

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	105.9594	105.307	2.451	1.90
ZF	111.6000	111.192	3.055	4.03
ZN	115.4688	115.150	3.597	6.46
2y	100.797	100.2550	2.457	1.90
5y	101.141	101.0450	3.122	4.54
10y	100.375	100.1200	3.825	8.07

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.095	2.905	66	0.180	SEP	
EDAZ08	96.920	3.080	157	0.429	DEC	White
EDAH09	96.885	3.115	248	0.679	MAR	Pack
EDAM09	96.735	3.265	339	0.928	JUN	
EDAU09	96.495	3.505	430	1.177	SEP	
EDAZ09	96.210	3.790	521	1.427	DEC	Red
EDAH10	95.985	4.015	612	1.676	MAR	Pack
EDAM10	95.820	4.180	703	1.925	JUN	
EDAU10	95.710	4.290	794	2.175	SEP	
EDAZ10	95.595	4.405	885	2.424	DEC	Green
EDAH11	95.555	4.445	976	2.673	MAR	Pack
EDAM11	95.530	4.470	1067	2.923	JUN	
EDAU11	95.425	4.575	1165	3.191	SEP	
EDAZ11	95.400	4.600	1256	3.440	DEC	Blue Pack
EDAH12	95.330	4.670	1347	3.690	MAR	
EDAM12	95.270	4.730	1438	3.939	JUN	
EDAU12	95.220	4.780	1529	4.188	SEP	
EDAZ12	95.150	4.850	1620	4.438	DEC	Gold Pack
EDAH13	95.180	4.820	1711	4.687	MAR	
EDAM13	95.100	4.900	1802	4.936	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.159	-3.000	9690.875	
Red Pack	3.965	-4.875	9612.750	Pack
Green Pack	4.513	-1.125	9559.750	Prices
Blue Pack	4.764	-3.250	9535.625	
Gold Pack		-2.375	9516.000	

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.

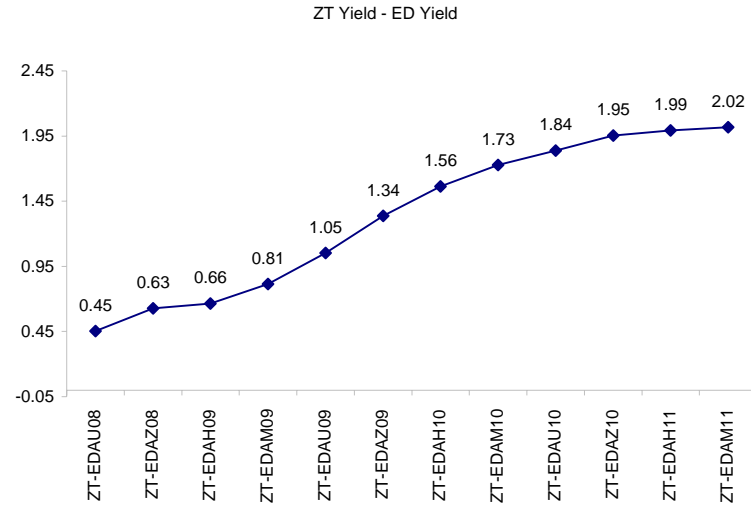
jgoulding@ghco.com

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.

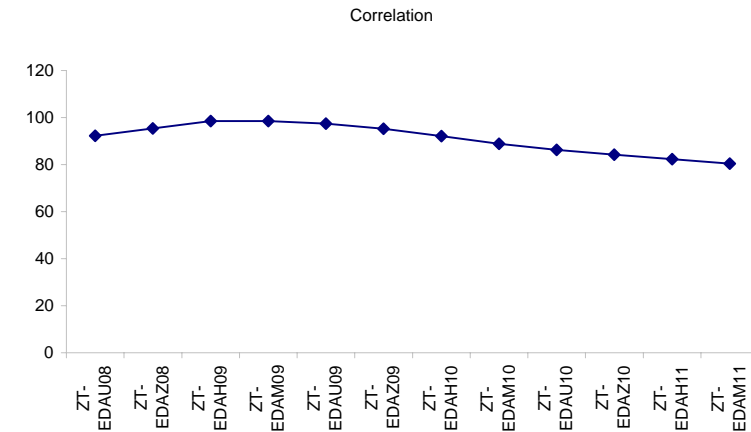
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.864	0.45	ZT-EDAU08	92.239
EDAZ08	9.039	0.63	ZT-EDAZ08	95.407
EDAH09	9.074	0.66	ZT-EDAH09	98.563
EDAM09	9.224	0.81	ZT-EDAM09	98.555
EDAU09	9.464	1.05	ZT-EDAU09	97.371
EDAZ09	9.749	1.34	ZT-EDAZ09	95.209
EDAH10	9.974	1.56	ZT-EDAH10	92.129
EDAM10	10.139	1.73	ZT-EDAM10	88.835
EDAU10	10.249	1.84	ZT-EDAU10	86.259
EDAZ10	10.364	1.95	ZT-EDAZ10	84.186
EDAH11	10.404	1.99	ZT-EDAH11	82.308
EDAM11	10.429	2.02	ZT-EDAM11	80.429

