

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	108.2094	108.067	0.572	1.90
ZF	118.0000	118.000	1.255	1.26
ZN	125.8906	125.285	2.419	6.44
2y	100.803	100.2570	0.829	1.94
5y	101.813	101.2600	1.614	4.71
10y	109.328	109.1050	2.670	8.33

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	98.100	1.900	4	0.010	DEC	
EDAH09	98.405	1.595	95	0.260	MAR	White Pack
EDAM09	98.380	1.620	186	0.509	JUN	
EDAU09	98.295	1.705	277	0.758	SEP	
EDAZ09	98.155	1.845	368	1.008	DEC	
EDAH10	98.095	1.905	459	1.257	MAR	Red Pack
EDAM10	97.945	2.055	550	1.506	JUN	
EDAU10	97.795	2.205	641	1.755	SEP	
EDAZ10	97.585	2.415	732	2.005	DEC	
EDAH11	97.450	2.550	823	2.254	MAR	Green Pack
EDAM11	97.240	2.760	914	2.503	JUN	
EDAU11	97.080	2.920	1012	2.772	SEP	
EDAZ11	96.935	3.065	1103	3.021	DEC	
EDAH12	96.930	3.070	1194	3.271	MAR	Blue Pack
EDAM12	96.900	3.100	1285	3.520	JUN	
EDAU12	96.835	3.165	1376	3.769	SEP	
EDAZ12	96.760	3.240	1467	4.019	DEC	
EDAH13	96.790	3.210	1558	4.268	MAR	Gold Pack
EDAM13	96.710	3.290	1649	4.517	JUN	
EDZU13	96.575	3.425	1831	5.016	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	1.736	4.437	9829.500	
Red Pack	2.041	7.375	9799.750	Pack Prices
Green Pack	2.716	5.750	9733.875	
Blue Pack	3.168	2.250	9690.000	
Gold Pack		1.625	9672.750	

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.

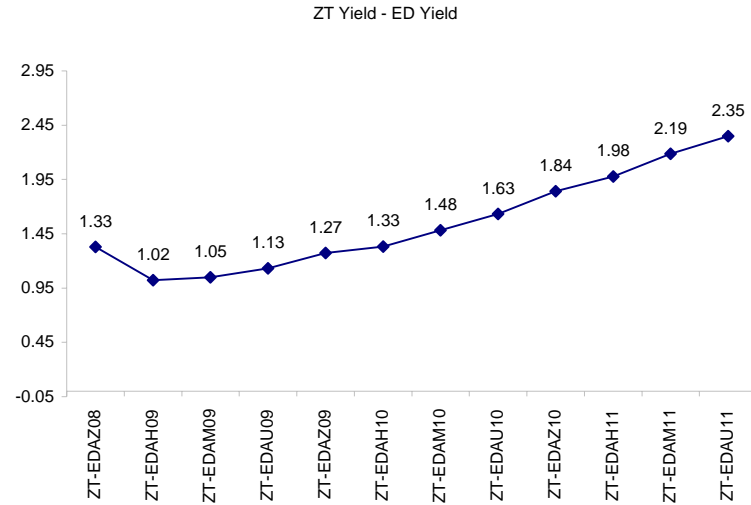
jgoulding@ghco.com

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.

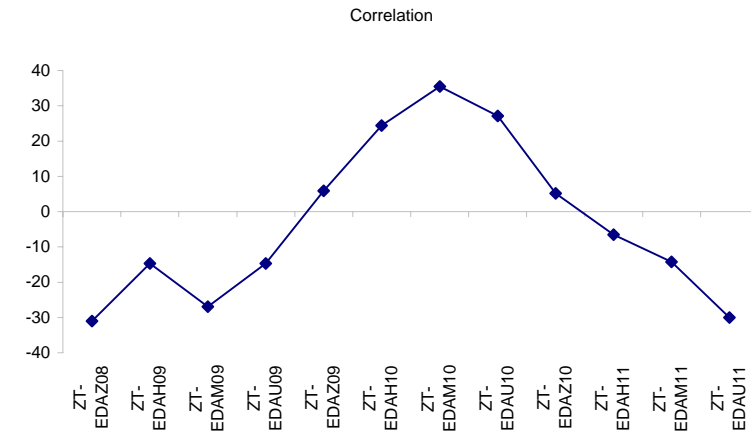
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.109	1.33	ZT-EDAZ08	-31.038
EDAH09	9.804	1.02	ZT-EDAH09	-14.680
EDAM09	9.829	1.05	ZT-EDAM09	-26.949
EDAU09	9.914	1.13	ZT-EDAU09	-14.680
EDAZ09	10.054	1.27	ZT-EDAZ09	5.902
EDAH10	10.114	1.33	ZT-EDAH10	24.408
EDAM10	10.264	1.48	ZT-EDAM10	35.499
EDAU10	10.414	1.63	ZT-EDAU10	27.086
EDAZ10	10.624	1.84	ZT-EDAZ10	5.127
EDAH11	10.759	1.98	ZT-EDAH11	-6.504
EDAM11	10.969	2.19	ZT-EDAM11	-14.197
EDAU11	11.129	2.35	ZT-EDAU11	-29.994

