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	105.0781	105.025	3.074	1.91
ZF	110.1563	110.050	3.405	3.96
ZN	113.1406	113.045	3.765	5.90
2y	100.344	100.1100	3.071	1.91
5y	100.672	100.2150	3.476	4.47
10y	101.500	101.1600	4.061	7.97

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH08	95.760	4.240	75	0.205	MAR	White Pack
EDAM08	96.245	3.755	166	0.454	JUN	
EDAU08	96.495	3.505	257	0.703	SEP	
EDAZ08	96.615	3.385	348	0.953	DEC	
EDAH09	96.615	3.385	439	1.202	MAR	Red Pack
EDAM09	96.490	3.510	530	1.451	JUN	
EDAU09	96.330	3.670	621	1.701	SEP	
EDAZ09	96.160	3.840	712	1.950	DEC	
EDAH10	96.000	4.000	803	2.199	MAR	Green Pack
EDAM10	95.845	4.155	894	2.449	JUN	
EDAU10	95.740	4.260	985	2.698	SEP	
EDAZ10	95.605	4.395	1076	2.947	DEC	
EDAH11	95.520	4.480	1167	3.197	MAR	Blue Pack
EDAM11	95.450	4.550	1258	3.446	JUN	
EDAU11	95.380	4.620	1356	3.714	SEP	
EDAZ11	95.315	4.685	1447	3.964	DEC	
EDAH12	95.250	4.750	1538	4.213	MAR	Gold Pack
EDAM12	95.195	4.805	1629	4.462	JUN	
EDAU12	95.050	4.950	1720	4.712	SEP	
EDAU12	95.050	4.950	1720	4.712	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	3.809	-1.125	9627.875	Pack Prices
Q.ED.Red	3.685	-1.875	9639.875	
Q.ED.Green	4.306	-1.875	9579.750	
Q.ED.Blue		-0.625	9541.375	
Q.ED.Gold		0.000	9513.375	

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

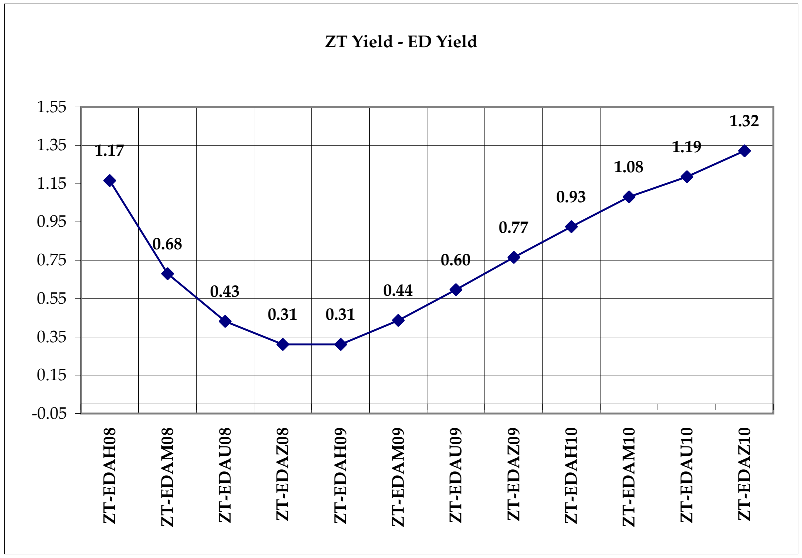
Eurodollar Color Codes for Individual Year Strips:

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

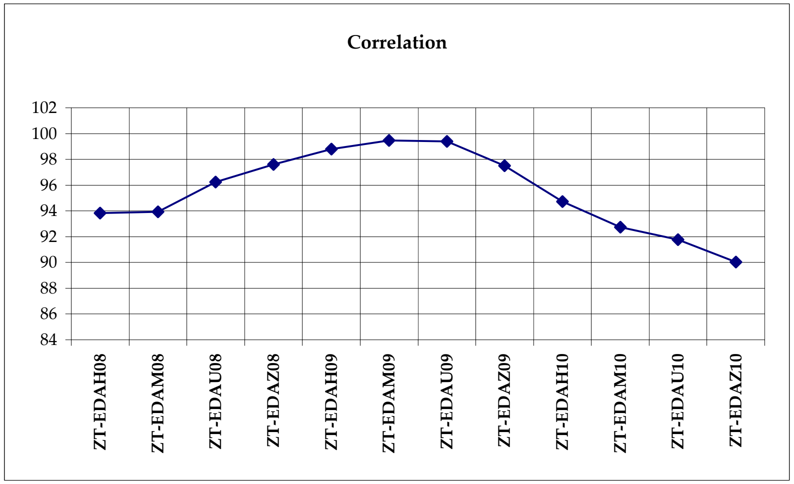
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	9.318	1.17	ZT-EDAH08	93.829
EDAM08	8.833	0.68	ZT-EDAM08	93.920
EDAU08	8.583	0.43	ZT-EDAU08	96.246
EDAZ08	8.463	0.31	ZT-EDAZ08	97.599
EDAH09	8.463	0.31	ZT-EDAH09	98.801
EDAM09	8.588	0.44	ZT-EDAM09	99.465
EDAU09	8.748	0.60	ZT-EDAU09	99.401
EDAZ09	8.918	0.77	ZT-EDAZ09	97.511
EDAH10	9.078	0.93	ZT-EDAH10	94.724
EDAM10	9.233	1.08	ZT-EDAM10	92.736
EDAU10	9.338	1.19	ZT-EDAU10	91.765
EDAZ10	9.473	1.32	ZT-EDAZ10	90.024

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	0.205	1.91	1.71	ZT-EDAH08
EDAM08	0.454	1.91	1.46	ZT-EDAM08
EDAU08	0.703	1.91	1.21	ZT-EDAU08
EDAZ08	0.953	1.91	0.96	ZT-EDAZ08
EDAH09	1.202	1.91	0.71	ZT-EDAH09
EDAM09	1.451	1.91	0.46	ZT-EDAM09
EDAU09	1.701	1.91	0.21	ZT-EDAU09
EDAZ09	1.950	1.91	(0.04)	ZT-EDAZ09
EDAH10	2.199	1.91	(0.28)	ZT-EDAH10
EDAM10	2.449	1.91	(0.53)	ZT-EDAM10
EDAU10	2.698	1.91	(0.78)	ZT-EDAU10
EDAZ10	2.947	1.91	(1.03)	ZT-EDAZ10

