

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	107.6000	107.192	1.559	1.87
ZF	113.6875	113.220	2.638	4.17
ZN	114.6094	114.195	3.630	6.46
2y	99.844	99.2700	1.572	1.96
5y	101.975	101.3120	2.695	4.53
10y	101.469	101.1500	3.818	7.99

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.630	2.370	47	0.128	DEC	
EDAH09	97.800	2.200	138	0.377	MAR	White Pack
EDAM09	97.670	2.330	229	0.627	JUN	
EDAU09	97.520	2.480	320	0.876	SEP	
EDAZ09	97.315	2.685	411	1.125	DEC	
EDAH10	97.195	2.805	502	1.375	MAR	Red Pack
EDAM10	96.935	3.065	593	1.624	JUN	
EDAU10	96.580	3.420	684	1.873	SEP	
EDAZ10	96.115	3.885	775	2.123	DEC	
EDAH11	95.825	4.175	866	2.372	MAR	Green Pack
EDAM11	95.565	4.435	957	2.621	JUN	
EDAU11	95.390	4.610	1055	2.890	SEP	
EDAZ11	95.235	4.765	1146	3.139	DEC	
EDAH12	95.225	4.775	1237	3.388	MAR	Blue Pack
EDAM12	95.165	4.835	1328	3.638	JUN	
EDAU12	95.090	4.910	1419	3.887	SEP	
EDAZ12	94.990	5.010	1510	4.136	DEC	
EDAH13	94.995	5.005	1601	4.386	MAR	Gold Pack
EDAM13	94.920	5.080	1692	4.635	JUN	
EDZU13	94.820	5.180	1874	5.134	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.392	5.125	9765.500	
Red Pack	3.058	3.750	9700.625	Pack Prices
Green Pack	4.383	2.625	9572.375	
Blue Pack	4.948	0.250	9517.875	
Gold Pack	5.188	-0.125	9494.750	

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.

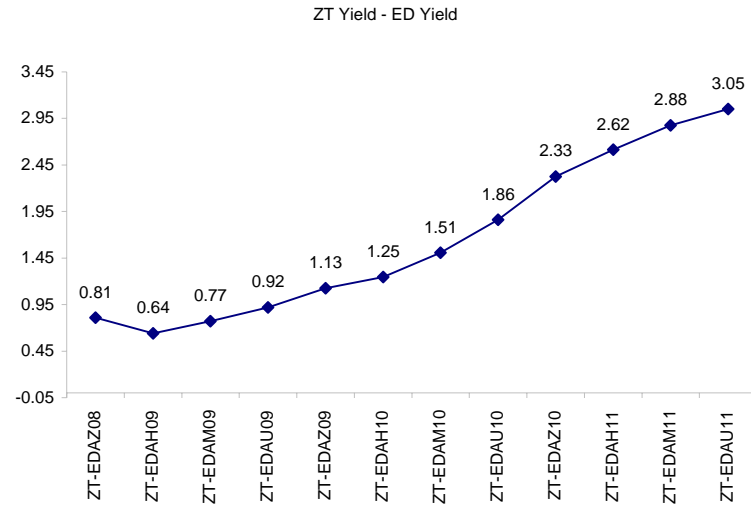
jgoulding@ghco.com

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.

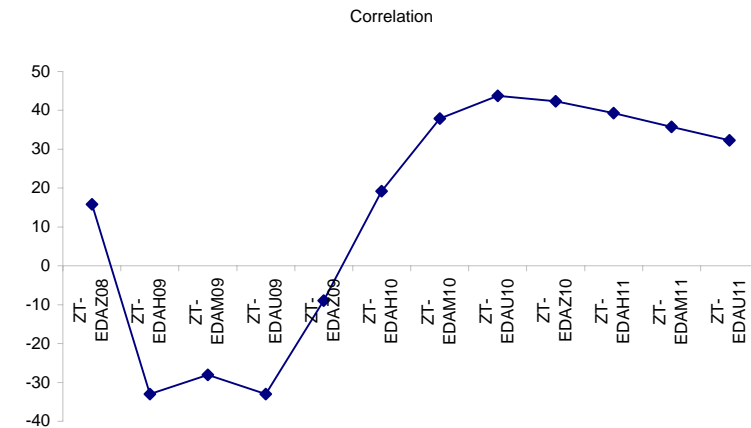
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.970	0.81	ZT-EDAZ08	15.795
EDAH09	9.800	0.64	ZT-EDAH09	-33.016
EDAM09	9.930	0.77	ZT-EDAM09	-28.031
EDAU09	10.080	0.92	ZT-EDAU09	-33.016
EDAZ09	10.285	1.13	ZT-EDAZ09	-8.969
EDAH10	10.405	1.25	ZT-EDAH10	19.197
EDAM10	10.665	1.51	ZT-EDAM10	37.860
EDAU10	11.020	1.86	ZT-EDAU10	43.714
EDAZ10	11.485	2.33	ZT-EDAZ10	42.377
EDAH11	11.775	2.62	ZT-EDAH11	39.263
EDAM11	12.035	2.88	ZT-EDAM11	35.725
EDAU11	12.210	3.05	ZT-EDAU11	32.297

