

The Morning Email: TERM TEDS & Dirty TEDS

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

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Treasury Futures and Cash				
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	107.1094	107.035	1.695	1.89
ZF	112.7500	112.240	2.759	4.19
ZN	113.2344	113.075	4.397	6.42
2y	100.594	100.1900	1.688	1.83
5y	101.553	101.1770	2.783	4.55
10y	101.203	101.0650	3.847	8.01

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.560	2.440	55	0.150	DEC	
EDAH09	97.730	2.270	146	0.399	MAR	White Pack
EDAM09	97.715	2.285	237	0.649	JUN	
EDAU09	97.655	2.345	328	0.898	SEP	
EDAZ09	97.430	2.570	419	1.147	DEC	
EDAH10	97.245	2.755	510	1.397	MAR	Red Pack
EDAM10	96.915	3.085	601	1.646	JUN	
EDAU10	96.530	3.470	692	1.895	SEP	
EDAZ10	96.080	3.920	783	2.145	DEC	
EDAH11	95.815	4.185	874	2.394	MAR	Green Pack
EDAM11	95.585	4.415	965	2.643	JUN	
EDAU11	95.440	4.560	1063	2.912	SEP	
EDAZ11	95.350	4.650	1154	3.161	DEC	
EDAH12	95.350	4.650	1245	3.410	MAR	Blue Pack
EDAM12	95.220	4.780	1336	3.660	JUN	
EDAU12	95.150	4.850	1427	3.909	SEP	
EDAZ12	95.055	4.945	1518	4.158	DEC	
EDAH13	95.040	4.960	1609	4.408	MAR	Gold Pack
EDAM13	94.975	5.025	1700	4.657	JUN	
EDZU13	94.880	5.120	1882	5.155	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.381	6.000	9766.500	Pack Prices
Red Pack	3.034	1.375	9703.000	
Green Pack	4.376	3.625	9573.000	
Blue Pack	4.856	2.375	9526.750	
Gold Pack	5.145	1.750	9498.875	

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.

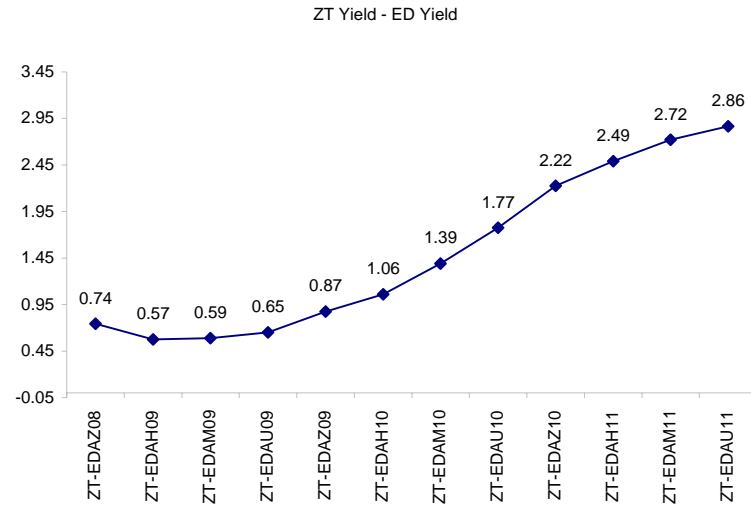
jgoulding@ghco.com

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.

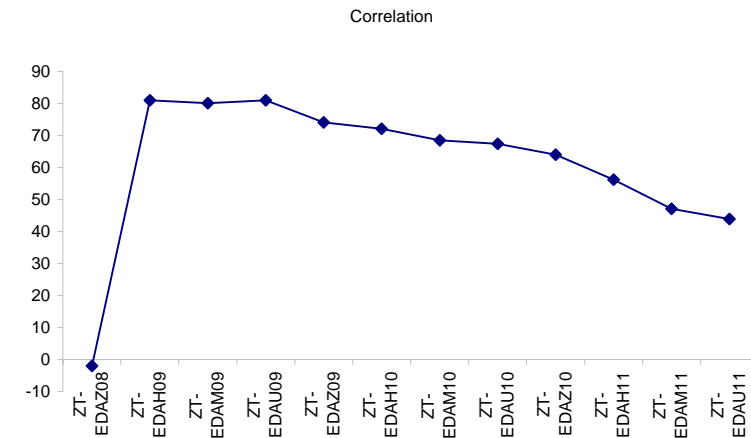
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.549	0.74	ZT-EDAZ08	-1.965
EDAH09	9.379	0.57	ZT-EDAH09	81.047
EDAM09	9.394	0.59	ZT-EDAM09	80.099
EDAU09	9.454	0.65	ZT-EDAU09	81.047
EDAZ09	9.679	0.87	ZT-EDAZ09	74.147
EDAH10	9.864	1.06	ZT-EDAH10	72.102
EDAM10	10.194	1.39	ZT-EDAM10	68.488
EDAU10	10.579	1.77	ZT-EDAU10	67.428
EDAZ10	11.029	2.22	ZT-EDAZ10	63.967
EDAH11	11.294	2.49	ZT-EDAH11	56.172
EDAM11	11.524	2.72	ZT-EDAM11	47.112
EDAU11	11.669	2.86	ZT-EDAU11	43.936

