

## **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	105.5219	105.167	2.667	1.92
ZF	110.3813	110.122	3.309	4.06
ZN	113.6719	113.215	3.563	5.93
2y	100.391	100.1250	2.669	1.92
5y	100.031	100.0100	3.367	4.56
10y	98.813	98.2600	4.022	8.08

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.030	2.970	75	0.205	SEP	
EDAZ08	96.770	3.230	166	0.454	DEC	White
EDAH09	96.630	3.370	257	0.703	MAR	Pack
EDAM09	96.415	3.585	348	0.953	JUN	
EDAU09	96.170	3.830	439	1.202	SEP	
EDAZ09	95.890	4.110	530	1.451	DEC	Red
EDAH10	95.695	4.305	621	1.701	MAR	Pack
EDAM10	95.525	4.475	712	1.950	JUN	
EDAU10	95.400	4.600	803	2.199	SEP	
EDAZ10	95.290	4.710	894	2.449	DEC	Green
EDAH11	95.250	4.750	985	2.698	MAR	Pack
EDAM11	95.200	4.800	1076	2.947	JUN	
EDAU11	95.180	4.820	1174	3.216	SEP	
EDAZ11	95.115	4.885	1265	3.465	DEC	Blue
EDAH12	95.090	4.910	1356	3.714	MAR	Pack
EDAM12	95.060	4.940	1447	3.964	JUN	
EDAU12	95.020	4.980	1538	4.213	SEP	
EDAZ12	94.990	5.010	1629	4.462	DEC	Gold
EDAH13	94.955	5.045	1720	4.712	MAR	Pack
EDAM13	94.905	5.095	1811	4.961	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.362	-3.875	9671.125	
Red Pack	4.283	-4.500	9582.000	Pack
Green Pack	4.838	-3.250	9528.500	Prices
Blue Pack	5.018	-1.000	9511.125	
Gold Pack	5.167	-0.625	9496.750	

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.

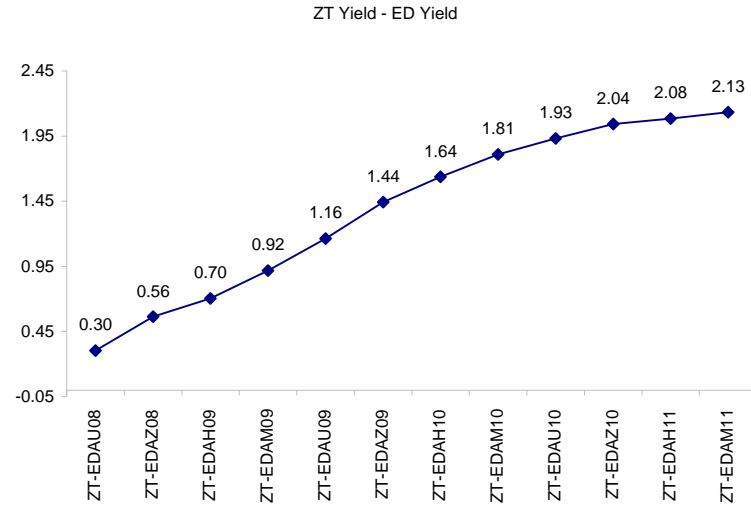
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### 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.**

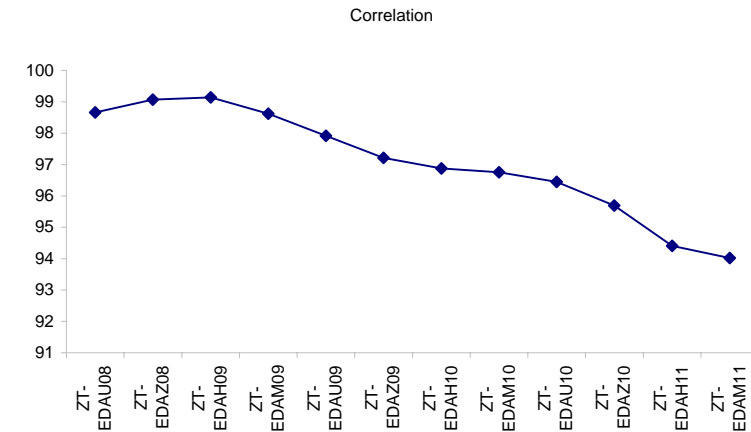
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.492	0.30	ZT-EDAU08	98.662
EDAZ08	8.752	0.56	ZT-EDAZ08	99.068
EDAH09	8.892	0.70	ZT-EDAH09	99.146
EDAM09	9.107	0.92	ZT-EDAM09	98.619
EDAU09	9.352	1.16	ZT-EDAU09	97.921
EDAZ09	9.632	1.44	ZT-EDAZ09	97.212
EDAH10	9.827	1.64	ZT-EDAH10	96.882
EDAM10	9.997	1.81	ZT-EDAM10	96.758
EDAU10	10.122	1.93	ZT-EDAU10	96.451
EDAZ10	10.232	2.04	ZT-EDAZ10	95.698
EDAH11	10.272	2.08	ZT-EDAH11	94.409
EDAM11	10.322	2.13	ZT-EDAM11	94.016

