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	103.7500	103.240	3.819	1.91
ZF	107.7344	107.235	4.006	3.87
ZN	110.5313	110.170	4.196	5.80
2y	99.631	99.2020	3.818	1.82
5y	99.131	99.0420	4.065	4.50
10y	102.781	102.2500	4.393	7.73

Eurodollars (ED)	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ07	95.275	4.725	48	0.131	DEC	White Pack
EDAH08	95.600	4.400	139	0.380	MAR	
EDAM08	95.740	4.260	230	0.629	JUN	
EDAU08	95.825	4.175	321	0.879	SEP	
EDAZ08	95.830	4.170	412	1.128	DEC	Red Pack
EDAH09	95.775	4.225	503	1.377	MAR	
EDAM09	95.675	4.325	594	1.627	JUN	
EDAU09	95.565	4.435	685	1.876	SEP	
EDAZ09	95.460	4.540	776	2.125	DEC	Green Pack
EDAH10	95.390	4.610	867	2.375	MAR	
EDAM10	95.300	4.700	958	2.624	JUN	
EDAU10	95.235	4.765	1049	2.873	SEP	
EDAZ10	95.150	4.850	1140	3.123	DEC	Blue Pack
EDAH11	95.095	4.905	1231	3.372	MAR	
EDAM11	95.035	4.965	1322	3.621	JUN	
EDAU11	94.990	5.010	1420	3.890	SEP	
EDAZ11	94.905	5.095	1511	4.139	DEC	Gold Pack
EDAH12	94.860	5.140	1602	4.388	MAR	
EDAM12	94.820	5.180	1693	4.638	JUN	
EDAU12	94.770	5.230	1784	4.887	SEP	

	Last Yield	Net Yield	Last Price	
Q.ED.White	4.499	-3.000	9561.125	Pack Prices
Q.ED.Red	4.395	-1.875	9571.125	
Q.ED.Green	4.774	-1.000	9534.625	
Q.ED.Blue		-0.125	9506.125	
Q.ED.Gold	5.301	0.500	9483.875	

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

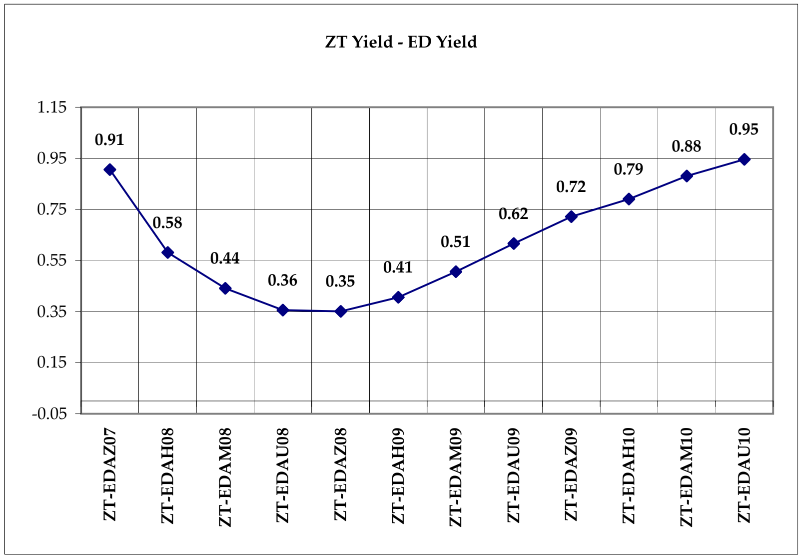
Eurodollar Color Codes for Individual Year Strips:

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

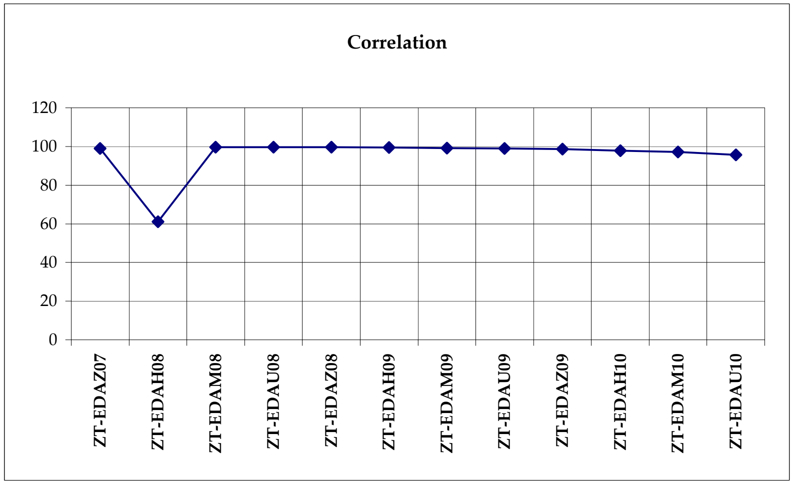
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	8.475	0.91	ZT-EDAZ07	98.947
EDAH08	8.150	0.58	ZT-EDAH08	61.116
EDAM08	8.010	0.44	ZT-EDAM08	99.678
EDAU08	7.925	0.36	ZT-EDAU08	99.603
EDAZ08	7.920	0.35	ZT-EDAZ08	99.634
EDAH09	7.975	0.41	ZT-EDAH09	99.437
EDAM09	8.075	0.51	ZT-EDAM09	99.129
EDAU09	8.185	0.62	ZT-EDAU09	99.037
EDAZ09	8.290	0.72	ZT-EDAZ09	98.602
EDAH10	8.360	0.79	ZT-EDAH10	97.809
EDAM10	8.450	0.88	ZT-EDAM10	97.080
EDAU10	8.515	0.95	ZT-EDAU10	95.595

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	0.131	1.91	1.78	ZT-EDAZ07
EDAH08	0.380	1.91	1.53	ZT-EDAH08
EDAM08	0.629	1.91	1.28	ZT-EDAM08
EDAU08	0.879	1.91	1.03	ZT-EDAU08
EDAZ08	1.128	1.91	0.78	ZT-EDAZ08
EDAH09	1.377	1.91	0.53	ZT-EDAH09
EDAM09	1.627	1.91	0.28	ZT-EDAM09
EDAU09	1.876	1.91	0.03	ZT-EDAU09
EDAZ09	2.125	1.91	(0.21)	ZT-EDAZ09
EDAH10	2.375	1.91	(0.46)	ZT-EDAH10
EDAM10	2.624	1.91	(0.71)	ZT-EDAM10
EDAU10	2.873	1.91	(0.96)	ZT-EDAU10

