

## **The Morning Email: TERM TEDS & Dirty TEDS**

### **Table of Contents**

- Pg 1** Quotes
  
- Pg 2** Dirty TED: ZT vs Eurodollar Contracts
  
- Pg 3** Dirty TED: ZF vs Eurodollar Contracts
  
- Pg 4** Dirty TED: ZN vs Eurodollar Contracts
  
- Pg 5** TERM TED: 2y vs Eurodollar Contracts
  
- Pg 6** TERM TED: 5y vs Eurodollar Contracts
  
- Pg 7** TERM TED: 10y vs Eurodollar Contracts
  
- Pg 8** Dirty TED Curve
  
- Pg 9** TED Curve
  
- Pg 10** 2y Basis TED Curve
  
- Pg 11** 5y Basis TED Curve
  
- Pg 12** 10y Basis TED Curve
  
- Pg 13** Packs
  
- Pg 14** 2y, 5y, 10y Basis Curves vs ED

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	106.3500	106.112	2.325	1.78	
ZF	112.2813	112.090	2.957	3.92	
ZN	116.3750	116.120	3.604	6.63	
2y	100.709	100.2270	2.363	1.87	
5y	101.297	101.0950	3.086	4.51	
10y	101.391	101.1250	3.827	8.17	

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.165	2.835	21	0.057	SEP	
EDAZ08	96.970	3.030	112	0.306	DEC	White Pack
EDAH09	96.960	3.040	203	0.555	MAR	
EDAM09	96.825	3.175	294	0.805	JUN	
EDAU09	96.625	3.375	385	1.054	SEP	
EDAZ09	96.345	3.655	476	1.303	DEC	Red Pack
EDAH10	96.125	3.875	567	1.553	MAR	
EDAM10	95.915	4.085	658	1.802	JUN	
EDAU10	95.740	4.260	749	2.051	SEP	
EDAZ10	95.585	4.415	840	2.301	DEC	Green Pack
EDAH11	95.510	4.490	931	2.550	MAR	
EDAM11	95.440	4.560	1022	2.799	JUN	
EDAU11	95.385	4.615	1120	3.068	SEP	
EDAZ11	#VALUE!	#VALUE!	1211	3.317	DEC	Blue Pack
EDAH12	#VALUE!	#VALUE!	1302	3.566	MAR	
EDAM12	#VALUE!	#VALUE!	1393	3.816	JUN	
EDAU12	#VALUE!	#VALUE!	1484	4.065	SEP	
EDAZ12	95.135	4.865	1575	4.314	DEC	Gold Pack
EDAH13	95.095	4.905	1666	4.564	MAR	
EDAM13	95.065	4.935	1757	4.813	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.085	2.625	9698.000	
Red Pack	3.836	3.125	9625.250	Pack Prices
Green Pack	4.543	1.625	9556.875	
Blue Pack		0.250	9530.625	
Gold Pack		0.000	9511.875	

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.

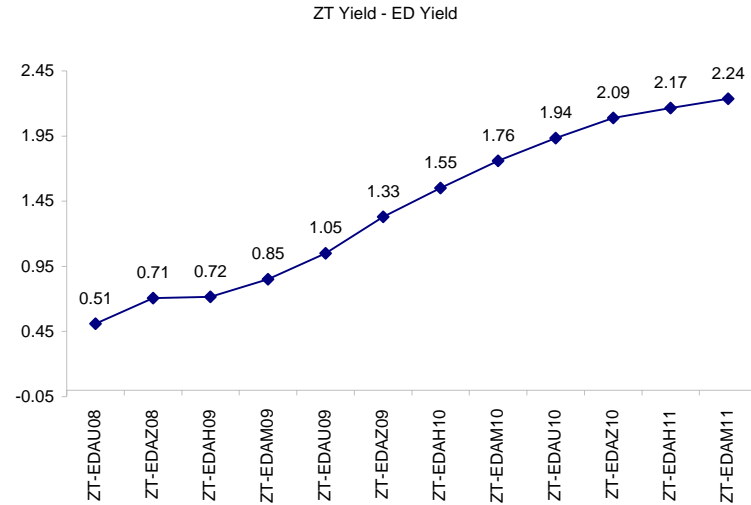
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### 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.**

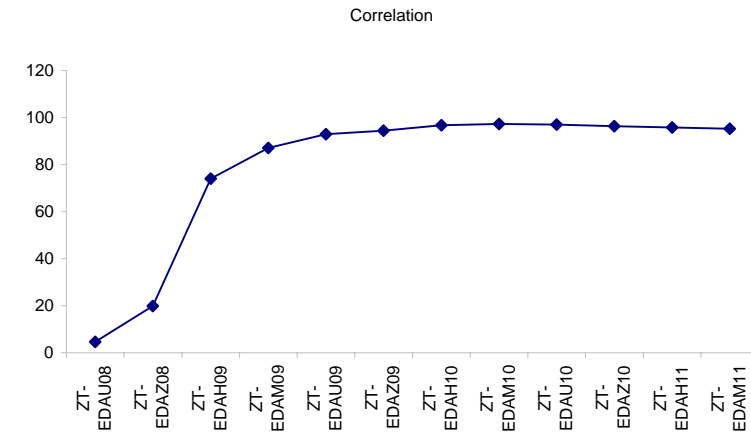
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	9.185	0.51	ZT-EDAU08	4.668
EDAZ08	9.380	0.71	ZT-EDAZ08	19.925
EDAH09	9.390	0.72	ZT-EDAH09	73.977
EDAM09	9.525	0.85	ZT-EDAM09	87.069
EDAU09	9.725	1.05	ZT-EDAU09	92.858
EDAZ09	10.005	1.33	ZT-EDAZ09	94.379
EDAH10	10.225	1.55	ZT-EDAH10	96.703
EDAM10	10.435	1.76	ZT-EDAM10	97.321
EDAU10	10.610	1.94	ZT-EDAU10	97.051
EDAZ10	10.765	2.09	ZT-EDAZ10	96.385
EDAH11	10.840	2.17	ZT-EDAH11	95.834
EDAM11	10.910	2.24	ZT-EDAM11	95.195

