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	105.0000	105.000	3.048	1.85
ZF	109.9688	109.310	3.419	3.82
ZN	113.4531	113.145	3.763	5.75
2y	101.116	101.0370	3.024	1.76
5y	102.303	102.0970	3.360	4.45
10y	101.859	101.2750	4.018	8.08

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.180	4.820	24	0.065	DEC	White Pack
EDAH08	95.815	4.185	115	0.314	MAR	
EDAM08	96.180	3.820	206	0.564	JUN	
EDAU08	96.370	3.630	297	0.813	SEP	
EDAZ08	96.405	3.595	388	1.062	DEC	Red Pack
EDAH09	96.350	3.650	479	1.312	MAR	
EDAM09	96.225	3.775	570	1.561	JUN	
EDAU09	96.090	3.910	661	1.810	SEP	
EDAZ09	95.940	4.060	752	2.060	DEC	Green Pack
EDAH10	95.805	4.195	843	2.309	MAR	
EDAM10	95.680	4.320	934	2.558	JUN	
EDAU10	95.570	4.430	1025	2.808	SEP	
EDAZ10	95.450	4.550	1116	3.057	DEC	Blue Pack
EDAH11	95.350	4.650	1207	3.306	MAR	
EDAM11	95.250	4.750	1298	3.556	JUN	
EDAU11	95.160	4.840	1396	3.824	SEP	
EDAZ11	95.075	4.925	1487	4.073	DEC	Gold Pack
EDAH12	95.000	5.000	1578	4.323	MAR	
EDAM12	94.925	5.075	1669	4.572	JUN	
EDAU12	94.865	5.135	1760	4.821	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.215	-1.250	9588.625	Pack Prices
Q.ED.Red	3.820	-0.750	9626.750	
Q.ED.Green	4.357	0.625	9574.875	
Q.ED.Blue	4.819	0.625	9530.250	
Q.ED.Gold	5.169	0.375	9496.625	

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

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

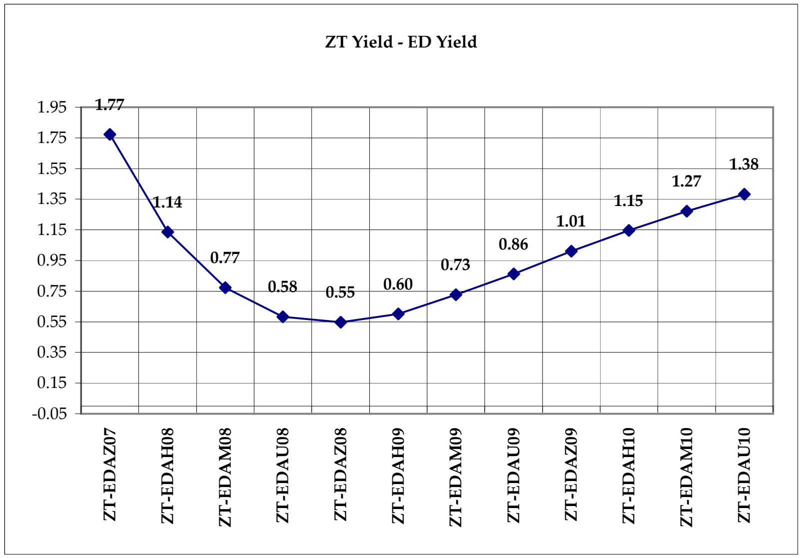
Eurodollar Color Codes for Individual Year Strips:

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

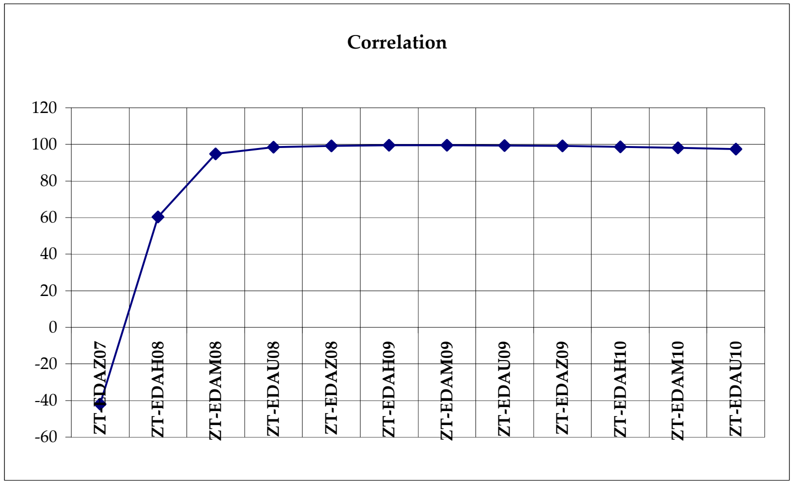
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	9.820	1.77	ZT-EDAZ07	-42.054
EDAH08	9.185	1.14	ZT-EDAH08	60.428
EDAM08	8.820	0.77	ZT-EDAM08	94.765
EDAU08	8.630	0.58	ZT-EDAU08	98.507
EDAZ08	8.595	0.55	ZT-EDAZ08	99.145
EDAH09	8.650	0.60	ZT-EDAH09	99.486
EDAM09	8.775	0.73	ZT-EDAM09	99.504
EDAU09	8.910	0.86	ZT-EDAU09	99.425
EDAZ09	9.060	1.01	ZT-EDAZ09	99.149
EDAH10	9.195	1.15	ZT-EDAH10	98.659
EDAM10	9.320	1.27	ZT-EDAM10	98.207
EDAU10	9.430	1.38	ZT-EDAU10	97.470

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	0.065	1.85	1.78	ZT-EDAZ07
EDAH08	0.314	1.85	1.53	ZT-EDAH08
EDAM08	0.564	1.85	1.28	ZT-EDAM08
EDAU08	0.813	1.85	1.04	ZT-EDAU08
EDAZ08	1.062	1.85	0.79	ZT-EDAZ08
EDAH09	1.312	1.85	0.54	ZT-EDAH09
EDAM09	1.561	1.85	0.29	ZT-EDAM09
EDAU09	1.810	1.85	0.04	ZT-EDAU09
EDAZ09	2.060	1.85	(0.21)	ZT-EDAZ09
EDAH10	2.309	1.85	(0.46)	ZT-EDAH10
EDAM10	2.558	1.85	(0.71)	ZT-EDAM10
EDAU10	2.808	1.85	(0.96)	ZT-EDAU10

