

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	107.4125	107.132	1.609	1.88
ZF	113.4750	113.152	2.647	4.17
ZN	114.5469	114.175	3.760	6.45
2y	100.741	100.2370	1.602	1.81
5y	101.944	101.3020	2.698	4.53
10y	101.781	101.2500	3.774	8.00

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.495	2.505	48	0.131	DEC	
EDAH09	97.615	2.385	139	0.380	MAR	White Pack
EDAM09	97.520	2.480	230	0.629	JUN	
EDAU09	97.410	2.590	321	0.879	SEP	
EDAZ09	97.250	2.750	412	1.128	DEC	
EDAH10	97.195	2.805	503	1.377	MAR	Red Pack
EDAM10	96.975	3.025	594	1.627	JUN	
EDAU10	96.655	3.345	685	1.876	SEP	
EDAZ10	96.205	3.795	776	2.125	DEC	
EDAH11	95.910	4.090	867	2.375	MAR	Green Pack
EDAM11	95.655	4.345	958	2.624	JUN	
EDAU11	95.465	4.535	1056	2.892	SEP	
EDAZ11	95.320	4.680	1147	3.142	DEC	
EDAH12	95.320	4.680	1238	3.391	MAR	Blue Pack
EDAM12	95.230	4.770	1329	3.640	JUN	
EDAU12	95.180	4.820	1420	3.890	SEP	
EDAZ12	95.095	4.905	1511	4.139	DEC	
EDAH13	95.085	4.915	1602	4.388	MAR	Gold Pack
EDAM13	95.015	4.985	1693	4.638	JUN	
EDZU13	94.995	5.005	1875	5.136	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.540	1.000	9751.000	Pack Prices
Red Pack	3.045	-5.875	9701.875	
Green Pack	4.295	-4.750	9580.875	
Blue Pack	4.861	-5.625	9526.250	
Gold Pack		-3.250	9505.000	

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.

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Correlations (Important)

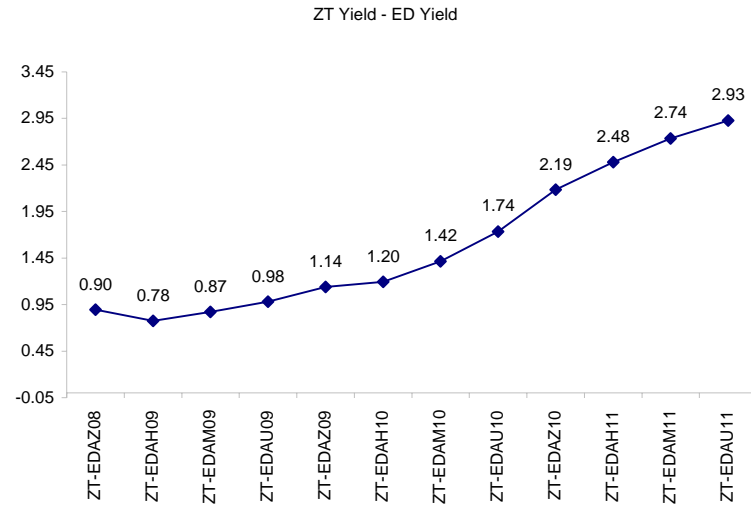
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based on yield than price.

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.918	0.90	ZT-EDAZ08	15.994
EDAH09	9.798	0.78	ZT-EDAH09	-16.254
EDAM09	9.893	0.87	ZT-EDAM09	-30.569
EDAU09	10.003	0.98	ZT-EDAU09	-16.254
EDAZ09	10.163	1.14	ZT-EDAZ09	25.605
EDAH10	10.218	1.20	ZT-EDAH10	54.178
EDAM10	10.438	1.42	ZT-EDAM10	64.458
EDAU10	10.758	1.74	ZT-EDAU10	67.506
EDAZ10	11.208	2.19	ZT-EDAZ10	66.634
EDAH11	11.503	2.48	ZT-EDAH11	64.529
EDAM11	11.758	2.74	ZT-EDAM11	62.805
EDAU11	11.948	2.93	ZT-EDAU11	60.660

Price = Outright Decimal Price - Euro Contract Price

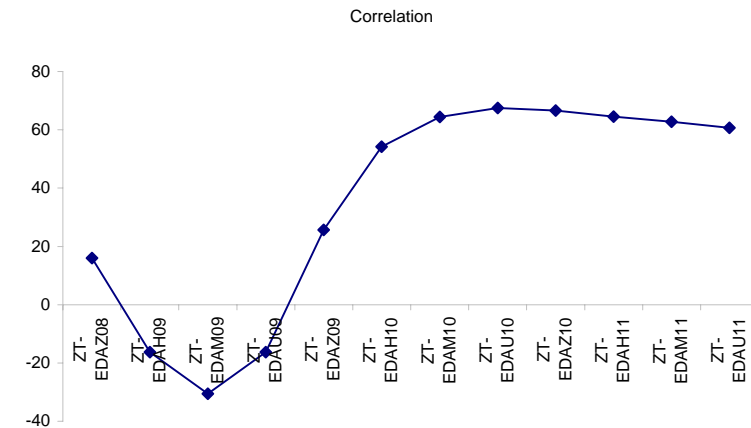
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			ZT Duration	Spread Duration	
EDAZ08	0.131	1.88	1.75	ZT-EDAZ08		
EDAH09	0.380	1.88	1.50	ZT-EDAH09		
EDAM09	0.629	1.88	1.25	ZT-EDAM09		
EDAU09	0.879	1.88	1.00	ZT-EDAU09		
EDAZ09	1.128	1.88	0.75	ZT-EDAZ09		
EDAH10	1.377	1.88	0.50	ZT-EDAH10		
EDAM10	1.627	1.88	0.25	ZT-EDAM10		
EDAU10	1.876	1.88	(0.00)	ZT-EDAU10		
EDAZ10	2.125	1.88	(0.25)	ZT-EDAZ10		
EDAH11	2.375	1.88	(0.50)	ZT-EDAH11		
EDAM11	2.624	1.88	(0.75)	ZT-EDAM11		
EDAU11	2.892	1.88	(1.02)	ZT-EDAU11		