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	0.057	1.78	1.73	ZT-EDAU08	
EDAZ08	0.306	1.78	1.48	ZT-EDAZ08	
EDAH09	0.555	1.78	1.23	ZT-EDAH09	
EDAM09	0.805	1.78	0.98	ZT-EDAM09	
EDAU09	1.054	1.78	0.73	ZT-EDAU09	
EDAZ09	1.303	1.78	0.48	ZT-EDAZ09	
EDAH10	1.553	1.78	0.23	ZT-EDAH10	
EDAM10	1.802	1.78	(0.02)	ZT-EDAM10	
EDAU10	2.051	1.78	(0.27)	ZT-EDAU10	
EDAZ10	2.301	1.78	(0.52)	ZT-EDAZ10	
EDAH11	2.550	1.78	(0.77)	ZT-EDAH11	
EDAM11	2.799	1.78	(1.02)	ZT-EDAM11	

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

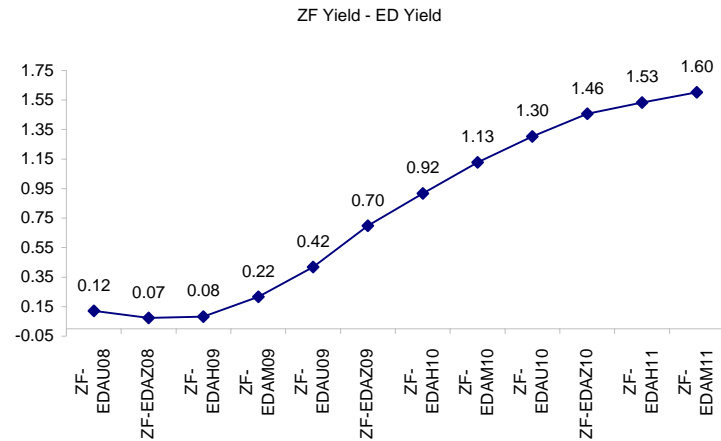


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	15.116	0.12	ZF-EDAU08	-3.040
EDAZ08	15.311	0.07	ZF-EDAZ08	13.232
EDAH09	15.321	0.08	ZF-EDAH09	68.754
EDAM09	15.456	0.22	ZF-EDAM09	83.026
EDAU09	15.656	0.42	ZF-EDAU09	90.026
EDAZ09	15.936	0.70	ZF-EDAZ09	92.188
EDAH10	16.156	0.92	ZF-EDAH10	94.817
EDAM10	16.366	1.13	ZF-EDAM10	96.158
EDAU10	16.541	1.30	ZF-EDAU10	95.957
EDAZ10	16.696	1.46	ZF-EDAZ10	95.626
EDAH11	16.771	1.53	ZF-EDAH11	95.858
EDAM11	16.841	1.60	ZF-EDAM11	95.793

Price = Outright Decimal Price - Euro Contract Price

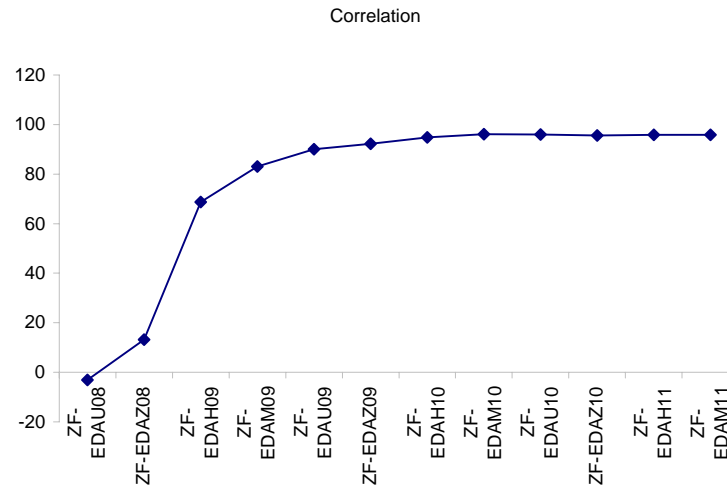
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAU08	0.057	3.92	3.86	ZF-EDAU08		
EDAZ08	0.306	3.92	3.61	ZF-EDAZ08		
EDAH09	0.555	3.92	3.36	ZF-EDAH09		
EDAM09	0.805	3.92	3.12	ZF-EDAM09		
EDAU09	1.054	3.92	2.87	ZF-EDAU09		
EDAZ09	1.303	3.92	2.62	ZF-EDAZ09		
EDAH10	1.553	3.92	2.37	ZF-EDAH10		
EDAM10	1.802	3.92	2.12	ZF-EDAM10		
EDAU10	2.051	3.92	1.87	ZF-EDAU10		
EDAZ10	2.301	3.92	1.62	ZF-EDAZ10		
EDAH11	2.550	3.92	1.37	ZF-EDAH11		
EDAM11	2.799	3.92	1.12	ZF-EDAM11		

