The Morning Email: TERM TEDS & Dirty TEDS

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Want something added? Let me know: jgoulding@ghco.com

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	107.7188	107.230	1.428	1.88
ZF	114.3813	114.122	2.456	4.18
ZN	115.8438	115.270	3.539	6.47
2y	101.069	101.0220	1.430	1.82
5y	102.891	102.2850	2.496	4.54
10y	103.188	103.0600	3.607	8.03

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.430	2.570	49	0.134	DEC	
EDAH09	97.620	2.380	140	0.383	MAR	White Pack
EDAM09	97.575	2.425	231	0.632	JUN	
EDAU09	97.525	2.475	322	0.882	SEP	
EDAZ09	97.425	2.575	413	1.131	DEC	
EDAH10	97.380	2.620	504	1.380	MAR	Red Pack
EDAM10	97.170	2.830	595	1.629	JUN	
EDAU10	96.850	3.150	686	1.879	SEP	
EDAZ10	96.385	3.615	777	2.128	DEC	
EDAH11	96.100	3.900	868	2.377	MAR	Green Pack
EDAM11	95.850	4.150	959	2.627	JUN	
EDAU11	95.680	4.320	1057	2.895	SEP	
EDAZ11	95.565	4.435	1148	3.145	DEC	
EDAH12	95.500	4.500	1239	3.394	MAR	Blue Pack
EDAM12	95.475	4.525	1330	3.643	JUN	
EDAU12	95.365	4.635	1421	3.892	SEP	
EDAZ12	#VALUE!	#VALUE!	1512	4.142	DEC	
EDAH13	95.270	4.730	1603	4.391	MAR	Gold Pack
EDAM13	95.235	4.765	1694	4.640	JUN	
EDZU13	95.070	4.930	1876	5.139	DEC	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	2.512	6.875	9753.750
Red Pack	2.853	6.375	9720.625
Green Pack	4.093	8.625	9600.375
Blue Pack	4.639	4.625	9547.625
Gold Pack		3.875	9523.375

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
IF : '#VALUE!, then, no quote being provided by exchange.
If color of cell is orange, it's simply a 'note' for me.

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

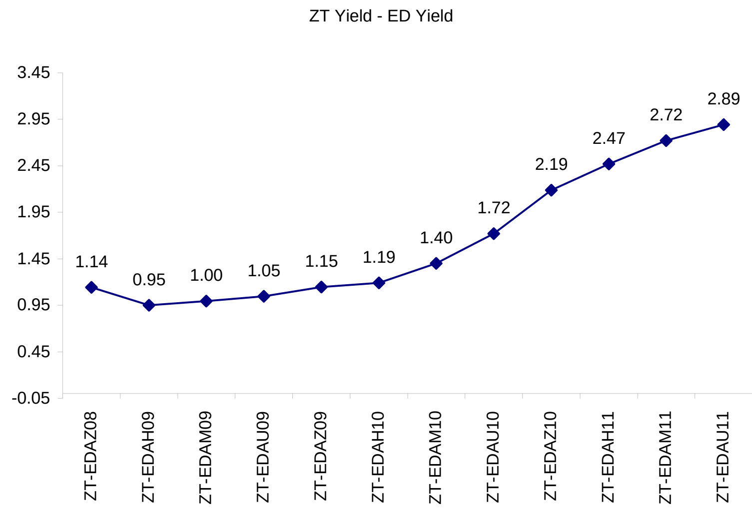
Correlations (Important)

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. So, it's much easier
to formulate the correlations based on yield than price.

Dirty TED: ZT vs Eurodollar Contracts

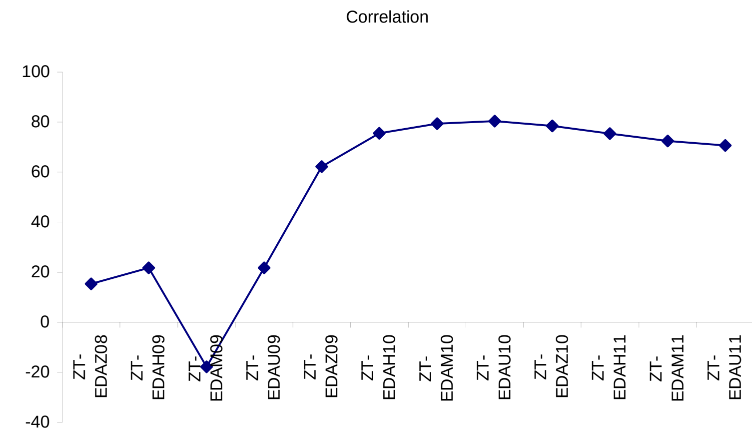
	ZT			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ08	10.289	1.14	ZT-EDAZ08	15.374
EDAH09	10.099	0.95	ZT-EDAH09	21.762
EDAM09	10.144	1.00	ZT-EDAM09	-17.858
EDAU09	10.194	1.05	ZT-EDAU09	21.762
EDAZ09	10.294	1.15	ZT-EDAZ09	62.264
EDAH10	10.339	1.19	ZT-EDAH10	75.577
EDAM10	10.549	1.40	ZT-EDAM10	79.435
EDAU10	10.869	1.72	ZT-EDAU10	80.436
EDAZ10	11.334	2.19	ZT-EDAZ10	78.454
EDAH11	11.619	2.47	ZT-EDAH11	75.358
EDAM11	11.869	2.72	ZT-EDAM11	72.518
EDAU11	12.039	2.89	ZT-EDAU11	70.693

