

## **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	106.1094	106.035	2.422	1.81
ZF	111.7250	111.232	3.045	3.95
ZN	115.4688	115.150	3.707	6.65
2y	100.538	100.1720	2.459	1.90
5y	100.813	100.2600	3.193	4.53
10y	100.547	100.1750	3.930	8.18

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.155	2.845	32	0.087	SEP	
EDAZ08	97.005	2.995	123	0.336	DEC	White
EDAH09	96.950	3.050	214	0.586	MAR	Pack
EDAM09	96.790	3.210	305	0.835	JUN	
EDAU09	96.565	3.435	396	1.084	SEP	
EDAZ09	96.280	3.720	487	1.334	DEC	Red
EDAH10	96.040	3.960	578	1.583	MAR	Pack
EDAM10	95.800	4.200	669	1.832	JUN	
EDAU10	95.625	4.375	760	2.082	SEP	
EDAZ10	95.475	4.525	851	2.331	DEC	Green
EDAH11	95.405	4.595	942	2.580	MAR	Pack
EDAM11	95.345	4.655	1033	2.829	JUN	
EDAU11	95.290	4.710	1131	3.098	SEP	
EDAZ11	95.215	4.785	1222	3.347	DEC	Blue Pack
EDAH12	95.205	4.795	1313	3.597	MAR	
EDAM12	95.145	4.855	1404	3.846	JUN	
EDAU12	95.135	4.865	1495	4.095	SEP	
EDAZ12	95.070	4.930	1586	4.345	DEC	Gold Pack
EDAH13	95.015	4.985	1677	4.594	MAR	
EDAM13	95.010	4.990	1768	4.843	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.090	0.750	9697.500	
Red Pack	3.920	2.000	9617.125	Pack
Green Pack	4.653	2.625	9546.250	Prices
Blue Pack		0.625	9521.250	
Gold Pack		1.250	9505.875	

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.

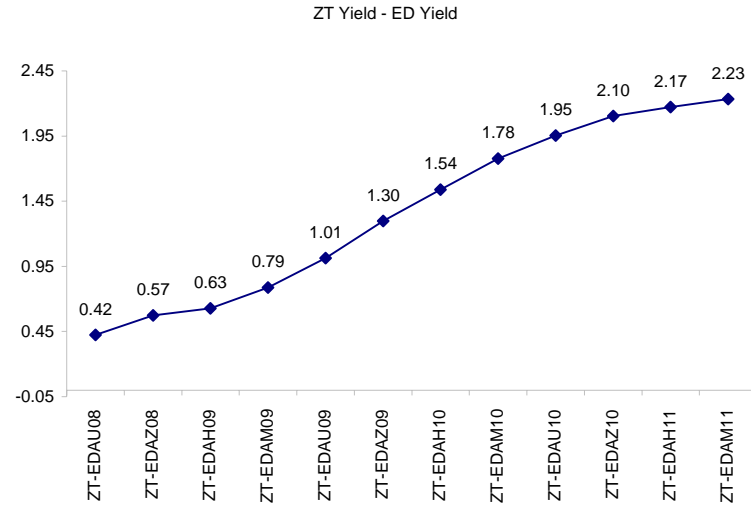
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### 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.**

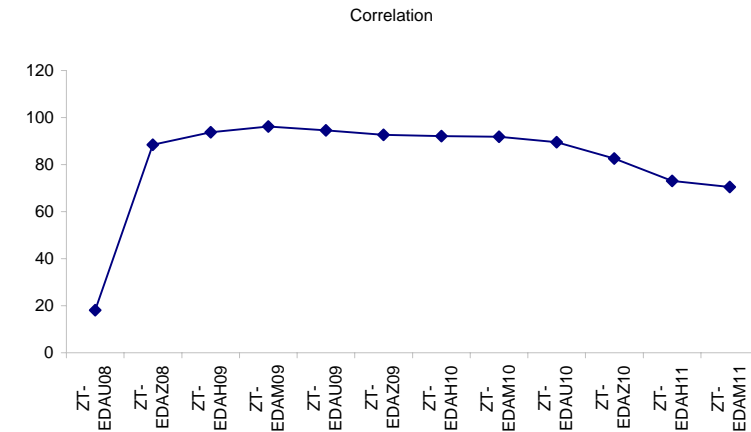
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.954	0.42	ZT-EDAU08	18.162
EDAZ08	9.104	0.57	ZT-EDAZ08	88.470
EDAH09	9.159	0.63	ZT-EDAH09	93.772
EDAM09	9.319	0.79	ZT-EDAM09	96.128
EDAU09	9.544	1.01	ZT-EDAU09	94.516
EDAZ09	9.829	1.30	ZT-EDAZ09	92.591
EDAH10	10.069	1.54	ZT-EDAH10	92.055
EDAM10	10.309	1.78	ZT-EDAM10	91.875
EDAU10	10.484	1.95	ZT-EDAU10	89.503
EDAZ10	10.634	2.10	ZT-EDAZ10	82.529
EDAH11	10.704	2.17	ZT-EDAH11	73.058
EDAM11	10.764	2.23	ZT-EDAM11	70.473

