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	104.6469	104.207	3.275	1.91
ZF	109.4063	109.130	3.585	3.99
ZN	112.1563	112.050	3.885	5.93
2y	99.725	99.2320	3.271	1.87
5y	99.016	99.0050	3.590	4.51
10y	100.375	100.1200	4.203	7.99

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.045	4.955	0	-0.001	DEC	White Pack
EDAH08	95.530	4.470	91	0.249	MAR	
EDAM08	95.915	4.085	182	0.498	JUN	
EDAU08	96.145	3.855	273	0.747	SEP	
EDAZ08	96.255	3.745	364	0.997	DEC	Red Pack
EDAH09	96.245	3.755	455	1.246	MAR	
EDAM09	96.135	3.865	546	1.495	JUN	
EDAU09	96.005	3.995	637	1.745	SEP	
EDAZ09	95.875	4.125	728	1.994	DEC	Green Pack
EDAH10	95.770	4.230	819	2.243	MAR	
EDAM10	95.640	4.360	910	2.492	JUN	
EDAU10	95.530	4.470	1001	2.742	SEP	
EDAZ10	95.445	4.555	1092	2.991	DEC	Blue Pack
EDAH11	#VALUE!	#VALUE!	1183	3.240	MAR	
EDAM11	#VALUE!	#VALUE!	1274	3.490	JUN	
EDAU11	95.195	4.805	1372	3.758	SEP	
EDAZ11	#VALUE!	#VALUE!	1463	4.008	DEC	Gold Pack
EDAH12	94.985	5.015	1554	4.257	MAR	
EDAM12	94.920	5.080	1645	4.506	JUN	
EDAU12	94.900	5.100	1736	4.755	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.450	-2.125	9565.875	Pack Prices
Q.ED.Red	3.931	1.875	9616.000	
Q.ED.Green	4.403	3.000	9570.375	
Q.ED.Blue		2.625	9529.500	
Q.ED.Gold		1.250	9496.875	

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

<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

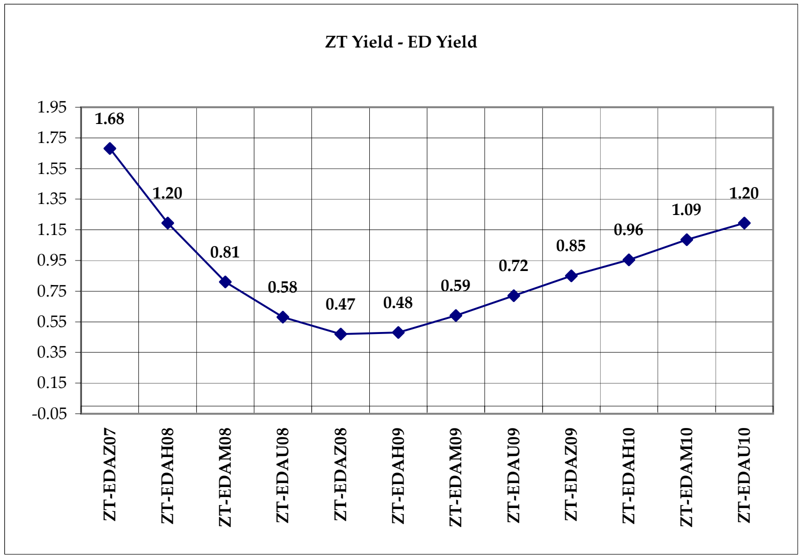
Eurodollar Color Codes for Individual Year Strips:

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

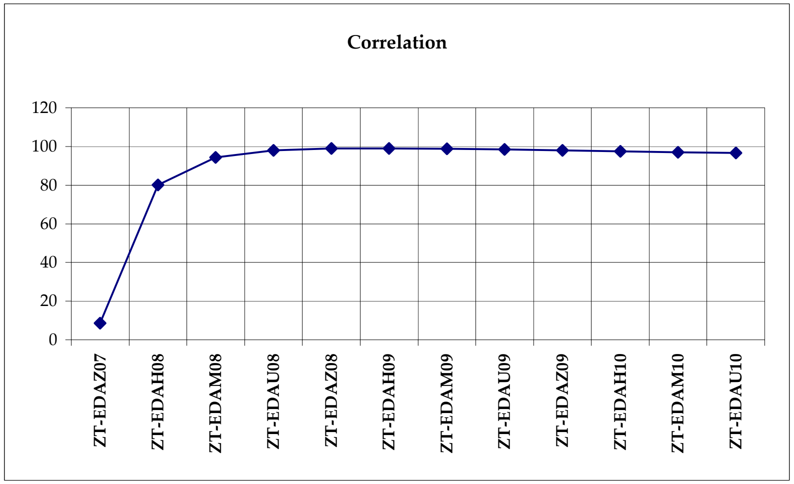
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	9.602	1.68	ZT-EDAZ07	8.625
EDAH08	9.117	1.20	ZT-EDAH08	80.085
EDAM08	8.732	0.81	ZT-EDAM08	94.270
EDAU08	8.502	0.58	ZT-EDAU08	98.000
EDAZ08	8.392	0.47	ZT-EDAZ08	98.916
EDAH09	8.402	0.48	ZT-EDAH09	99.014
EDAM09	8.512	0.59	ZT-EDAM09	98.794
EDAU09	8.642	0.72	ZT-EDAU09	98.442
EDAZ09	8.772	0.85	ZT-EDAZ09	98.004
EDAH10	8.877	0.96	ZT-EDAH10	97.438
EDAM10	9.007	1.09	ZT-EDAM10	96.941
EDAU10	9.117	1.20	ZT-EDAU10	96.586

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	-0.001	1.91	1.91	ZT-EDAZ07
EDAH08	0.249	1.91	1.66	ZT-EDAH08
EDAM08	0.498	1.91	1.41	ZT-EDAM08
EDAU08	0.747	1.91	1.16	ZT-EDAU08
EDAZ08	0.997	1.91	0.91	ZT-EDAZ08
EDAH09	1.246	1.91	0.66	ZT-EDAH09
EDAM09	1.495	1.91	0.41	ZT-EDAM09
EDAU09	1.745	1.91	0.17	ZT-EDAU09
EDAZ09	1.994	1.91	(0.08)	ZT-EDAZ09
EDAH10	2.243	1.91	(0.33)	ZT-EDAH10
EDAM10	2.492	1.91	(0.58)	ZT-EDAM10
EDAU10	2.742	1.91	(0.83)	ZT-EDAU10