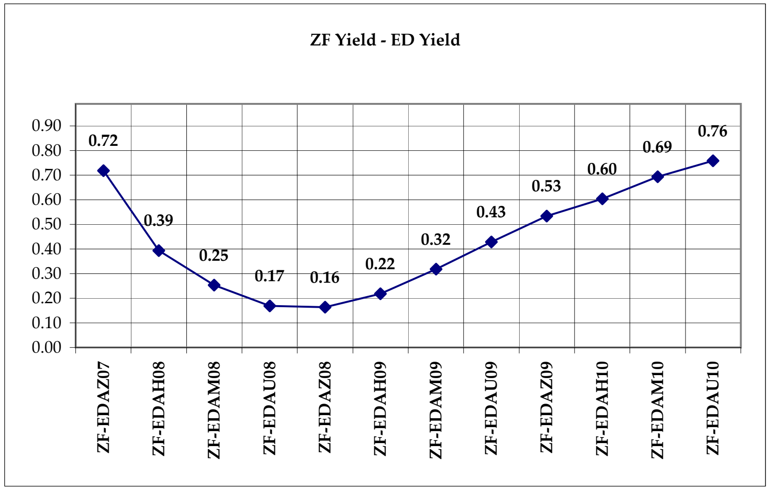
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

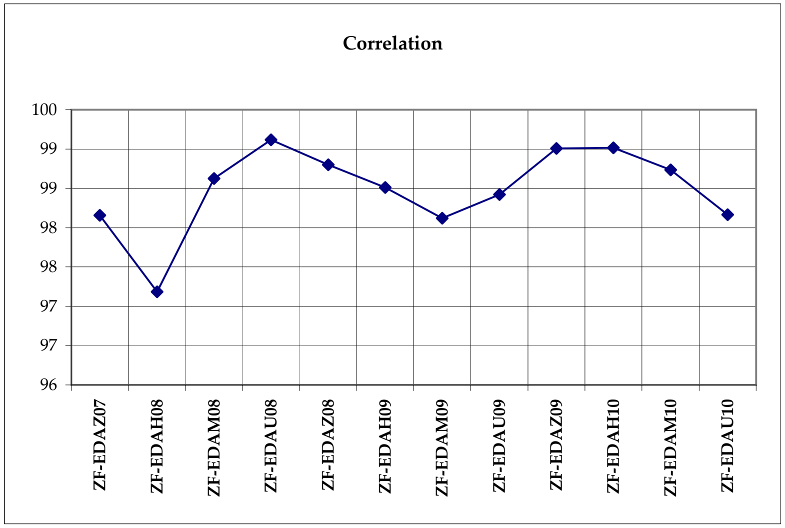
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	12.46	0.72	ZF-EDAZ07	98.158
EDAH08	12.13	0.39	ZF-EDAH08	97.182
EDAM08	11.99	0.25	ZF-EDAM08	98.626
EDAU08	11.91	0.17	ZF-EDAU08	99.118
EDAZ08	11.90	0.16	ZF-EDAZ08	98.802
EDAH09	11.96	0.22	ZF-EDAH09	98.511
EDAM09	12.06	0.32	ZF-EDAM09	98.119
EDAU09	12.17	0.43	ZF-EDAU09	98.421
EDAZ09	12.27	0.53	ZF-EDAZ09	99.009
EDAH10	12.34	0.60	ZF-EDAH10	99.017
EDAM10	12.43	0.69	ZF-EDAM10	98.734
EDAU10	12.50	0.76	ZF-EDAU10	98.166

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	0.131	3.87	3.74	ZF-EDAZ07
EDAH08	0.380	3.87	3.49	ZF-EDAH08
EDAM08	0.629	3.87	3.25	ZF-EDAM08
EDAU08	0.879	3.87	3.00	ZF-EDAU08
EDAZ08	1.128	3.87	2.75	ZF-EDAZ08
EDAH09	1.377	3.87	2.50	ZF-EDAH09
EDAM09	1.627	3.87	2.25	ZF-EDAM09
EDAU09	1.876	3.87	2.00	ZF-EDAU09
EDAZ09	2.125	3.87	1.75	ZF-EDAZ09
EDAH10	2.375	3.87	1.50	ZF-EDAH10
EDAM10	2.624	3.87	1.25	ZF-EDAM10
EDAU10	2.873	3.87	1.00	ZF-EDAU10

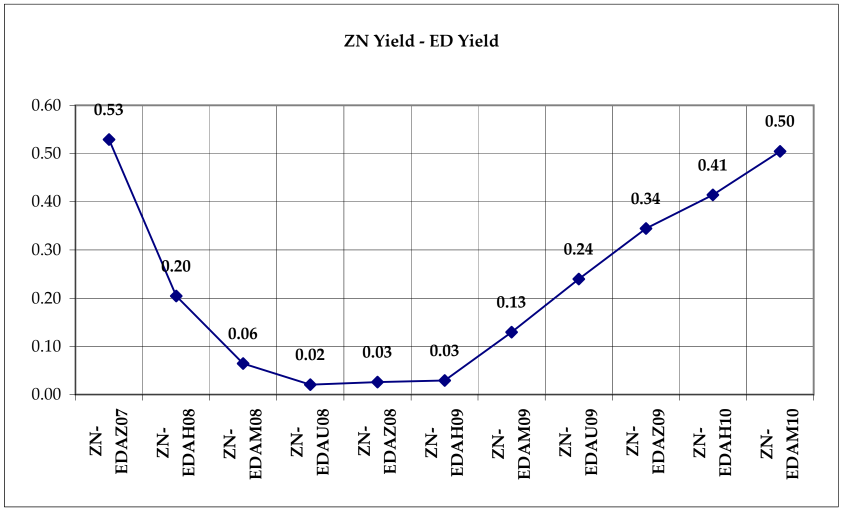
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