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	
EDAU08	0.180	1.90	1.72	ZT-EDAU08		
EDAZ08	0.429	1.90	1.47	ZT-EDAZ08		
EDAH09	0.679	1.90	1.22	ZT-EDAH09		
EDAM09	0.928	1.90	0.97	ZT-EDAM09		
EDAU09	1.177	1.90	0.72	ZT-EDAU09		
EDAZ09	1.427	1.90	0.47	ZT-EDAZ09		
EDAH10	1.676	1.90	0.22	ZT-EDAH10		
EDAM10	1.925	1.90	(0.03)	ZT-EDAM10		
EDAU10	2.175	1.90	(0.28)	ZT-EDAU10		
EDAZ10	2.424	1.90	(0.53)	ZT-EDAZ10		
EDAH11	2.673	1.90	(0.78)	ZT-EDAH11		
EDAM11	2.923	1.90	(1.03)	ZT-EDAM11		

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

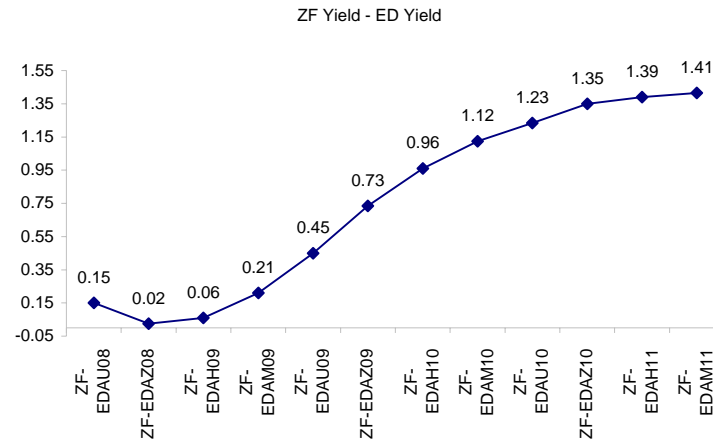


ZF				Correlation* (percent)
Spread Price	Spread Yield	Spread Name		
EDAU08	14.505	0.15	ZF-EDAU08	87.550
EDAZ08	14.680	0.02	ZF-EDAZ08	89.089
EDAH09	14.715	0.06	ZF-EDAH09	95.550
EDAM09	14.865	0.21	ZF-EDAM09	98.093
EDAU09	15.105	0.45	ZF-EDAU09	98.624
EDAZ09	15.390	0.73	ZF-EDAZ09	98.640
EDAH10	15.615	0.96	ZF-EDAH10	97.377
EDAM10	15.780	1.12	ZF-EDAM10	95.915
EDAU10	15.890	1.23	ZF-EDAU10	94.854
EDAZ10	16.005	1.35	ZF-EDAZ10	93.766
EDAH11	16.045	1.39	ZF-EDAH11	92.800
EDAM11	16.070	1.41	ZF-EDAM11	91.730

Price = Outright Decimal Price - Euro Contract Price

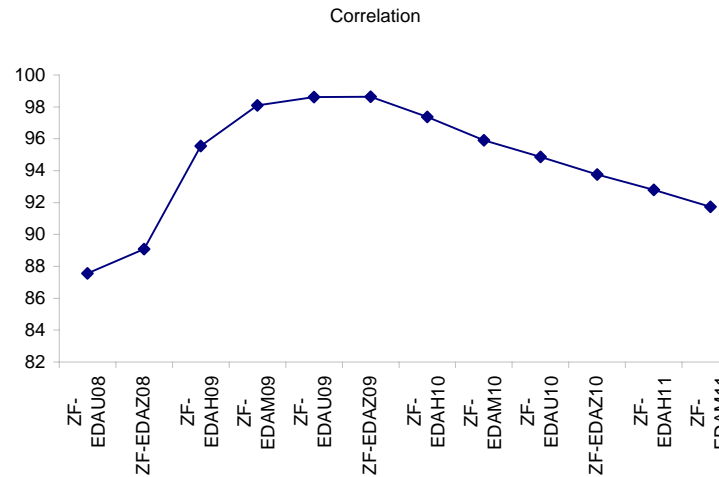
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU08	0.180	4.03	3.85	ZF-EDAU08	
EDAZ08	0.429	4.03	3.60	ZF-EDAZ08	
EDAH09	0.679	4.03	3.35	ZF-EDAH09	
EDAM09	0.928	4.03	3.10	ZF-EDAM09	
EDAU09	1.177	4.03	2.86	ZF-EDAU09	
EDAZ09	1.427	4.03	2.61	ZF-EDAZ09	
EDAH10	1.676	4.03	2.36	ZF-EDAH10	
EDAM10	1.925	4.03	2.11	ZF-EDAM10	
EDAU10	2.175	4.03	1.86	ZF-EDAU10	
EDAZ10	2.424	4.03	1.61	ZF-EDAZ10	
EDAH11	2.673	4.03	1.36	ZF-EDAH11	
EDAM11	2.923	4.03	1.11	ZF-EDAM11	