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

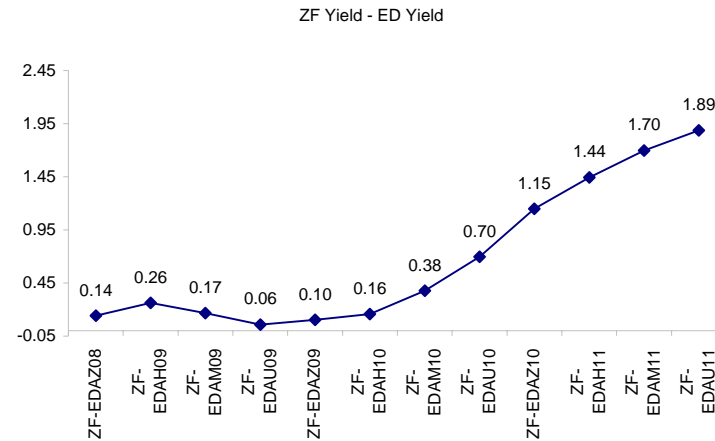


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.980	0.14	ZF-EDAZ08	59.295
EDAH09	15.860	0.26	ZF-EDAH09	-15.061
EDAM09	15.955	0.17	ZF-EDAM09	-25.018
EDAU09	16.065	0.06	ZF-EDAU09	-3.403
EDAZ09	16.225	0.10	ZF-EDAZ09	52.647
EDAH10	16.280	0.16	ZF-EDAH10	84.788
EDAM10	16.500	0.38	ZF-EDAM10	94.674
EDAU10	16.820	0.70	ZF-EDAU10	96.654
EDAZ10	17.270	1.15	ZF-EDAZ10	96.437
EDAH11	17.565	1.44	ZF-EDAH11	95.299
EDAM11	17.820	1.70	ZF-EDAM11	93.866
EDAU11	18.010	1.89	ZF-EDAU11	91.323

Price = Outright Decimal Price - Euro Contract Price

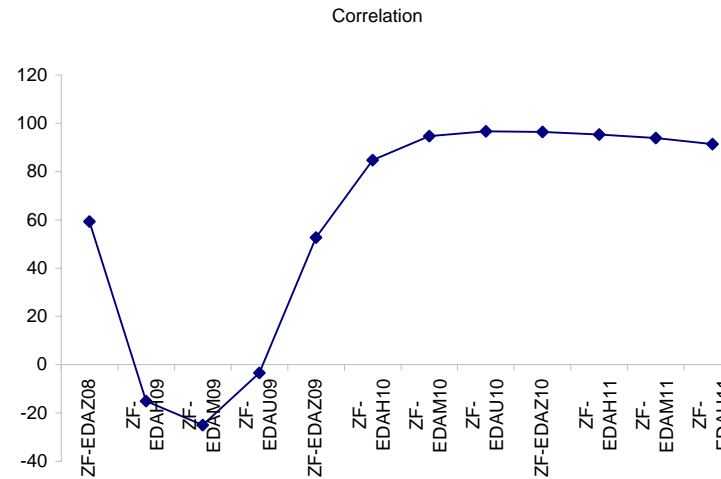
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.131	4.17	4.04	ZF-EDAZ08		
EDAH09	0.380	4.17	3.79	ZF-EDAH09		
EDAM09	0.629	4.17	3.54	ZF-EDAM09		
EDAU09	0.879	4.17	3.29	ZF-EDAU09		
EDAZ09	1.128	4.17	3.04	ZF-EDAZ09		
EDAH10	1.377	4.17	2.79	ZF-EDAH10		
EDAM10	1.627	4.17	2.54	ZF-EDAM10		
EDAU10	1.876	4.17	2.30	ZF-EDAU10		
EDAZ10	2.125	4.17	2.05	ZF-EDAZ10		
EDAH11	2.375	4.17	1.80	ZF-EDAH11		
EDAM11	2.624	4.17	1.55	ZF-EDAM11		
EDAU11	2.892	4.17	1.28	ZF-EDAU11		