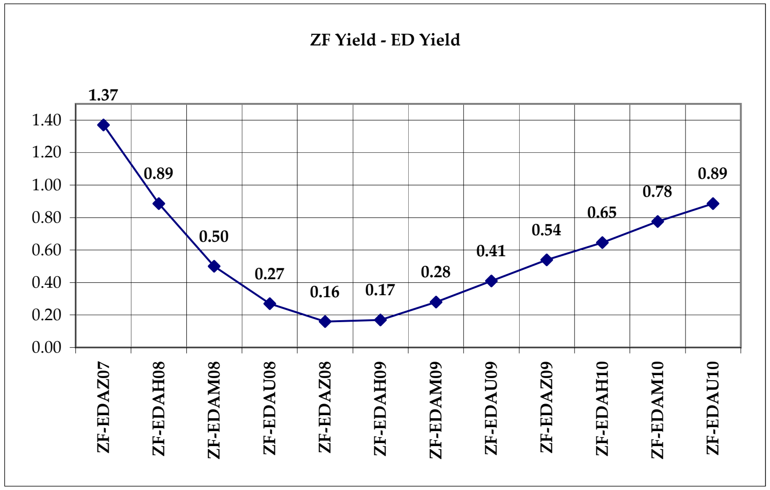
The farther away from 0 the spread duration is
the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

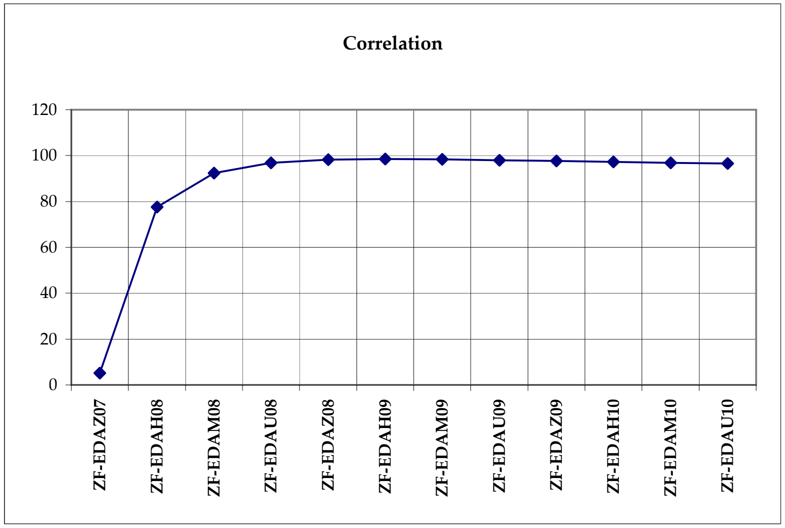
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.36	1.37	ZF-EDAZ07	5.219
EDAH08	13.88	0.89	ZF-EDAH08	77.605
EDAM08	13.49	0.50	ZF-EDAM08	92.323
EDAU08	13.26	0.27	ZF-EDAU08	96.774
EDAZ08	13.15	0.16	ZF-EDAZ08	98.250
EDAH09	13.16	0.17	ZF-EDAH09	98.565
EDAM09	13.27	0.28	ZF-EDAM09	98.317
EDAU09	13.40	0.41	ZF-EDAU09	98.018
EDAZ09	13.53	0.54	ZF-EDAZ09	97.649
EDAH10	13.64	0.65	ZF-EDAH10	97.291
EDAM10	13.77	0.78	ZF-EDAM10	96.892
EDAU10	13.88	0.89	ZF-EDAU10	96.509

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	-0.001	3.99	4.00	ZF-EDAZ07
EDAH08	0.249	3.99	3.75	ZF-EDAH08
EDAM08	0.498	3.99	3.50	ZF-EDAM08
EDAU08	0.747	3.99	3.25	ZF-EDAU08
EDAZ08	0.997	3.99	3.00	ZF-EDAZ08
EDAH09	1.246	3.99	2.75	ZF-EDAH09
EDAM09	1.495	3.99	2.50	ZF-EDAM09
EDAU09	1.745	3.99	2.25	ZF-EDAU09
EDAZ09	1.994	3.99	2.00	ZF-EDAZ09
EDAH10	2.243	3.99	1.75	ZF-EDAH10
EDAM10	2.492	3.99	1.50	ZF-EDAM10
EDAU10	2.742	3.99	1.25	ZF-EDAU10

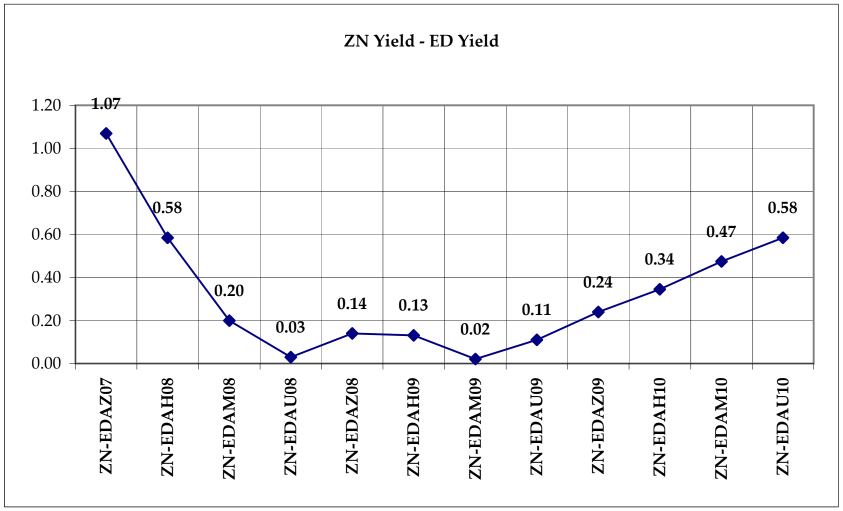
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

