

## The Morning Email: TERM TEDS & Dirty TEDS

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Want something added? Let me know: [jgoulding@ghco.com](mailto: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	109.0375	109.0120	0.799	1.95
ZF	118.9281	118.2970	1.348	1.35
ZN	124.5156	124.1650	1.563	6.27
2y	100.1469	100.0470	0.799	1.95
5y	99.3281	99.1050	1.645	4.64
10y	111.0469	111.0150	2.476	8.27

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH09	98.975	1.025	67	0.183	MAR	
EDAM09	98.975	1.025	158	0.432	JUN	White Pack
EDAU09	98.865	1.135	249	0.682	SEP	
EDAZ09	98.680	1.320	340	0.931	DEC	
EDAH10	98.550	1.450	431	1.180	MAR	
EDAM10	98.295	1.705	522	1.429	JUN	Red Pack
EDAU10	98.060	1.940	613	1.679	SEP	
EDAZ10	97.830	2.170	704	1.928	DEC	
EDAH11	97.680	2.320	795	2.177	MAR	
EDAM11	97.535	2.465	886	2.427	JUN	Green Pack
EDAU11	97.435	2.565	984	2.695	SEP	
EDAZ11	97.335	2.665	1075	2.945	DEC	
EDAH12	97.305	2.695	1166	3.194	MAR	
EDAM12	97.240	2.760	1257	3.443	JUN	Blue Pack
EDAU12	97.190	2.810	1348	3.692	SEP	
EDAZ12	97.105	2.895	1439	3.942	DEC	
EDAH13	97.080	2.920	1530	4.191	MAR	
EDAM13	97.000	3.000	1621	4.440	JUN	Gold Pack
EDZU13	96.940	3.060	1712	4.690	SEP	
EDZZ13	96.815	3.185	1803	4.939	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	1.145	1.750	9887.375	
Red Pack	1.850	-0.125	9818.375	Pack Prices
Green Pack	2.555	-1.500	9749.625	
Blue Pack		-0.125	9721.250	
Gold Pack		0.000	9696.125	

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.

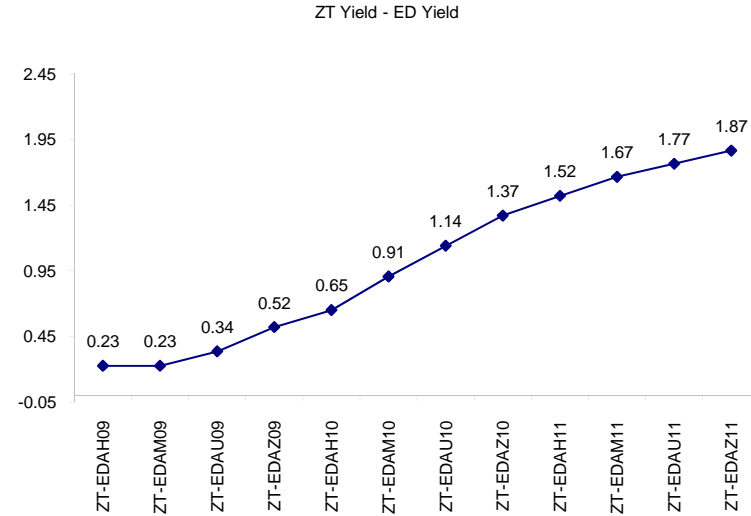
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

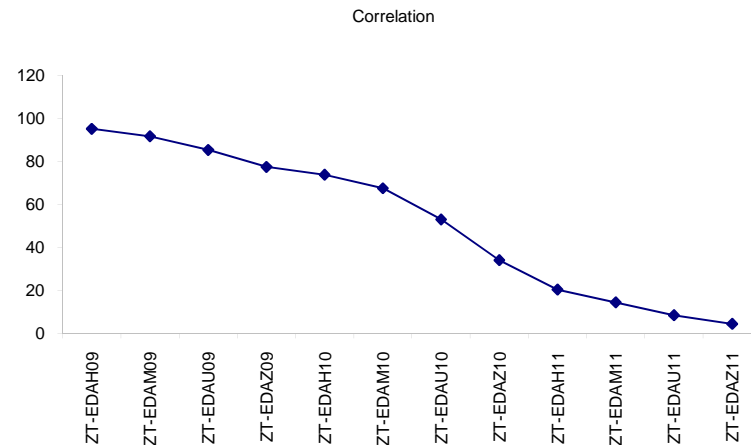
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	10.063	0.23	ZT-EDAH09	95.341
EDAM09	10.063	0.23	ZT-EDAM09	91.840
EDAU09	10.173	0.34	ZT-EDAU09	85.507
EDAZ09	10.358	0.52	ZT-EDAZ09	77.611
EDAH10	10.488	0.65	ZT-EDAH10	73.916
EDAM10	10.743	0.91	ZT-EDAM10	67.647
EDAU10	10.978	1.14	ZT-EDAU10	53.139
EDAZ10	11.208	1.37	ZT-EDAZ10	34.126
EDAH11	11.358	1.52	ZT-EDAH11	20.459
EDAM11	11.503	1.67	ZT-EDAM11	14.483
EDAU11	11.603	1.77	ZT-EDAU11	8.501
EDAZ11	11.703	1.87	ZT-EDAZ11	4.462