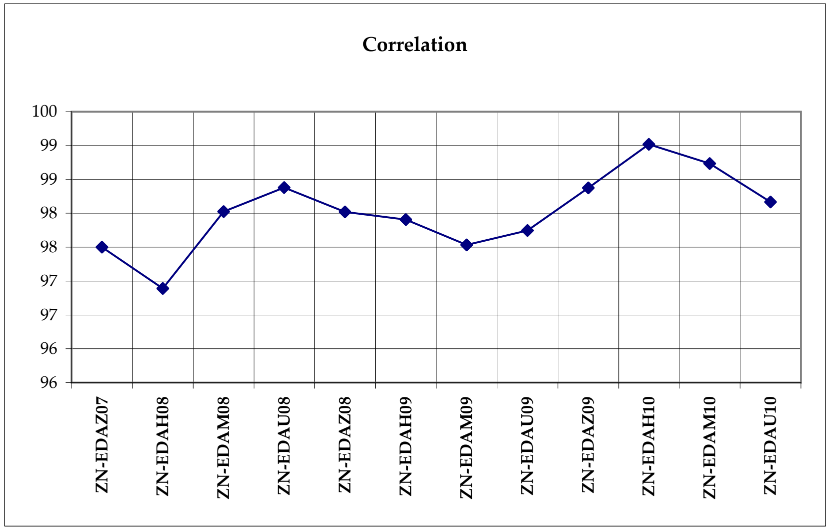
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	15.26	0.53	ZN-EDAZ07	97.50
EDAH08	14.93	0.20	ZN-EDAH08	96.89
EDAM08	14.79	0.06	ZN-EDAM08	98.02
EDAU08	14.71	0.02	ZN-EDAU08	98.38
EDAZ08	14.70	0.03	ZN-EDAZ08	98.02
EDAH09	14.76	0.03	ZN-EDAH09	97.91
EDAM09	14.86	0.13	ZN-EDAM09	97.53
EDAU09	14.97	0.24	ZN-EDAU09	97.75
EDAZ09	15.07	0.34	ZN-EDAZ09	98.37
EDAH10	15.14	0.41	ZN-EDAH10	99.02
EDAM10	15.23	0.50	ZN-EDAM10	98.73
EDAU10	15.30	0.57	ZN-EDAU10	98.17

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	0.131	5.80	5.67	ZN-EDAZ07
EDAH08	0.380	5.80	5.42	ZN-EDAH08
EDAM08	0.629	5.80	5.17	ZN-EDAM08
EDAU08	0.879	5.80	4.92	ZN-EDAU08
EDAZ08	1.128	5.80	4.67	ZN-EDAZ08
EDAH09	1.377	5.80	4.42	ZN-EDAH09
EDAM09	1.627	5.80	4.17	ZN-EDAM09
EDAU09	1.876	5.80	3.92	ZN-EDAU09
EDAZ09	2.125	5.80	3.67	ZN-EDAZ09
EDAH10	2.375	5.80	3.42	ZN-EDAH10
EDAM10	2.624	5.80	3.17	ZN-EDAM10
EDAU10	2.873	5.80	2.93	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	2y Spread Name	Correlation* (percent)
EDAZ07	4.36	0.91	2y-EDAZ07	-97.144
EDAH08	4.03	0.58	2y-EDAH08	-95.712
EDAM08	3.89	0.44	2y-EDAM08	-95.858
EDAU08	3.81	0.36	2y-EDAU08	-95.899
EDAZ08	3.80	0.35	2y-EDAZ08	-95.858
EDAH09	3.86	0.41	2y-EDAH09	-95.477
EDAM09	3.96	0.51	2y-EDAM09	-94.887
EDAU09	4.07	0.62	2y-EDAU09	-94.778
EDAZ09	4.17	0.72	2y-EDAZ09	-94.374
EDAH10	4.24	0.79	2y-EDAH10	-93.998
EDAM10	4.33	0.88	2y-EDAM10	-93.032
EDAU10	4.40	0.95	2y-EDAU10	-92.119

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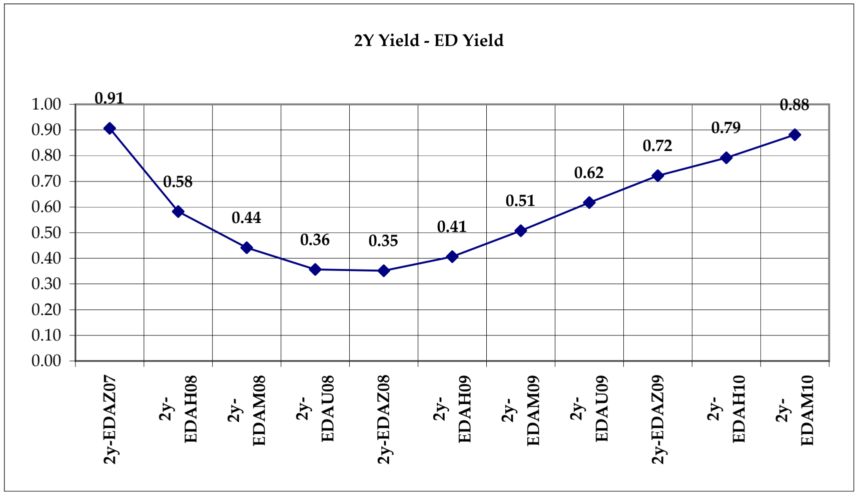
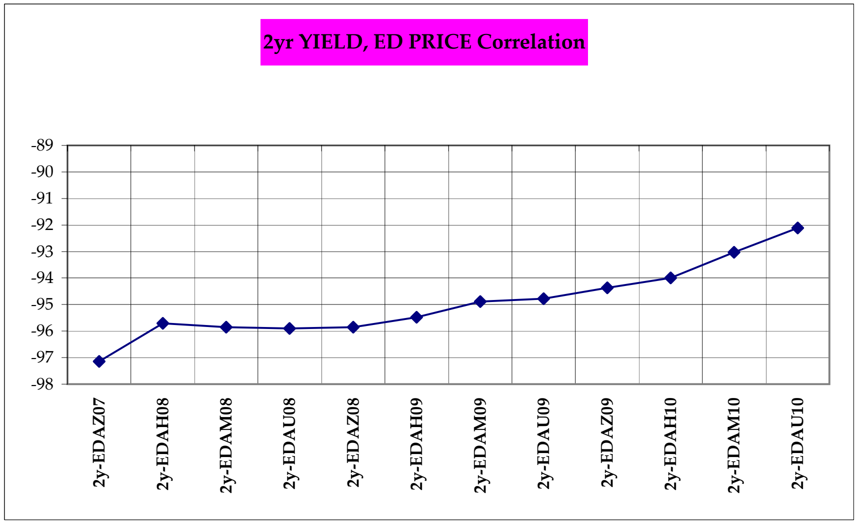
These are measuring YIELD correlations.