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	0.205	1.92	1.72	ZT-EDAU08		
EDAZ08	0.454	1.92	1.47	ZT-EDAZ08		
EDAH09	0.703	1.92	1.22	ZT-EDAH09		
EDAM09	0.953	1.92	0.97	ZT-EDAM09		
EDAU09	1.202	1.92	0.72	ZT-EDAU09		
EDAZ09	1.451	1.92	0.47	ZT-EDAZ09		
EDAH10	1.701	1.92	0.22	ZT-EDAH10		
EDAM10	1.950	1.92	(0.03)	ZT-EDAM10		
EDAU10	2.199	1.92	(0.28)	ZT-EDAU10		
EDAZ10	2.449	1.92	(0.52)	ZT-EDAZ10		
EDAH11	2.698	1.92	(0.77)	ZT-EDAH11		
EDAM11	2.947	1.92	(1.02)	ZT-EDAM11		

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

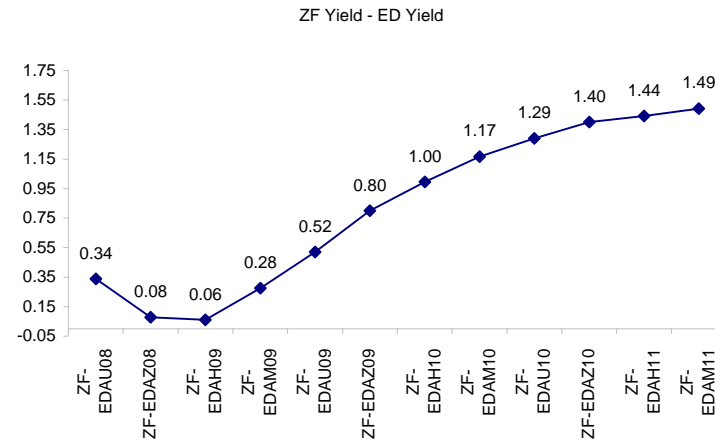


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	13.351	0.34	ZF-EDAU08	97.986
EDAZ08	13.611	0.08	ZF-EDAZ08	98.479
EDAH09	13.751	0.06	ZF-EDAH09	98.505
EDAM09	13.966	0.28	ZF-EDAM09	97.664
EDAU09	14.211	0.52	ZF-EDAU09	96.665
EDAZ09	14.491	0.80	ZF-EDAZ09	95.880
EDAH10	14.686	1.00	ZF-EDAH10	95.614
EDAM10	14.856	1.17	ZF-EDAM10	95.647
EDAU10	14.981	1.29	ZF-EDAU10	95.677
EDAZ10	15.091	1.40	ZF-EDAZ10	95.250
EDAH11	15.131	1.44	ZF-EDAH11	94.452
EDAM11	15.181	1.49	ZF-EDAM11	94.546

Price = Outright Decimal Price - Euro Contract Price

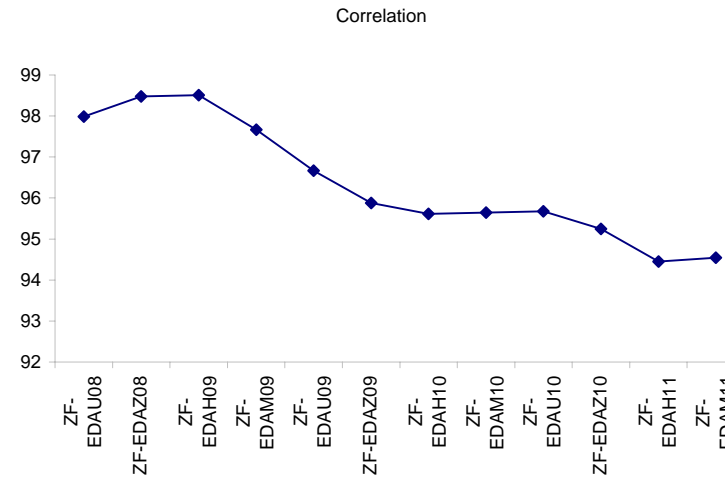
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU08	0.205	4.06	3.85	ZF-EDAU08	
EDAZ08	0.454	4.06	3.60	ZF-EDAZ08	
EDAH09	0.703	4.06	3.35	ZF-EDAH09	
EDAM09	0.953	4.06	3.10	ZF-EDAM09	
EDAU09	1.202	4.06	2.85	ZF-EDAU09	
EDAZ09	1.451	4.06	2.60	ZF-EDAZ09	
EDAH10	1.701	4.06	2.36	ZF-EDAH10	
EDAM10	1.950	4.06	2.11	ZF-EDAM10	
EDAU10	2.199	4.06	1.86	ZF-EDAU10	
EDAZ10	2.449	4.06	1.61	ZF-EDAZ10	
EDAH11	2.698	4.06	1.36	ZF-EDAH11	
EDAM11	2.947	4.06	1.11	ZF-EDAM11	

