

## **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	108.1406	108.045	0.606	1.91
ZF	117.7813	117.250	1.307	1.31
ZN	126.0000	126.000	2.403	6.44
2y	100.703	100.2250	0.886	1.94
5y	101.609	101.1950	1.663	4.72
10y	109.063	109.0200	2.703	8.33

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	98.030	1.970	5	0.013	DEC	
EDAH09	98.280	1.720	96	0.262	MAR	White Pack
EDAM09	98.245	1.755	187	0.512	JUN	
EDAU09	98.145	1.855	278	0.761	SEP	
EDAZ09	97.975	2.025	369	1.010	DEC	
EDAH10	97.915	2.085	460	1.260	MAR	Red Pack
EDAM10	97.770	2.230	551	1.509	JUN	
EDAU10	97.615	2.385	642	1.758	SEP	
EDAZ10	97.400	2.600	733	2.008	DEC	
EDAH11	97.255	2.745	824	2.257	MAR	Green Pack
EDAM11	97.060	2.940	915	2.506	JUN	
EDAU11	96.905	3.095	1013	2.775	SEP	
EDAZ11	96.835	3.165	1104	3.024	DEC	
EDAH12	96.895	3.105	1195	3.273	MAR	Blue Pack
EDAM12	96.855	3.145	1286	3.523	JUN	
EDAU12	96.800	3.200	1377	3.772	SEP	
EDAZ12	96.750	3.250	1468	4.021	DEC	
EDAH13	96.760	3.240	1559	4.271	MAR	Gold Pack
EDAM13	96.720	3.280	1650	4.520	JUN	
EDZU13	96.575	3.425	1832	5.019	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	1.859	-0.125	9817.500	
Red Pack	2.224	-3.625	9781.875	Pack Prices
Green Pack	2.905	-6.375	9715.500	
Blue Pack	3.223	0.250	9684.625	
Gold Pack		0.000	9669.750	

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.

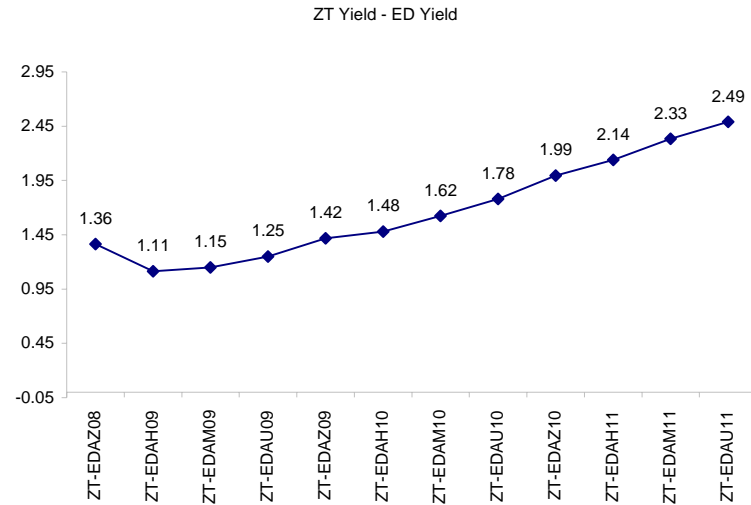
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

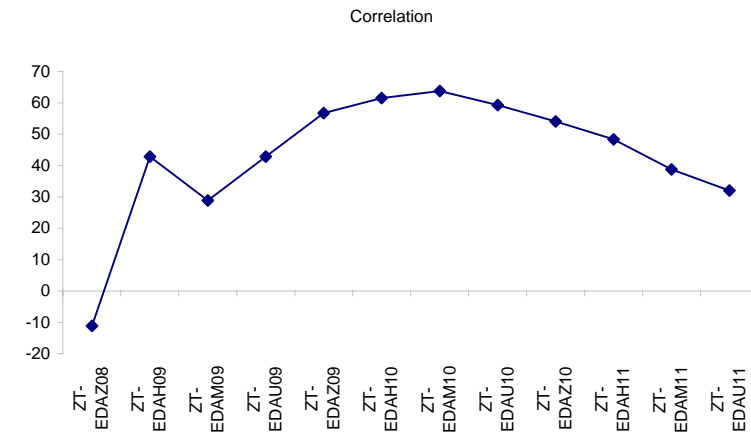
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.111	1.36	ZT-EDAZ08	-11.097
EDAH09	9.861	1.11	ZT-EDAH09	42.854
EDAM09	9.896	1.15	ZT-EDAM09	28.886
EDAU09	9.996	1.25	ZT-EDAU09	42.854
EDAZ09	10.166	1.42	ZT-EDAZ09	56.754
EDAH10	10.226	1.48	ZT-EDAH10	61.535
EDAM10	10.371	1.62	ZT-EDAM10	63.811
EDAU10	10.526	1.78	ZT-EDAU10	59.313
EDAZ10	10.741	1.99	ZT-EDAZ10	54.109
EDAH11	10.886	2.14	ZT-EDAH11	48.355
EDAM11	11.081	2.33	ZT-EDAM11	38.729
EDAU11	11.236	2.49	ZT-EDAU11	32.005

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	0.013	1.91	1.89	ZT-EDAZ08		
EDAH09	0.262	1.91	1.64	ZT-EDAH09		
EDAM09	0.512	1.91	1.39	ZT-EDAM09		
EDAU09	0.761	1.91	1.14	ZT-EDAU09		
EDAZ09	1.010	1.91	0.90	ZT-EDAZ09		
EDAH10	1.260	1.91	0.65	ZT-EDAH10		
EDAM10	1.509	1.91	0.40	ZT-EDAM10		
EDAU10	1.758	1.91	0.15	ZT-EDAU10		
EDAZ10	2.008	1.91	(0.10)	ZT-EDAZ10		
EDAH11	2.257	1.91	(0.35)	ZT-EDAH11		
EDAM11	2.506	1.91	(0.60)	ZT-EDAM11		
EDAU11	2.775	1.91	(0.87)	ZT-EDAU11		

