

The Morning Email: TERM TEDS & Dirty TEDS

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

Disclaimer: All information within this newsletter is meant for internal use at GH Trader's LLC, only. All information has been recorded to the best of my ability. This material is based upon information that I consider reliable, but I do not represent that it is accurate or complete.

Treasury Futures and Cash				
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.1156	108.037	1.042	1.79
ZF	115.7813	115.250	2.311	4.33
ZN	115.8125	115.260	3.490	6.45
2y	100.422	100.1350	1.280	1.94
5y	101.444	101.1420	2.437	4.63
10y	102.828	102.2650	3.656	7.99

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	98.035	1.965	39	0.106	DEC	
EDAH09	98.135	1.865	130	0.355	MAR	White Pack
EDAM09	98.030	1.970	221	0.605	JUN	
EDAU09	97.875	2.125	312	0.854	SEP	
EDAZ09	97.640	2.360	403	1.103	DEC	
EDAH10	97.520	2.480	494	1.353	MAR	Red Pack
EDAM10	97.250	2.750	585	1.602	JUN	
EDAU10	96.915	3.085	676	1.851	SEP	
EDAZ10	96.500	3.500	767	2.101	DEC	
EDAH11	96.225	3.775	858	2.350	MAR	Green Pack
EDAM11	95.990	4.010	949	2.599	JUN	
EDAU11	95.825	4.175	1047	2.868	SEP	
EDAZ11	95.620	4.380	1138	3.117	DEC	
EDAH12	95.620	4.380	1229	3.366	MAR	Blue Pack
EDAM12	95.500	4.500	1320	3.616	JUN	
EDAU12	95.425	4.575	1411	3.865	SEP	
EDAZ12	95.310	4.690	1502	4.114	DEC	
EDAH13	95.290	4.710	1593	4.364	MAR	Gold Pack
EDAM13	95.225	4.775	1684	4.613	JUN	
EDZU13	94.675	5.325	1866	5.112	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.019	7.625	9801.875	Pack Prices
Red Pack	2.724	6.875	9733.125	
Green Pack	3.957	7.000	9613.500	
Blue Pack	4.572	6.250	9554.125	
Gold Pack		4.625	9523.250	

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.

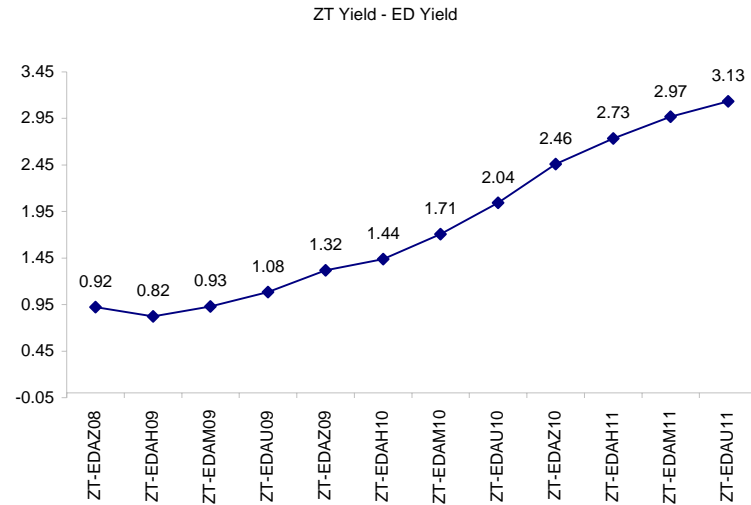
jgoulding@ghco.com

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.

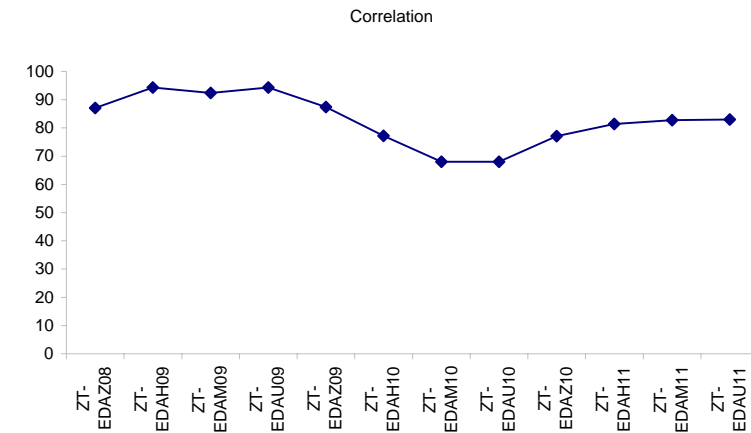
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.081	0.92	ZT-EDAZ08	87.095
EDAH09	9.981	0.82	ZT-EDAH09	94.359
EDAM09	10.086	0.93	ZT-EDAM09	92.409
EDAU09	10.241	1.08	ZT-EDAU09	94.359
EDAZ09	10.476	1.32	ZT-EDAZ09	87.466
EDAH10	10.596	1.44	ZT-EDAH10	77.164
EDAM10	10.866	1.71	ZT-EDAM10	68.023
EDAU10	11.201	2.04	ZT-EDAU10	68.017
EDAZ10	11.616	2.46	ZT-EDAZ10	77.149
EDAH11	11.891	2.73	ZT-EDAH11	81.389
EDAM11	12.126	2.97	ZT-EDAM11	82.788
EDAU11	12.291	3.13	ZT-EDAU11	82.995