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	0.010	1.90	1.89	ZT-EDAZ08		
EDAH09	0.260	1.90	1.64	ZT-EDAH09		
EDAM09	0.509	1.90	1.39	ZT-EDAM09		
EDAU09	0.758	1.90	1.15	ZT-EDAU09		
EDAZ09	1.008	1.90	0.90	ZT-EDAZ09		
EDAH10	1.257	1.90	0.65	ZT-EDAH10		
EDAM10	1.506	1.90	0.40	ZT-EDAM10		
EDAU10	1.755	1.90	0.15	ZT-EDAU10		
EDAZ10	2.005	1.90	(0.10)	ZT-EDAZ10		
EDAH11	2.254	1.90	(0.35)	ZT-EDAH11		
EDAM11	2.503	1.90	(0.60)	ZT-EDAM11		
EDAU11	2.772	1.90	(0.87)	ZT-EDAU11		

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

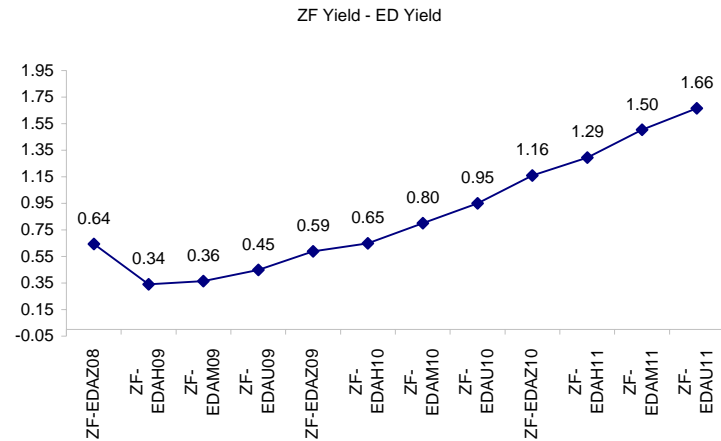


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	19.900	0.64	ZF-EDAZ08	30.205
EDAH09	19.595	0.34	ZF-EDAH09	37.360
EDAM09	19.620	0.36	ZF-EDAM09	49.165
EDAU09	19.705	0.45	ZF-EDAU09	51.052
EDAZ09	19.845	0.59	ZF-EDAZ09	43.029
EDAH10	19.905	0.65	ZF-EDAH10	35.802
EDAM10	20.055	0.80	ZF-EDAM10	31.900
EDAU10	20.205	0.95	ZF-EDAU10	42.701
EDAZ10	20.415	1.16	ZF-EDAZ10	60.954
EDAH11	20.550	1.29	ZF-EDAH11	66.659
EDAM11	20.760	1.50	ZF-EDAM11	71.207
EDAU11	20.920	1.66	ZF-EDAU11	80.688

Price = Outright Decimal Price - Euro Contract Price

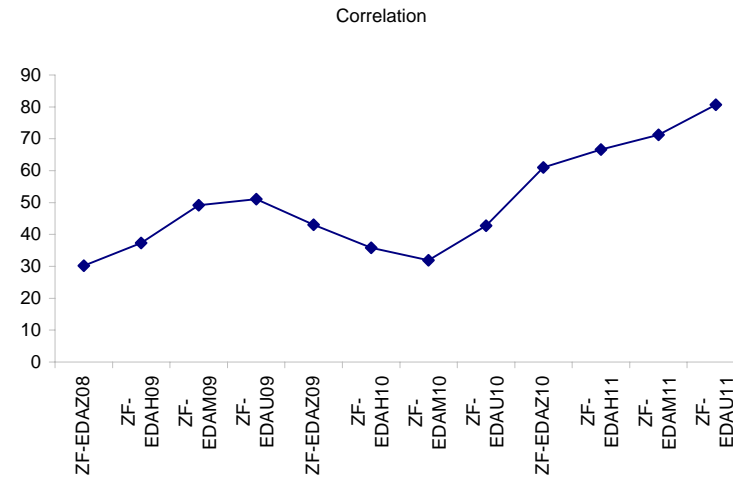
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAZ08	0.010	1.26	1.25		ZF-EDAZ08
EDAH09	0.260	1.26	1.00		ZF-EDAH09
EDAM09	0.509	1.26	0.75		ZF-EDAM09
EDAU09	0.758	1.26	0.50		ZF-EDAU09
EDAZ09	1.008	1.26	0.25		ZF-EDAZ09
EDAH10	1.257	1.26	(0.00)		ZF-EDAH10
EDAM10	1.506	1.26	(0.25)		ZF-EDAM10
EDAU10	1.755	1.26	(0.50)		ZF-EDAU10
EDAZ10	2.005	1.26	(0.75)		ZF-EDAZ10
EDAH11	2.254	1.26	(1.00)		ZF-EDAH11
EDAM11	2.503	1.26	(1.25)		ZF-EDAM11
EDAU11	2.772	1.26	(1.52)		ZF-EDAU11

