAU10
EDAZ10	2.928	5.90	2.97	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	4.92	1.17	2y-EDAH08	-97.924
EDAM08	4.47	0.73	2y-EDAM08	-99.384
EDAU08	4.23	0.49	2y-EDAU08	-99.228
EDAZ08	4.12	0.37	2y-EDAZ08	-99.384
EDAH09	4.10	0.36	2y-EDAH09	-98.700
EDAM09	4.17	0.43	2y-EDAM09	-98.958
EDAU09	4.28	0.54	2y-EDAU09	-99.209
EDAZ09	4.41	0.67	2y-EDAZ09	-99.389
EDAH10	4.55	0.81	2y-EDAH10	-99.334
EDAM10	4.72	0.98	2y-EDAM10	-99.180
EDAU10	4.87	1.12	2y-EDAU10	-99.117
EDAZ10	5.00	1.26	2y-EDAZ10	-99.060

Price = Outright Decimal Price - Euro Contract Price
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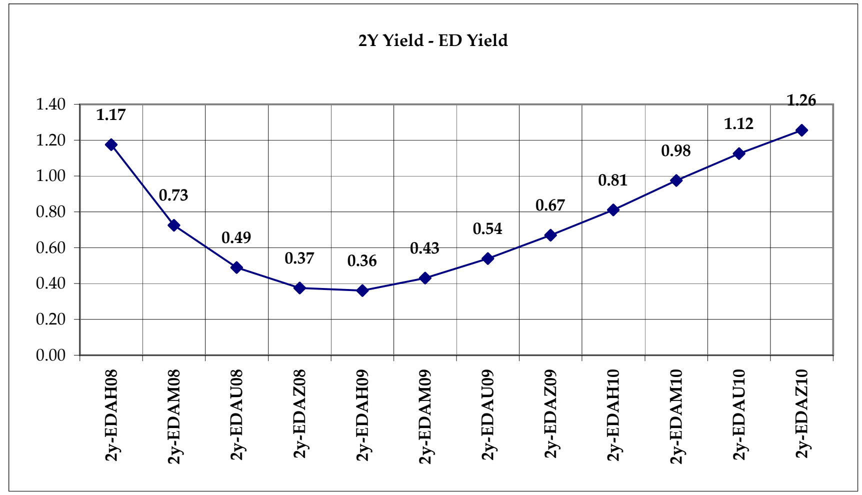
These are measuring YIELD correlations.



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAH08	0.186	1.90	1.71	2y-EDAH08
EDAM08	0.435	1.90	1.46	2y-EDAM08
EDAU08	0.684	1.90	1.22	2y-EDAU08
EDAZ08	0.934	1.90	0.97	2y-EDAZ08
EDAH09	1.183	1.90	0.72	2y-EDAH09
EDAM09	1.432	1.90	0.47	2y-EDAM09
EDAU09	1.682	1.90	0.22	2y-EDAU09
EDAZ09	1.931	1.90	(0.03)	2y-EDAZ09
EDAH10	2.180	1.90	(0.28)	2y-EDAH10
EDAM10	2.430	1.90	(0.53)	2y-EDAM10
EDAU10	2.679	1.90	(0.78)	2y-EDAU10
EDAZ10	2.928	1.90	(1.03)	2y-EDAZ10