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year	**ZT Duration**	**Spread Duration**	
EDAZ08	0.134	1.88	1.75	ZT-EDAZ08
EDAH09	0.383	1.88	1.50	ZT-EDAH09
EDAM09	0.632	1.88	1.25	ZT-EDAM09
EDAU09	0.882	1.88	1.00	ZT-EDAU09
EDAZ09	1.131	1.88	0.75	ZT-EDAZ09
EDAH10	1.380	1.88	0.50	ZT-EDAH10
EDAM10	1.629	1.88	0.25	ZT-EDAM10
EDAU10	1.879	1.88	0.00	ZT-EDAU10
EDAZ10	2.128	1.88	(0.25)	ZT-EDAZ10
EDAH11	2.377	1.88	(0.50)	ZT-EDAH11
EDAM11	2.627	1.88	(0.75)	ZT-EDAM11
EDAU11	2.895	1.88	(1.01)	ZT-EDAU11

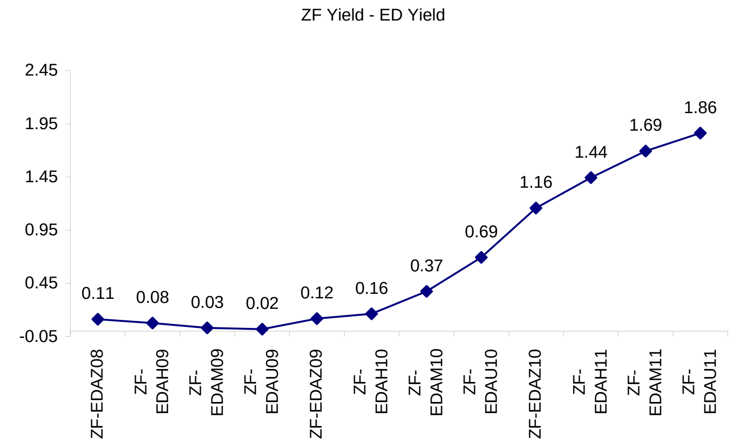
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

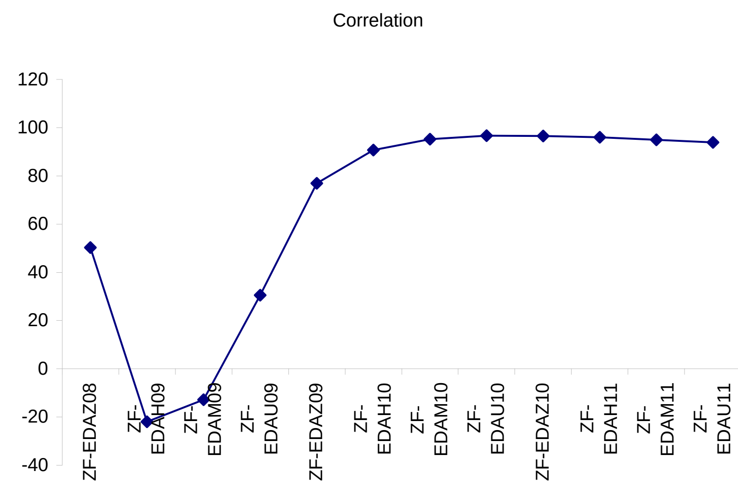
	ZF			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ08	16.951	0.11	ZF-EDAZ08	50.270
EDAH09	16.761	0.08	ZF-EDAH09	-21.996
EDAM09	16.806	0.03	ZF-EDAM09	-12.809
EDAU09	16.856	0.02	ZF-EDAU09	30.546
EDAZ09	16.956	0.12	ZF-EDAZ09	76.957
EDAH10	17.001	0.16	ZF-EDAH10	90.662
EDAM10	17.211	0.37	ZF-EDAM10	95.223
EDAU10	17.531	0.69	ZF-EDAU10	96.628
EDAZ10	17.996	1.16	ZF-EDAZ10	96.534
EDAH11	18.281	1.44	ZF-EDAH11	96.020
EDAM11	18.531	1.69	ZF-EDAM11	95.011
EDAU11	18.701	1.86	ZF-EDAU11	93.952

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year	**ZF Duration**	**Spread Duration**	
EDAZ08	0.134	4.18	4.05	ZF-EDAZ08
EDAH09	0.383	4.18	3.80	ZF-EDAH09
EDAM09	0.632	4.18	3.55	ZF-EDAM09
EDAU09	0.882	4.18	3.30	ZF-EDAU09
EDAZ09	1.131	4.18	3.05	ZF-EDAZ09
EDAH10	1.380	4.18	2.80	ZF-EDAH10
EDAM10	1.629	4.18	2.55	ZF-EDAM10
EDAU10	1.879	4.18	2.30	ZF-EDAU10
EDAZ10	2.128	4.18	2.05	ZF-EDAZ10
EDAH11	2.377	4.18	1.80	ZF-EDAH11
EDAM11	2.627	4.18	1.55	ZF-EDAM11
EDAU11	2.895	4.18	1.28	ZF-EDAU11

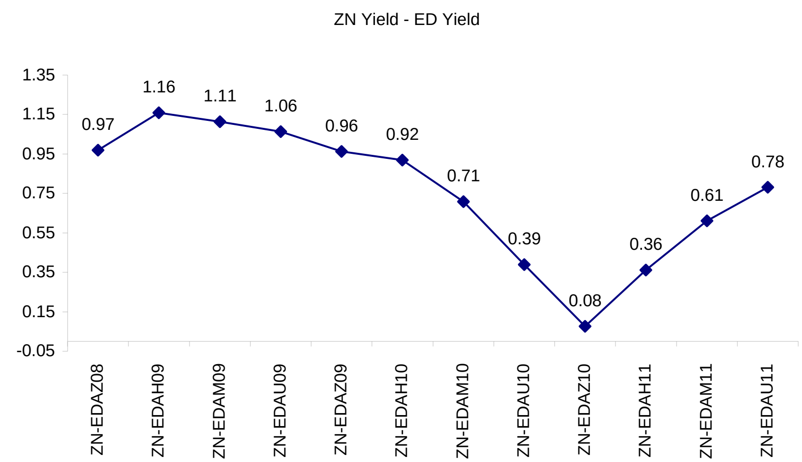
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