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	0.128	1.87	1.75	ZT-EDAZ08		
EDAH09	0.377	1.87	1.50	ZT-EDAH09		
EDAM09	0.627	1.87	1.25	ZT-EDAM09		
EDAU09	0.876	1.87	1.00	ZT-EDAU09		
EDAZ09	1.125	1.87	0.75	ZT-EDAZ09		
EDAH10	1.375	1.87	0.50	ZT-EDAH10		
EDAM10	1.624	1.87	0.25	ZT-EDAM10		
EDAU10	1.873	1.87	0.00	ZT-EDAU10		
EDAZ10	2.123	1.87	(0.25)	ZT-EDAZ10		
EDAH11	2.372	1.87	(0.50)	ZT-EDAH11		
EDAM11	2.621	1.87	(0.75)	ZT-EDAM11		
EDAU11	2.890	1.87	(1.02)	ZT-EDAU11		

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

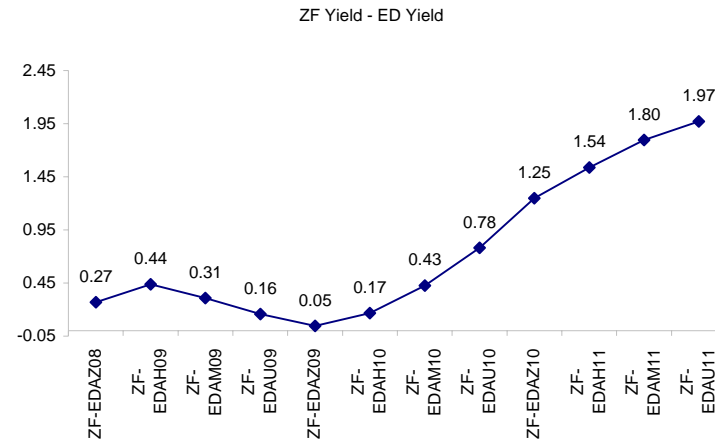


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	16.058	0.27	ZF-EDAZ08	44.327
EDAH09	15.888	0.44	ZF-EDAH09	-7.817
EDAM09	16.018	0.31	ZF-EDAM09	-28.479
EDAU09	16.168	0.16	ZF-EDAU09	-19.415
EDAZ09	16.373	0.05	ZF-EDAZ09	27.500
EDAH10	16.493	0.17	ZF-EDAH10	66.010
EDAM10	16.753	0.43	ZF-EDAM10	85.090
EDAU10	17.108	0.78	ZF-EDAU10	89.414
EDAZ10	17.573	1.25	ZF-EDAZ10	88.612
EDAH11	17.863	1.54	ZF-EDAH11	86.150
EDAM11	18.123	1.80	ZF-EDAM11	83.036
EDAU11	18.298	1.97	ZF-EDAU11	79.046

Price = Outright Decimal Price - Euro Contract Price

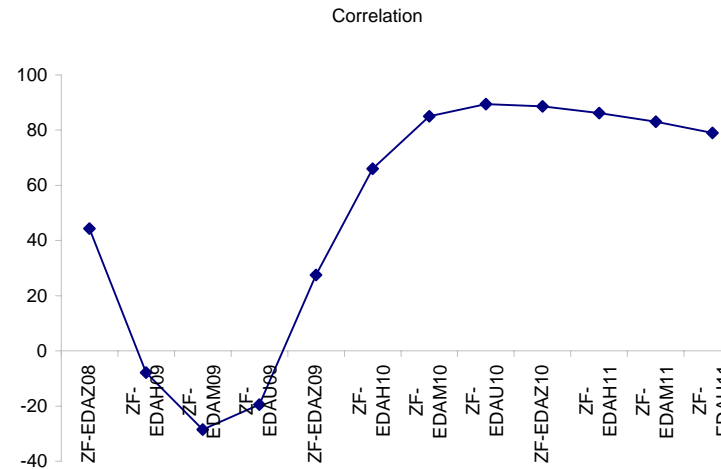
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



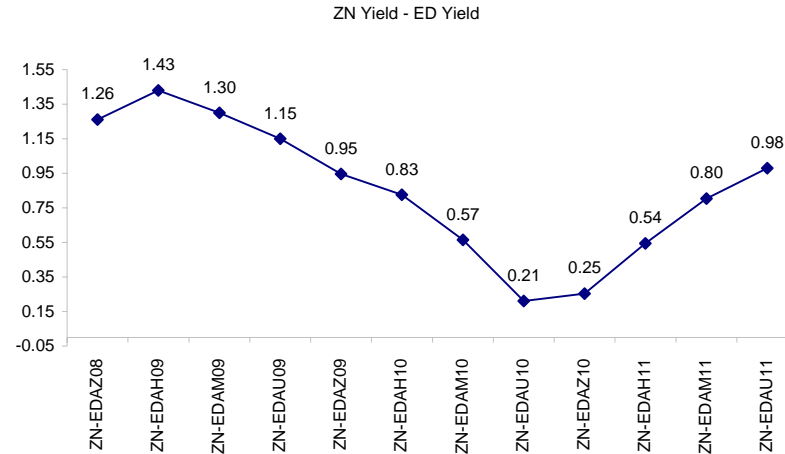
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.128	4.17	4.04	ZF-EDAZ08		
EDAH09	0.377	4.17	3.79	ZF-EDAH09		
EDAM09	0.627	4.17	3.54	ZF-EDAM09		
EDAU09	0.876	4.17	3.29	ZF-EDAU09		
EDAZ09	1.125	4.17	3.04	ZF-EDAZ09		
EDAH10	1.375	4.17	2.79	ZF-EDAH10		
EDAM10	1.624	4.17	2.54	ZF-EDAM10		
EDAU10	1.873	4.17	2.30	ZF-EDAU10		
EDAZ10	2.123	4.17	2.05	ZF-EDAZ10		
EDAH11	2.372	4.17	1.80	ZF-EDAH11		
EDAM11	2.621	4.17	1.55	ZF-EDAM11		
EDAU11	2.890	4.17	1.28	ZF-EDAU11		