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

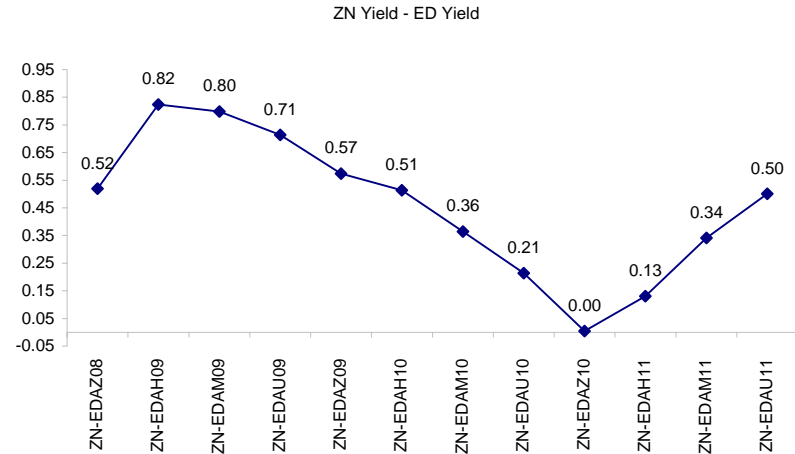


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	27.791	0.52	ZN-EDAZ08	17.332
EDAH09	27.486	0.82	ZN-EDAH09	22.944
EDAM09	27.511	0.80	ZN-EDAM09	35.270
EDAU09	27.596	0.71	ZN-EDAU09	35.650
EDAZ09	27.736	0.57	ZN-EDAZ09	25.906
EDAH10	27.796	0.51	ZN-EDAH10	18.858
EDAM10	27.946	0.36	ZN-EDAM10	31.900
EDAU10	28.096	0.21	ZN-EDAU10	42.701
EDAZ10	28.306	0.00	ZN-EDAZ10	60.954
EDAH11	28.441	0.13	ZN-EDAH11	66.659
EDAM11	28.651	0.34	ZN-EDAM11	71.207
EDAU11	28.811	0.50	ZN-EDAU11	80.688

Price = Outright Decimal Price - Euro Contract Price

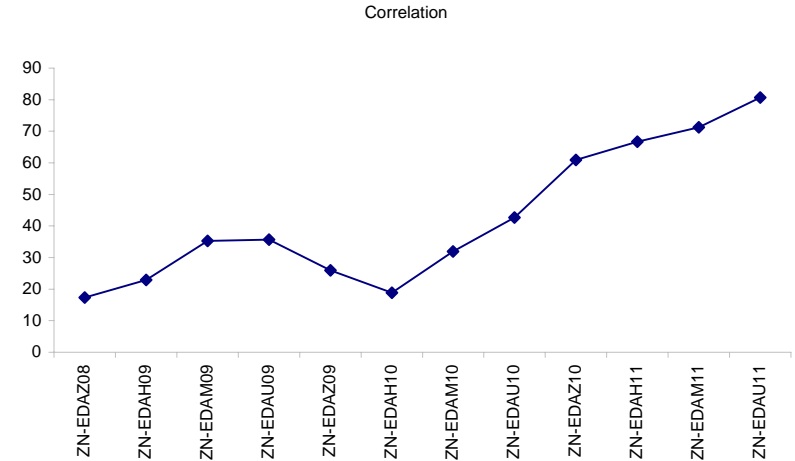
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAZ08	0.010	6.44	6.43	ZN-EDAZ08		
EDAH09	0.260	6.44	6.18	ZN-EDAH09		
EDAM09	0.509	6.44	5.93	ZN-EDAM09		
EDAU09	0.758	6.44	5.68	ZN-EDAU09		
EDAZ09	1.008	6.44	5.43	ZN-EDAZ09		
EDAH10	1.257	6.44	5.18	ZN-EDAH10		
EDAM10	1.506	6.44	4.93	ZN-EDAM10		
EDAU10	1.755	6.44	4.68	ZN-EDAU10		
EDAZ10	2.005	6.44	4.43	ZN-EDAZ10		
EDAH11	2.254	6.44	4.18	ZN-EDAH11		
EDAM11	2.503	6.44	3.93	ZN-EDAM11		
EDAU11	2.772	6.44	3.67	ZN-EDAU11		

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

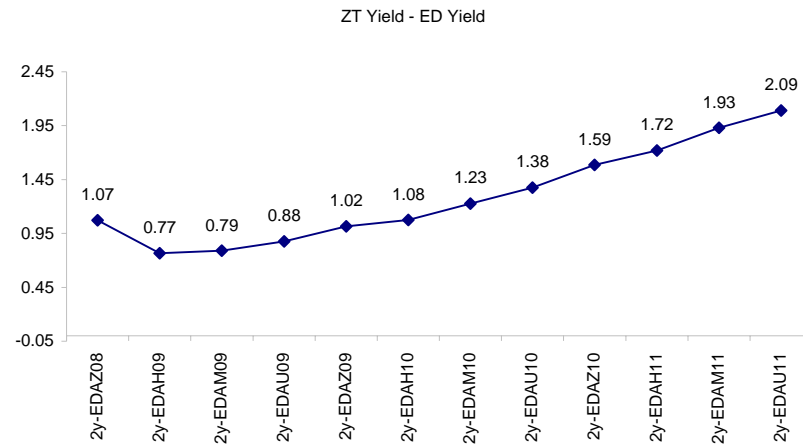


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.703	1.07	2y-EDAZ08	-64.239
EDAH09	2.398	0.77	2y-EDAH09	-72.109
EDAM09	2.423	0.79	2y-EDAM09	-80.178
EDAU09	2.508	0.88	2y-EDAU09	-79.837
EDAZ09	2.648	1.02	2y-EDAZ09	-70.229
EDAH10	2.708	1.08	2y-EDAH10	-56.756
EDAM10	2.858	1.23	2y-EDAM10	-45.495
EDAU10	3.008	1.38	2y-EDAU10	-49.855
EDAZ10	3.218	1.59	2y-EDAZ10	-62.824
EDAH11	3.353	1.72	2y-EDAH11	-63.293
EDAM11	3.563	1.93	2y-EDAM11	-64.482
EDAU11	3.723	2.09	2y-EDAU11	-71.615