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	
EDAH09	0.183	1.95	1.77	ZT-EDAH09		
EDAM09	0.432	1.95	1.52	ZT-EDAM09		
EDAU09	0.682	1.95	1.27	ZT-EDAU09		
EDAZ09	0.931	1.95	1.02	ZT-EDAZ09		
EDAH10	1.180	1.95	0.77	ZT-EDAH10		
EDAM10	1.429	1.95	0.52	ZT-EDAM10		
EDAU10	1.679	1.95	0.28	ZT-EDAU10		
EDAZ10	1.928	1.95	0.03	ZT-EDAZ10		
EDAH11	2.177	1.95	(0.22)	ZT-EDAH11		
EDAM11	2.427	1.95	(0.47)	ZT-EDAM11		
EDAU11	2.695	1.95	(0.74)	ZT-EDAU11		
EDAZ11	2.945	1.95	(0.99)	ZT-EDAZ11		

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

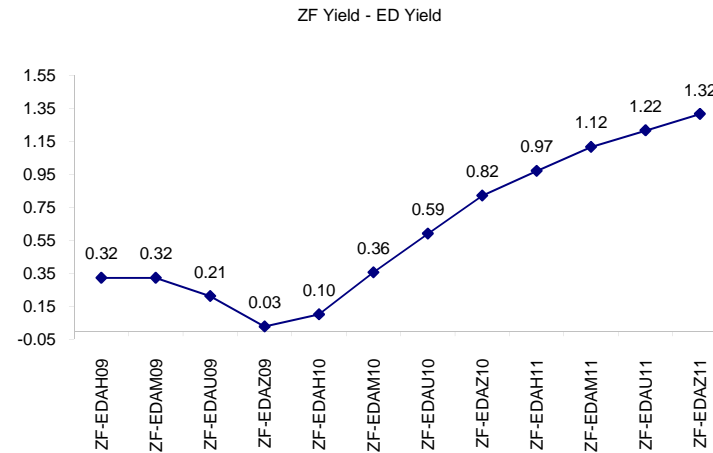


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	19.953	0.32	ZF-EDAH09	11.802
EDAM09	19.953	0.32	ZF-EDAM09	8.633
EDAU09	20.063	0.21	ZF-EDAU09	24.289
EDAZ09	20.248	0.03	ZF-EDAZ09	43.392
EDAH10	20.378	0.10	ZF-EDAH10	48.255
EDAM10	20.633	0.36	ZF-EDAM10	56.225
EDAU10	20.868	0.59	ZF-EDAU10	71.057
EDAZ10	21.098	0.82	ZF-EDAZ10	83.958
EDAH11	21.248	0.97	ZF-EDAH11	89.657
EDAM11	21.393	1.12	ZF-EDAM11	91.085
EDAU11	21.493	1.22	ZF-EDAU11	92.112
EDAZ11	21.593	1.32	ZF-EDAZ11	92.097

Price = Outright Decimal Price - Euro Contract Price

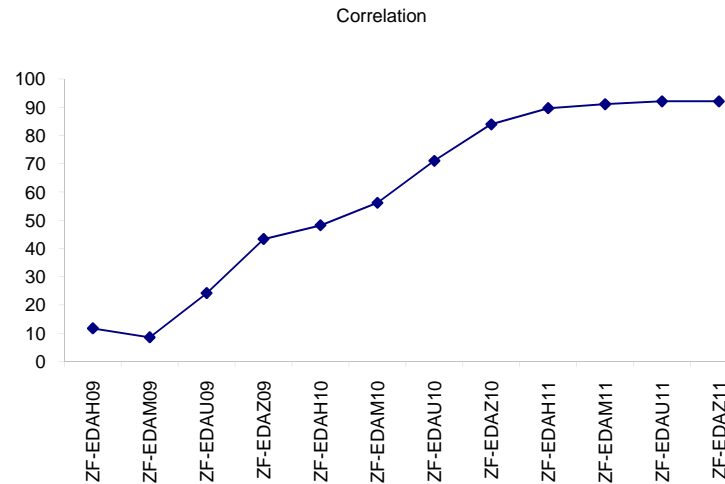
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAH09	0.183	1.35	1.17	ZF-EDAH09		
EDAM09	0.432	1.35	0.92	ZF-EDAM09		
EDAU09	0.682	1.35	0.67	ZF-EDAU09		
EDAZ09	0.931	1.35	0.42	ZF-EDAZ09		
EDAH10	1.180	1.35	0.17	ZF-EDAH10		
EDAM10	1.429	1.35	(0.08)	ZF-EDAM10		
EDAU10	1.679	1.35	(0.33)	ZF-EDAU10		
EDAZ10	1.928	1.35	(0.58)	ZF-EDAZ10		
EDAH11	2.177	1.35	(0.83)	ZF-EDAH11		
EDAM11	2.427	1.35	(1.08)	ZF-EDAM11		
EDAU11	2.695	1.35	(1.35)	ZF-EDAU11		
EDAZ11	2.945	1.35	(1.60)	ZF-EDAZ11		