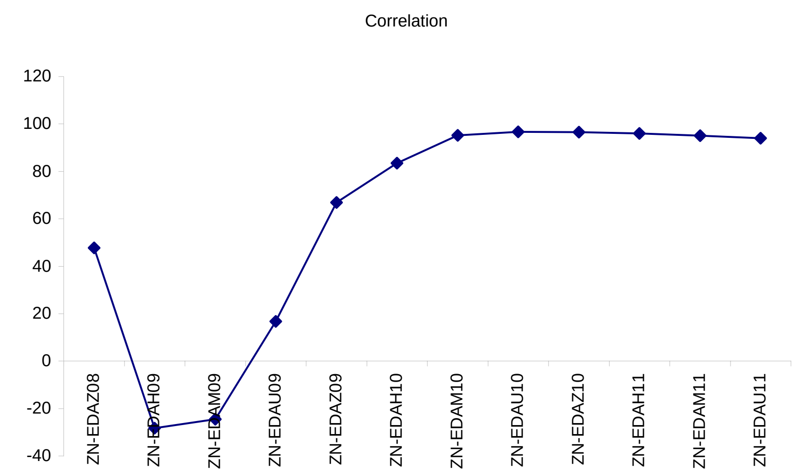
	ZN			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ08	18.414	0.97	ZN-EDAZ08	47.815
EDAH09	18.224	1.16	ZN-EDAH09	-28.223
EDAM09	18.269	1.11	ZN-EDAM09	-24.442
EDAU09	18.319	1.06	ZN-EDAU09	16.772
EDAZ09	18.419	0.96	ZN-EDAZ09	66.879
EDAH10	18.464	0.92	ZN-EDAH10	83.417
EDAM10	18.674	0.71	ZN-EDAM10	95.223
EDAU10	18.994	0.39	ZN-EDAU10	96.628
EDAZ10	19.459	0.08	ZN-EDAZ10	96.534
EDAH11	19.744	0.36	ZN-EDAH11	96.020
EDAM11	19.994	0.61	ZN-EDAM11	95.011
EDAU11	20.164	0.78	ZN-EDAU11	93.952

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year	**ZN Duration**	**Spread Duration**	
EDAZ08	0.134	6.47	6.34	ZN-EDAZ08
EDAH09	0.383	6.47	6.09	ZN-EDAH09
EDAM09	0.632	6.47	5.84	ZN-EDAM09
EDAU09	0.882	6.47	5.59	ZN-EDAU09
EDAZ09	1.131	6.47	5.34	ZN-EDAZ09
EDAH10	1.380	6.47	5.09	ZN-EDAH10
EDAM10	1.629	6.47	4.84	ZN-EDAM10
EDAU10	1.879	6.47	4.59	ZN-EDAU10
EDAZ10	2.128	6.47	4.34	ZN-EDAZ10
EDAH11	2.377	6.47	4.09	ZN-EDAH11
EDAM11	2.627	6.47	3.84	ZN-EDAM11
EDAU11	2.895	6.47	3.57	ZN-EDAU11

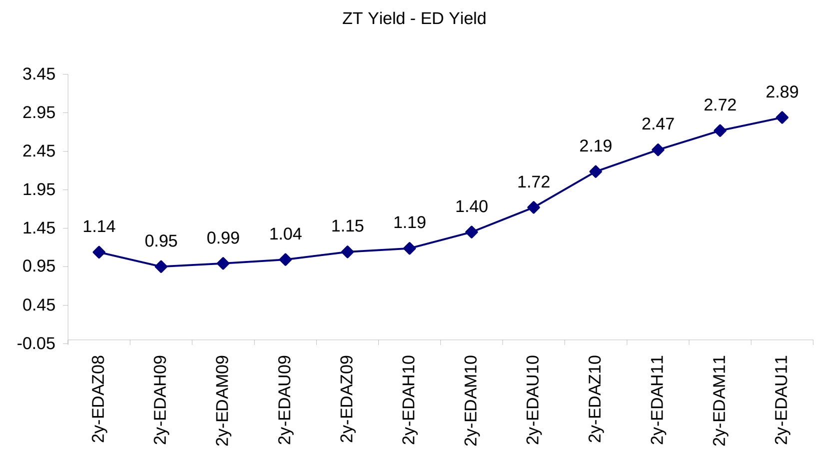
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