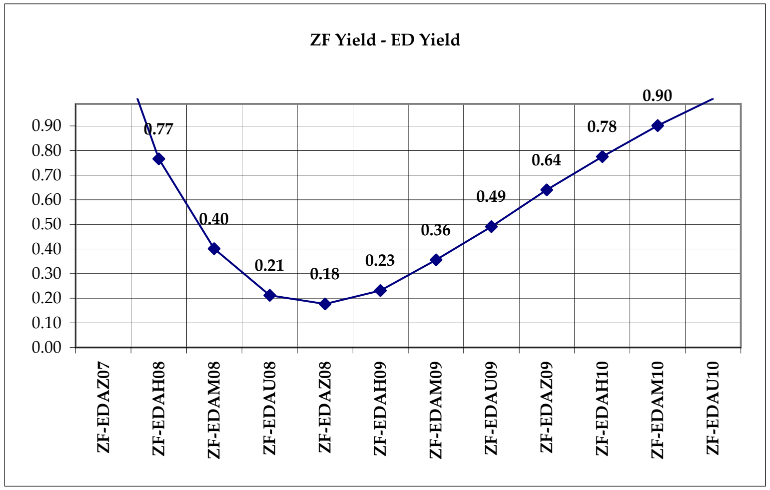
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

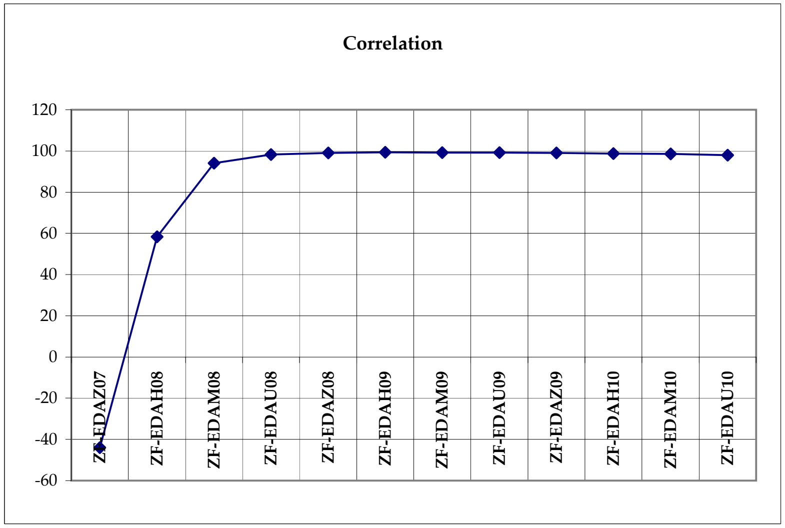
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	14.79	1.40	ZF-EDAZ07	-43.975
EDAH08	14.15	0.77	ZF-EDAH08	58.302
EDAM08	13.79	0.40	ZF-EDAM08	94.021
EDAU08	13.60	0.21	ZF-EDAU08	98.198
EDAZ08	13.56	0.18	ZF-EDAZ08	99.037
EDAH09	13.62	0.23	ZF-EDAH09	99.289
EDAM09	13.74	0.36	ZF-EDAM09	99.252
EDAU09	13.88	0.49	ZF-EDAU09	99.155
EDAZ09	14.03	0.64	ZF-EDAZ09	99.057
EDAH10	14.16	0.78	ZF-EDAH10	98.771
EDAM10	14.29	0.90	ZF-EDAM10	98.536
EDAU10	14.40	1.01	ZF-EDAU10	98.005

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	0.065	3.82	3.76	ZF-EDAZ07
EDAH08	0.314	3.82	3.51	ZF-EDAH08
EDAM08	0.564	3.82	3.26	ZF-EDAM08
EDAU08	0.813	3.82	3.01	ZF-EDAU08
EDAZ08	1.062	3.82	2.76	ZF-EDAZ08
EDAH09	1.312	3.82	2.51	ZF-EDAH09
EDAM09	1.561	3.82	2.26	ZF-EDAM09
EDAU09	1.810	3.82	2.01	ZF-EDAU09
EDAZ09	2.060	3.82	1.76	ZF-EDAZ09
EDAH10	2.309	3.82	1.51	ZF-EDAH10
EDAM10	2.558	3.82	1.26	ZF-EDAM10
EDAU10	2.808	3.82	1.01	ZF-EDAU10

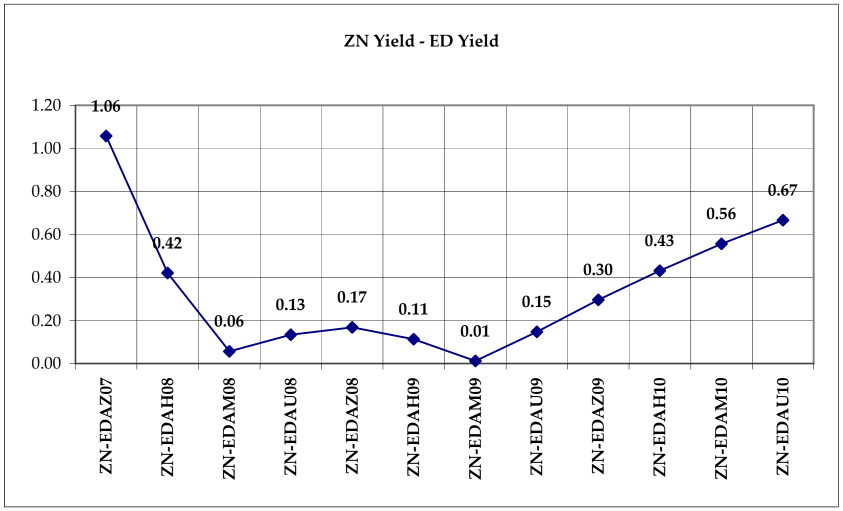
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