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

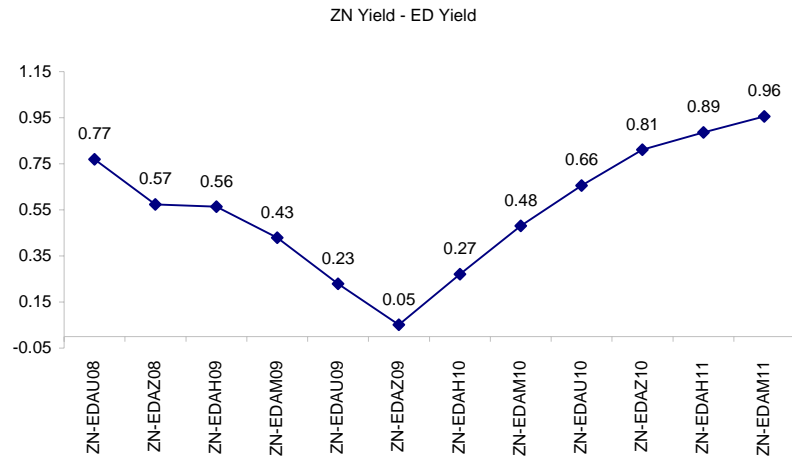


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	19.210	0.77	ZN-EDAU08	-3.250
EDAZ08	19.405	0.57	ZN-EDAZ08	5.052
EDAH09	19.415	0.56	ZN-EDAH09	60.859
EDAM09	19.550	0.43	ZN-EDAM09	76.102
EDAU09	19.750	0.23	ZN-EDAU09	84.388
EDAZ09	20.030	0.05	ZN-EDAZ09	87.083
EDAH10	20.250	0.27	ZN-EDAH10	94.817
EDAM10	20.460	0.48	ZN-EDAM10	96.158
EDAU10	20.635	0.66	ZN-EDAU10	95.957
EDAZ10	20.790	0.81	ZN-EDAZ10	95.626
EDAH11	20.865	0.89	ZN-EDAH11	95.858
EDAM11	20.935	0.96	ZN-EDAM11	95.793

Price = Outright Decimal Price - Euro Contract Price

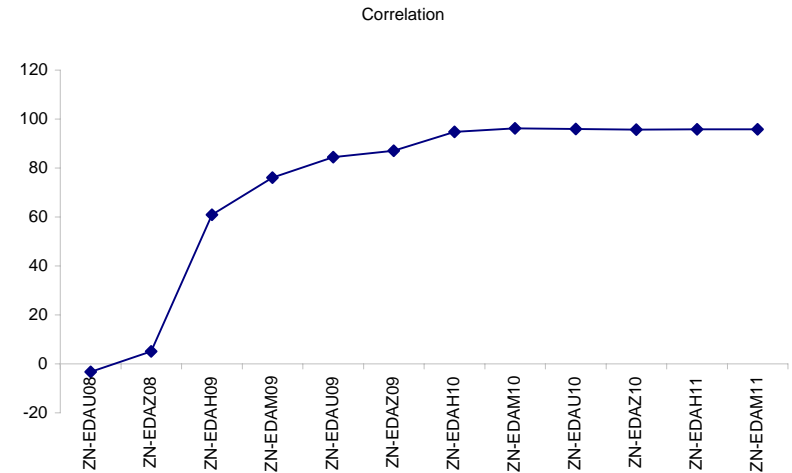
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.057	6.63	6.58	ZN-EDAU08		
EDAZ08	0.306	6.63	6.33	ZN-EDAZ08		
EDAH09	0.555	6.63	6.08	ZN-EDAH09		
EDAM09	0.805	6.63	5.83	ZN-EDAM09		
EDAU09	1.054	6.63	5.58	ZN-EDAU09		
EDAZ09	1.303	6.63	5.33	ZN-EDAZ09		
EDAH10	1.553	6.63	5.08	ZN-EDAH10		
EDAM10	1.802	6.63	4.83	ZN-EDAM10		
EDAU10	2.051	6.63	4.58	ZN-EDAU10		
EDAZ10	2.301	6.63	4.33	ZN-EDAZ10		
EDAH11	2.550	6.63	4.08	ZN-EDAH11		
EDAM11	2.799	6.63	3.83	ZN-EDAM11		

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

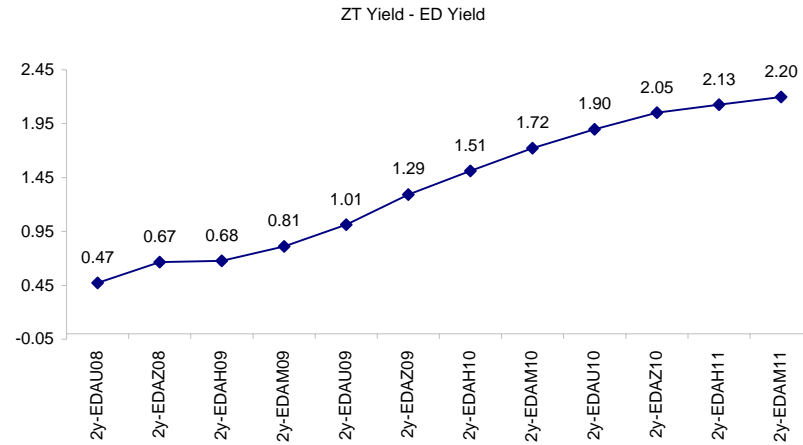


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.544	0.47	2y-EDAU08	-0.899
EDAZ08	3.739	0.67	2y-EDAZ08	-29.788
EDAH09	3.749	0.68	2y-EDAH09	-81.506
EDAM09	3.884	0.81	2y-EDAM09	-92.237
EDAU09	4.084	1.01	2y-EDAU09	-95.700
EDAZ09	4.364	1.29	2y-EDAZ09	-96.026
EDAH10	4.584	1.51	2y-EDAH10	-95.889
EDAM10	4.794	1.72	2y-EDAM10	-95.015
EDAU10	4.969	1.90	2y-EDAU10	-93.643
EDAZ10	5.124	2.05	2y-EDAZ10	-92.502
EDAH11	5.199	2.13	2y-EDAH11	-91.459
EDAM11	5.269	2.20	2y-EDAM11	-90.233