Price = Outright Decimal Price - Euro Contract Price

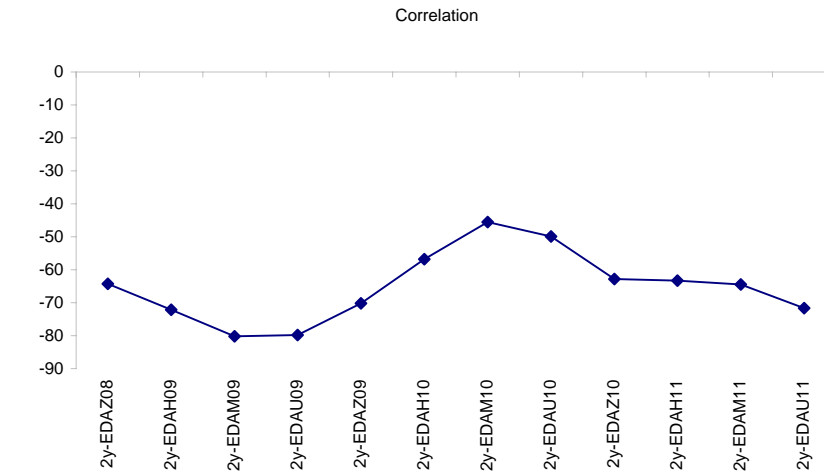
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.010	1.94	1.93	2y-EDAZ08	
EDAH09	0.260	1.94	1.68	2y-EDAH09	
EDAM09	0.509	1.94	1.43	2y-EDAM09	
EDAU09	0.758	1.94	1.18	2y-EDAU09	
EDAZ09	1.008	1.94	0.93	2y-EDAZ09	
EDAH10	1.257	1.94	0.68	2y-EDAH10	
EDAM10	1.506	1.94	0.43	2y-EDAM10	
EDAU10	1.755	1.94	0.19	2y-EDAU10	
EDAZ10	2.005	1.94	(0.06)	2y-EDAZ10	
EDAH11	2.254	1.94	(0.31)	2y-EDAH11	
EDAM11	2.503	1.94	(0.56)	2y-EDAM11	
EDAU11	2.772	1.94	(0.83)	2y-EDAU11	

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

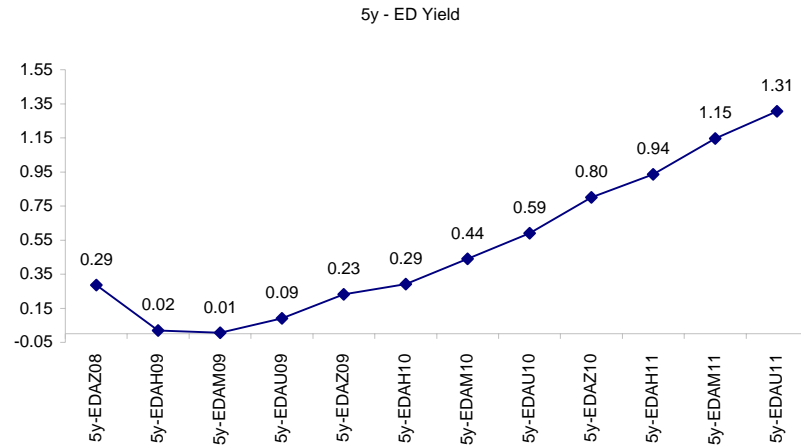


	5y			Correlation* (percent)
	Spread Price	Spread Yield	Spread Name	
EDAZ08	3.713	0.29	5y-EDAZ08	-43.607
EDAH09	3.408	0.02	5y-EDAH09	-51.675
EDAM09	3.433	0.01	5y-EDAM09	-62.444
EDAU09	3.518	0.09	5y-EDAU09	-63.219
EDAZ09	3.658	0.23	5y-EDAZ09	-53.459
EDAH10	3.718	0.29	5y-EDAH10	-43.062
EDAM10	3.868	0.44	5y-EDAM10	-35.994
EDAU10	4.018	0.59	5y-EDAU10	-44.990
EDAZ10	4.228	0.80	5y-EDAZ10	-62.757
EDAH11	4.363	0.94	5y-EDAH11	-67.550
EDAM11	4.573	1.15	5y-EDAM11	-71.565
EDAU11	4.733	1.31	5y-EDAU11	-80.718

Price = Outright Decimal Price - Euro Contract Price

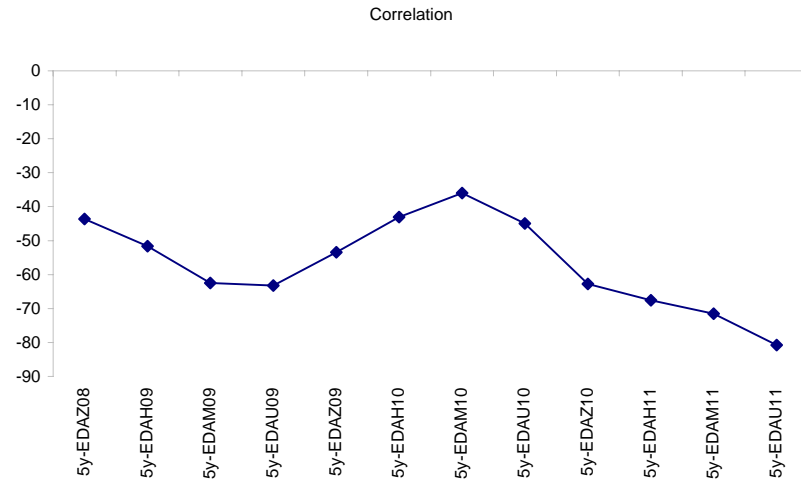
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			5Y Duration	Spread Duration	
	Fraction of year	5Y Duration	Spread Duration			
EDAZ08	0.010	4.71	4.70	5y-EDAZ08		
EDAH09	0.260	4.71	4.45	5y-EDAH09		
EDAM09	0.509	4.71	4.21	5y-EDAM09		
EDAU09	0.758	4.71	3.96	5y-EDAU09		
EDAZ09	1.008	4.71	3.71	5y-EDAZ09		
EDAH10	1.257	4.71	3.46	5y-EDAH10		
EDAM10	1.506	4.71	3.21	5y-EDAM10		
EDAU10	1.755	4.71	2.96	5y-EDAU10		
EDAZ10	2.005	4.71	2.71	5y-EDAZ10		
EDAH11	2.254	4.71	2.46	5y-EDAH11		
EDAM11	2.503	4.71	2.21	5y-EDAM11		
EDAU11	2.772	4.71	1.94	5y-EDAU11		