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

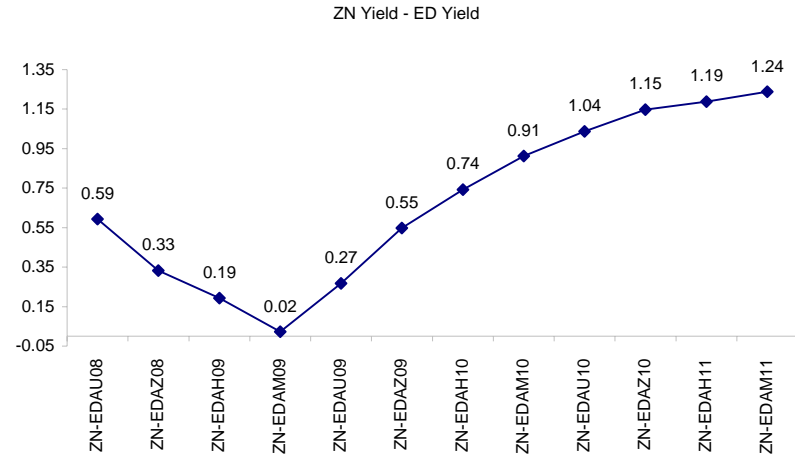


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	16.642	0.59	ZN-EDAU08	97.185
EDAZ08	16.902	0.33	ZN-EDAZ08	97.825
EDAH09	17.042	0.19	ZN-EDAH09	97.262
EDAM09	17.257	0.02	ZN-EDAM09	96.053
EDAU09	17.502	0.27	ZN-EDAU09	94.837
EDAZ09	17.782	0.55	ZN-EDAZ09	93.937
EDAH10	17.977	0.74	ZN-EDAH10	95.614
EDAM10	18.147	0.91	ZN-EDAM10	95.647
EDAU10	18.272	1.04	ZN-EDAU10	95.677
EDAZ10	18.382	1.15	ZN-EDAZ10	95.250
EDAH11	18.422	1.19	ZN-EDAH11	94.452
EDAM11	18.472	1.24	ZN-EDAM11	94.546

Price = Outright Decimal Price - Euro Contract Price

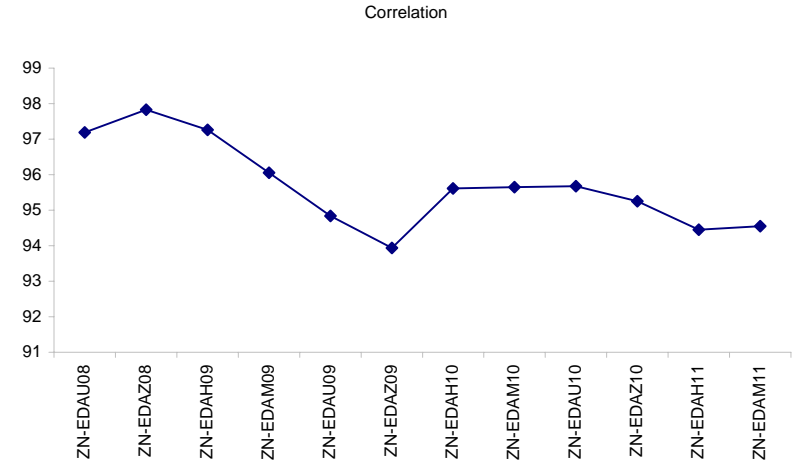
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.205	5.93	5.72	ZN-EDAU08		
EDAZ08	0.454	5.93	5.48	ZN-EDAZ08		
EDAH09	0.703	5.93	5.23	ZN-EDAH09		
EDAM09	0.953	5.93	4.98	ZN-EDAM09		
EDAU09	1.202	5.93	4.73	ZN-EDAU09		
EDAZ09	1.451	5.93	4.48	ZN-EDAZ09		
EDAH10	1.701	5.93	4.23	ZN-EDAH10		
EDAM10	1.950	5.93	3.98	ZN-EDAM10		
EDAU10	2.199	5.93	3.73	ZN-EDAU10		
EDAZ10	2.449	5.93	3.48	ZN-EDAZ10		
EDAH11	2.698	5.93	3.23	ZN-EDAH11		
EDAM11	2.947	5.93	2.98	ZN-EDAM11		