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	0.150	1.89	1.74	ZT-EDAZ08	
EDAH09	0.399	1.89	1.49	ZT-EDAH09	
EDAM09	0.649	1.89	1.25	ZT-EDAM09	
EDAU09	0.898	1.89	1.00	ZT-EDAU09	
EDAZ09	1.147	1.89	0.75	ZT-EDAZ09	
EDAH10	1.397	1.89	0.50	ZT-EDAH10	
EDAM10	1.646	1.89	0.25	ZT-EDAM10	
EDAU10	1.895	1.89	(0.00)	ZT-EDAU10	
EDAZ10	2.145	1.89	(0.25)	ZT-EDAZ10	
EDAH11	2.394	1.89	(0.50)	ZT-EDAH11	
EDAM11	2.643	1.89	(0.75)	ZT-EDAM11	
EDAU11	2.912	1.89	(1.02)	ZT-EDAU11	

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

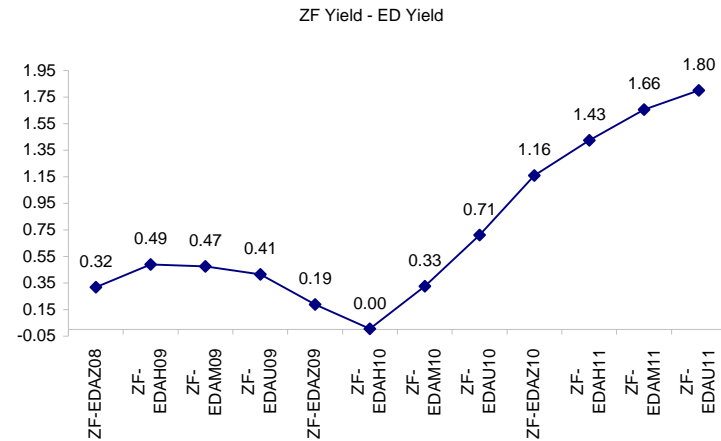


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.190	0.32	ZF-EDAZ08	-11.093
EDAH09	15.020	0.49	ZF-EDAH09	12.123
EDAM09	15.035	0.47	ZF-EDAM09	62.867
EDAU09	15.095	0.41	ZF-EDAU09	71.795
EDAZ09	15.320	0.19	ZF-EDAZ09	68.642
EDAH10	15.505	0.00	ZF-EDAH10	68.661
EDAM10	15.835	0.33	ZF-EDAM10	70.132
EDAU10	16.220	0.71	ZF-EDAU10	75.952
EDAZ10	16.670	1.16	ZF-EDAZ10	85.068
EDAH11	16.935	1.43	ZF-EDAH11	92.053
EDAM11	17.165	1.66	ZF-EDAM11	92.119
EDAU11	17.310	1.80	ZF-EDAU11	91.270

Price = Outright Decimal Price - Euro Contract Price

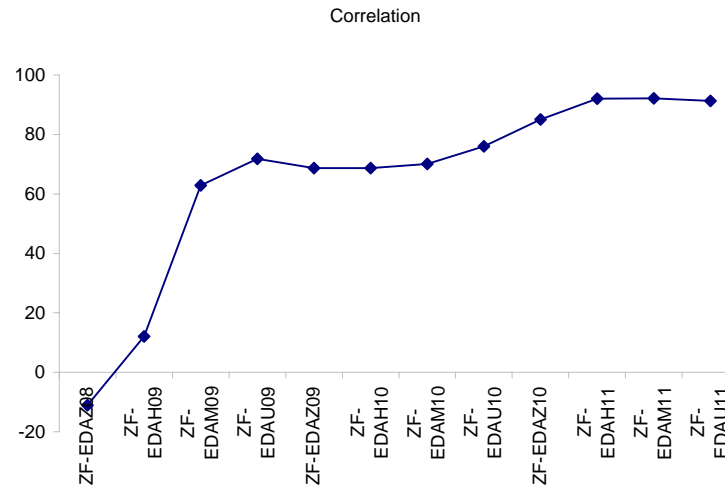
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



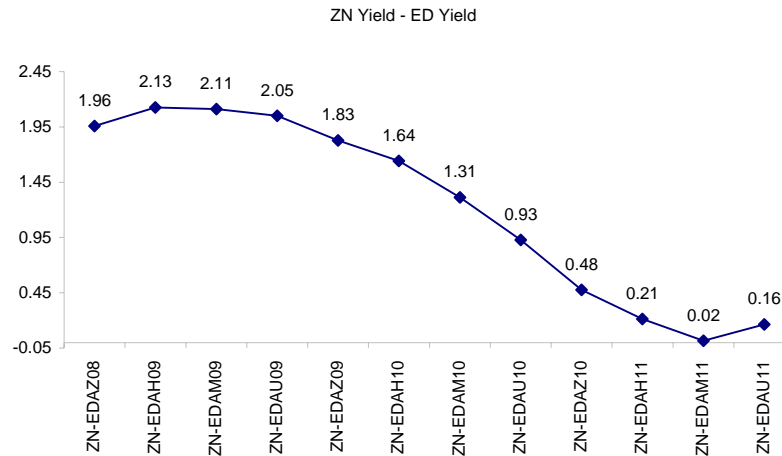
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.150	4.19	4.04	ZF-EDAZ08		
EDAH09	0.399	4.19	3.79	ZF-EDAH09		
EDAM09	0.649	4.19	3.54	ZF-EDAM09		
EDAU09	0.898	4.19	3.29	ZF-EDAU09		
EDAZ09	1.147	4.19	3.04	ZF-EDAZ09		
EDAH10	1.397	4.19	2.79	ZF-EDAH10		
EDAM10	1.646	4.19	2.54	ZF-EDAM10		
EDAU10	1.895	4.19	2.29	ZF-EDAU10		
EDAZ10	2.145	4.19	2.04	ZF-EDAZ10		
EDAH11	2.394	4.19	1.79	ZF-EDAH11		
EDAM11	2.643	4.19	1.54	ZF-EDAM11		
EDAU11	2.912	4.19	1.27	ZF-EDAU11		