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



ED Duration as Fraction of year				ZT Duration	Spread Duration	
EDAZ08	0.106	1.79	1.68	ZT-EDAZ08		
EDAH09	0.355	1.79	1.43	ZT-EDAH09		
EDAM09	0.605	1.79	1.18	ZT-EDAM09		
EDAU09	0.854	1.79	0.94	ZT-EDAU09		
EDAZ09	1.103	1.79	0.69	ZT-EDAZ09		
EDAH10	1.353	1.79	0.44	ZT-EDAH10		
EDAM10	1.602	1.79	0.19	ZT-EDAM10		
EDAU10	1.851	1.79	(0.06)	ZT-EDAU10		
EDAZ10	2.101	1.79	(0.31)	ZT-EDAZ10		
EDAH11	2.350	1.79	(0.56)	ZT-EDAH11		
EDAM11	2.599	1.79	(0.81)	ZT-EDAM11		
EDAU11	2.868	1.79	(1.08)	ZT-EDAU11		

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

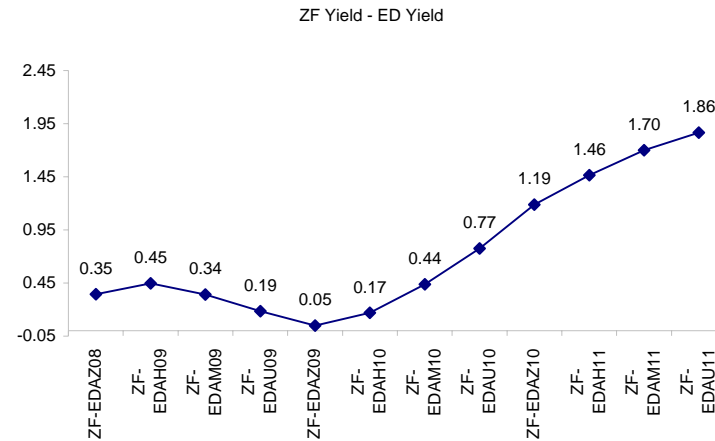


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	17.746	0.35	ZF-EDAZ08	76.391
EDAH09	17.646	0.45	ZF-EDAH09	76.598
EDAM09	17.751	0.34	ZF-EDAM09	84.272
EDAU09	17.906	0.19	ZF-EDAU09	91.205
EDAZ09	18.141	0.05	ZF-EDAZ09	91.518
EDAH10	18.261	0.17	ZF-EDAH10	87.929
EDAM10	18.531	0.44	ZF-EDAM10	82.949
EDAU10	18.866	0.77	ZF-EDAU10	83.971
EDAZ10	19.281	1.19	ZF-EDAZ10	90.574
EDAH11	19.556	1.46	ZF-EDAH11	93.234
EDAM11	19.791	1.70	ZF-EDAM11	93.736
EDAU11	19.956	1.86	ZF-EDAU11	93.530

Price = Outright Decimal Price - Euro Contract Price

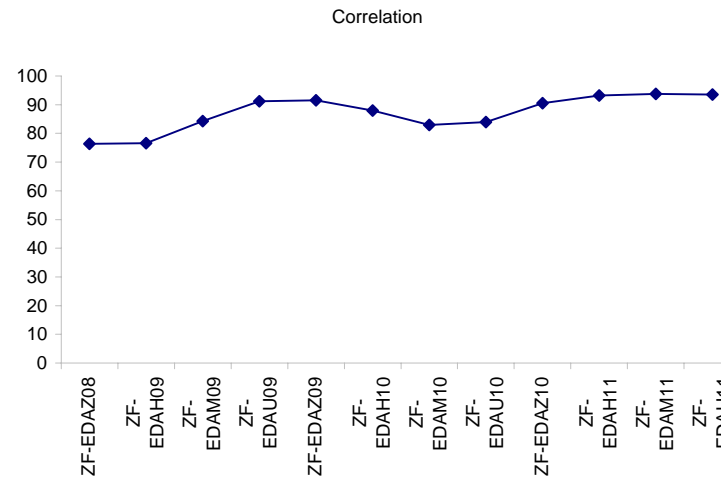
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAZ08	0.106	4.33	4.23	ZF-EDAZ08	
EDAH09	0.355	4.33	3.98	ZF-EDAH09	
EDAM09	0.605	4.33	3.73	ZF-EDAM09	
EDAU09	0.854	4.33	3.48	ZF-EDAU09	
EDAZ09	1.103	4.33	3.23	ZF-EDAZ09	
EDAH10	1.353	4.33	2.98	ZF-EDAH10	
EDAM10	1.602	4.33	2.73	ZF-EDAM10	
EDAU10	1.851	4.33	2.48	ZF-EDAU10	
EDAZ10	2.101	4.33	2.23	ZF-EDAZ10	
EDAH11	2.350	4.33	1.98	ZF-EDAH11	
EDAM11	2.599	4.33	1.73	ZF-EDAM11	
EDAU11	2.868	4.33	1.47	ZF-EDAU11	