The farther away from 0 the spread duration is
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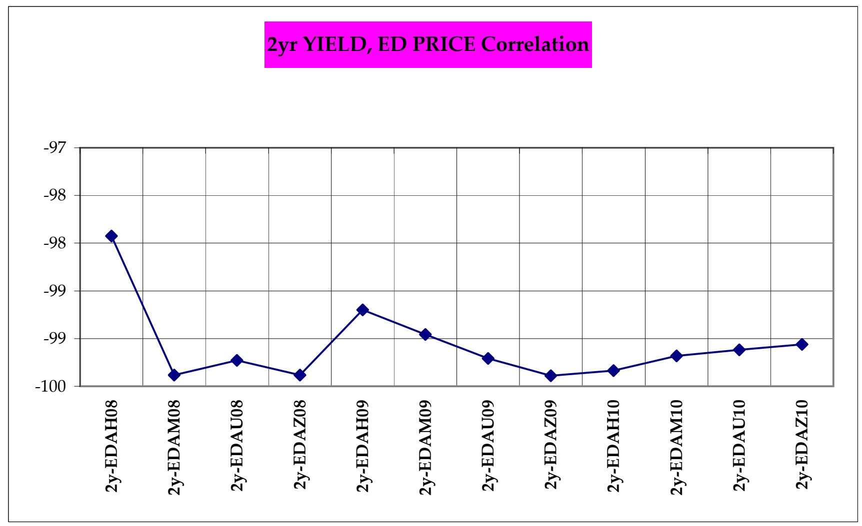
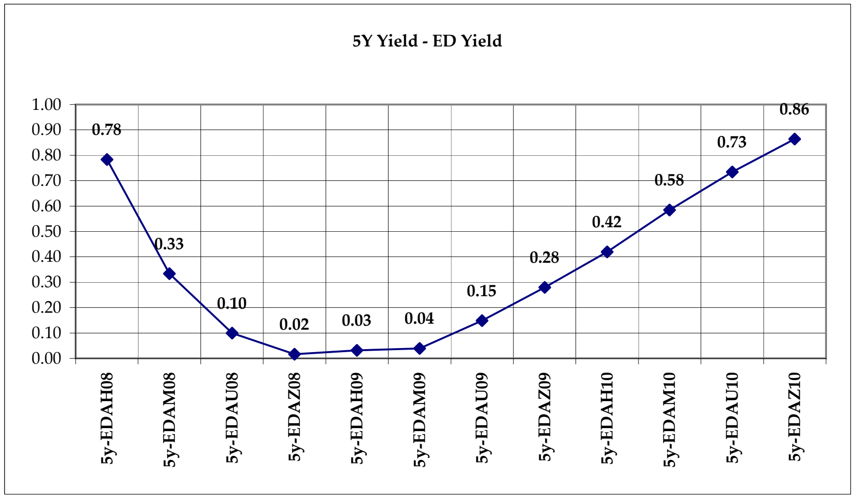


TERM TED: 5y vs Eurodollar Contracts

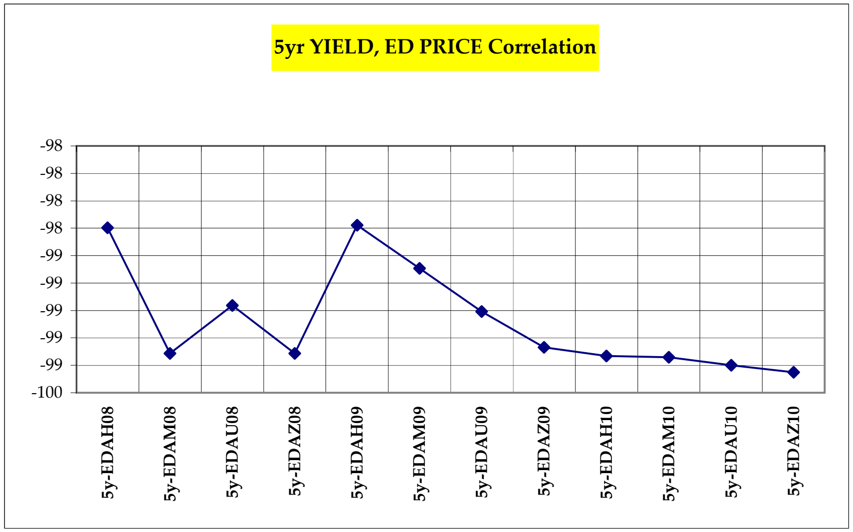
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	6.28	0.78	5y-EDAH08	-98.397
EDAM08	5.83	0.33	5y-EDAM08	-99.312
EDAU08	5.59	0.10	5y-EDAU08	-98.963
EDAZ08	5.48	0.02	5y-EDAZ08	-99.312
EDAH09	5.46	0.03	5y-EDAH09	-98.379
EDAM09	5.53	0.04	5y-EDAM09	-98.693
EDAU09	5.64	0.15	5y-EDAU09	-99.009
EDAZ09	5.77	0.28	5y-EDAZ09	-99.268
EDAH10	5.91	0.42	5y-EDAH10	-99.333
EDAM10	6.08	0.58	5y-EDAM10	-99.341
EDAU10	6.23	0.73	5y-EDAU10	-99.398
EDAZ10	6.36	0.86	5y-EDAZ10	-99.450

