

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	107.5938	107.190	1.482	1.86
ZF	113.7188	113.230	2.592	4.16
ZN	114.0156	114.005	3.754	6.44
2y	99.928	99.2970	1.537	1.95
5y	99.944	99.3020	2.757	4.60
10y	100.813	100.2600	3.901	7.97

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.790	2.210	45	0.123	DEC	
EDAH09	97.920	2.080	136	0.372	MAR	White Pack
EDAM09	97.780	2.220	227	0.621	JUN	
EDAU09	97.590	2.410	318	0.871	SEP	
EDAZ09	97.350	2.650	409	1.120	DEC	
EDAH10	97.185	2.815	500	1.369	MAR	Red Pack
EDAM10	96.895	3.105	591	1.618	JUN	
EDAU10	96.550	3.450	682	1.868	SEP	
EDAZ10	96.125	3.875	773	2.117	DEC	
EDAH11	95.855	4.145	864	2.366	MAR	Green Pack
EDAM11	95.625	4.375	955	2.616	JUN	
EDAU11	95.455	4.545	1053	2.884	SEP	
EDAZ11	95.300	4.700	1144	3.134	DEC	
EDAH12	95.285	4.715	1235	3.383	MAR	Blue Pack
EDAM12	95.205	4.795	1326	3.632	JUN	
EDAU12	95.130	4.870	1417	3.881	SEP	
EDAZ12	95.020	4.980	1508	4.131	DEC	
EDAH13	94.985	5.015	1599	4.380	MAR	Gold Pack
EDAM13	94.935	5.065	1690	4.629	JUN	
EDZU13	94.700	5.300	1872	5.128	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.274	8.125	9777.000	Pack Prices
Red Pack	3.070	5.125	9699.500	
Green Pack	4.340	5.500	9576.500	
Blue Pack	4.895	5.625	9523.000	
Gold Pack	5.177	5.500	9495.875	

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

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.

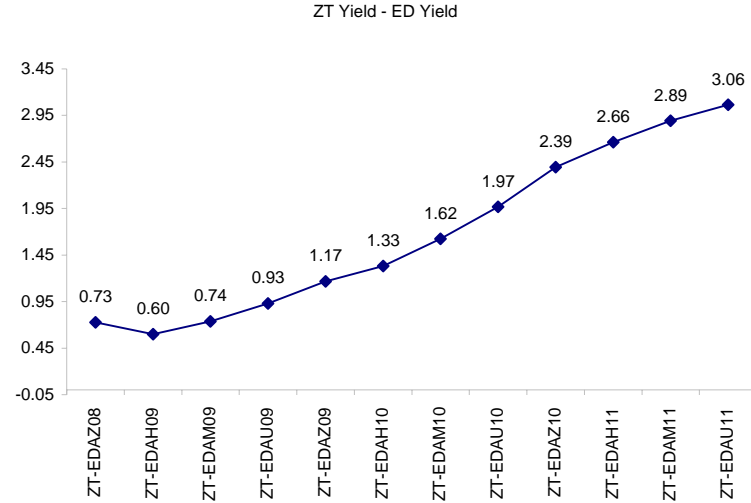
jgoulding@ghco.com

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.

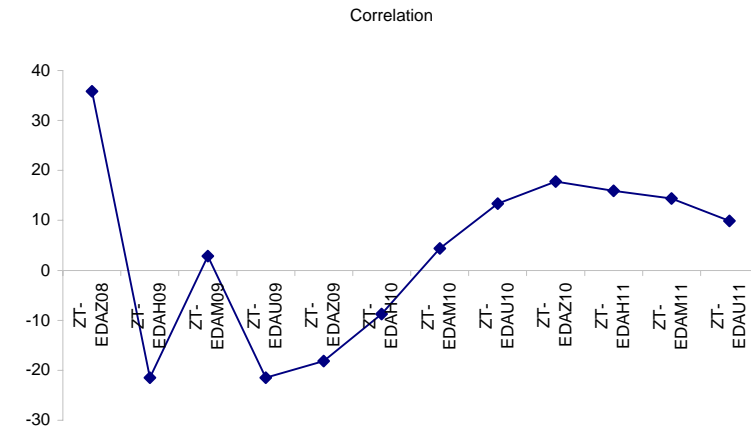
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.804	0.73	ZT-EDAZ08	35.819
EDAH09	9.674	0.60	ZT-EDAH09	-21.493
EDAM09	9.814	0.74	ZT-EDAM09	2.855
EDAU09	10.004	0.93	ZT-EDAU09	-21.493
EDAZ09	10.244	1.17	ZT-EDAZ09	-18.142
EDAH10	10.409	1.33	ZT-EDAH10	-8.712
EDAM10	10.699	1.62	ZT-EDAM10	4.372
EDAU10	11.044	1.97	ZT-EDAU10	13.334
EDAZ10	11.469	2.39	ZT-EDAZ10	17.793
EDAH11	11.739	2.66	ZT-EDAH11	15.908
EDAM11	11.969	2.89	ZT-EDAM11	14.363
EDAU11	12.139	3.06	ZT-EDAU11	9.870