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



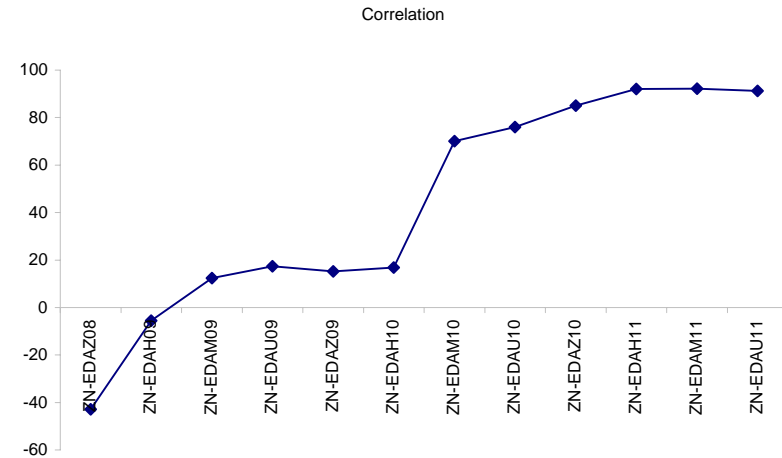
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.674	1.96	ZN-EDAZ08	-42.866
EDAH09	15.504	2.13	ZN-EDAH09	-5.523
EDAM09	15.519	2.11	ZN-EDAM09	12.340
EDAU09	15.579	2.05	ZN-EDAU09	17.436
EDAZ09	15.804	1.83	ZN-EDAZ09	15.269
EDAH10	15.989	1.64	ZN-EDAH10	16.776
EDAM10	16.319	1.31	ZN-EDAM10	70.132
EDAU10	16.704	0.93	ZN-EDAU10	75.952
EDAZ10	17.154	0.48	ZN-EDAZ10	85.068
EDAH11	17.419	0.21	ZN-EDAH11	92.053
EDAM11	17.649	0.02	ZN-EDAM11	92.119
EDAU11	17.794	0.16	ZN-EDAU11	91.270

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	0.150	6.42	6.27	ZN-EDAZ08		
EDAH09	0.399	6.42	6.02	ZN-EDAH09		
EDAM09	0.649	6.42	5.77	ZN-EDAM09		
EDAU09	0.898	6.42	5.52	ZN-EDAU09		
EDAZ09	1.147	6.42	5.27	ZN-EDAZ09		
EDAH10	1.397	6.42	5.02	ZN-EDAH10		
EDAM10	1.646	6.42	4.77	ZN-EDAM10		
EDAU10	1.895	6.42	4.52	ZN-EDAU10		
EDAZ10	2.145	6.42	4.27	ZN-EDAZ10		
EDAH11	2.394	6.42	4.02	ZN-EDAH11		
EDAM11	2.643	6.42	3.77	ZN-EDAM11		
EDAU11	2.912	6.42	3.51	ZN-EDAU11		