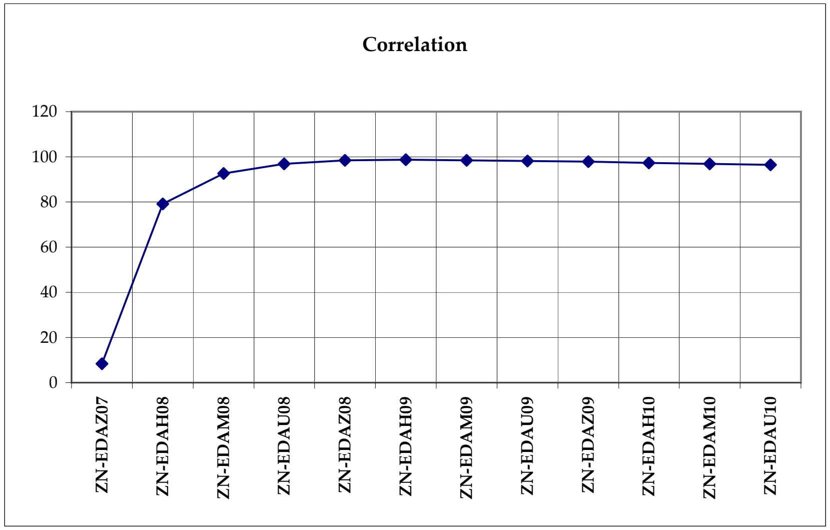
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	17.11	1.07	ZN-EDAZ07	8.34
EDAH08	16.63	0.58	ZN-EDAH08	79.16
EDAM08	16.24	0.20	ZN-EDAM08	92.65
EDAU08	16.01	0.03	ZN-EDAU08	96.89
EDAZ08	15.90	0.14	ZN-EDAZ08	98.48
EDAH09	15.91	0.13	ZN-EDAH09	98.75
EDAM09	16.02	0.02	ZN-EDAM09	98.45
EDAU09	16.15	0.11	ZN-EDAU09	98.20
EDAZ09	16.28	0.24	ZN-EDAZ09	97.90
EDAH10	16.39	0.34	ZN-EDAH10	97.29
EDAM10	16.52	0.47	ZN-EDAM10	96.89
EDAU10	16.63	0.58	ZN-EDAU10	96.51

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	-0.001	5.93	5.93	ZN-EDAZ07
EDAH08	0.249	5.93	5.68	ZN-EDAH08
EDAM08	0.498	5.93	5.44	ZN-EDAM08
EDAU08	0.747	5.93	5.19	ZN-EDAU08
EDAZ08	0.997	5.93	4.94	ZN-EDAZ08
EDAH09	1.246	5.93	4.69	ZN-EDAH09
EDAM09	1.495	5.93	4.44	ZN-EDAM09
EDAU09	1.745	5.93	4.19	ZN-EDAU09
EDAZ09	1.994	5.93	3.94	ZN-EDAZ09
EDAH10	2.243	5.93	3.69	ZN-EDAH10
EDAM10	2.492	5.93	3.44	ZN-EDAM10
EDAU10	2.742	5.93	3.19	ZN-EDAU10

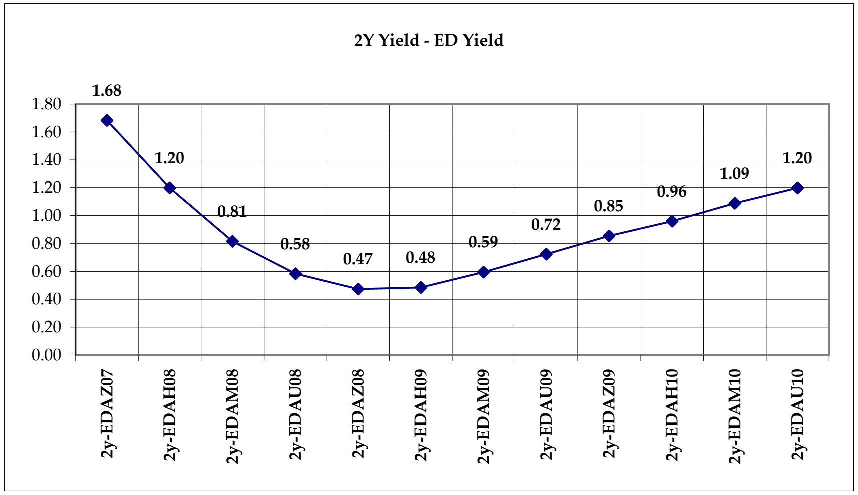
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y Spread Price	2y Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	4.68	1.68	2y-EDAZ07	9.401
EDAH08	4.19	1.20	2y-EDAH08	-67.643
EDAM08	3.81	0.81	2y-EDAM08	-86.198
EDAU08	3.58	0.58	2y-EDAU08	-91.959
EDAZ08	3.47	0.47	2y-EDAZ08	-86.198
EDAH09	3.48	0.48	2y-EDAH09	-93.876
EDAM09	3.59	0.59	2y-EDAM09	-93.411
EDAU09	3.72	0.72	2y-EDAU09	-92.734
EDAZ09	3.85	0.85	2y-EDAZ09	-91.643
EDAH10	3.96	0.96	2y-EDAH10	-90.576
EDAM10	4.08	1.09	2y-EDAM10	-89.773
EDAU10	4.19	1.20	2y-EDAU10	-89.250

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.