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	0.123	1.86	1.74	ZT-EDAZ08		
EDAH09	0.372	1.86	1.49	ZT-EDAH09		
EDAM09	0.621	1.86	1.24	ZT-EDAM09		
EDAU09	0.871	1.86	0.99	ZT-EDAU09		
EDAZ09	1.120	1.86	0.74	ZT-EDAZ09		
EDAH10	1.369	1.86	0.49	ZT-EDAH10		
EDAM10	1.618	1.86	0.24	ZT-EDAM10		
EDAU10	1.868	1.86	(0.00)	ZT-EDAU10		
EDAZ10	2.117	1.86	(0.25)	ZT-EDAZ10		
EDAH11	2.366	1.86	(0.50)	ZT-EDAH11		
EDAM11	2.616	1.86	(0.75)	ZT-EDAM11		
EDAU11	2.884	1.86	(1.02)	ZT-EDAU11		

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

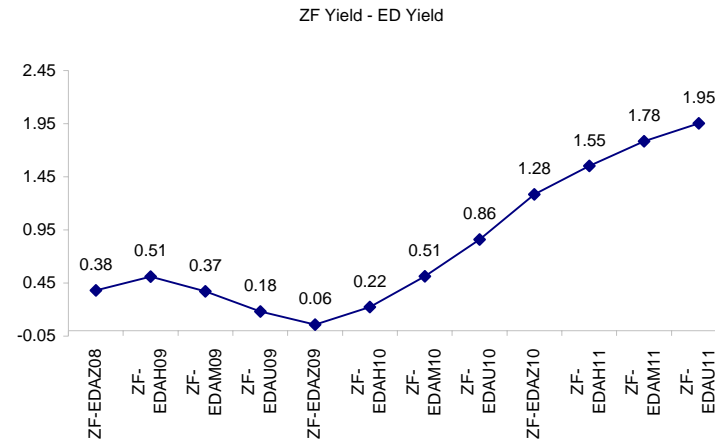


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.929	0.38	ZF-EDAZ08	-3.598
EDAH09	15.799	0.51	ZF-EDAH09	-8.460
EDAM09	15.939	0.37	ZF-EDAM09	-9.093
EDAU09	16.129	0.18	ZF-EDAU09	0.338
EDAZ09	16.369	0.06	ZF-EDAZ09	26.536
EDAH10	16.534	0.22	ZF-EDAH10	48.158
EDAM10	16.824	0.51	ZF-EDAM10	63.078
EDAU10	17.169	0.86	ZF-EDAU10	70.595
EDAZ10	17.594	1.28	ZF-EDAZ10	72.993
EDAH11	17.864	1.55	ZF-EDAH11	70.253
EDAM11	18.094	1.78	ZF-EDAM11	67.601
EDAU11	18.264	1.95	ZF-EDAU11	63.148

Price = Outright Decimal Price - Euro Contract Price

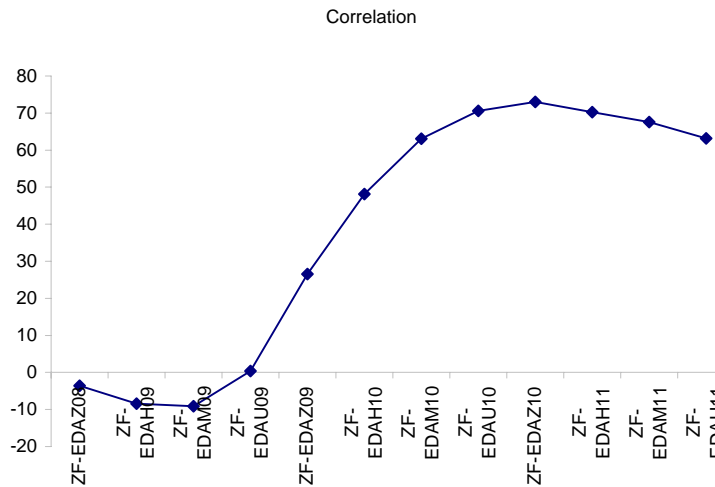
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



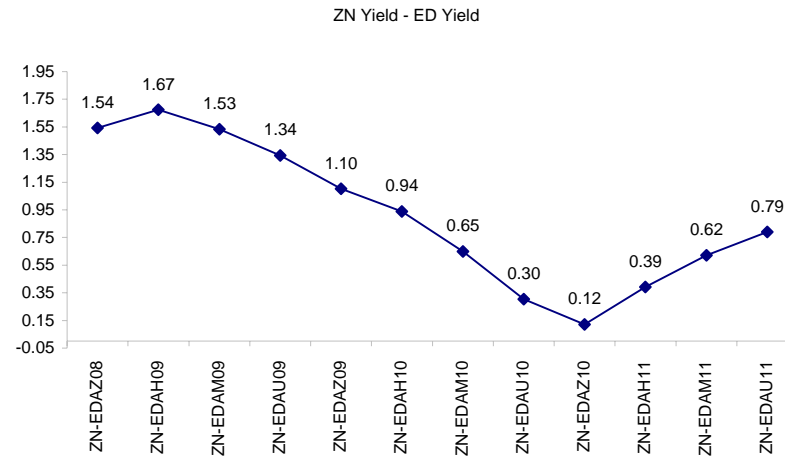
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.123	4.16	4.04	ZF-EDAZ08		
EDAH09	0.372	4.16	3.79	ZF-EDAH09		
EDAM09	0.621	4.16	3.54	ZF-EDAM09		
EDAU09	0.871	4.16	3.29	ZF-EDAU09		
EDAZ09	1.120	4.16	3.04	ZF-EDAZ09		
EDAH10	1.369	4.16	2.79	ZF-EDAH10		
EDAM10	1.618	4.16	2.54	ZF-EDAM10		
EDAU10	1.868	4.16	2.29	ZF-EDAU10		
EDAZ10	2.117	4.16	2.04	ZF-EDAZ10		
EDAH11	2.366	4.16	1.79	ZF-EDAH11		
EDAM11	2.616	4.16	1.54	ZF-EDAM11		
EDAU11	2.884	4.16	1.28	ZF-EDAU11		