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

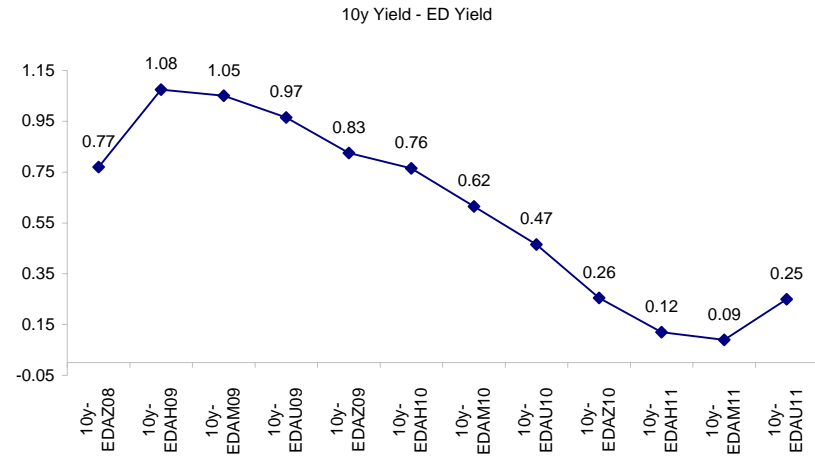


	10y			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAZ08	3.713	0.77	10y-EDAZ08	-30.049
EDAH09	3.408	1.08	10y-EDAH09	-38.898
EDAM09	3.433	1.05	10y-EDAM09	-50.674
EDAU09	3.518	0.97	10y-EDAU09	-52.191
EDAZ09	3.658	0.83	10y-EDAZ09	-43.659
EDAH10	3.718	0.76	10y-EDAH10	-35.696
EDAM10	3.868	0.62	10y-EDAM10	-31.185
EDAU10	4.018	0.47	10y-EDAU10	-41.449
EDAZ10	4.228	0.26	10y-EDAZ10	-59.659
EDAH11	4.363	0.12	10y-EDAH11	-65.253
EDAM11	4.573	0.09	10y-EDAM11	-69.900
EDAU11	4.733	0.25	10y-EDAU11	-79.518

Price = Outright Decimal Price - Euro Contract Price

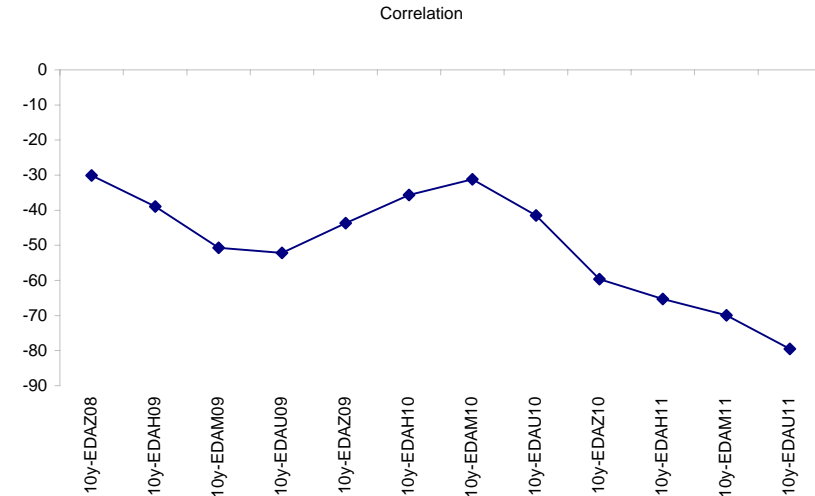
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.010	8.33	8.32	10y-EDAZ08
EDAH09	0.260	8.33	8.07	10y-EDAH09
EDAM09	0.509	8.33	7.82	10y-EDAM09
EDAU09	0.758	8.33	7.57	10y-EDAU09
EDAZ09	1.008	8.33	7.32	10y-EDAZ09
EDAH10	1.257	8.33	7.07	10y-EDAH10
EDAM10	1.506	8.33	6.82	10y-EDAM10
EDAU10	1.755	8.33	6.57	10y-EDAU10
EDAZ10	2.005	8.33	6.32	10y-EDAZ10
EDAH11	2.254	8.33	6.07	10y-EDAH11
EDAM11	2.503	8.33	5.82	10y-EDAM11
EDAU11	2.772	8.33	5.56	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.