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAZ07	0.131	1.82	1.69	2y-EDAZ07
EDAH08	0.380	1.82	1.44	2y-EDAH08
EDAM08	0.629	1.82	1.19	2y-EDAM08
EDAU08	0.879	1.82	0.94	2y-EDAU08
EDAZ08	1.128	1.82	0.69	2y-EDAZ08
EDAH09	1.377	1.82	0.45	2y-EDAH09
EDAM09	1.627	1.82	0.20	2y-EDAM09
EDAU09	1.876	1.82	(0.05)	2y-EDAU09
EDAZ09	2.125	1.82	(0.30)	2y-EDAZ09
EDAH10	2.375	1.82	(0.55)	2y-EDAH10
EDAM10	2.624	1.82	(0.80)	2y-EDAM10
EDAU10	2.873	1.82	(1.05)	2y-EDAU10

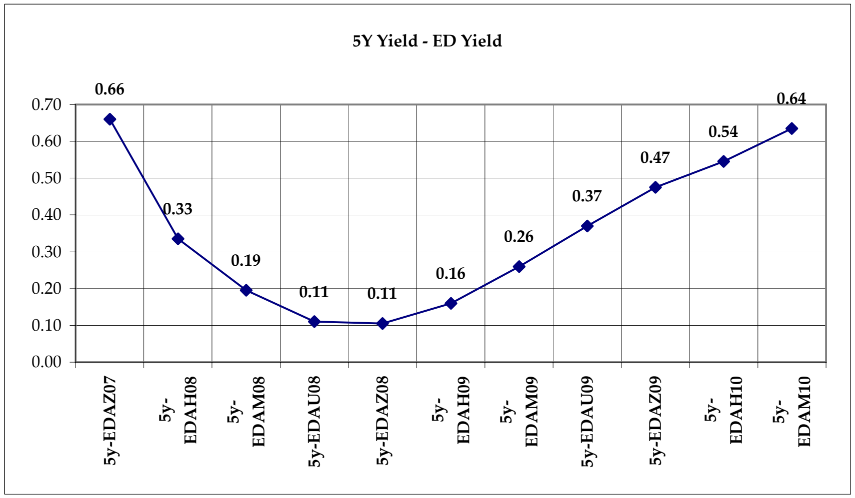
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

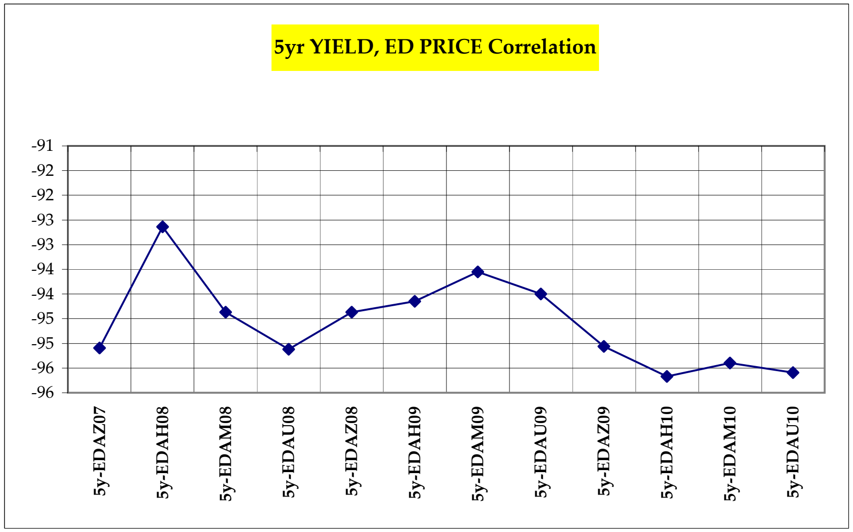
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	3.86	0.66	5y-EDAZ07	-95.094
EDAH08	3.53	0.33	5y-EDAH08	-92.636
EDAM08	3.39	0.19	5y-EDAM08	-94.365
EDAU08	3.31	0.11	5y-EDAU08	-95.117
EDAZ08	3.30	0.11	5y-EDAZ08	-94.365
EDAH09	3.36	0.16	5y-EDAH09	-94.148
EDAM09	3.46	0.26	5y-EDAM09	-93.553
EDAU09	3.57	0.37	5y-EDAU09	-94.002
EDAZ09	3.67	0.47	5y-EDAZ09	-95.063
EDAH10	3.74	0.54	5y-EDAH10	-95.672
EDAM10	3.83	0.64	5y-EDAM10	-95.398
EDAU10	3.90	0.70	5y-EDAU10	-95.593

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	0.131	4.50	4.37	5y-EDAZ07
EDAH08	0.380	4.50	4.12	5y-EDAH08
EDAM08	0.629	4.50	3.87	5y-EDAM08
EDAU08	0.879	4.50	3.62	5y-EDAU08
EDAZ08	1.128	4.50	3.37	5y-EDAZ08
EDAH09	1.377	4.50	3.12	5y-EDAH09
EDAM09	1.627	4.50	2.87	5y-EDAM09
EDAU09	1.876	4.50	2.62	5y-EDAU09
EDAZ09	2.125	4.50	2.37	5y-EDAZ09
EDAH10	2.375	4.50	2.12	5y-EDAH10
EDAM10	2.624	4.50	1.88	5y-EDAM10
EDAU10	2.873	4.50	1.63	5y-EDAU10

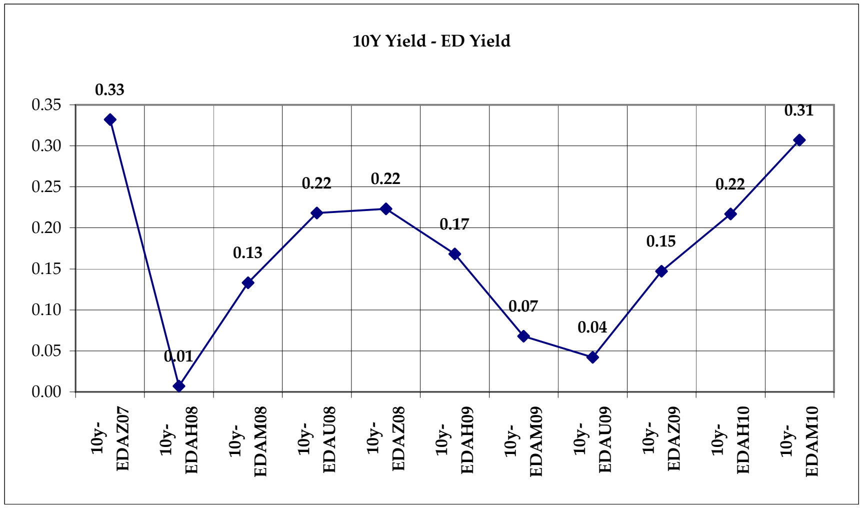
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