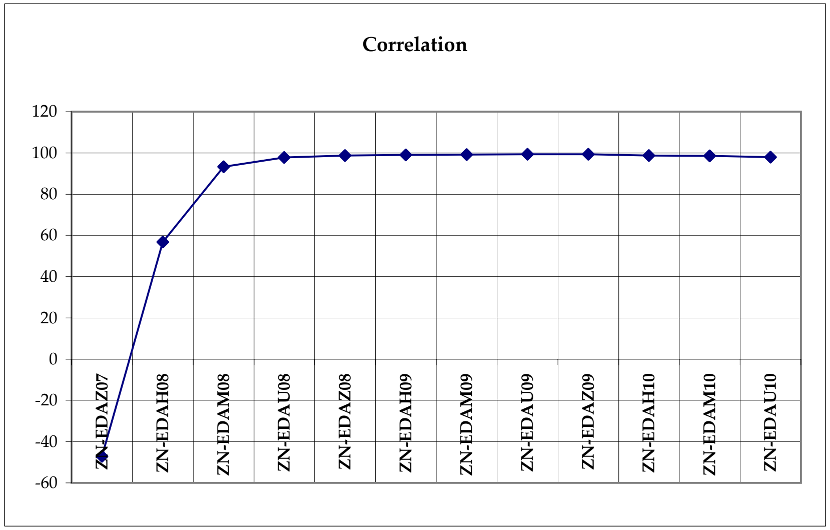
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	18.27	1.06	ZN-EDAZ07	-47.14
EDAH08	17.64	0.42	ZN-EDAH08	56.83
EDAM08	17.27	0.06	ZN-EDAM08	93.28
EDAU08	17.08	0.13	ZN-EDAU08	97.75
EDAZ08	17.05	0.17	ZN-EDAZ08	98.66
EDAH09	17.10	0.11	ZN-EDAH09	99.06
EDAM09	17.23	0.01	ZN-EDAM09	99.21
EDAU09	17.36	0.15	ZN-EDAU09	99.32
EDAZ09	17.51	0.30	ZN-EDAZ09	99.37
EDAH10	17.65	0.43	ZN-EDAH10	98.77
EDAM10	17.77	0.56	ZN-EDAM10	98.54
EDAU10	17.88	0.67	ZN-EDAU10	98.01

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	0.065	5.75	5.69	ZN-EDAZ07
EDAH08	0.314	5.75	5.44	ZN-EDAH08
EDAM08	0.564	5.75	5.19	ZN-EDAM08
EDAU08	0.813	5.75	4.94	ZN-EDAU08
EDAZ08	1.062	5.75	4.69	ZN-EDAZ08
EDAH09	1.312	5.75	4.44	ZN-EDAH09
EDAM09	1.561	5.75	4.19	ZN-EDAM09
EDAU09	1.810	5.75	3.94	ZN-EDAU09
EDAZ09	2.060	5.75	3.70	ZN-EDAZ09
EDAH10	2.309	5.75	3.45	ZN-EDAH10
EDAM10	2.558	5.75	3.20	ZN-EDAM10
EDAU10	2.808	5.75	2.95	ZN-EDAU10

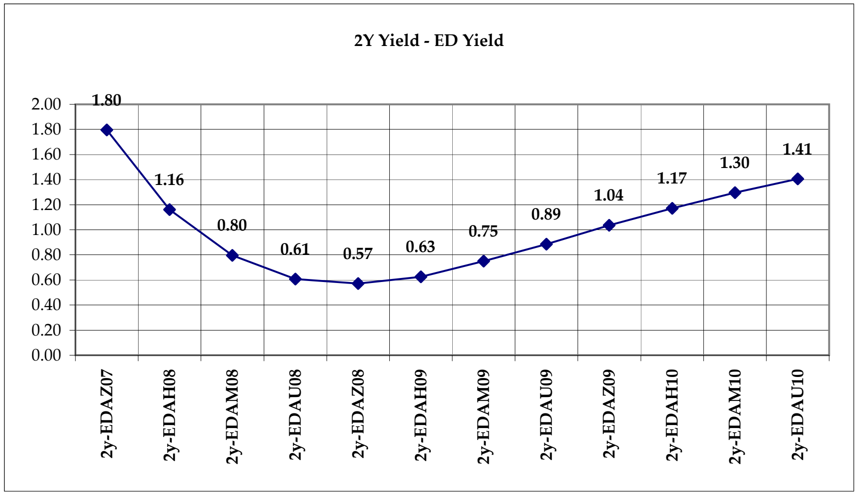
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	5.94	1.80	2y-EDAZ07	38.718
EDAH08	5.30	1.16	2y-EDAH08	-65.724
EDAM08	4.94	0.80	2y-EDAM08	-95.598
EDAU08	4.75	0.61	2y-EDAU08	-98.020
EDAZ08	4.71	0.57	2y-EDAZ08	-95.598
EDAH09	4.77	0.63	2y-EDAH09	-98.205
EDAM09	4.89	0.75	2y-EDAM09	-98.425
EDAU09	5.03	0.89	2y-EDAU09	-98.475
EDAZ09	5.18	1.04	2y-EDAZ09	-98.296
EDAH10	5.31	1.17	2y-EDAH10	-97.897
EDAM10	5.44	1.30	2y-EDAM10	-97.570
EDAU10	5.55	1.41	2y-EDAU10	-96.944

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.