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	0.186	4.46	4.28	5y-EDAH08
EDAM08	0.435	4.46	4.03	5y-EDAM08
EDAU08	0.684	4.46	3.78	5y-EDAU08
EDAZ08	0.934	4.46	3.53	5y-EDAZ08
EDAH09	1.183	4.46	3.28	5y-EDAH09
EDAM09	1.432	4.46	3.03	5y-EDAM09
EDAU09	1.682	4.46	2.78	5y-EDAU09
EDAZ09	1.931	4.46	2.53	5y-EDAZ09
EDAH10	2.180	4.46	2.28	5y-EDAH10
EDAM10	2.430	4.46	2.03	5y-EDAM10
EDAU10	2.679	4.46	1.79	5y-EDAU10
EDAZ10	2.928	4.46	1.54	5y-EDAZ10

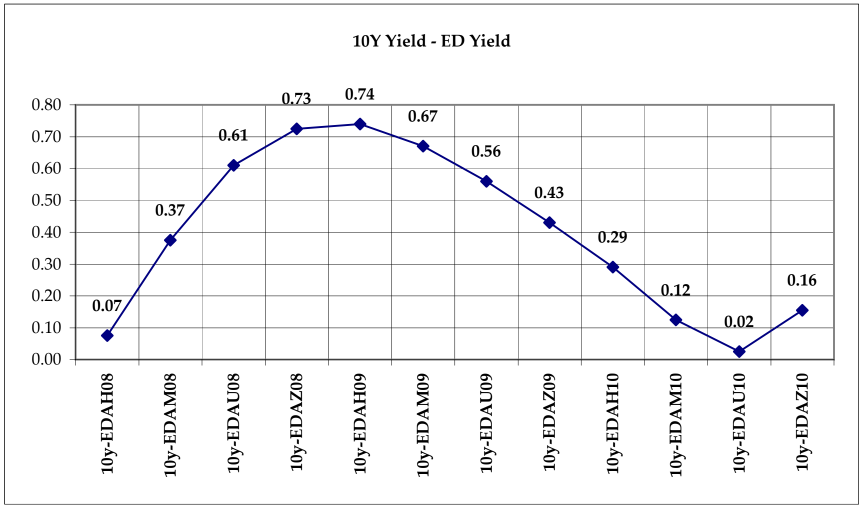
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

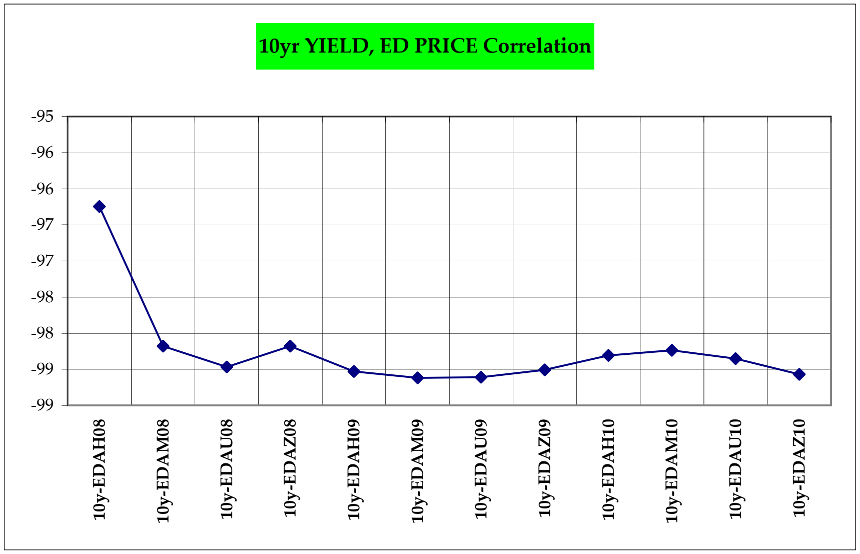
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	6.28	0.07	10y-EDAH08	-96.245
EDAM08	5.83	0.37	10y-EDAM08	-98.178
EDAU08	5.59	0.61	10y-EDAU08	-98.468
EDAZ08	5.48	0.73	10y-EDAZ08	-98.178
EDAH09	5.46	0.74	10y-EDAH09	-98.532
EDAM09	5.53	0.67	10y-EDAM09	-98.620
EDAU09	5.64	0.56	10y-EDAU09	-98.612
EDAZ09	5.77	0.43	10y-EDAZ09	-98.510
EDAH10	5.91	0.29	10y-EDAH10	-98.310
EDAM10	6.08	0.12	10y-EDAM10	-98.237
EDAU10	6.23	0.02	10y-EDAU10	-98.353
EDAZ10	6.36	0.16	10y-EDAZ10	-98.568

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.