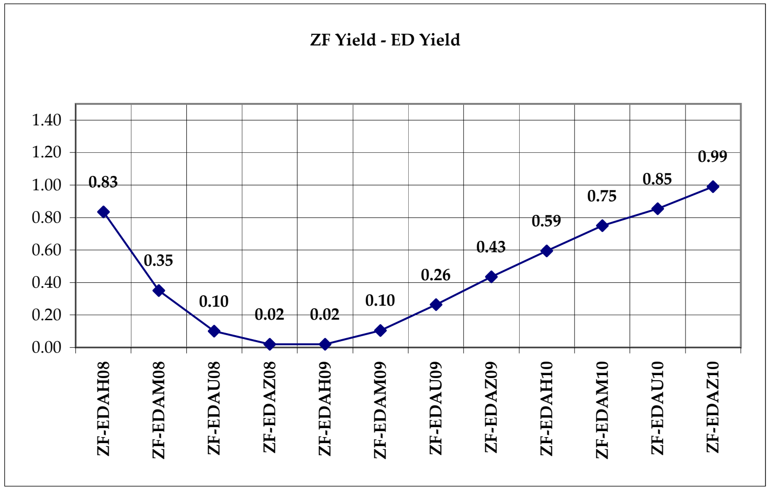
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

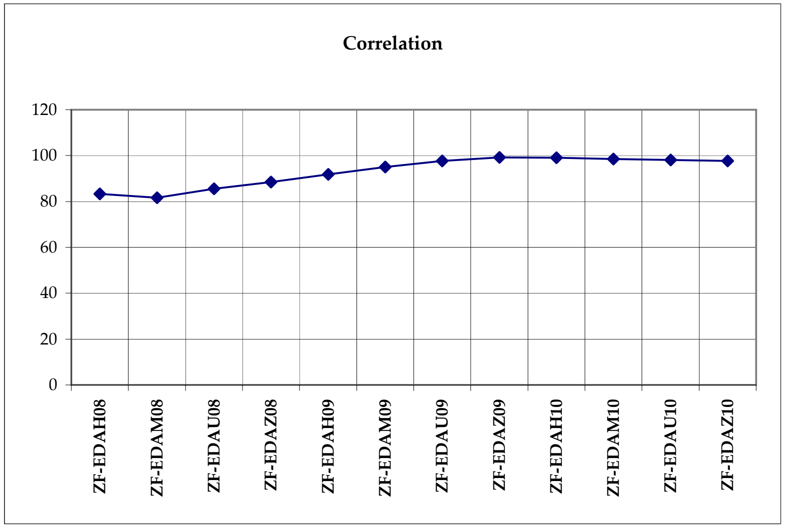
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	14.40	0.83	ZF-EDAH08	83.258
EDAM08	13.91	0.35	ZF-EDAM08	81.697
EDAU08	13.66	0.10	ZF-EDAU08	85.519
EDAZ08	13.54	0.02	ZF-EDAZ08	88.481
EDAH09	13.54	0.02	ZF-EDAH09	91.764
EDAM09	13.67	0.10	ZF-EDAM09	95.034
EDAU09	13.83	0.26	ZF-EDAU09	97.636
EDAZ09	14.00	0.43	ZF-EDAZ09	99.265
EDAH10	14.16	0.59	ZF-EDAH10	99.047
EDAM10	14.31	0.75	ZF-EDAM10	98.486
EDAU10	14.42	0.85	ZF-EDAU10	98.144
EDAZ10	14.55	0.99	ZF-EDAZ10	97.675

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	0.205	3.96	3.75	ZF-EDAH08
EDAM08	0.454	3.96	3.50	ZF-EDAM08
EDAU08	0.703	3.96	3.25	ZF-EDAU08
EDAZ08	0.953	3.96	3.00	ZF-EDAZ08
EDAH09	1.202	3.96	2.75	ZF-EDAH09
EDAM09	1.451	3.96	2.51	ZF-EDAM09
EDAU09	1.701	3.96	2.26	ZF-EDAU09
EDAZ09	1.950	3.96	2.01	ZF-EDAZ09
EDAH10	2.199	3.96	1.76	ZF-EDAH10
EDAM10	2.449	3.96	1.51	ZF-EDAM10
EDAU10	2.698	3.96	1.26	ZF-EDAU10
EDAZ10	2.947	3.96	1.01	ZF-EDAZ10

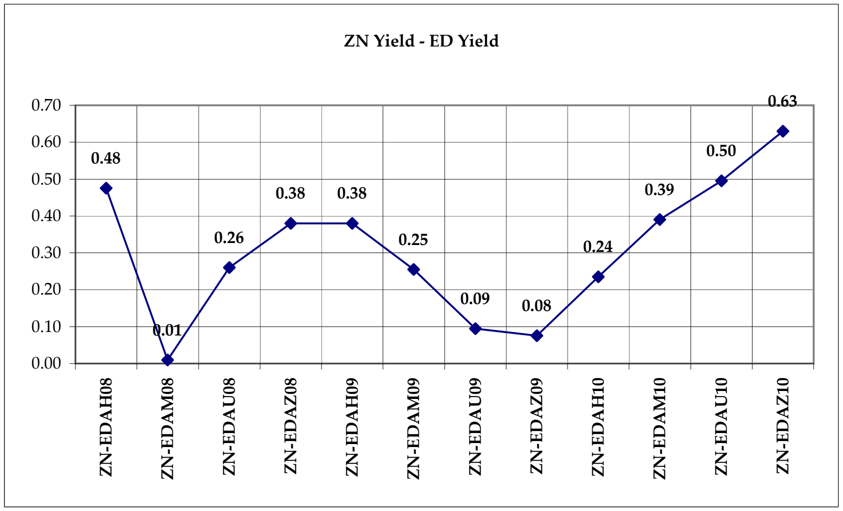
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