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	0.087	1.81	1.72	ZT-EDAU08		
EDAZ08	0.336	1.81	1.47	ZT-EDAZ08		
EDAH09	0.586	1.81	1.23	ZT-EDAH09		
EDAM09	0.835	1.81	0.98	ZT-EDAM09		
EDAU09	1.084	1.81	0.73	ZT-EDAU09		
EDAZ09	1.334	1.81	0.48	ZT-EDAZ09		
EDAH10	1.583	1.81	0.23	ZT-EDAH10		
EDAM10	1.832	1.81	(0.02)	ZT-EDAM10		
EDAU10	2.082	1.81	(0.27)	ZT-EDAU10		
EDAZ10	2.331	1.81	(0.52)	ZT-EDAZ10		
EDAH11	2.580	1.81	(0.77)	ZT-EDAH11		
EDAM11	2.829	1.81	(1.02)	ZT-EDAM11		

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

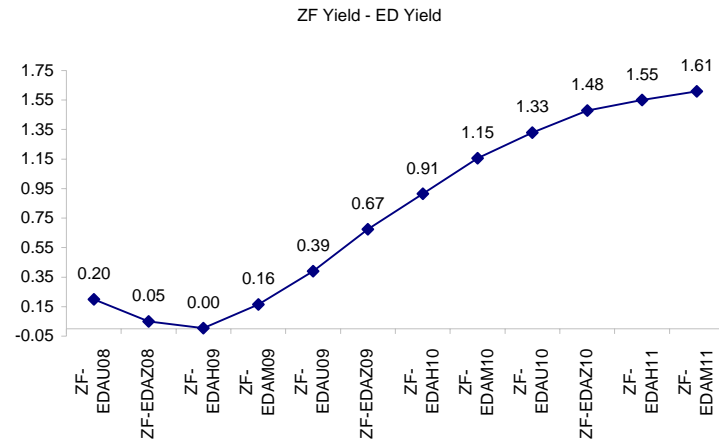


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	14.570	0.20	ZF-EDAU08	22.600
EDAZ08	14.720	0.05	ZF-EDAZ08	86.720
EDAH09	14.775	0.00	ZF-EDAH09	93.716
EDAM09	14.935	0.16	ZF-EDAM09	96.341
EDAU09	15.160	0.39	ZF-EDAU09	96.556
EDAZ09	15.445	0.67	ZF-EDAZ09	95.892
EDAH10	15.685	0.91	ZF-EDAH10	95.320
EDAM10	15.925	1.15	ZF-EDAM10	94.619
EDAU10	16.100	1.33	ZF-EDAU10	89.950
EDAZ10	16.250	1.48	ZF-EDAZ10	80.522
EDAH11	16.320	1.55	ZF-EDAH11	69.302
EDAM11	16.380	1.61	ZF-EDAM11	65.557

Price = Outright Decimal Price - Euro Contract Price

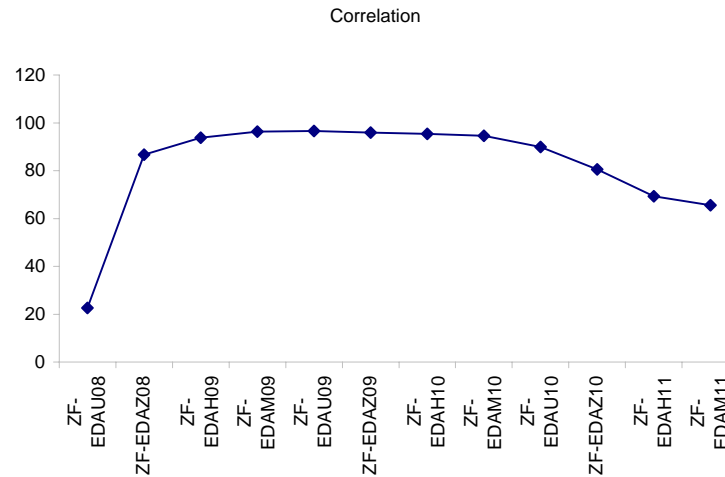
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year			
	ZF Duration	Spread Duration	
EDAU08	0.087	3.95	3.86
EDAZ08	0.336	3.95	3.61
EDAH09	0.586	3.95	3.36
EDAM09	0.835	3.95	3.11
EDAU09	1.084	3.95	2.86
EDAZ09	1.334	3.95	2.61
EDAH10	1.583	3.95	2.36
EDAM10	1.832	3.95	2.12
EDAU10	2.082	3.95	1.87
EDAZ10	2.331	3.95	1.62
EDAH11	2.580	3.95	1.37
EDAM11	2.829	3.95	1.12

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

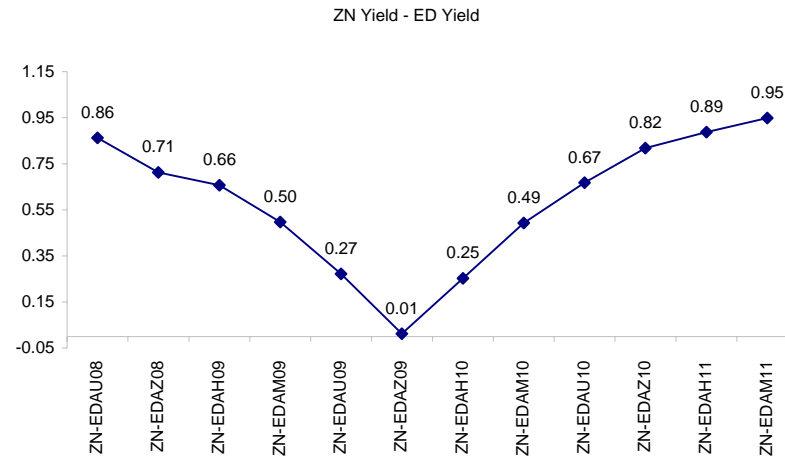


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	18.314	0.86	ZN-EDAU08	25.640
EDAZ08	18.464	0.71	ZN-EDAZ08	88.557
EDAH09	18.519	0.66	ZN-EDAH09	94.930
EDAM09	18.679	0.50	ZN-EDAM09	96.680
EDAU09	18.904	0.27	ZN-EDAU09	96.588
EDAZ09	19.189	0.01	ZN-EDAZ09	95.577
EDAH10	19.429	0.25	ZN-EDAH10	95.320
EDAM10	19.669	0.49	ZN-EDAM10	94.619
EDAU10	19.844	0.67	ZN-EDAU10	89.950
EDAZ10	19.994	0.82	ZN-EDAZ10	80.522
EDAH11	20.064	0.89	ZN-EDAH11	69.302
EDAM11	20.124	0.95	ZN-EDAM11	65.557