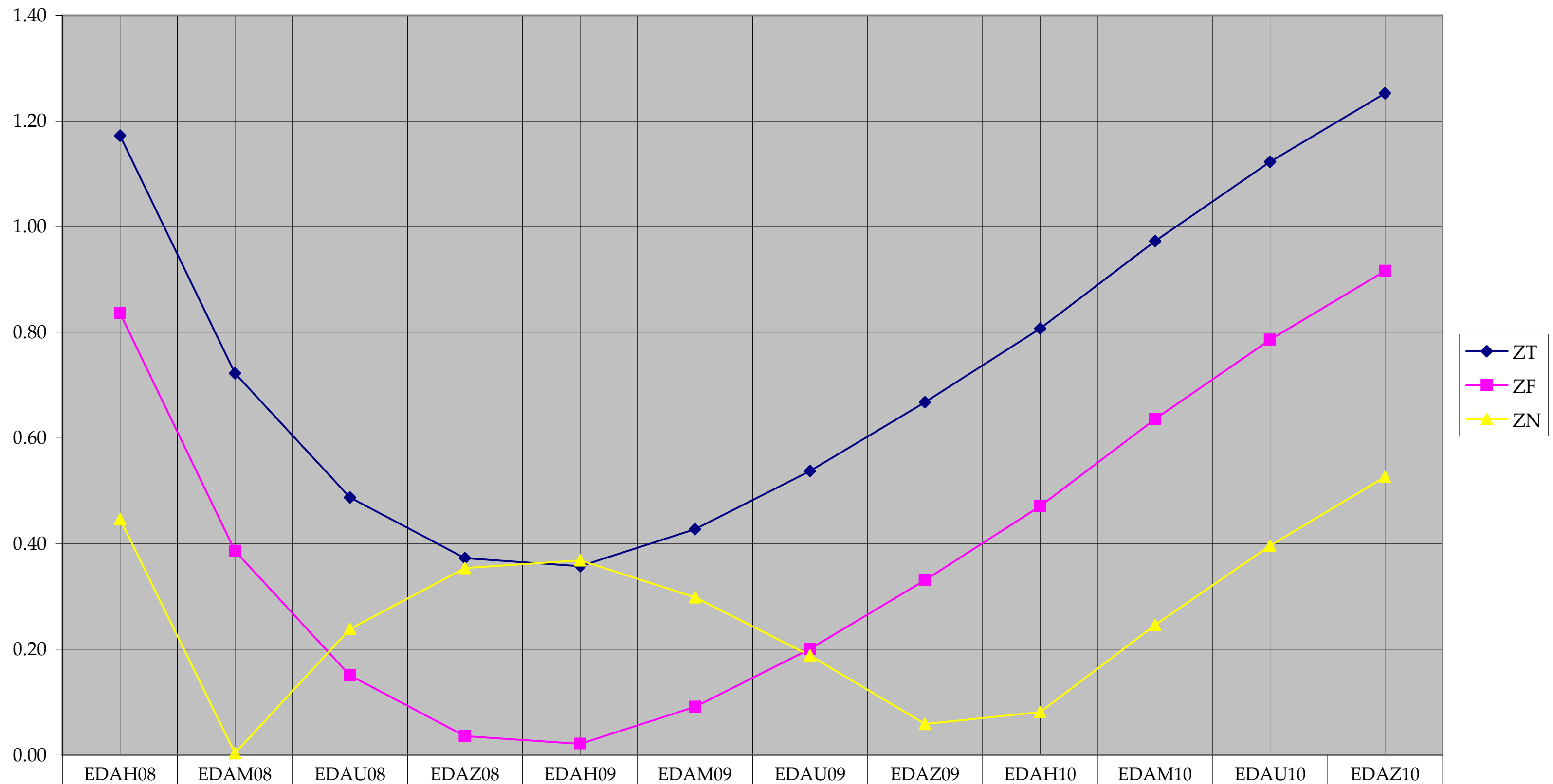
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAH08	0.186	7.98	7.80	10y-EDAH08
EDAM08	0.435	7.98	7.55	10y-EDAM08
EDAU08	0.684	7.98	7.30	10y-EDAU08
EDAZ08	0.934	7.98	7.05	10y-EDAZ08
EDAH09	1.183	7.98	6.80	10y-EDAH09
EDAM09	1.432	7.98	6.55	10y-EDAM09
EDAU09	1.682	7.98	6.30	10y-EDAU09
EDAZ09	1.931	7.98	6.05	10y-EDAZ09
EDAH10	2.180	7.98	5.80	10y-EDAH10
EDAM10	2.430	7.98	5.55	10y-EDAM10
EDAU10	2.679	7.98	5.30	10y-EDAU10
EDAZ10	2.928	7.98	5.05	10y-EDAZ10