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



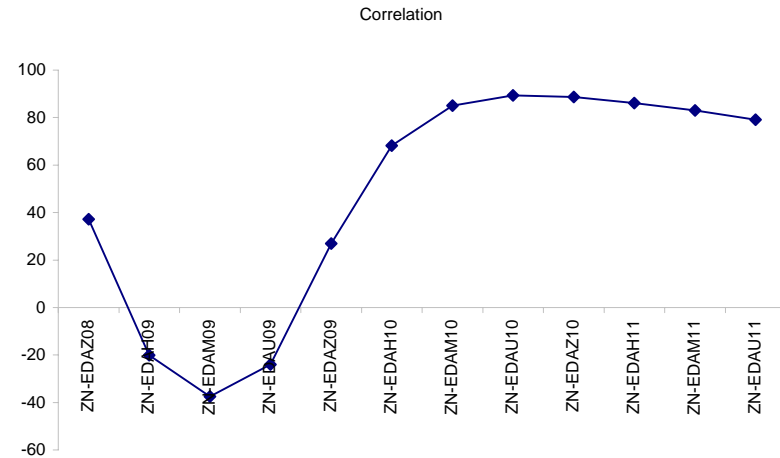
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	16.979	1.26	ZN-EDAZ08	37.233
EDAH09	16.809	1.43	ZN-EDAH09	-20.088
EDAM09	16.939	1.30	ZN-EDAM09	-37.496
EDAU09	17.089	1.15	ZN-EDAU09	-24.016
EDAZ09	17.294	0.95	ZN-EDAZ09	26.967
EDAH10	17.414	0.83	ZN-EDAH10	68.176
EDAM10	17.674	0.57	ZN-EDAM10	85.090
EDAU10	18.029	0.21	ZN-EDAU10	89.414
EDAZ10	18.494	0.25	ZN-EDAZ10	88.612
EDAH11	18.784	0.54	ZN-EDAH11	86.150
EDAM11	19.044	0.80	ZN-EDAM11	83.036
EDAU11	19.219	0.98	ZN-EDAU11	79.046

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	0.128	6.46	6.33	ZN-EDAZ08		
EDAH09	0.377	6.46	6.08	ZN-EDAH09		
EDAM09	0.627	6.46	5.83	ZN-EDAM09		
EDAU09	0.876	6.46	5.58	ZN-EDAU09		
EDAZ09	1.125	6.46	5.33	ZN-EDAZ09		
EDAH10	1.375	6.46	5.08	ZN-EDAH10		
EDAM10	1.624	6.46	4.83	ZN-EDAM10		
EDAU10	1.873	6.46	4.58	ZN-EDAU10		
EDAZ10	2.123	6.46	4.33	ZN-EDAZ10		
EDAH11	2.372	6.46	4.09	ZN-EDAH11		
EDAM11	2.621	6.46	3.84	ZN-EDAM11		
EDAU11	2.890	6.46	3.57	ZN-EDAU11		

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

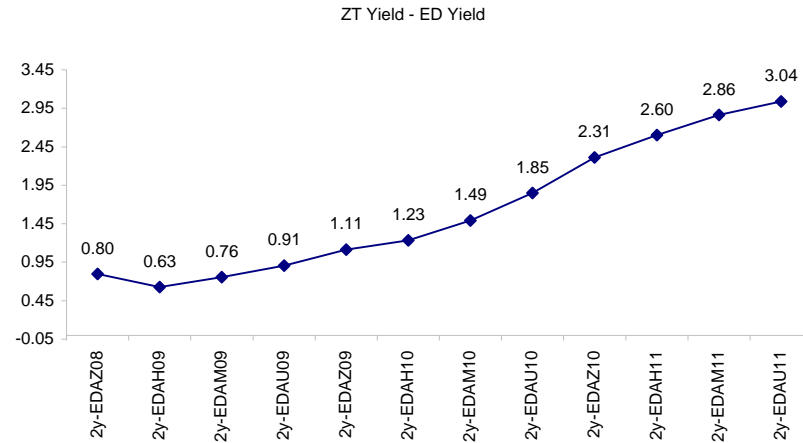


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.214	0.80	2y-EDAZ08	-3.818
EDAH09	2.044	0.63	2y-EDAH09	32.114
EDAM09	2.174	0.76	2y-EDAM09	47.709
EDAU09	2.324	0.91	2y-EDAU09	39.002
EDAZ09	2.529	1.11	2y-EDAZ09	2.060
EDAH10	2.649	1.23	2y-EDAH10	-33.671
EDAM10	2.909	1.49	2y-EDAM10	-53.185
EDAU10	3.264	1.85	2y-EDAU10	-58.111
EDAZ10	3.729	2.31	2y-EDAZ10	-55.723
EDAH11	4.019	2.60	2y-EDAH11	-52.018
EDAM11	4.279	2.86	2y-EDAM11	-48.730
EDAU11	4.454	3.04	2y-EDAU11	-44.603