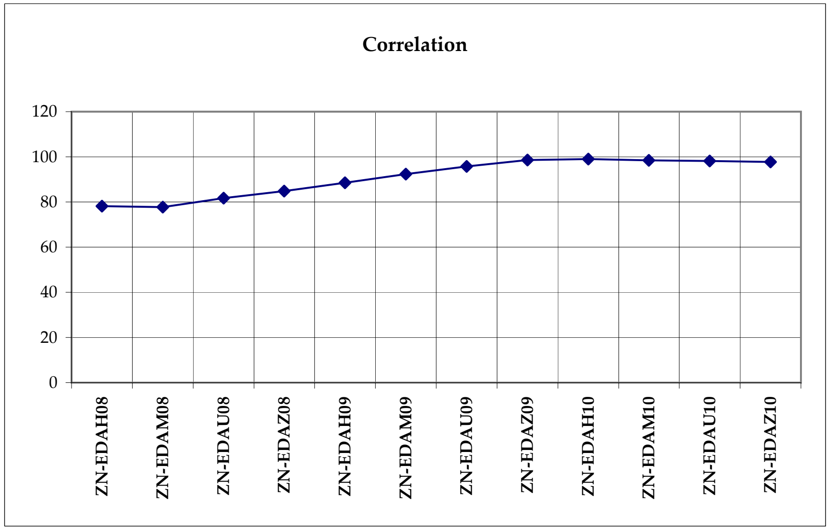
	ZN Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	17.38	0.48	ZN-EDAH08	78.18
EDAM08	16.90	0.01	ZN-EDAM08	77.76
EDAU08	16.65	0.26	ZN-EDAU08	81.69
EDAZ08	16.53	0.38	ZN-EDAZ08	84.88
EDAH09	16.53	0.38	ZN-EDAH09	88.46
EDAM09	16.65	0.25	ZN-EDAM09	92.30
EDAU09	16.81	0.09	ZN-EDAU09	95.78
EDAZ09	16.98	0.08	ZN-EDAZ09	98.58
EDAH10	17.14	0.24	ZN-EDAH10	99.05
EDAM10	17.30	0.39	ZN-EDAM10	98.49
EDAU10	17.40	0.50	ZN-EDAU10	98.14
EDAZ10	17.54	0.63	ZN-EDAZ10	97.68

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	0.205	5.90	5.69	ZN-EDAH08
EDAM08	0.454	5.90	5.44	ZN-EDAM08
EDAU08	0.703	5.90	5.19	ZN-EDAU08
EDAZ08	0.953	5.90	4.94	ZN-EDAZ08
EDAH09	1.202	5.90	4.70	ZN-EDAH09
EDAM09	1.451	5.90	4.45	ZN-EDAM09
EDAU09	1.701	5.90	4.20	ZN-EDAU09
EDAZ09	1.950	5.90	3.95	ZN-EDAZ09
EDAH10	2.199	5.90	3.70	ZN-EDAH10
EDAM10	2.449	5.90	3.45	ZN-EDAM10
EDAU10	2.698	5.90	3.20	ZN-EDAU10
EDAZ10	2.947	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	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.58	1.17	2y-EDAH08	-90.426
EDAM08	4.10	0.68	2y-EDAM08	-89.362
EDAU08	3.85	0.43	2y-EDAU08	-90.686
EDAZ08	3.73	0.31	2y-EDAZ08	-89.362
EDAH09	3.73	0.31	2y-EDAH09	-95.018
EDAM09	3.85	0.44	2y-EDAM09	-96.899
EDAU09	4.01	0.60	2y-EDAU09	-98.150
EDAZ09	4.18	0.77	2y-EDAZ09	-97.992
EDAH10	4.34	0.93	2y-EDAH10	-96.263
EDAM10	4.50	1.08	2y-EDAM10	-94.835
EDAU10	4.60	1.19	2y-EDAU10	-93.928
EDAZ10	4.74	1.32	2y-EDAZ10	-92.805

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS(Proxy Yield - Implied Euro Contract yield)
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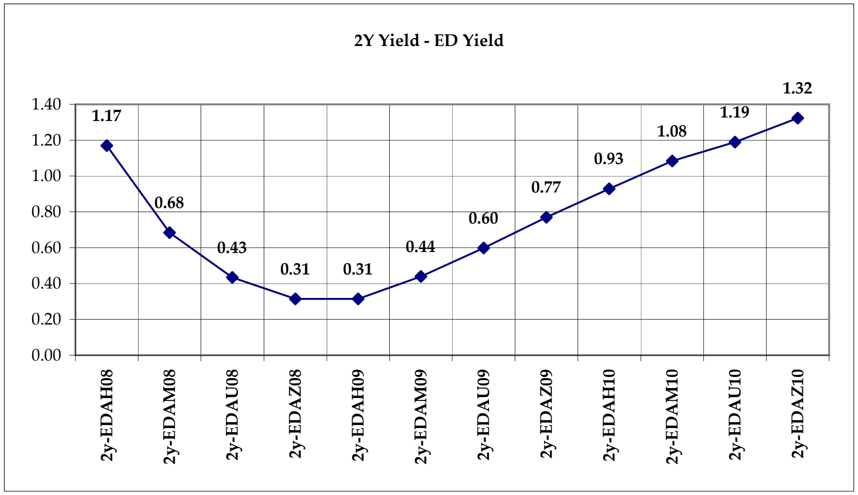
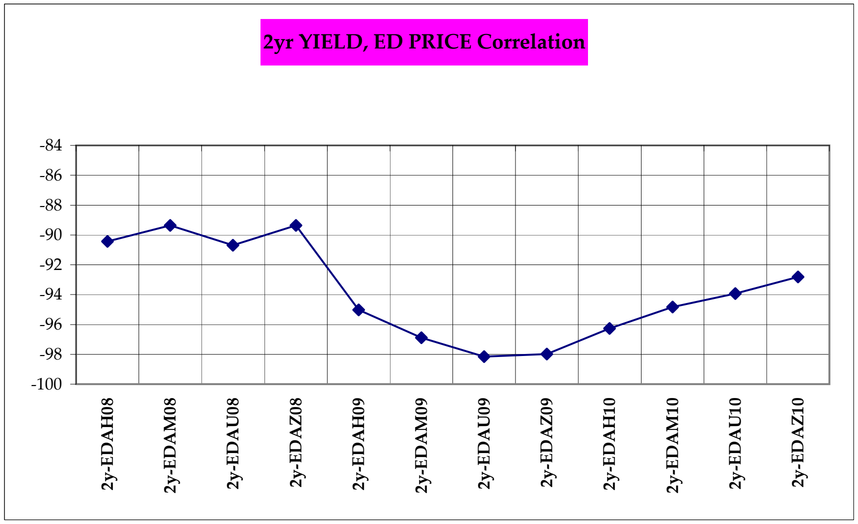
These are measuring YIELD correlations.