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



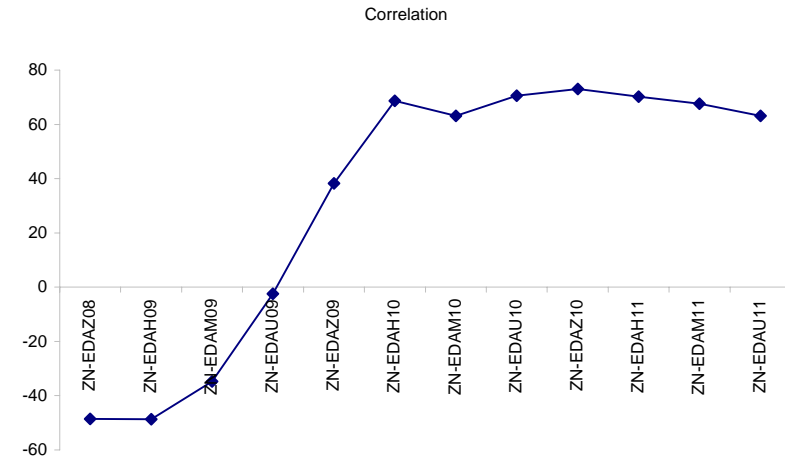
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	16.226	1.54	ZN-EDAZ08	-48.570
EDAH09	16.096	1.67	ZN-EDAH09	-48.712
EDAM09	16.236	1.53	ZN-EDAM09	-34.783
EDAU09	16.426	1.34	ZN-EDAU09	-2.429
EDAZ09	16.666	1.10	ZN-EDAZ09	38.292
EDAH10	16.831	0.94	ZN-EDAH10	68.700
EDAM10	17.121	0.65	ZN-EDAM10	63.078
EDAU10	17.466	0.30	ZN-EDAU10	70.595
EDAZ10	17.891	0.12	ZN-EDAZ10	72.993
EDAH11	18.161	0.39	ZN-EDAH11	70.253
EDAM11	18.391	0.62	ZN-EDAM11	67.601
EDAU11	18.561	0.79	ZN-EDAU11	63.148

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	0.123	6.44	6.31	ZN-EDAZ08		
EDAH09	0.372	6.44	6.06	ZN-EDAH09		
EDAM09	0.621	6.44	5.82	ZN-EDAM09		
EDAU09	0.871	6.44	5.57	ZN-EDAU09		
EDAZ09	1.120	6.44	5.32	ZN-EDAZ09		
EDAH10	1.369	6.44	5.07	ZN-EDAH10		
EDAM10	1.618	6.44	4.82	ZN-EDAM10		
EDAU10	1.868	6.44	4.57	ZN-EDAU10		
EDAZ10	2.117	6.44	4.32	ZN-EDAZ10		
EDAH11	2.366	6.44	4.07	ZN-EDAH11		
EDAM11	2.616	6.44	3.82	ZN-EDAM11		
EDAU11	2.884	6.44	3.55	ZN-EDAU11		

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

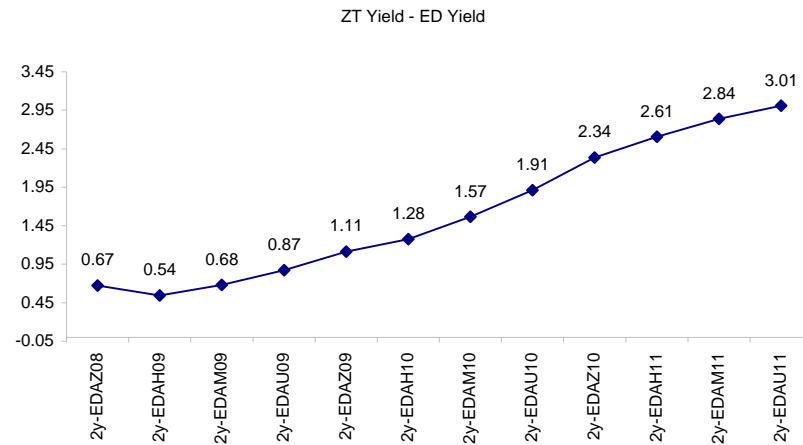


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.138	0.67	2y-EDAZ08	3.800
EDAH09	2.008	0.54	2y-EDAH09	14.464
EDAM09	2.148	0.68	2y-EDAM09	33.094
EDAU09	2.338	0.87	2y-EDAU09	36.074
EDAZ09	2.578	1.11	2y-EDAZ09	13.853
EDAH10	2.743	1.28	2y-EDAH10	-9.664
EDAM10	3.033	1.57	2y-EDAM10	-28.514
EDAU10	3.378	1.91	2y-EDAU10	-36.973
EDAZ10	3.803	2.34	2y-EDAZ10	-37.069
EDAH11	4.073	2.61	2y-EDAH11	-32.620
EDAM11	4.303	2.84	2y-EDAM11	-29.012
EDAU11	4.473	3.01	2y-EDAU11	-23.529