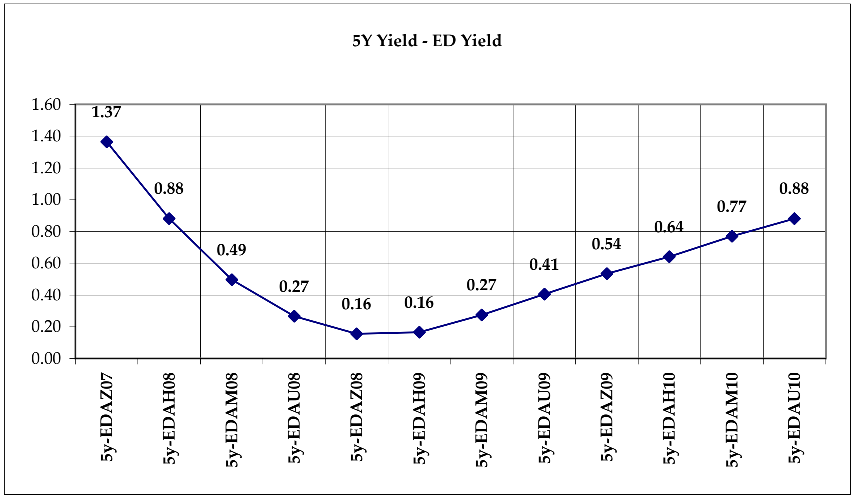
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	-0.001	1.87	1.88	2y-EDAZ07
EDAH08	0.249	1.87	1.63	2y-EDAH08
EDAM08	0.498	1.87	1.38	2y-EDAM08
EDAU08	0.747	1.87	1.13	2y-EDAU08
EDAZ08	0.997	1.87	0.88	2y-EDAZ08
EDAH09	1.246	1.87	0.63	2y-EDAH09
EDAM09	1.495	1.87	0.38	2y-EDAM09
EDAU09	1.745	1.87	0.13	2y-EDAU09
EDAZ09	1.994	1.87	(0.12)	2y-EDAZ09
EDAH10	2.243	1.87	(0.37)	2y-EDAH10
EDAM10	2.492	1.87	(0.62)	2y-EDAM10
EDAU10	2.742	1.87	(0.87)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

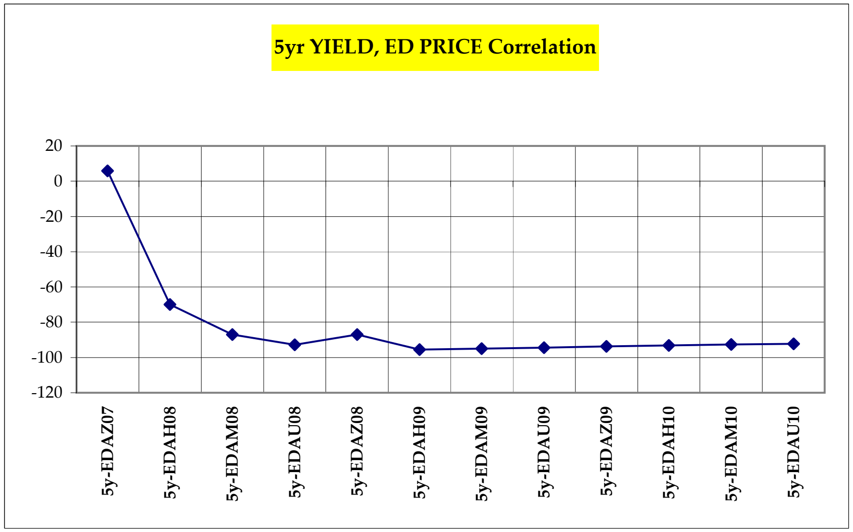
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	3.97	1.37	5y-EDAZ07	5.856
EDAH08	3.49	0.88	5y-EDAH08	-70.020
EDAM08	3.10	0.49	5y-EDAM08	-86.936
EDAU08	2.87	0.27	5y-EDAU08	-92.825
EDAZ08	2.76	0.16	5y-EDAZ08	-86.936
EDAH09	2.77	0.16	5y-EDAH09	-95.433
EDAM09	2.88	0.27	5y-EDAM09	-94.950
EDAU09	3.01	0.41	5y-EDAU09	-94.470
EDAZ09	3.14	0.54	5y-EDAZ09	-93.747
EDAH10	3.25	0.64	5y-EDAH10	-93.183
EDAM10	3.38	0.77	5y-EDAM10	-92.651
EDAU10	3.49	0.88	5y-EDAU10	-92.163

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	-0.001	4.51	4.51	5y-EDAZ07
EDAH08	0.249	4.51	4.26	5y-EDAH08
EDAM08	0.498	4.51	4.01	5y-EDAM08
EDAU08	0.747	4.51	3.76	5y-EDAU08
EDAZ08	0.997	4.51	3.51	5y-EDAZ08
EDAH09	1.246	4.51	3.26	5y-EDAH09
EDAM09	1.495	4.51	3.01	5y-EDAM09
EDAU09	1.745	4.51	2.77	5y-EDAU09
EDAZ09	1.994	4.51	2.52	5y-EDAZ09
EDAH10	2.243	4.51	2.27	5y-EDAH10
EDAM10	2.492	4.51	2.02	5y-EDAM10
EDAU10	2.742	4.51	1.77	5y-EDAU10

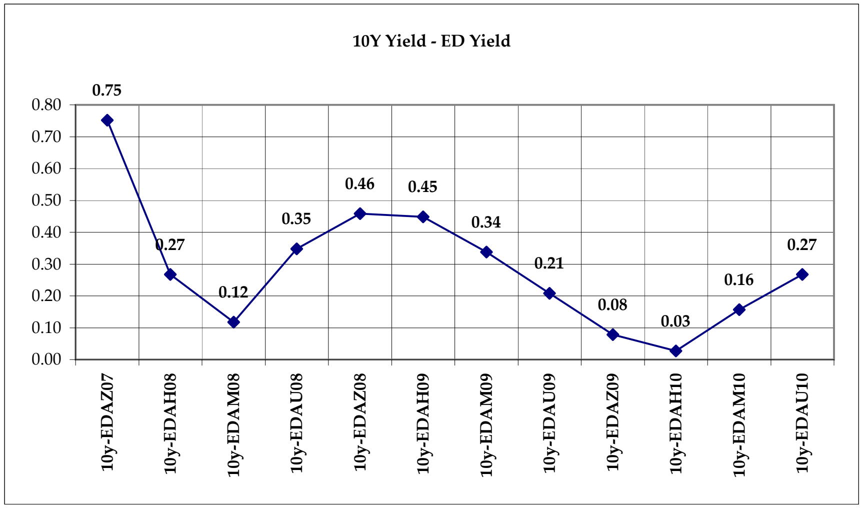
The farther away from 0 the spread duration is
the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