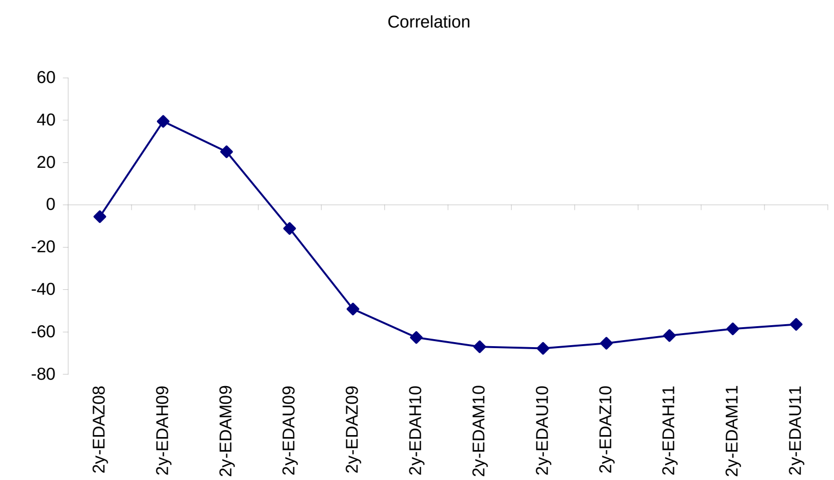
	2y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAZ08	3.639	1.14	2y-EDAZ08	-5.494
EDAH09	3.449	0.95	2y-EDAH09	39.470
EDAM09	3.494	0.99	2y-EDAM09	25.139
EDAU09	3.544	1.04	2y-EDAU09	-11.114
EDAZ09	3.644	1.15	2y-EDAZ09	-49.197
EDAH10	3.689	1.19	2y-EDAH10	-62.570
EDAM10	3.899	1.40	2y-EDAM10	-67.015
EDAU10	4.219	1.72	2y-EDAU10	-67.775
EDAZ10	4.684	2.19	2y-EDAZ10	-65.354
EDAH11	4.969	2.47	2y-EDAH11	-61.799
EDAM11	5.219	2.72	2y-EDAM11	-58.522
EDAU11	5.389	2.89	2y-EDAU11	-56.497

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days.



	ED Duration as Fraction of year	**2Y Duration**	**Spread Duration**	
EDAZ08	0.134	1.82	1.68	2y-EDAZ08
EDAH09	0.383	1.82	1.43	2y-EDAH09
EDAM09	0.632	1.82	1.18	2y-EDAM09
EDAU09	0.882	1.82	0.93	2y-EDAU09
EDAZ09	1.131	1.82	0.68	2y-EDAZ09
EDAH10	1.380	1.82	0.43	2y-EDAH10
EDAM10	1.629	1.82	0.19	2y-EDAM10
EDAU10	1.879	1.82	(0.06)	2y-EDAU10
EDAZ10	2.128	1.82	(0.31)	2y-EDAZ10
EDAH11	2.377	1.82	(0.56)	2y-EDAH11
EDAM11	2.627	1.82	(0.81)	2y-EDAM11
EDAU11	2.895	1.82	(1.08)	2y-EDAU11

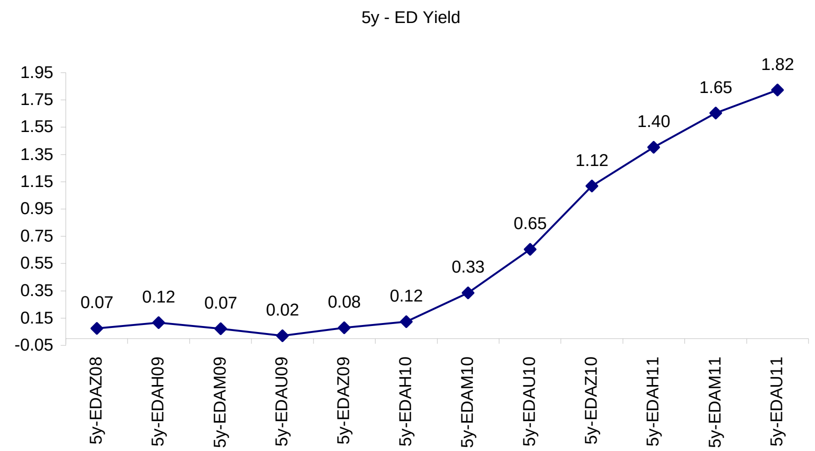
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

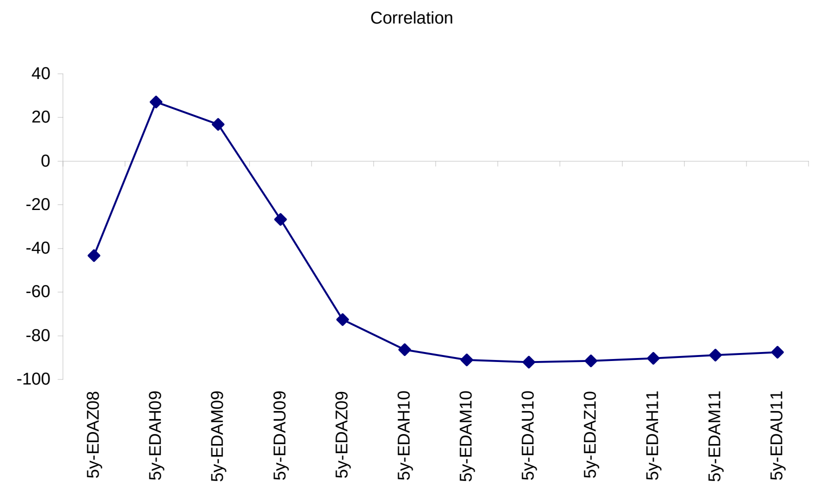
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	5.461	0.07	5y-EDAZ08	-43.287
EDAH09	5.271	0.12	5y-EDAH09	27.098
EDAM09	5.316	0.07	5y-EDAM09	16.853
EDAU09	5.366	0.02	5y-EDAU09	-26.727
EDAZ09	5.466	0.08	5y-EDAZ09	-72.651
EDAH10	5.511	0.12	5y-EDAH10	-86.419
EDAM10	5.721	0.33	5y-EDAM10	-90.992
EDAU10	6.041	0.65	5y-EDAU10	-92.031
EDAZ10	6.506	1.12	5y-EDAZ10	-91.456
EDAH11	6.791	1.40	5y-EDAH11	-90.353
EDAM11	7.041	1.65	5y-EDAM11	-88.815
EDAU11	7.211	1.82	5y-EDAU11	-87.492