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAH08	0.205	1.91	1.71	2y-EDAH08
EDAM08	0.454	1.91	1.46	2y-EDAM08
EDAU08	0.703	1.91	1.21	2y-EDAU08
EDAZ08	0.953	1.91	0.96	2y-EDAZ08
EDAH09	1.202	1.91	0.71	2y-EDAH09
EDAM09	1.451	1.91	0.46	2y-EDAM09
EDAU09	1.701	1.91	0.21	2y-EDAU09
EDAZ09	1.950	1.91	(0.04)	2y-EDAZ09
EDAH10	2.199	1.91	(0.28)	2y-EDAH10
EDAM10	2.449	1.91	(0.53)	2y-EDAM10
EDAU10	2.698	1.91	(0.78)	2y-EDAU10
EDAZ10	2.947	1.91	(1.03)	2y-EDAZ10

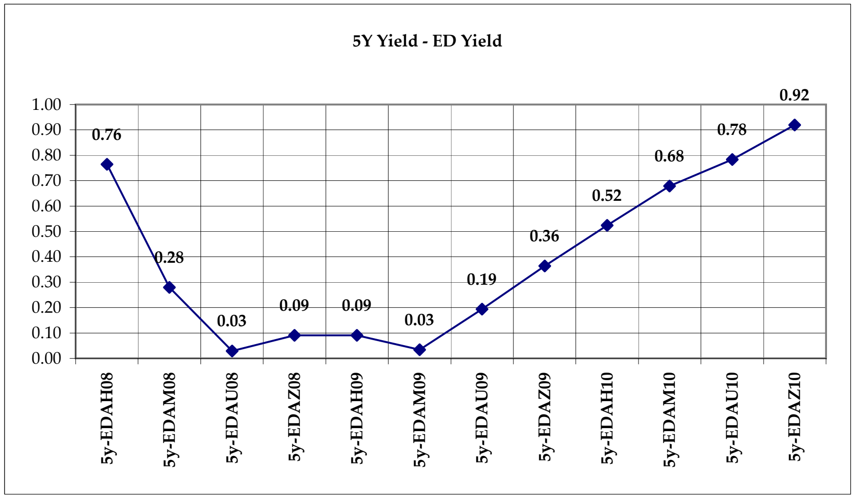
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

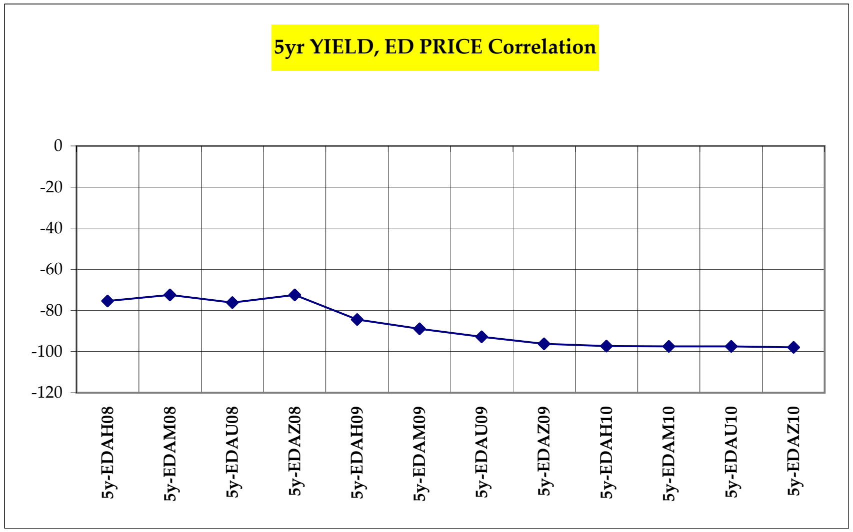
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.91	0.76	5y-EDAH08	-75.453
EDAM08	4.43	0.28	5y-EDAM08	-72.451
EDAU08	4.18	0.03	5y-EDAU08	-76.169
EDAZ08	4.06	0.09	5y-EDAZ08	-72.451
EDAH09	4.06	0.09	5y-EDAH09	-84.425
EDAM09	4.18	0.03	5y-EDAM09	-88.939
EDAU09	4.34	0.19	5y-EDAU09	-92.772
EDAZ09	4.51	0.36	5y-EDAZ09	-96.229
EDAH10	4.67	0.52	5y-EDAH10	-97.329
EDAM10	4.83	0.68	5y-EDAM10	-97.504
EDAU10	4.93	0.78	5y-EDAU10	-97.513
EDAZ10	5.07	0.92	5y-EDAZ10	-97.893

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	0.205	4.47	4.27	5y-EDAH08
EDAM08	0.454	4.47	4.02	5y-EDAM08
EDAU08	0.703	4.47	3.77	5y-EDAU08
EDAZ08	0.953	4.47	3.52	5y-EDAZ08
EDAH09	1.202	4.47	3.27	5y-EDAH09
EDAM09	1.451	4.47	3.02	5y-EDAM09
EDAU09	1.701	4.47	2.77	5y-EDAU09
EDAZ09	1.950	4.47	2.52	5y-EDAZ09
EDAH10	2.199	4.47	2.27	5y-EDAH10
EDAM10	2.449	4.47	2.02	5y-EDAM10
EDAU10	2.698	4.47	1.77	5y-EDAU10
EDAZ10	2.947	4.47	1.52	5y-EDAZ10