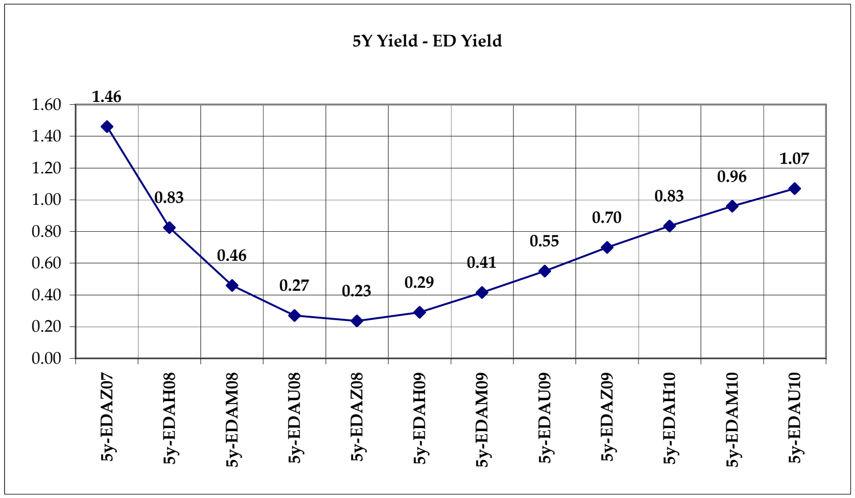
	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.065	1.76	1.69	2y-EDAZ07
EDAH08	0.314	1.76	1.45	2y-EDAH08
EDAM08	0.564	1.76	1.20	2y-EDAM08
EDAU08	0.813	1.76	0.95	2y-EDAU08
EDAZ08	1.062	1.76	0.70	2y-EDAZ08
EDAH09	1.312	1.76	0.45	2y-EDAH09
EDAM09	1.561	1.76	0.20	2y-EDAM09
EDAU09	1.810	1.76	(0.05)	2y-EDAU09
EDAZ09	2.060	1.76	(0.30)	2y-EDAZ09
EDAH10	2.309	1.76	(0.55)	2y-EDAH10
EDAM10	2.558	1.76	(0.80)	2y-EDAM10
EDAU10	2.808	1.76	(1.05)	2y-EDAU10

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

TERM TED: 5y vs Eurodollar Contracts

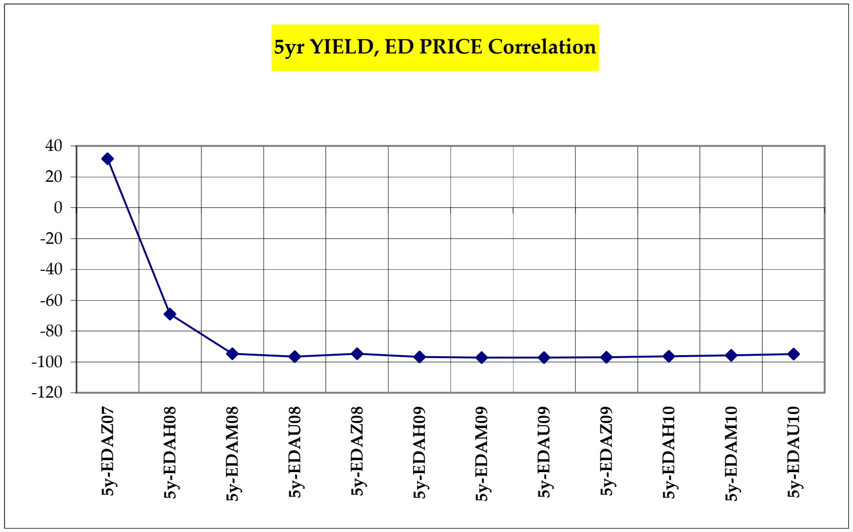
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	7.12	1.46	5y-EDAZ07	31.717
EDAH08	6.49	0.83	5y-EDAH08	-68.939
EDAM08	6.12	0.46	5y-EDAM08	-94.722
EDAU08	5.93	0.27	5y-EDAU08	-96.534
EDAZ08	5.90	0.23	5y-EDAZ08	-94.722
EDAH09	5.95	0.29	5y-EDAH09	-96.693
EDAM09	6.08	0.41	5y-EDAM09	-97.130
EDAU09	6.21	0.55	5y-EDAU09	-97.293
EDAZ09	6.36	0.70	5y-EDAZ09	-96.987
EDAH10	6.50	0.83	5y-EDAH10	-96.330
EDAM10	6.62	0.96	5y-EDAM10	-95.769
EDAU10	6.73	1.07	5y-EDAU10	-94.888

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	0.065	4.45	4.39	5y-EDAZ07
EDAH08	0.314	4.45	4.14	5y-EDAH08
EDAM08	0.564	4.45	3.89	5y-EDAM08
EDAU08	0.813	4.45	3.64	5y-EDAU08
EDAZ08	1.062	4.45	3.39	5y-EDAZ08
EDAH09	1.312	4.45	3.14	5y-EDAH09
EDAM09	1.561	4.45	2.89	5y-EDAM09
EDAU09	1.810	4.45	2.64	5y-EDAU09
EDAZ09	2.060	4.45	2.39	5y-EDAZ09
EDAH10	2.309	4.45	2.14	5y-EDAH10
EDAM10	2.558	4.45	1.89	5y-EDAM10
EDAU10	2.808	4.45	1.65	5y-EDAU10

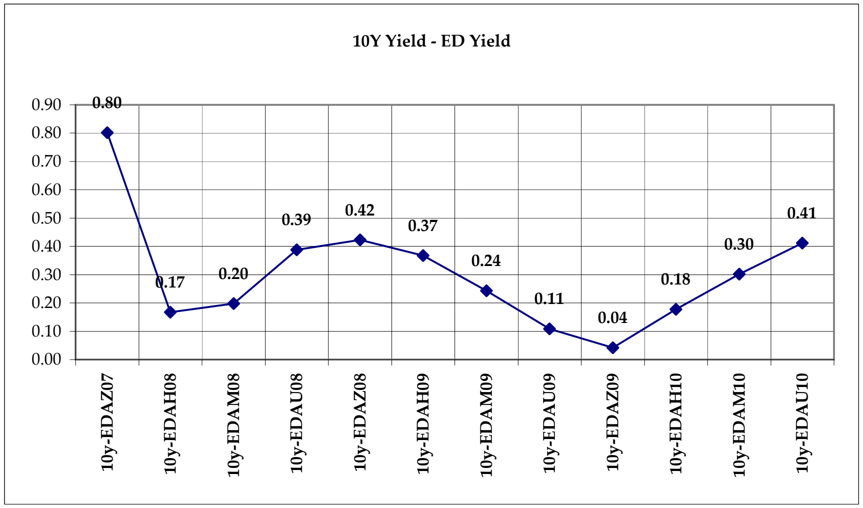
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