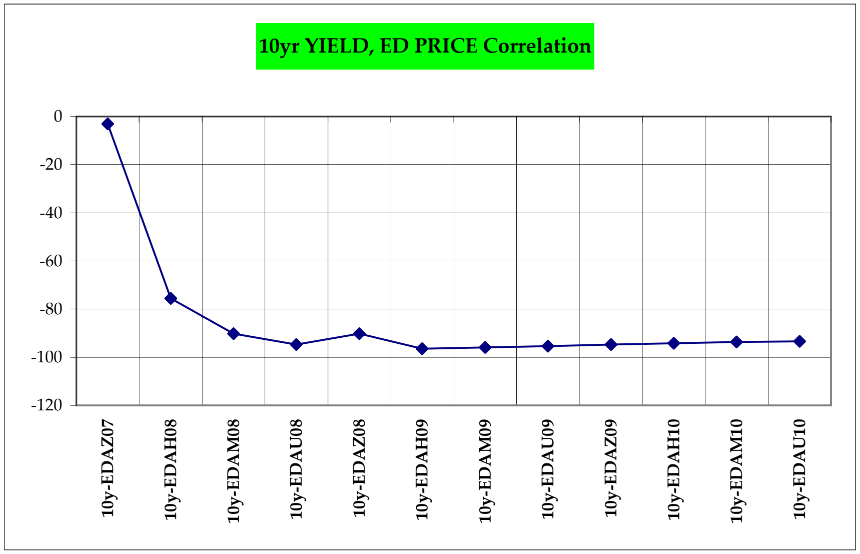
	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ07	3.97	0.75	10y-EDAZ07	-3.044
EDAH08	3.49	0.27	10y-EDAH08	-75.592
EDAM08	3.10	0.12	10y-EDAM08	-90.206
EDAU08	2.87	0.35	10y-EDAU08	-94.729
EDAZ08	2.76	0.46	10y-EDAZ08	-90.206
EDAH09	2.77	0.45	10y-EDAH09	-96.392
EDAM09	2.88	0.34	10y-EDAM09	-95.904
EDAU09	3.01	0.21	10y-EDAU09	-95.448
EDAZ09	3.14	0.08	10y-EDAZ09	-94.671
EDAH10	3.25	0.03	10y-EDAH10	-94.136
EDAM10	3.38	0.16	10y-EDAM10	-93.643
EDAU10	3.49	0.27	10y-EDAU10	-93.343

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.



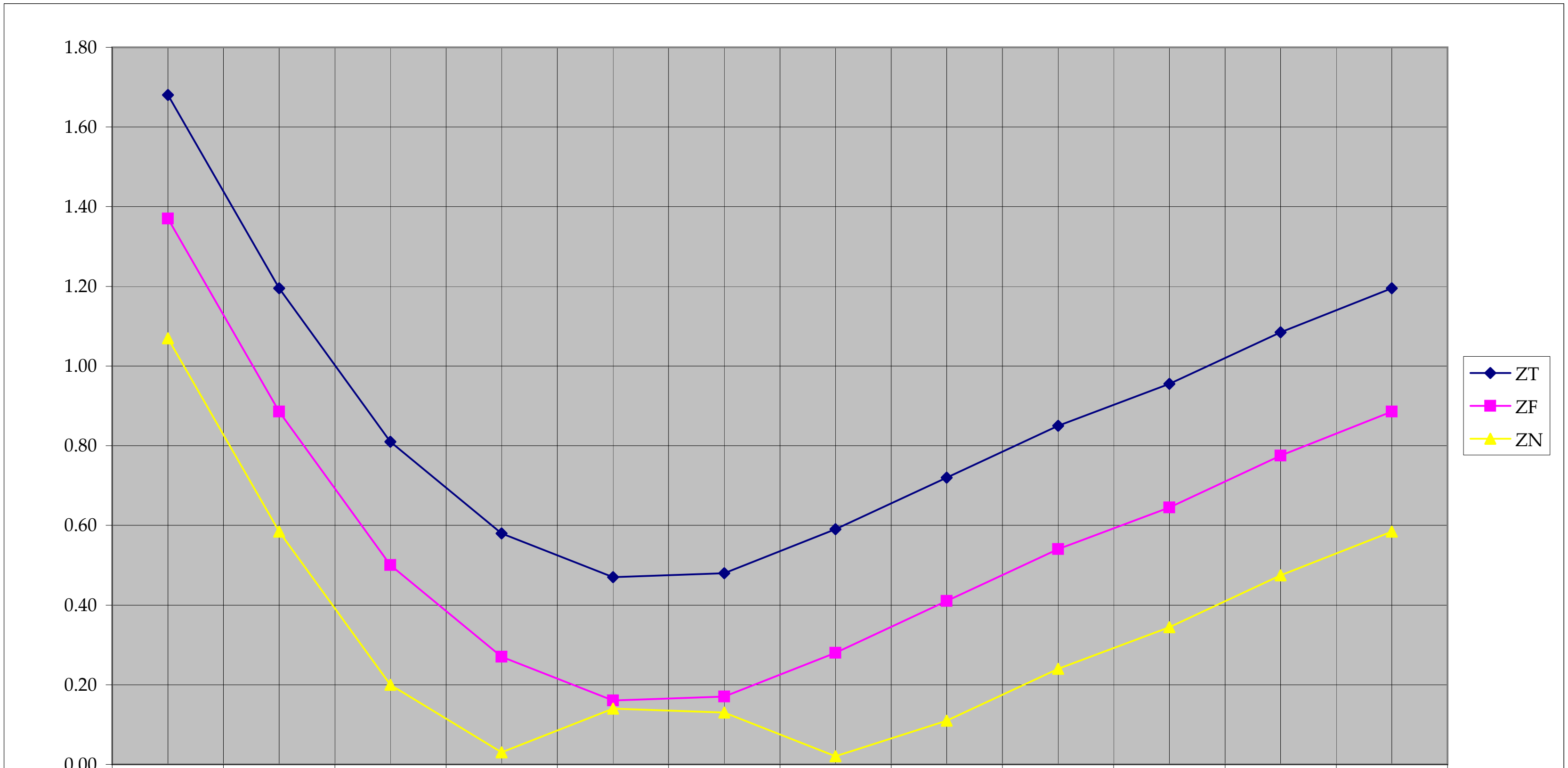
	GE Duration as Fraction of year	**10Y Duration**	**Spread Duration**	
EDAZ07	-0.001	7.99	8.00	10y-EDAZ07
EDAH08	0.249	7.99	7.75	10y-EDAH08
EDAM08	0.498	7.99	7.50	10y-EDAM08
EDAU08	0.747	7.99	7.25	10y-EDAU08
EDAZ08	0.997	7.99	7.00	10y-EDAZ08
EDAH09	1.246	7.99	6.75	10y-EDAH09
EDAM09	1.495	7.99	6.50	10y-EDAM09
EDAU09	1.745	7.99	6.25	10y-EDAU09
EDAZ09	1.994	7.99	6.00	10y-EDAZ09
EDAH10	2.243	7.99	5.75	10y-EDAH10
EDAM10	2.492	7.99	5.50	10y-EDAM10
EDAU10	2.742	7.99	5.25	10y-EDAU10