Price = Outright Decimal Price - Euro Contract Price

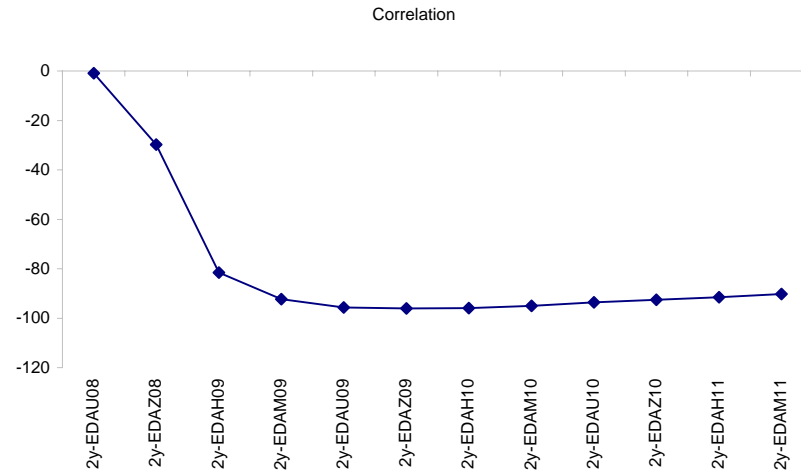
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.057	1.87	1.81	2y-EDAU08	
EDAZ08	0.306	1.87	1.56	2y-EDAZ08	
EDAH09	0.555	1.87	1.31	2y-EDAH09	
EDAM09	0.805	1.87	1.06	2y-EDAM09	
EDAU09	1.054	1.87	0.81	2y-EDAU09	
EDAZ09	1.303	1.87	0.56	2y-EDAZ09	
EDAH10	1.553	1.87	0.31	2y-EDAH10	
EDAM10	1.802	1.87	0.07	2y-EDAM10	
EDAU10	2.051	1.87	(0.18)	2y-EDAU10	
EDAZ10	2.301	1.87	(0.43)	2y-EDAZ10	
EDAH11	2.550	1.87	(0.68)	2y-EDAH11	
EDAM11	2.799	1.87	(0.93)	2y-EDAM11	

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

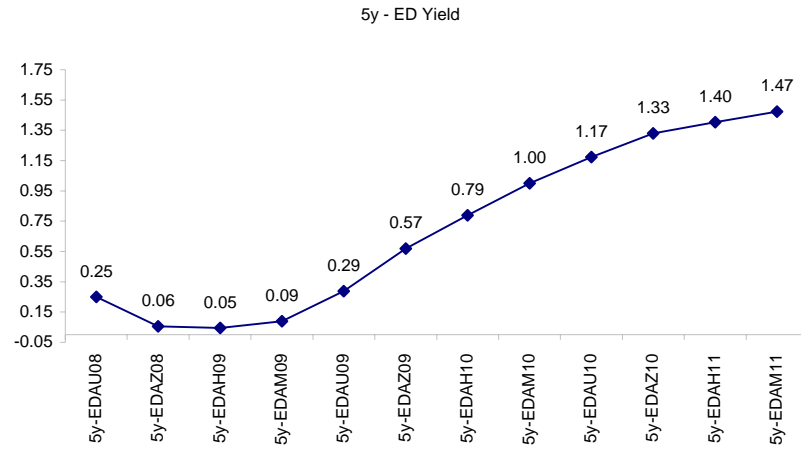


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.132	0.25	5y-EDAU08	4.356
EDAZ08	4.327	0.06	5y-EDAZ08	-23.043
EDAH09	4.337	0.05	5y-EDAH09	-75.735
EDAM09	4.472	0.09	5y-EDAM09	-87.752
EDAU09	4.672	0.29	5y-EDAU09	-92.574
EDAZ09	4.952	0.57	5y-EDAZ09	-93.683
EDAH10	5.172	0.79	5y-EDAH10	-94.301
EDAM10	5.382	1.00	5y-EDAM10	-94.573
EDAU10	5.557	1.17	5y-EDAU10	-93.613
EDAZ10	5.712	1.33	5y-EDAZ10	-93.155
EDAH11	5.787	1.40	5y-EDAH11	-93.183
EDAM11	5.857	1.47	5y-EDAM11	-92.638

Price = Outright Decimal Price - Euro Contract Price

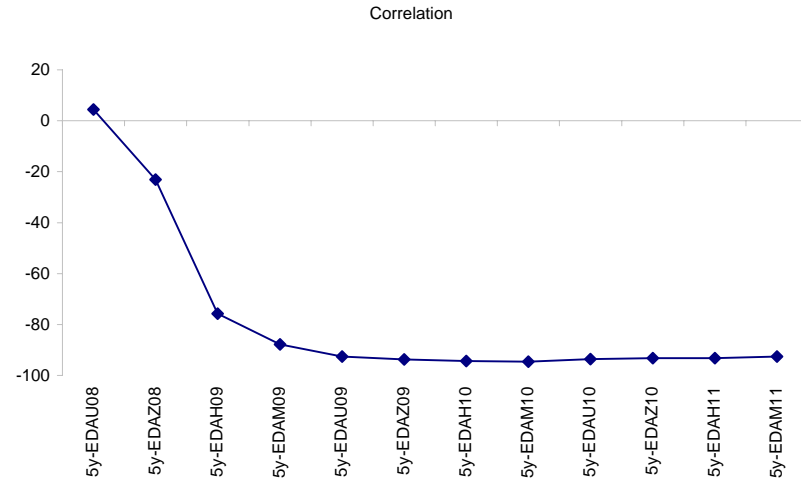
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.057	4.51	4.45	5y-EDAU08
EDAZ08	0.306	4.51	4.20	5y-EDAZ08
EDAH09	0.555	4.51	3.95	5y-EDAH09
EDAM09	0.805	4.51	3.70	5y-EDAM09
EDAU09	1.054	4.51	3.45	5y-EDAU09
EDAZ09	1.303	4.51	3.20	5y-EDAZ09
EDAH10	1.553	4.51	2.95	5y-EDAH10
EDAM10	1.802	4.51	2.70	5y-EDAM10
EDAU10	2.051	4.51	2.45	5y-EDAU10
EDAZ10	2.301	4.51	2.20	5y-EDAZ10
EDAH11	2.550	4.51	1.96	5y-EDAH11
EDAM11	2.799	4.51	1.71	5y-EDAM11