Price = Outright Decimal Price - Euro Contract Price

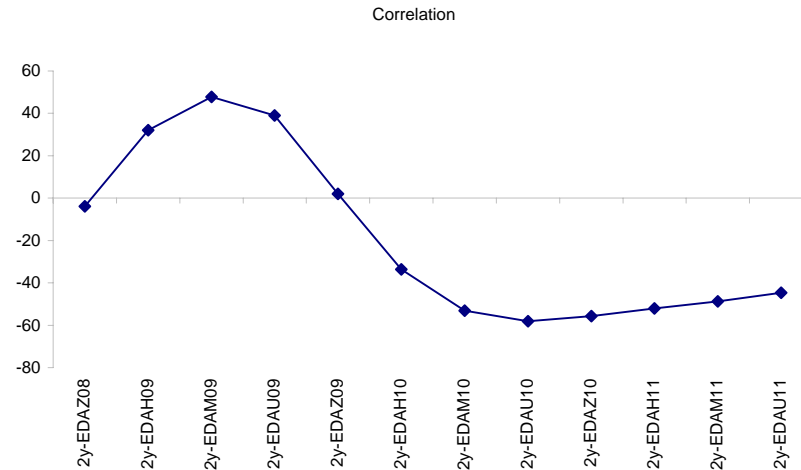
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.128	1.96	1.83	2y-EDAZ08	
EDAH09	0.377	1.96	1.58	2y-EDAH09	
EDAM09	0.627	1.96	1.34	2y-EDAM09	
EDAU09	0.876	1.96	1.09	2y-EDAU09	
EDAZ09	1.125	1.96	0.84	2y-EDAZ09	
EDAH10	1.375	1.96	0.59	2y-EDAH10	
EDAM10	1.624	1.96	0.34	2y-EDAM10	
EDAU10	1.873	1.96	0.09	2y-EDAU10	
EDAZ10	2.123	1.96	(0.16)	2y-EDAZ10	
EDAH11	2.372	1.96	(0.41)	2y-EDAH11	
EDAM11	2.621	1.96	(0.66)	2y-EDAM11	
EDAU11	2.890	1.96	(0.93)	2y-EDAU11	

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

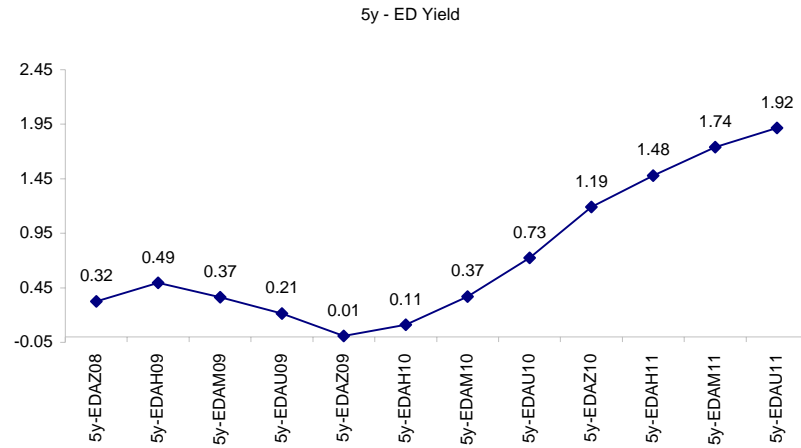


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.345	0.32	5y-EDAZ08	-30.018
EDAH09	4.175	0.49	5y-EDAH09	22.921
EDAM09	4.305	0.37	5y-EDAM09	33.361
EDAU09	4.455	0.21	5y-EDAU09	15.160
EDAZ09	4.660	0.01	5y-EDAZ09	-34.898
EDAH10	4.780	0.11	5y-EDAH10	-72.306
EDAM10	5.040	0.37	5y-EDAM10	-87.698
EDAU10	5.395	0.73	5y-EDAU10	-90.075
EDAZ10	5.860	1.19	5y-EDAZ10	-89.040
EDAH11	6.150	1.48	5y-EDAH11	-87.115
EDAM11	6.410	1.74	5y-EDAM11	-84.886
EDAU11	6.585	1.92	5y-EDAU11	-81.460

Price = Outright Decimal Price - Euro Contract Price

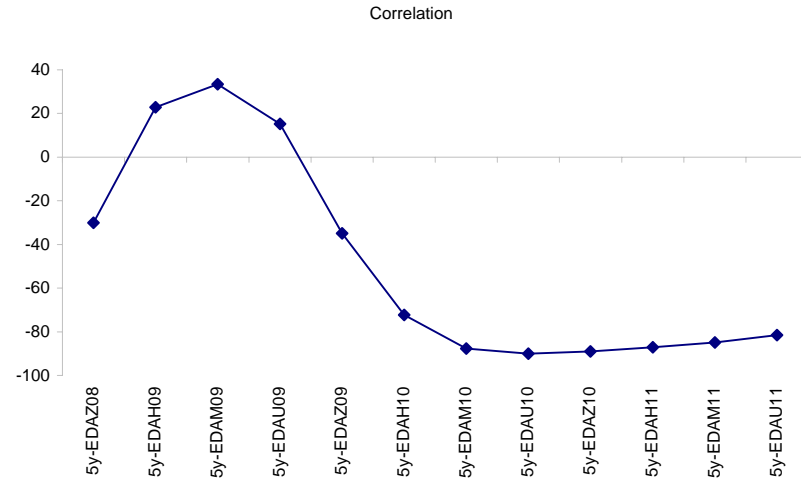
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.128	4.53	4.40	5y-EDAZ08
EDAH09	0.377	4.53	4.15	5y-EDAH09
EDAM09	0.627	4.53	3.90	5y-EDAM09
EDAU09	0.876	4.53	3.65	5y-EDAU09
EDAZ09	1.125	4.53	3.40	5y-EDAZ09
EDAH10	1.375	4.53	3.15	5y-EDAH10
EDAM10	1.624	4.53	2.90	5y-EDAM10
EDAU10	1.873	4.53	2.65	5y-EDAU10
EDAZ10	2.123	4.53	2.41	5y-EDAZ10
EDAH11	2.372	4.53	2.16	5y-EDAH11
EDAM11	2.621	4.53	1.91	5y-EDAM11
EDAU11	2.890	4.53	1.64	5y-EDAU11