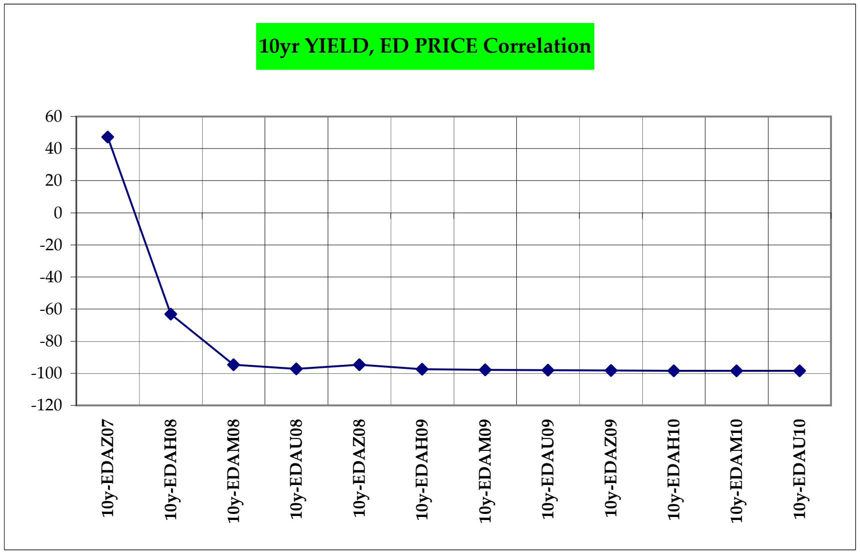
	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ07	7.12	0.80	10y-EDAZ07	47.260
EDAH08	6.49	0.17	10y-EDAH08	-63.057
EDAM08	6.12	0.20	10y-EDAM08	-94.683
EDAU08	5.93	0.39	10y-EDAU08	-97.323
EDAZ08	5.90	0.42	10y-EDAZ08	-94.683
EDAH09	5.95	0.37	10y-EDAH09	-97.506
EDAM09	6.08	0.24	10y-EDAM09	-97.854
EDAU09	6.21	0.11	10y-EDAU09	-98.119
EDAZ09	6.36	0.04	10y-EDAZ09	-98.332
EDAH10	6.50	0.18	10y-EDAH10	-98.471
EDAM10	6.62	0.30	10y-EDAM10	-98.539
EDAU10	6.73	0.41	10y-EDAU10	-98.412

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.



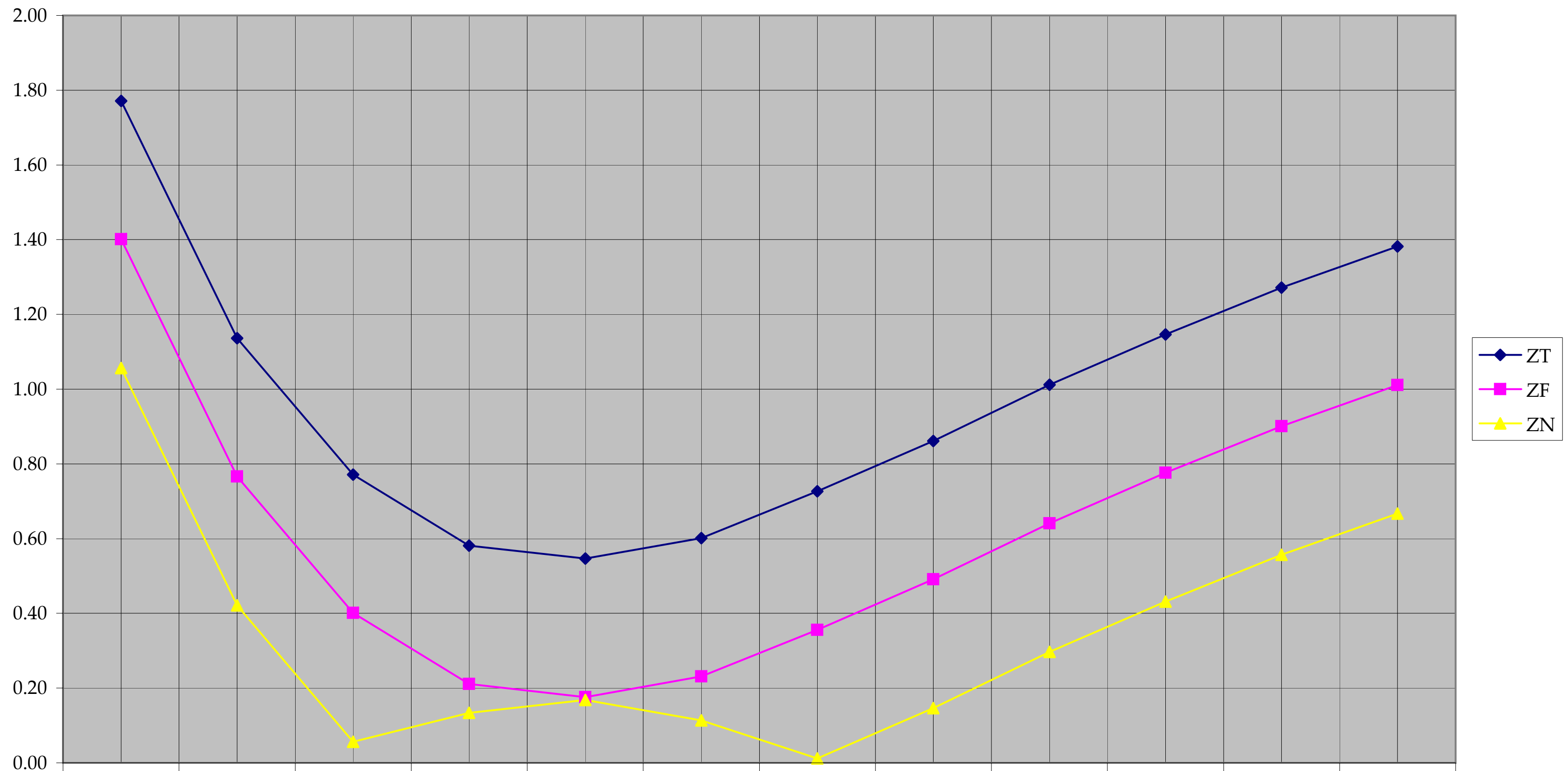
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.065	8.08	8.01	10y-EDAZ07
EDAH08	0.314	8.08	7.76	10y-EDAH08
EDAM08	0.564	8.08	7.51	10y-EDAM08
EDAU08	0.813	8.08	7.26	10y-EDAU08
EDAZ08	1.062	8.08	7.01	10y-EDAZ08
EDAH09	1.312	8.08	6.76	10y-EDAH09
EDAM09	1.561	8.08	6.52	10y-EDAM09
EDAU09	1.810	8.08	6.27	10y-EDAU09
EDAZ09	2.060	8.08	6.02	10y-EDAZ09
EDAH10	2.309	8.08	5.77	10y-EDAH10
EDAM10	2.558	8.08	5.52	10y-EDAM10
EDAU10	2.808	8.08	5.27	10y-EDAU10