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



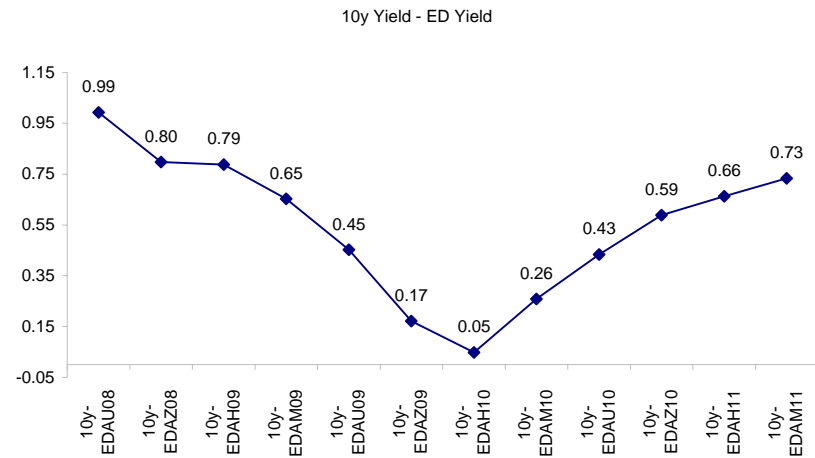


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.132	0.99	10y-EDAU08	13.036
EDAZ08	4.327	0.80	10y-EDAZ08	2.149
EDAH09	4.337	0.79	10y-EDAH09	-56.708
EDAM09	4.472	0.65	10y-EDAM09	-72.892
EDAU09	4.672	0.45	10y-EDAU09	-81.382
EDAZ09	4.952	0.17	10y-EDAZ09	-83.779
EDAH10	5.172	0.05	10y-EDAH10	-87.423
EDAM10	5.382	0.26	10y-EDAM10	-89.897
EDAU10	5.557	0.43	10y-EDAU10	-90.178
EDAZ10	5.712	0.59	10y-EDAZ10	-90.526
EDAH11	5.787	0.66	10y-EDAH11	-91.899
EDAM11	5.857	0.73	10y-EDAM11	-92.191

Price = Outright Decimal Price - Euro Contract Price

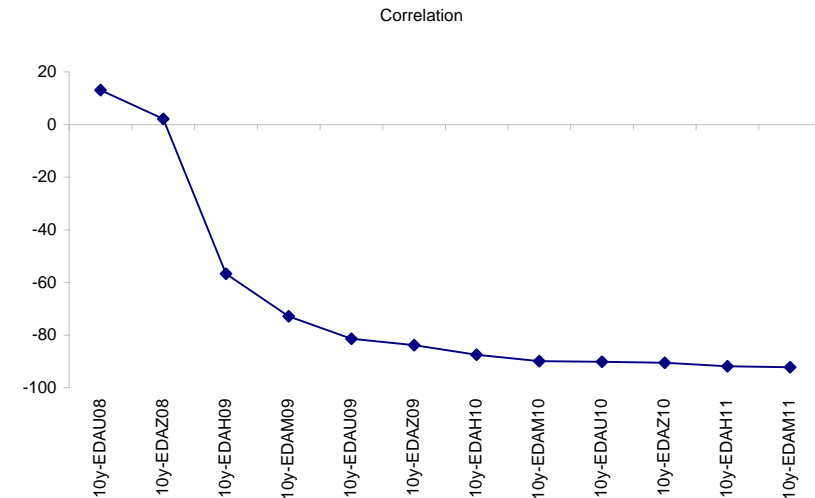
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.057	8.17	8.11	10y-EDAU08
EDAZ08	0.306	8.17	7.86	10y-EDAZ08
EDAH09	0.555	8.17	7.61	10y-EDAH09
EDAM09	0.805	8.17	7.36	10y-EDAM09
EDAU09	1.054	8.17	7.11	10y-EDAU09
EDAZ09	1.303	8.17	6.86	10y-EDAZ09
EDAH10	1.553	8.17	6.61	10y-EDAH10
EDAM10	1.802	8.17	6.37	10y-EDAM10
EDAU10	2.051	8.17	6.12	10y-EDAU10
EDAZ10	2.301	8.17	5.87	10y-EDAZ10
EDAH11	2.550	8.17	5.62	10y-EDAH11
EDAM11	2.799	8.17	5.37	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.

