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	103.4844	103.155	3.947	1.90
ZF	107.2344	107.075	4.137	3.87
ZN	109.8281	109.265	4.297	5.79
2y	99.359	99.1150	3.963	1.82
5y	98.594	98.1900	4.190	4.49
10y	102.016	102.0050	4.490	7.71

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.220	4.780	46	0.125	DEC	White Pack
EDAH08	95.470	4.530	137	0.375	MAR	
EDAM08	95.585	4.415	228	0.624	JUN	
EDAU08	95.645	4.355	319	0.873	SEP	
EDAZ08	95.645	4.355	410	1.123	DEC	Red Pack
EDAH09	95.595	4.405	501	1.372	MAR	
EDAM09	95.505	4.495	592	1.621	JUN	
EDAU09	95.410	4.590	683	1.871	SEP	
EDAZ09	95.310	4.690	774	2.120	DEC	Green Pack
EDAH10	95.240	4.760	865	2.369	MAR	
EDAM10	95.165	4.835	956	2.619	JUN	
EDAU10	95.095	4.905	1047	2.868	SEP	
EDAZ10	95.030	4.970	1138	3.117	DEC	Blue Pack
EDAH11	95.020	4.980	1229	3.366	MAR	
EDAM11	94.970	5.030	1320	3.616	JUN	
EDAU11	94.880	5.120	1418	3.884	SEP	
EDAZ11	94.930	5.070	1509	4.134	DEC	Gold Pack
EDAH12	94.810	5.190	1600	4.383	MAR	
EDAM12	94.760	5.240	1691	4.632	JUN	
EDAU12	94.710	5.290	1782	4.882	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.635	-3.625	9548.000	Pack Prices
Q.ED.Red	4.574	-5.500	9553.875	
Q.ED.Green	4.923	-4.250	9520.250	
Q.ED.Blue		-0.750	9496.625	
Q.ED.Gold		0.000	9475.875	

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

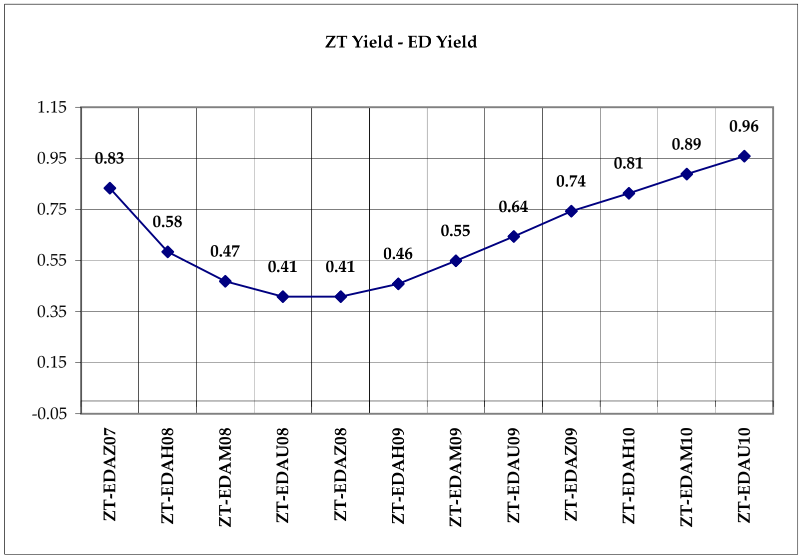
Eurodollar Color Codes for Individual Year Strips:

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

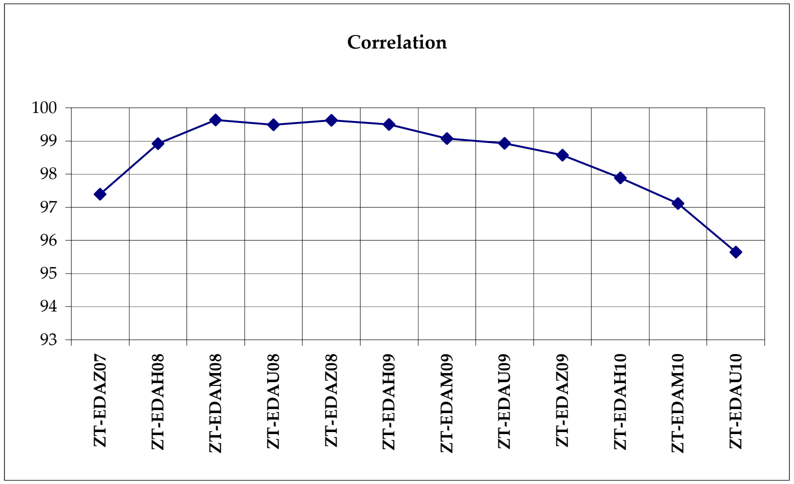
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.264	0.83	ZT-EDAZ07	97.395
EDAH08	8.014	0.58	ZT-EDAH08	98.922
EDAM08	7.899	0.47	ZT-EDAM08	99.631
EDAU08	7.839	0.41	ZT-EDAU08	99.487
EDAZ08	7.839	0.41	ZT-EDAZ08	99.627
EDAH09	7.889	0.46	ZT-EDAH09	99.497
EDAM09	7.979	0.55	ZT-EDAM09	99.074
EDAU09	8.074	0.64	ZT-EDAU09	98.933
EDAZ09	8.174	0.74	ZT-EDAZ09	98.573
EDAH10	8.244	0.81	ZT-EDAH10	97.886
EDAM10	8.319	0.89	ZT-EDAM10	97.109
EDAU10	8.389	0.96	ZT-EDAU10	95.643

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	
EDAZ07	0.125	1.90	1.78	ZT-EDAZ07
EDAH08	0.375	1.90	1.53	ZT-EDAH08
EDAM08	0.624	1.90	1.28	ZT-EDAM08
EDAU08	0.873	1.90	1.03	ZT-EDAU08
EDAZ08	1.123	1.90	0.78	ZT-EDAZ08
EDAH09	1.372	1.90	0.53	ZT-EDAH09
EDAM09	1.621	1.90	0.28	ZT-EDAM09
EDAU09	1.871	1.90	0.03	ZT-EDAU09
EDAZ09	2.120	1.90	(0.22)	ZT-EDAZ09
EDAH10	2.369	1.90	(0.47)	ZT-EDAH10
EDAM10	2.619	1.90	(0.71)	ZT-EDAM10
EDAU10	2.868	1.90	(0.96)	ZT-EDAU10