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

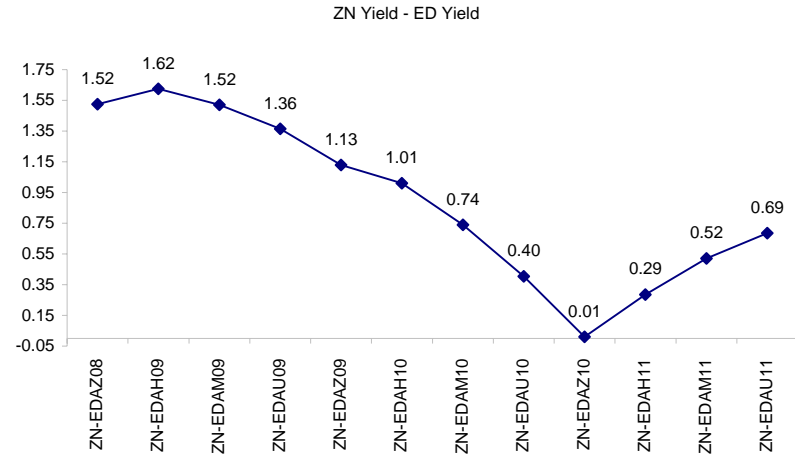


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	17.778	1.52	ZN-EDAZ08	21.238
EDAH09	17.678	1.62	ZN-EDAH09	27.840
EDAM09	17.783	1.52	ZN-EDAM09	45.905
EDAU09	17.938	1.36	ZN-EDAU09	65.302
EDAZ09	18.173	1.13	ZN-EDAZ09	83.796
EDAH10	18.293	1.01	ZN-EDAH10	93.286
EDAM10	18.563	0.74	ZN-EDAM10	82.949
EDAU10	18.898	0.40	ZN-EDAU10	83.971
EDAZ10	19.313	0.01	ZN-EDAZ10	90.574
EDAH11	19.588	0.29	ZN-EDAH11	93.234
EDAM11	19.823	0.52	ZN-EDAM11	93.736
EDAU11	19.988	0.69	ZN-EDAU11	93.530

Price = Outright Decimal Price - Euro Contract Price

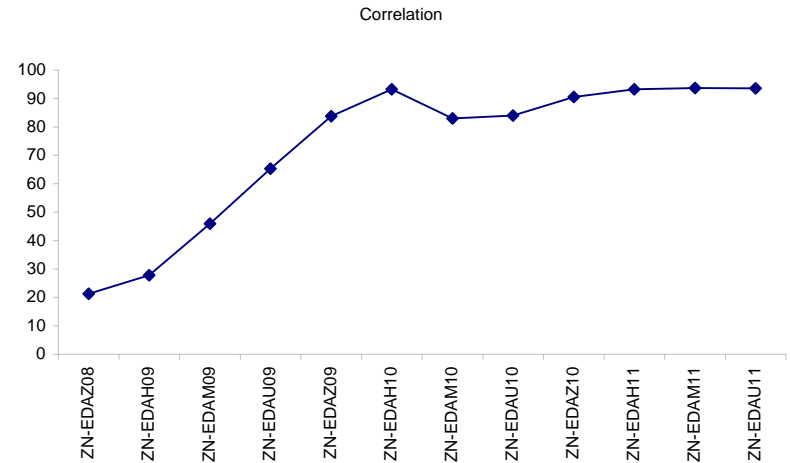
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAZ08	0.106	6.45	6.34	ZN-EDAZ08		
EDAH09	0.355	6.45	6.09	ZN-EDAH09		
EDAM09	0.605	6.45	5.84	ZN-EDAM09		
EDAU09	0.854	6.45	5.59	ZN-EDAU09		
EDAZ09	1.103	6.45	5.34	ZN-EDAZ09		
EDAH10	1.353	6.45	5.09	ZN-EDAH10		
EDAM10	1.602	6.45	4.84	ZN-EDAM10		
EDAU10	1.851	6.45	4.60	ZN-EDAU10		
EDAZ10	2.101	6.45	4.35	ZN-EDAZ10		
EDAH11	2.350	6.45	4.10	ZN-EDAH11		
EDAM11	2.599	6.45	3.85	ZN-EDAM11		
EDAU11	2.868	6.45	3.58	ZN-EDAU11		

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

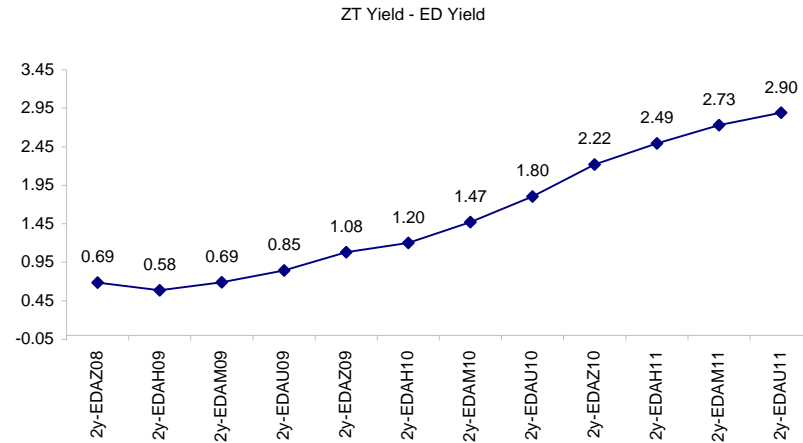


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.387	0.69	2y-EDAZ08	-75.130
EDAH09	2.287	0.58	2y-EDAH09	-72.833
EDAM09	2.392	0.69	2y-EDAM09	-79.765
EDAU09	2.547	0.85	2y-EDAU09	-87.115
EDAZ09	2.782	1.08	2y-EDAZ09	-87.938
EDAH10	2.902	1.20	2y-EDAH10	-85.231
EDAM10	3.172	1.47	2y-EDAM10	-81.515
EDAU10	3.507	1.80	2y-EDAU10	-83.500
EDAZ10	3.922	2.22	2y-EDAZ10	-90.619
EDAH11	4.197	2.49	2y-EDAH11	-93.461
EDAM11	4.432	2.73	2y-EDAM11	-93.911
EDAU11	4.597	2.90	2y-EDAU11	-93.947