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



Dirty TED Curve

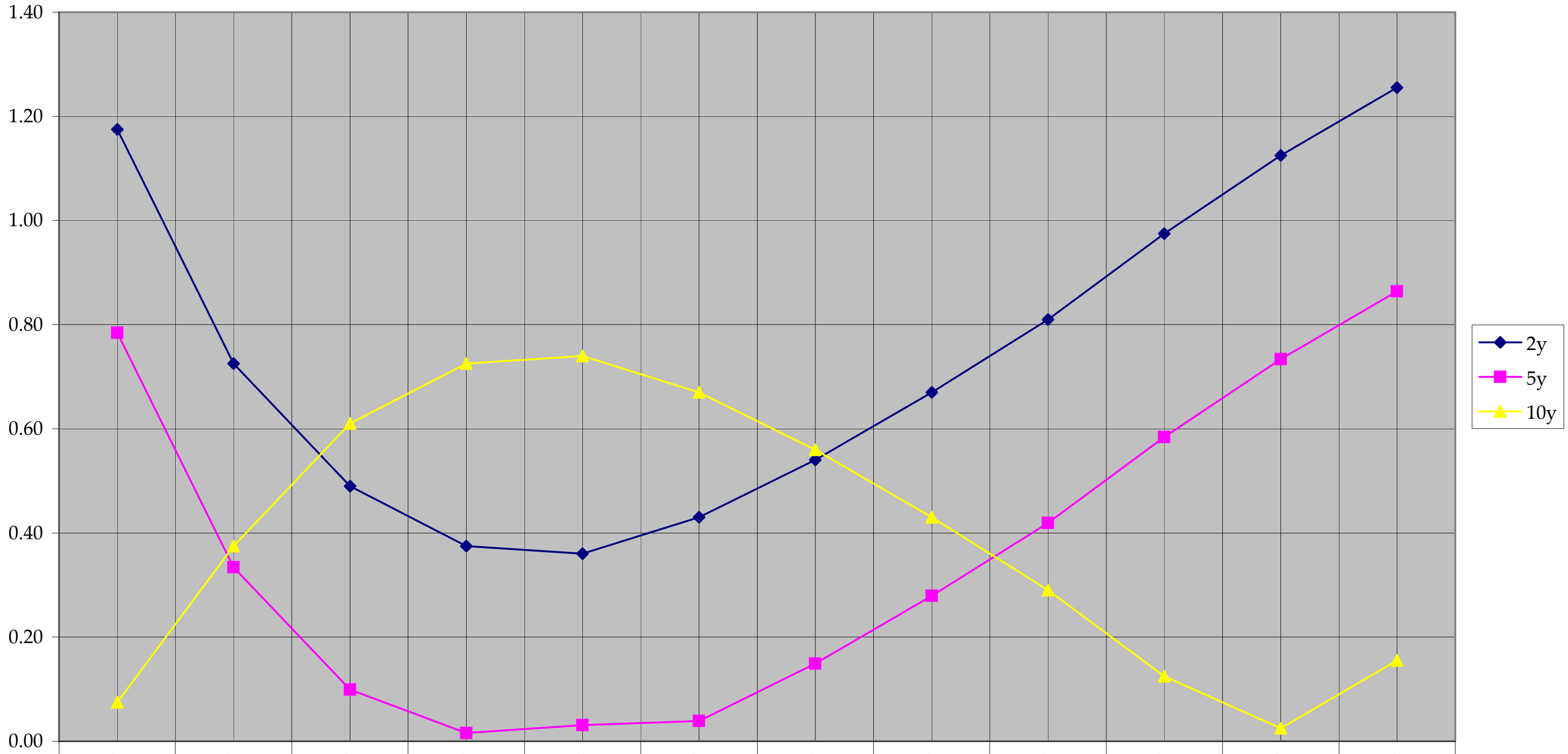
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.17	0.72	0.49	0.37	0.36	0.43	0.54	0.67	0.81	0.97	1.12	1.25
ZF	0.84	0.39	0.15	0.04	0.02	0.09	0.20	0.33	0.47	0.64	0.79	0.92
ZN	0.45	0.00	0.24	0.35	0.37	0.30	0.19	0.06	0.08	0.25	0.40	0.53