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



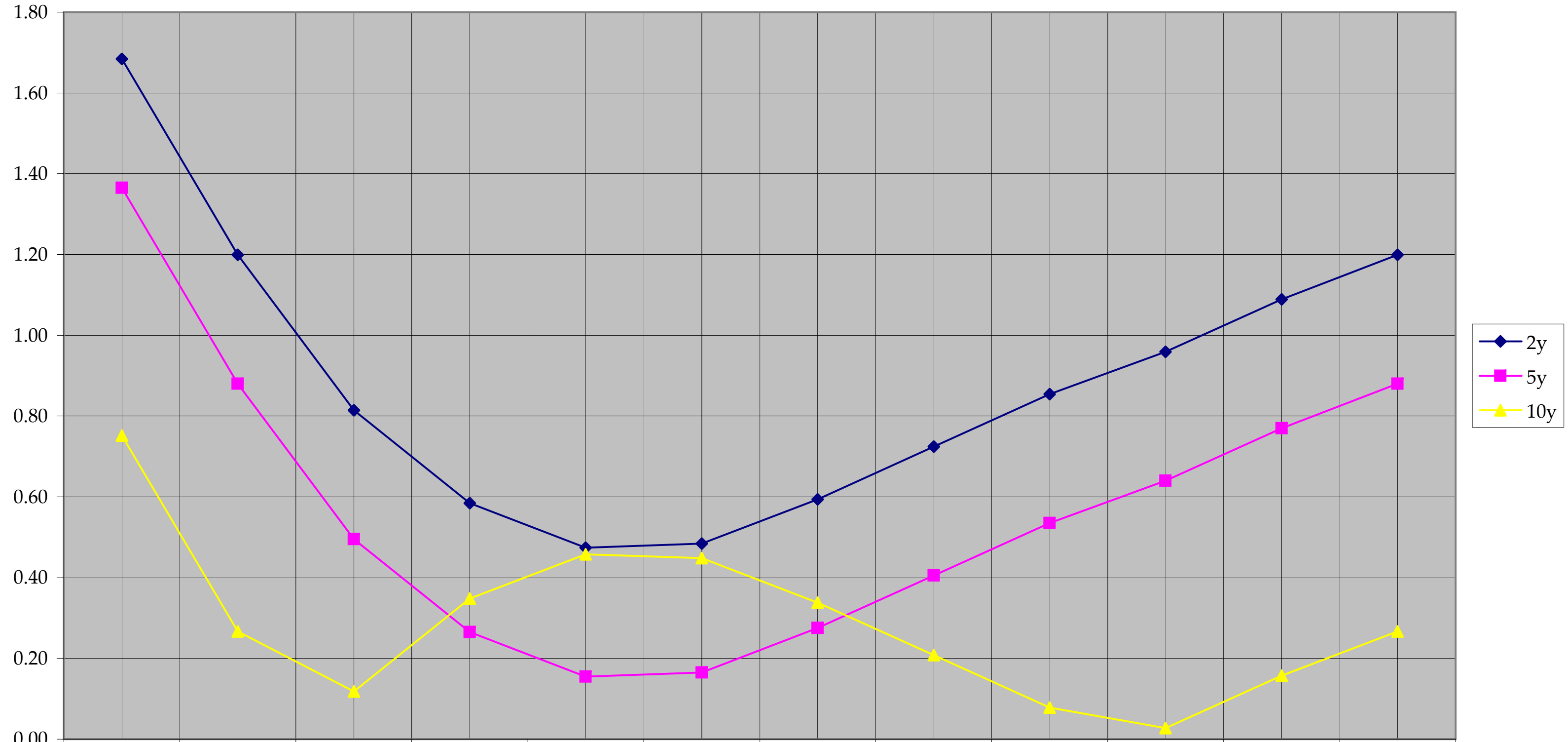
Dirty TED Curve

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.