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

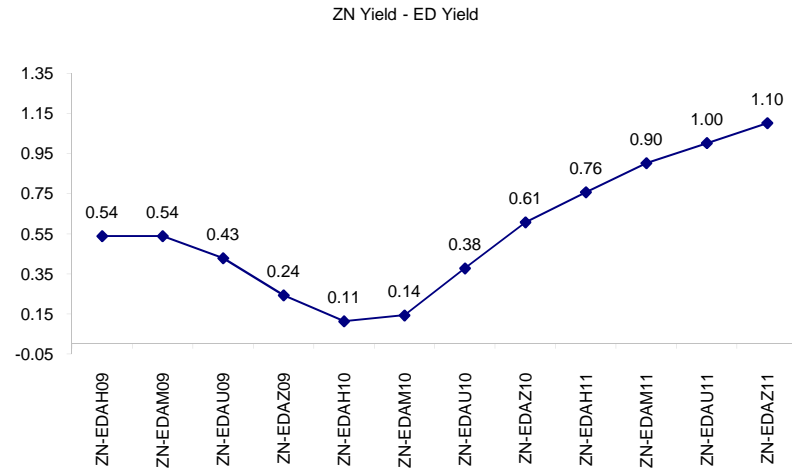


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	25.541	0.54	ZN-EDAH09	-21.542
EDAM09	25.541	0.54	ZN-EDAM09	-28.884
EDAU09	25.651	0.43	ZN-EDAU09	-14.307
EDAZ09	25.836	0.24	ZN-EDAZ09	6.928
EDAH10	25.966	0.11	ZN-EDAH10	14.163
EDAM10	26.221	0.14	ZN-EDAM10	25.338
EDAU10	26.456	0.38	ZN-EDAU10	46.122
EDAZ10	26.686	0.61	ZN-EDAZ10	66.747
EDAH11	26.836	0.76	ZN-EDAH11	77.155
EDAM11	26.981	0.90	ZN-EDAM11	81.046
EDAU11	27.081	1.00	ZN-EDAU11	84.109
EDAZ11	27.181	1.10	ZN-EDAZ11	85.879

Price = Outright Decimal Price - Euro Contract Price

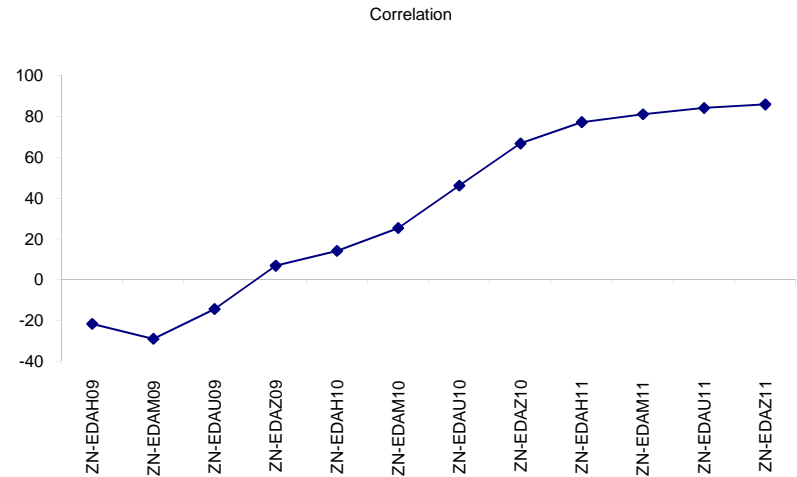
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAH09	0.183	6.27	6.08	ZN-EDAH09		
EDAM09	0.432	6.27	5.84	ZN-EDAM09		
EDAU09	0.682	6.27	5.59	ZN-EDAU09		
EDAZ09	0.931	6.27	5.34	ZN-EDAZ09		
EDAH10	1.180	6.27	5.09	ZN-EDAH10		
EDAM10	1.429	6.27	4.84	ZN-EDAM10		
EDAU10	1.679	6.27	4.59	ZN-EDAU10		
EDAZ10	1.928	6.27	4.34	ZN-EDAZ10		
EDAH11	2.177	6.27	4.09	ZN-EDAH11		
EDAM11	2.427	6.27	3.84	ZN-EDAM11		
EDAU11	2.695	6.27	3.57	ZN-EDAU11		
EDAZ11	2.945	6.27	3.32	ZN-EDAZ11		

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

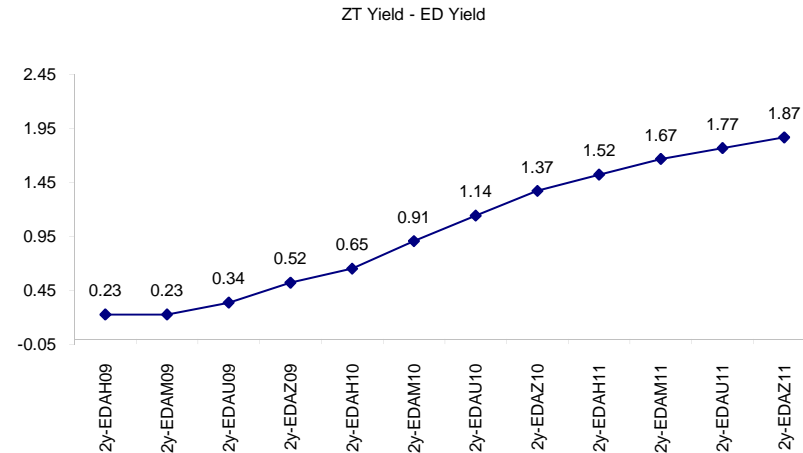


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.172	0.23	2y-EDAH09	-75.662
EDAM09	1.172	0.23	2y-EDAM09	-65.851
EDAU09	1.282	0.34	2y-EDAU09	-58.154
EDAZ09	1.467	0.52	2y-EDAZ09	-53.182
EDAH10	1.597	0.65	2y-EDAH10	-52.859
EDAM10	1.852	0.91	2y-EDAM10	-50.497
EDAU10	2.087	1.14	2y-EDAU10	-42.490
EDAZ10	2.317	1.37	2y-EDAZ10	-30.477
EDAH11	2.467	1.52	2y-EDAH11	-19.703
EDAM11	2.612	1.67	2y-EDAM11	-15.143
EDAU11	2.712	1.77	2y-EDAU11	-9.924
EDAZ11	2.812	1.87	2y-EDAZ11	-6.691