Price = Outright Decimal Price - Euro Contract Price

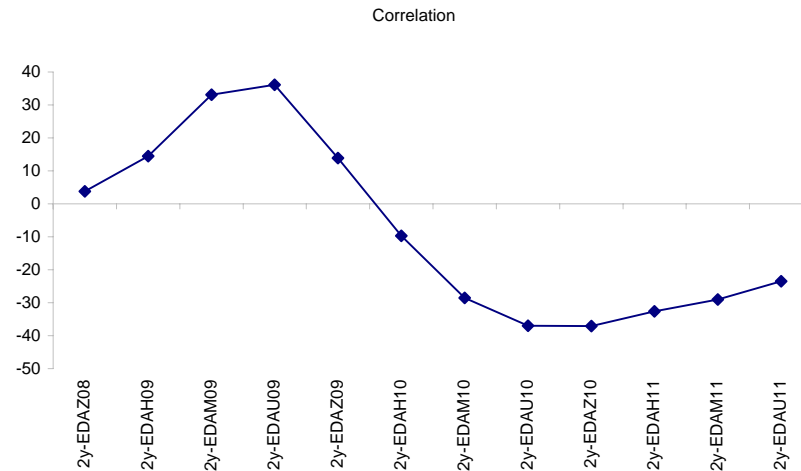
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.123	1.95	1.83	2y-EDAZ08	
EDAH09	0.372	1.95	1.58	2y-EDAH09	
EDAM09	0.621	1.95	1.33	2y-EDAM09	
EDAU09	0.871	1.95	1.08	2y-EDAU09	
EDAZ09	1.120	1.95	0.83	2y-EDAZ09	
EDAH10	1.369	1.95	0.58	2y-EDAH10	
EDAM10	1.618	1.95	0.33	2y-EDAM10	
EDAU10	1.868	1.95	0.08	2y-EDAU10	
EDAZ10	2.117	1.95	(0.17)	2y-EDAZ10	
EDAH11	2.366	1.95	(0.41)	2y-EDAH11	
EDAM11	2.616	1.95	(0.66)	2y-EDAM11	
EDAU11	2.884	1.95	(0.93)	2y-EDAU11	

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

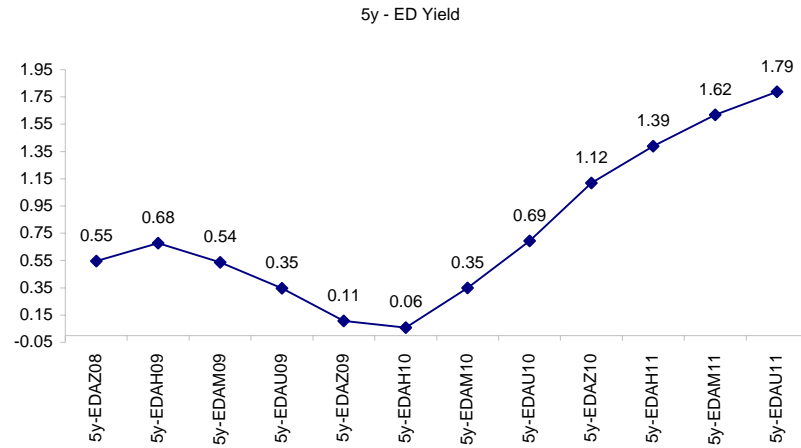


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.154	0.55	5y-EDAZ08	52.517
EDAH09	2.024	0.68	5y-EDAH09	53.415
EDAM09	2.164	0.54	5y-EDAM09	35.351
EDAU09	2.354	0.35	5y-EDAU09	-2.974
EDAZ09	2.594	0.11	5y-EDAZ09	-43.461
EDAH10	2.759	0.06	5y-EDAH10	-71.364
EDAM10	3.049	0.35	5y-EDAM10	-83.928
EDAU10	3.394	0.69	5y-EDAU10	-86.265
EDAZ10	3.819	1.12	5y-EDAZ10	-83.529
EDAH11	4.089	1.39	5y-EDAH11	-79.763
EDAM11	4.319	1.62	5y-EDAM11	-76.189
EDAU11	4.489	1.79	5y-EDAU11	-72.828

Price = Outright Decimal Price - Euro Contract Price

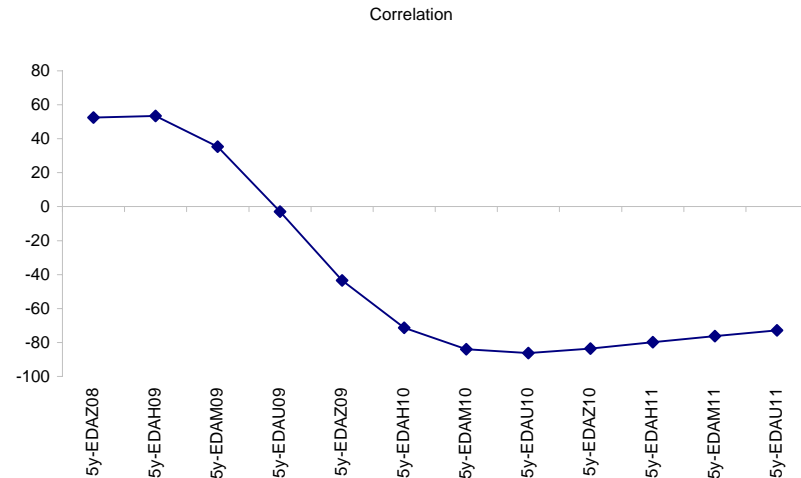
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.123	4.60	4.48	5y-EDAZ08
EDAH09	0.372	4.60	4.23	5y-EDAH09
EDAM09	0.621	4.60	3.98	5y-EDAM09
EDAU09	0.871	4.60	3.73	5y-EDAU09
EDAZ09	1.120	4.60	3.48	5y-EDAZ09
EDAH10	1.369	4.60	3.23	5y-EDAH10
EDAM10	1.618	4.60	2.98	5y-EDAM10
EDAU10	1.868	4.60	2.73	5y-EDAU10
EDAZ10	2.117	4.60	2.48	5y-EDAZ10
EDAH11	2.366	4.60	2.23	5y-EDAH11
EDAM11	2.616	4.60	1.98	5y-EDAM11
EDAU11	2.884	4.60	1.72	5y-EDAU11