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



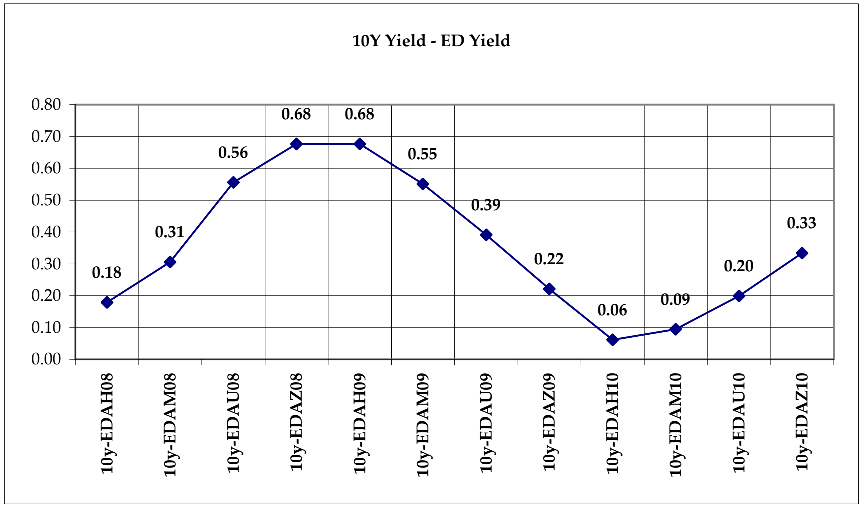
TERM TED: 10y vs Eurodollar Contracts

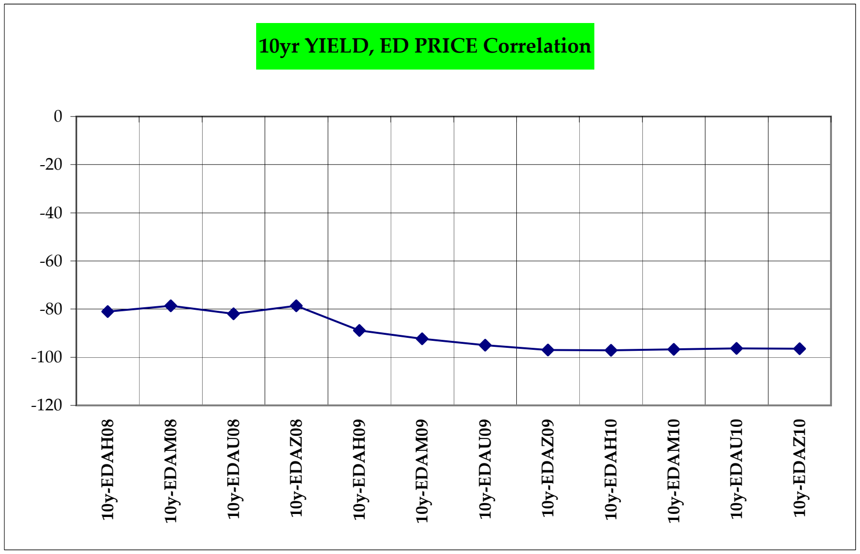
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH08	4.91	0.18	10y-EDAH08	-80.965
EDAM08	4.43	0.31	10y-EDAM08	-78.628
EDAU08	4.18	0.56	10y-EDAU08	-81.905
EDAZ08	4.06	0.68	10y-EDAZ08	-78.628
EDAH09	4.06	0.68	10y-EDAH09	-88.842
EDAM09	4.18	0.55	10y-EDAM09	-92.356
EDAU09	4.34	0.39	10y-EDAU09	-95.033
EDAZ09	4.51	0.22	10y-EDAZ09	-97.016
EDAH10	4.67	0.06	10y-EDAH10	-97.130
EDAM10	4.83	0.09	10y-EDAM10	-96.700
EDAU10	4.93	0.20	10y-EDAU10	-96.326
EDAZ10	5.07	0.33	10y-EDAZ10	-96.445

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	0.205	7.97	7.76	10y-EDAH08
EDAM08	0.454	7.97	7.51	10y-EDAM08
EDAU08	0.703	7.97	7.27	10y-EDAU08
EDAZ08	0.953	7.97	7.02	10y-EDAZ08
EDAH09	1.202	7.97	6.77	10y-EDAH09
EDAM09	1.451	7.97	6.52	10y-EDAM09
EDAU09	1.701	7.97	6.27	10y-EDAU09
EDAZ09	1.950	7.97	6.02	10y-EDAZ09
EDAH10	2.199	7.97	5.77	10y-EDAH10
EDAM10	2.449	7.97	5.52	10y-EDAM10
EDAU10	2.698	7.97	5.27	10y-EDAU10
EDAZ10	2.947	7.97	5.02	10y-EDAZ10

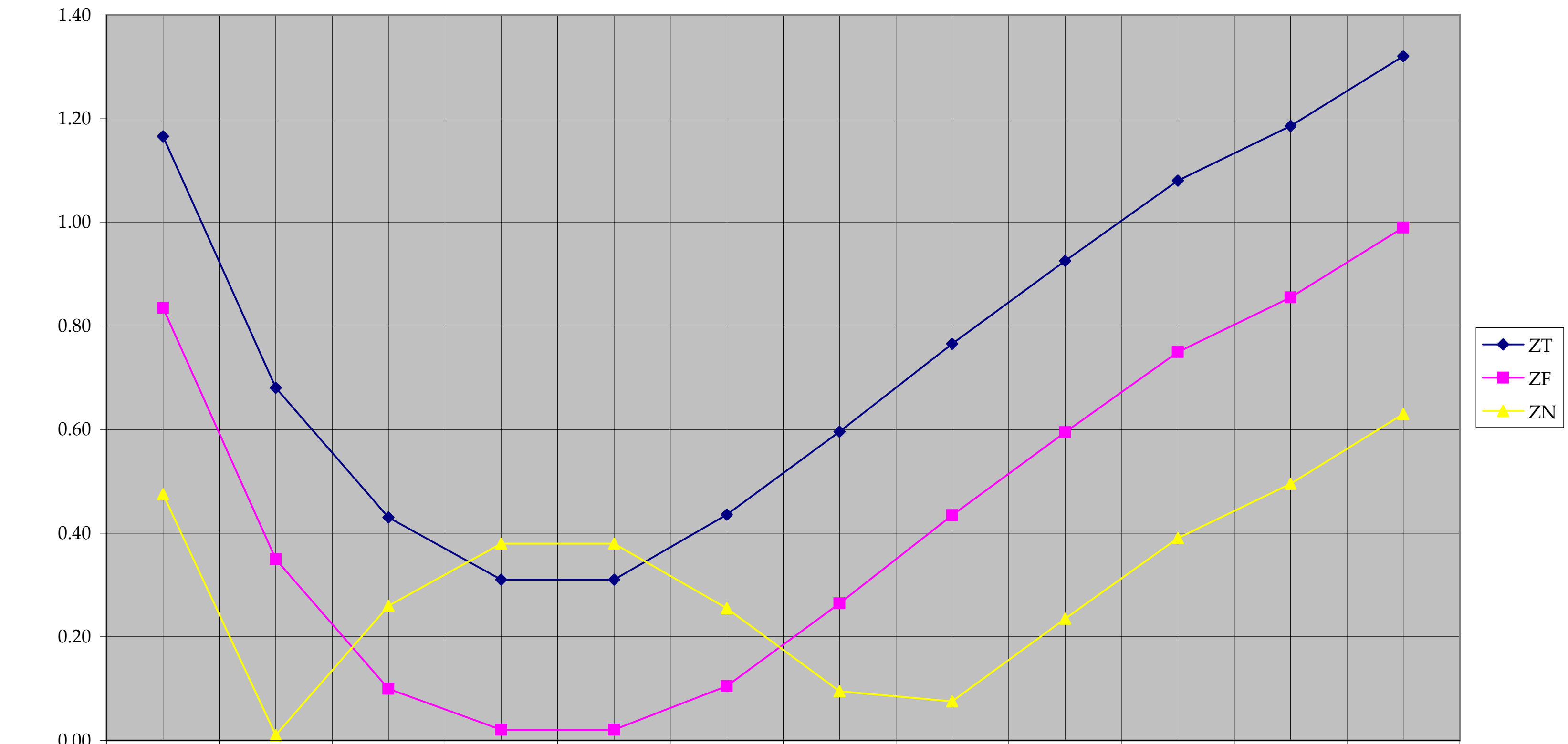
The farther away from 0 the spread duration is
the riskier the trade.