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

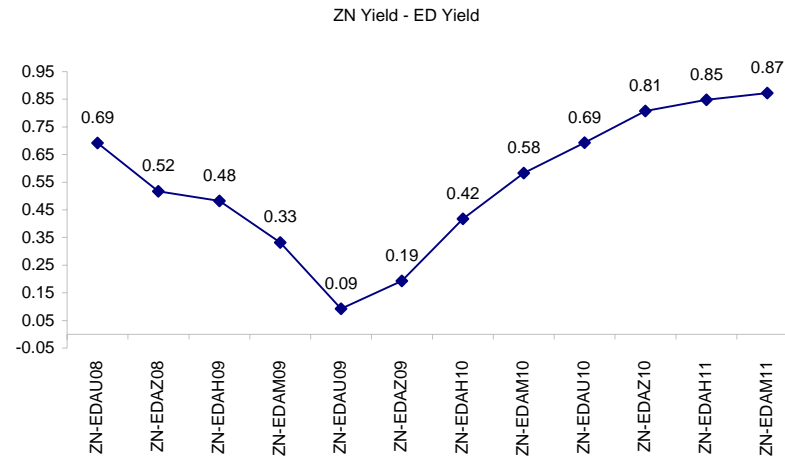


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	18.374	0.69	ZN-EDAU08	87.650
EDAZ08	18.549	0.52	ZN-EDAZ08	89.894
EDAH09	18.584	0.48	ZN-EDAH09	95.863
EDAM09	18.734	0.33	ZN-EDAM09	97.758
EDAU09	18.974	0.09	ZN-EDAU09	97.806
EDAZ09	19.259	0.19	ZN-EDAZ09	97.658
EDAH10	19.484	0.42	ZN-EDAH10	97.377
EDAM10	19.649	0.58	ZN-EDAM10	95.915
EDAU10	19.759	0.69	ZN-EDAU10	94.854
EDAZ10	19.874	0.81	ZN-EDAZ10	93.766
EDAH11	19.914	0.85	ZN-EDAH11	92.800
EDAM11	19.939	0.87	ZN-EDAM11	91.730

Price = Outright Decimal Price - Euro Contract Price

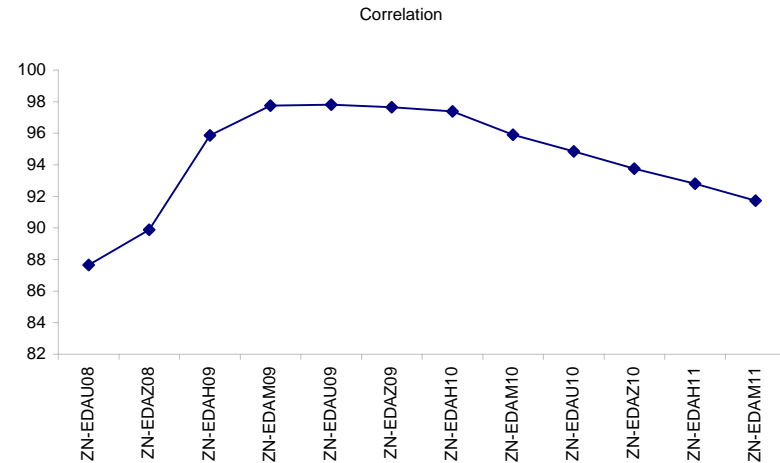
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.180	6.46	6.28	ZN-EDAU08		
EDAZ08	0.429	6.46	6.03	ZN-EDAZ08		
EDAH09	0.679	6.46	5.78	ZN-EDAH09		
EDAM09	0.928	6.46	5.53	ZN-EDAM09		
EDAU09	1.177	6.46	5.28	ZN-EDAU09		
EDAZ09	1.427	6.46	5.03	ZN-EDAZ09		
EDAH10	1.676	6.46	4.78	ZN-EDAH10		
EDAM10	1.925	6.46	4.54	ZN-EDAM10		
EDAU10	2.175	6.46	4.29	ZN-EDAU10		
EDAZ10	2.424	6.46	4.04	ZN-EDAZ10		
EDAH11	2.673	6.46	3.79	ZN-EDAH11		
EDAM11	2.923	6.46	3.54	ZN-EDAM11		

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

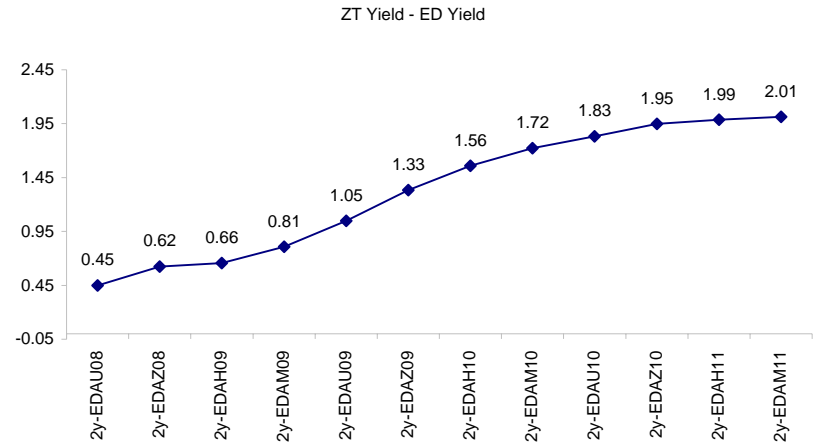


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.702	0.45	2y-EDAU08	-83.754
EDAZ08	3.877	0.62	2y-EDAZ08	-94.693
EDAH09	3.912	0.66	2y-EDAH09	-97.802
EDAM09	4.062	0.81	2y-EDAM09	-97.442
EDAU09	4.302	1.05	2y-EDAU09	-96.278
EDAZ09	4.587	1.33	2y-EDAZ09	-94.224
EDAH10	4.812	1.56	2y-EDAH10	-91.481
EDAM10	4.977	1.72	2y-EDAM10	-88.249
EDAU10	5.087	1.83	2y-EDAU10	-85.677
EDAZ10	5.202	1.95	2y-EDAZ10	-83.652
EDAH11	5.242	1.99	2y-EDAH11	-81.744
EDAM11	5.267	2.01	2y-EDAM11	-79.798