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

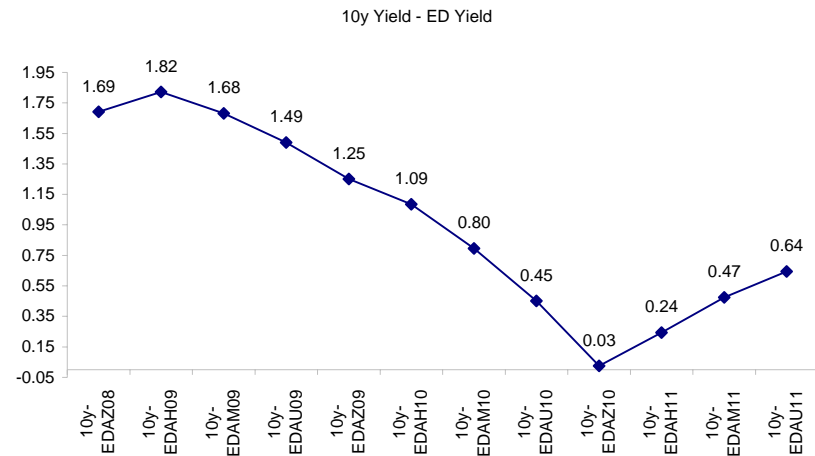


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.154	1.69	10y-EDAZ08	64.606
EDAH09	2.024	1.82	10y-EDAH09	61.714
EDAM09	2.164	1.68	10y-EDAM09	33.506
EDAU09	2.354	1.49	10y-EDAU09	-14.072
EDAZ09	2.594	1.25	10y-EDAZ09	-55.838
EDAH10	2.759	1.09	10y-EDAH10	-81.964
EDAM10	3.049	0.80	10y-EDAM10	-91.073
EDAU10	3.394	0.45	10y-EDAU10	-91.362
EDAZ10	3.819	0.03	10y-EDAZ10	-88.081
EDAH11	4.089	0.24	10y-EDAH11	-85.056
EDAM11	4.319	0.47	10y-EDAM11	-81.831
EDAU11	4.489	0.64	10y-EDAU11	-79.697

Price = Outright Decimal Price - Euro Contract Price

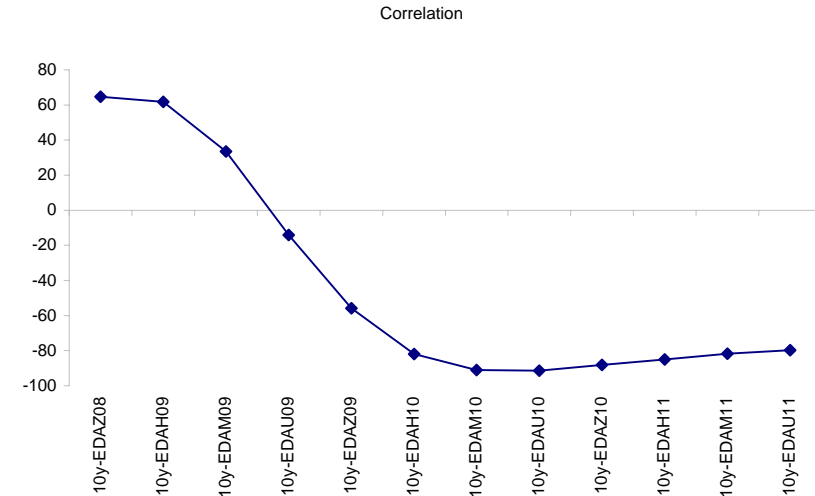
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.123	7.97	7.85	10y-EDAZ08
EDAH09	0.372	7.97	7.60	10y-EDAH09
EDAM09	0.621	7.97	7.35	10y-EDAM09
EDAU09	0.871	7.97	7.10	10y-EDAU09
EDAZ09	1.120	7.97	6.85	10y-EDAZ09
EDAH10	1.369	7.97	6.60	10y-EDAH10
EDAM10	1.618	7.97	6.36	10y-EDAM10
EDAU10	1.868	7.97	6.11	10y-EDAU10
EDAZ10	2.117	7.97	5.86	10y-EDAZ10
EDAH11	2.366	7.97	5.61	10y-EDAH11
EDAM11	2.616	7.97	5.36	10y-EDAM11
EDAU11	2.884	7.97	5.09	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.