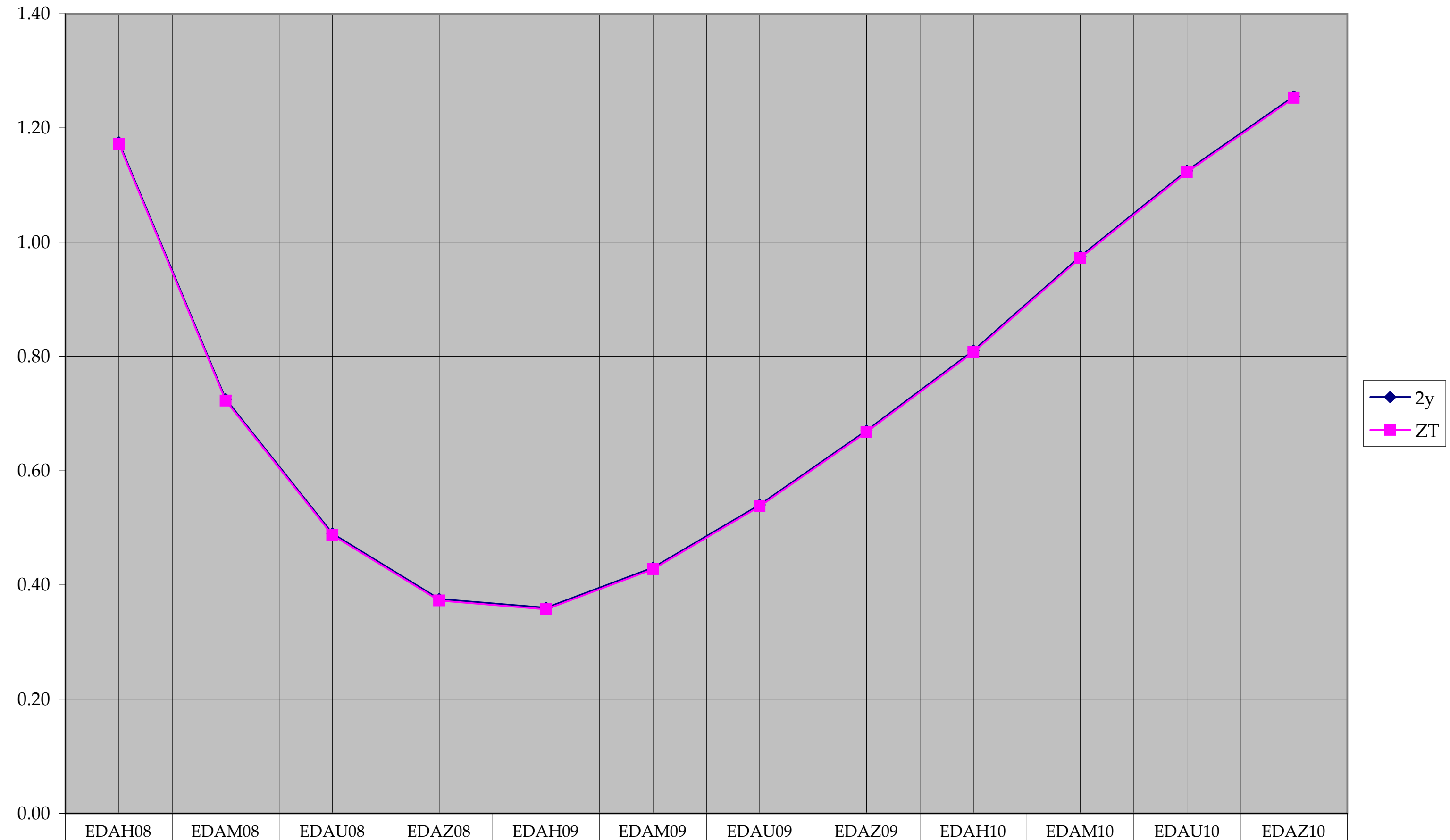
TED Curve

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.