Price = Outright Decimal Price - Euro Contract Price

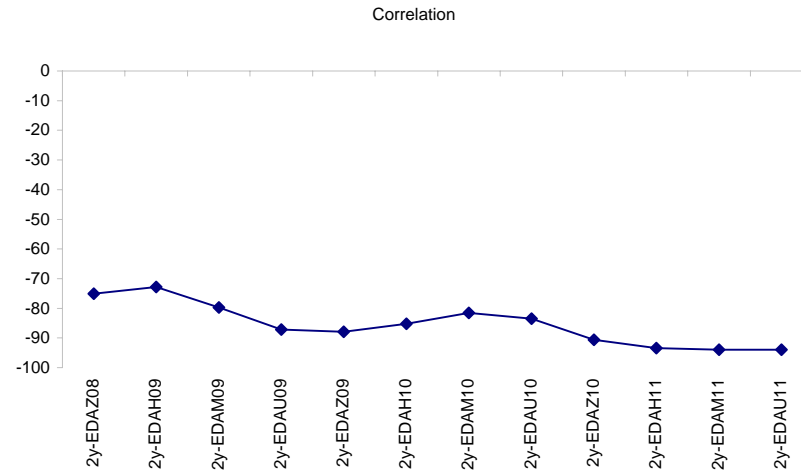
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days.



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.106	1.94	1.84	2y-EDAZ08	
EDAH09	0.355	1.94	1.59	2y-EDAH09	
EDAM09	0.605	1.94	1.34	2y-EDAM09	
EDAU09	0.854	1.94	1.09	2y-EDAU09	
EDAZ09	1.103	1.94	0.84	2y-EDAZ09	
EDAH10	1.353	1.94	0.59	2y-EDAH10	
EDAM10	1.602	1.94	0.34	2y-EDAM10	
EDAU10	1.851	1.94	0.09	2y-EDAU10	
EDAZ10	2.101	1.94	(0.16)	2y-EDAZ10	
EDAH11	2.350	1.94	(0.41)	2y-EDAH11	
EDAM11	2.599	1.94	(0.66)	2y-EDAM11	
EDAU11	2.868	1.94	(0.92)	2y-EDAU11	

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

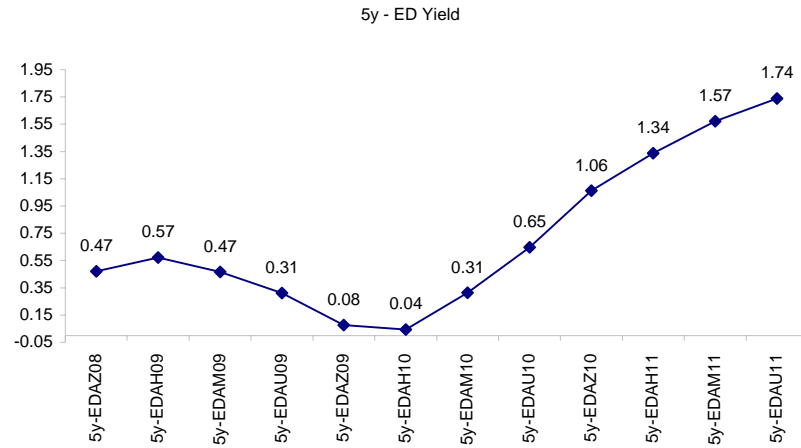


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.409	0.47	5y-EDAZ08	-38.307
EDAH09	3.309	0.57	5y-EDAH09	-40.417
EDAM09	3.414	0.47	5y-EDAM09	-55.603
EDAU09	3.569	0.31	5y-EDAU09	-73.025
EDAZ09	3.804	0.08	5y-EDAZ09	-88.139
EDAH10	3.924	0.04	5y-EDAH10	-95.363
EDAM10	4.194	0.31	5y-EDAM10	-96.511
EDAU10	4.529	0.65	5y-EDAU10	-96.874
EDAZ10	4.944	1.06	5y-EDAZ10	-96.314
EDAH11	5.219	1.34	5y-EDAH11	-95.056
EDAM11	5.454	1.57	5y-EDAM11	-94.295
EDAU11	5.619	1.74	5y-EDAU11	-93.741

Price = Outright Decimal Price - Euro Contract Price

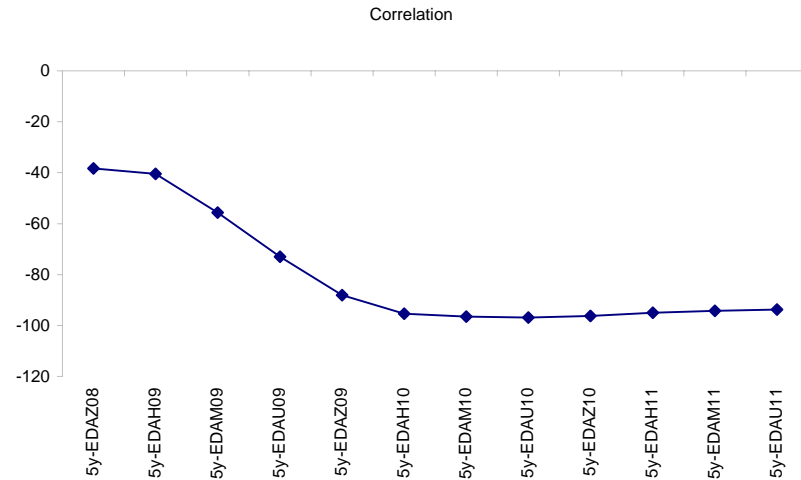
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.106	4.63	4.53	5y-EDAZ08
EDAH09	0.355	4.63	4.28	5y-EDAH09
EDAM09	0.605	4.63	4.03	5y-EDAM09
EDAU09	0.854	4.63	3.78	5y-EDAU09
EDAZ09	1.103	4.63	3.53	5y-EDAZ09
EDAH10	1.353	4.63	3.28	5y-EDAH10
EDAM10	1.602	4.63	3.03	5y-EDAM10
EDAU10	1.851	4.63	2.78	5y-EDAU10
EDAZ10	2.101	4.63	2.53	5y-EDAZ10
EDAH11	2.350	4.63	2.28	5y-EDAH11
EDAM11	2.599	4.63	2.03	5y-EDAM11
EDAU11	2.868	4.63	1.76	5y-EDAU11