Price = Outright Decimal Price - Euro Contract Price

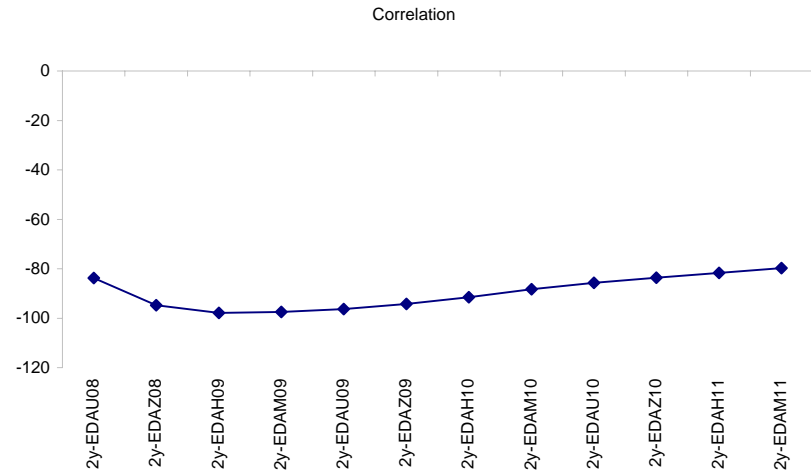
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.180	1.90	1.72	2y-EDAU08	
EDAZ08	0.429	1.90	1.47	2y-EDAZ08	
EDAH09	0.679	1.90	1.22	2y-EDAH09	
EDAM09	0.928	1.90	0.97	2y-EDAM09	
EDAU09	1.177	1.90	0.72	2y-EDAU09	
EDAZ09	1.427	1.90	0.47	2y-EDAZ09	
EDAH10	1.676	1.90	0.22	2y-EDAH10	
EDAM10	1.925	1.90	(0.03)	2y-EDAM10	
EDAU10	2.175	1.90	(0.28)	2y-EDAU10	
EDAZ10	2.424	1.90	(0.53)	2y-EDAZ10	
EDAH11	2.673	1.90	(0.78)	2y-EDAH11	
EDAM11	2.923	1.90	(1.03)	2y-EDAM11	

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

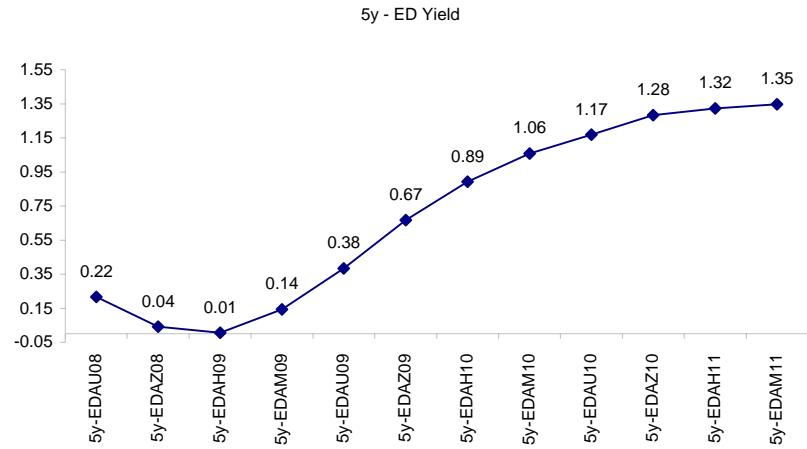


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.046	0.22	5y-EDAU08	-81.069
EDAZ08	4.221	0.04	5y-EDAZ08	-90.240
EDAH09	4.256	0.01	5y-EDAH09	-96.449
EDAM09	4.406	0.14	5y-EDAM09	-98.487
EDAU09	4.646	0.38	5y-EDAU09	-98.991
EDAZ09	4.931	0.67	5y-EDAZ09	-98.803
EDAH10	5.156	0.89	5y-EDAH10	-97.680
EDAM10	5.321	1.06	5y-EDAM10	-96.119
EDAU10	5.431	1.17	5y-EDAU10	-94.803
EDAZ10	5.546	1.28	5y-EDAZ10	-93.601
EDAH11	5.586	1.32	5y-EDAH11	-92.347
EDAM11	5.611	1.35	5y-EDAM11	-91.086

Price = Outright Decimal Price - Euro Contract Price

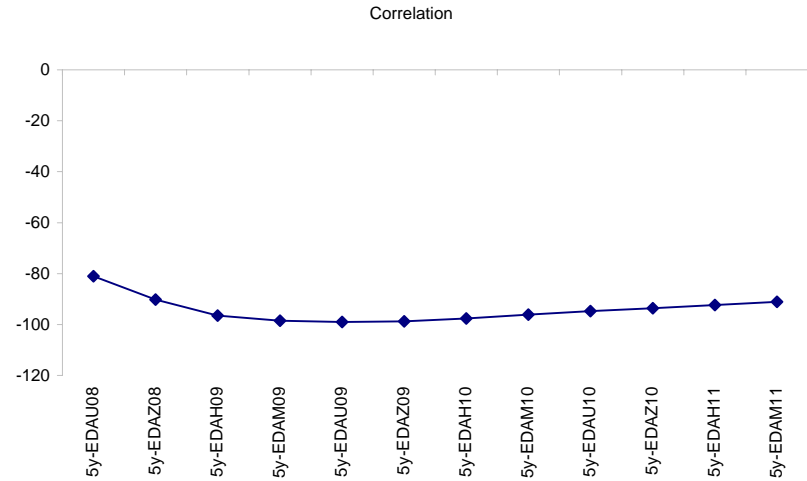
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.180	4.54	4.36	5y-EDAU08
EDAZ08	0.429	4.54	4.11	5y-EDAZ08
EDAH09	0.679	4.54	3.86	5y-EDAH09
EDAM09	0.928	4.54	3.61	5y-EDAM09
EDAU09	1.177	4.54	3.36	5y-EDAU09
EDAZ09	1.427	4.54	3.11	5y-EDAZ09
EDAH10	1.676	4.54	2.86	5y-EDAH10
EDAM10	1.925	4.54	2.61	5y-EDAM10
EDAU10	2.175	4.54	2.36	5y-EDAU10
EDAZ10	2.424	4.54	2.11	5y-EDAZ10
EDAH11	2.673	4.54	1.86	5y-EDAH11
EDAM11	2.923	4.54	1.61	5y-EDAM11