Dirty TED Curve

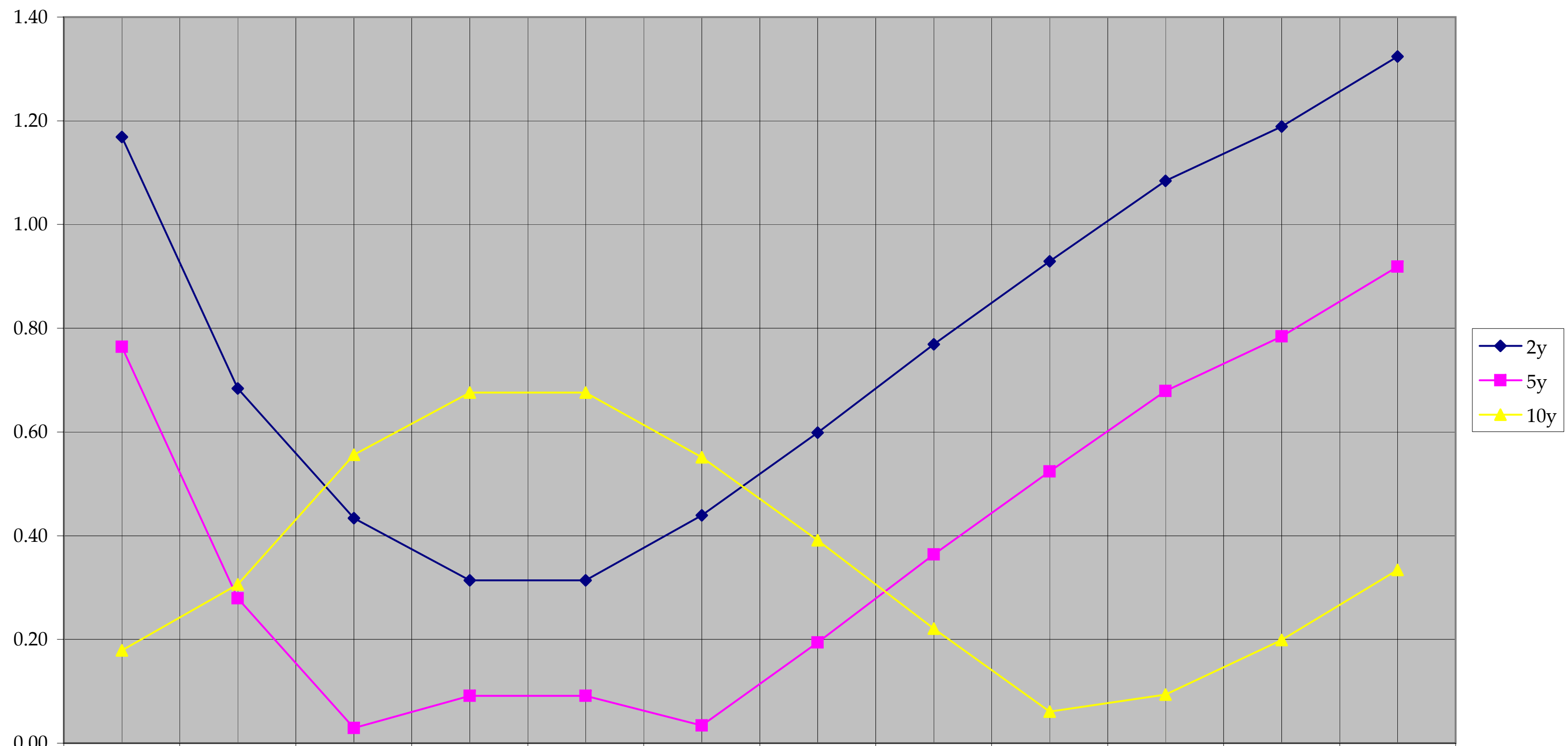
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
ZT	1.17	0.68	0.43	0.31	0.31	0.44	0.60	0.77	0.93	1.08	1.19	1.32
ZF	0.83	0.35	0.10	0.02	0.02	0.10	0.26	0.43	0.59	0.75	0.85	0.99
ZN	0.48	0.01	0.26	0.38	0.38	0.25	0.09	0.08	0.24	0.39	0.50	0.63