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

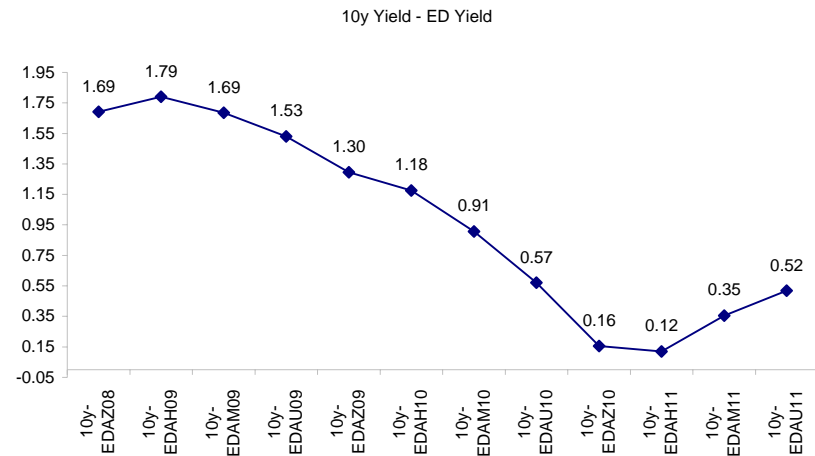


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.409	1.69	10y-EDAZ08	-3.633
EDAH09	3.309	1.79	10y-EDAH09	-7.873
EDAM09	3.414	1.69	10y-EDAM09	-26.340
EDAU09	3.569	1.53	10y-EDAU09	-48.373
EDAZ09	3.804	1.30	10y-EDAZ09	-71.816
EDAH10	3.924	1.18	10y-EDAH10	-85.925
EDAM10	4.194	0.91	10y-EDAM10	-91.263
EDAU10	4.529	0.57	10y-EDAU10	-90.787
EDAZ10	4.944	0.16	10y-EDAZ10	-84.560
EDAH11	5.219	0.12	10y-EDAH11	-80.286
EDAM11	5.454	0.35	10y-EDAM11	-78.419
EDAU11	5.619	0.52	10y-EDAU11	-77.440

Price = Outright Decimal Price - Euro Contract Price

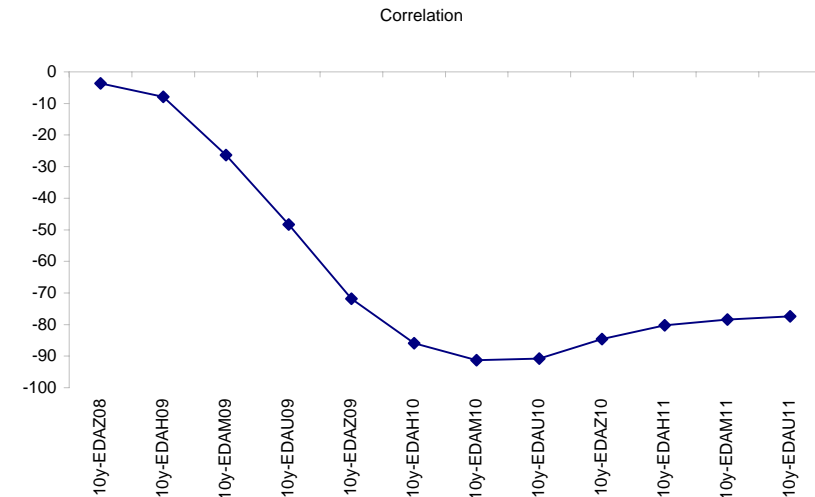
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.106	7.99	7.89	10y-EDAZ08
EDAH09	0.355	7.99	7.64	10y-EDAH09
EDAM09	0.605	7.99	7.39	10y-EDAM09
EDAU09	0.854	7.99	7.14	10y-EDAU09
EDAZ09	1.103	7.99	6.89	10y-EDAZ09
EDAH10	1.353	7.99	6.64	10y-EDAH10
EDAM10	1.602	7.99	6.39	10y-EDAM10
EDAU10	1.851	7.99	6.14	10y-EDAU10
EDAZ10	2.101	7.99	5.89	10y-EDAZ10
EDAH11	2.350	7.99	5.64	10y-EDAH11
EDAM11	2.599	7.99	5.39	10y-EDAM11
EDAU11	2.868	7.99	5.12	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.