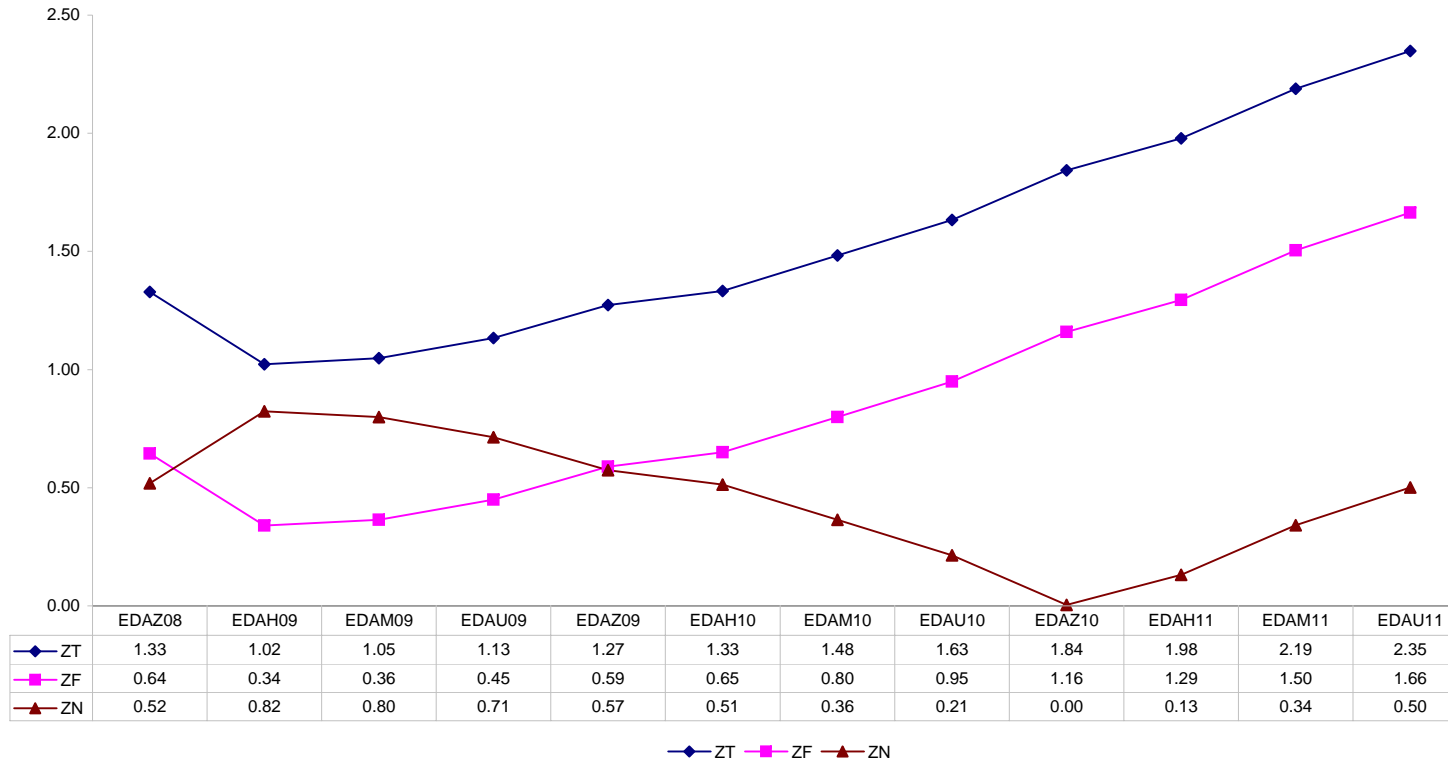
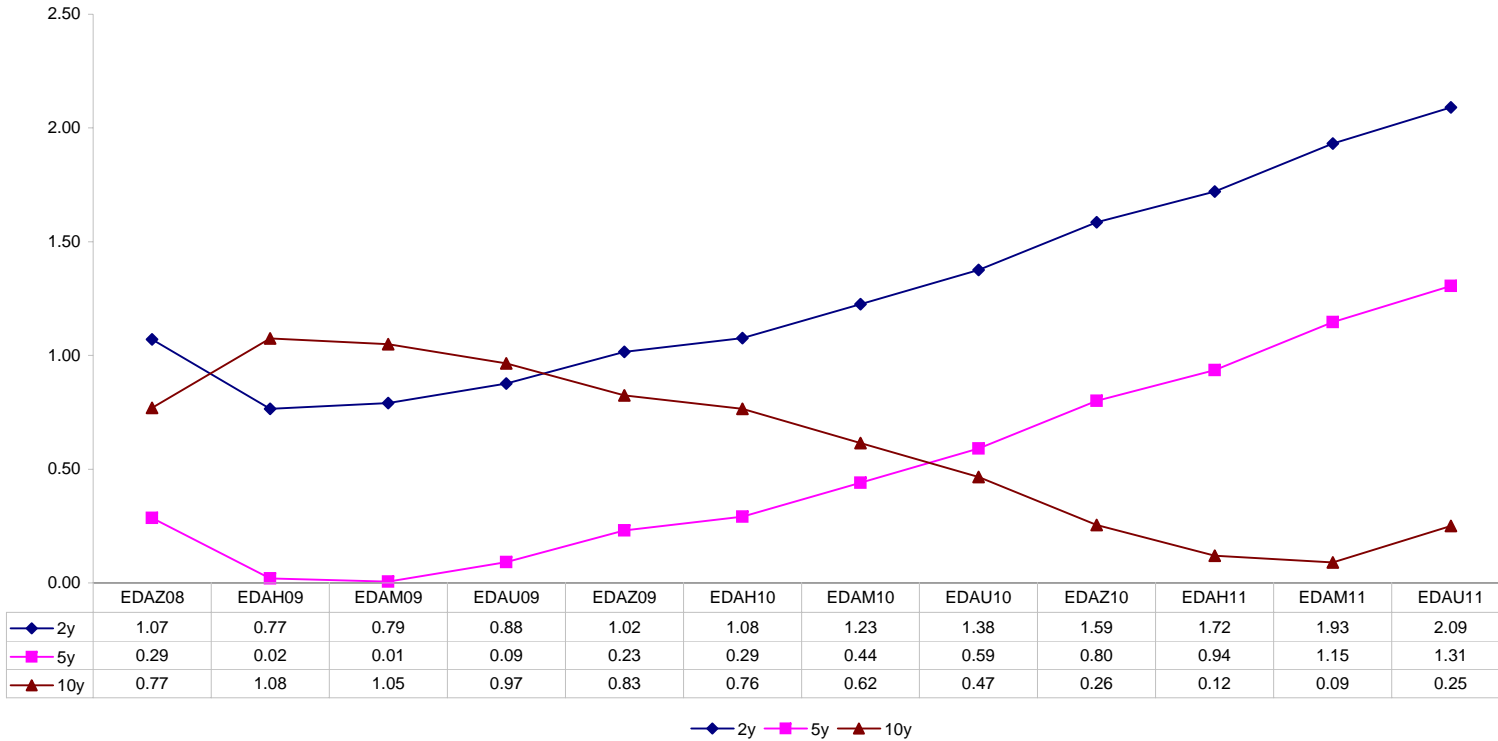
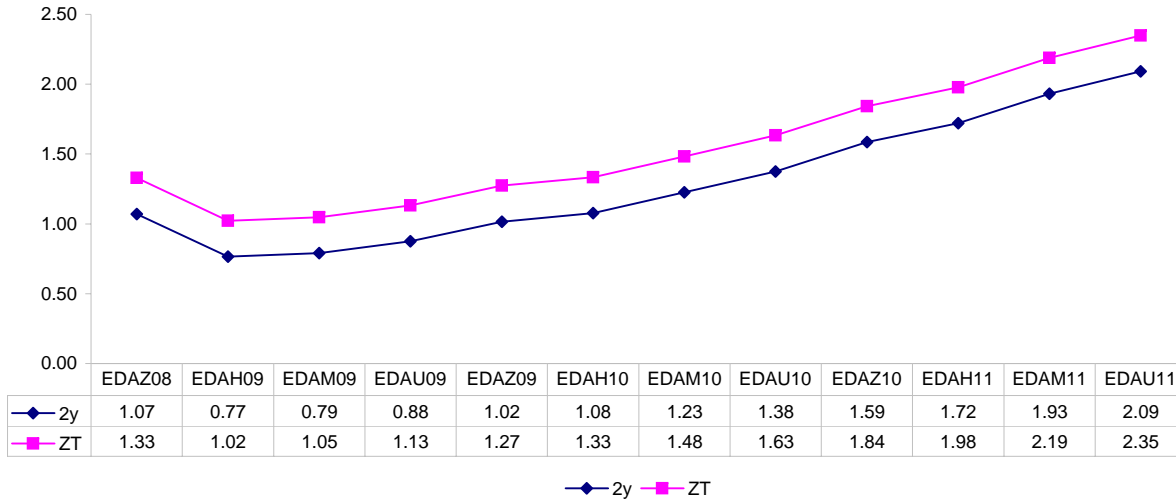