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

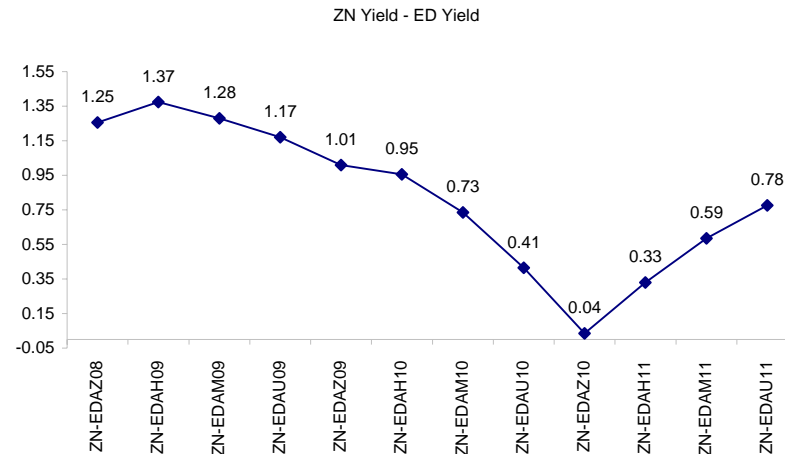


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	17.052	1.25	ZN-EDAZ08	52.518
EDAH09	16.932	1.37	ZN-EDAH09	-25.678
EDAM09	17.027	1.28	ZN-EDAM09	-34.694
EDAU09	17.137	1.17	ZN-EDAU09	-12.462
EDAZ09	17.297	1.01	ZN-EDAZ09	45.572
EDAH10	17.352	0.95	ZN-EDAH10	80.413
EDAM10	17.572	0.73	ZN-EDAM10	94.674
EDAU10	17.892	0.41	ZN-EDAU10	96.654
EDAZ10	18.342	0.04	ZN-EDAZ10	96.437
EDAH11	18.637	0.33	ZN-EDAH11	95.299
EDAM11	18.892	0.59	ZN-EDAM11	93.866
EDAU11	19.082	0.78	ZN-EDAU11	91.323

Price = Outright Decimal Price - Euro Contract Price

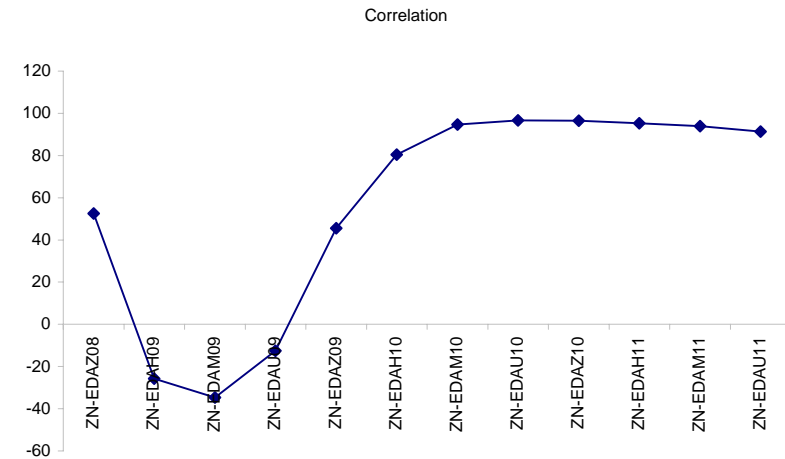
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAZ08	0.131	6.45	6.32	ZN-EDAZ08		
EDAH09	0.380	6.45	6.07	ZN-EDAH09		
EDAM09	0.629	6.45	5.82	ZN-EDAM09		
EDAU09	0.879	6.45	5.57	ZN-EDAU09		
EDAZ09	1.128	6.45	5.32	ZN-EDAZ09		
EDAH10	1.377	6.45	5.07	ZN-EDAH10		
EDAM10	1.627	6.45	4.82	ZN-EDAM10		
EDAU10	1.876	6.45	4.57	ZN-EDAU10		
EDAZ10	2.125	6.45	4.32	ZN-EDAZ10		
EDAH11	2.375	6.45	4.07	ZN-EDAH11		
EDAM11	2.624	6.45	3.83	ZN-EDAM11		
EDAU11	2.892	6.45	3.56	ZN-EDAU11		

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

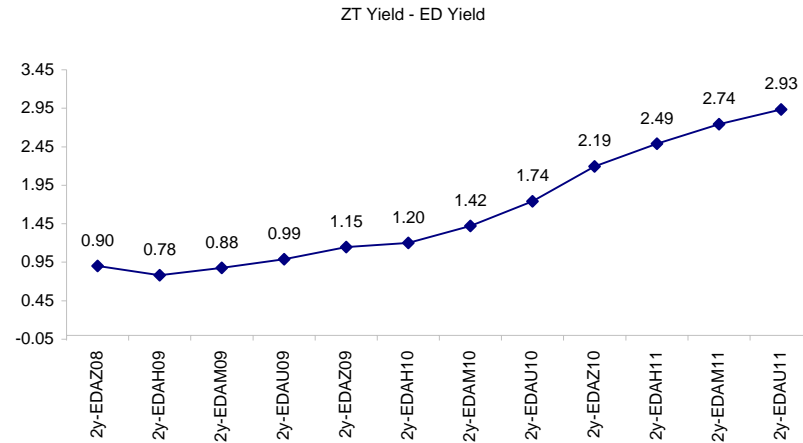


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.246	0.90	2y-EDAZ08	6.249
EDAH09	3.126	0.78	2y-EDAH09	32.301
EDAM09	3.221	0.88	2y-EDAM09	38.309
EDAU09	3.331	0.99	2y-EDAU09	32.170
EDAZ09	3.491	1.15	2y-EDAZ09	3.834
EDAH10	3.546	1.20	2y-EDAH10	-18.942
EDAM10	3.766	1.42	2y-EDAM10	-30.751
EDAU10	4.086	1.74	2y-EDAU10	-34.321
EDAZ10	4.536	2.19	2y-EDAZ10	-33.969
EDAH11	4.831	2.49	2y-EDAH11	-34.058
EDAM11	5.086	2.74	2y-EDAM11	-33.695
EDAU11	5.276	2.93	2y-EDAU11	-33.088