Price = Outright Decimal Price - Euro Contract Price

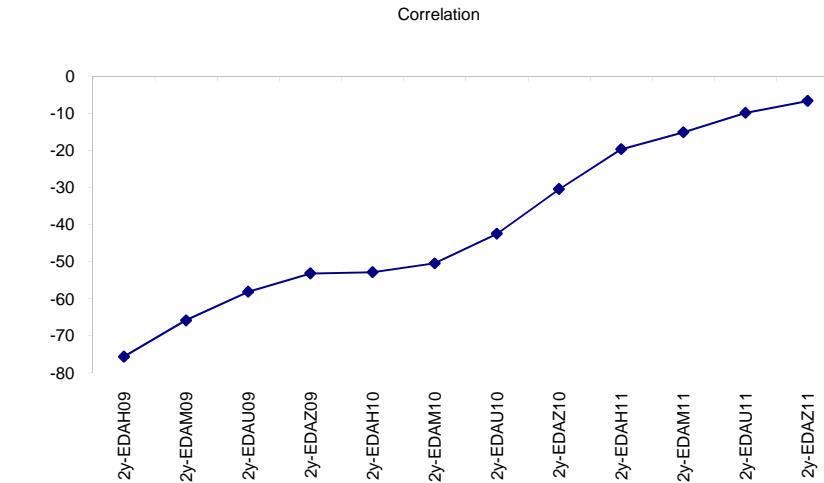
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAH09	0.183	1.95	1.77	2y-EDAH09	
EDAM09	0.432	1.95	1.52	2y-EDAM09	
EDAU09	0.682	1.95	1.27	2y-EDAU09	
EDAZ09	0.931	1.95	1.02	2y-EDAZ09	
EDAH10	1.180	1.95	0.77	2y-EDAH10	
EDAM10	1.429	1.95	0.52	2y-EDAM10	
EDAU10	1.679	1.95	0.28	2y-EDAU10	
EDAZ10	1.928	1.95	0.03	2y-EDAZ10	
EDAH11	2.177	1.95	(0.22)	2y-EDAH11	
EDAM11	2.427	1.95	(0.47)	2y-EDAM11	
EDAU11	2.695	1.95	(0.74)	2y-EDAU11	
EDAZ11	2.945	1.95	(0.99)	2y-EDAZ11	

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

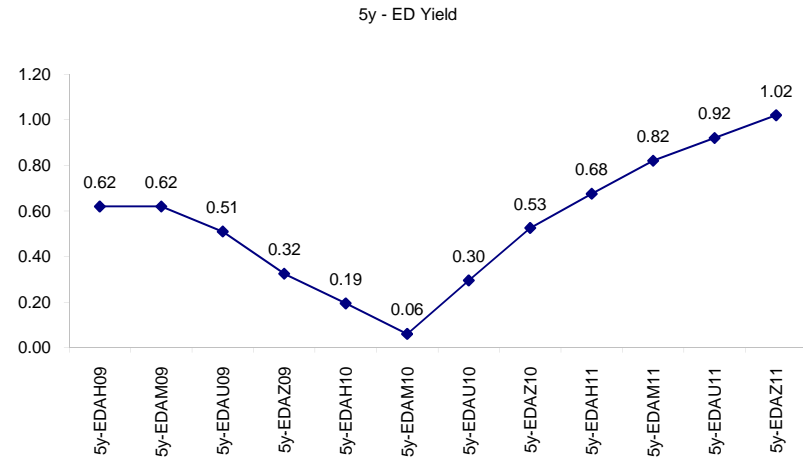


	5y			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAH09	0.353	0.62	5y-EDAH09	0.809
EDAM09	0.353	0.62	5y-EDAM09	12.195
EDAU09	0.463	0.51	5y-EDAU09	0.144
EDAZ09	0.648	0.32	5y-EDAZ09	-20.082
EDAH10	0.778	0.19	5y-EDAH10	-27.641
EDAM10	1.033	0.06	5y-EDAM10	-38.583
EDAU10	1.268	0.30	5y-EDAU10	-57.413
EDAZ10	1.498	0.53	5y-EDAZ10	-75.015
EDAH11	1.648	0.68	5y-EDAH11	-82.488
EDAM11	1.793	0.82	5y-EDAM11	-85.336
EDAU11	1.893	0.92	5y-EDAU11	-87.232
EDAZ11	1.993	1.02	5y-EDAZ11	-88.383