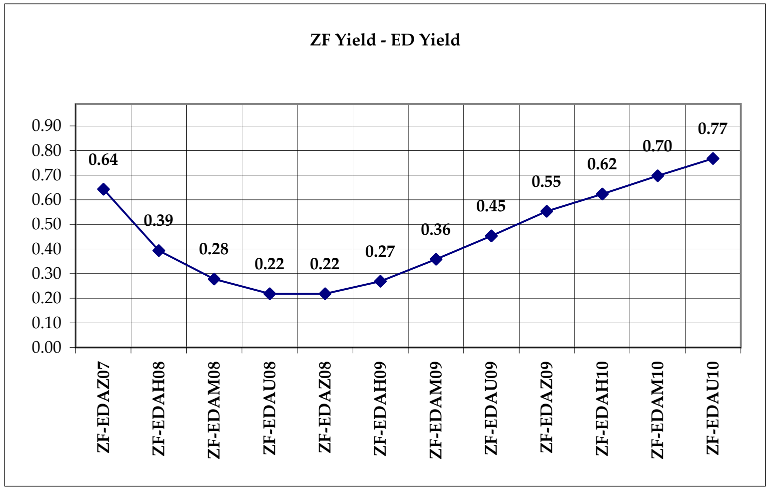
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

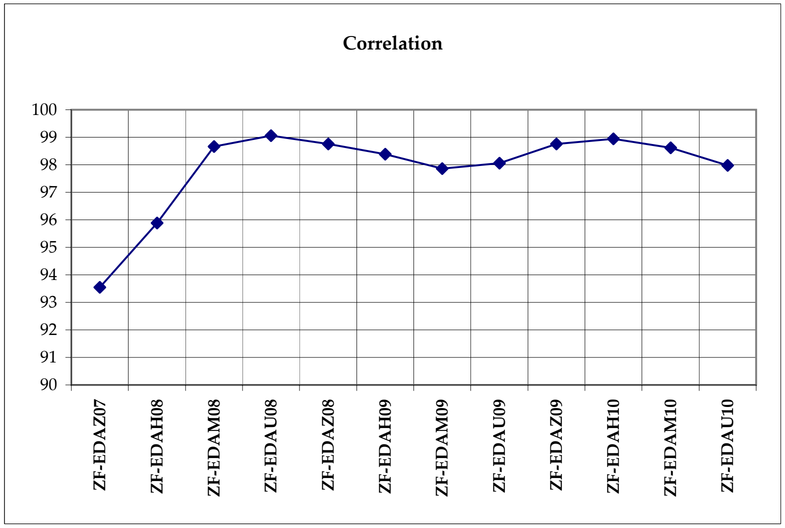
	ZF			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ07	12.01	0.64	ZF-EDAZ07	93.542
EDAH08	11.76	0.39	ZF-EDAH08	95.880
EDAM08	11.65	0.28	ZF-EDAM08	98.658
EDAU08	11.59	0.22	ZF-EDAU08	99.054
EDAZ08	11.59	0.22	ZF-EDAZ08	98.754
EDAH09	11.64	0.27	ZF-EDAH09	98.384
EDAM09	11.73	0.36	ZF-EDAM09	97.865
EDAU09	11.82	0.45	ZF-EDAU09	98.062
EDAZ09	11.92	0.55	ZF-EDAZ09	98.758
EDAH10	11.99	0.62	ZF-EDAH10	98.939
EDAM10	12.07	0.70	ZF-EDAM10	98.616
EDAU10	12.14	0.77	ZF-EDAU10	97.979

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**	
EDAZ07	0.125	3.87	3.74	ZF-EDAZ07
EDAH08	0.375	3.87	3.49	ZF-EDAH08
EDAM08	0.624	3.87	3.24	ZF-EDAM08
EDAU08	0.873	3.87	2.99	ZF-EDAU08
EDAZ08	1.123	3.87	2.74	ZF-EDAZ08
EDAH09	1.372	3.87	2.49	ZF-EDAH09
EDAM09	1.621	3.87	2.24	ZF-EDAM09
EDAU09	1.871	3.87	1.99	ZF-EDAU09
EDAZ09	2.120	3.87	1.75	ZF-EDAZ09
EDAH10	2.369	3.87	1.50	ZF-EDAH10
EDAM10	2.619	3.87	1.25	ZF-EDAM10
EDAU10	2.868	3.87	1.00	ZF-EDAU10

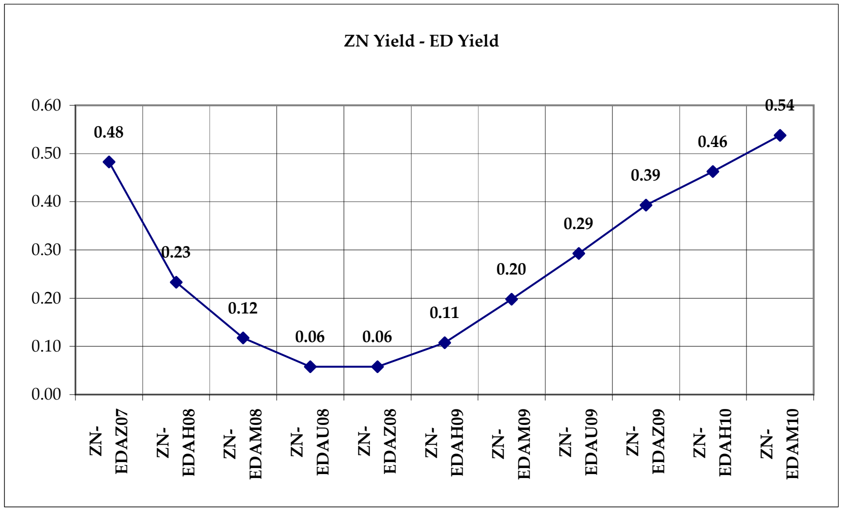
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