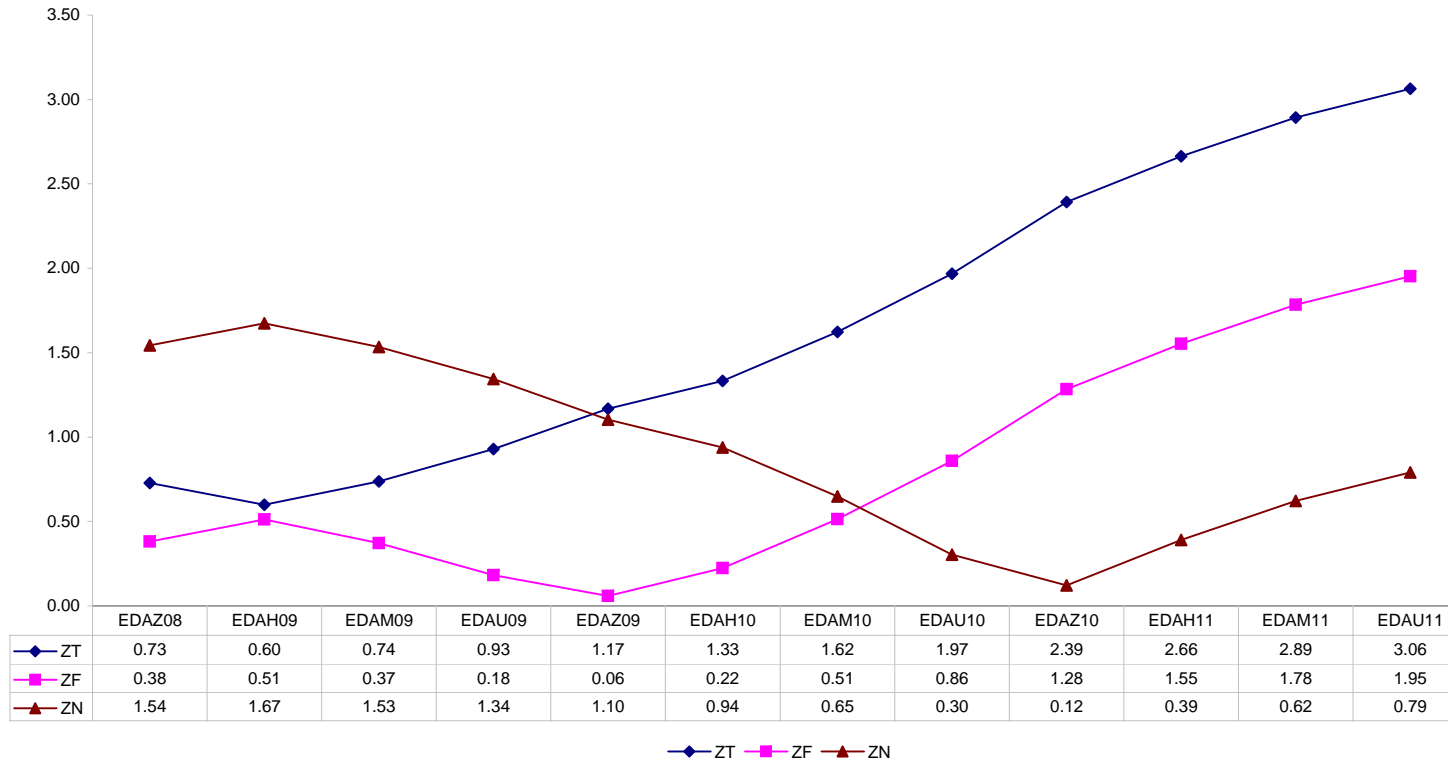
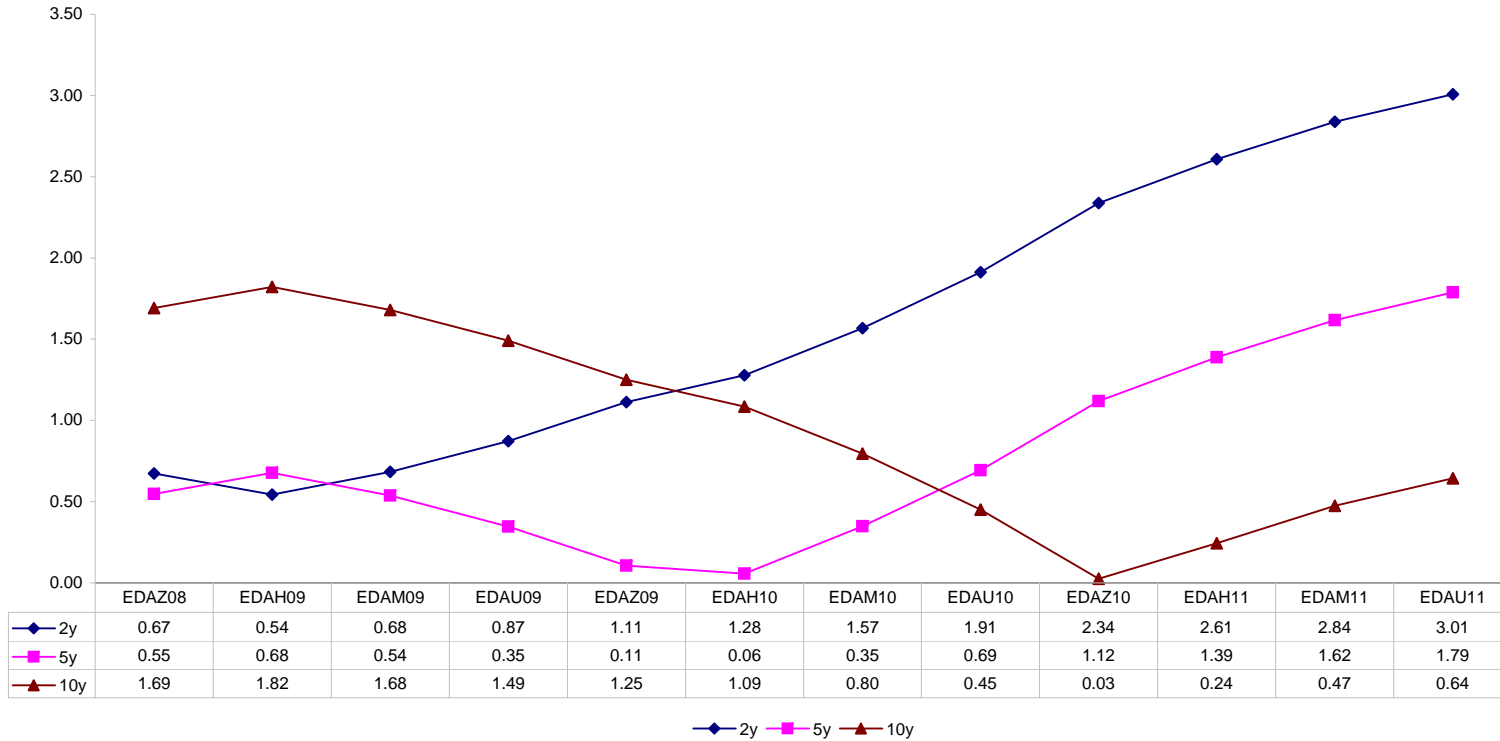
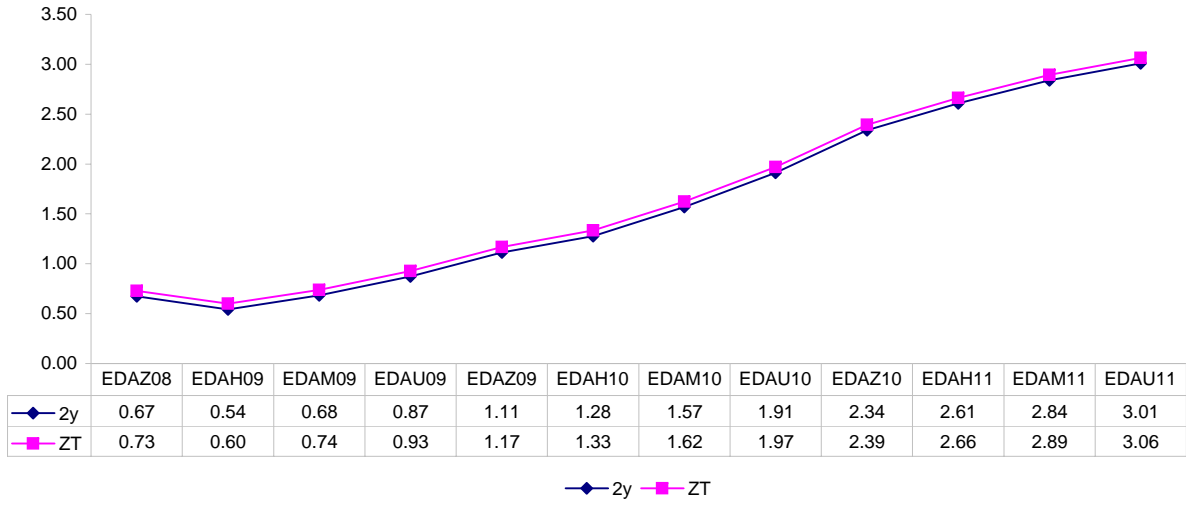