Price = Outright Decimal Price - Euro Contract Price

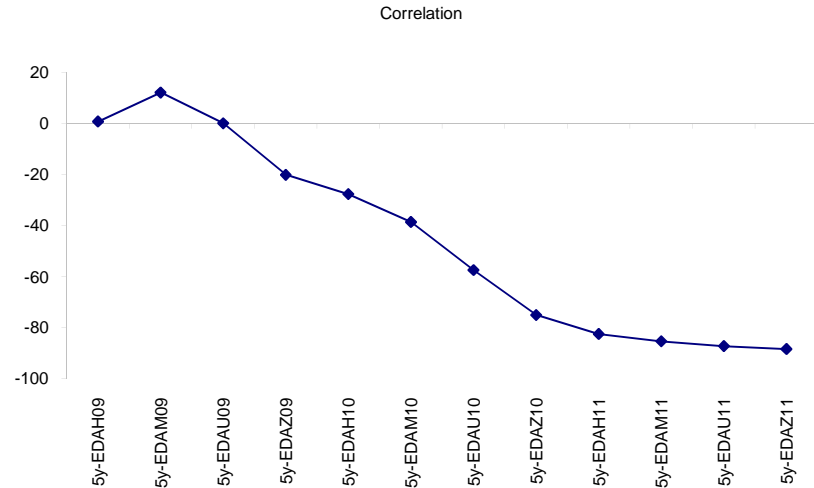
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			5Y Duration	Spread Duration	
EDAH09	0.183	4.64	4.46	5y-EDAH09		
EDAM09	0.432	4.64	4.21	5y-EDAM09		
EDAU09	0.682	4.64	3.96	5y-EDAU09		
EDAZ09	0.931	4.64	3.71	5y-EDAZ09		
EDAH10	1.180	4.64	3.46	5y-EDAH10		
EDAM10	1.429	4.64	3.21	5y-EDAM10		
EDAU10	1.679	4.64	2.96	5y-EDAU10		
EDAZ10	1.928	4.64	2.71	5y-EDAZ10		
EDAH11	2.177	4.64	2.46	5y-EDAH11		
EDAM11	2.427	4.64	2.21	5y-EDAM11		
EDAU11	2.695	4.64	1.94	5y-EDAU11		
EDAZ11	2.945	4.64	1.70	5y-EDAZ11		

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

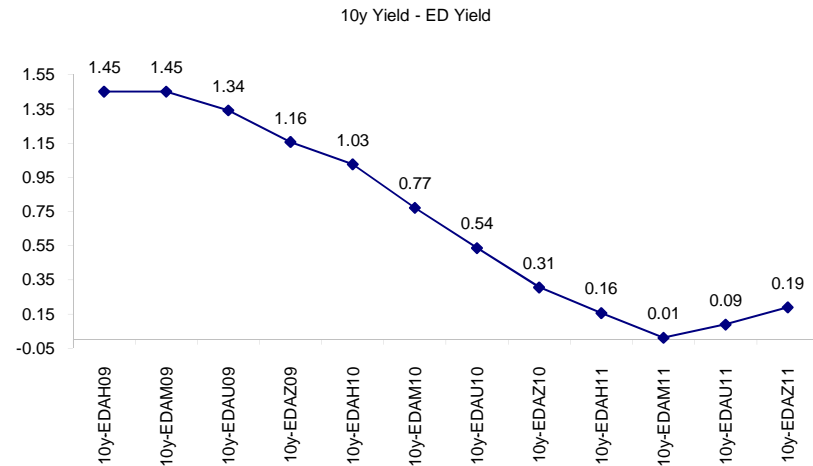


	10y			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAH09	0.353	1.45	10y-EDAH09	26.144
EDAM09	0.353	1.45	10y-EDAM09	39.905
EDAU09	0.463	1.34	10y-EDAU09	29.214
EDAZ09	0.648	1.16	10y-EDAZ09	8.580
EDAH10	0.778	1.03	10y-EDAH10	-0.212
EDAM10	1.033	0.77	10y-EDAM10	-12.988
EDAU10	1.268	0.54	10y-EDAU10	-35.174
EDAZ10	1.498	0.31	10y-EDAZ10	-57.444
EDAH11	1.648	0.16	10y-EDAH11	-68.037
EDAM11	1.793	0.01	10y-EDAM11	-72.569
EDAU11	1.893	0.09	10y-EDAU11	-75.814
EDAZ11	1.993	0.19	10y-EDAZ11	-78.326

Price = Outright Decimal Price - Euro Contract Price

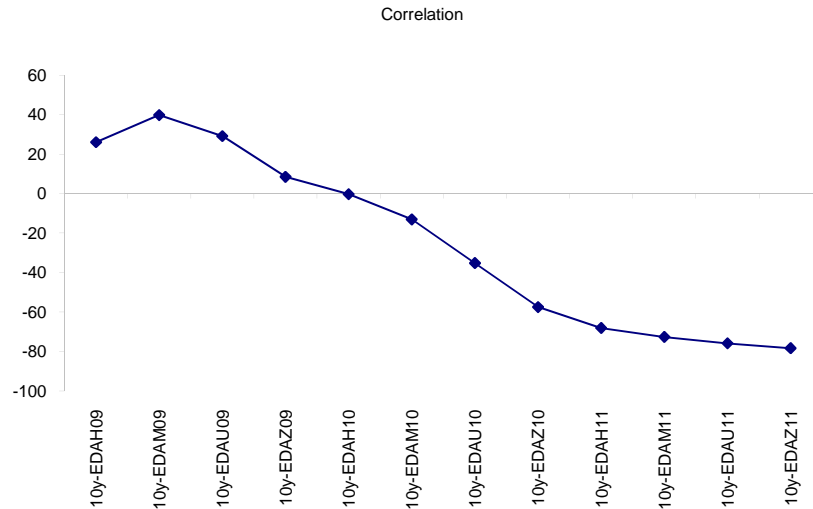
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			10Y Duration	Spread Duration	
EDAH09	0.183	8.27	8.09	10y-EDAH09		
EDAM09	0.432	8.27	7.84	10y-EDAM09		
EDAU09	0.682	8.27	7.59	10y-EDAU09		
EDAZ09	0.931	8.27	7.34	10y-EDAZ09		
EDAH10	1.180	8.27	7.09	10y-EDAH10		
EDAM10	1.429	8.27	6.84	10y-EDAM10		
EDAU10	1.679	8.27	6.60	10y-EDAU10		
EDAZ10	1.928	8.27	6.35	10y-EDAZ10		
EDAH11	2.177	8.27	6.10	10y-EDAH11		
EDAM11	2.427	8.27	5.85	10y-EDAM11		
EDAU11	2.695	8.27	5.58	10y-EDAU11		
EDAZ11	2.945	8.27	5.33	10y-EDAZ11		

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.