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

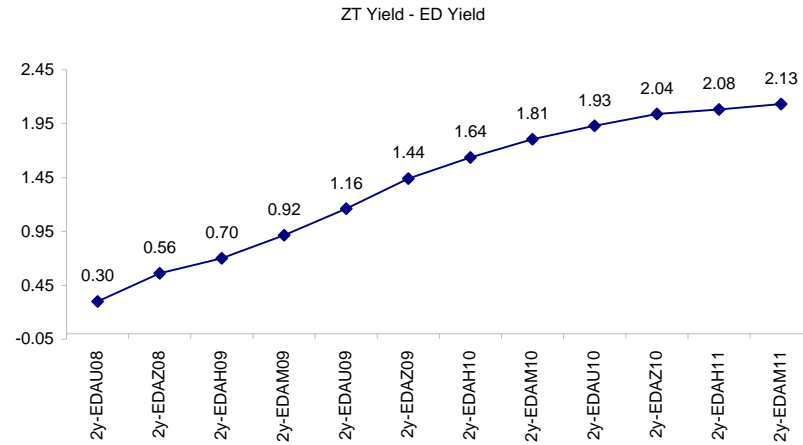


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.361	0.30	2y-EDAU08	-99.112
EDAZ08	3.621	0.56	2y-EDAZ08	-99.770
EDAH09	3.761	0.70	2y-EDAH09	-99.425
EDAM09	3.976	0.92	2y-EDAM09	-98.705
EDAU09	4.221	1.16	2y-EDAU09	-97.945
EDAZ09	4.501	1.44	2y-EDAZ09	-97.290
EDAH10	4.696	1.64	2y-EDAH10	-96.928
EDAM10	4.866	1.81	2y-EDAM10	-96.694
EDAU10	4.991	1.93	2y-EDAU10	-96.215
EDAZ10	5.101	2.04	2y-EDAZ10	-95.176
EDAH11	5.141	2.08	2y-EDAH11	-93.522
EDAM11	5.191	2.13	2y-EDAM11	-92.941

Price = Outright Decimal Price - Euro Contract Price

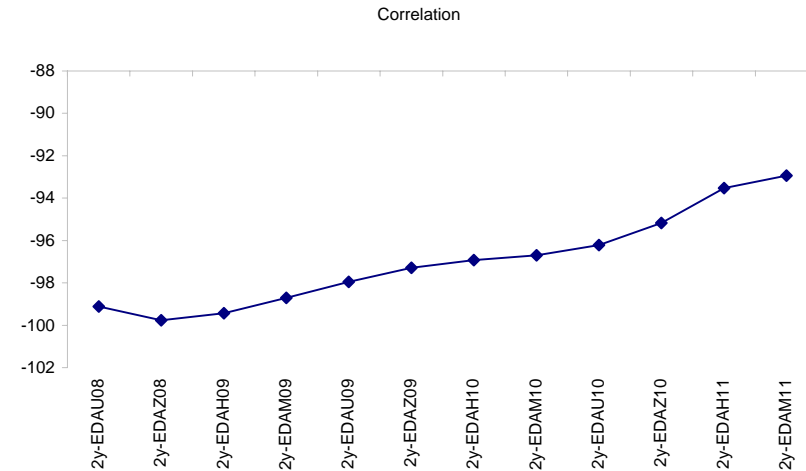
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	2Y Duration	Spread Duration		
EDAU08	0.205	1.92	1.72	2y-EDAU08
EDAZ08	0.454	1.92	1.47	2y-EDAZ08
EDAH09	0.703	1.92	1.22	2y-EDAH09
EDAM09	0.953	1.92	0.97	2y-EDAM09
EDAU09	1.202	1.92	0.72	2y-EDAU09
EDAZ09	1.451	1.92	0.47	2y-EDAZ09
EDAH10	1.701	1.92	0.22	2y-EDAH10
EDAM10	1.950	1.92	(0.03)	2y-EDAM10
EDAU10	2.199	1.92	(0.28)	2y-EDAU10
EDAZ10	2.449	1.92	(0.52)	2y-EDAZ10
EDAH11	2.698	1.92	(0.77)	2y-EDAH11
EDAM11	2.947	1.92	(1.02)	2y-EDAM11