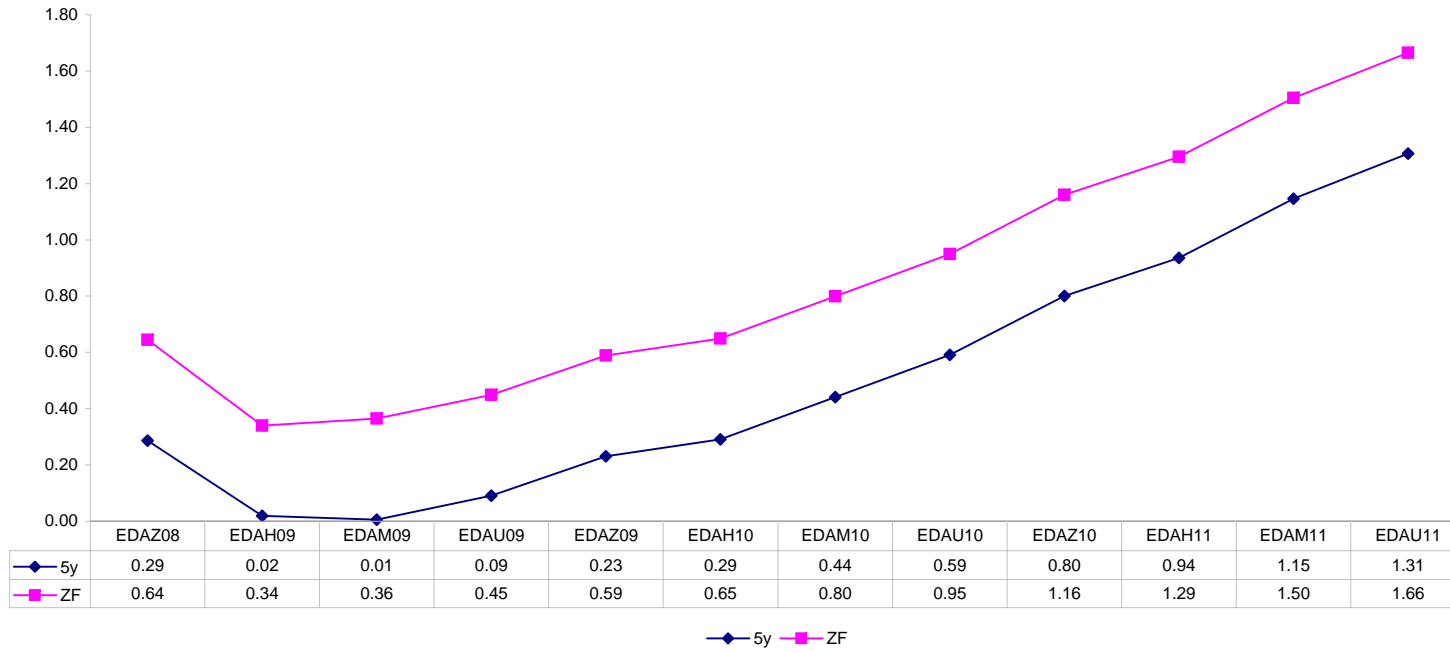
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