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



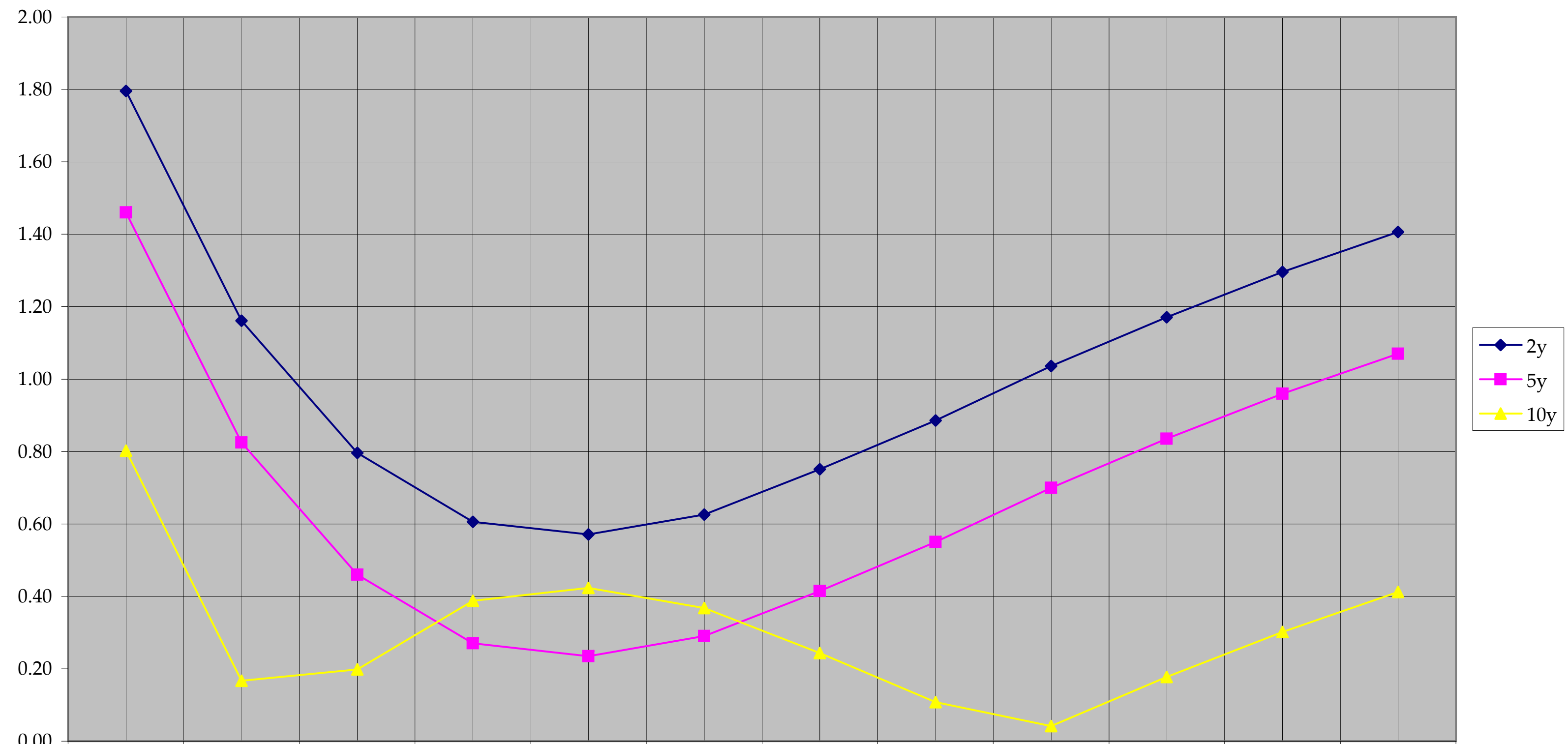
Dirty TED Curve

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.