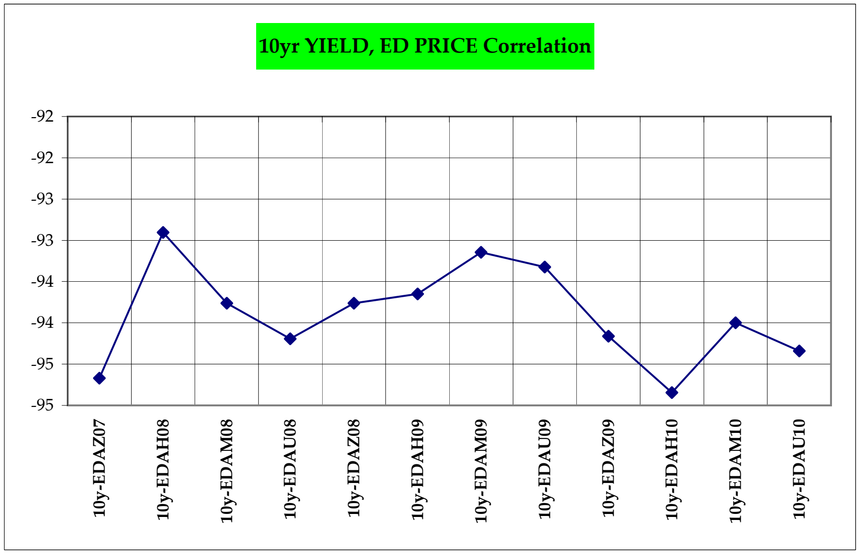
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ07	3.86	0.33	10y-EDAZ07	-94.672
EDAH08	3.53	0.01	10y-EDAH08	-92.905
EDAM08	3.39	0.13	10y-EDAM08	-93.762
EDAU08	3.31	0.22	10y-EDAU08	-94.191
EDAZ08	3.30	0.22	10y-EDAZ08	-93.762
EDAH09	3.36	0.17	10y-EDAH09	-93.651
EDAM09	3.46	0.07	10y-EDAM09	-93.145
EDAU09	3.57	0.04	10y-EDAU09	-93.323
EDAZ09	3.67	0.15	10y-EDAZ09	-94.160
EDAH10	3.74	0.22	10y-EDAH10	-94.844
EDAM10	3.83	0.31	10y-EDAM10	-94.000
EDAU10	3.90	0.37	10y-EDAU10	-94.340

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.



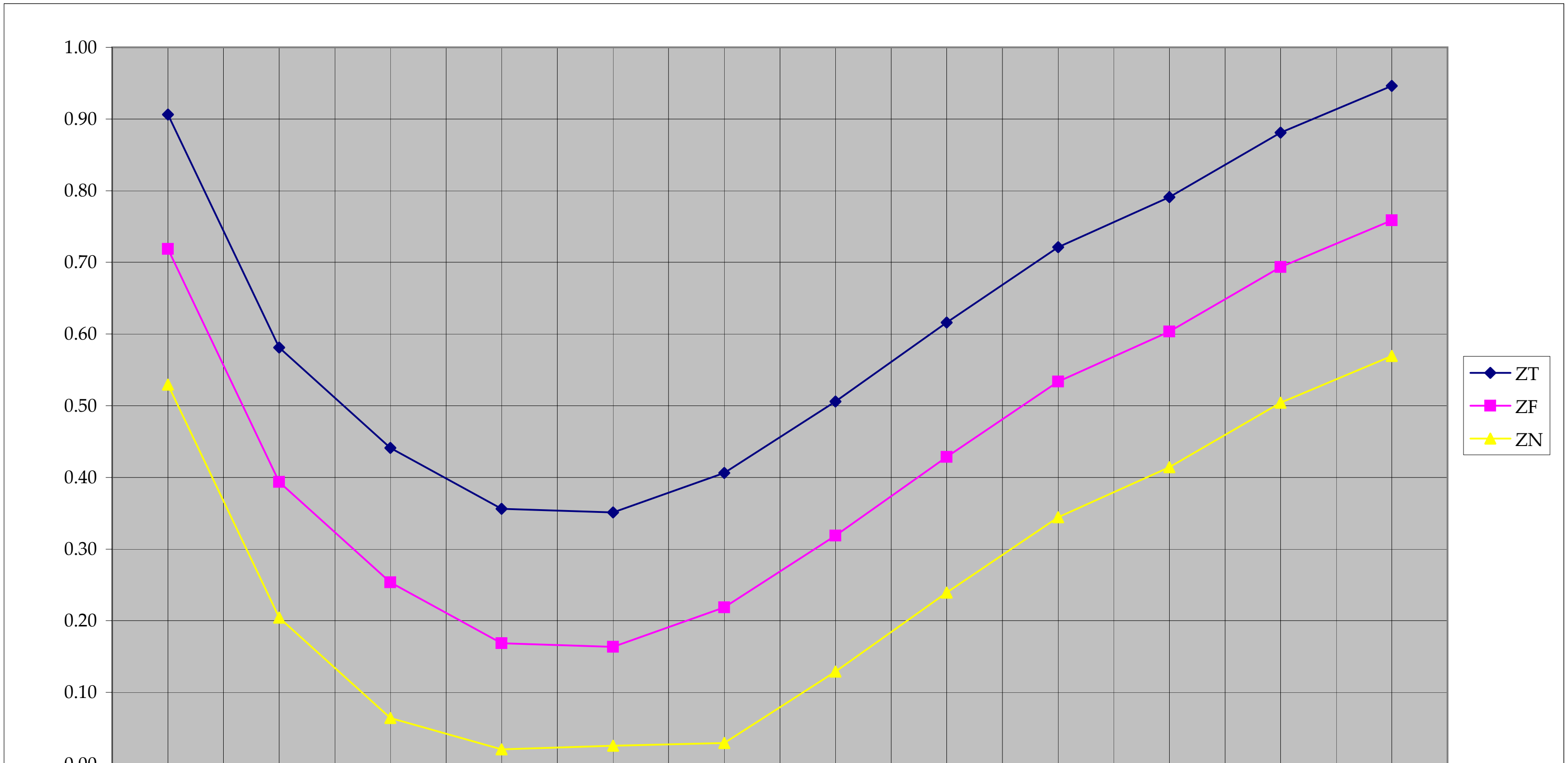
	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ07	0.131	7.73	7.60	10y-EDAZ07
EDAH08	0.380	7.73	7.35	10y-EDAH08
EDAM08	0.629	7.73	7.10	10y-EDAM08
EDAU08	0.879	7.73	6.85	10y-EDAU08
EDAZ08	1.128	7.73	6.60	10y-EDAZ08
EDAH09	1.377	7.73	6.35	10y-EDAH09
EDAM09	1.627	7.73	6.10	10y-EDAM09
EDAU09	1.876	7.73	5.85	10y-EDAU09
EDAZ09	2.125	7.73	5.60	10y-EDAZ09
EDAH10	2.375	7.73	5.35	10y-EDAH10
EDAM10	2.624	7.73	5.10	10y-EDAM10
EDAU10	2.873	7.73	4.85	10y-EDAU10