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.134	4.54	4.41	5y-EDAZ08
EDAH09	0.383	4.54	4.16	5y-EDAH09
EDAM09	0.632	4.54	3.91	5y-EDAM09
EDAU09	0.882	4.54	3.66	5y-EDAU09
EDAZ09	1.131	4.54	3.41	5y-EDAZ09
EDAH10	1.380	4.54	3.16	5y-EDAH10
EDAM10	1.629	4.54	2.91	5y-EDAM10
EDAU10	1.879	4.54	2.66	5y-EDAU10
EDAZ10	2.128	4.54	2.41	5y-EDAZ10
EDAH11	2.377	4.54	2.16	5y-EDAH11
EDAM11	2.627	4.54	1.91	5y-EDAM11
EDAU11	2.895	4.54	1.64	5y-EDAU11

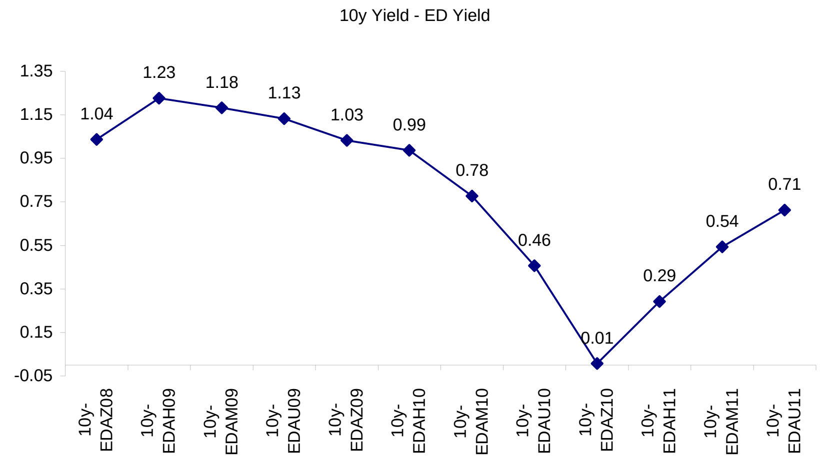
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

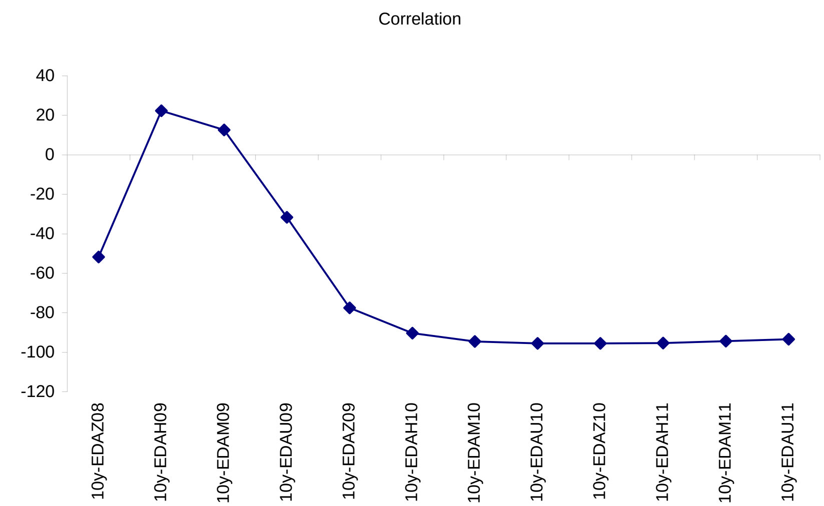
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	5.461	1.04	10y-EDAZ08	-51.714
EDAH09	5.271	1.23	10y-EDAH09	22.290
EDAM09	5.316	1.18	10y-EDAM09	12.551
EDAU09	5.366	1.13	10y-EDAU09	-31.689
EDAZ09	5.466	1.03	10y-EDAZ09	-77.461
EDAH10	5.511	0.99	10y-EDAH10	-90.329
EDAM10	5.721	0.78	10y-EDAM10	-94.502
EDAU10	6.041	0.46	10y-EDAU10	-95.510
EDAZ10	6.506	0.01	10y-EDAZ10	-95.602
EDAH11	6.791	0.29	10y-EDAH11	-95.344
EDAM11	7.041	0.54	10y-EDAM11	-94.417
EDAU11	7.211	0.71	10y-EDAU11	-93.456