Price = Outright Decimal Price - Euro Contract Price

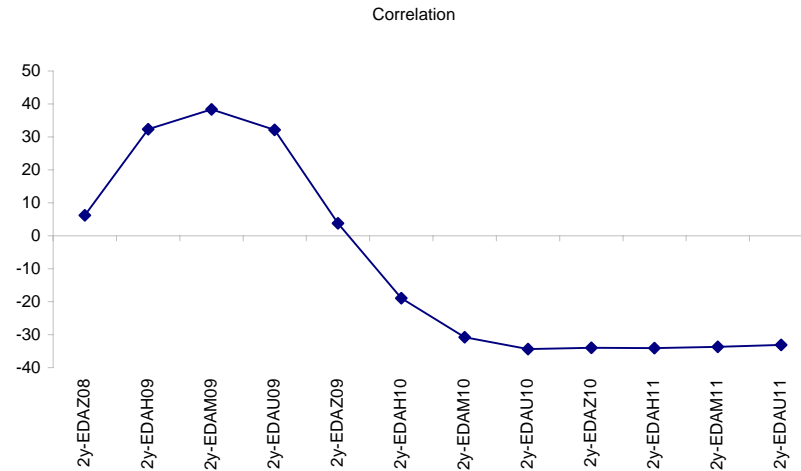
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.131	1.81	1.68	2y-EDAZ08	
EDAH09	0.380	1.81	1.43	2y-EDAH09	
EDAM09	0.629	1.81	1.18	2y-EDAM09	
EDAU09	0.879	1.81	0.93	2y-EDAU09	
EDAZ09	1.128	1.81	0.68	2y-EDAZ09	
EDAH10	1.377	1.81	0.43	2y-EDAH10	
EDAM10	1.627	1.81	0.18	2y-EDAM10	
EDAU10	1.876	1.81	(0.07)	2y-EDAU10	
EDAZ10	2.125	1.81	(0.31)	2y-EDAZ10	
EDAH11	2.375	1.81	(0.56)	2y-EDAH11	
EDAM11	2.624	1.81	(0.81)	2y-EDAM11	
EDAU11	2.892	1.81	(1.08)	2y-EDAU11	

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

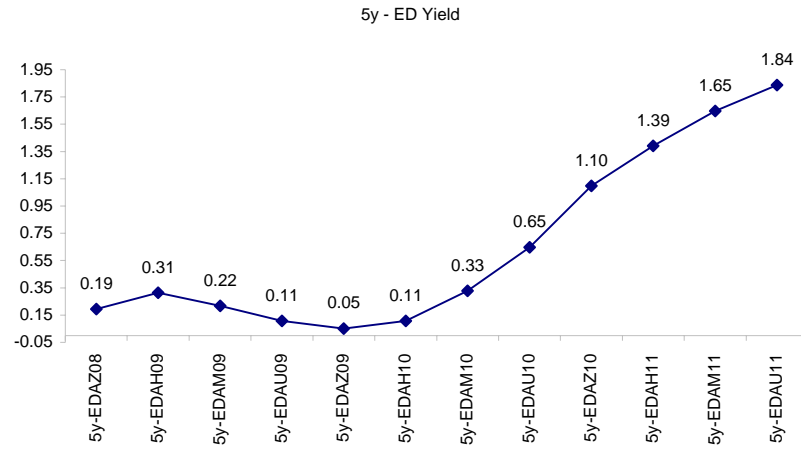


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.449	0.19	5y-EDAZ08	-50.802
EDAH09	4.329	0.31	5y-EDAH09	18.442
EDAM09	4.424	0.22	5y-EDAM09	29.426
EDAU09	4.534	0.11	5y-EDAU09	9.965
EDAZ09	4.694	0.05	5y-EDAZ09	-42.762
EDAH10	4.749	0.11	5y-EDAH10	-73.462
EDAM10	4.969	0.33	5y-EDAM10	-84.043
EDAU10	5.289	0.65	5y-EDAU10	-86.117
EDAZ10	5.739	1.10	5y-EDAZ10	-86.231
EDAH11	6.034	1.39	5y-EDAH11	-86.271
EDAM11	6.289	1.65	5y-EDAM11	-85.553
EDAU11	6.479	1.84	5y-EDAU11	-83.745

Price = Outright Decimal Price - Euro Contract Price

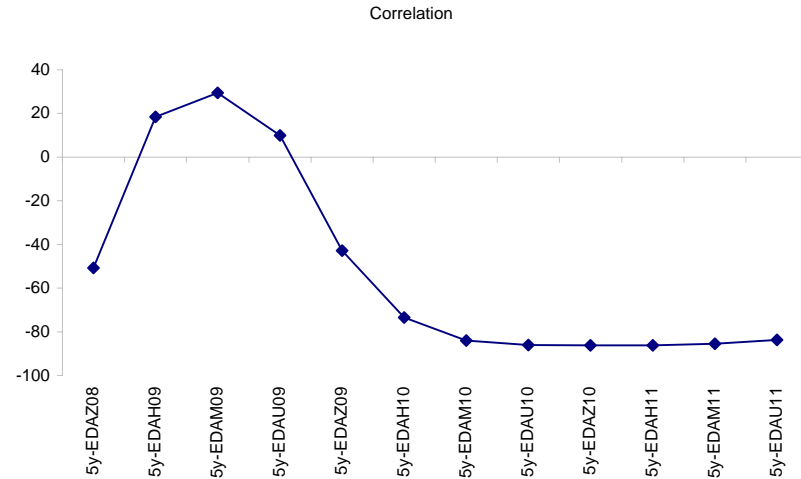
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year		5Y Duration	Spread Duration	
EDAZ08	0.131	4.53	4.40	5y-EDAZ08	
EDAH09	0.380	4.53	4.15	5y-EDAH09	
EDAM09	0.629	4.53	3.90	5y-EDAM09	
EDAU09	0.879	4.53	3.65	5y-EDAU09	
EDAZ09	1.128	4.53	3.40	5y-EDAZ09	
EDAH10	1.377	4.53	3.15	5y-EDAH10	
EDAM10	1.627	4.53	2.90	5y-EDAM10	
EDAU10	1.876	4.53	2.65	5y-EDAU10	
EDAZ10	2.125	4.53	2.41	5y-EDAZ10	
EDAH11	2.375	4.53	2.16	5y-EDAH11	
EDAM11	2.624	4.53	1.91	5y-EDAM11	
EDAU11	2.892	4.53	1.64	5y-EDAU11	