Price = Outright Decimal Price - Euro Contract Price

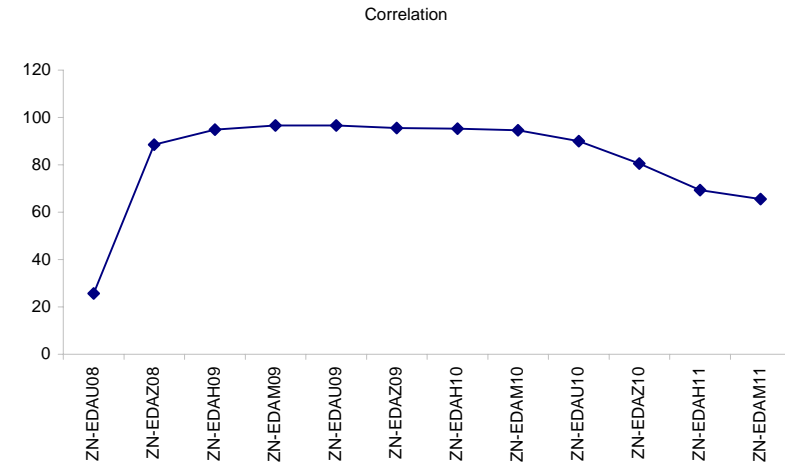
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.087	6.65	6.57	ZN-EDAU08		
EDAZ08	0.336	6.65	6.32	ZN-EDAZ08		
EDAH09	0.586	6.65	6.07	ZN-EDAH09		
EDAM09	0.835	6.65	5.82	ZN-EDAM09		
EDAU09	1.084	6.65	5.57	ZN-EDAU09		
EDAZ09	1.334	6.65	5.32	ZN-EDAZ09		
EDAH10	1.583	6.65	5.07	ZN-EDAH10		
EDAM10	1.832	6.65	4.82	ZN-EDAM10		
EDAU10	2.082	6.65	4.57	ZN-EDAU10		
EDAZ10	2.331	6.65	4.32	ZN-EDAZ10		
EDAH11	2.580	6.65	4.07	ZN-EDAH11		
EDAM11	2.829	6.65	3.82	ZN-EDAM11		

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

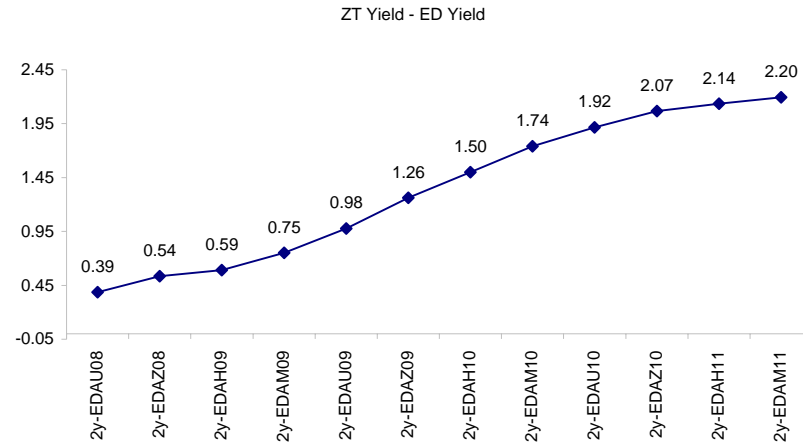


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.382	0.39	2y-EDAU08	-17.990
EDAZ08	3.533	0.54	2y-EDAZ08	-81.582
EDAH09	3.587	0.59	2y-EDAH09	-87.075
EDAM09	3.747	0.75	2y-EDAM09	-91.061
EDAU09	3.973	0.98	2y-EDAU09	-89.891
EDAZ09	4.257	1.26	2y-EDAZ09	-88.809
EDAH10	4.497	1.50	2y-EDAH10	-90.011
EDAM10	4.738	1.74	2y-EDAM10	-92.715
EDAU10	4.912	1.92	2y-EDAU10	-92.973
EDAZ10	5.062	2.07	2y-EDAZ10	-88.705
EDAH11	5.132	2.14	2y-EDAH11	-80.958
EDAM11	5.193	2.20	2y-EDAM11	-78.275