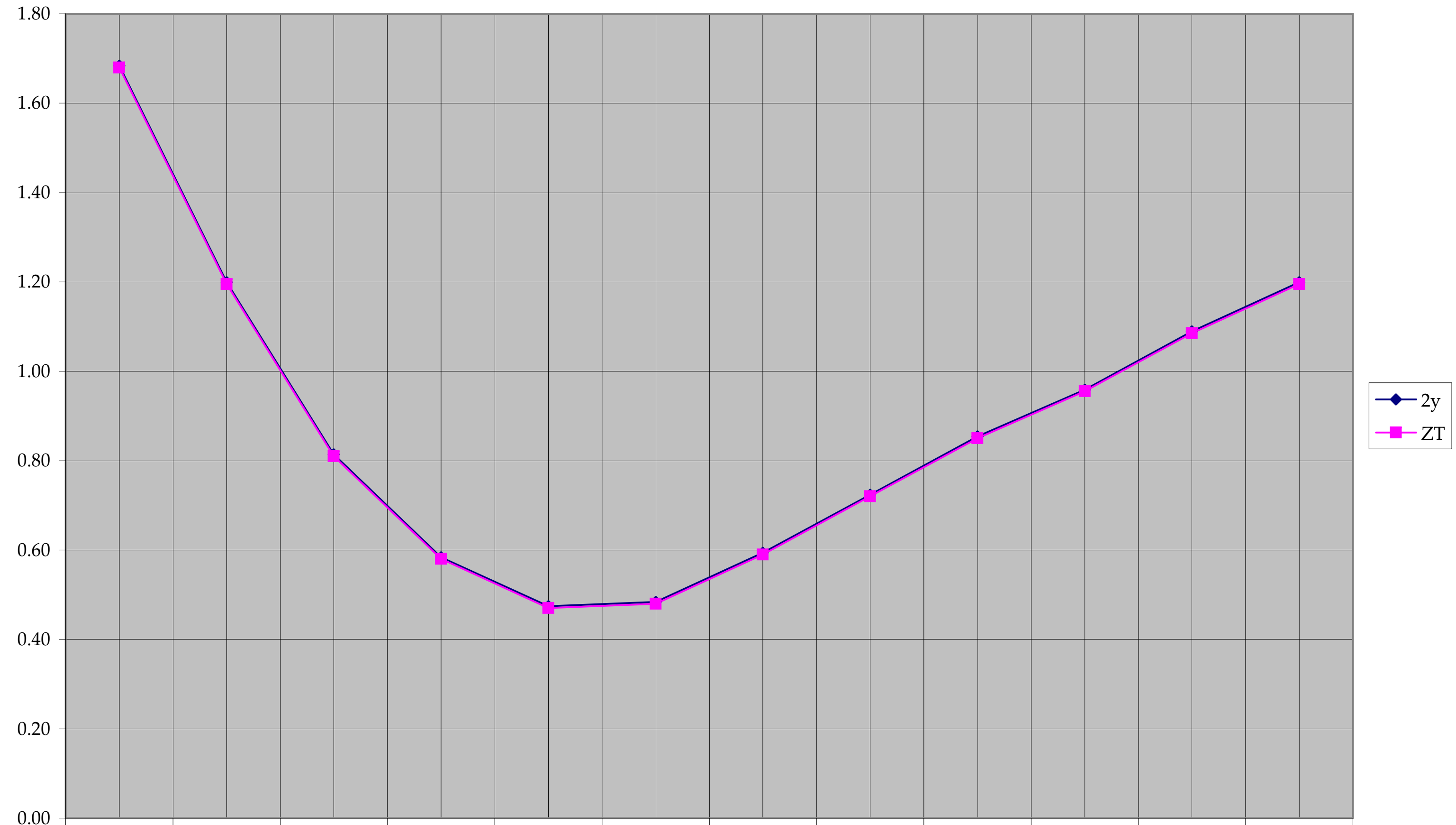
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	1.68	1.20	0.81	0.58	0.47	0.48	0.59	0.72	0.85	0.96	1.09	1.20
ZF	1.37	0.89	0.50	0.27	0.16	0.17	0.28	0.41	0.54	0.65	0.78	0.89
ZN	1.07	0.58	0.20	0.03	0.14	0.13	0.02	0.11	0.24	0.34	0.47	0.58

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.



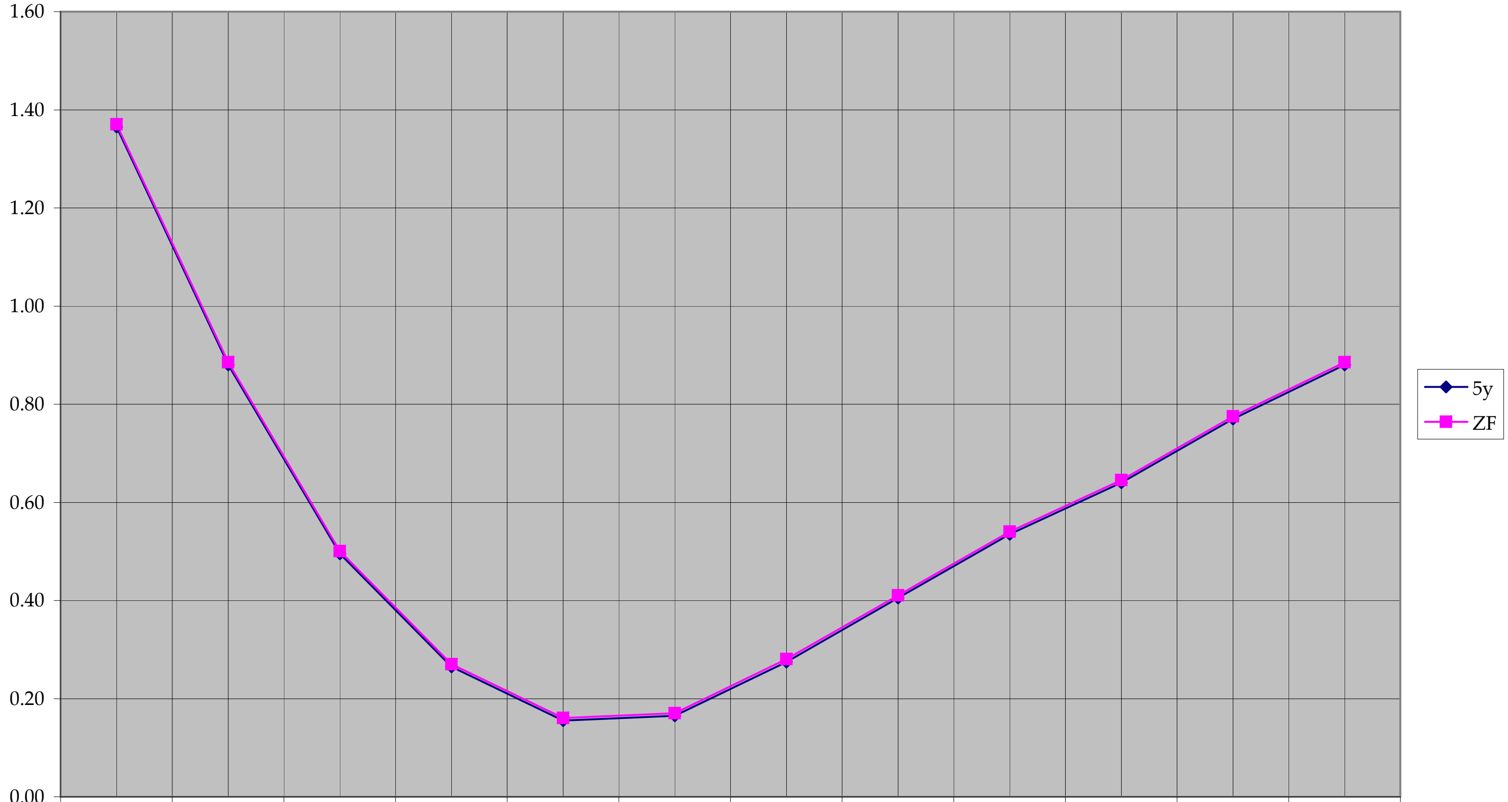
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.68	1.20	0.81	0.58	0.47	0.48	0.59	0.72	0.85	0.96	1.09	1.20
5y	1.37	0.88	0.49	0.27	0.16	0.16	0.27	0.41	0.54	0.64	0.77	0.88
10y	0.75	0.27	0.12	0.35	0.46	0.45	0.34	0.21	0.08	0.03	0.16	0.27