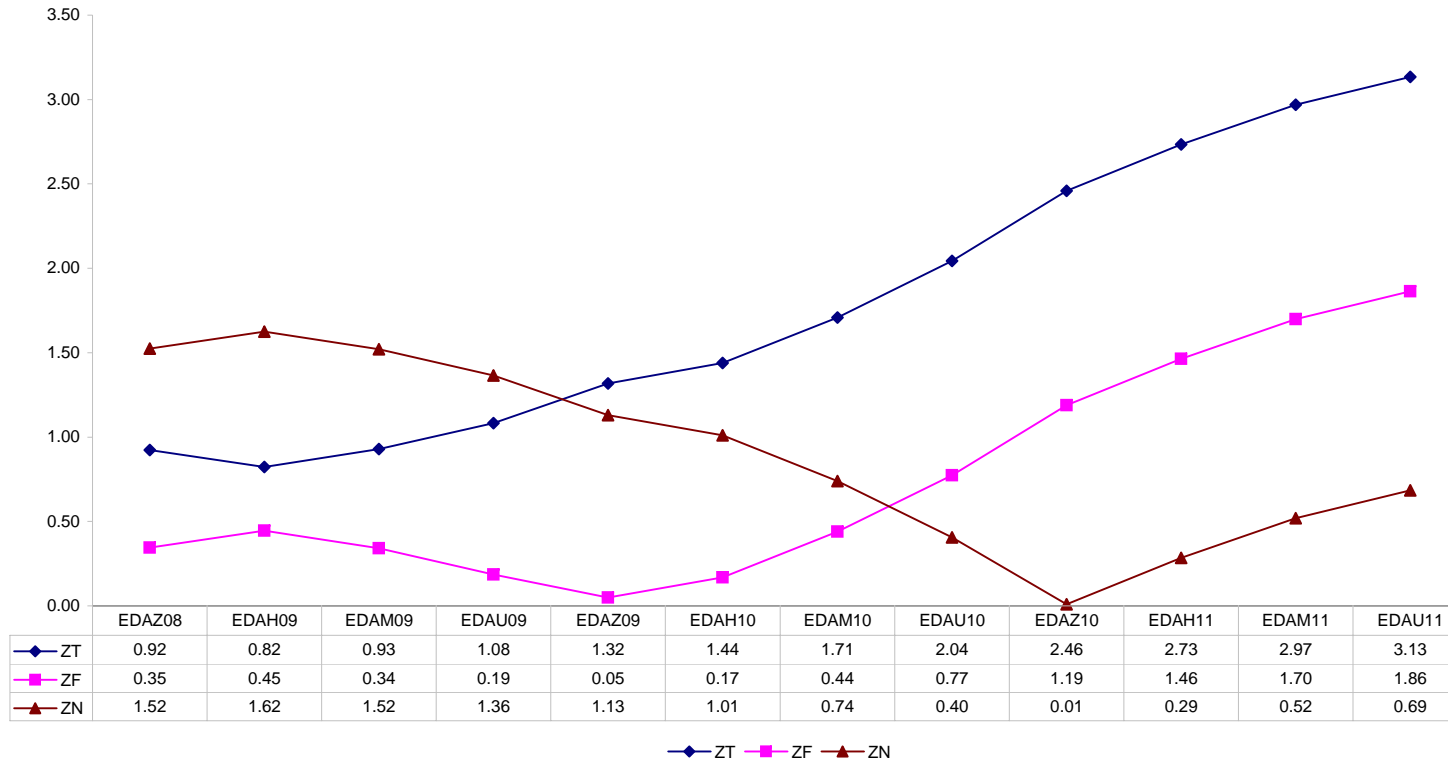
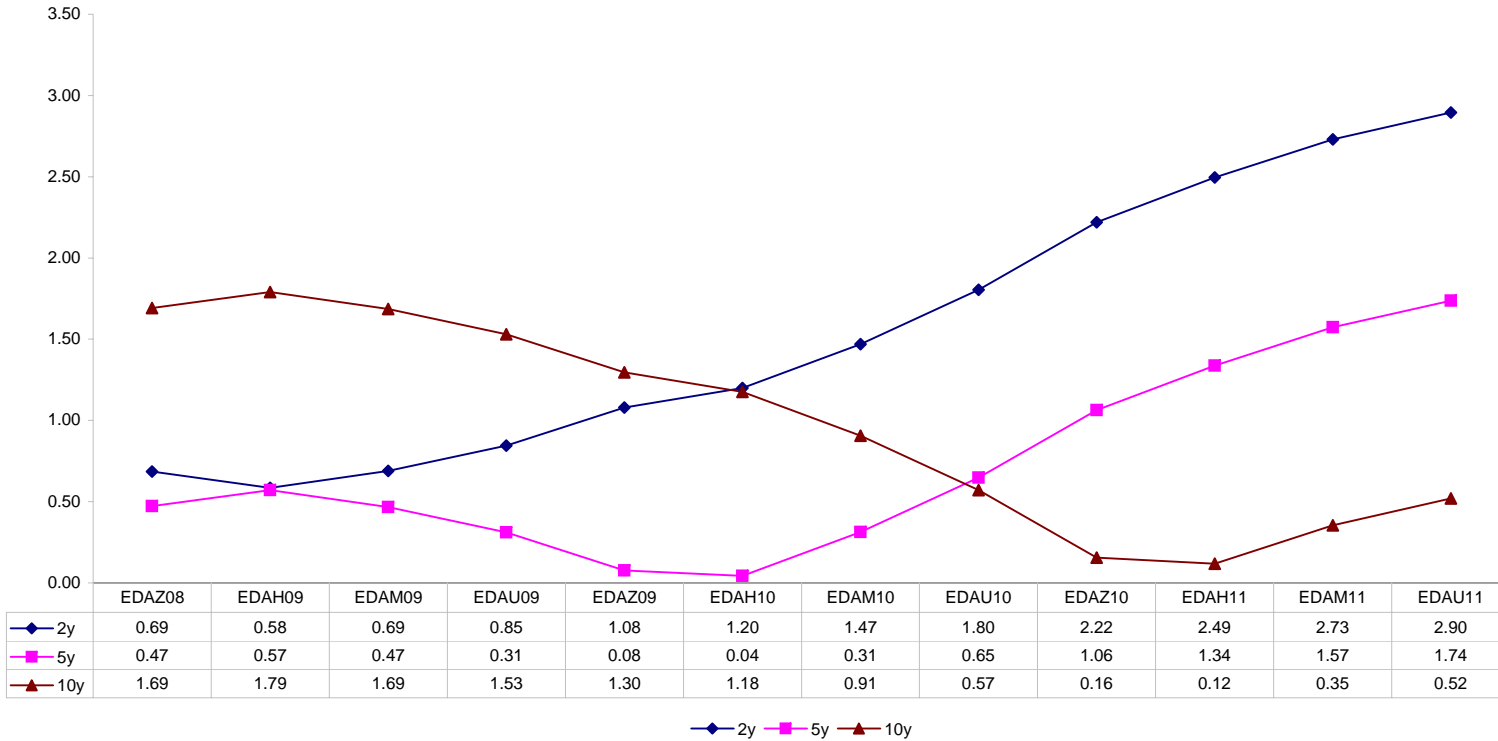
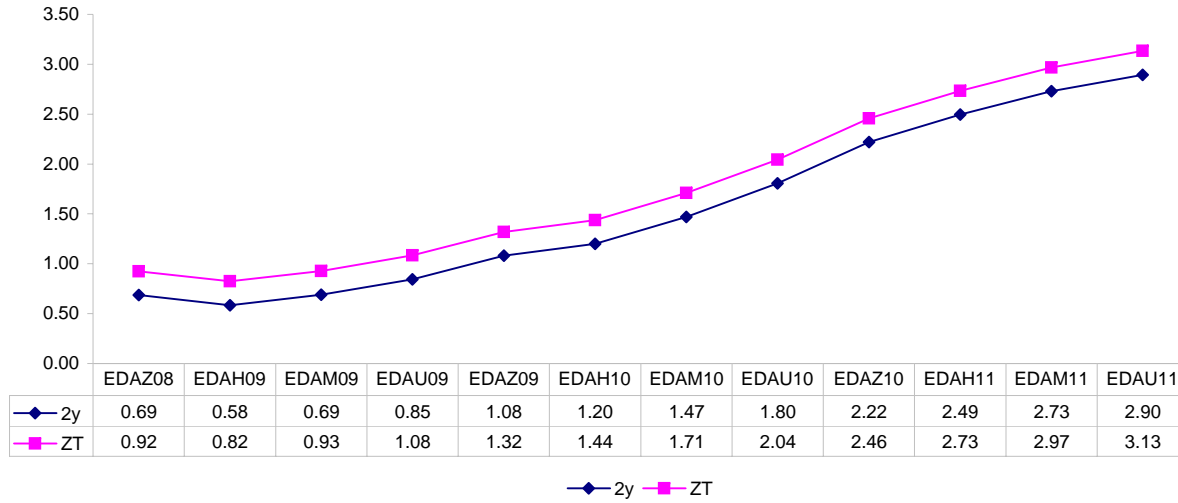