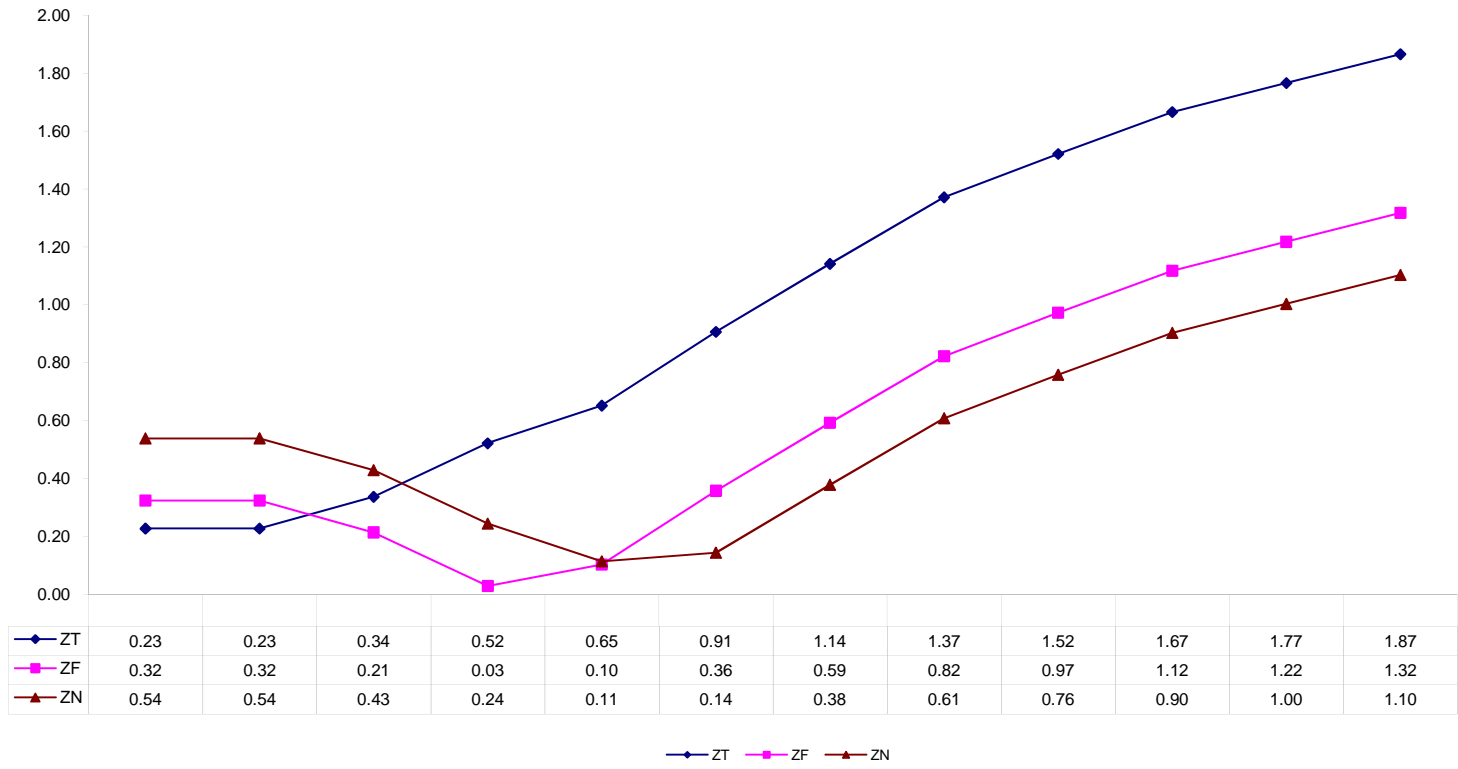
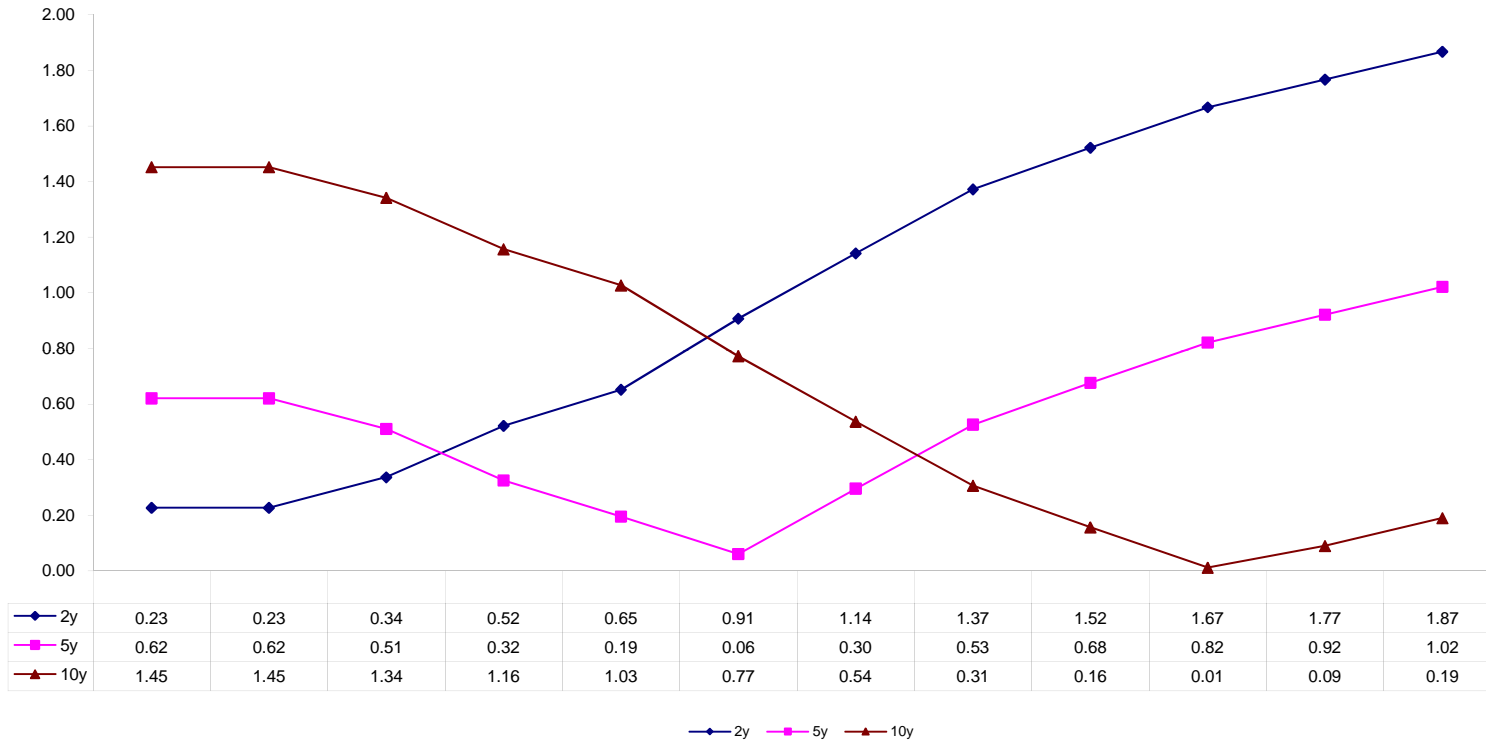
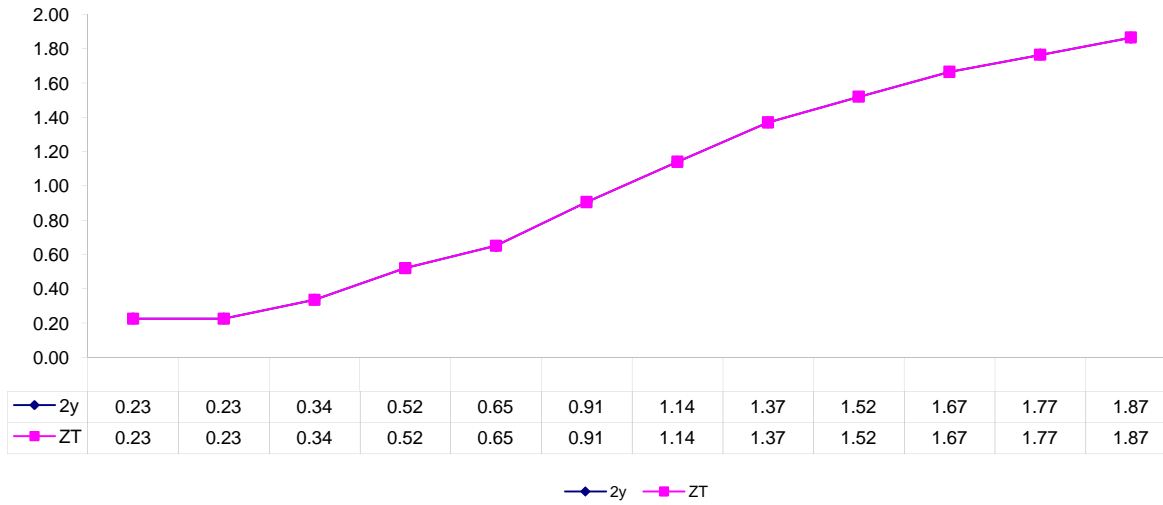