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

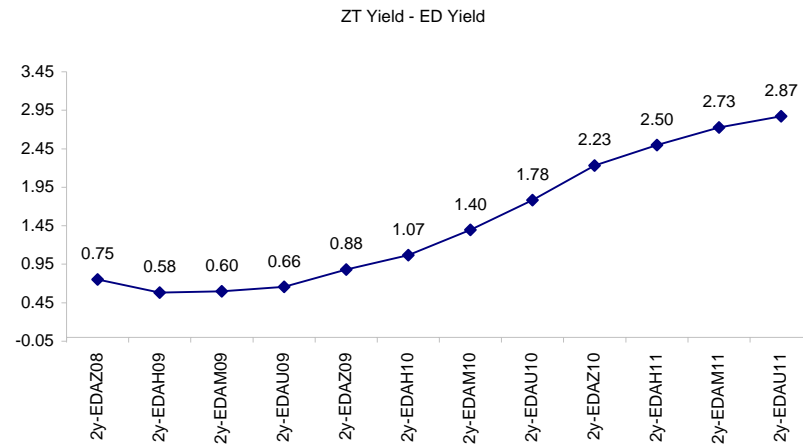


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.034	0.75	2y-EDAZ08	63.251
EDAH09	2.864	0.58	2y-EDAH09	10.367
EDAM09	2.879	0.60	2y-EDAM09	-12.797
EDAU09	2.939	0.66	2y-EDAU09	-15.422
EDAZ09	3.164	0.88	2y-EDAZ09	-7.804
EDAH10	3.349	1.07	2y-EDAH10	-9.686
EDAM10	3.679	1.40	2y-EDAM10	-13.323
EDAU10	4.064	1.78	2y-EDAU10	-22.543
EDAZ10	4.514	2.23	2y-EDAZ10	-35.435
EDAH11	4.779	2.50	2y-EDAH11	-45.710
EDAM11	5.009	2.73	2y-EDAM11	-50.996
EDAU11	5.154	2.87	2y-EDAU11	-54.535

Price = Outright Decimal Price - Euro Contract Price

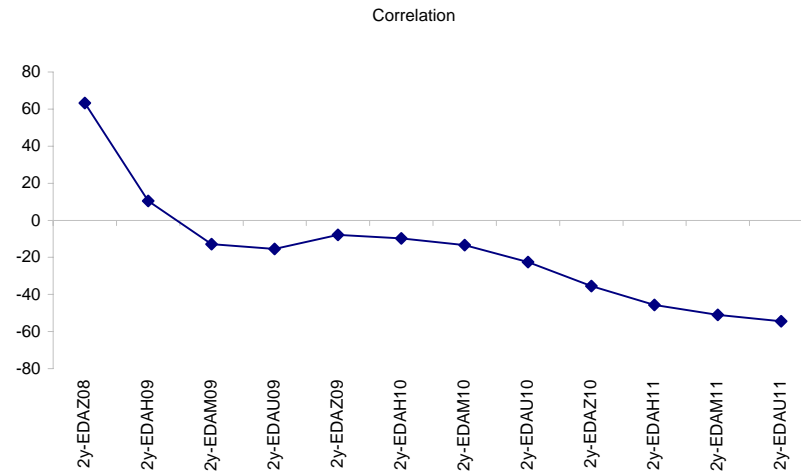
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.150	1.83	1.68	2y-EDAZ08	
EDAH09	0.399	1.83	1.43	2y-EDAH09	
EDAM09	0.649	1.83	1.18	2y-EDAM09	
EDAU09	0.898	1.83	0.93	2y-EDAU09	
EDAZ09	1.147	1.83	0.68	2y-EDAZ09	
EDAH10	1.397	1.83	0.43	2y-EDAH10	
EDAM10	1.646	1.83	0.18	2y-EDAM10	
EDAU10	1.895	1.83	(0.07)	2y-EDAU10	
EDAZ10	2.145	1.83	(0.32)	2y-EDAZ10	
EDAH11	2.394	1.83	(0.56)	2y-EDAH11	
EDAM11	2.643	1.83	(0.81)	2y-EDAM11	
EDAU11	2.912	1.83	(1.08)	2y-EDAU11	

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

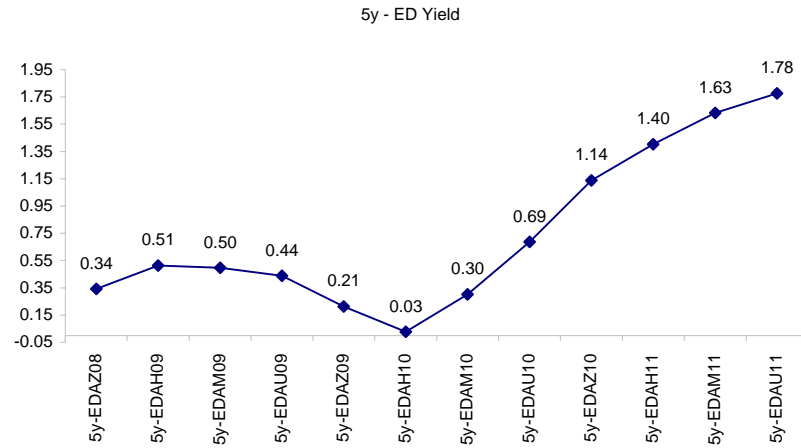


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.993	0.34	5y-EDAZ08	43.691
EDAH09	3.823	0.51	5y-EDAH09	-13.228
EDAM09	3.838	0.50	5y-EDAM09	-27.198
EDAU09	3.898	0.44	5y-EDAU09	-33.264
EDAZ09	4.123	0.21	5y-EDAZ09	-29.943
EDAH10	4.308	0.03	5y-EDAH10	-35.570
EDAM10	4.638	0.30	5y-EDAM10	-43.034
EDAU10	5.023	0.69	5y-EDAU10	-55.671
EDAZ10	5.473	1.14	5y-EDAZ10	-71.956
EDAH11	5.738	1.40	5y-EDAH11	-84.302
EDAM11	5.968	1.63	5y-EDAM11	-89.223
EDAU11	6.113	1.78	5y-EDAU11	-91.420