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

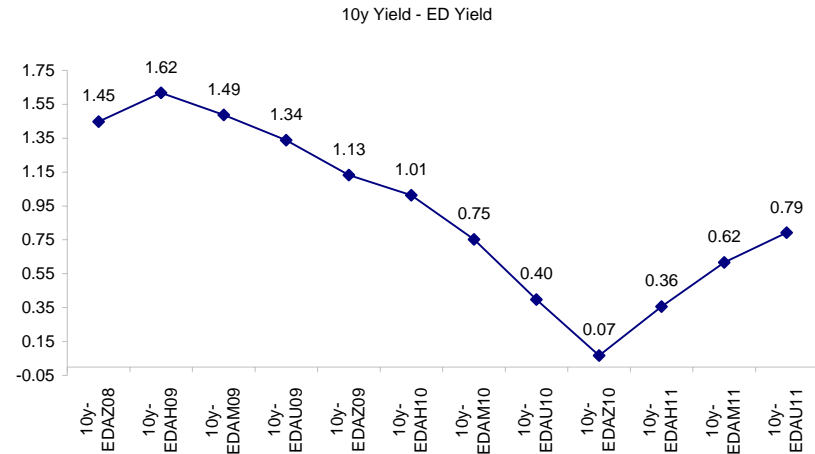


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.345	1.45	10y-EDAZ08	-29.426
EDAH09	4.175	1.62	10y-EDAH09	23.161
EDAM09	4.305	1.49	10y-EDAM09	27.525
EDAU09	4.455	1.34	10y-EDAU09	5.365
EDAZ09	4.660	1.13	10y-EDAZ09	-46.133
EDAH10	4.780	1.01	10y-EDAH10	-81.431
EDAM10	5.040	0.75	10y-EDAM10	-93.687
EDAU10	5.395	0.40	10y-EDAU10	-94.957
EDAZ10	5.860	0.07	10y-EDAZ10	-94.501
EDAH11	6.150	0.36	10y-EDAH11	-93.449
EDAM11	6.410	0.62	10y-EDAM11	-91.951
EDAU11	6.585	0.79	10y-EDAU11	-89.268

Price = Outright Decimal Price - Euro Contract Price

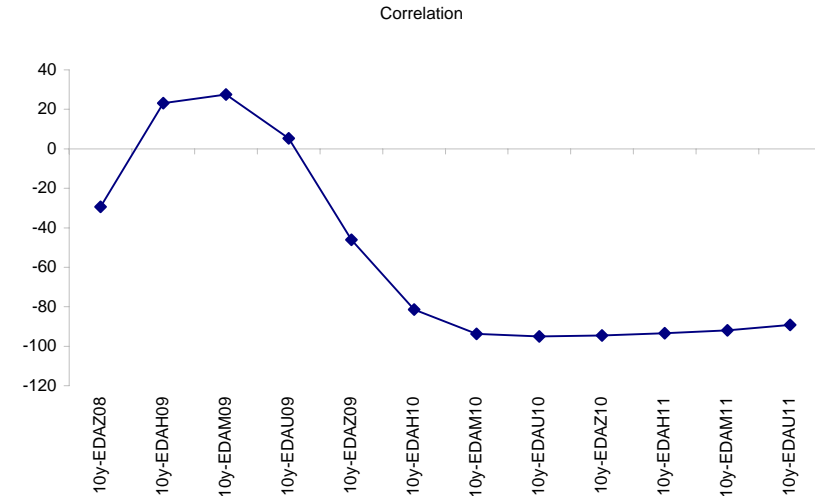
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.128	7.99	7.87	10y-EDAZ08
EDAH09	0.377	7.99	7.62	10y-EDAH09
EDAM09	0.627	7.99	7.37	10y-EDAM09
EDAU09	0.876	7.99	7.12	10y-EDAU09
EDAZ09	1.125	7.99	6.87	10y-EDAZ09
EDAH10	1.375	7.99	6.62	10y-EDAH10
EDAM10	1.624	7.99	6.37	10y-EDAM10
EDAU10	1.873	7.99	6.12	10y-EDAU10
EDAZ10	2.123	7.99	5.87	10y-EDAZ10
EDAH11	2.372	7.99	5.62	10y-EDAH11
EDAM11	2.621	7.99	5.37	10y-EDAM11
EDAU11	2.890	7.99	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.