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days



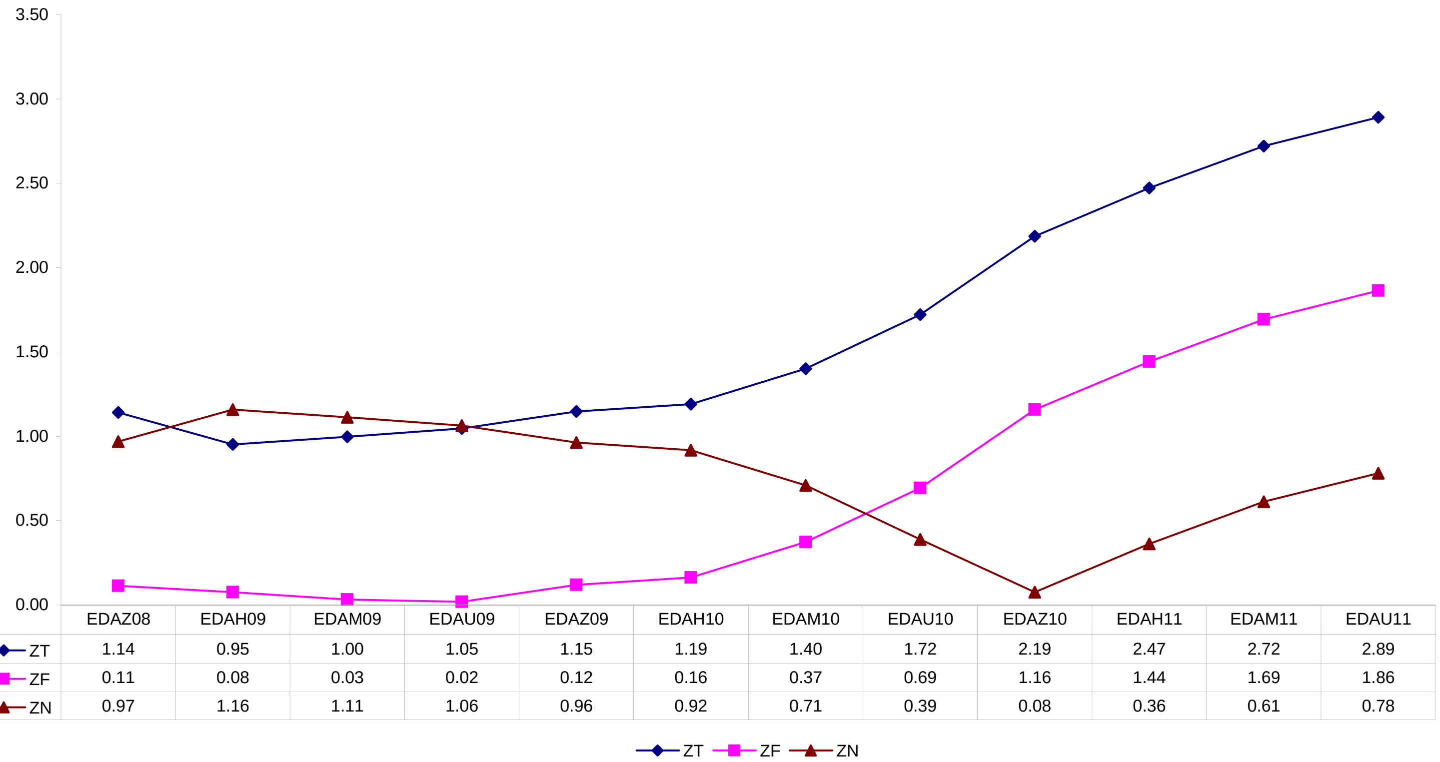
	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.134	8.03	7.89	10y-EDAZ08
EDAH09	0.383	8.03	7.64	10y-EDAH09
EDAM09	0.632	8.03	7.39	10y-EDAM09
EDAU09	0.882	8.03	7.14	10y-EDAU09
EDAZ09	1.131	8.03	6.89	10y-EDAZ09
EDAH10	1.380	8.03	6.65	10y-EDAH10
EDAM10	1.629	8.03	6.40	10y-EDAM10
EDAU10	1.879	8.03	6.15	10y-EDAU10
EDAZ10	2.128	8.03	5.90	10y-EDAZ10
EDAH11	2.377	8.03	5.65	10y-EDAH11
EDAM11	2.627	8.03	5.40	10y-EDAM11
EDAU11	2.895	8.03	5.13	10y-EDAU11

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



Dirty TED Curve

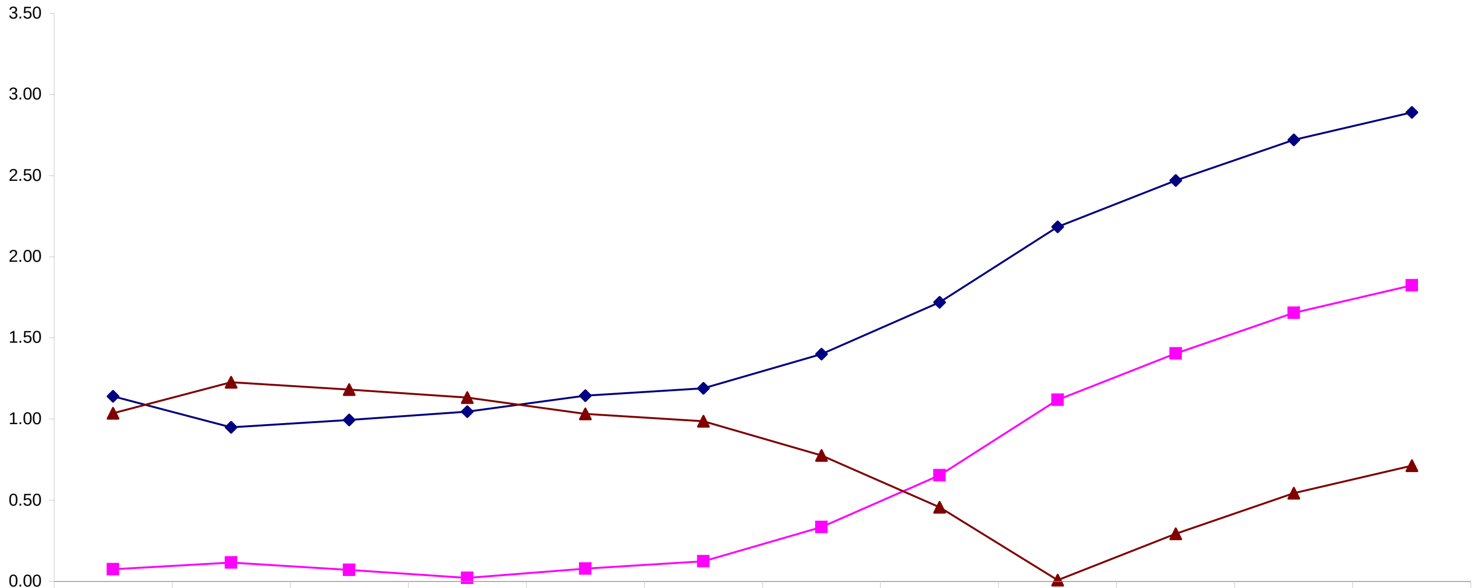
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11	EDAU11
ZT	1.14	0.95	1.00	1.05	1.15	1.19	1.40	1.72	2.19	2.47	2.72	2.89
ZF	0.11	0.08	0.03	0.02	0.12	0.16	0.37	0.69	1.16	1.44	1.69	1.86
ZN	0.97	1.16	1.11	1.06	0.96	0.92	0.71	0.39	0.08	0.36	0.61	0.78