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

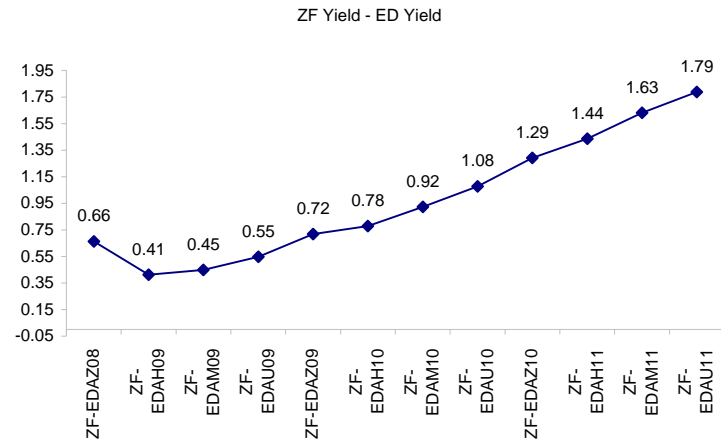


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	19.751	0.66	ZF-EDAZ08	35.503
EDAH09	19.501	0.41	ZF-EDAH09	62.104
EDAM09	19.536	0.45	ZF-EDAM09	77.727
EDAU09	19.636	0.55	ZF-EDAU09	79.263
EDAZ09	19.806	0.72	ZF-EDAZ09	70.620
EDAH10	19.866	0.78	ZF-EDAH10	59.296
EDAM10	20.011	0.92	ZF-EDAM10	54.770
EDAU10	20.166	1.08	ZF-EDAU10	62.890
EDAZ10	20.381	1.29	ZF-EDAZ10	79.535
EDAH11	20.526	1.44	ZF-EDAH11	82.055
EDAM11	20.721	1.63	ZF-EDAM11	80.662
EDAU11	20.876	1.79	ZF-EDAU11	86.593

Price = Outright Decimal Price - Euro Contract Price

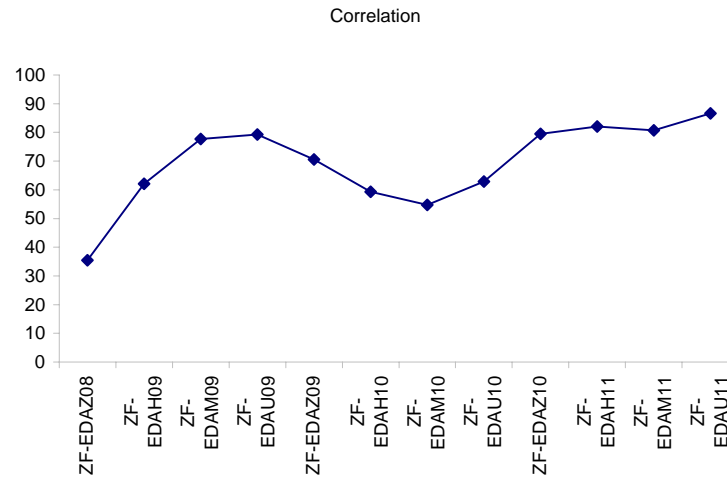
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.013	1.31	1.29	ZF-EDAZ08		
EDAH09	0.262	1.31	1.04	ZF-EDAH09		
EDAM09	0.512	1.31	0.80	ZF-EDAM09		
EDAU09	0.761	1.31	0.55	ZF-EDAU09		
EDAZ09	1.010	1.31	0.30	ZF-EDAZ09		
EDAH10	1.260	1.31	0.05	ZF-EDAH10		
EDAM10	1.509	1.31	(0.20)	ZF-EDAM10		
EDAU10	1.758	1.31	(0.45)	ZF-EDAU10		
EDAZ10	2.008	1.31	(0.70)	ZF-EDAZ10		
EDAH11	2.257	1.31	(0.95)	ZF-EDAH11		
EDAM11	2.506	1.31	(1.20)	ZF-EDAM11		
EDAU11	2.775	1.31	(1.47)	ZF-EDAU11		