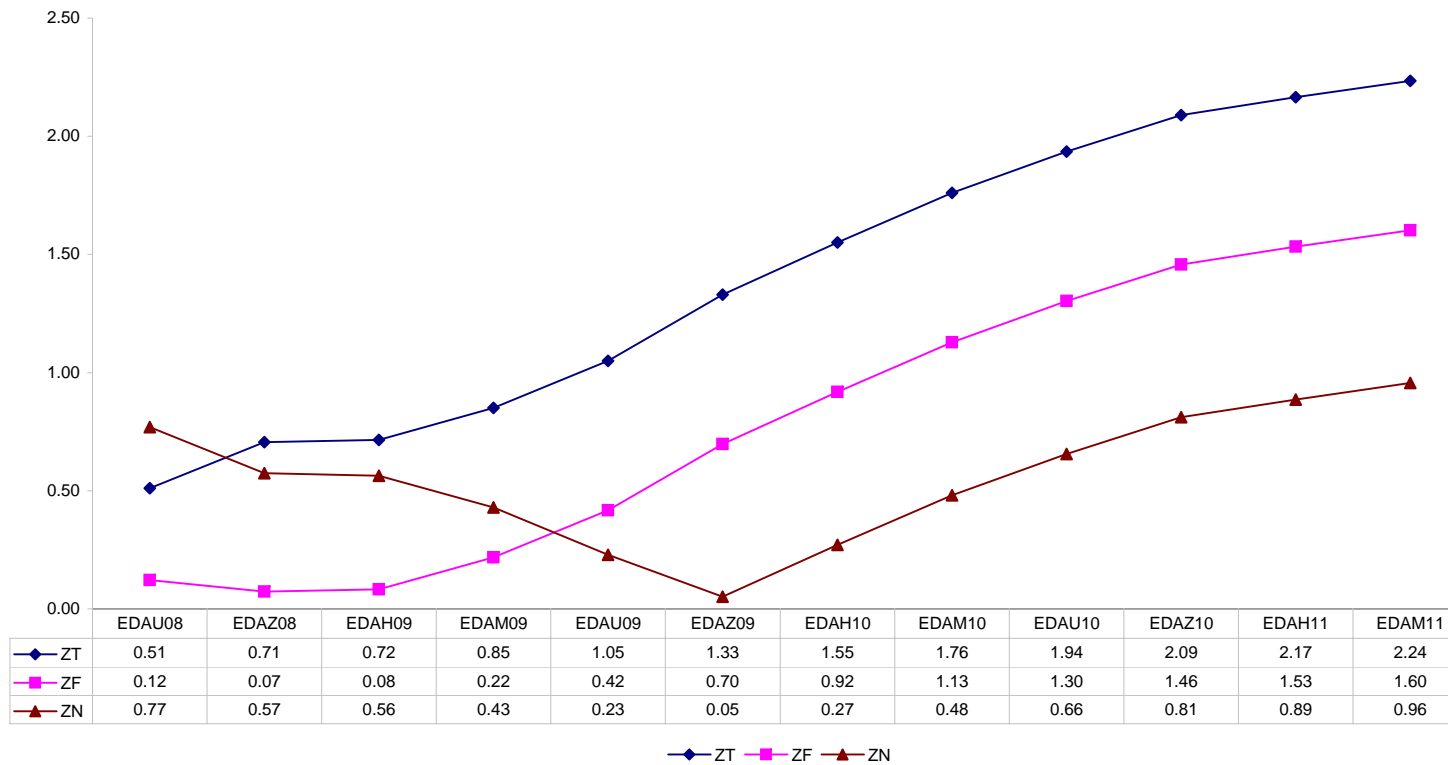
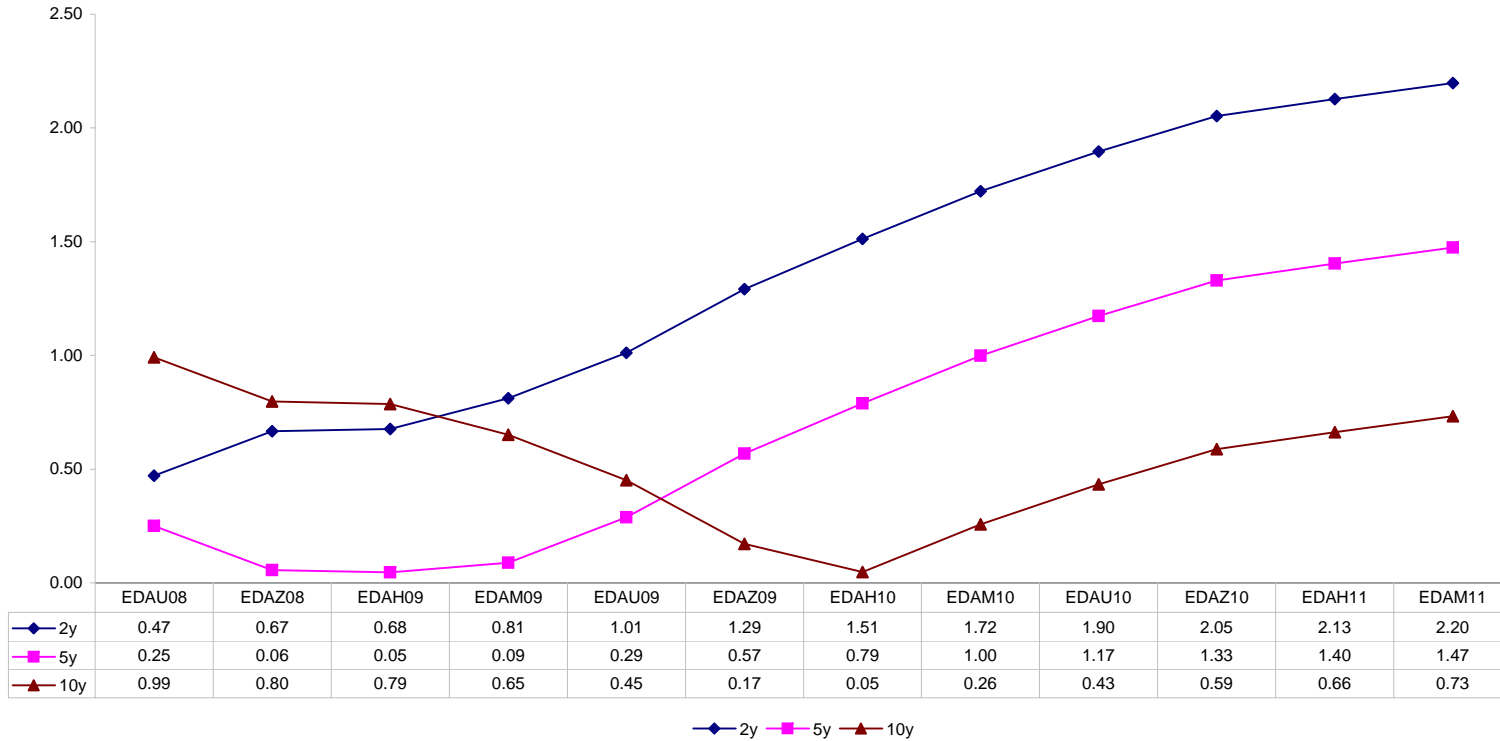
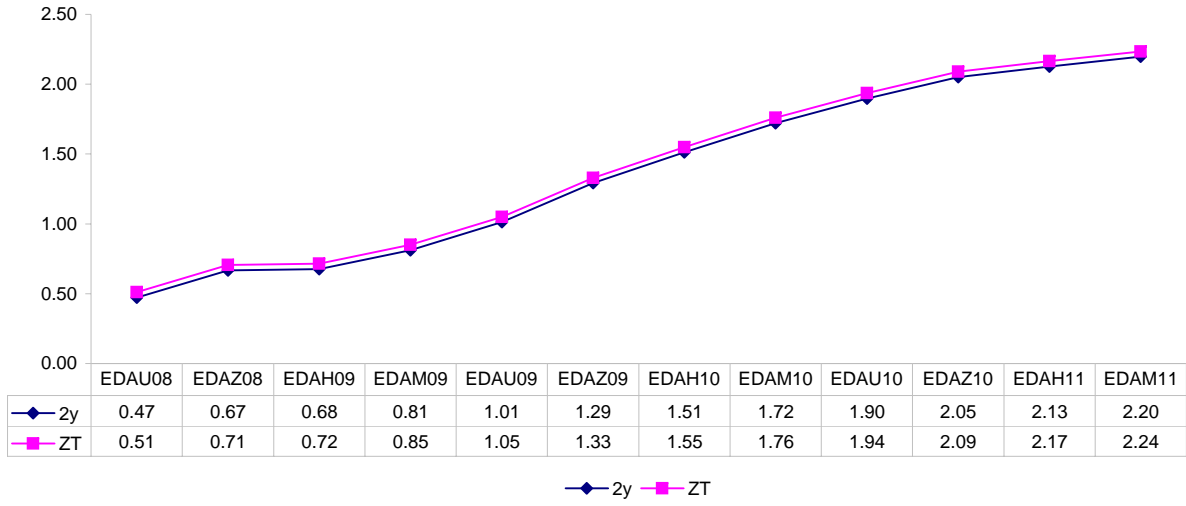