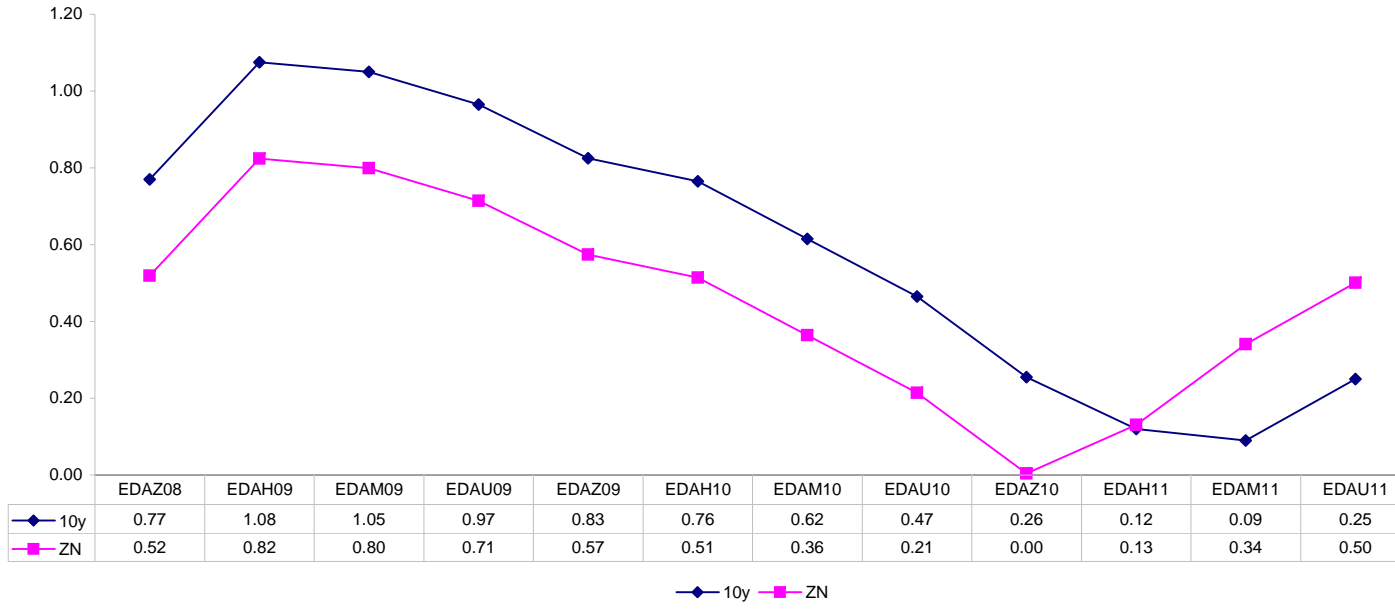
2y Basis TED Curve



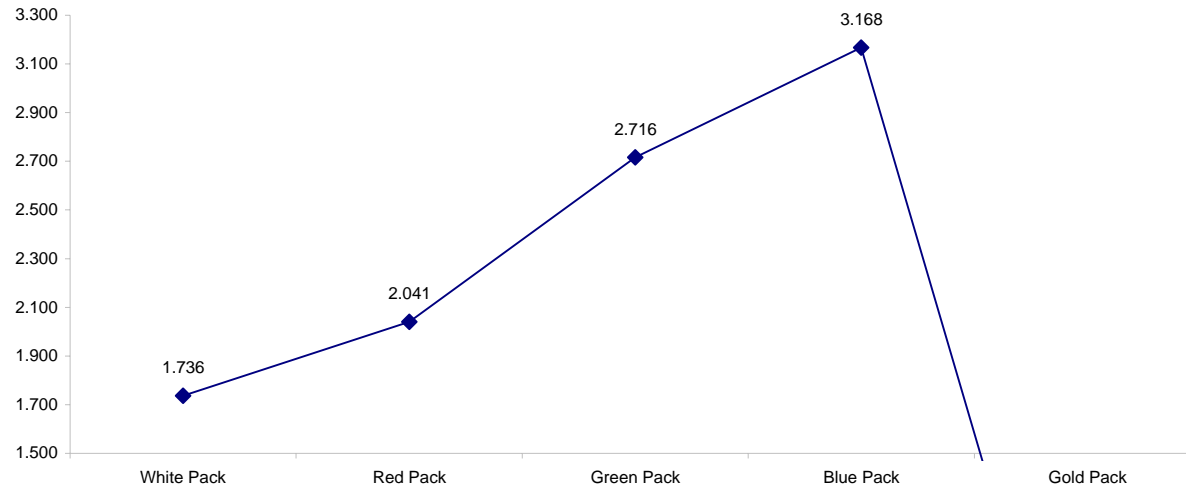
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	1.736	4.437	9829.500
Red Pack	2.041	7.375	9799.750
Green Pack	2.716	5.750	9733.875
Blue Pack	3.168	2.250	9690.000
Gold Pack		1.625	9672.750



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