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

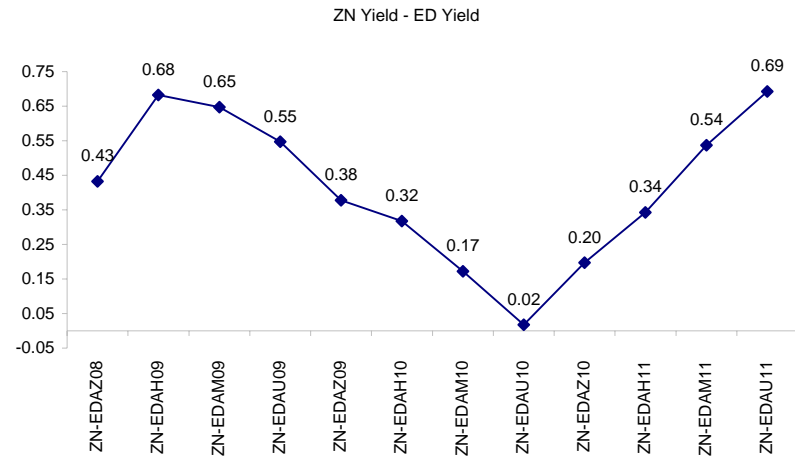


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	27.970	0.43	ZN-EDAZ08	39.679
EDAH09	27.720	0.68	ZN-EDAH09	61.827
EDAM09	27.755	0.65	ZN-EDAM09	76.215
EDAU09	27.855	0.55	ZN-EDAU09	74.815
EDAZ09	28.025	0.38	ZN-EDAZ09	63.108
EDAH10	28.085	0.32	ZN-EDAH10	50.004
EDAM10	28.230	0.17	ZN-EDAM10	54.770
EDAU10	28.385	0.02	ZN-EDAU10	62.890
EDAZ10	28.600	0.20	ZN-EDAZ10	79.535
EDAH11	28.745	0.34	ZN-EDAH11	82.055
EDAM11	28.940	0.54	ZN-EDAM11	80.662
EDAU11	29.095	0.69	ZN-EDAU11	86.593

Price = Outright Decimal Price - Euro Contract Price

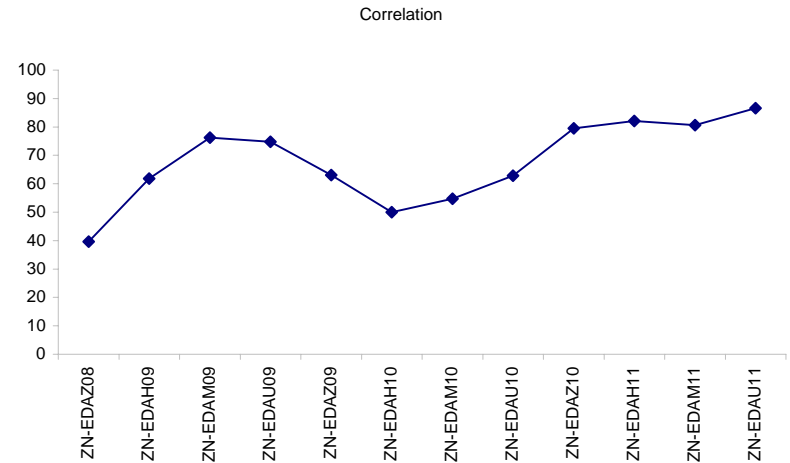
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAZ08	0.013	6.44	6.43	ZN-EDAZ08		
EDAH09	0.262	6.44	6.18	ZN-EDAH09		
EDAM09	0.512	6.44	5.93	ZN-EDAM09		
EDAU09	0.761	6.44	5.68	ZN-EDAU09		
EDAZ09	1.010	6.44	5.43	ZN-EDAZ09		
EDAH10	1.260	6.44	5.18	ZN-EDAH10		
EDAM10	1.509	6.44	4.93	ZN-EDAM10		
EDAU10	1.758	6.44	4.68	ZN-EDAU10		
EDAZ10	2.008	6.44	4.43	ZN-EDAZ10		
EDAH11	2.257	6.44	4.18	ZN-EDAH11		
EDAM11	2.506	6.44	3.94	ZN-EDAM11		
EDAU11	2.775	6.44	3.67	ZN-EDAU11		

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

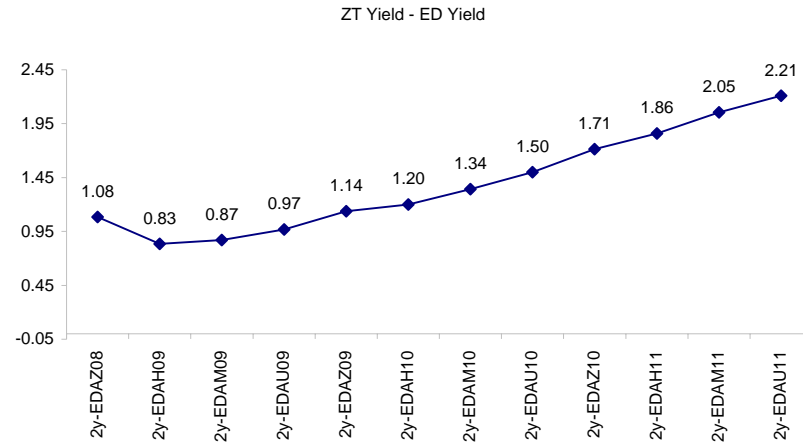


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.673	1.08	2y-EDAZ08	-15.540
EDAH09	2.423	0.83	2y-EDAH09	-50.791
EDAM09	2.458	0.87	2y-EDAM09	-71.323
EDAU09	2.558	0.97	2y-EDAU09	-74.608
EDAZ09	2.728	1.14	2y-EDAZ09	-66.447
EDAH10	2.788	1.20	2y-EDAH10	-54.157
EDAM10	2.933	1.34	2y-EDAM10	-47.398
EDAU10	3.088	1.50	2y-EDAU10	-56.984
EDAZ10	3.303	1.71	2y-EDAZ10	-71.632
EDAH11	3.448	1.86	2y-EDAH11	-72.796
EDAM11	3.643	2.05	2y-EDAM11	-74.960
EDAU11	3.798	2.21	2y-EDAU11	-81.155