Price = Outright Decimal Price - Euro Contract Price

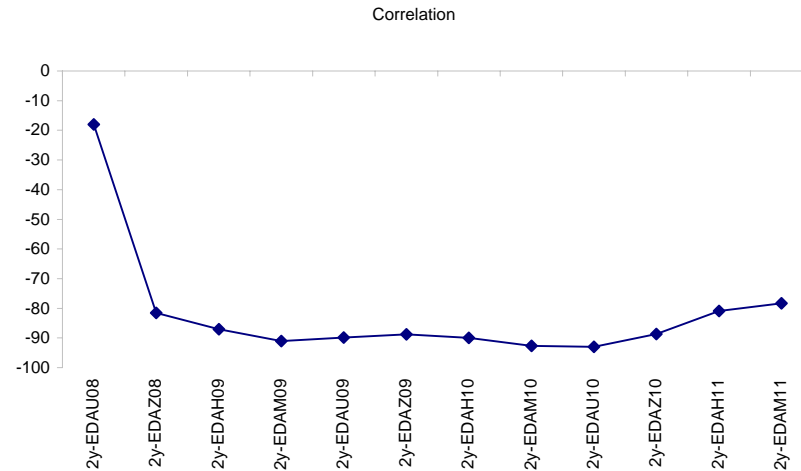
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.087	1.90	1.81	2y-EDAU08	
EDAZ08	0.336	1.90	1.56	2y-EDAZ08	
EDAH09	0.586	1.90	1.31	2y-EDAH09	
EDAM09	0.835	1.90	1.06	2y-EDAM09	
EDAU09	1.084	1.90	0.81	2y-EDAU09	
EDAZ09	1.334	1.90	0.56	2y-EDAZ09	
EDAH10	1.583	1.90	0.31	2y-EDAH10	
EDAM10	1.832	1.90	0.06	2y-EDAM10	
EDAU10	2.082	1.90	(0.19)	2y-EDAU10	
EDAZ10	2.331	1.90	(0.44)	2y-EDAZ10	
EDAH11	2.580	1.90	(0.68)	2y-EDAH11	
EDAM11	2.829	1.90	(0.93)	2y-EDAM11	

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

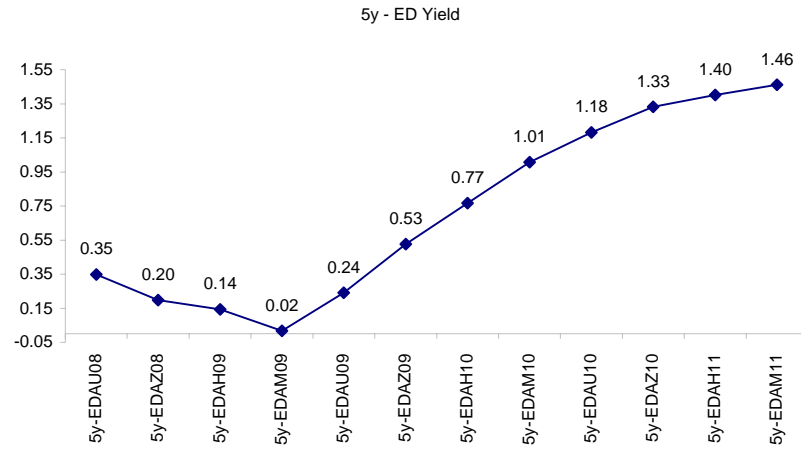


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.658	0.35	5y-EDAU08	-25.728
EDAZ08	3.808	0.20	5y-EDAZ08	-81.915
EDAH09	3.863	0.14	5y-EDAH09	-88.753
EDAM09	4.023	0.02	5y-EDAM09	-92.109
EDAU09	4.248	0.24	5y-EDAU09	-91.592
EDAZ09	4.533	0.53	5y-EDAZ09	-90.715
EDAH10	4.773	0.77	5y-EDAH10	-90.952
EDAM10	5.013	1.01	5y-EDAM10	-92.764
EDAU10	5.188	1.18	5y-EDAU10	-90.482
EDAZ10	5.338	1.33	5y-EDAZ10	-83.655
EDAH11	5.408	1.40	5y-EDAH11	-74.820
EDAM11	5.468	1.46	5y-EDAM11	-70.764

Price = Outright Decimal Price - Euro Contract Price

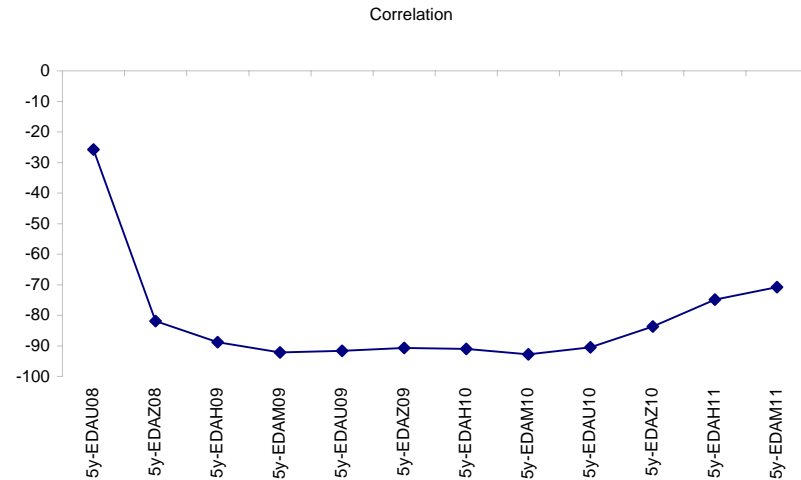
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.087	4.53	4.44	5y-EDAU08
EDAZ08	0.336	4.53	4.20	5y-EDAZ08
EDAH09	0.586	4.53	3.95	5y-EDAH09
EDAM09	0.835	4.53	3.70	5y-EDAM09
EDAU09	1.084	4.53	3.45	5y-EDAU09
EDAZ09	1.334	4.53	3.20	5y-EDAZ09
EDAH10	1.583	4.53	2.95	5y-EDAH10
EDAM10	1.832	4.53	2.70	5y-EDAM10
EDAU10	2.082	4.53	2.45	5y-EDAU10
EDAZ10	2.331	4.53	2.20	5y-EDAZ10
EDAH11	2.580	4.53	1.95	5y-EDAH11
EDAM11	2.829	4.53	1.70	5y-EDAM11