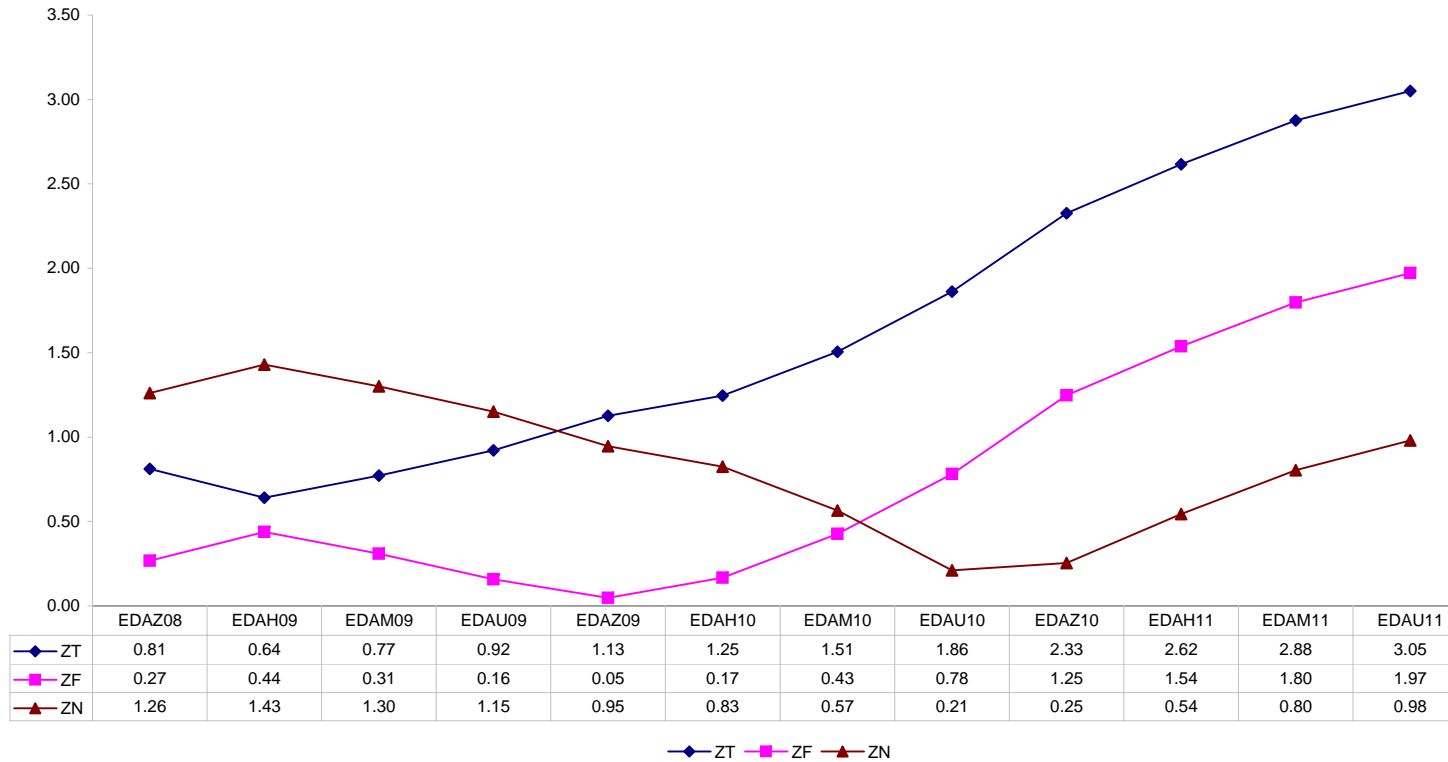
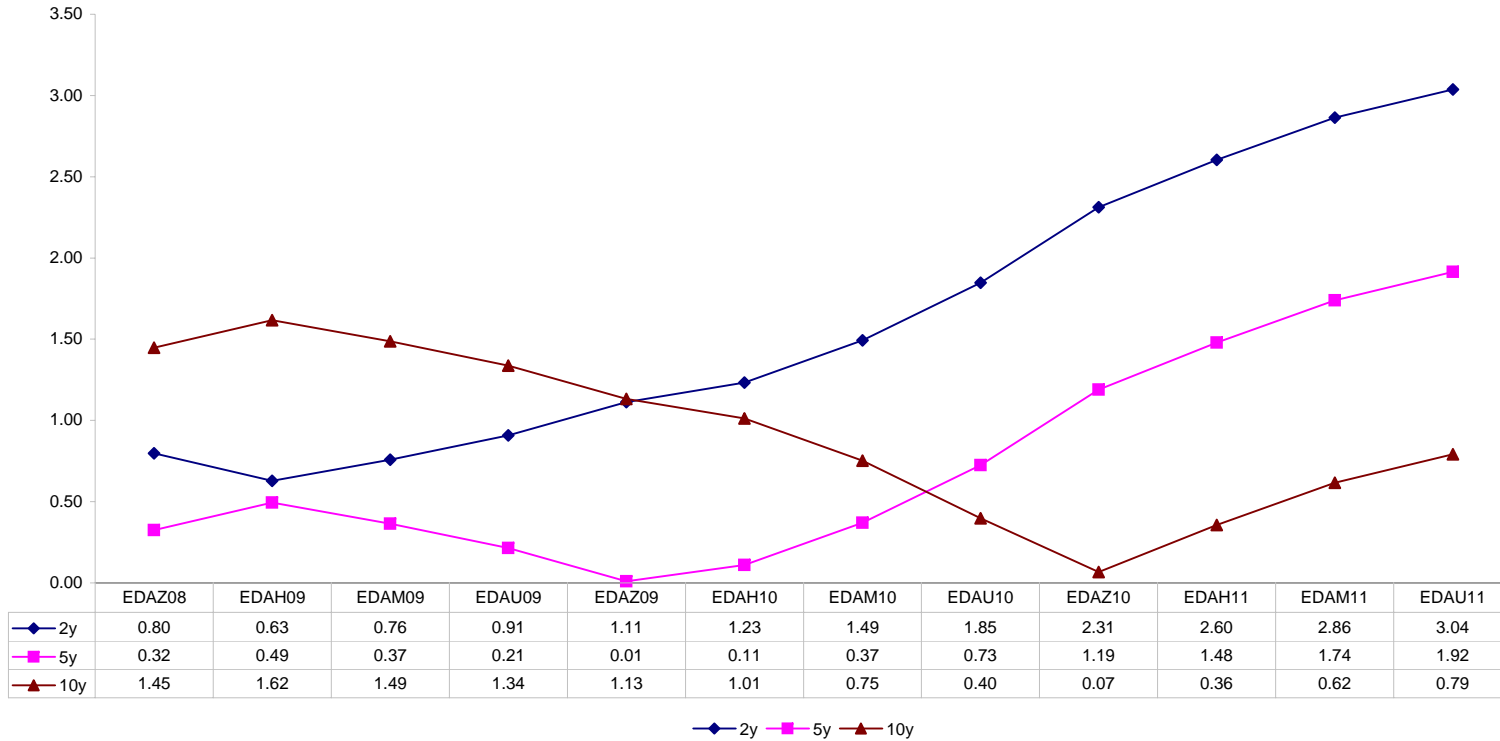
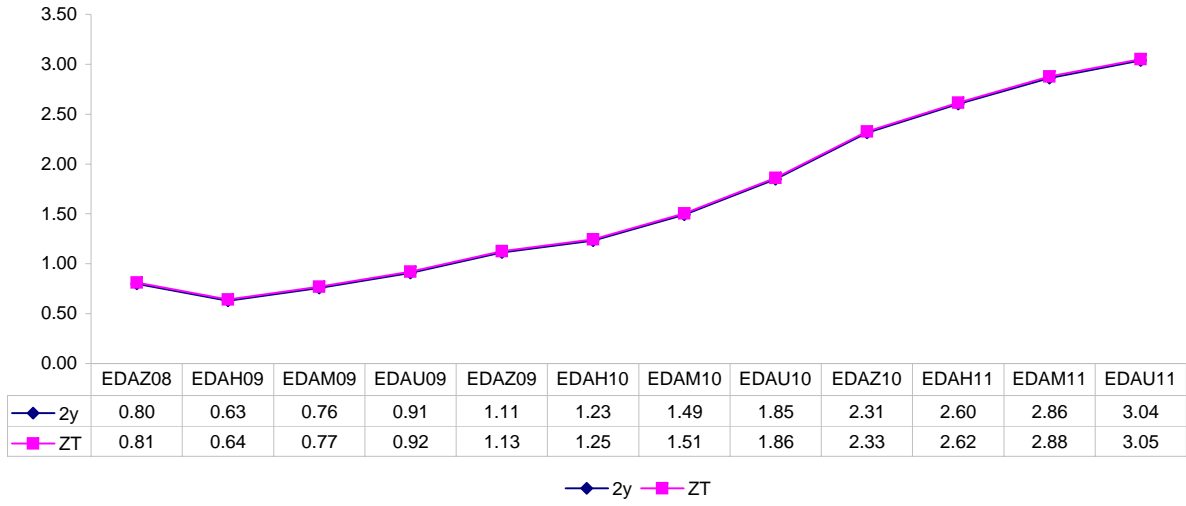