Price = Outright Decimal Price - Euro Contract Price

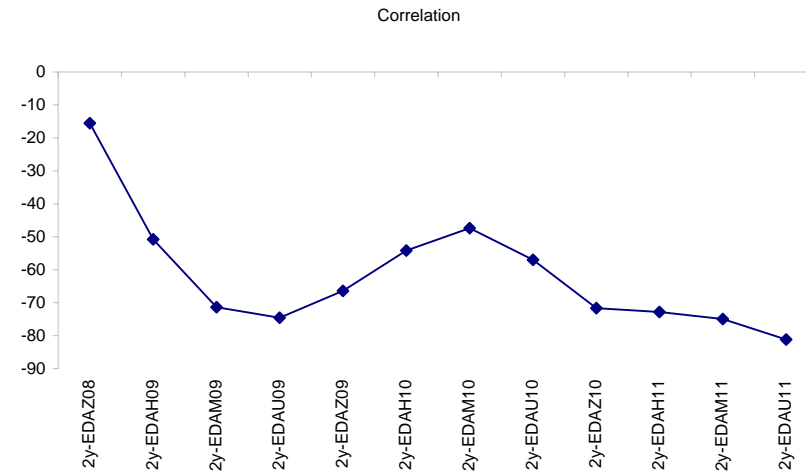
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.013	1.94	1.93	2y-EDAZ08	
EDAH09	0.262	1.94	1.68	2y-EDAH09	
EDAM09	0.512	1.94	1.43	2y-EDAM09	
EDAU09	0.761	1.94	1.18	2y-EDAU09	
EDAZ09	1.010	1.94	0.93	2y-EDAZ09	
EDAH10	1.260	1.94	0.68	2y-EDAH10	
EDAM10	1.509	1.94	0.43	2y-EDAM10	
EDAU10	1.758	1.94	0.18	2y-EDAU10	
EDAZ10	2.008	1.94	(0.06)	2y-EDAZ10	
EDAH11	2.257	1.94	(0.31)	2y-EDAH11	
EDAM11	2.506	1.94	(0.56)	2y-EDAM11	
EDAU11	2.775	1.94	(0.83)	2y-EDAU11	

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

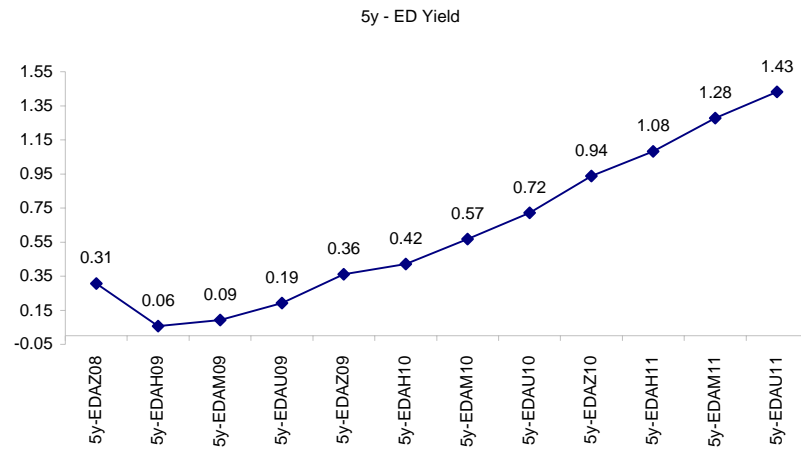


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.579	0.31	5y-EDAZ08	-5.769
EDAH09	3.329	0.06	5y-EDAH09	-39.000
EDAM09	3.364	0.09	5y-EDAM09	-62.605
EDAU09	3.464	0.19	5y-EDAU09	-68.436
EDAZ09	3.634	0.36	5y-EDAZ09	-61.481
EDAH10	3.694	0.42	5y-EDAH10	-51.836
EDAM10	3.839	0.57	5y-EDAM10	-47.028
EDAU10	3.994	0.72	5y-EDAU10	-58.747
EDAZ10	4.209	0.94	5y-EDAZ10	-75.257
EDAH11	4.354	1.08	5y-EDAH11	-78.773
EDAM11	4.549	1.28	5y-EDAM11	-81.628
EDAU11	4.704	1.43	5y-EDAU11	-87.696

Price = Outright Decimal Price - Euro Contract Price

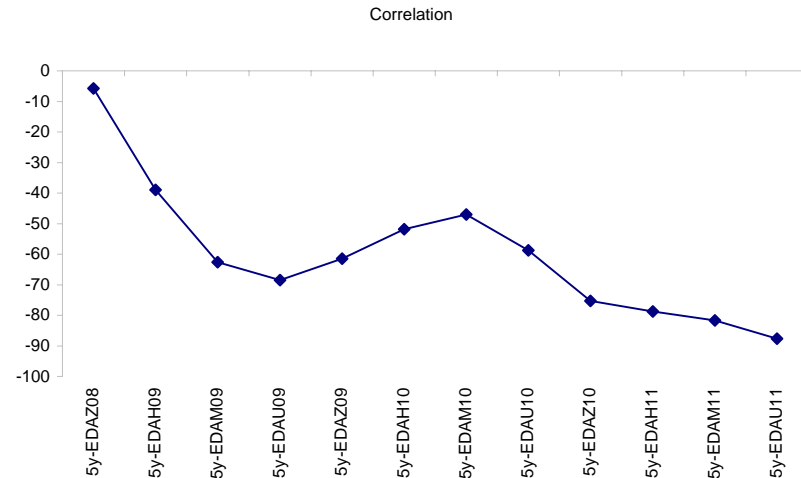
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		5Y Duration	Spread Duration	
EDAZ08	0.013	4.72	4.70	5y-EDAZ08	
EDAH09	0.262	4.72	4.45	5y-EDAH09	
EDAM09	0.512	4.72	4.20	5y-EDAM09	
EDAU09	0.761	4.72	3.95	5y-EDAU09	
EDAZ09	1.010	4.72	3.71	5y-EDAZ09	
EDAH10	1.260	4.72	3.46	5y-EDAH10	
EDAM10	1.509	4.72	3.21	5y-EDAM10	
EDAU10	1.758	4.72	2.96	5y-EDAU10	
EDAZ10	2.008	4.72	2.71	5y-EDAZ10	
EDAH11	2.257	4.72	2.46	5y-EDAH11	
EDAM11	2.506	4.72	2.21	5y-EDAM11	
EDAU11	2.775	4.72	1.94	5y-EDAU11	