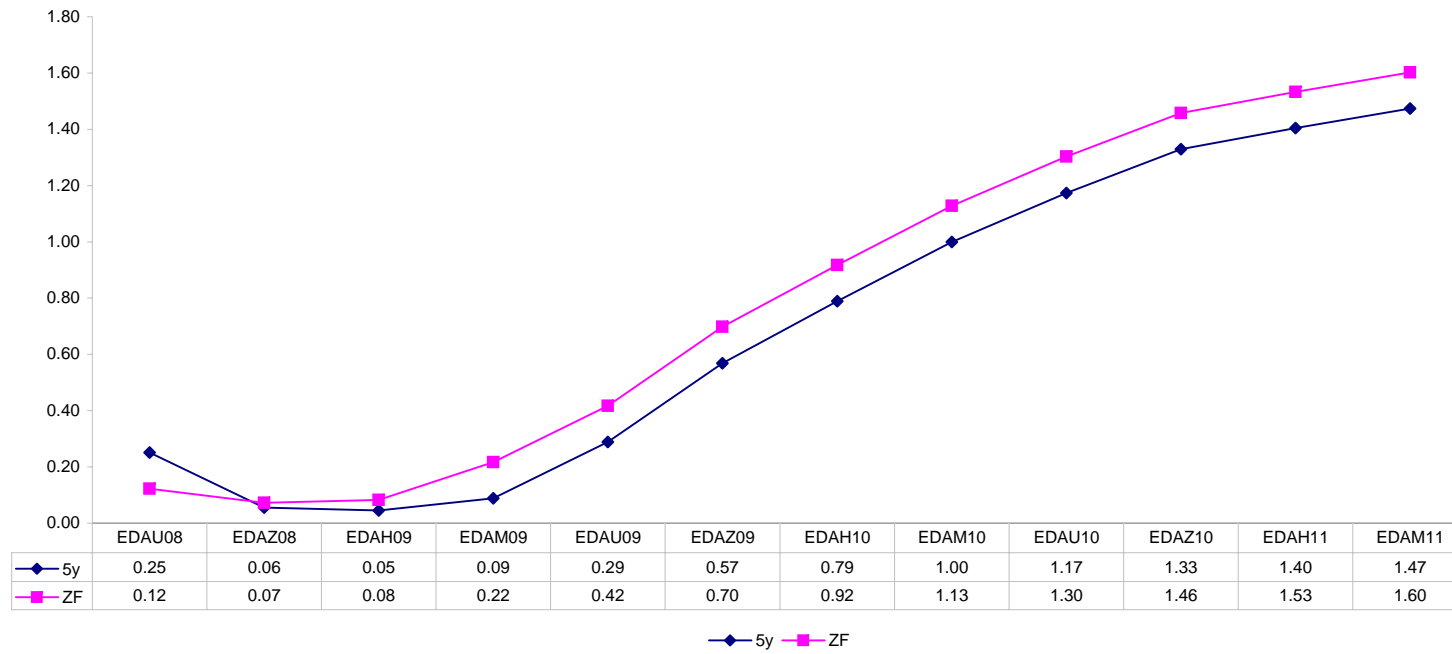
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