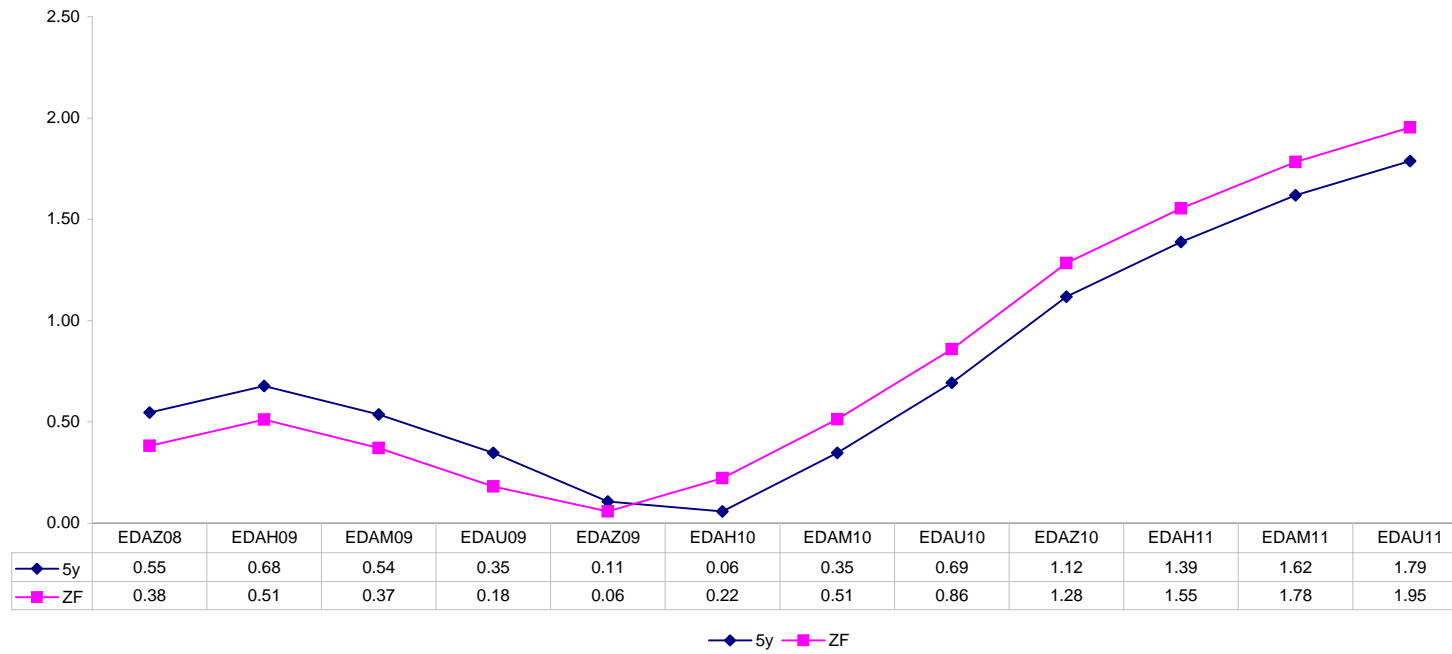
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