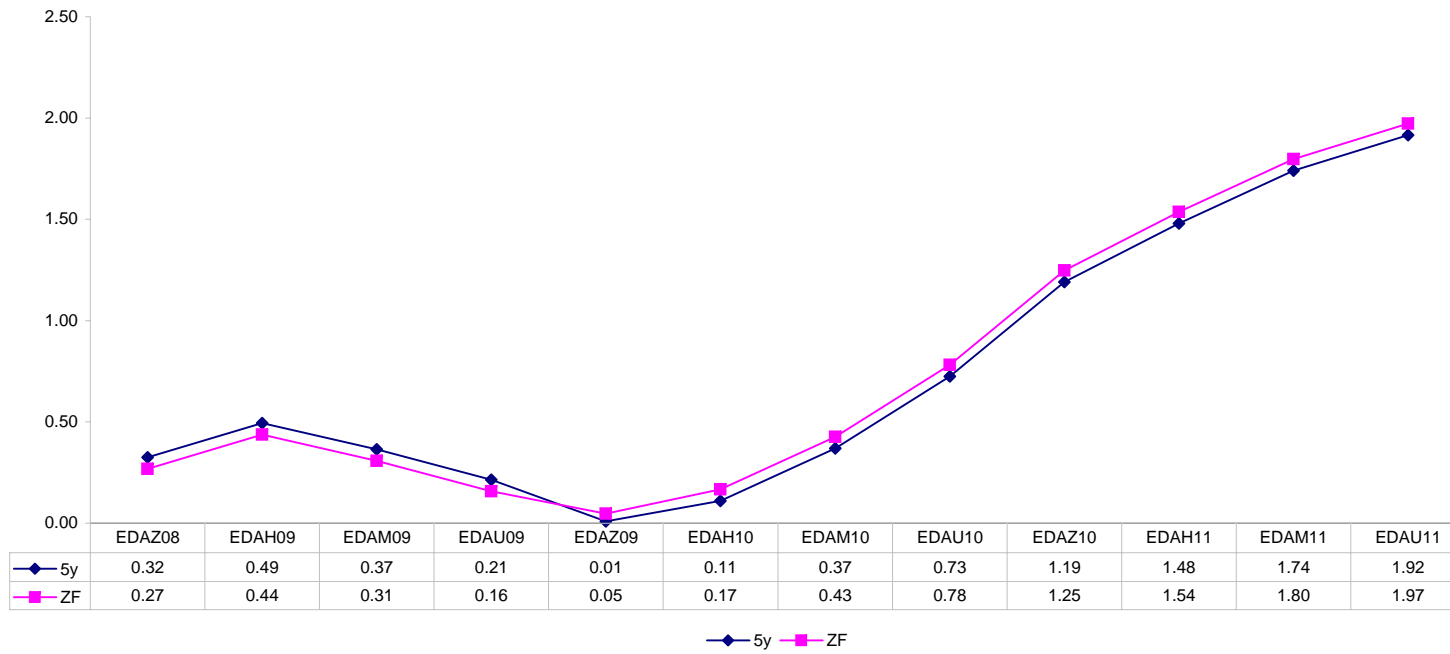
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