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



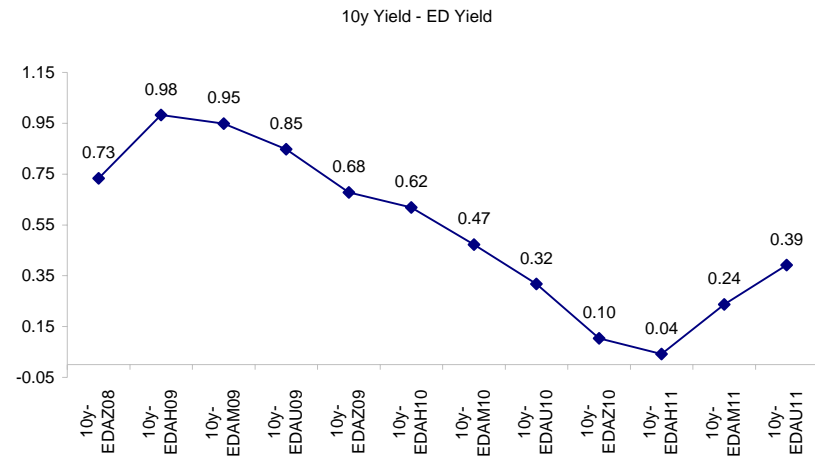


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.579	0.73	10y-EDAZ08	-11.495
EDAH09	3.329	0.98	10y-EDAH09	-44.352
EDAM09	3.364	0.95	10y-EDAM09	-66.354
EDAU09	3.464	0.85	10y-EDAU09	-69.039
EDAZ09	3.634	0.68	10y-EDAZ09	-59.926
EDAH10	3.694	0.62	10y-EDAH10	-48.148
EDAM10	3.839	0.47	10y-EDAM10	-42.394
EDAU10	3.994	0.32	10y-EDAU10	-54.260
EDAZ10	4.209	0.10	10y-EDAZ10	-71.633
EDAH11	4.354	0.04	10y-EDAH11	-74.850
EDAM11	4.549	0.24	10y-EDAM11	-77.927
EDAU11	4.704	0.39	10y-EDAU11	-85.311

Price = Outright Decimal Price - Euro Contract Price

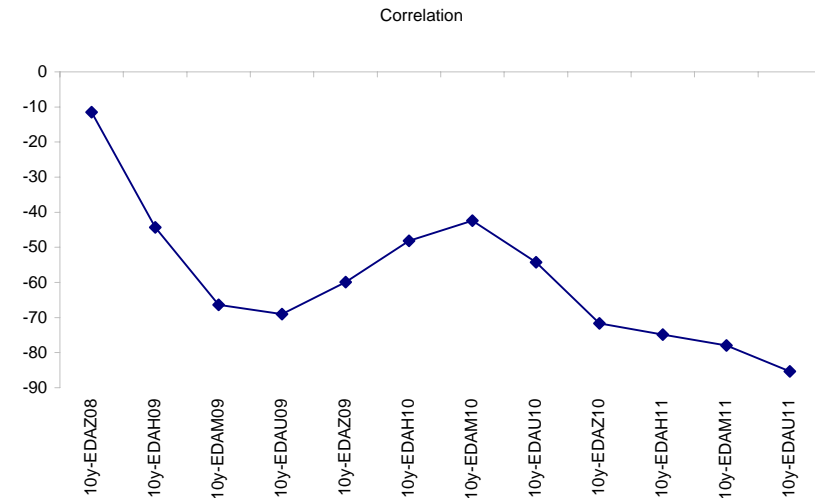
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as				
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.013	8.33	8.31	10y-EDAZ08
EDAH09	0.262	8.33	8.06	10y-EDAH09
EDAM09	0.512	8.33	7.82	10y-EDAM09
EDAU09	0.761	8.33	7.57	10y-EDAU09
EDAZ09	1.010	8.33	7.32	10y-EDAZ09
EDAH10	1.260	8.33	7.07	10y-EDAH10
EDAM10	1.509	8.33	6.82	10y-EDAM10
EDAU10	1.758	8.33	6.57	10y-EDAU10
EDAZ10	2.008	8.33	6.32	10y-EDAZ10
EDAH11	2.257	8.33	6.07	10y-EDAH11
EDAM11	2.506	8.33	5.82	10y-EDAM11
EDAU11	2.775	8.33	5.55	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.