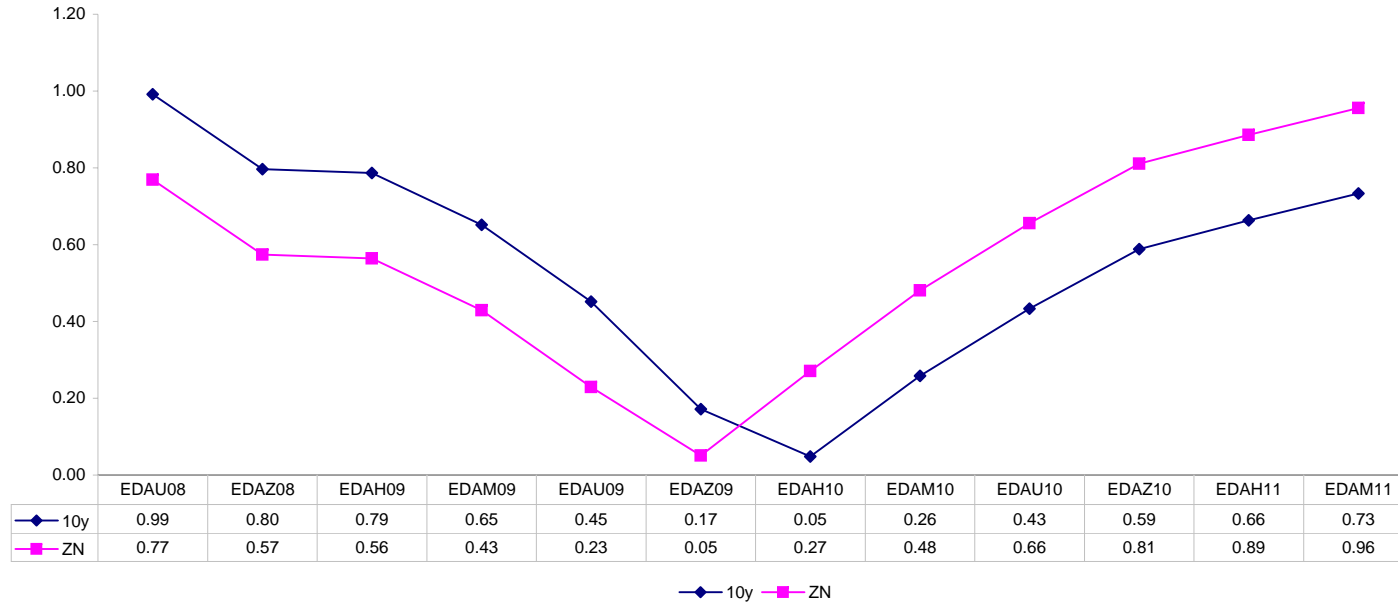
2y Basis TED Curve



5y Basis TED Curve

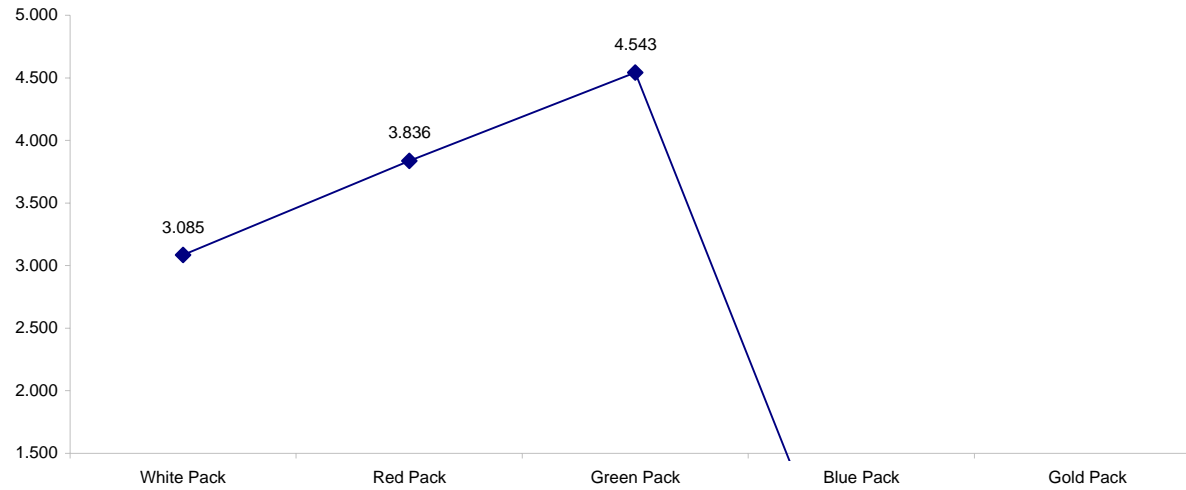


10y Basis TED Curve



### Packs

	Last Yield	Net Last Yield	Last Price
White Pack	3.085	2.625	9698.000
Red Pack	3.836	3.125	9625.250
Green Pack	4.543	1.625	9556.875
Blue Pack		0.250	9530.625
Gold Pack		0.000	9511.875



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