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

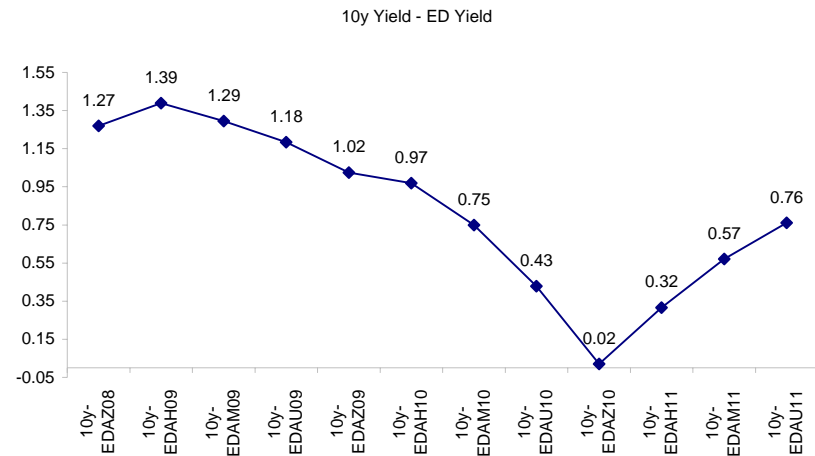


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.449	1.27	10y-EDAZ08	-58.912
EDAH09	4.329	1.39	10y-EDAH09	14.305
EDAM09	4.424	1.29	10y-EDAM09	25.420
EDAU09	4.534	1.18	10y-EDAU09	4.286
EDAZ09	4.694	1.02	10y-EDAZ09	-50.312
EDAH10	4.749	0.97	10y-EDAH10	-80.696
EDAM10	4.969	0.75	10y-EDAM10	-90.367
EDAU10	5.289	0.43	10y-EDAU10	-92.105
EDAZ10	5.739	0.02	10y-EDAZ10	-92.523
EDAH11	6.034	0.32	10y-EDAH11	-92.813
EDAM11	6.289	0.57	10y-EDAM11	-92.169
EDAU11	6.479	0.76	10y-EDAU11	-90.354

Price = Outright Decimal Price - Euro Contract Price

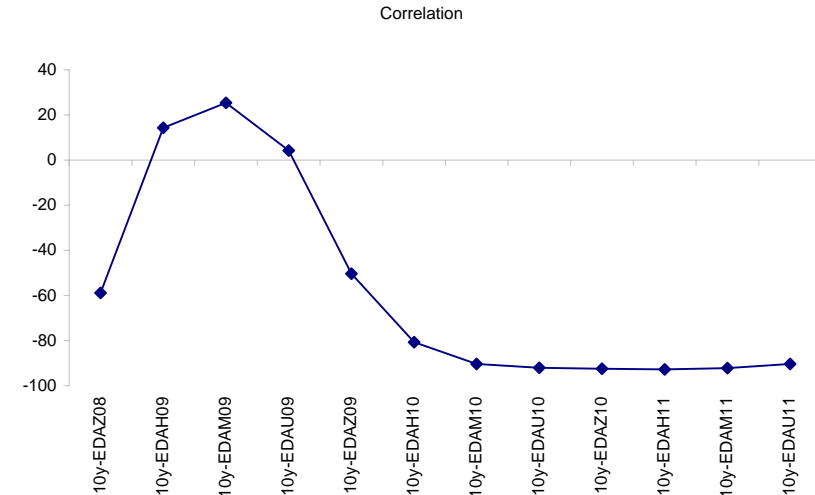
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.131	8.00	7.87	10y-EDAZ08
EDAH09	0.380	8.00	7.62	10y-EDAH09
EDAM09	0.629	8.00	7.37	10y-EDAM09
EDAU09	0.879	8.00	7.12	10y-EDAU09
EDAZ09	1.128	8.00	6.87	10y-EDAZ09
EDAH10	1.377	8.00	6.63	10y-EDAH10
EDAM10	1.627	8.00	6.38	10y-EDAM10
EDAU10	1.876	8.00	6.13	10y-EDAU10
EDAZ10	2.125	8.00	5.88	10y-EDAZ10
EDAH11	2.375	8.00	5.63	10y-EDAH11
EDAM11	2.624	8.00	5.38	10y-EDAM11
EDAU11	2.892	8.00	5.11	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.