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

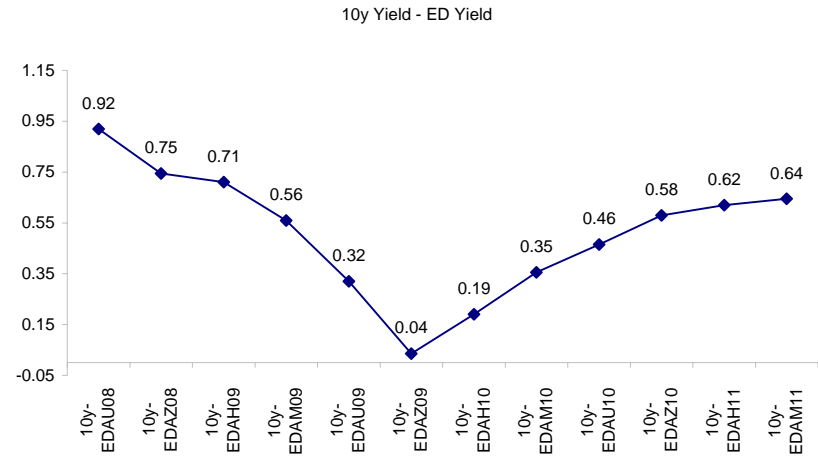


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.046	0.92	10y-EDAU08	-79.363
EDAZ08	4.221	0.75	10y-EDAZ08	-84.725
EDAH09	4.256	0.71	10y-EDAH09	-91.142
EDAM09	4.406	0.56	10y-EDAM09	-94.232
EDAU09	4.646	0.32	10y-EDAU09	-95.771
EDAZ09	4.931	0.04	10y-EDAZ09	-96.893
EDAH10	5.156	0.19	10y-EDAH10	-96.990
EDAM10	5.321	0.35	10y-EDAM10	-96.519
EDAU10	5.431	0.46	10y-EDAU10	-95.922
EDAZ10	5.546	0.58	10y-EDAZ10	-95.196
EDAH11	5.586	0.62	10y-EDAH11	-94.190
EDAM11	5.611	0.64	10y-EDAM11	-93.344

Price = Outright Decimal Price - Euro Contract Price

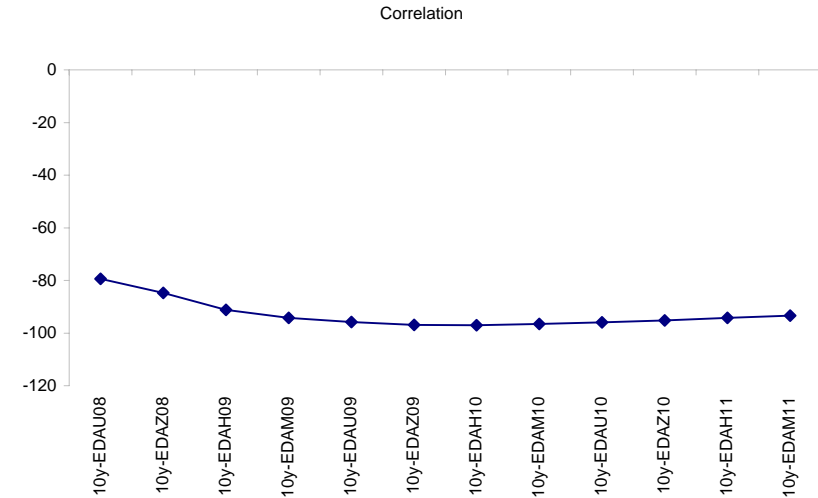
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.180	8.07	7.89	10y-EDAU08
EDAZ08	0.429	8.07	7.64	10y-EDAZ08
EDAH09	0.679	8.07	7.39	10y-EDAH09
EDAM09	0.928	8.07	7.14	10y-EDAM09
EDAU09	1.177	8.07	6.89	10y-EDAU09
EDAZ09	1.427	8.07	6.64	10y-EDAZ09
EDAH10	1.676	8.07	6.39	10y-EDAH10
EDAM10	1.925	8.07	6.15	10y-EDAM10
EDAU10	2.175	8.07	5.90	10y-EDAU10
EDAZ10	2.424	8.07	5.65	10y-EDAZ10
EDAH11	2.673	8.07	5.40	10y-EDAH11
EDAM11	2.923	8.07	5.15	10y-EDAM11

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.