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



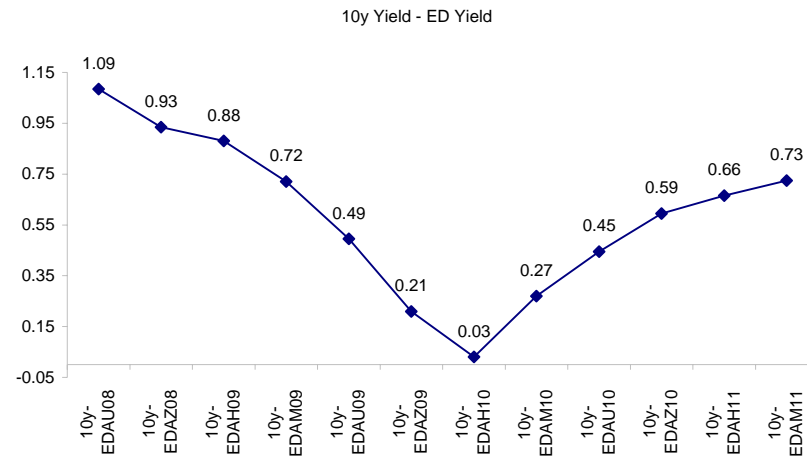


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.658	1.09	10y-EDAU08	-9.097
EDAZ08	3.808	0.93	10y-EDAZ08	-70.143
EDAH09	3.863	0.88	10y-EDAH09	-80.359
EDAM09	4.023	0.72	10y-EDAM09	-86.533
EDAU09	4.248	0.49	10y-EDAU09	-87.730
EDAZ09	4.533	0.21	10y-EDAZ09	-88.434
EDAH10	4.773	0.03	10y-EDAH10	-90.342
EDAM10	5.013	0.27	10y-EDAM10	-94.141
EDAU10	5.188	0.45	10y-EDAU10	-94.068
EDAZ10	5.338	0.59	10y-EDAZ10	-89.496
EDAH11	5.408	0.66	10y-EDAH11	-82.109
EDAM11	5.468	0.73	10y-EDAM11	-78.979

Price = Outright Decimal Price - Euro Contract Price

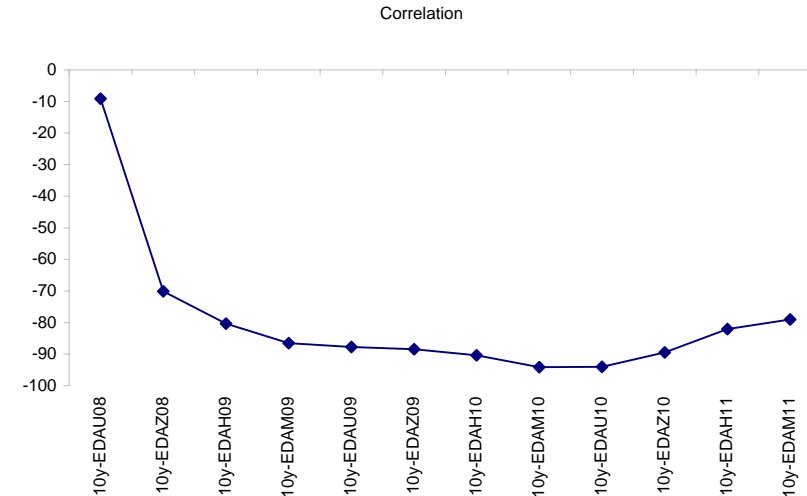
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.087	8.18	8.10	10y-EDAU08
EDAZ08	0.336	8.18	7.85	10y-EDAZ08
EDAH09	0.586	8.18	7.60	10y-EDAH09
EDAM09	0.835	8.18	7.35	10y-EDAM09
EDAU09	1.084	8.18	7.10	10y-EDAU09
EDAZ09	1.334	8.18	6.85	10y-EDAZ09
EDAH10	1.583	8.18	6.60	10y-EDAH10
EDAM10	1.832	8.18	6.35	10y-EDAM10
EDAU10	2.082	8.18	6.10	10y-EDAU10
EDAZ10	2.331	8.18	5.85	10y-EDAZ10
EDAH11	2.580	8.18	5.60	10y-EDAH11
EDAM11	2.829	8.18	5.35	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.