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



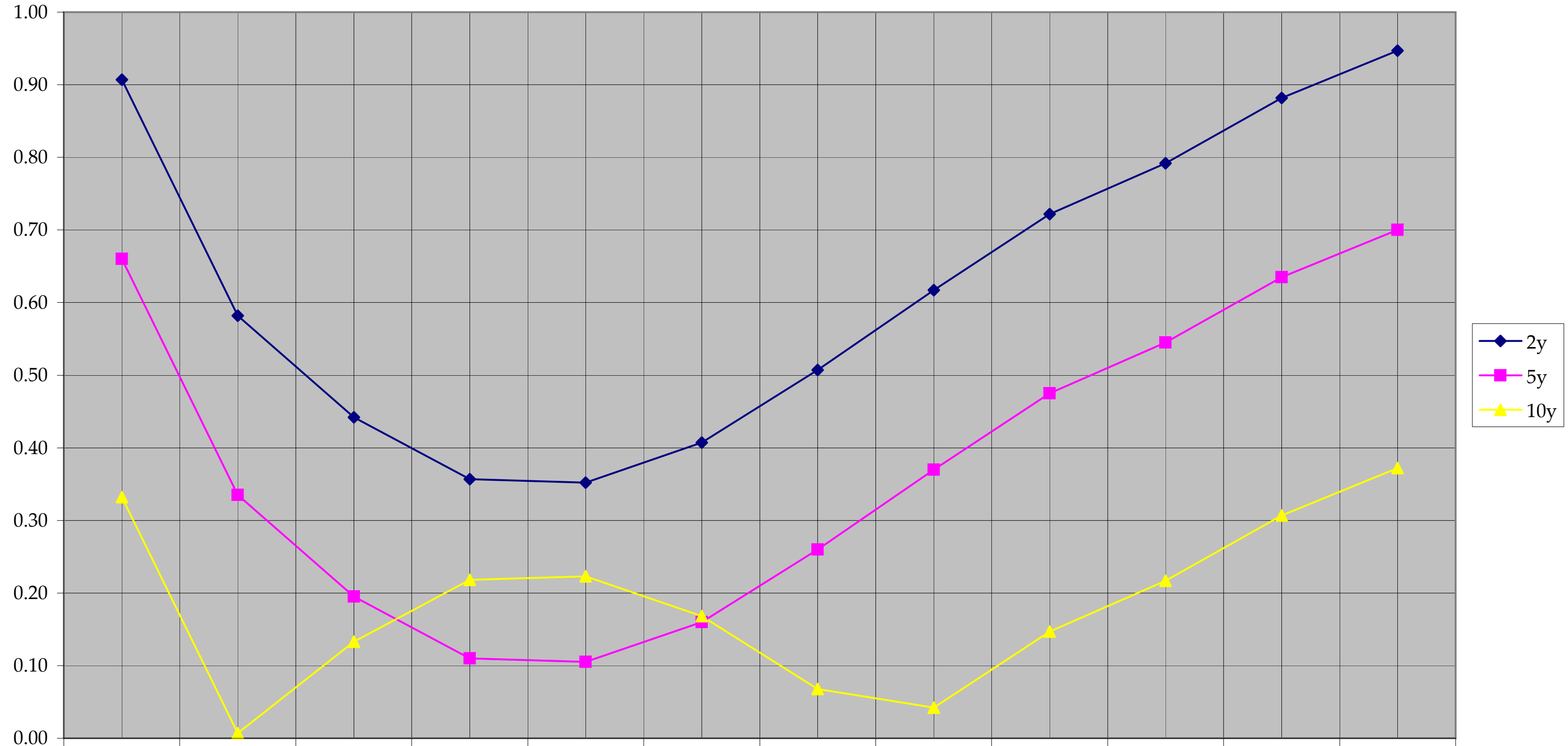
Dirty TED Curve

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.