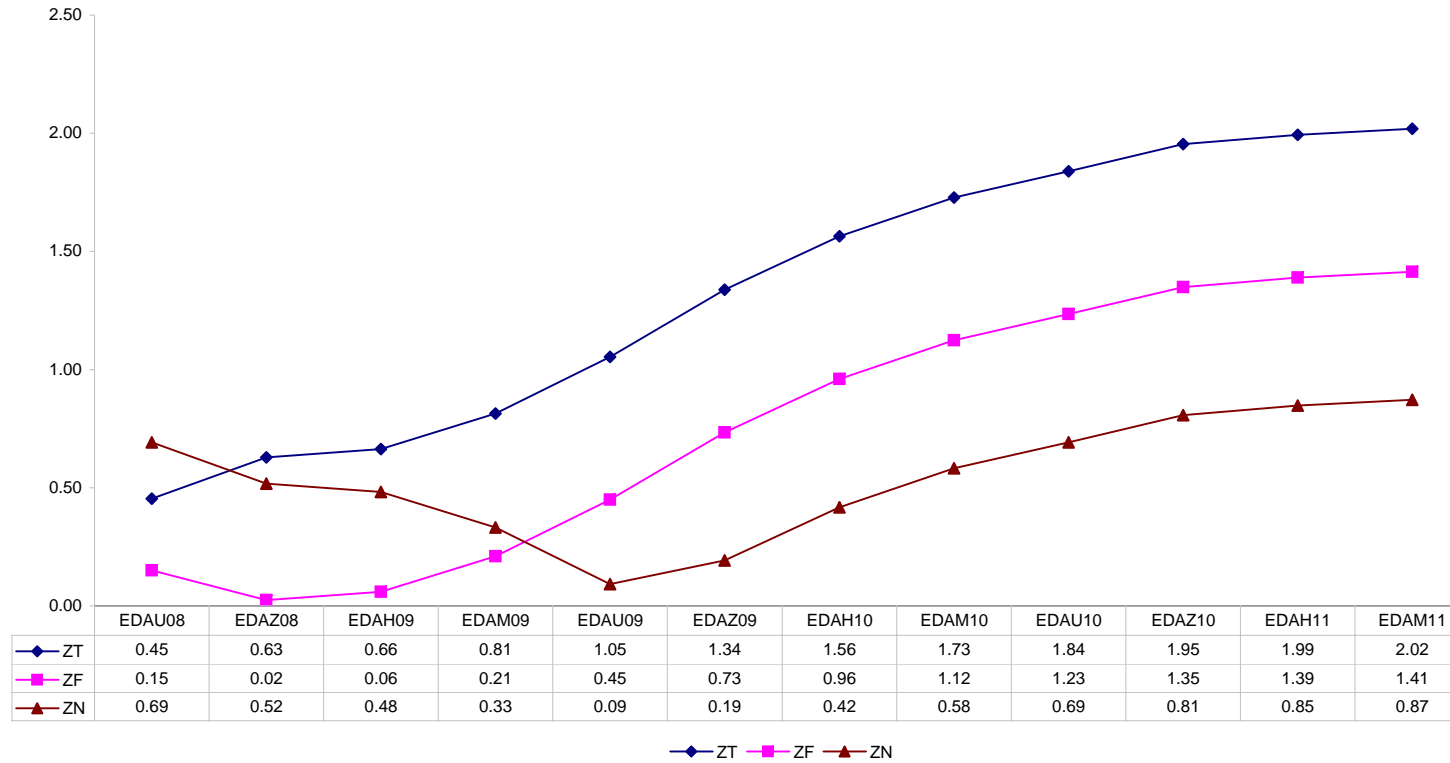
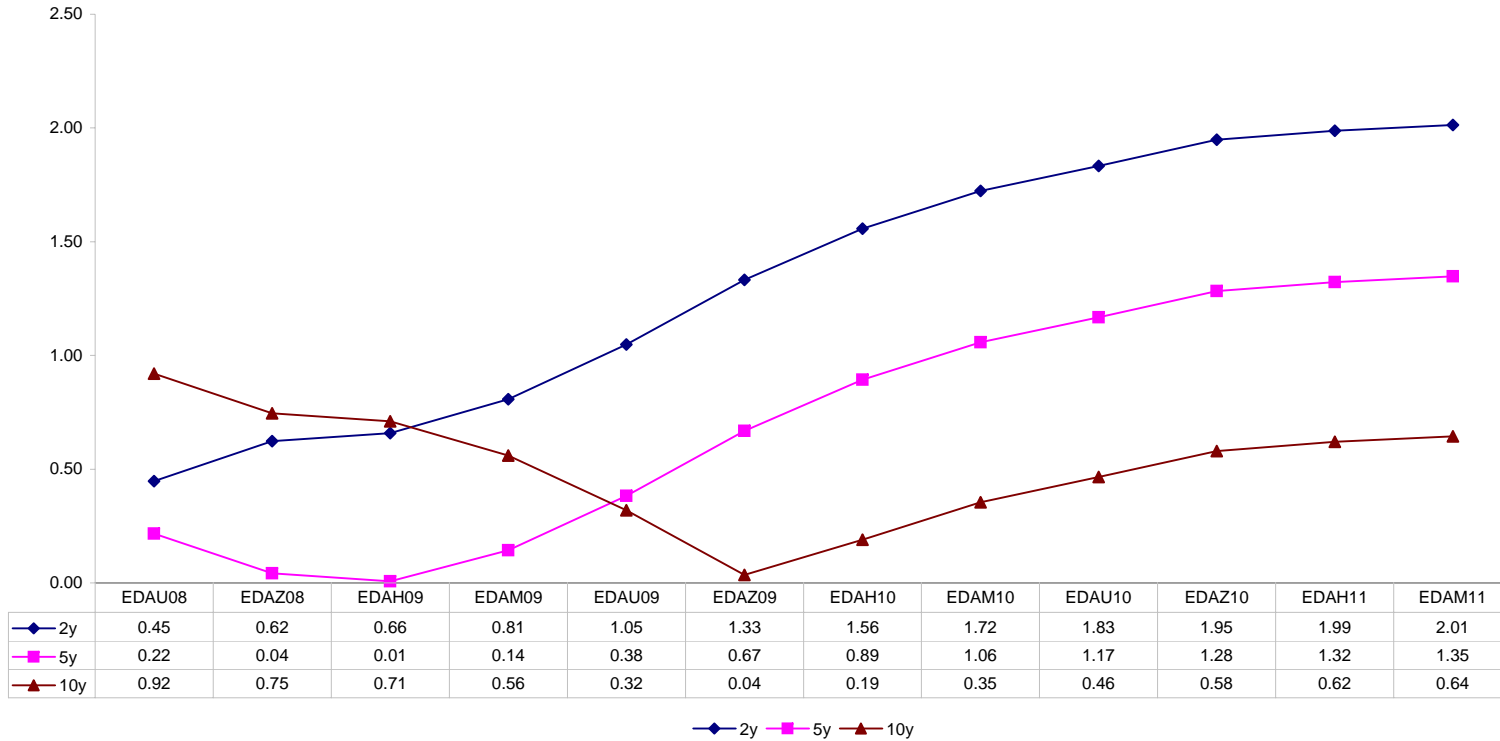
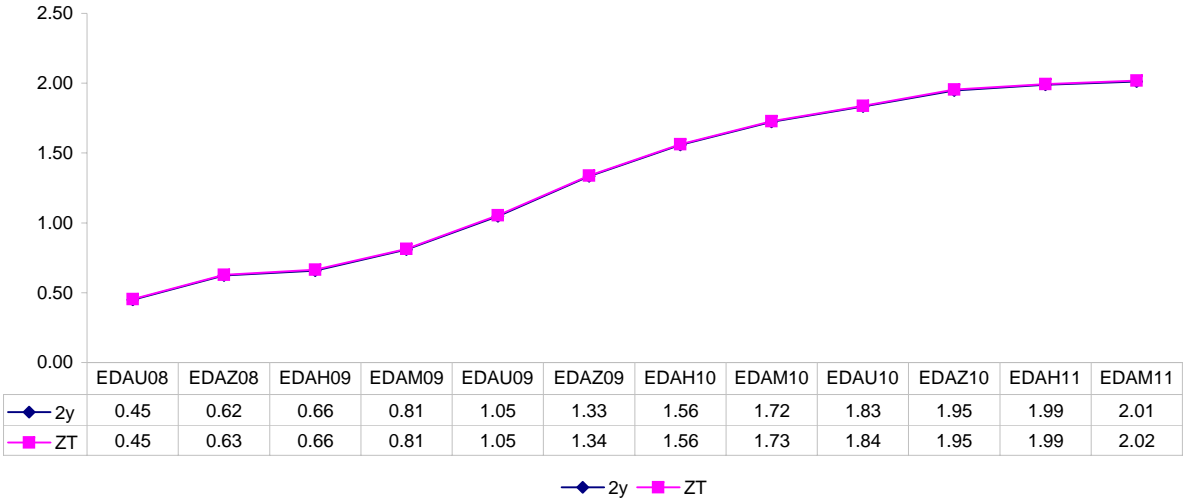