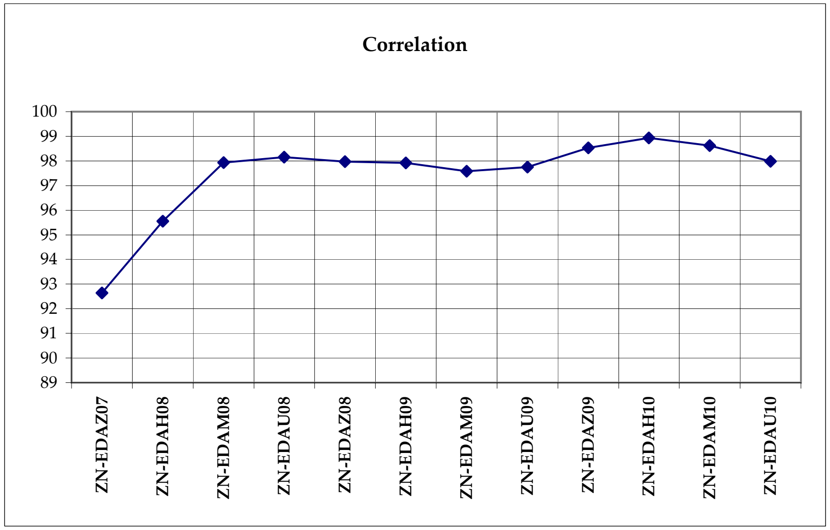
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.61	0.48	ZN-EDAZ07	92.64
EDAH08	14.36	0.23	ZN-EDAH08	95.56
EDAM08	14.24	0.12	ZN-EDAM08	97.94
EDAU08	14.18	0.06	ZN-EDAU08	98.15
EDAZ08	14.18	0.06	ZN-EDAZ08	97.97
EDAH09	14.23	0.11	ZN-EDAH09	97.92
EDAM09	14.32	0.20	ZN-EDAM09	97.58
EDAU09	14.42	0.29	ZN-EDAU09	97.76
EDAZ09	14.52	0.39	ZN-EDAZ09	98.53
EDAH10	14.59	0.46	ZN-EDAH10	98.94
EDAM10	14.66	0.54	ZN-EDAM10	98.62
EDAU10	14.73	0.61	ZN-EDAU10	97.98

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	
EDAZ07	0.125	5.79	5.66	ZN-EDAZ07
EDAH08	0.375	5.79	5.41	ZN-EDAH08
EDAM08	0.624	5.79	5.16	ZN-EDAM08
EDAU08	0.873	5.79	4.91	ZN-EDAU08
EDAZ08	1.123	5.79	4.66	ZN-EDAZ08
EDAH09	1.372	5.79	4.42	ZN-EDAH09
EDAM09	1.621	5.79	4.17	ZN-EDAM09
EDAU09	1.871	5.79	3.92	ZN-EDAU09
EDAZ09	2.120	5.79	3.67	ZN-EDAZ09
EDAH10	2.369	5.79	3.42	ZN-EDAH10
EDAM10	2.619	5.79	3.17	ZN-EDAM10
EDAU10	2.868	5.79	2.92	ZN-EDAU10

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)
EDAZ07	4.14	0.82	2y-EDAZ07	-92.833
EDAH08	3.89	0.57	2y-EDAH08	-94.358
EDAM08	3.77	0.45	2y-EDAM08	-96.006
EDAU08	3.71	0.39	2y-EDAU08	-96.104
EDAZ08	3.71	0.39	2y-EDAZ08	-96.006
EDAH09	3.76	0.44	2y-EDAH09	-95.505
EDAM09	3.85	0.53	2y-EDAM09	-94.619
EDAU09	3.95	0.63	2y-EDAU09	-94.410
EDAZ09	4.05	0.73	2y-EDAZ09	-94.153
EDAH10	4.12	0.80	2y-EDAH10	-93.732
EDAM10	4.19	0.87	2y-EDAM10	-93.018
EDAU10	4.26	0.94	2y-EDAU10	-91.973

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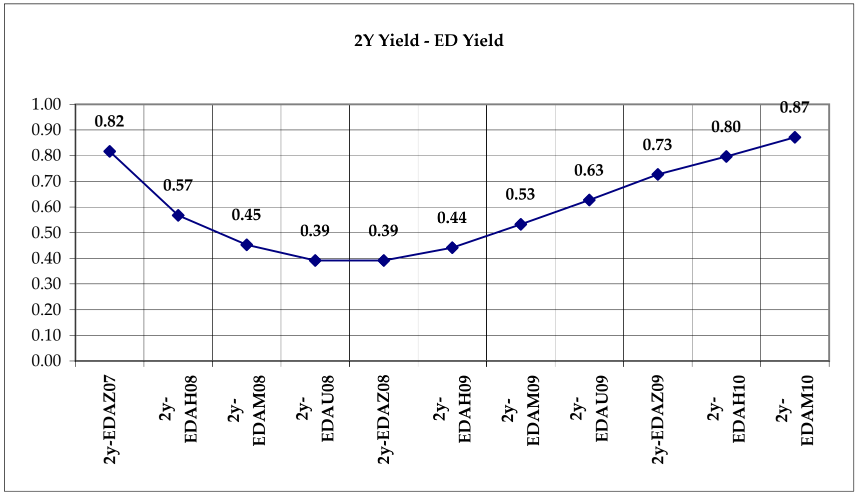
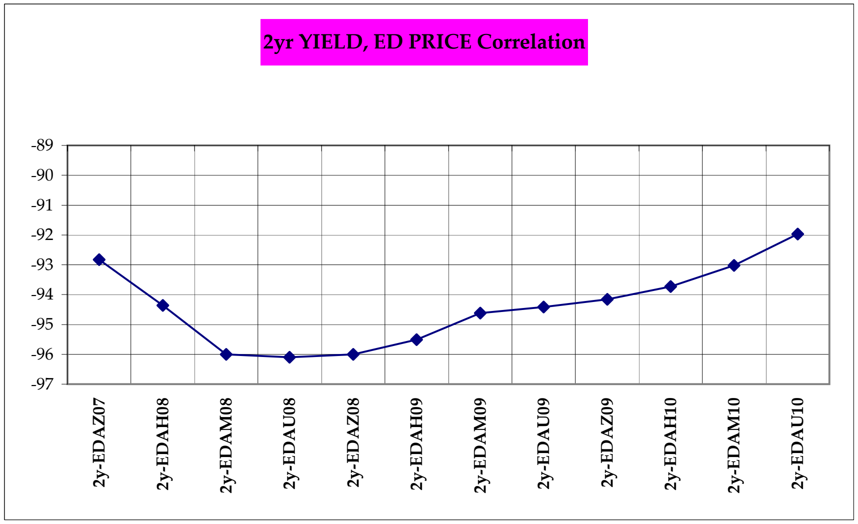
These are measuring YIELD correlations.