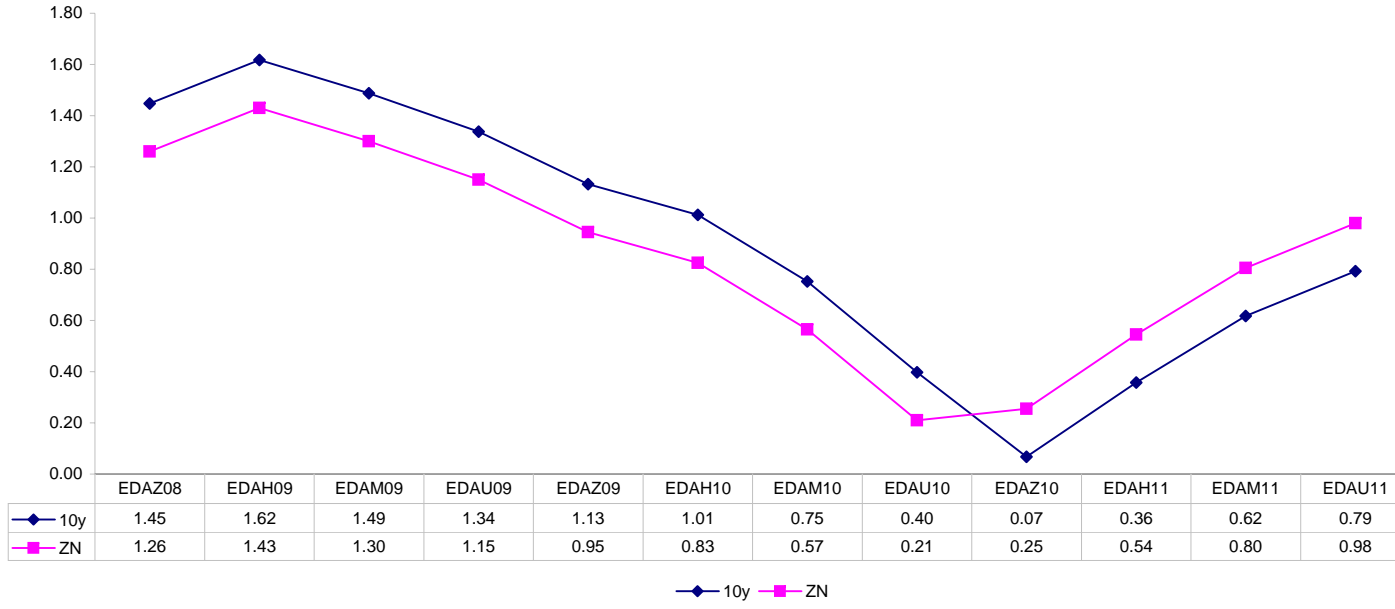
2y Basis TED Curve



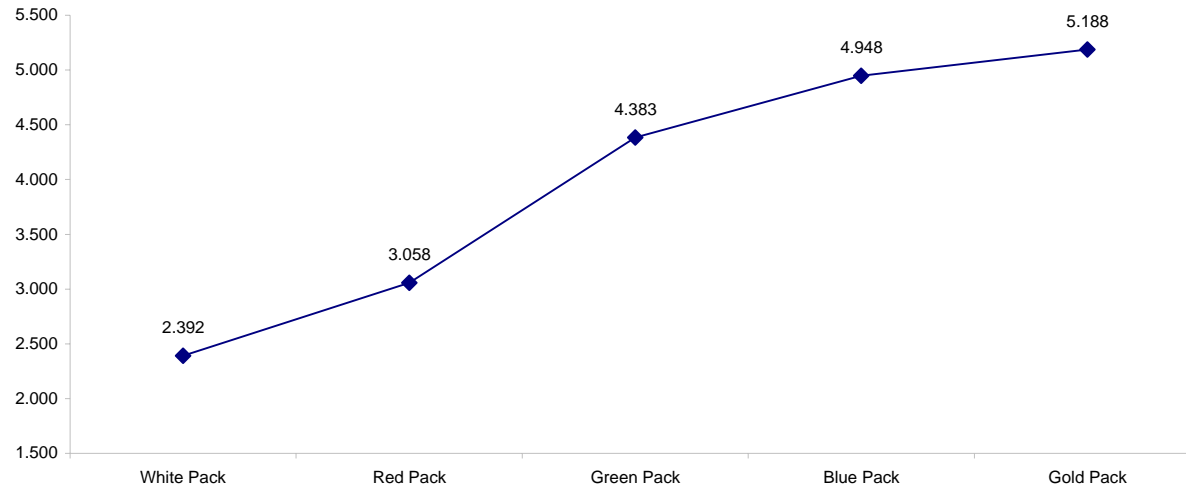
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.392	5.125	9765.500
Red Pack	3.058	3.750	9700.625
Green Pack	4.383	2.625	9572.375
Blue Pack	4.948	0.250	9517.875
Gold Pack	5.188	-0.125	9494.750



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