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

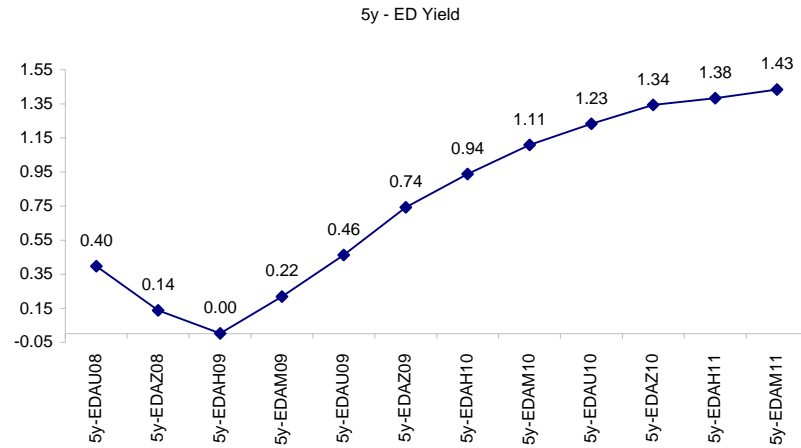


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.001	0.40	5y-EDAU08	-98.929
EDAZ08	3.261	0.14	5y-EDAZ08	-99.382
EDAH09	3.401	0.00	5y-EDAH09	-99.066
EDAM09	3.616	0.22	5y-EDAM09	-98.004
EDAU09	3.861	0.46	5y-EDAU09	-96.956
EDAZ09	4.141	0.74	5y-EDAZ09	-96.217
EDAH10	4.336	0.94	5y-EDAH10	-95.923
EDAM10	4.506	1.11	5y-EDAM10	-95.787
EDAU10	4.631	1.23	5y-EDAU10	-95.624
EDAZ10	4.741	1.34	5y-EDAZ10	-95.044
EDAH11	4.781	1.38	5y-EDAH11	-94.021
EDAM11	4.831	1.43	5y-EDAM11	-93.836

Price = Outright Decimal Price - Euro Contract Price

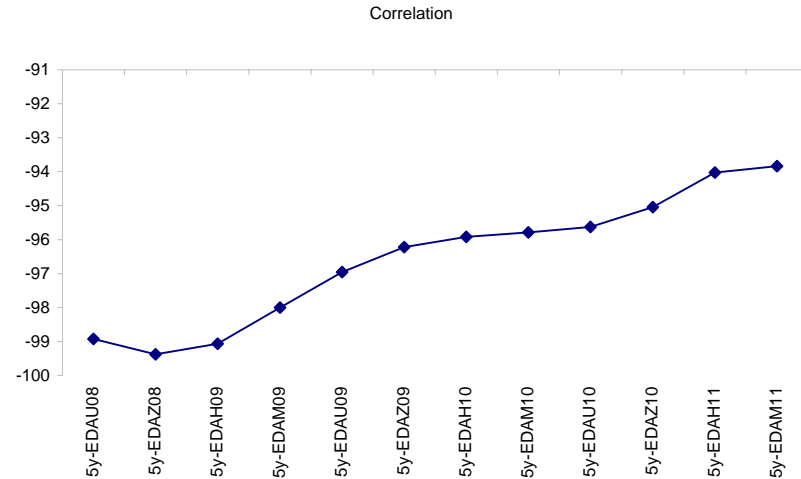
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.205	4.56	4.35	5y-EDAU08
EDAZ08	0.454	4.56	4.10	5y-EDAZ08
EDAH09	0.703	4.56	3.85	5y-EDAH09
EDAM09	0.953	4.56	3.61	5y-EDAM09
EDAU09	1.202	4.56	3.36	5y-EDAU09
EDAZ09	1.451	4.56	3.11	5y-EDAZ09
EDAH10	1.701	4.56	2.86	5y-EDAH10
EDAM10	1.950	4.56	2.61	5y-EDAM10
EDAU10	2.199	4.56	2.36	5y-EDAU10
EDAZ10	2.449	4.56	2.11	5y-EDAZ10
EDAH11	2.698	4.56	1.86	5y-EDAH11
EDAM11	2.947	4.56	1.61	5y-EDAM11

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



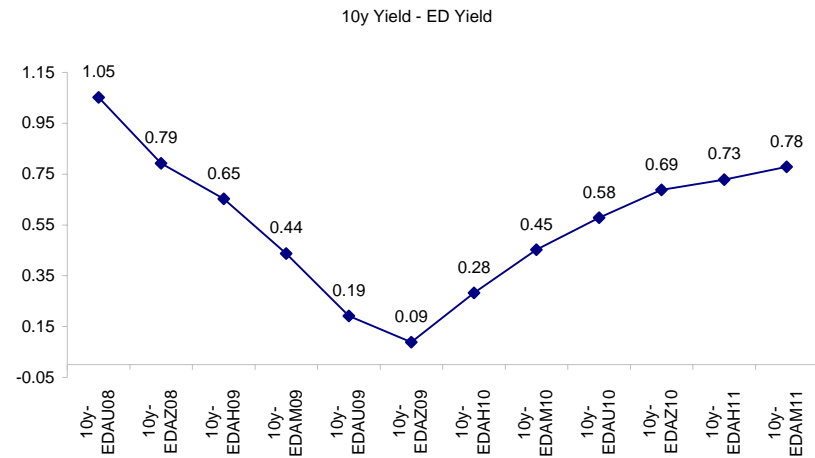


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.001	1.05	10y-EDAU08	-98.148
EDAZ08	3.261	0.79	10y-EDAZ08	-98.030
EDAH09	3.401	0.65	10y-EDAH09	-96.434
EDAM09	3.616	0.44	10y-EDAM09	-94.523
EDAU09	3.861	0.19	10y-EDAU09	-92.781
EDAZ09	4.141	0.09	10y-EDAZ09	-91.644
EDAH10	4.336	0.28	10y-EDAH10	-91.221
EDAM10	4.506	0.45	10y-EDAM10	-91.068
EDAU10	4.631	0.58	10y-EDAU10	-90.753
EDAZ10	4.741	0.69	10y-EDAZ10	-89.882
EDAH11	4.781	0.73	10y-EDAH11	-88.441
EDAM11	4.831	0.78	10y-EDAM11	-88.323