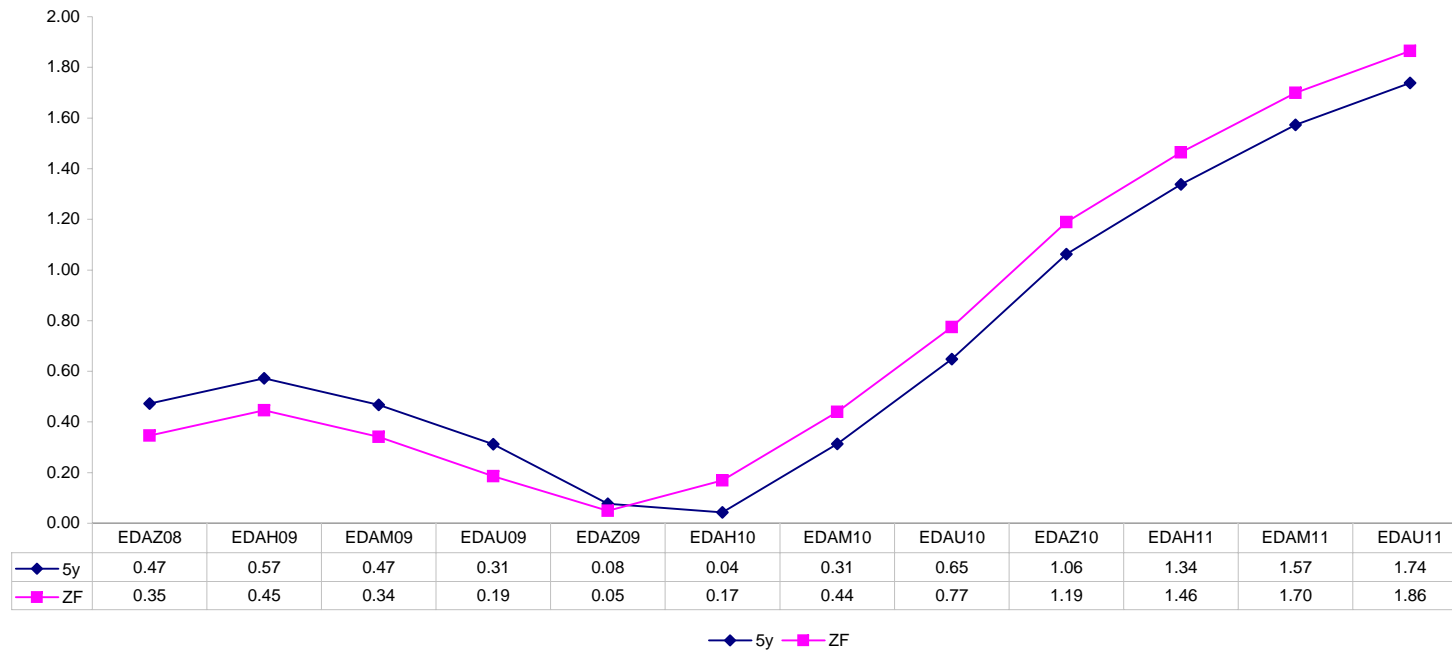
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