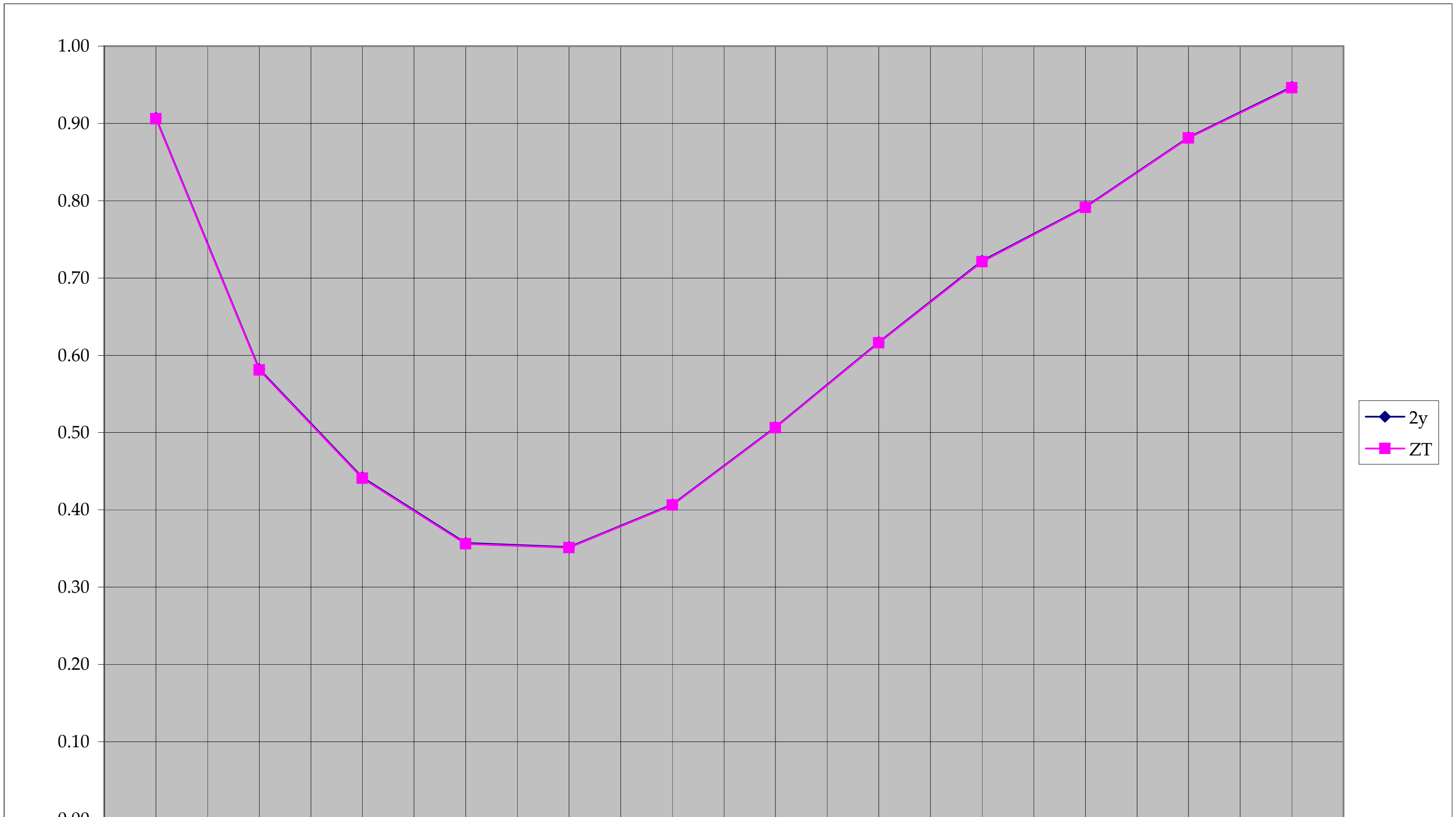
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
ZT	0.91	0.58	0.44	0.36	0.35	0.41	0.51	0.62	0.72	0.79	0.88	0.95
ZF	0.72	0.39	0.25	0.17	0.16	0.22	0.32	0.43	0.53	0.60	0.69	0.76
ZN	0.53	0.20	0.06	0.02	0.03	0.03	0.13	0.24	0.34	0.41	0.50	0.57

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.



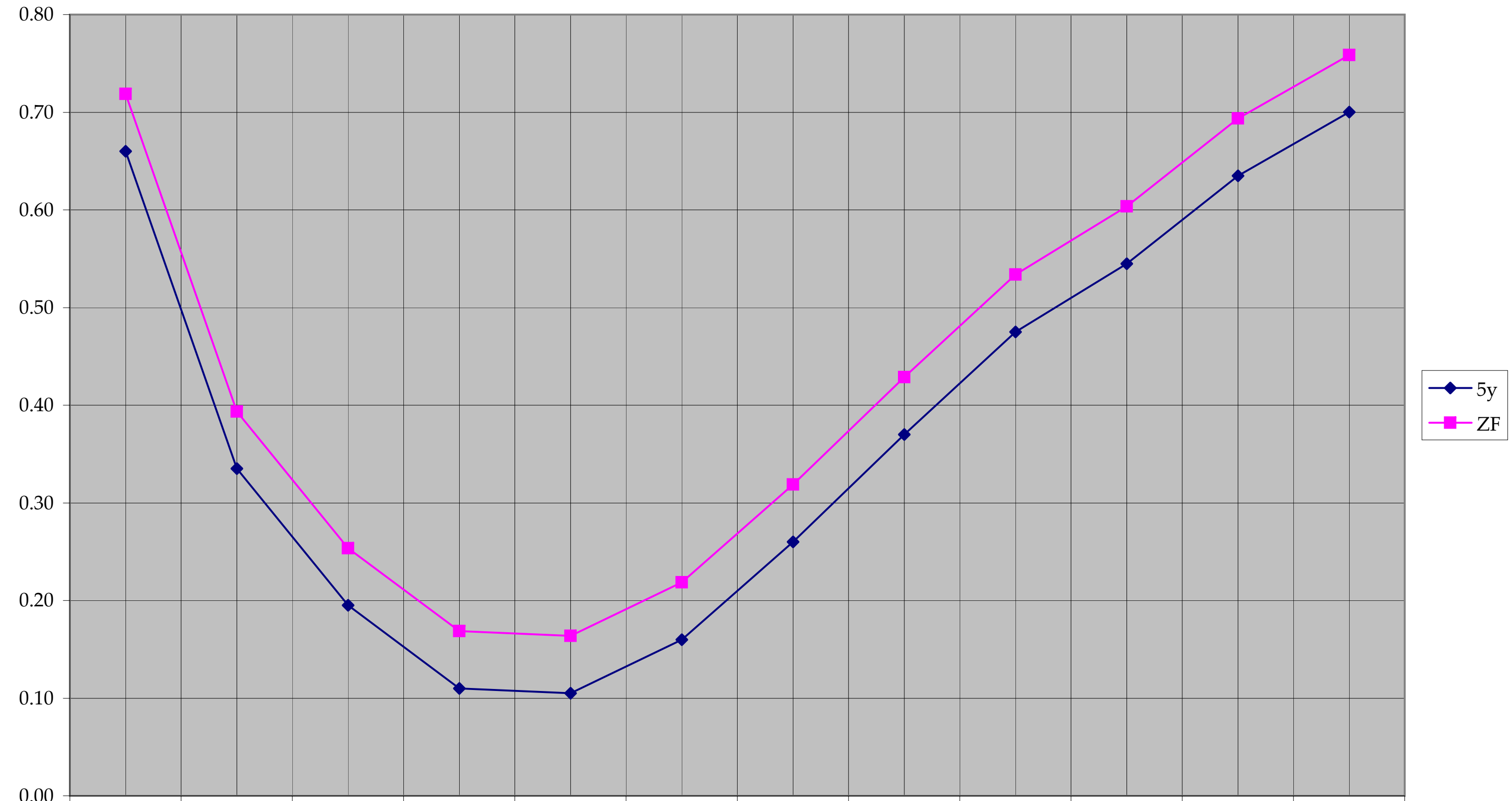
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.91	0.58	0.44	0.36	0.35	0.41	0.51	0.62	0.72	0.79	0.88	0.95
5y	0.66	0.33	0.19	0.11	0.11	0.16	0.26	0.37	0.47	0.54	0.64	0.70
10y	0.33	0.01	0.13	0.22	0.22	0.17	0.07	0.04	0.15	0.22	0.31	0.37