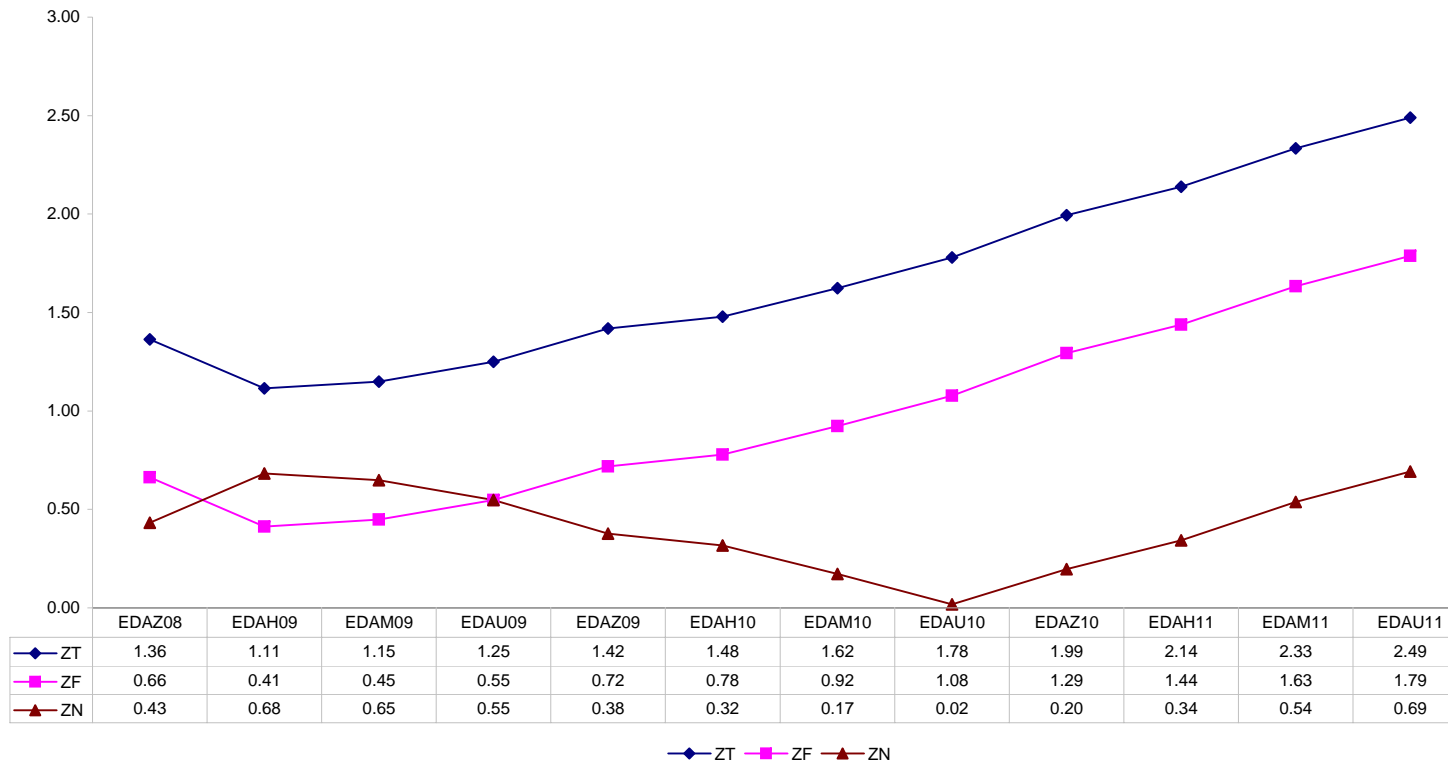
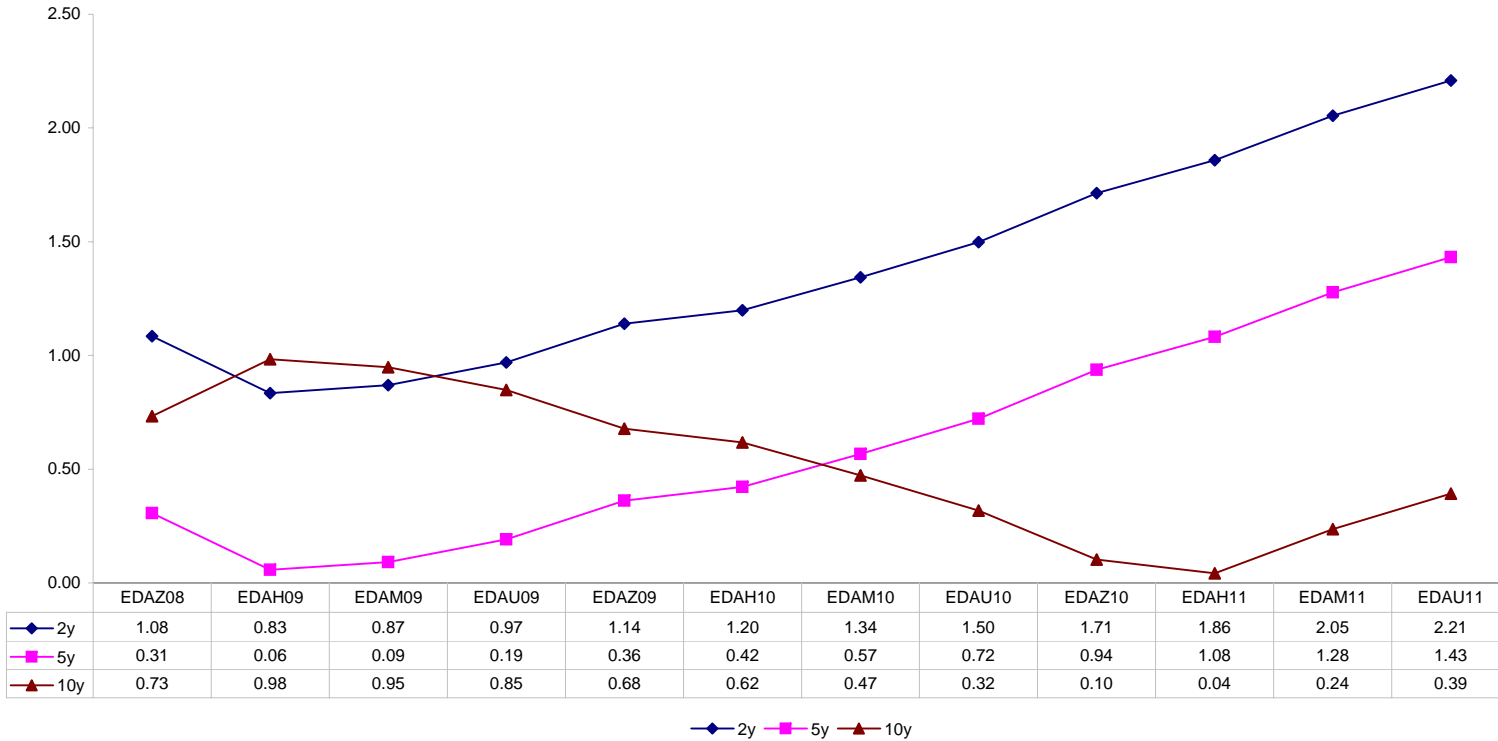
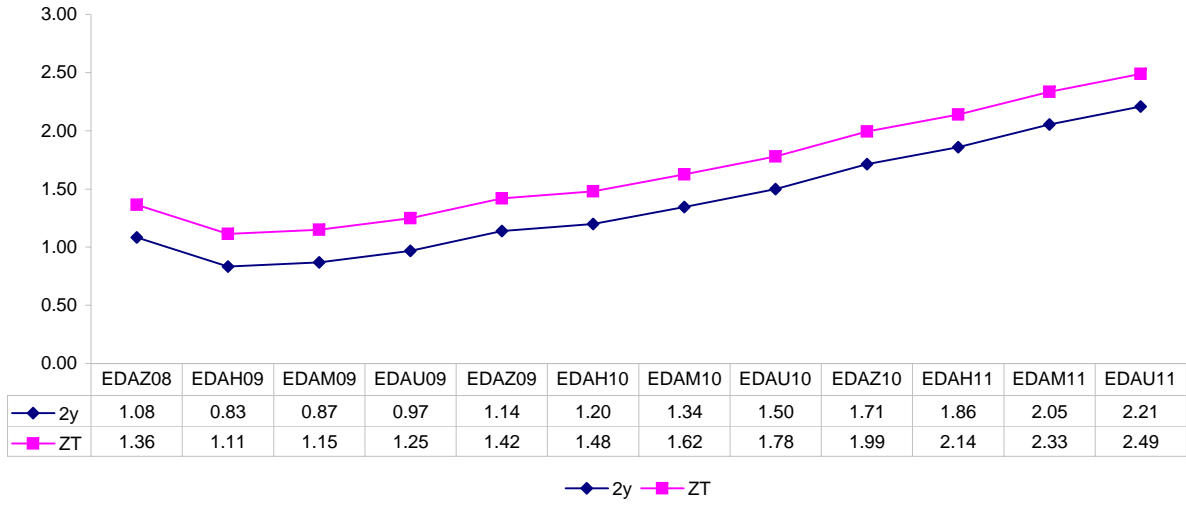