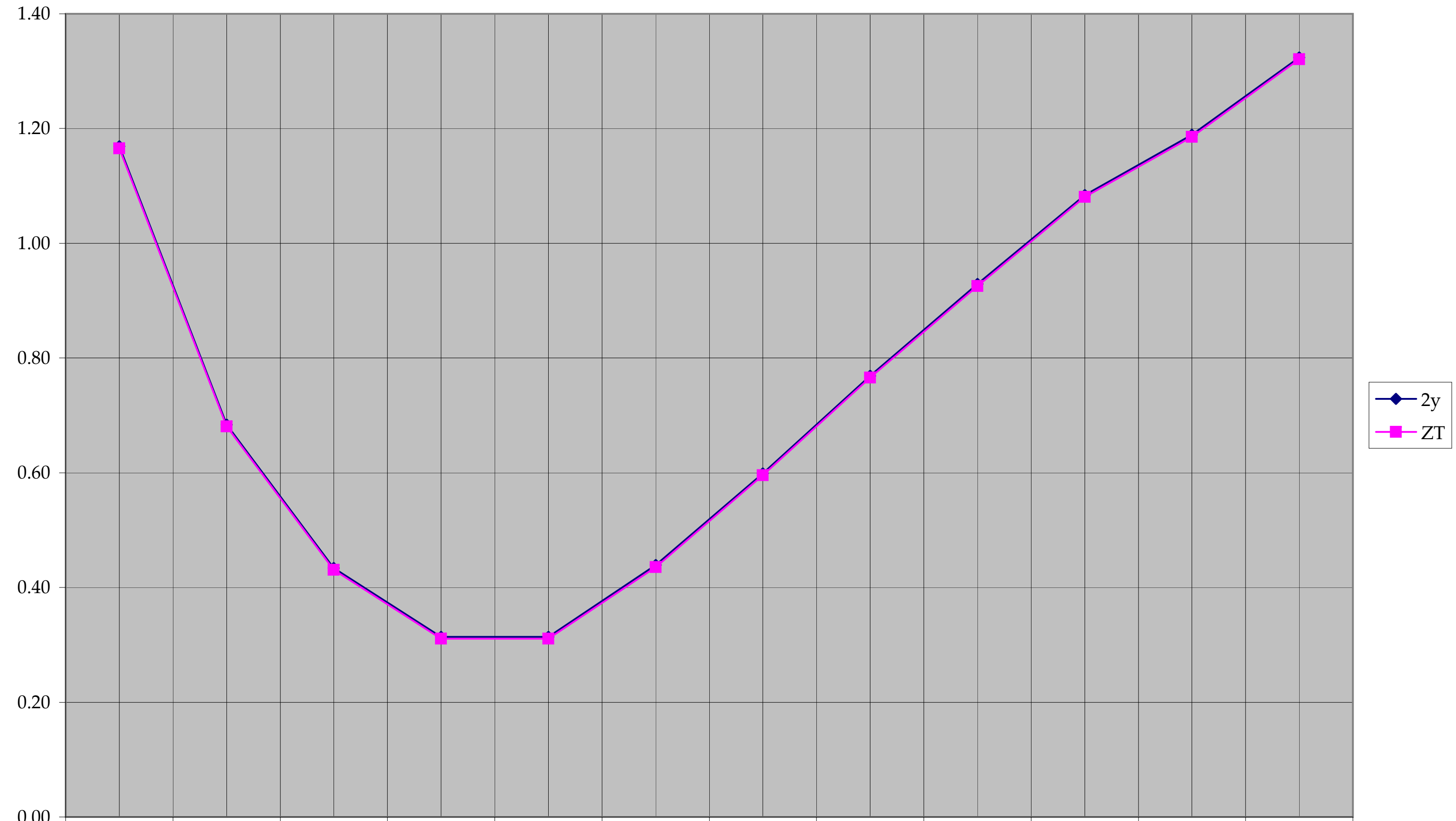
TED Curve

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.



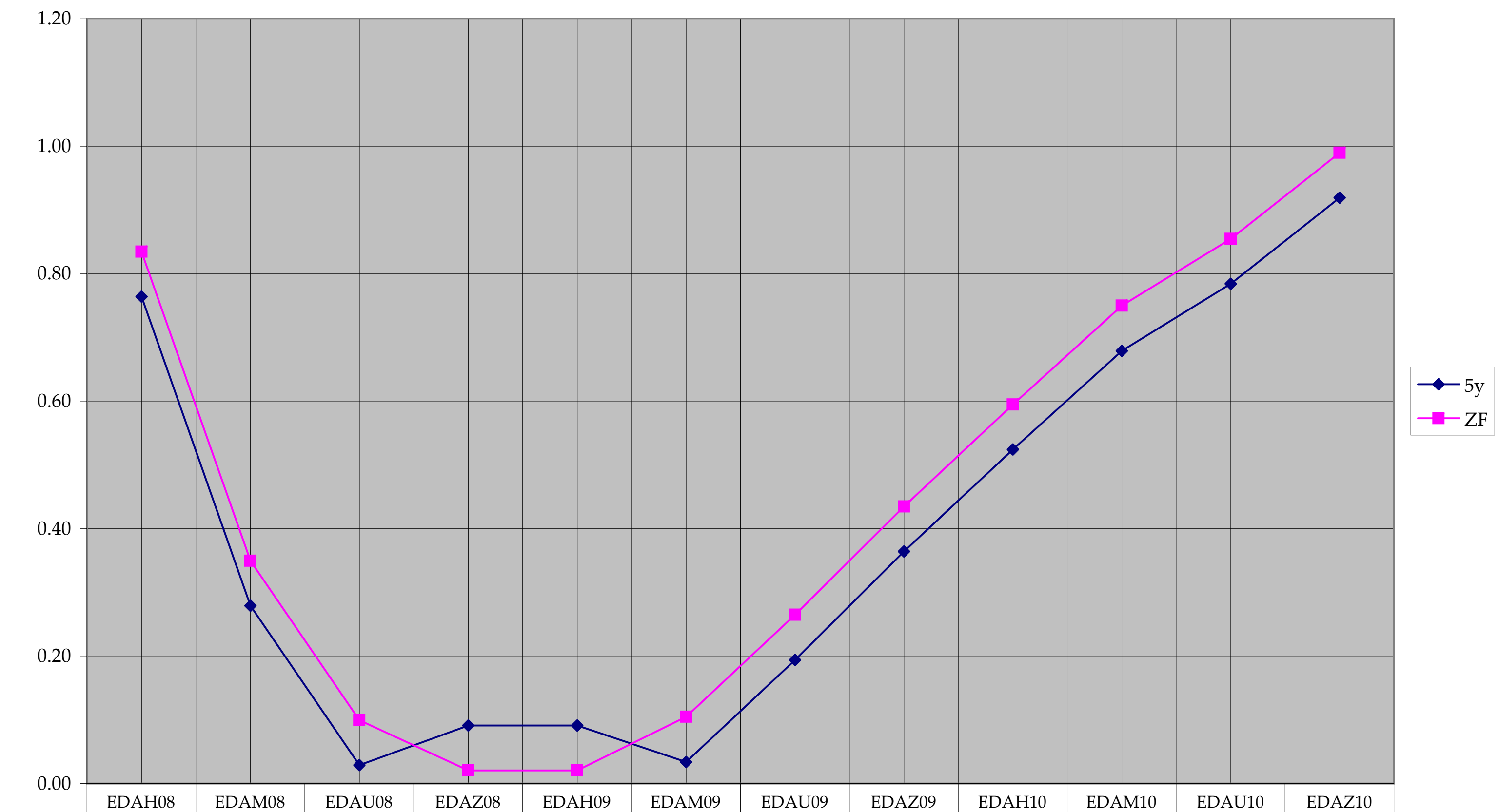
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.17	0.68	0.43	0.31	0.31	0.44	0.60	0.77	0.93	1.08	1.19	1.32
5y	0.76	0.28	0.03	0.09	0.09	0.03	0.19	0.36	0.52	0.68	0.78	0.92
10y	0.18	0.31	0.56	0.68	0.68	0.55	0.39	0.22	0.06	0.09	0.20	0.33