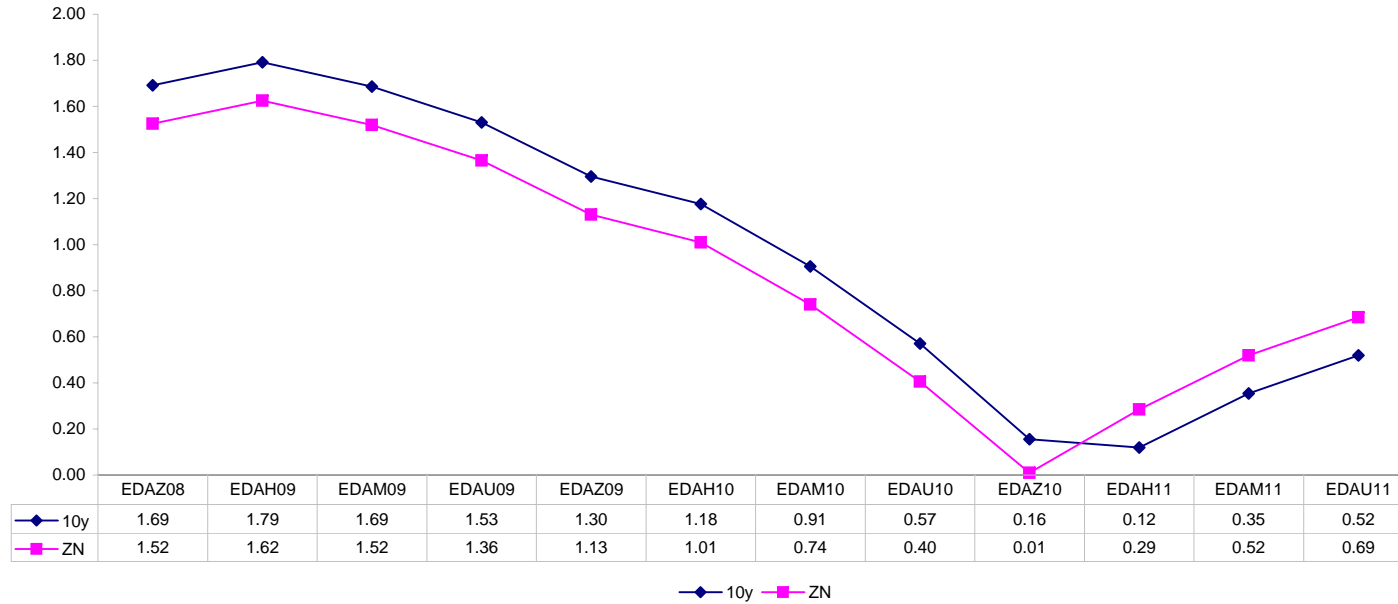
2y Basis TED Curve



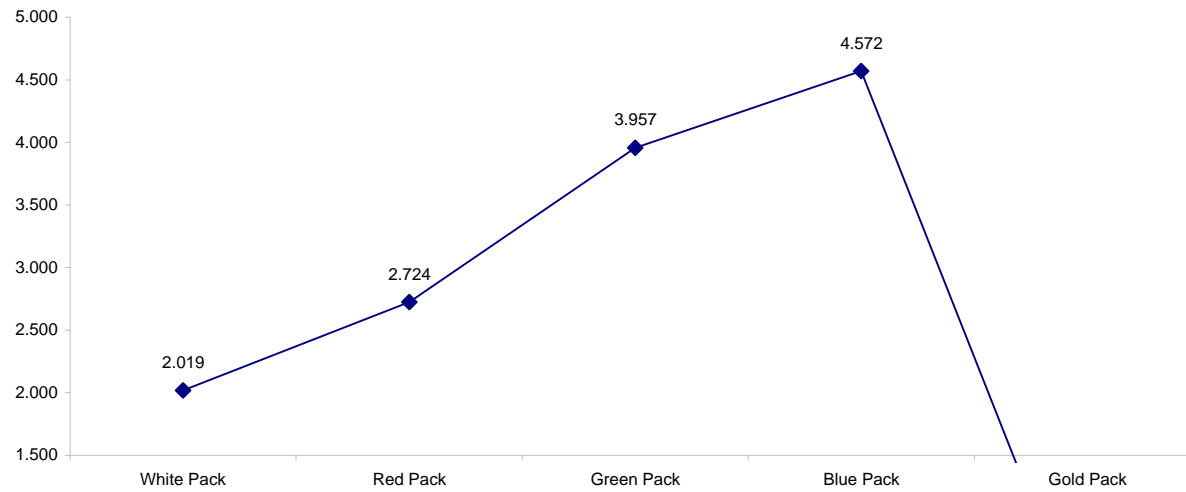
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.019	7.625	9801.875
Red Pack	2.724	6.875	9733.125
Green Pack	3.957	7.000	9613.500
Blue Pack	4.572	6.250	9554.125
Gold Pack		4.625	9523.250



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