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.125	1.82	1.69	2y-EDAZ07
EDAH08	0.375	1.82	1.44	2y-EDAH08
EDAM08	0.624	1.82	1.19	2y-EDAM08
EDAU08	0.873	1.82	0.94	2y-EDAU08
EDAZ08	1.123	1.82	0.69	2y-EDAZ08
EDAH09	1.372	1.82	0.44	2y-EDAH09
EDAM09	1.621	1.82	0.19	2y-EDAM09
EDAU09	1.871	1.82	(0.05)	2y-EDAU09
EDAZ09	2.120	1.82	(0.30)	2y-EDAZ09
EDAH10	2.369	1.82	(0.55)	2y-EDAH10
EDAM10	2.619	1.82	(0.80)	2y-EDAM10
EDAU10	2.868	1.82	(1.05)	2y-EDAU10

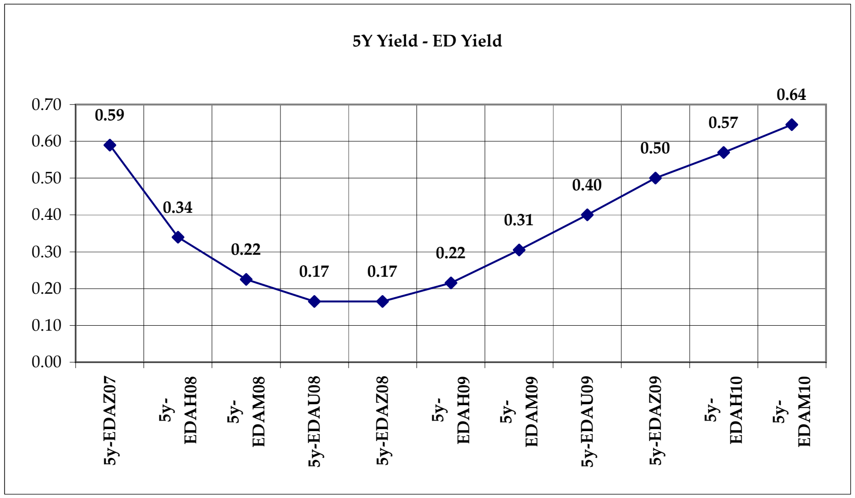
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

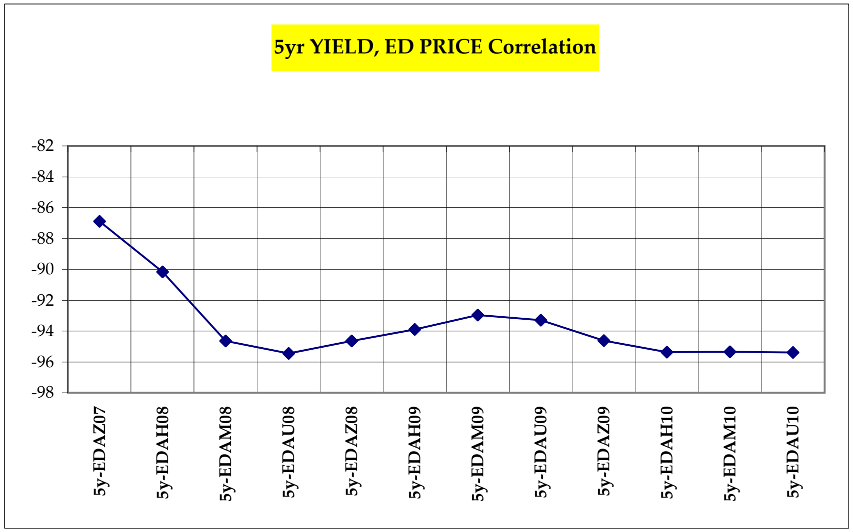
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	3.37	0.59	5y-EDAZ07	-86.899
EDAH08	3.12	0.34	5y-EDAH08	-90.159
EDAM08	3.01	0.22	5y-EDAM08	-94.641
EDAU08	2.95	0.17	5y-EDAU08	-95.454
EDAZ08	2.95	0.17	5y-EDAZ08	-94.641
EDAH09	3.00	0.22	5y-EDAH09	-93.904
EDAM09	3.09	0.31	5y-EDAM09	-92.967
EDAU09	3.18	0.40	5y-EDAU09	-93.302
EDAZ09	3.28	0.50	5y-EDAZ09	-94.626
EDAH10	3.35	0.57	5y-EDAH10	-95.372
EDAM10	3.43	0.64	5y-EDAM10	-95.342
EDAU10	3.50	0.72	5y-EDAU10	-95.388

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	
EDAZ07	0.125	4.49	4.36	5y-EDAZ07
EDAH08	0.375	4.49	4.12	5y-EDAH08
EDAM08	0.624	4.49	3.87	5y-EDAM08
EDAU08	0.873	4.49	3.62	5y-EDAU08
EDAZ08	1.123	4.49	3.37	5y-EDAZ08
EDAH09	1.372	4.49	3.12	5y-EDAH09
EDAM09	1.621	4.49	2.87	5y-EDAM09
EDAU09	1.871	4.49	2.62	5y-EDAU09
EDAZ09	2.120	4.49	2.37	5y-EDAZ09
EDAH10	2.369	4.49	2.12	5y-EDAH10
EDAM10	2.619	4.49	1.87	5y-EDAM10
EDAU10	2.868	4.49	1.62	5y-EDAU10