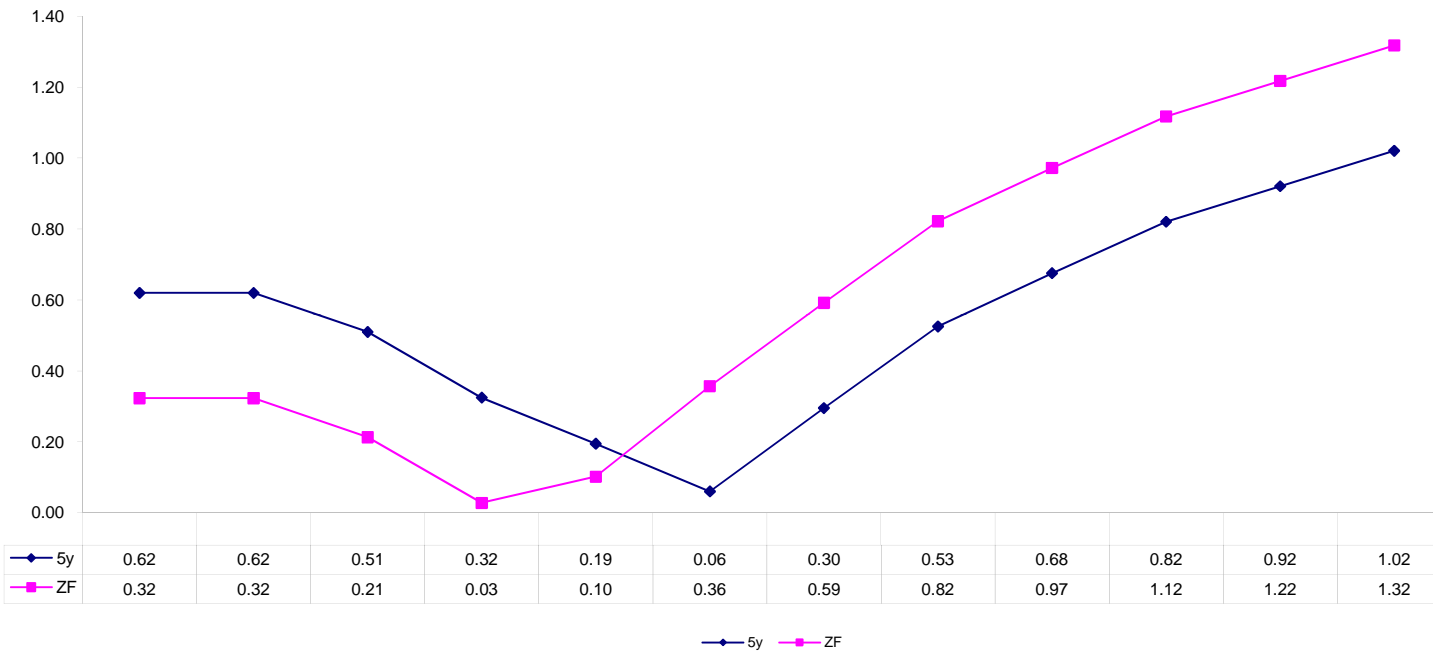
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