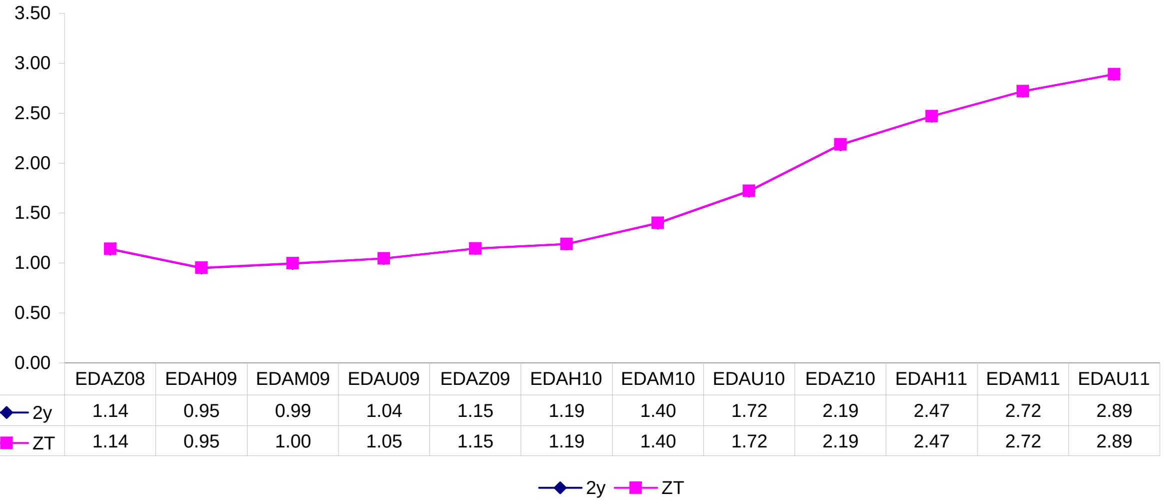
TED Curve

Chart values show the differences between ED contract and Treasury Cash contract. 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.



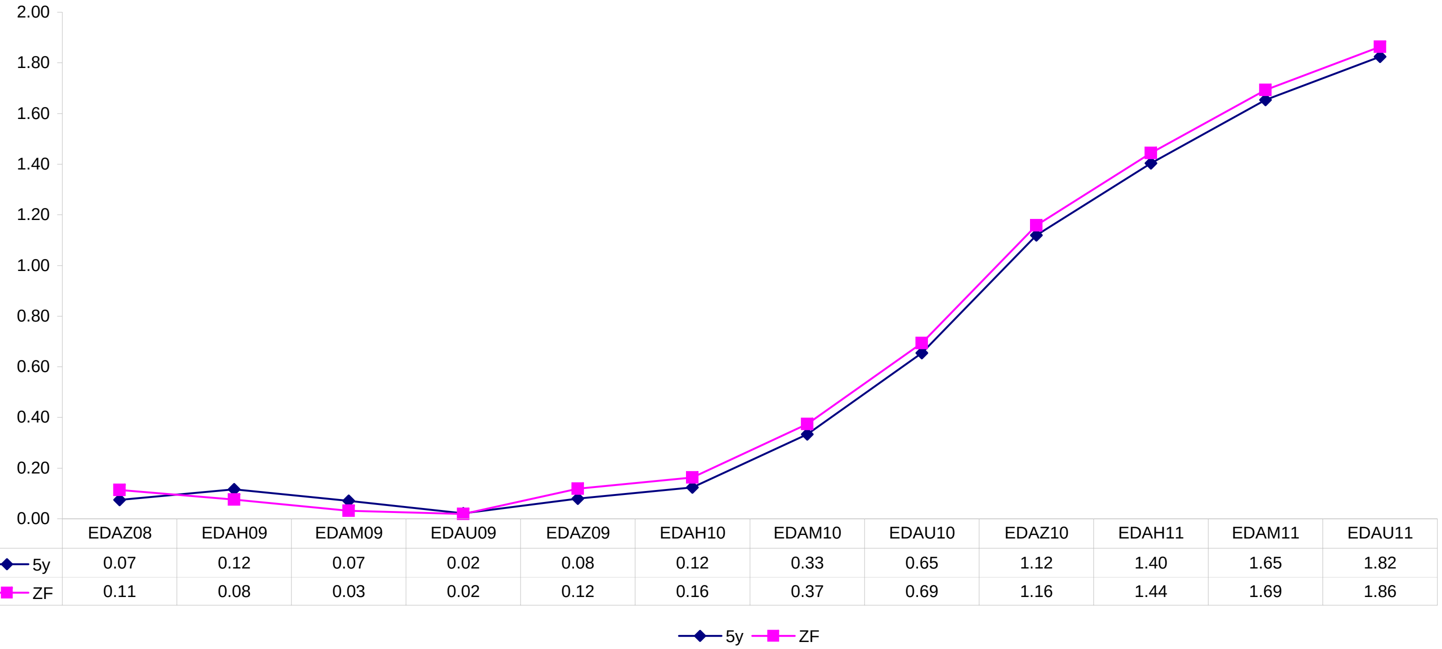
	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11	EDAU11
2y	1.14	0.95	0.99	1.04	1.15	1.19	1.40	1.72	2.19	2.47	2.72	2.89
5y	0.07	0.12	0.07	0.02	0.08	0.12	0.33	0.65	1.12	1.40	1.65	1.82
10y	1.04	1.23	1.18	1.13	1.03	0.99	0.78	0.46	0.01	0.29	0.54	0.71