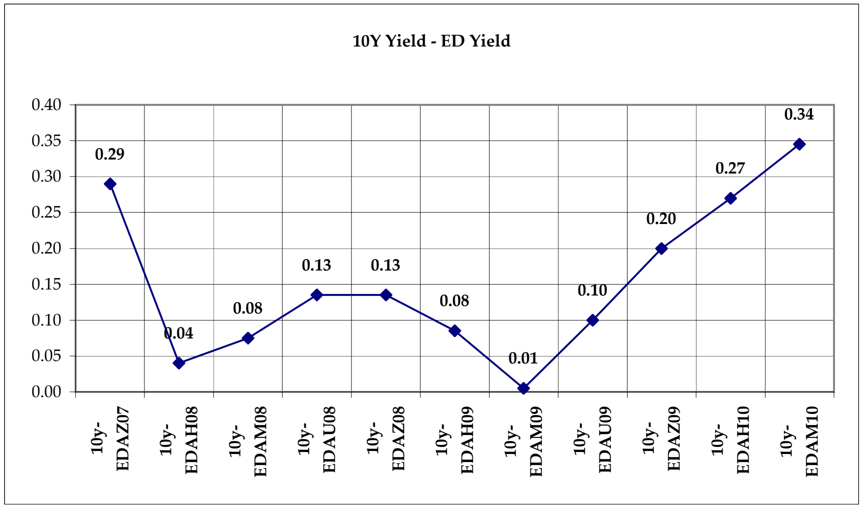
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

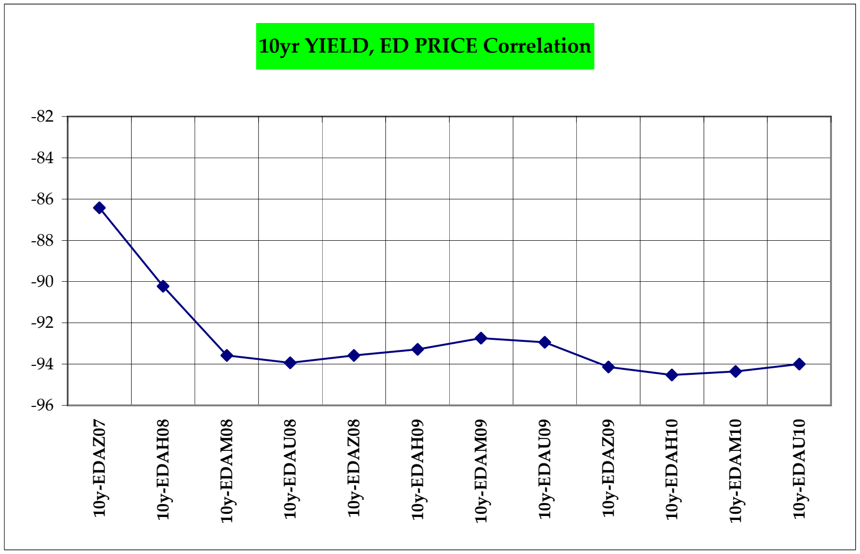
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	3.37	0.29	10y-EDAZ07	-86.429
EDAH08	3.12	0.04	10y-EDAH08	-90.230
EDAM08	3.01	0.08	10y-EDAM08	-93.577
EDAU08	2.95	0.13	10y-EDAU08	-93.933
EDAZ08	2.95	0.13	10y-EDAZ08	-93.577
EDAH09	3.00	0.08	10y-EDAH09	-93.281
EDAM09	3.09	0.01	10y-EDAM09	-92.741
EDAU09	3.18	0.10	10y-EDAU09	-92.939
EDAZ09	3.28	0.20	10y-EDAZ09	-94.143
EDAH10	3.35	0.27	10y-EDAH10	-94.526
EDAM10	3.43	0.34	10y-EDAM10	-94.353
EDAU10	3.50	0.42	10y-EDAU10	-93.995

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.



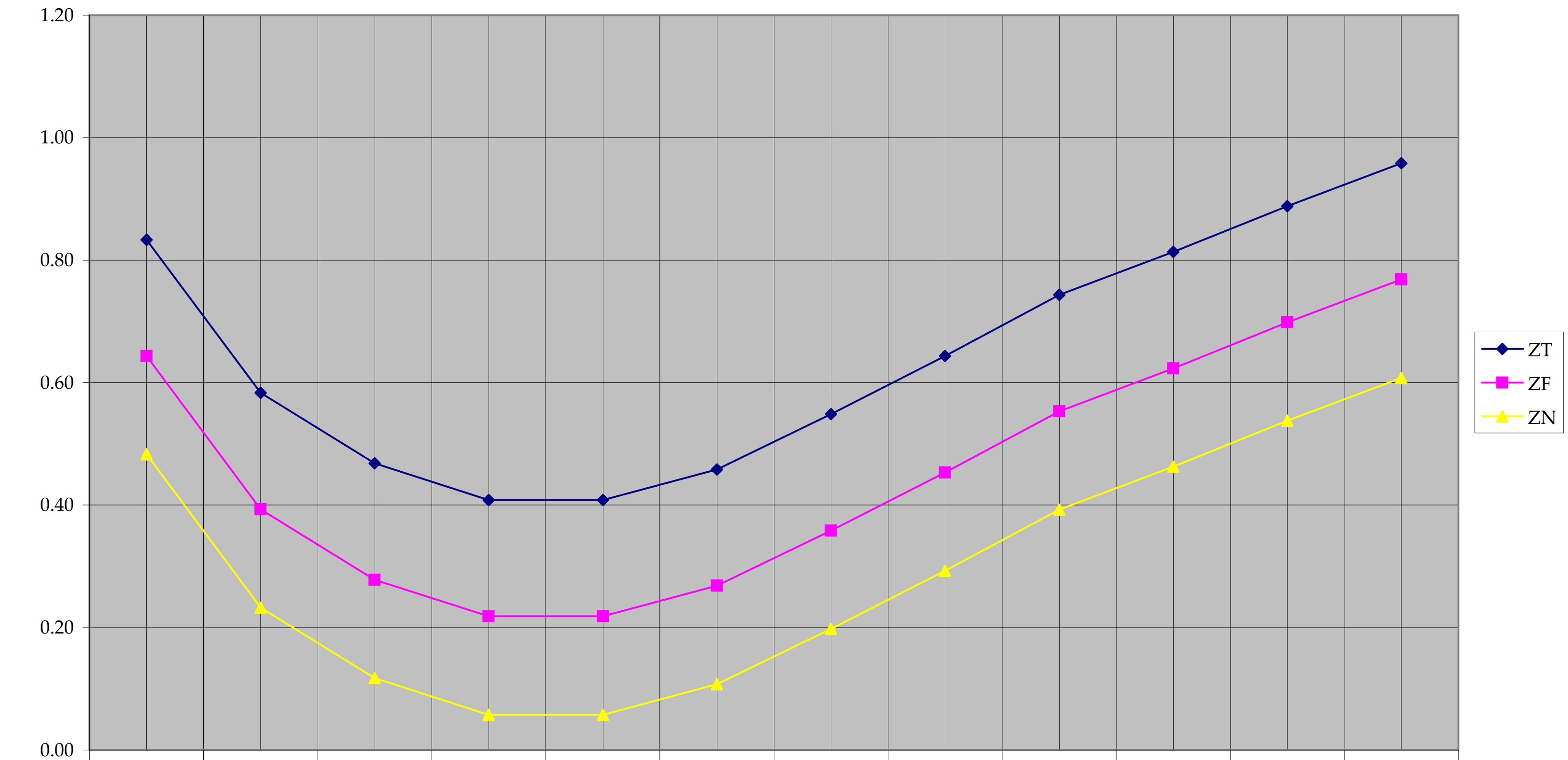
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.125	7.71	7.59	10y-EDAZ07
EDAH08	0.375	7.71	7.34	10y-EDAH08
EDAM08	0.624	7.71	7.09	10y-EDAM08
EDAU08	0.873	7.71	6.84	10y-EDAU08
EDAZ08	1.123	7.71	6.59	10y-EDAZ08
EDAH09	1.372	7.71	6.34	10y-EDAH09
EDAM09	1.621	7.71	6.09	10y-EDAM09
EDAU09	1.871	7.71	5.84	10y-EDAU09
EDAZ09	2.120	7.71	5.59	10y-EDAZ09
EDAH10	2.369	7.71	5.34	10y-EDAH10
EDAM10	2.619	7.71	5.09	10y-EDAM10
EDAU10	2.868	7.71	4.84	10y-EDAU10