Price = Outright Decimal Price - Euro Contract Price

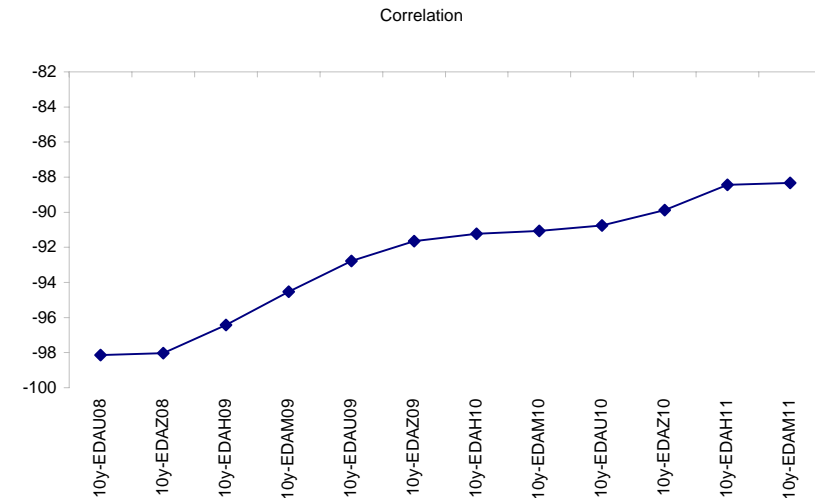
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.205	8.08	7.87	10y-EDAU08
EDAZ08	0.454	8.08	7.62	10y-EDAZ08
EDAH09	0.703	8.08	7.37	10y-EDAH09
EDAM09	0.953	8.08	7.12	10y-EDAM09
EDAU09	1.202	8.08	6.88	10y-EDAU09
EDAZ09	1.451	8.08	6.63	10y-EDAZ09
EDAH10	1.701	8.08	6.38	10y-EDAH10
EDAM10	1.950	8.08	6.13	10y-EDAM10
EDAU10	2.199	8.08	5.88	10y-EDAU10
EDAZ10	2.449	8.08	5.63	10y-EDAZ10
EDAH11	2.698	8.08	5.38	10y-EDAH11
EDAM11	2.947	8.08	5.13	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.