2y Basis TED Curve



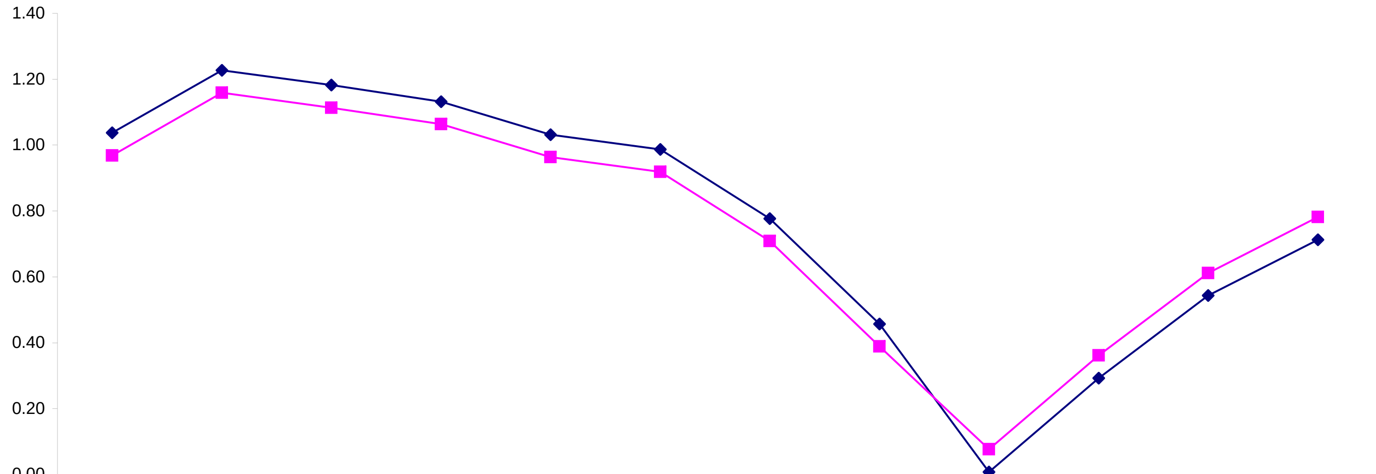
	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11	EDAU11
2y	1.14	0.95	0.99	1.04	1.15	1.19	1.40	1.72	2.19	2.47	2.72	2.89
ZT	1.14	0.95	1.00	1.05	1.15	1.19	1.40	1.72	2.19	2.47	2.72	2.89

5y Basis TED Curve



	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11	EDAU11
5y	0.07	0.12	0.07	0.02	0.08	0.12	0.33	0.65	1.12	1.40	1.65	1.82
ZF	0.11	0.08	0.03	0.02	0.12	0.16	0.37	0.69	1.16	1.44	1.69	1.86

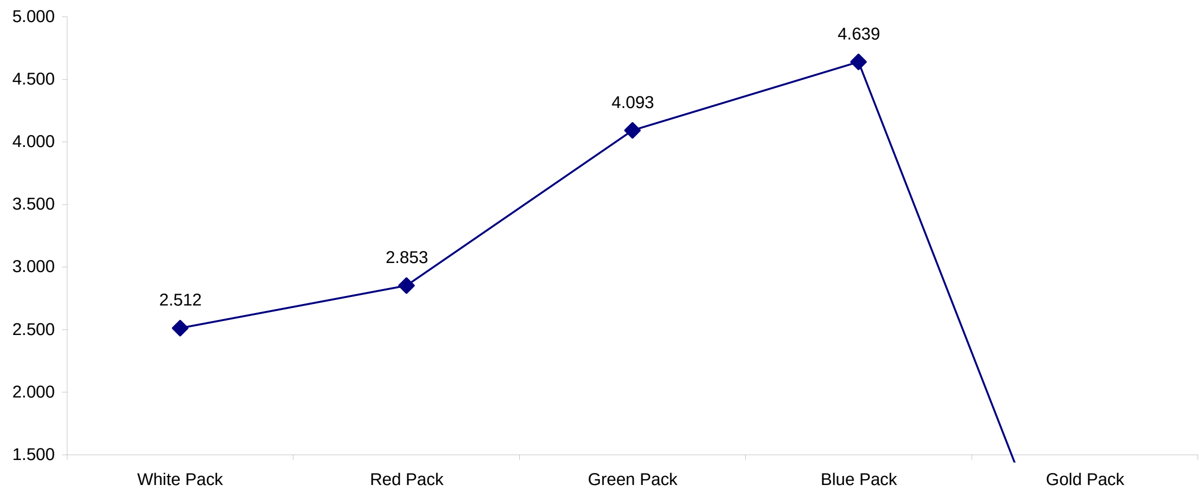
10y Basis TED Curve



	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11	EDAU11
10y	1.04	1.23	1.18	1.13	1.03	0.99	0.78	0.46	0.01	0.29	0.54	0.71
ZN	0.97	1.16	1.11	1.06	0.96	0.92	0.71	0.39	0.08	0.36	0.61	0.78

Packs

	Last Yield	Net Last Yield	Last Price
White Pack	2.512	6.875	9753.750
Red Pack	2.853	6.375	9720.625
Green Pack	4.093	8.625	9600.375
Blue Pack	4.639	4.625	9547.625
Gold Pack		3.875	9523.375



2y, 5y, 10y Basis Curves vs ED