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



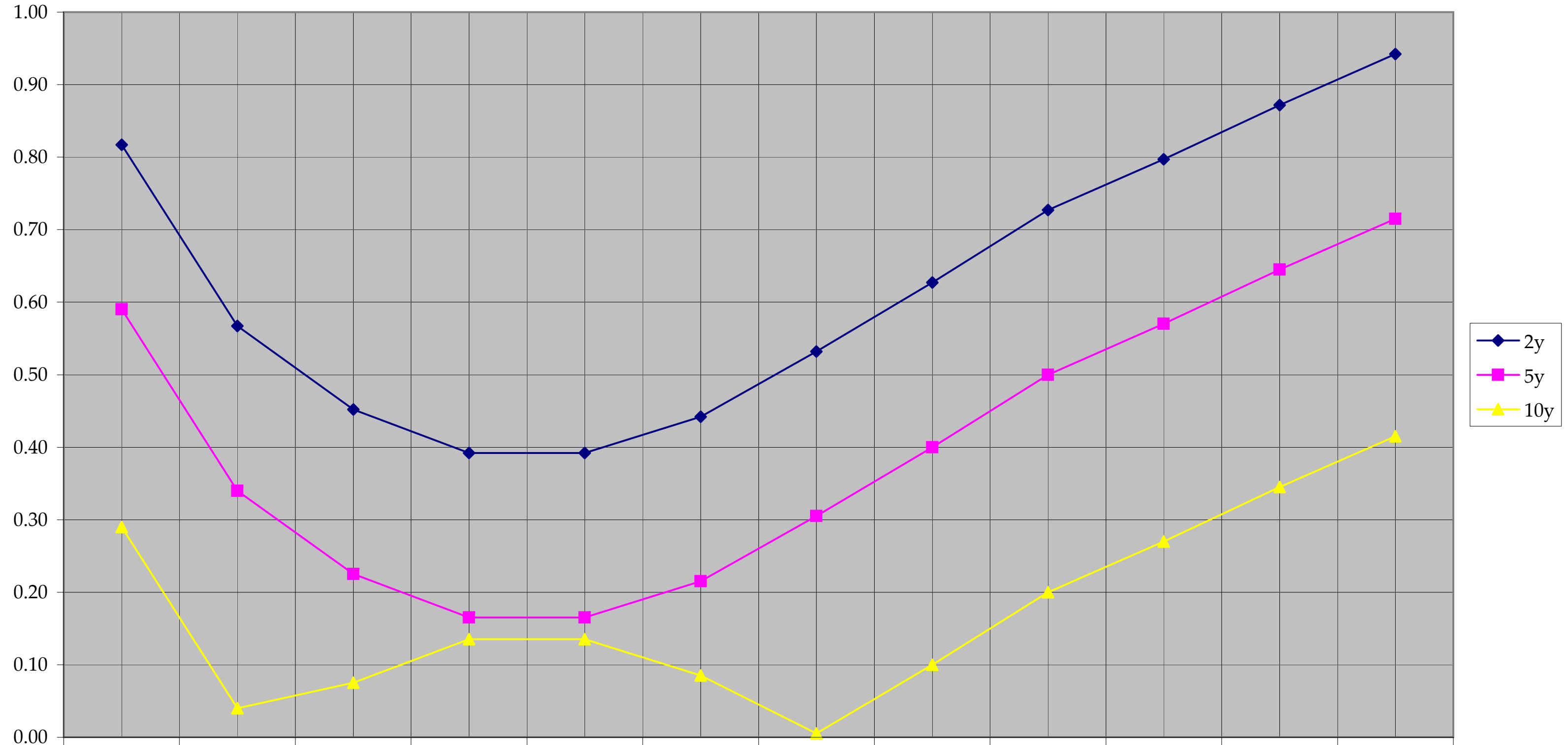
Dirty TED Curve

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.