2y Basis TED Curve



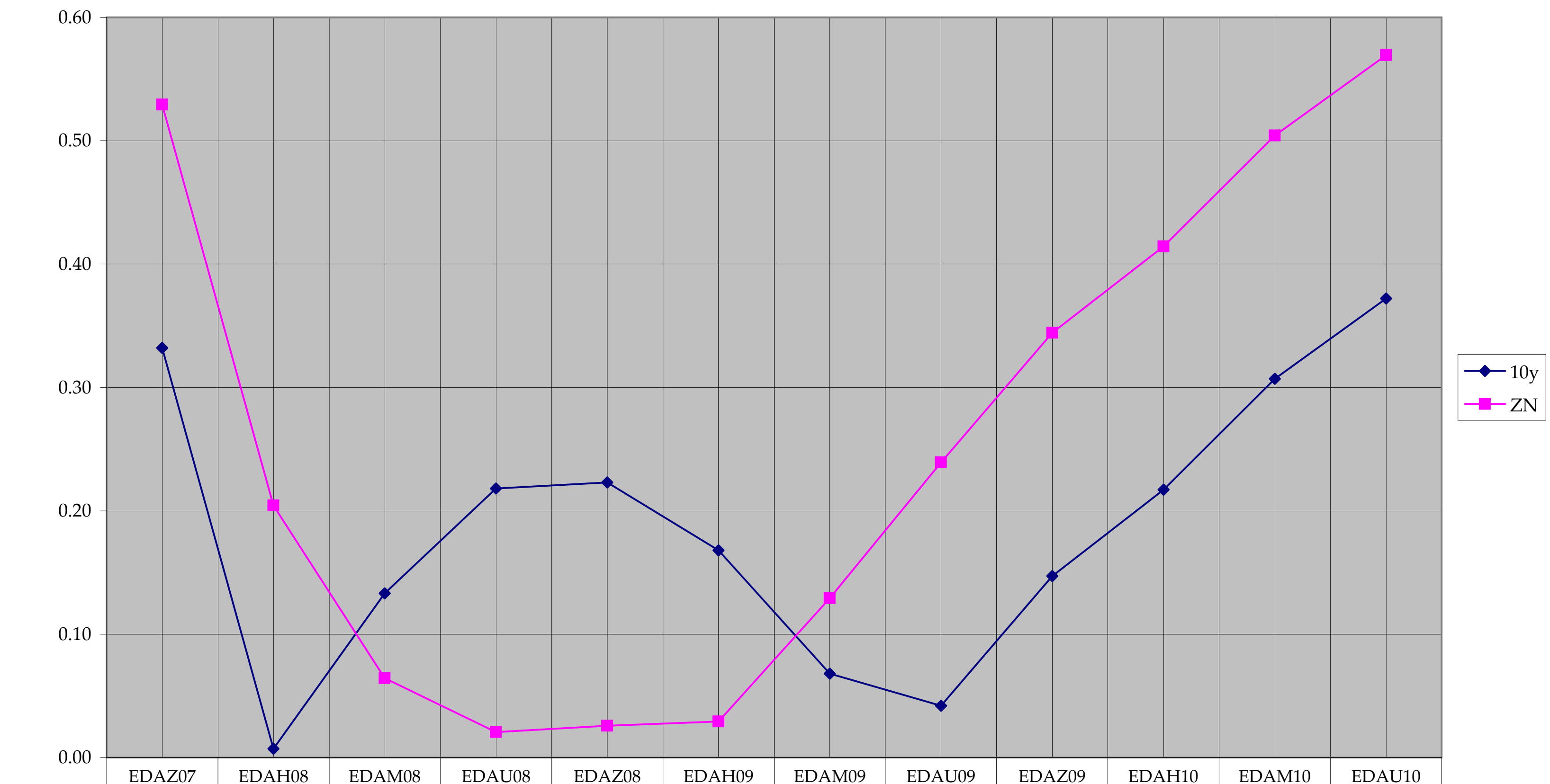
	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
2y	0.91	0.58	0.44	0.36	0.35	0.41	0.51	0.62	0.72	0.79	0.88	0.95
ZT	0.91	0.58	0.44	0.36	0.35	0.41	0.51	0.62	0.72	0.79	0.88	0.95

5y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
5y	0.66	0.33	0.19	0.11	0.11	0.16	0.26	0.37	0.47	0.54	0.64	0.70
ZF	0.72	0.39	0.25	0.17	0.16	0.22	0.32	0.43	0.53	0.60	0.69	0.76

10y Basis TED Curve



	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10
10y	0.33	0.01	0.13	0.22	0.22	0.17	0.07	0.04	0.15	0.22	0.31	0.37
ZN	0.53	0.20	0.06	0.02	0.03	0.03	0.13	0.24	0.34	0.41	0.50	0.57

Packs

	last Yield	Net Last Yield	Last Price
Q.ED.White	4.499	-3.000	9561.125
Q.ED.Red	4.395	-1.875	9571.125
Q.ED.Green	4.774	-1.000	9534.625
Q.ED.Blue		-0.125	9506.125
Q.ED.Gold	5.301	0.500	9483.875