2y Basis TED Curve



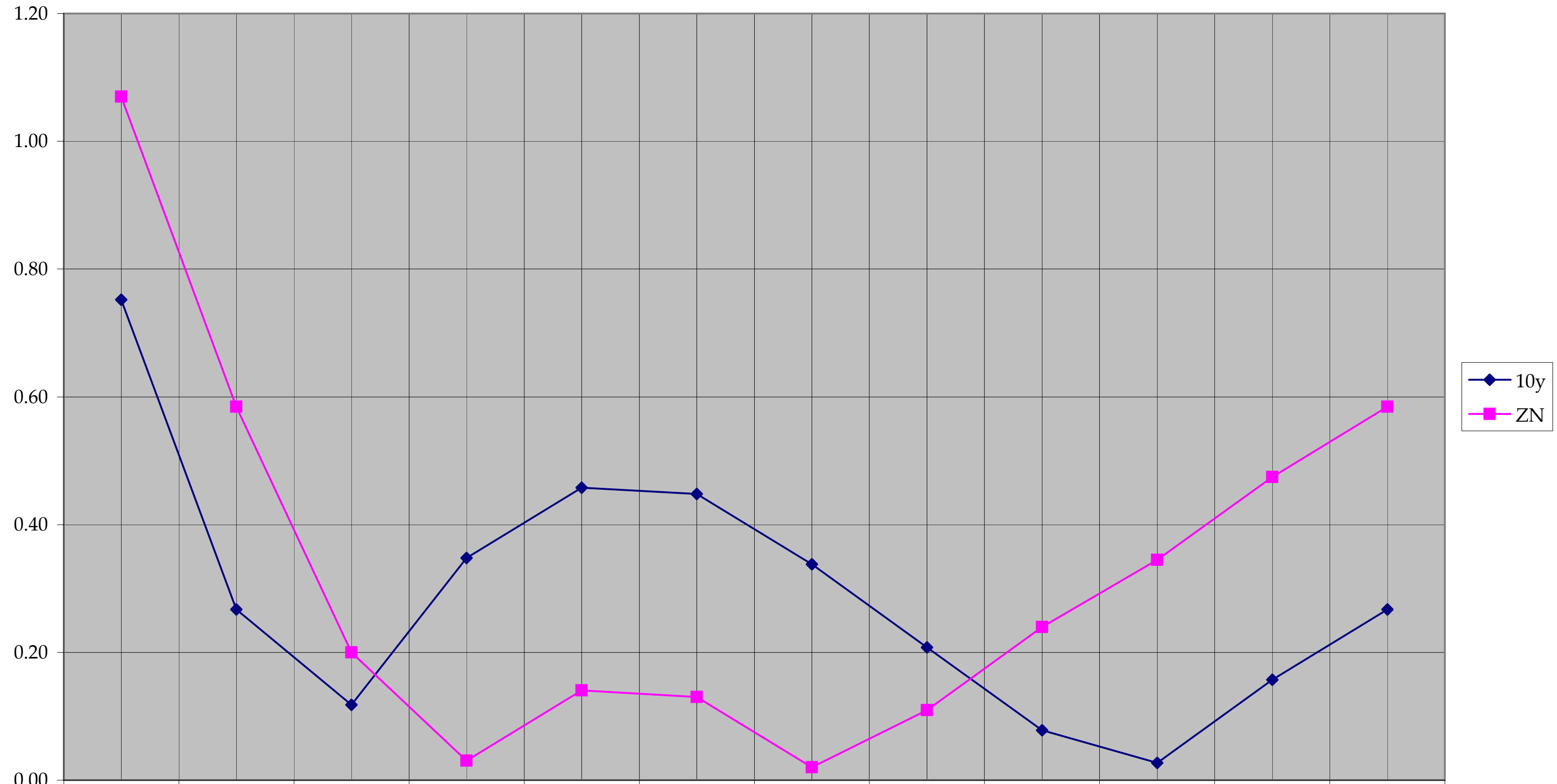
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.68	1.20	0.81	0.58	0.47	0.48	0.59	0.72	0.85	0.96	1.09	1.20
ZT	1.68	1.20	0.81	0.58	0.47	0.48	0.59	0.72	0.85	0.96	1.09	1.20

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	1.37	0.88	0.49	0.27	0.16	0.16	0.27	0.41	0.54	0.64	0.77	0.88
ZF	1.37	0.89	0.50	0.27	0.16	0.17	0.28	0.41	0.54	0.65	0.78	0.89

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.75	0.27	0.12	0.35	0.46	0.45	0.34	0.21	0.08	0.03	0.16	0.27
ZN	1.07	0.58	0.20	0.03	0.14	0.13	0.02	0.11	0.24	0.34	0.47	0.58

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.450	-2.125	9565.875
Q.ED.Red	3.931	1.875	9616.000
Q.ED.Green	4.403	3.000	9570.375
Q.ED.Blue		2.625	9529.500
Q.ED.Gold		1.250	9496.875