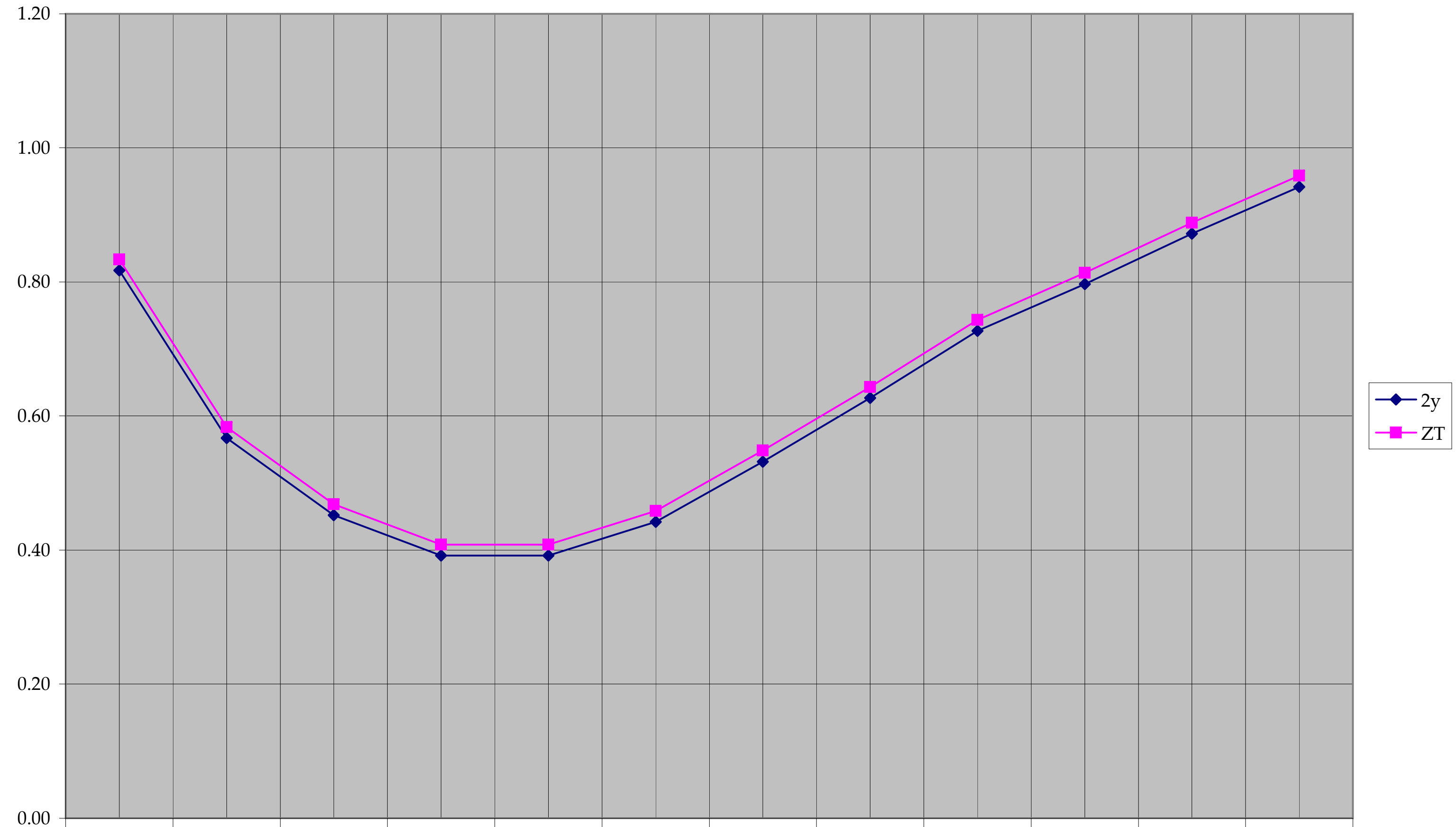
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	0.83	0.58	0.47	0.41	0.41	0.46	0.55	0.64	0.74	0.81	0.89	0.96
ZF	0.64	0.39	0.28	0.22	0.22	0.27	0.36	0.45	0.55	0.62	0.70	0.77
ZN	0.48	0.23	0.12	0.06	0.06	0.11	0.20	0.29	0.39	0.46	0.54	0.61

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.



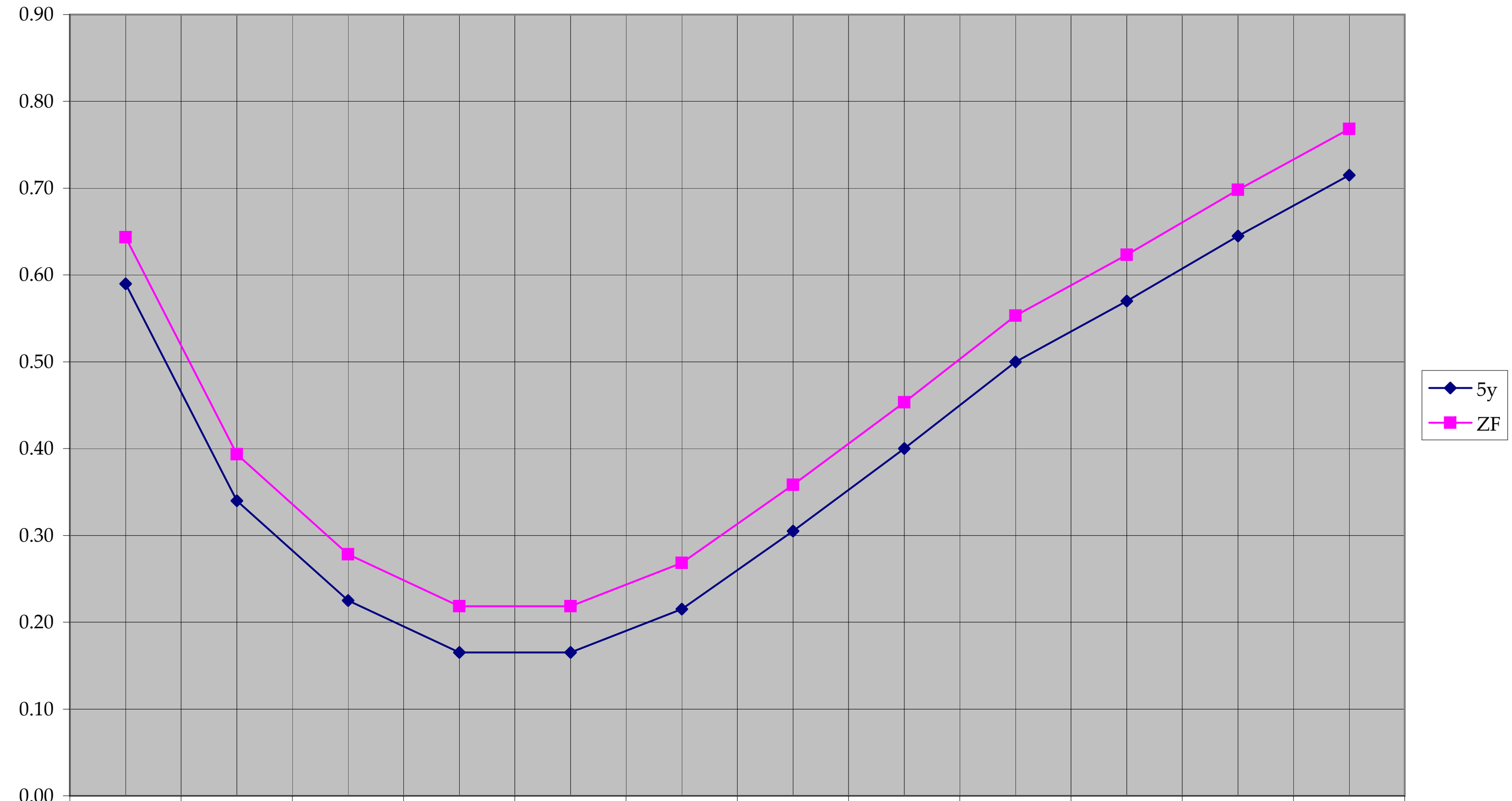
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.82	0.57	0.45	0.39	0.39	0.44	0.53	0.63	0.73	0.80	0.87	0.94
5y	0.59	0.34	0.22	0.17	0.17	0.22	0.31	0.40	0.50	0.57	0.64	0.72
10y	0.29	0.04	0.08	0.13	0.13	0.08	0.01	0.10	0.20	0.27	0.34	0.42