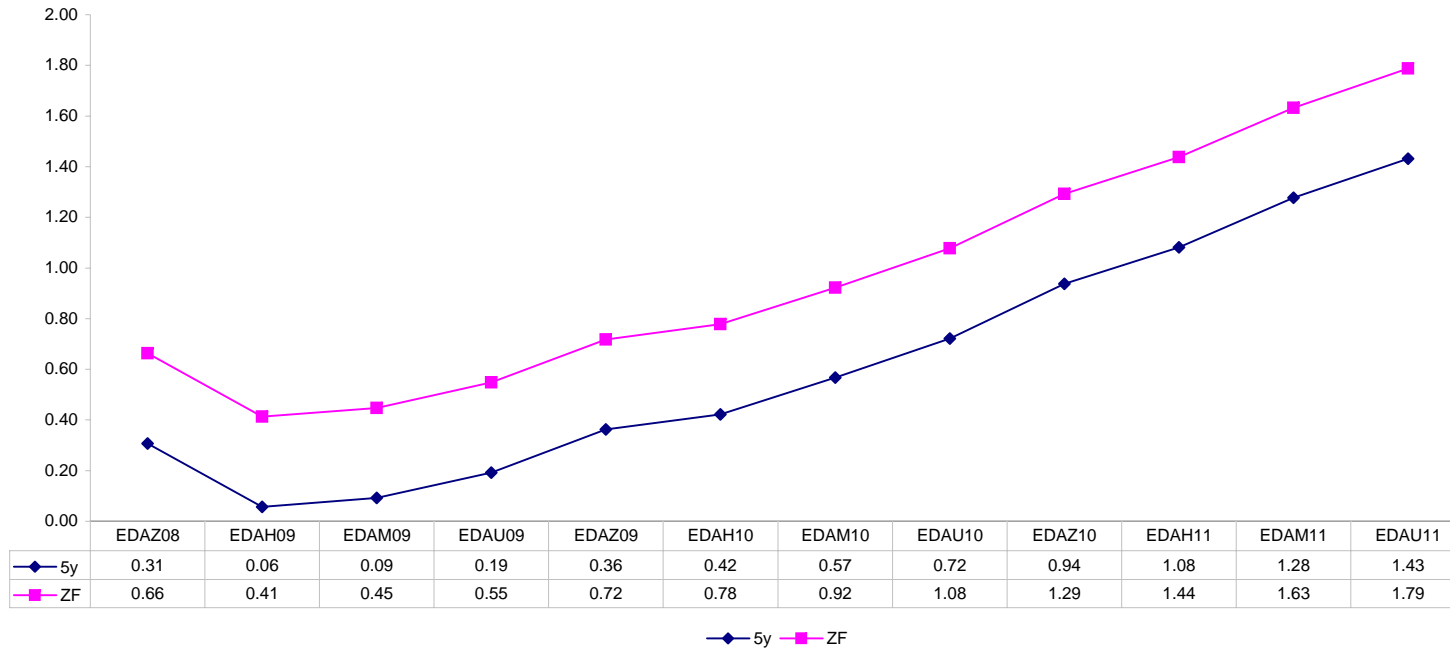
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