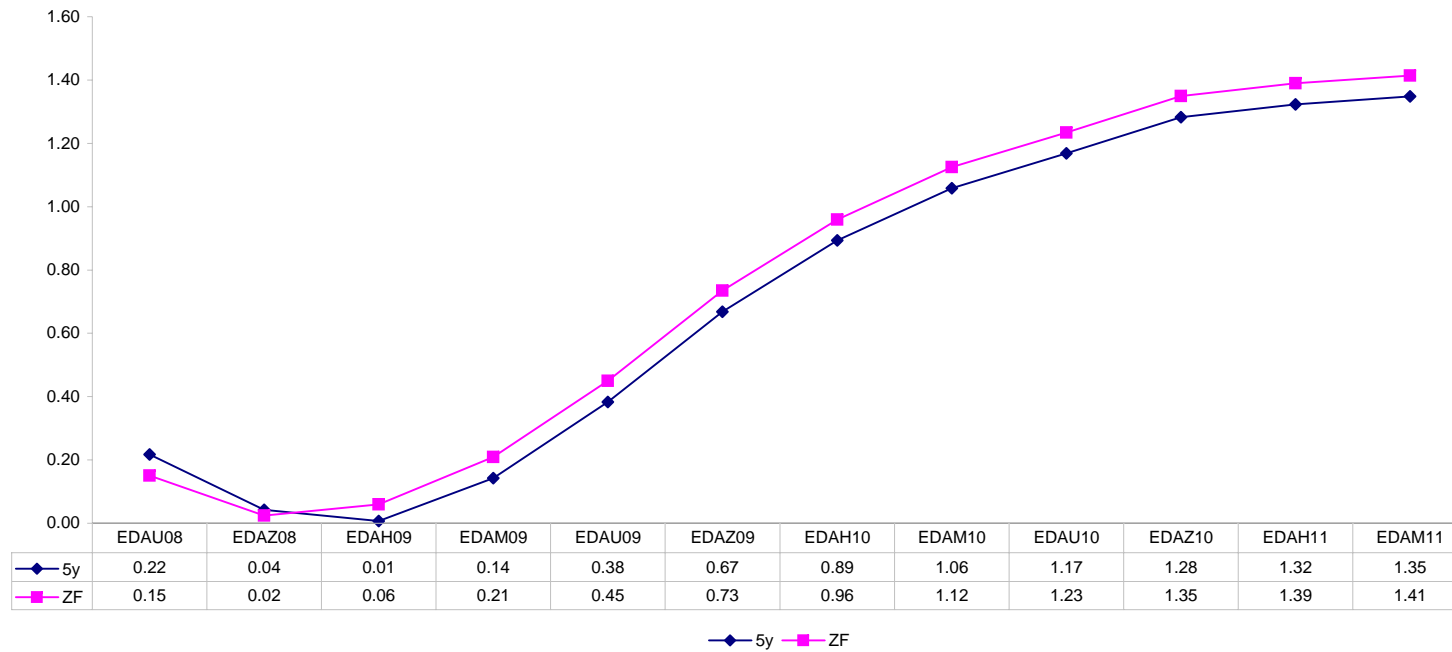
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