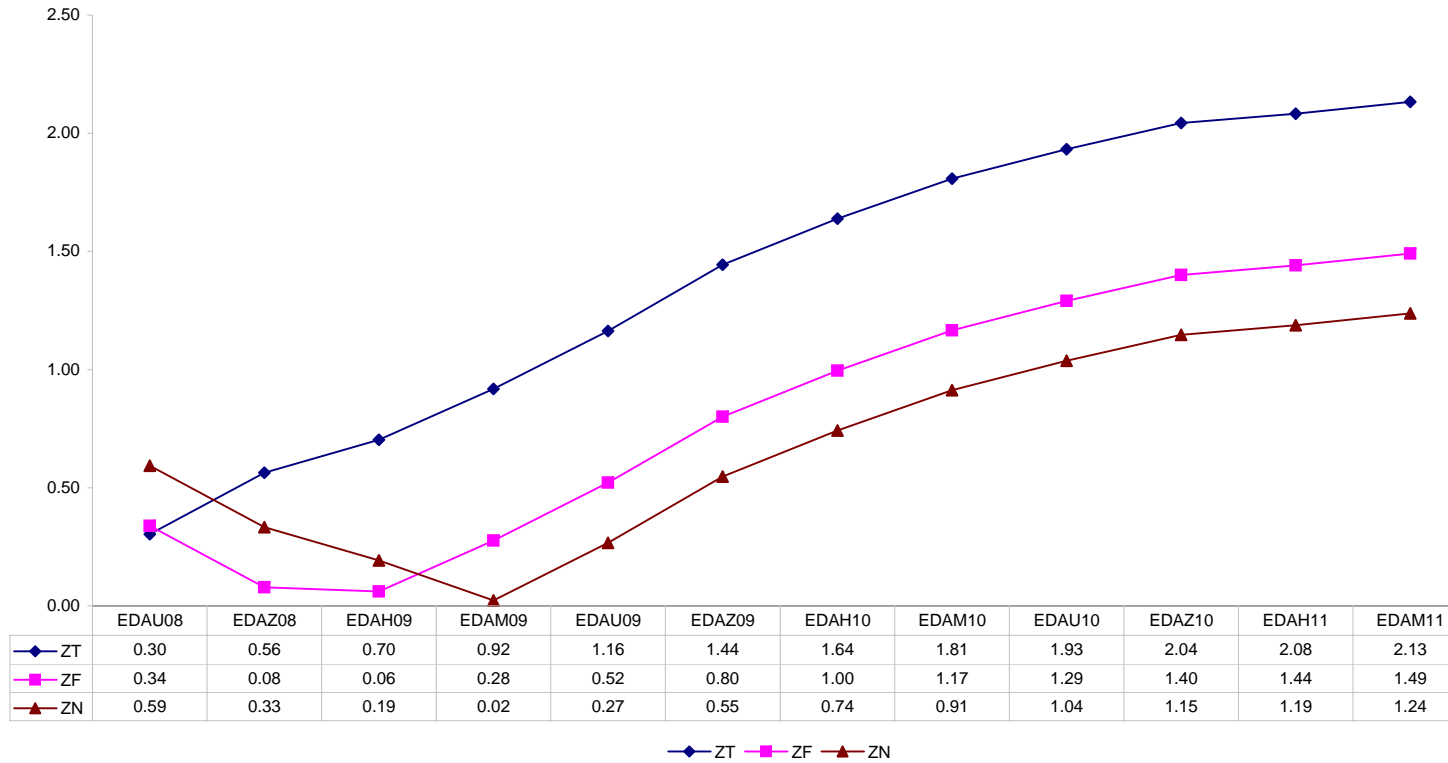
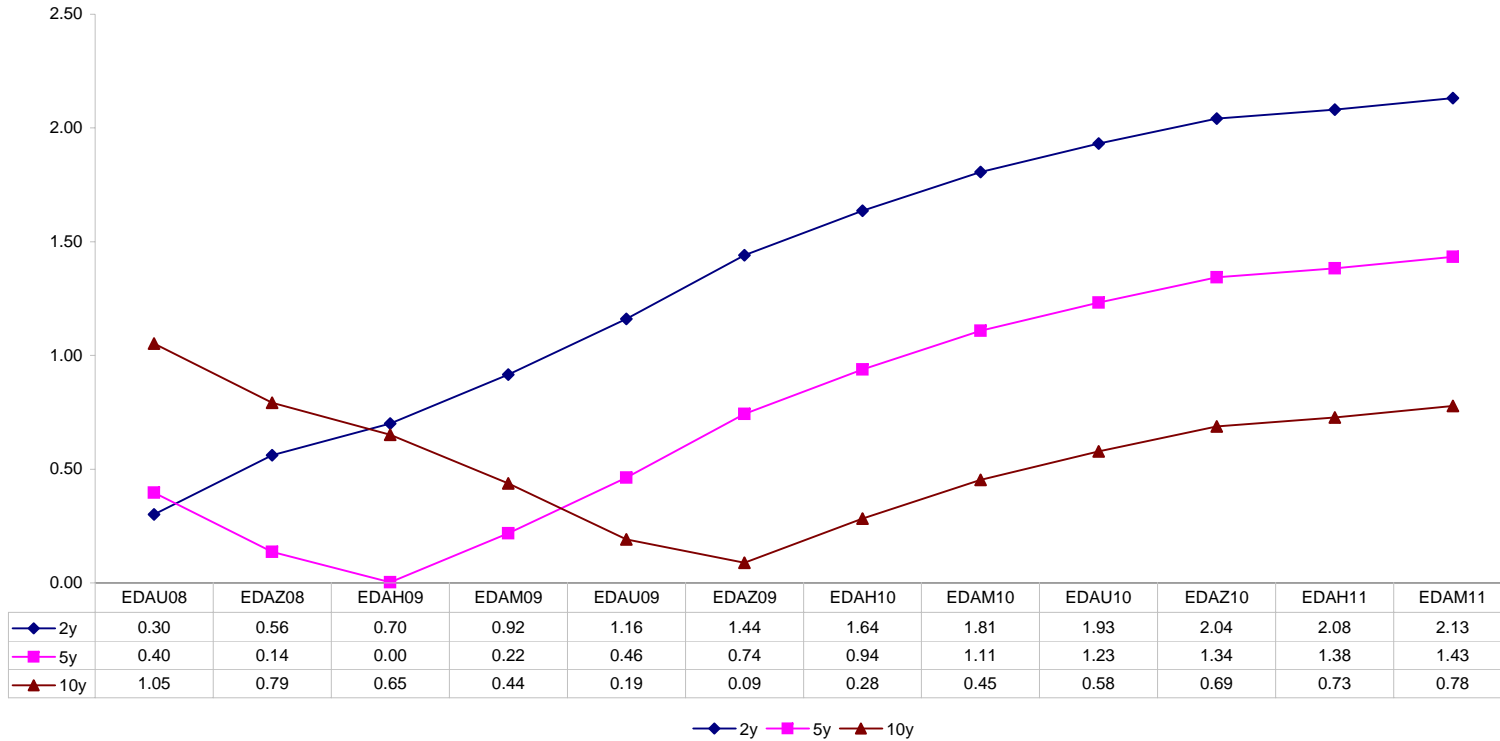
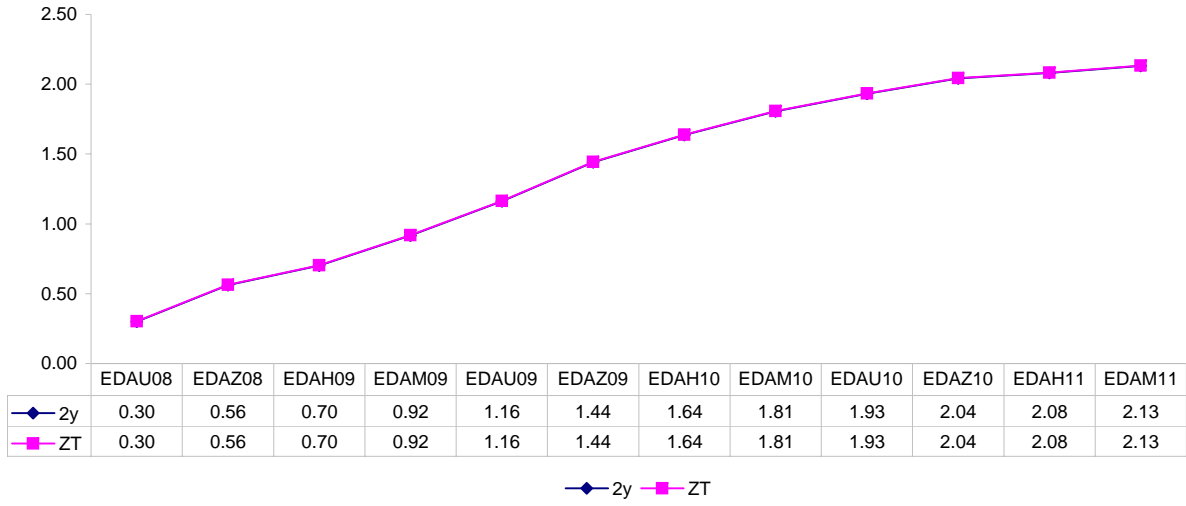