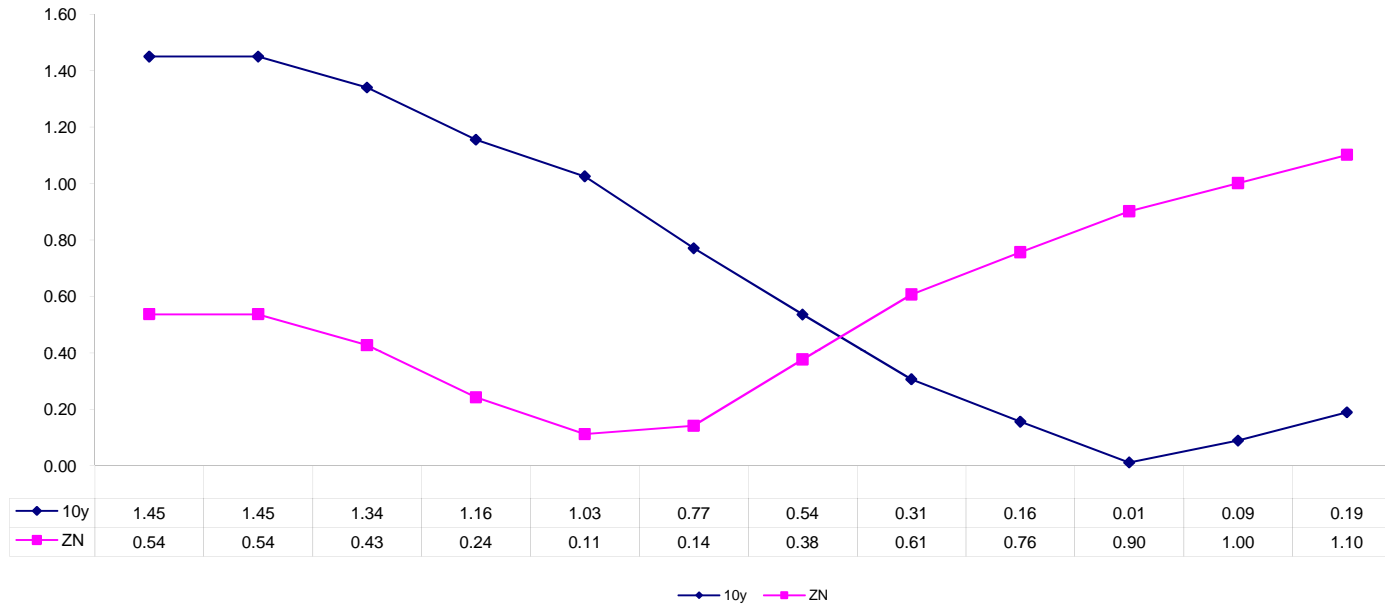
### 2y Basis TED Curve



5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	1.145	1.750	9887.375
Red Pack	1.850	-0.125	9818.375
Green Pack	2.555	-1.500	9749.625
Blue Pack		-0.125	9721.250
Gold Pack		0.000	9696.125