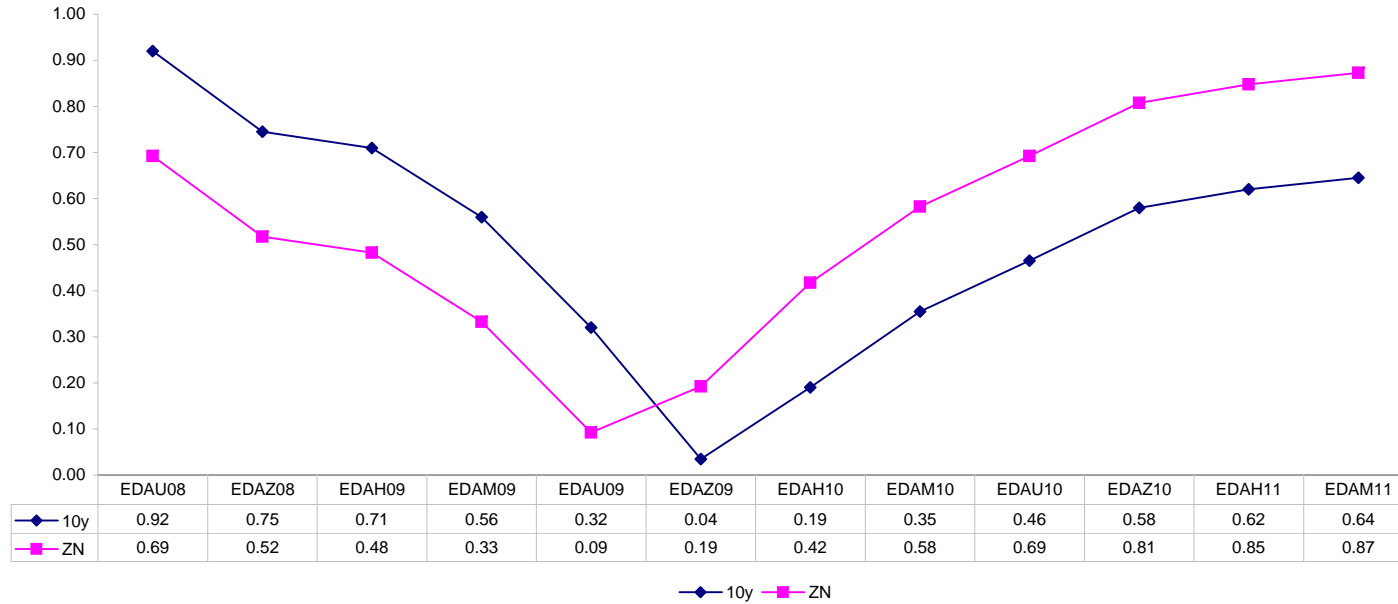
2y Basis TED Curve



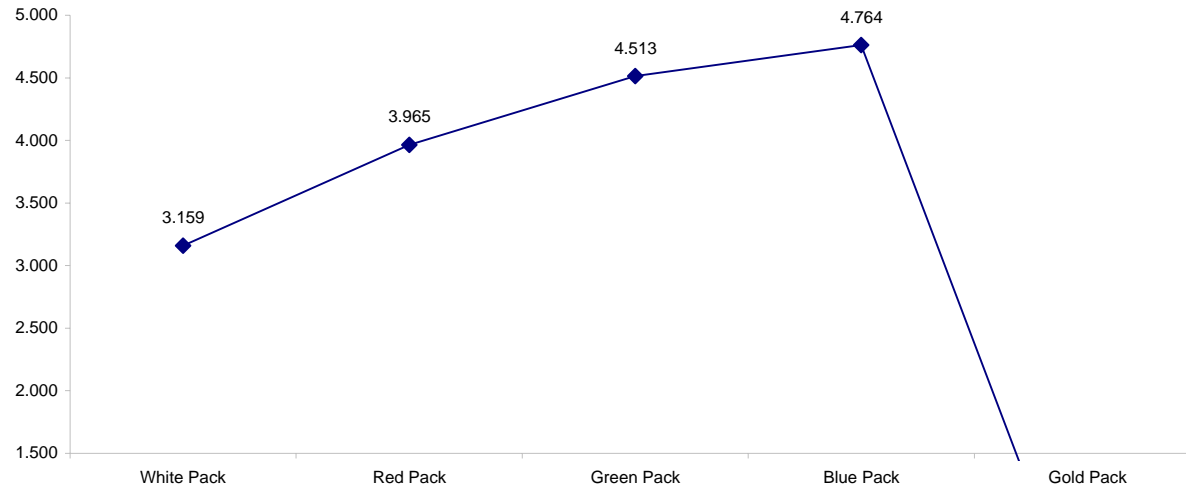
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.159	-3.000	9690.875
Red Pack	3.965	-4.875	9612.750
Green Pack	4.513	-1.125	9559.750
Blue Pack	4.764	-3.250	9535.625
Gold Pack		-2.375	9516.000



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