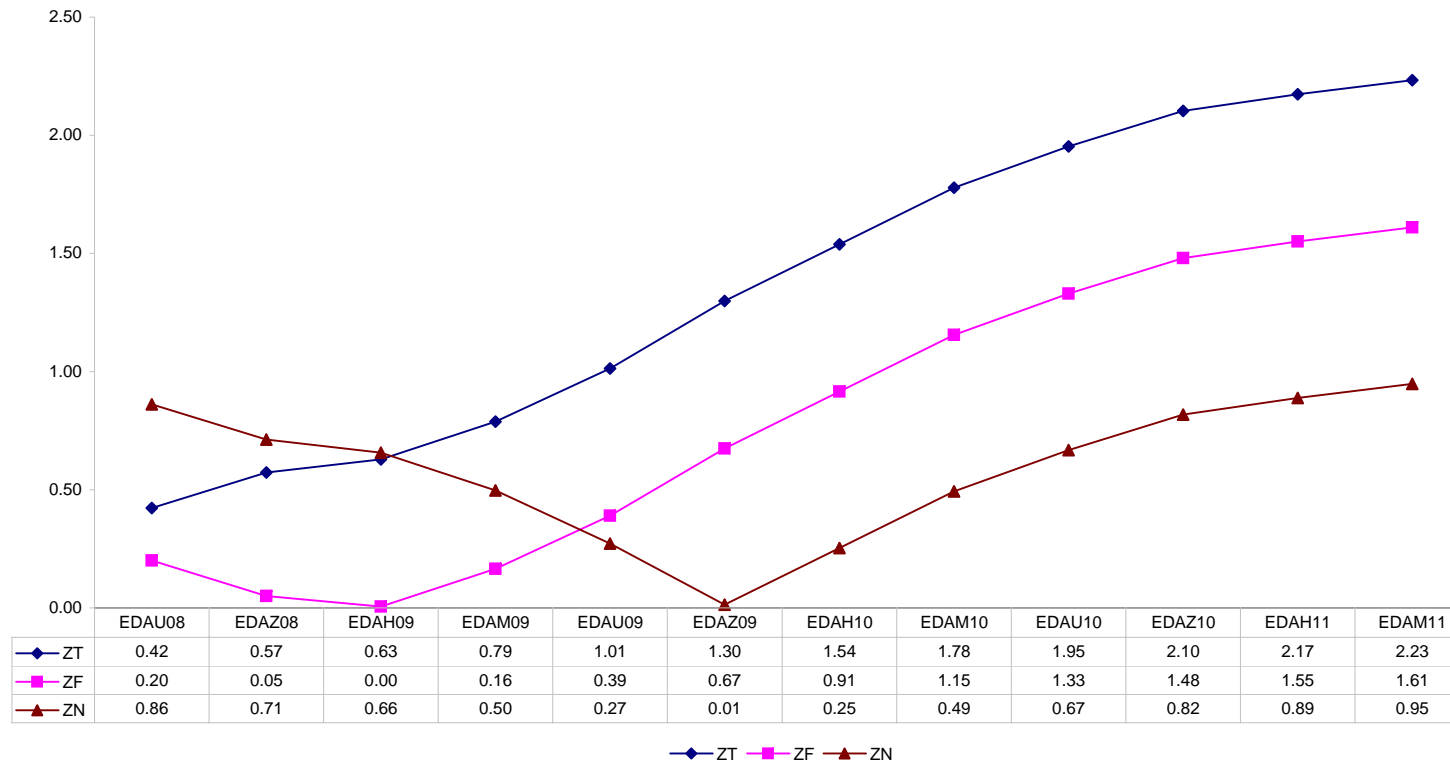
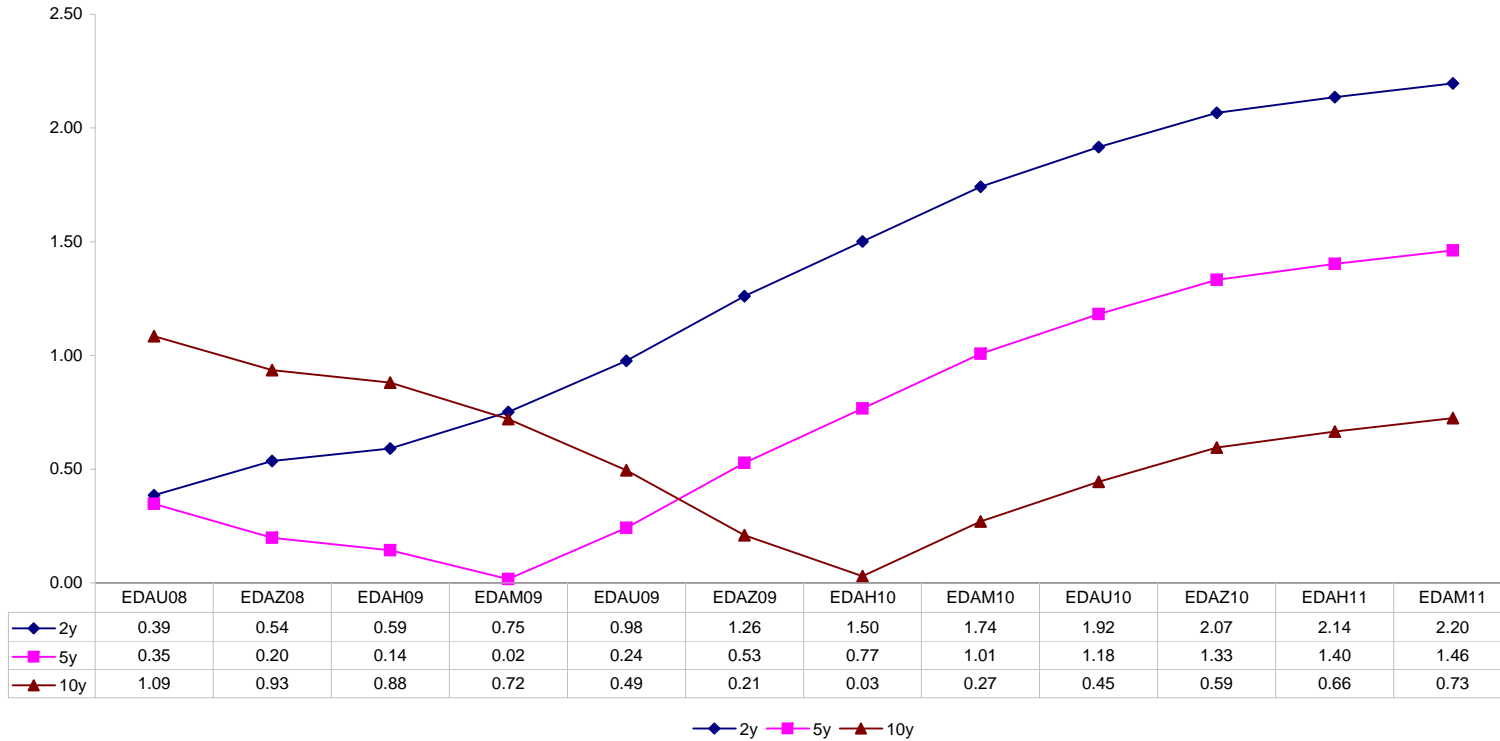
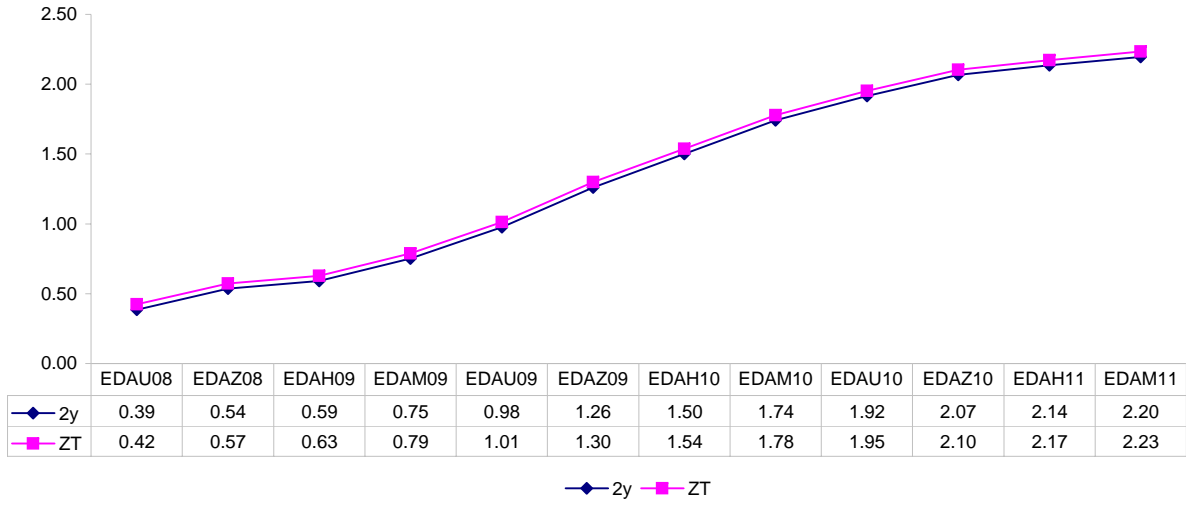