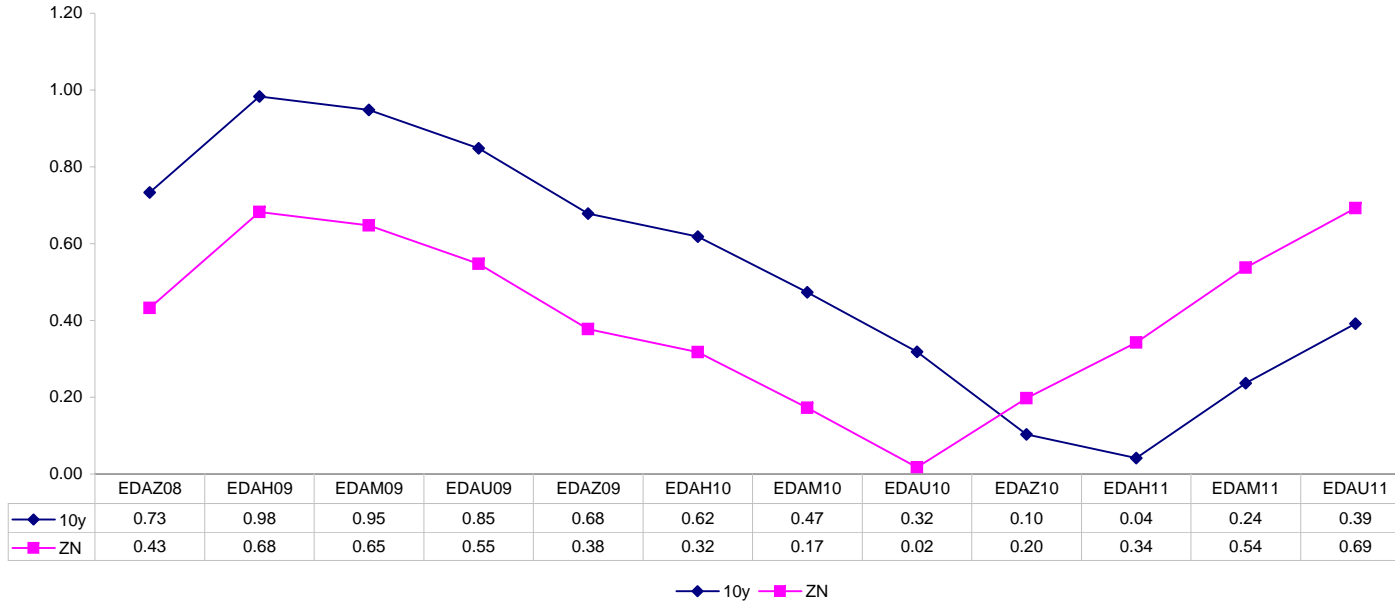
2y Basis TED Curve



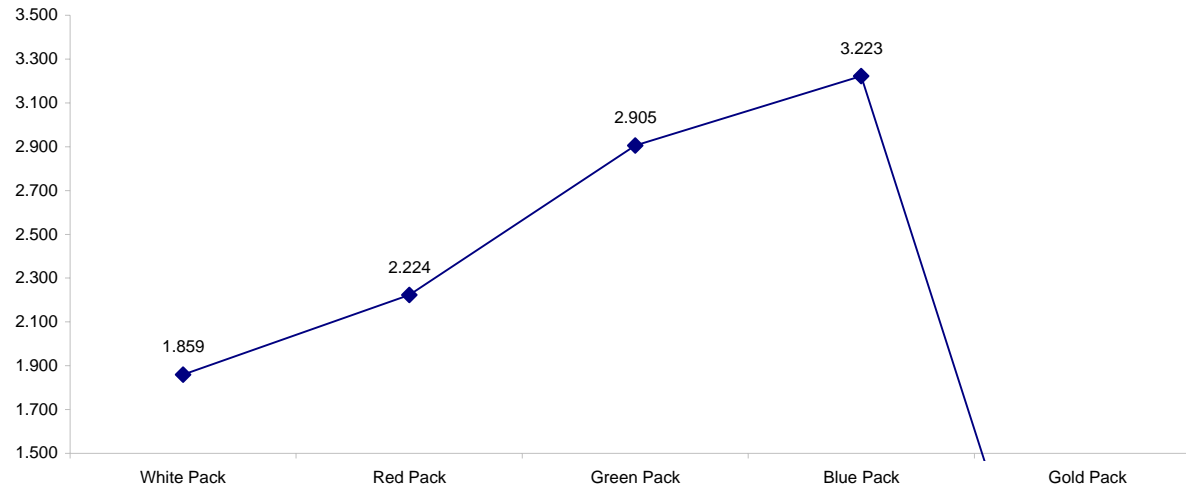
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	1.859	-0.125	9817.500
Red Pack	2.224	-3.625	9781.875
Green Pack	2.905	-6.375	9715.500
Blue Pack	3.223	0.250	9684.625
Gold Pack		0.000	9669.750



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