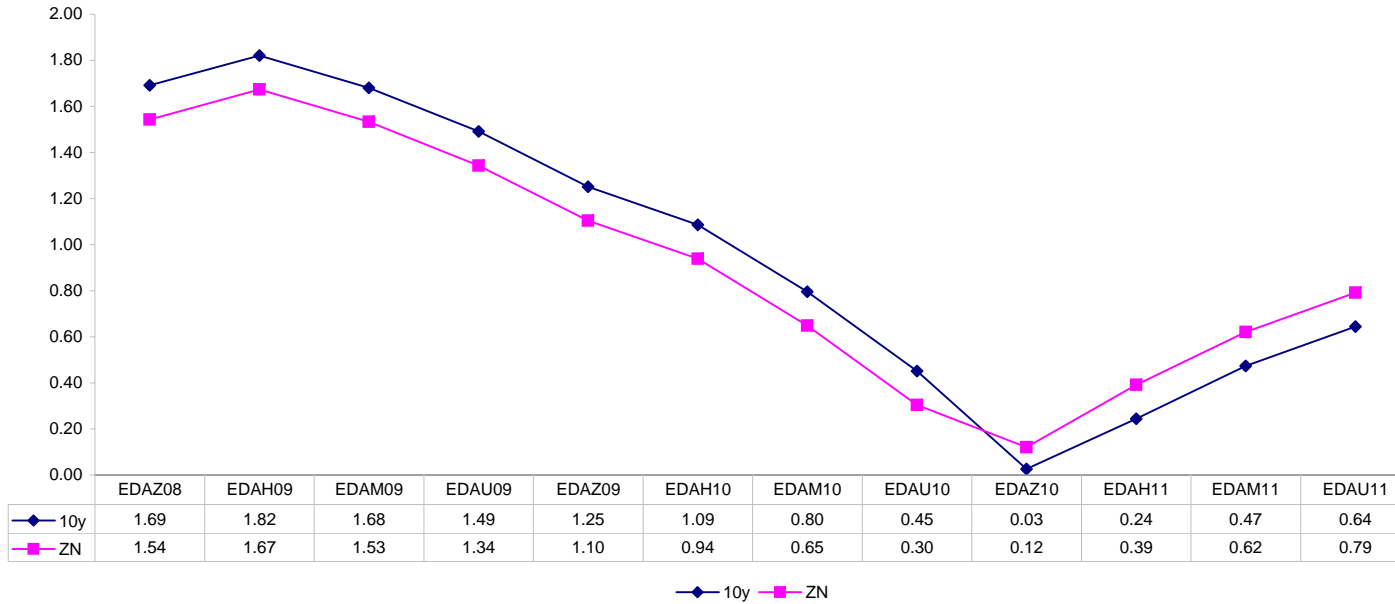
2y Basis TED Curve



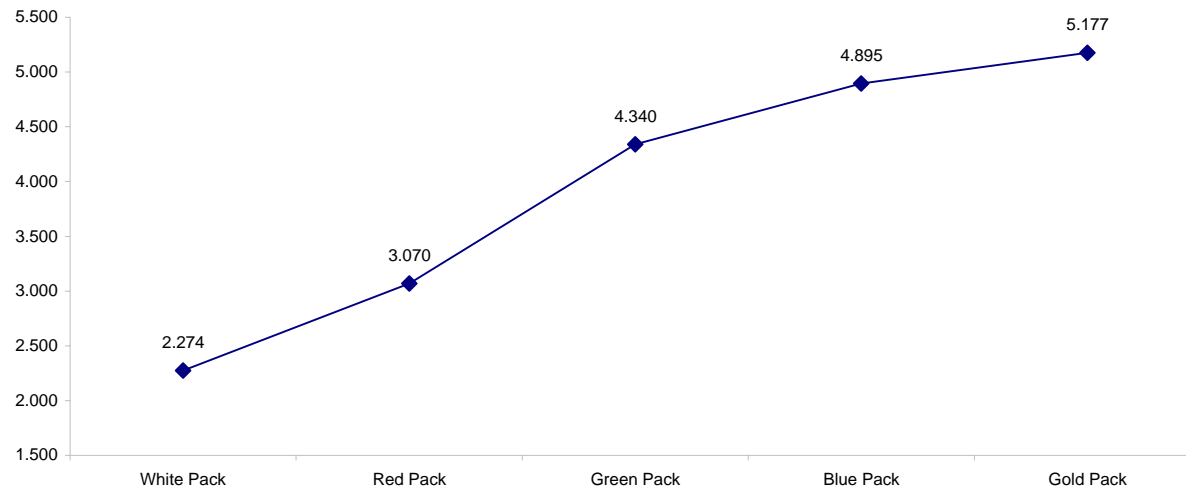
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.274	8.125	9777.000
Red Pack	3.070	5.125	9699.500
Green Pack	4.340	5.500	9576.500
Blue Pack	4.895	5.625	9523.000
Gold Pack	5.177	5.500	9495.875



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