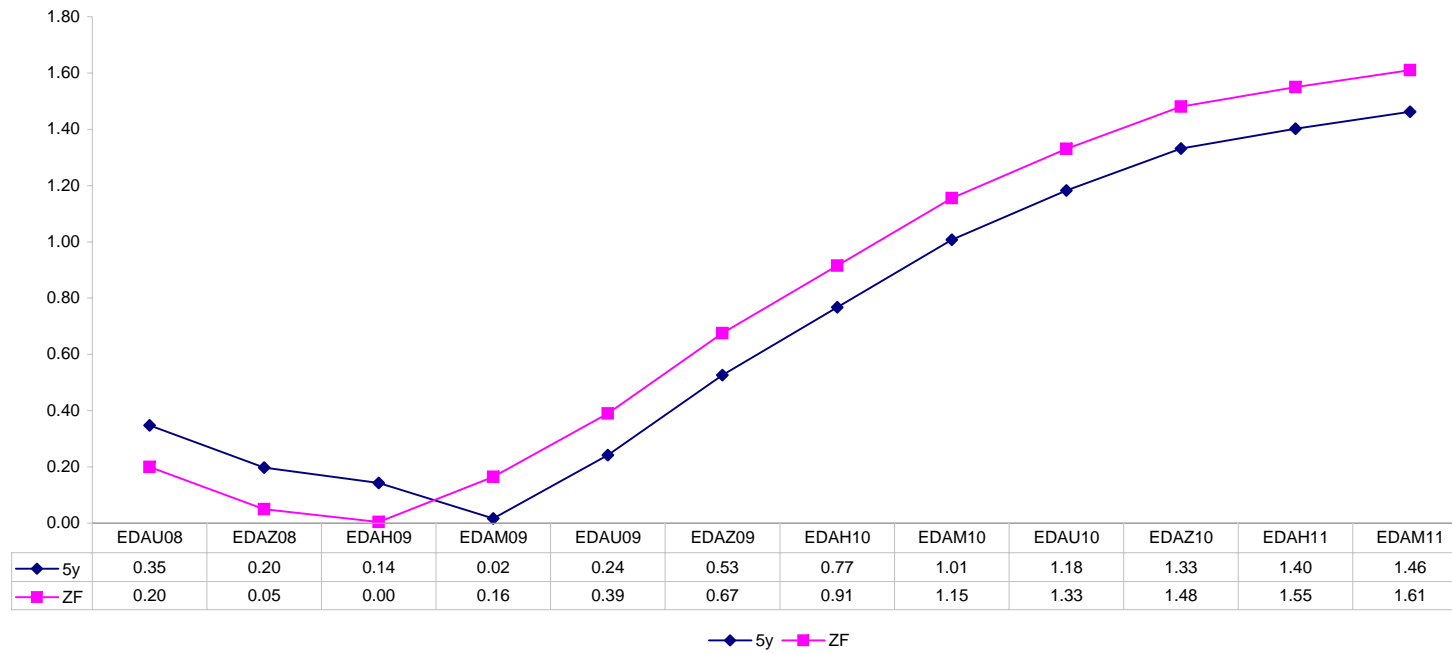
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