Price = Outright Decimal Price - Euro Contract Price

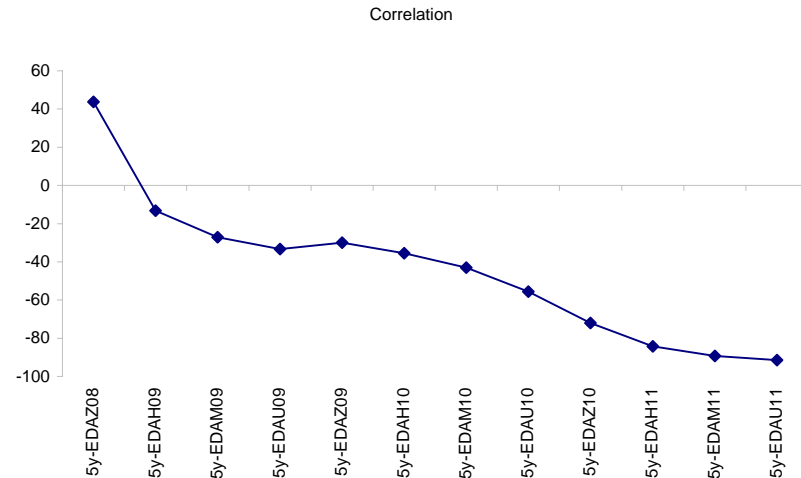
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.150	4.55	4.40	5y-EDAZ08
EDAH09	0.399	4.55	4.15	5y-EDAH09
EDAM09	0.649	4.55	3.90	5y-EDAM09
EDAU09	0.898	4.55	3.65	5y-EDAU09
EDAZ09	1.147	4.55	3.40	5y-EDAZ09
EDAH10	1.397	4.55	3.15	5y-EDAH10
EDAM10	1.646	4.55	2.90	5y-EDAM10
EDAU10	1.895	4.55	2.65	5y-EDAU10
EDAZ10	2.145	4.55	2.40	5y-EDAZ10
EDAH11	2.394	4.55	2.15	5y-EDAH11
EDAM11	2.643	4.55	1.90	5y-EDAM11
EDAU11	2.912	4.55	1.64	5y-EDAU11

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

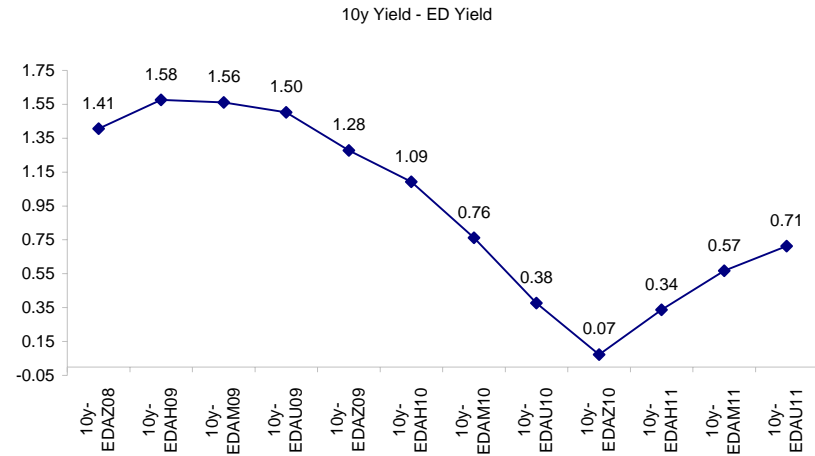


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.993	1.41	10y-EDAZ08	35.976
EDAH09	3.823	1.58	10y-EDAH09	-23.606
EDAM09	3.838	1.56	10y-EDAM09	-34.324
EDAU09	3.898	1.50	10y-EDAU09	-39.344
EDAZ09	4.123	1.28	10y-EDAZ09	-35.983
EDAH10	4.308	1.09	10y-EDAH10	-41.553
EDAM10	4.638	0.76	10y-EDAM10	-49.383
EDAU10	5.023	0.38	10y-EDAU10	-61.935
EDAZ10	5.473	0.07	10y-EDAZ10	-78.028
EDAH11	5.738	0.34	10y-EDAH11	-90.109
EDAM11	5.968	0.57	10y-EDAM11	-94.679
EDAU11	6.113	0.71	10y-EDAU11	-96.409