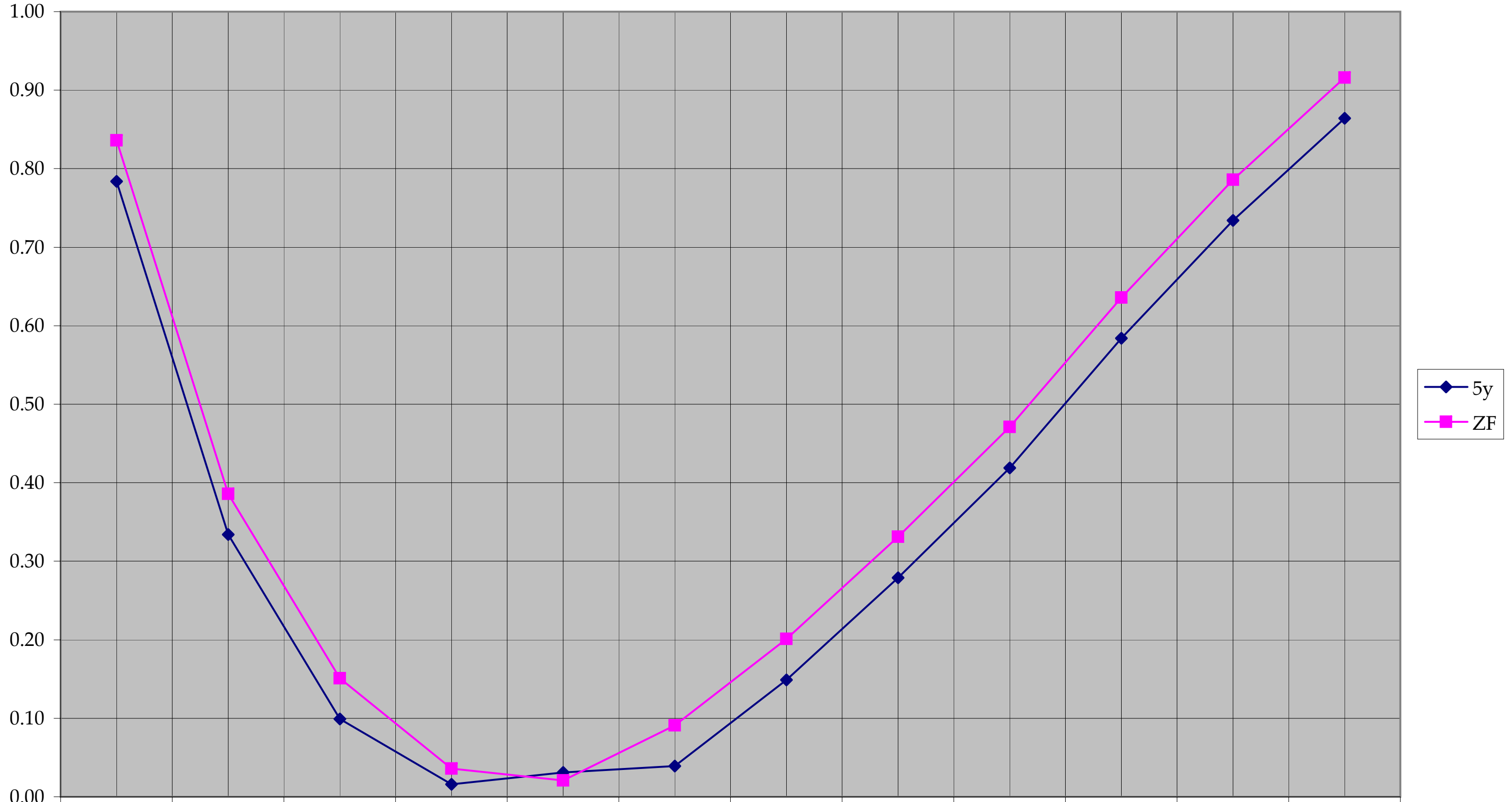
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.17	0.73	0.49	0.37	0.36	0.43	0.54	0.67	0.81	0.98	1.12	1.26
5y	0.78	0.33	0.10	0.02	0.03	0.04	0.15	0.28	0.42	0.58	0.73	0.86
10y	0.07	0.37	0.61	0.73	0.74	0.67	0.56	0.43	0.29	0.12	0.02	0.16