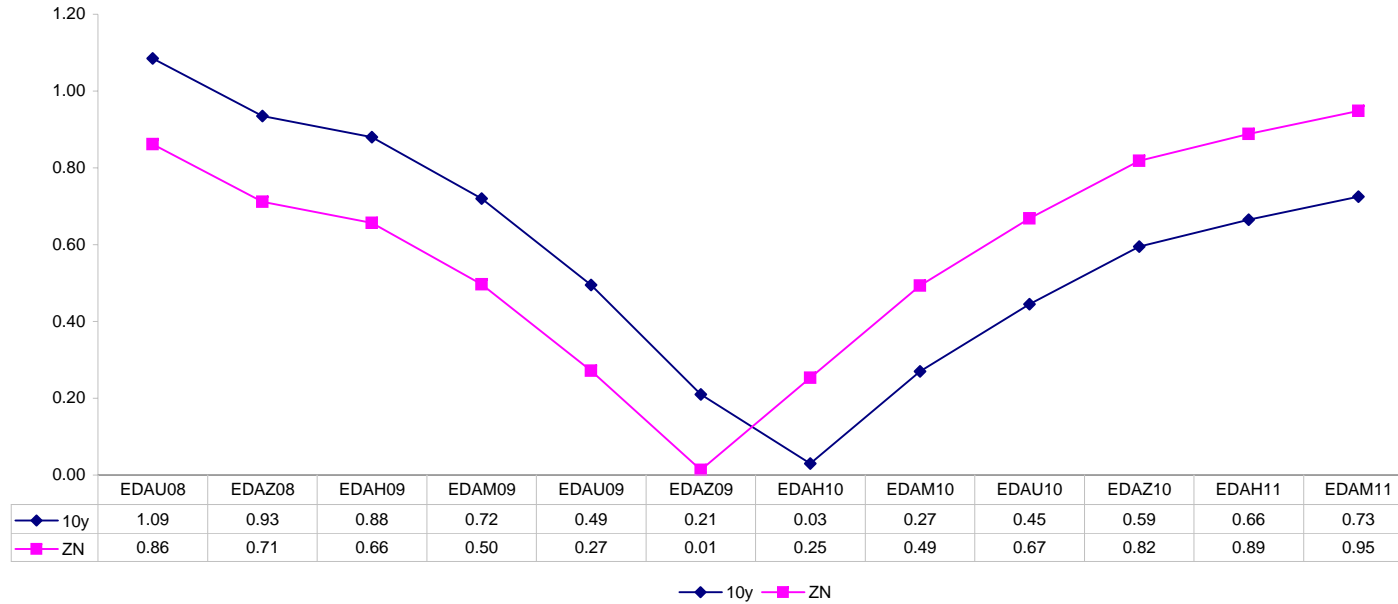
2y Basis TED Curve



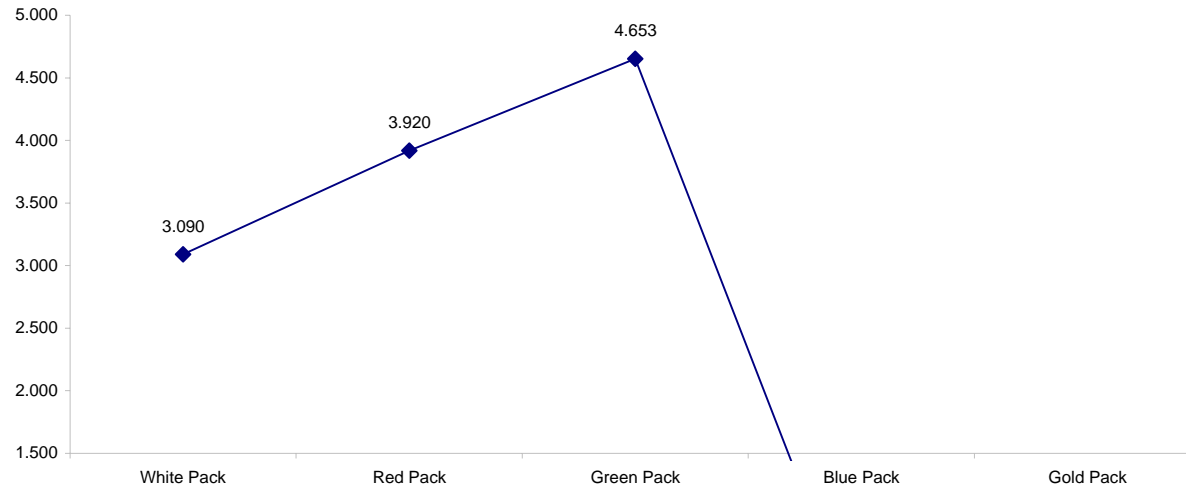
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.090	0.750	9697.500
Red Pack	3.920	2.000	9617.125
Green Pack	4.653	2.625	9546.250
Blue Pack		0.625	9521.250
Gold Pack		1.250	9505.875



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