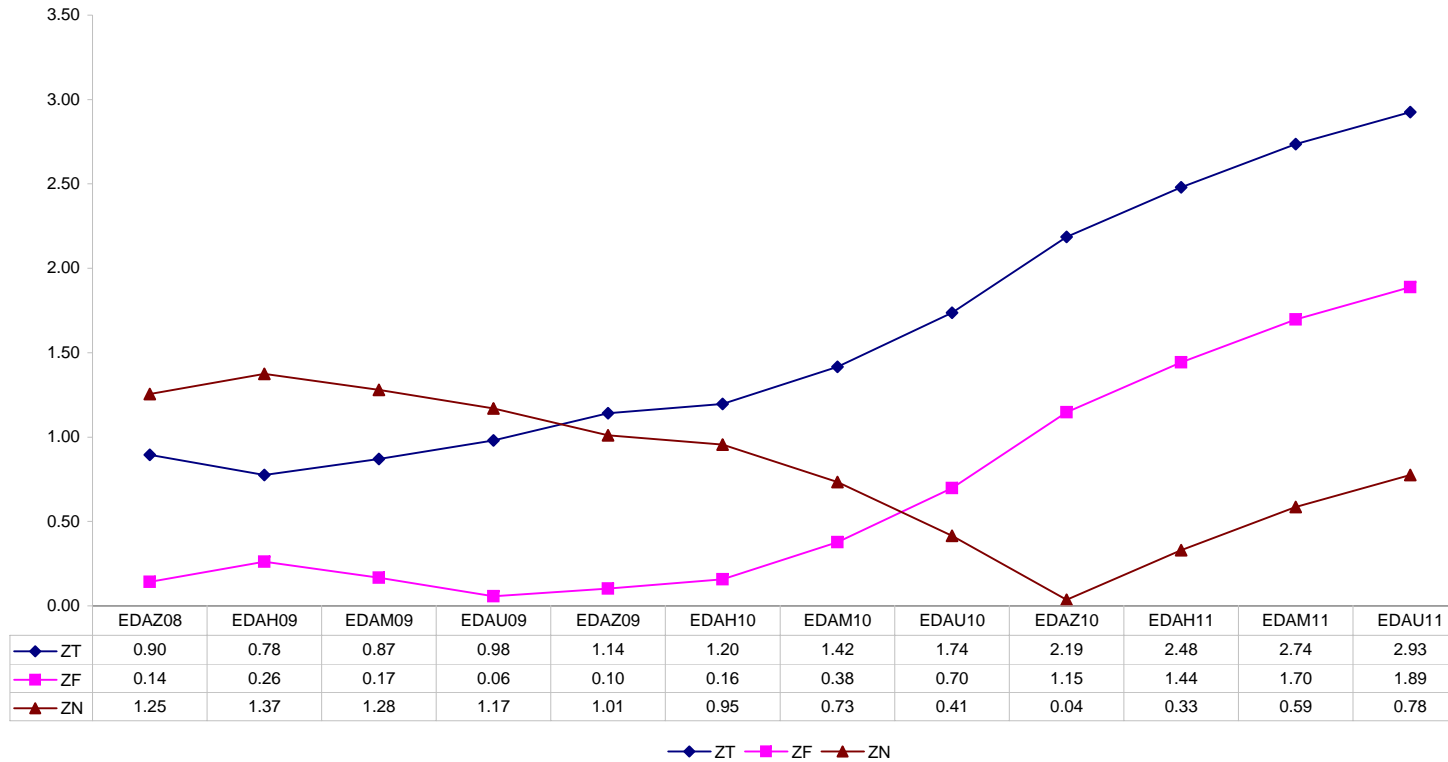
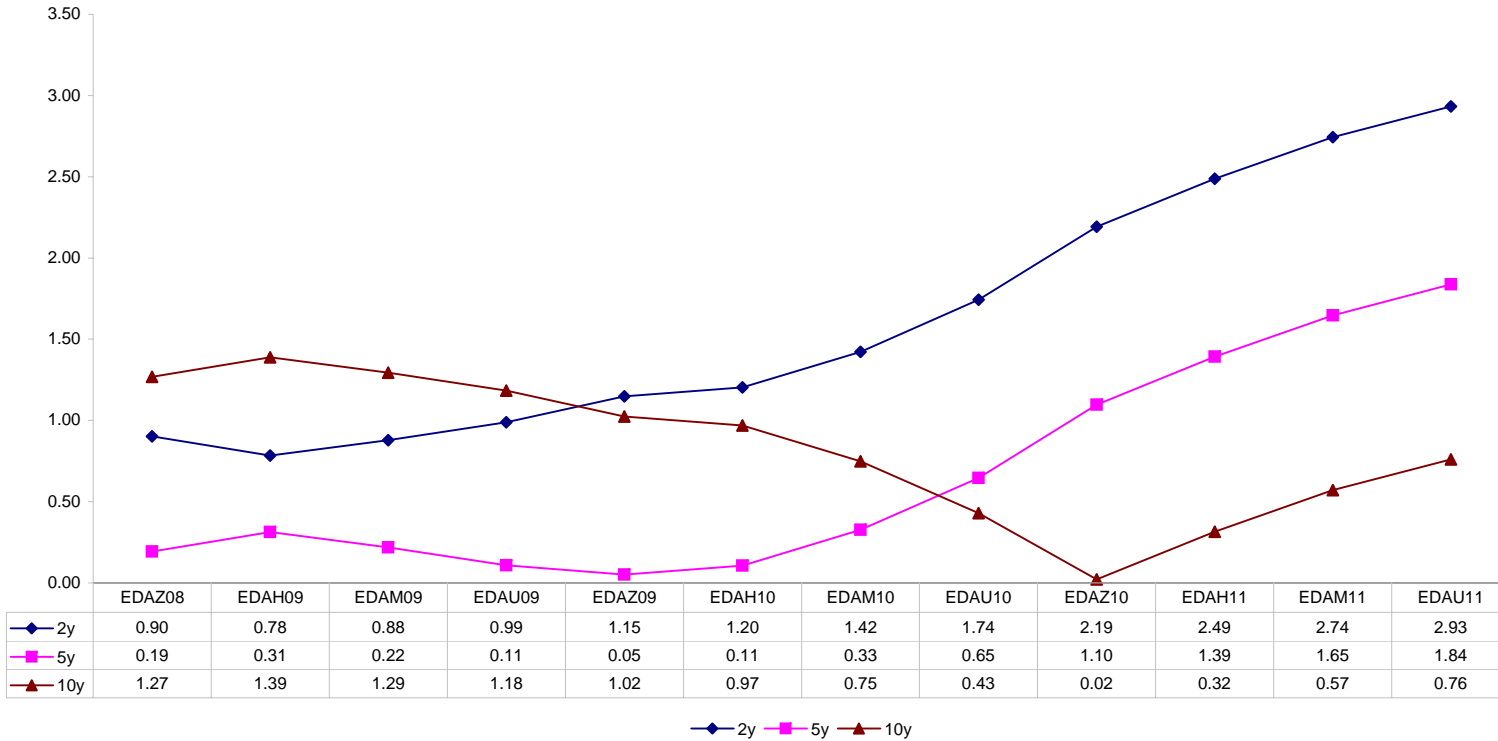
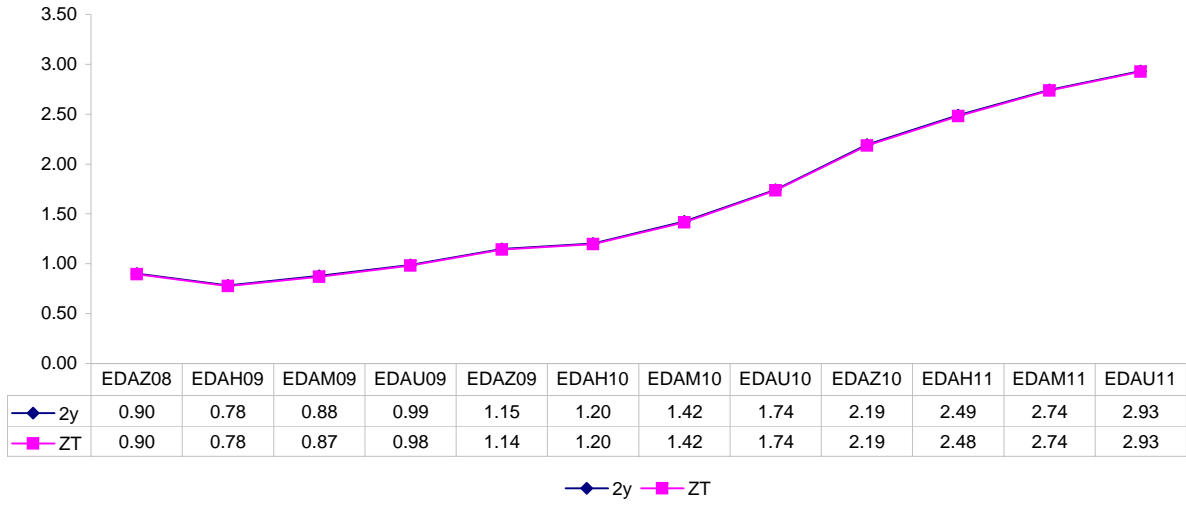