Price = Outright Decimal Price - Euro Contract Price

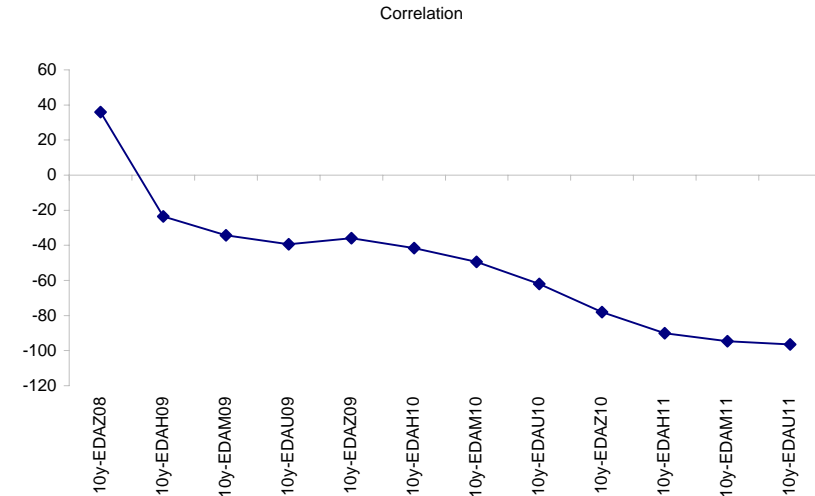
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.150	8.01	7.86	10y-EDAZ08
EDAH09	0.399	8.01	7.61	10y-EDAH09
EDAM09	0.649	8.01	7.36	10y-EDAM09
EDAU09	0.898	8.01	7.11	10y-EDAU09
EDAZ09	1.147	8.01	6.87	10y-EDAZ09
EDAH10	1.397	8.01	6.62	10y-EDAH10
EDAM10	1.646	8.01	6.37	10y-EDAM10
EDAU10	1.895	8.01	6.12	10y-EDAU10
EDAZ10	2.145	8.01	5.87	10y-EDAZ10
EDAH11	2.394	8.01	5.62	10y-EDAH11
EDAM11	2.643	8.01	5.37	10y-EDAM11
EDAU11	2.912	8.01	5.10	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.