2y Basis TED Curve



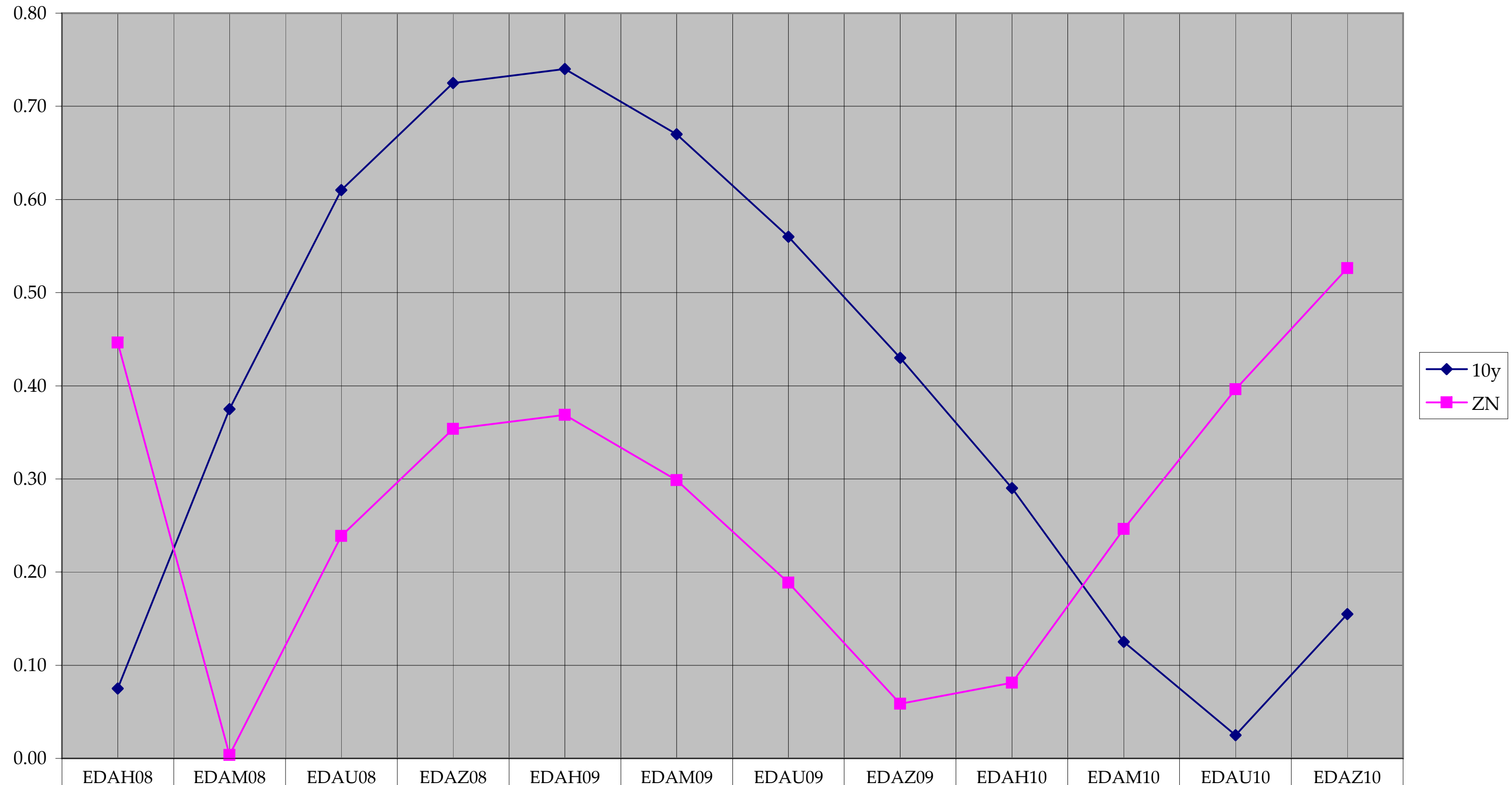
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.17	0.73	0.49	0.37	0.36	0.43	0.54	0.67	0.81	0.98	1.12	1.26
ZT	1.17	0.72	0.49	0.37	0.36	0.43	0.54	0.67	0.81	0.97	1.12	1.25

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.78	0.33	0.10	0.02	0.03	0.04	0.15	0.28	0.42	0.58	0.73	0.86
ZF	0.84	0.39	0.15	0.04	0.02	0.09	0.20	0.33	0.47	0.64	0.79	0.92

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.07	0.37	0.61	0.73	0.74	0.67	0.56	0.43	0.29	0.12	0.02	0.16
ZN	0.45	0.00	0.24	0.35	0.37	0.30	0.19	0.06	0.08	0.25	0.40	0.53

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	3.478	2.750	9659.875
Q.ED.Red	3.281	3.000	9679.000
Q.ED.Green	3.839	3.875	9624.875
Q.ED.Blue		0.000	9573.250
Q.ED.Gold		0.000	9536.625