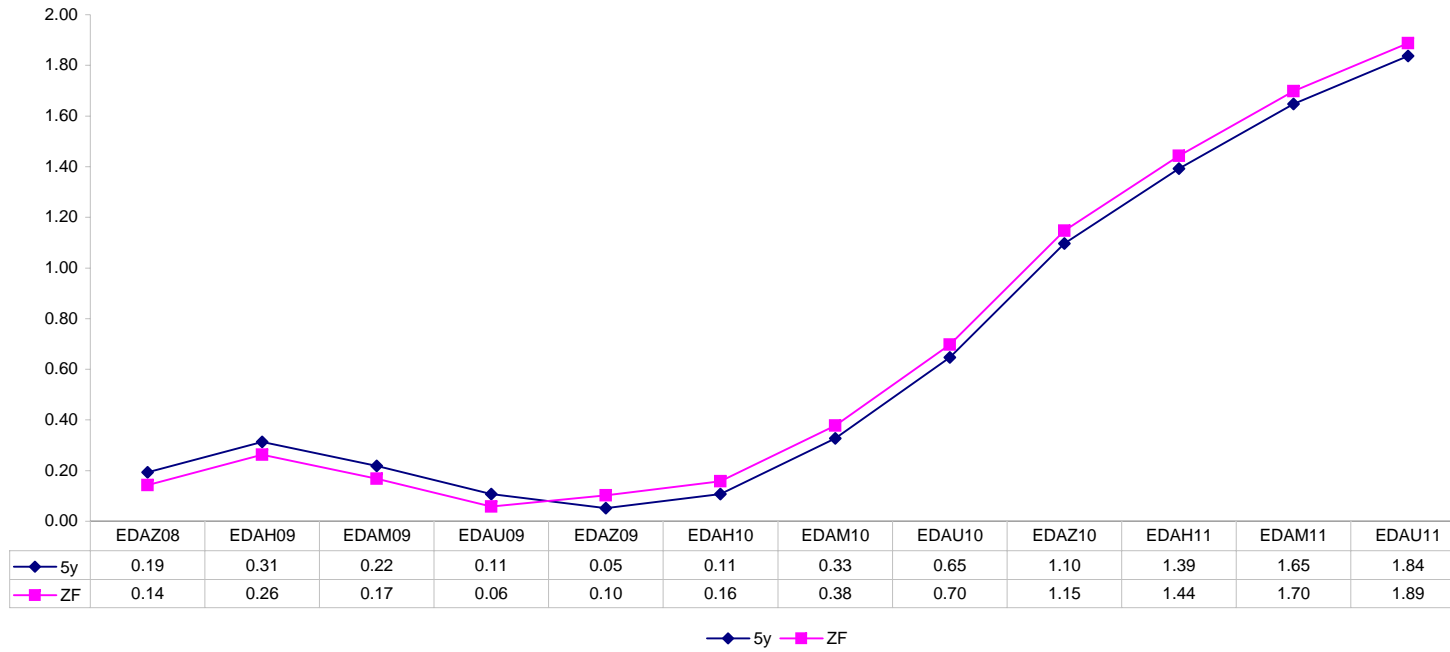
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