2y Basis TED Curve



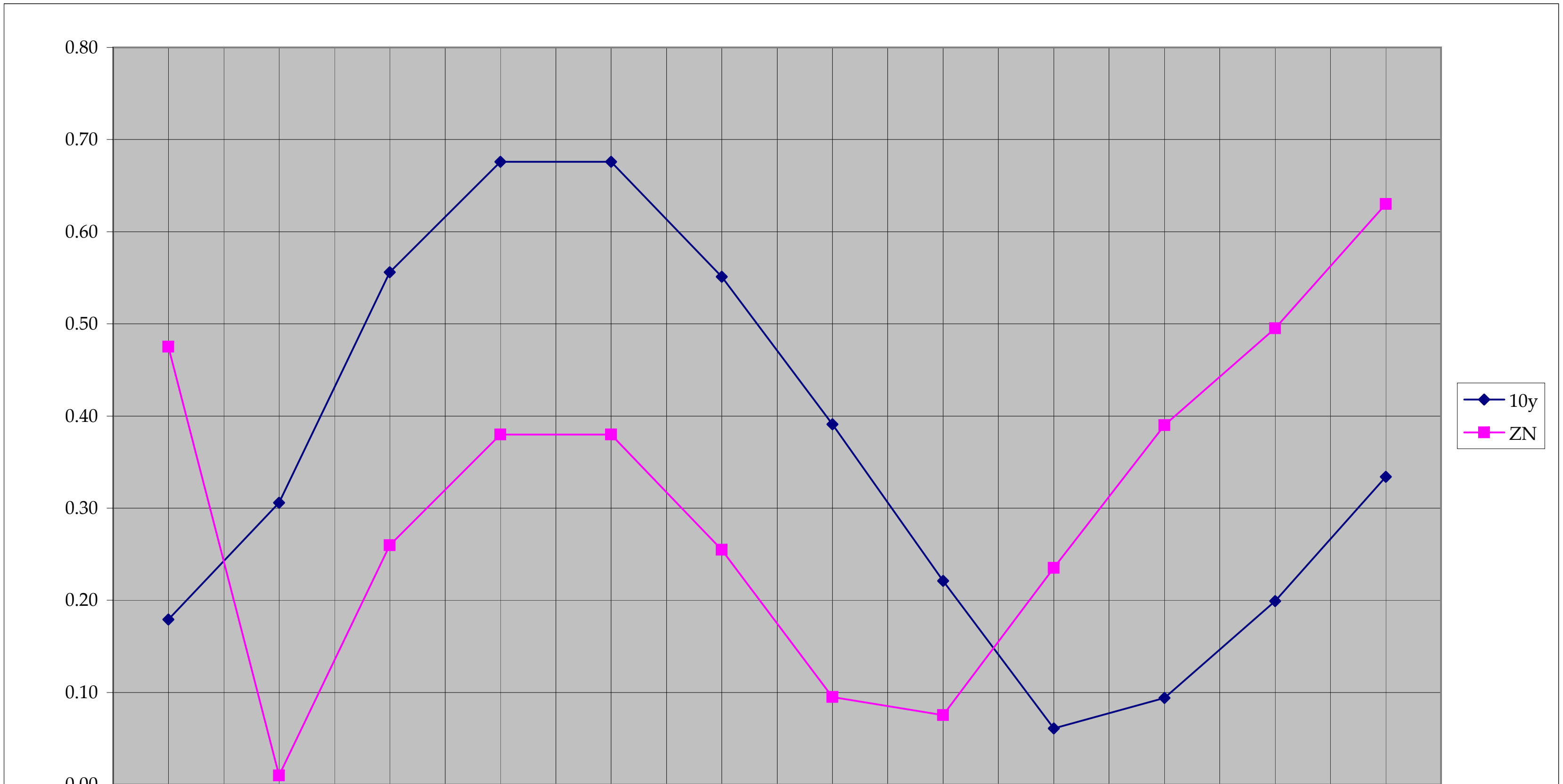
	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
2y	1.17	0.68	0.43	0.31	0.31	0.44	0.60	0.77	0.93	1.08	1.19	1.32
ZT	1.17	0.68	0.43	0.31	0.31	0.44	0.60	0.77	0.93	1.08	1.19	1.32

5y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
5y	0.76	0.28	0.03	0.09	0.09	0.03	0.19	0.36	0.52	0.68	0.78	0.92
ZF	0.83	0.35	0.10	0.02	0.02	0.10	0.26	0.43	0.59	0.75	0.85	0.99

10y Basis TED Curve



	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10
10y	0.18	0.31	0.56	0.68	0.68	0.55	0.39	0.22	0.06	0.09	0.20	0.33
ZN	0.48	0.01	0.26	0.38	0.38	0.25	0.09	0.08	0.24	0.39	0.50	0.63

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	3.809	-1.125	9627.875
Q.ED.Red	3.685	-1.875	9639.875
Q.ED.Green	4.306	-1.875	9579.750
Q.ED.Blue		-0.625	9541.375
Q.ED.Gold		0.000	9513.375