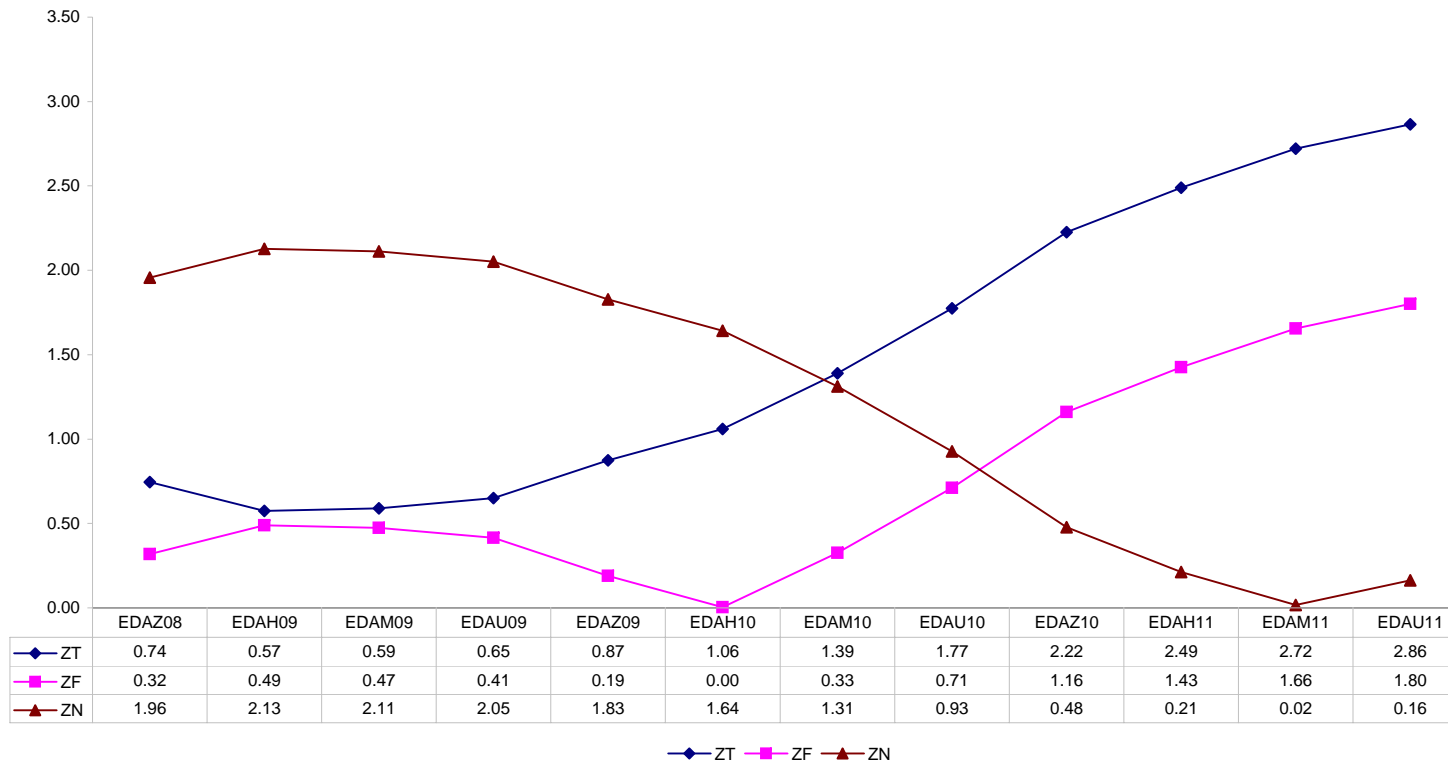
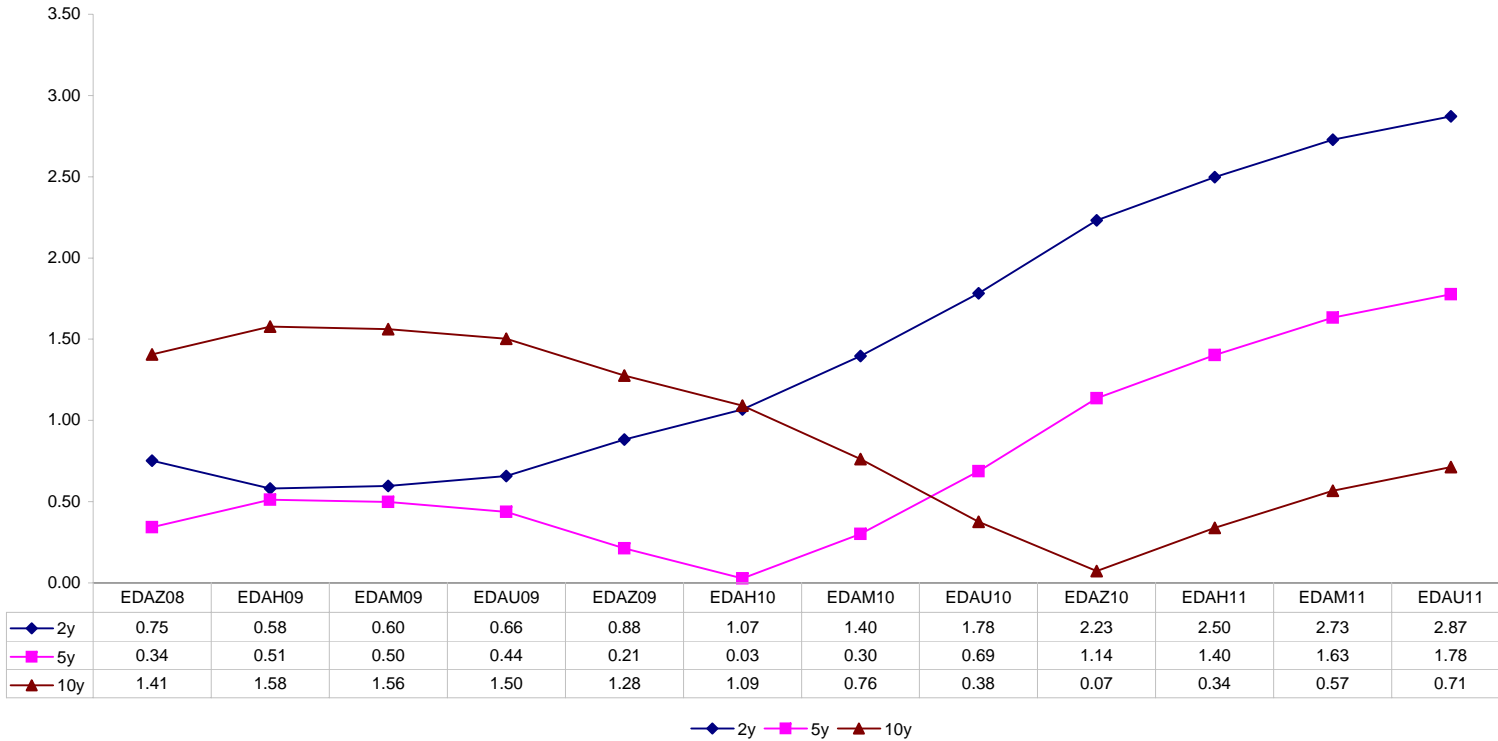
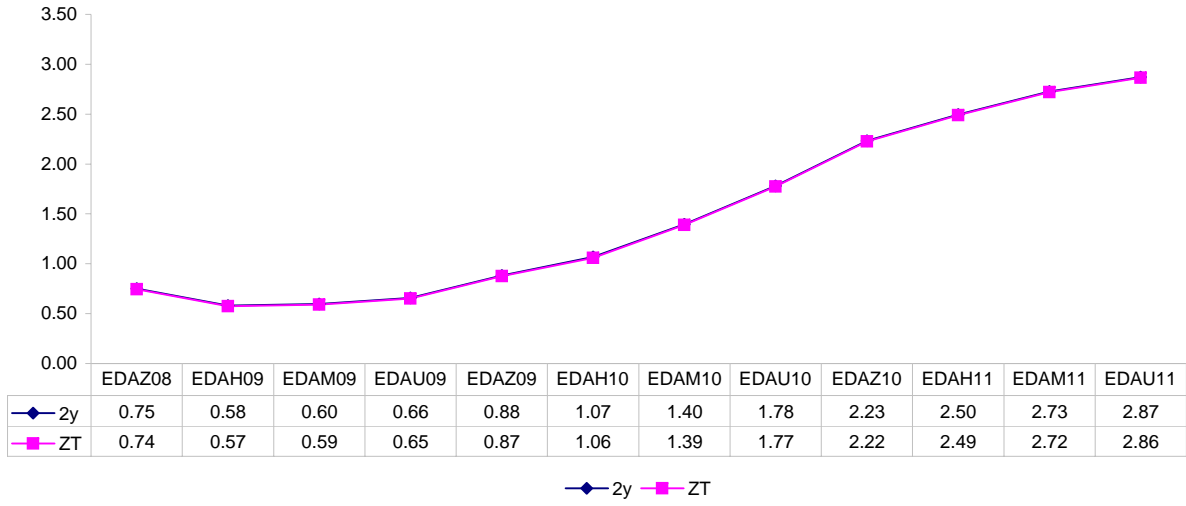


Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



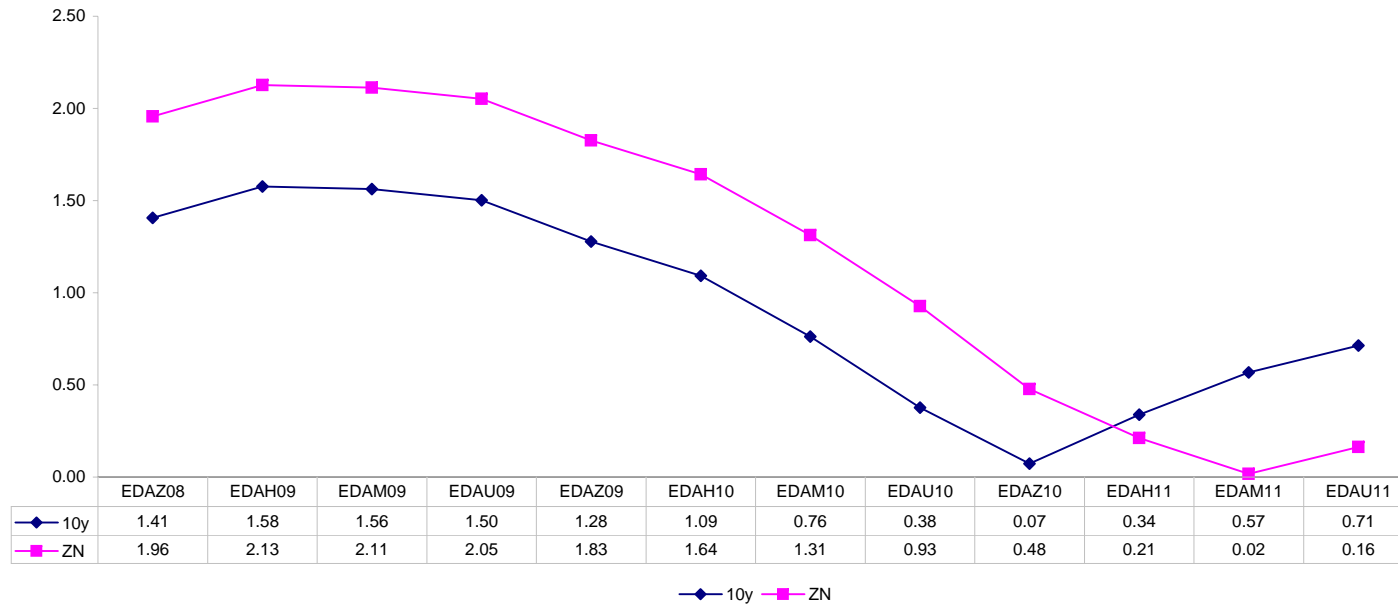
2y Basis TED Curve



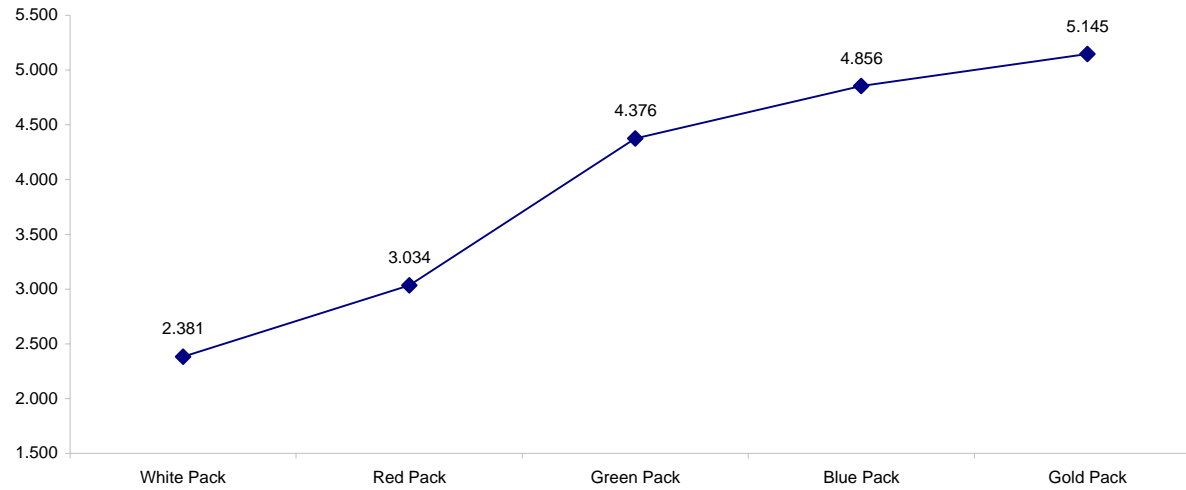
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.381	6.000	9766.500
Red Pack	3.034	1.375	9703.000
Green Pack	4.376	3.625	9573.000
Blue Pack	4.856	2.375	9526.750
Gold Pack	5.145	1.750	9498.875



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