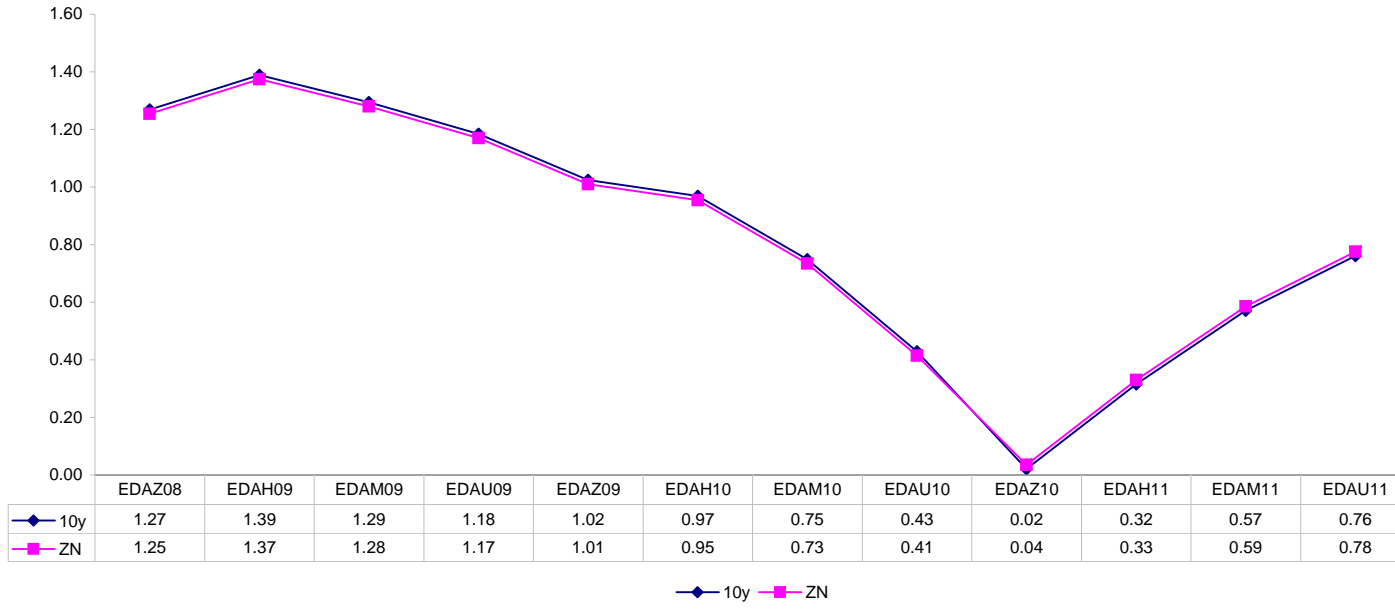
2y Basis TED Curve



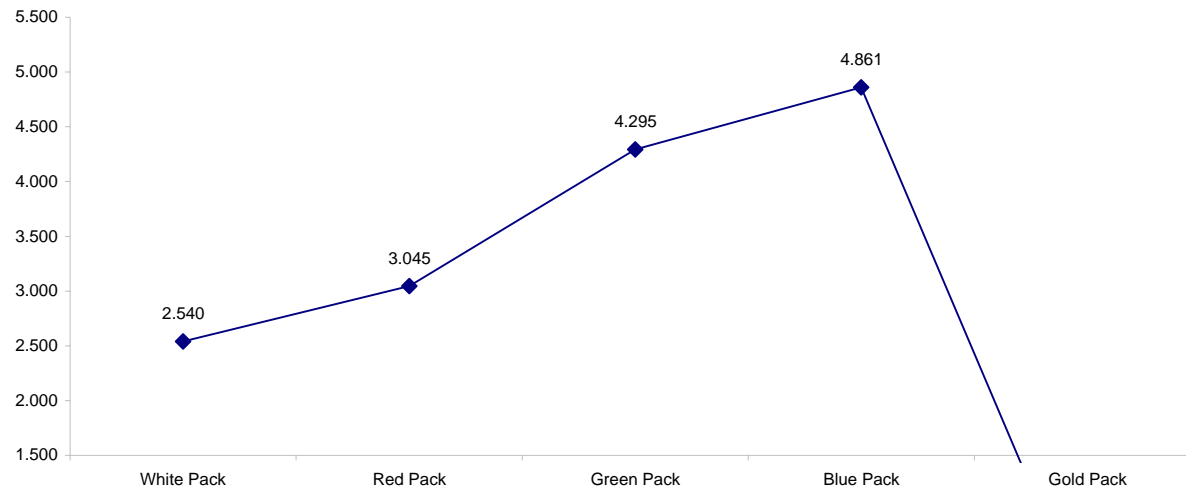
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.540	1.000	9751.000
Red Pack	3.045	-5.875	9701.875
Green Pack	4.295	-4.750	9580.875
Blue Pack	4.861	-5.625	9526.250
Gold Pack		-3.250	9505.000



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