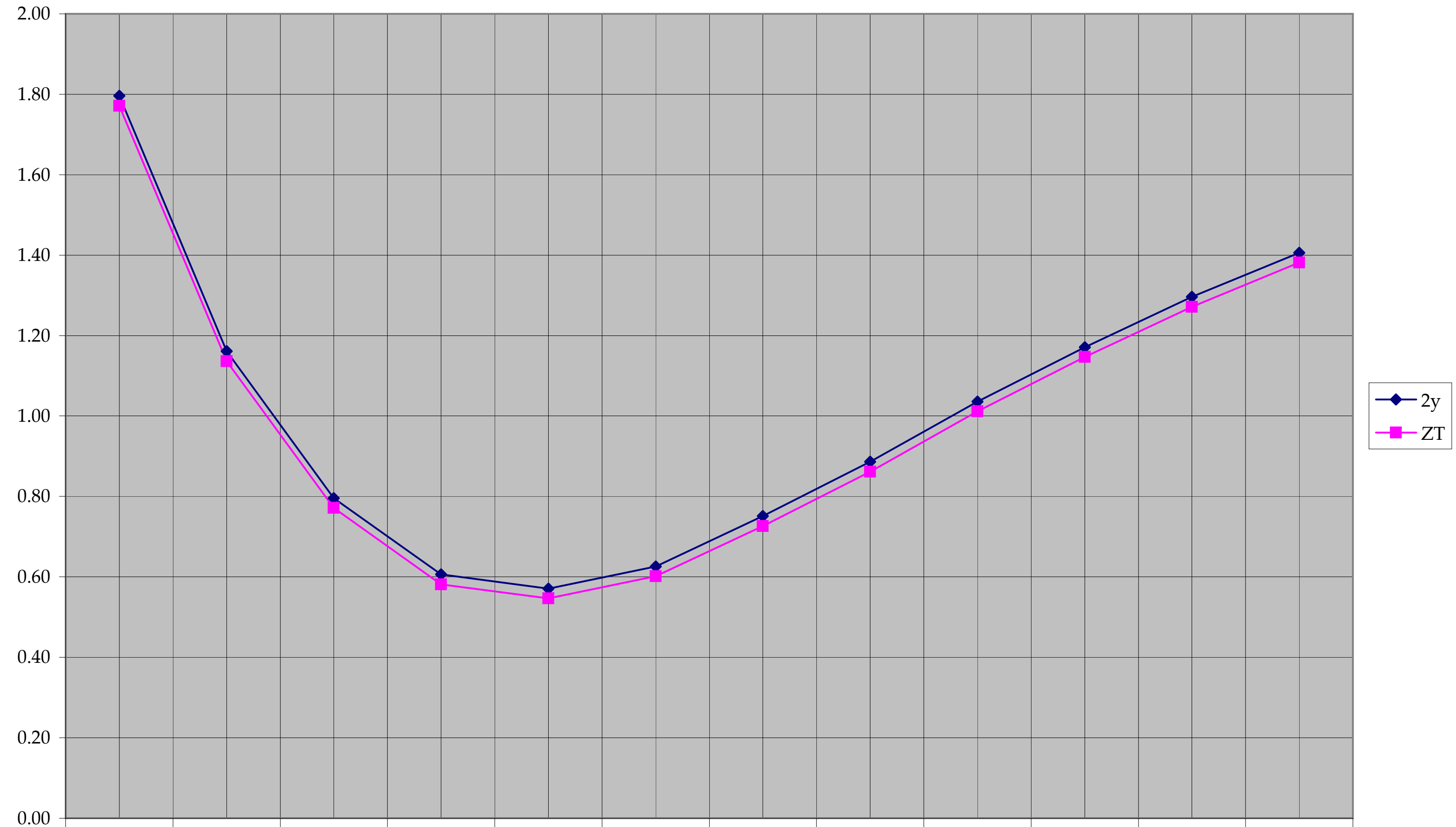
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	1.77	1.14	0.77	0.58	0.55	0.60	0.73	0.86	1.01	1.15	1.27	1.38
ZF	1.40	0.77	0.40	0.21	0.18	0.23	0.36	0.49	0.64	0.78	0.90	1.01
ZN	1.06	0.42	0.06	0.13	0.17	0.11	0.01	0.15	0.30	0.43	0.56	0.67

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.



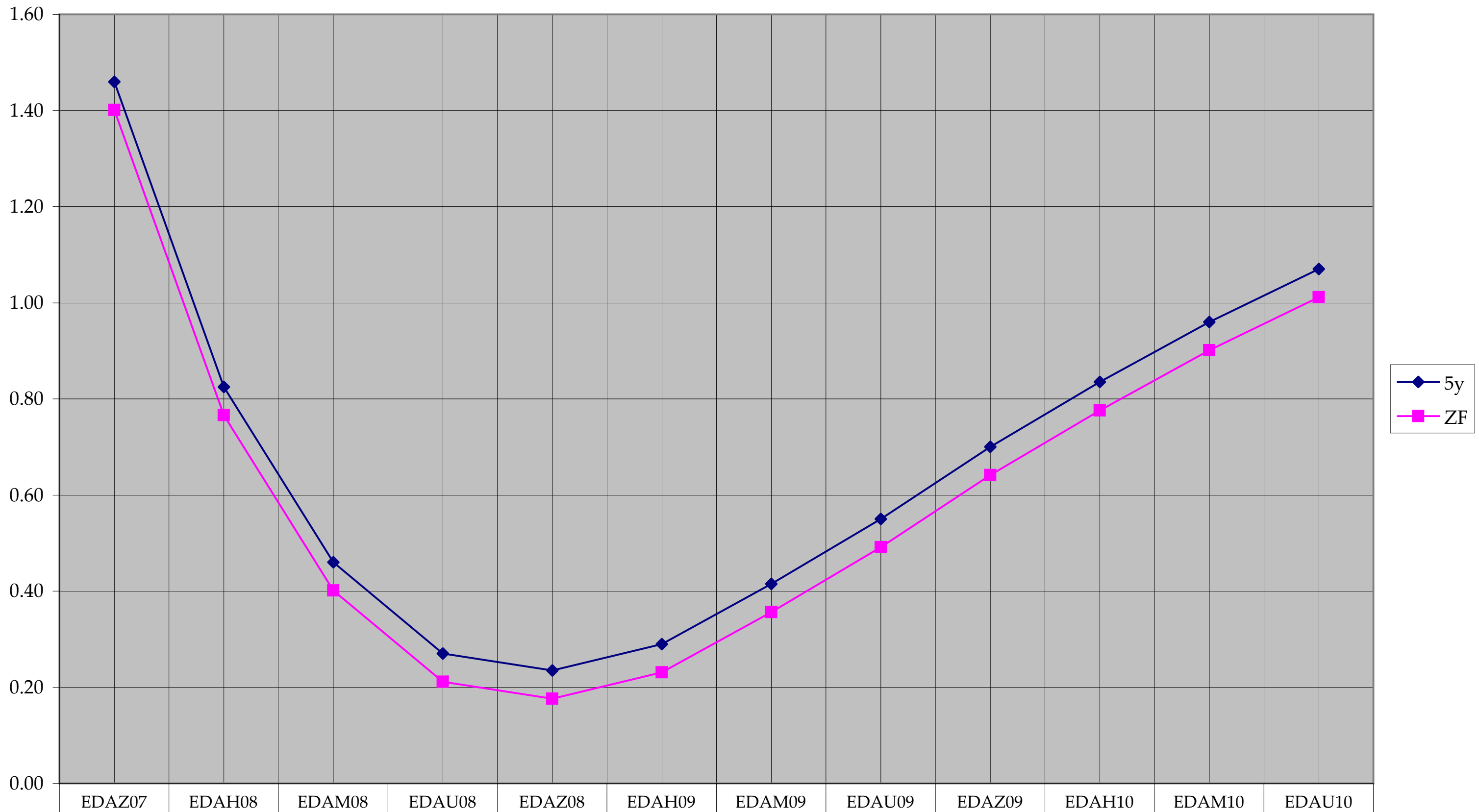
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.80	1.16	0.80	0.61	0.57	0.63	0.75	0.89	1.04	1.17	1.30	1.41
5y	1.46	0.83	0.46	0.27	0.23	0.29	0.41	0.55	0.70	0.83	0.96	1.07
10y	0.80	0.17	0.20	0.39	0.42	0.37	0.24	0.11	0.04	0.18	0.30	0.41