2y Basis TED Curve



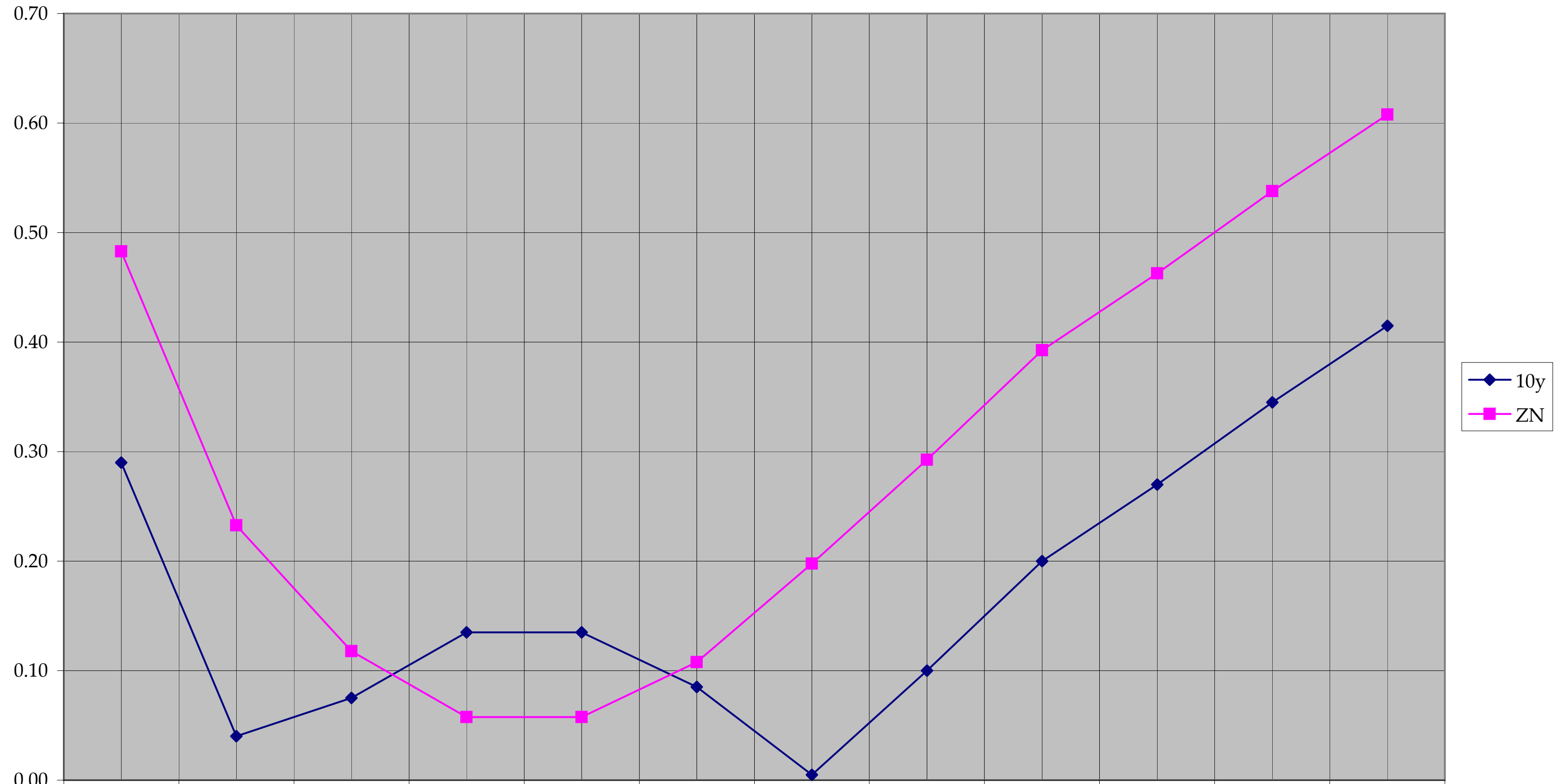
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.82	0.57	0.45	0.39	0.39	0.44	0.53	0.63	0.73	0.80	0.87	0.94
ZT	0.83	0.58	0.47	0.41	0.41	0.46	0.55	0.64	0.74	0.81	0.89	0.96

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.59	0.34	0.22	0.17	0.17	0.22	0.31	0.40	0.50	0.57	0.64	0.72
ZF	0.64	0.39	0.28	0.22	0.22	0.27	0.36	0.45	0.55	0.62	0.70	0.77

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.29	0.04	0.08	0.13	0.13	0.08	0.01	0.10	0.20	0.27	0.34	0.42
ZN	0.48	0.23	0.12	0.06	0.06	0.11	0.20	0.29	0.39	0.46	0.54	0.61

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.635	-3.625	9548.000
Q.ED.Red	4.574	-5.500	9553.875
Q.ED.Green	4.923	-4.250	9520.250
Q.ED.Blue		-0.750	9496.625
Q.ED.Gold		0.000	9475.875