2y Basis TED Curve



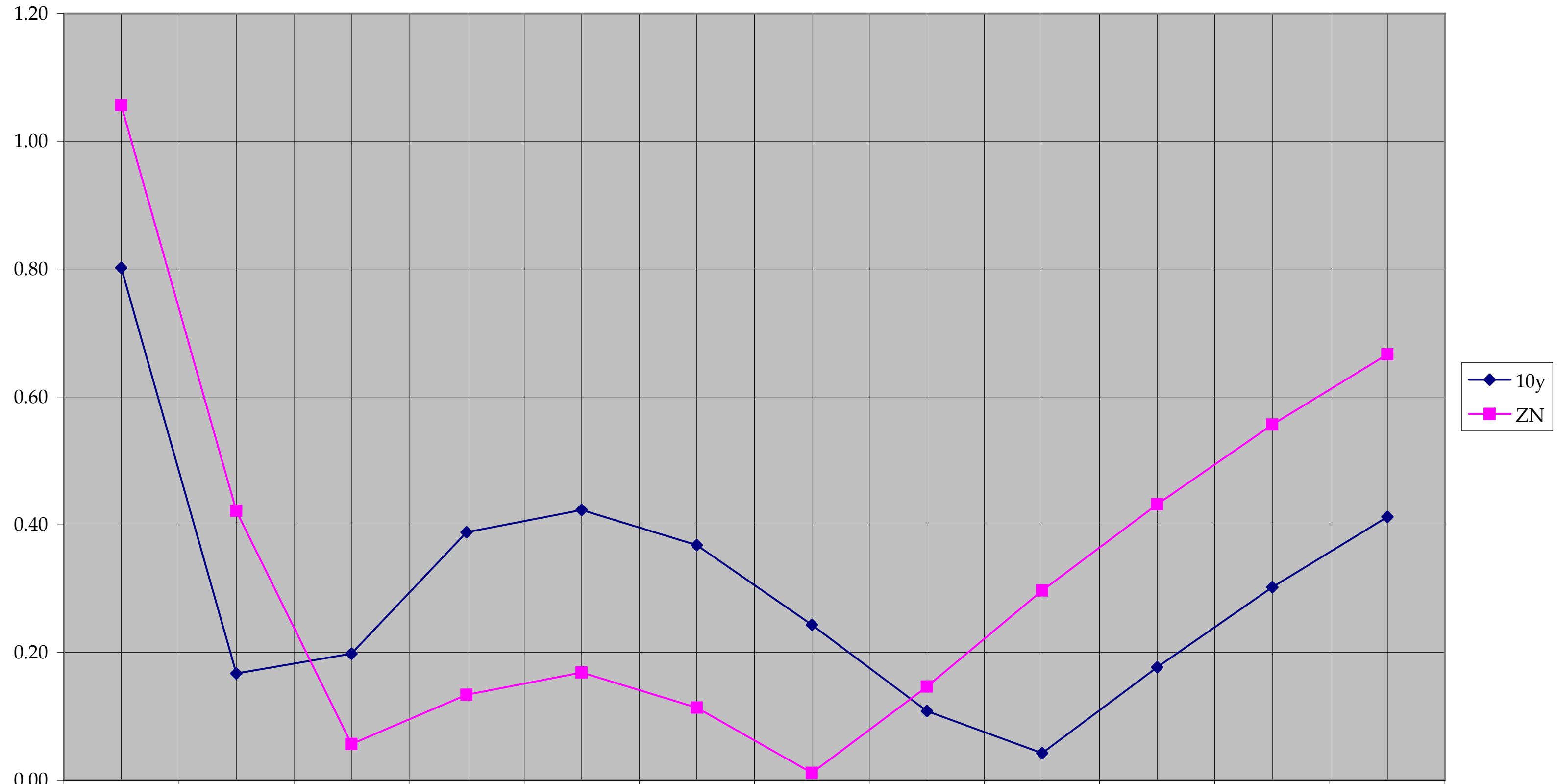
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	1.80	1.16	0.80	0.61	0.57	0.63	0.75	0.89	1.04	1.17	1.30	1.41
ZT	1.77	1.14	0.77	0.58	0.55	0.60	0.73	0.86	1.01	1.15	1.27	1.38

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	1.46	0.83	0.46	0.27	0.23	0.29	0.41	0.55	0.70	0.83	0.96	1.07
ZF	1.40	0.77	0.40	0.21	0.18	0.23	0.36	0.49	0.64	0.78	0.90	1.01

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.80	0.17	0.20	0.39	0.42	0.37	0.24	0.11	0.04	0.18	0.30	0.41
ZN	1.06	0.42	0.06	0.13	0.17	0.11	0.01	0.15	0.30	0.43	0.56	0.67

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.215	-1.250	9588.625
Q.ED.Red	3.820	-0.750	9626.750
Q.ED.Green	4.357	0.625	9574.875
Q.ED.Blue	4.819	0.625	9530.250
Q.ED.Gold	5.169	0.375	9496.625