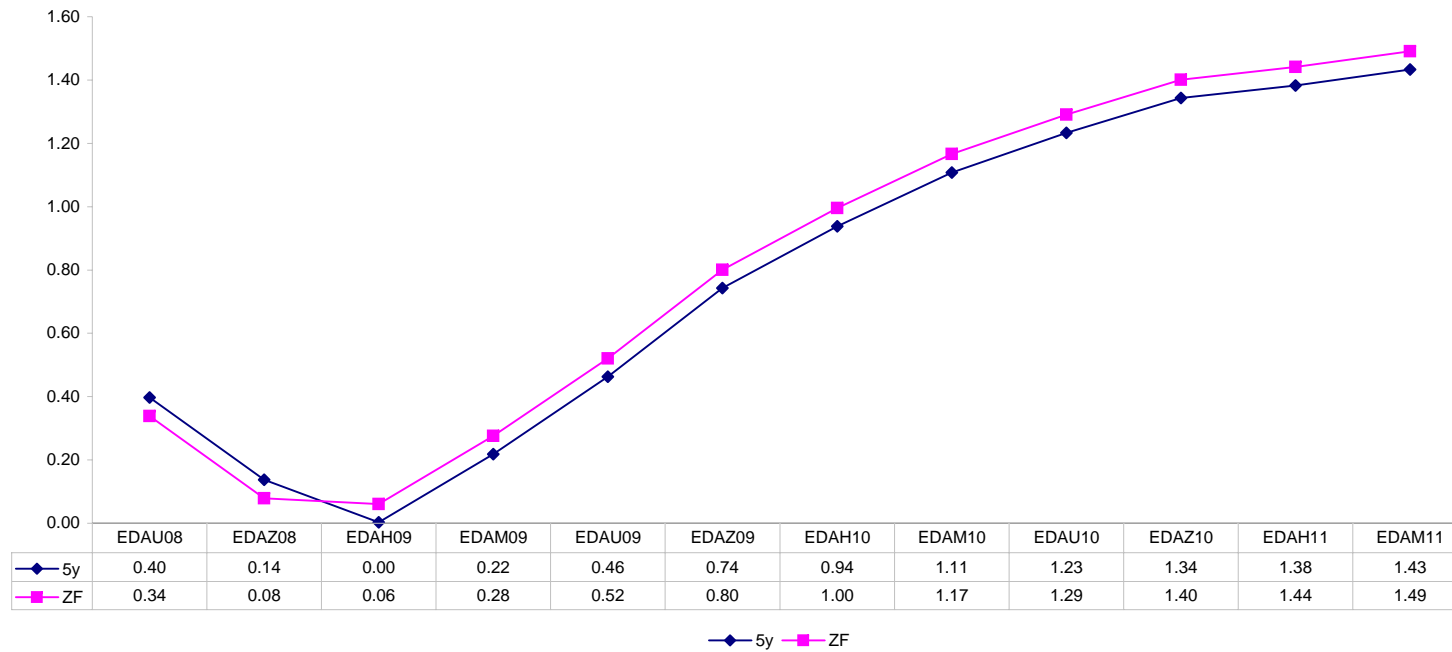
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



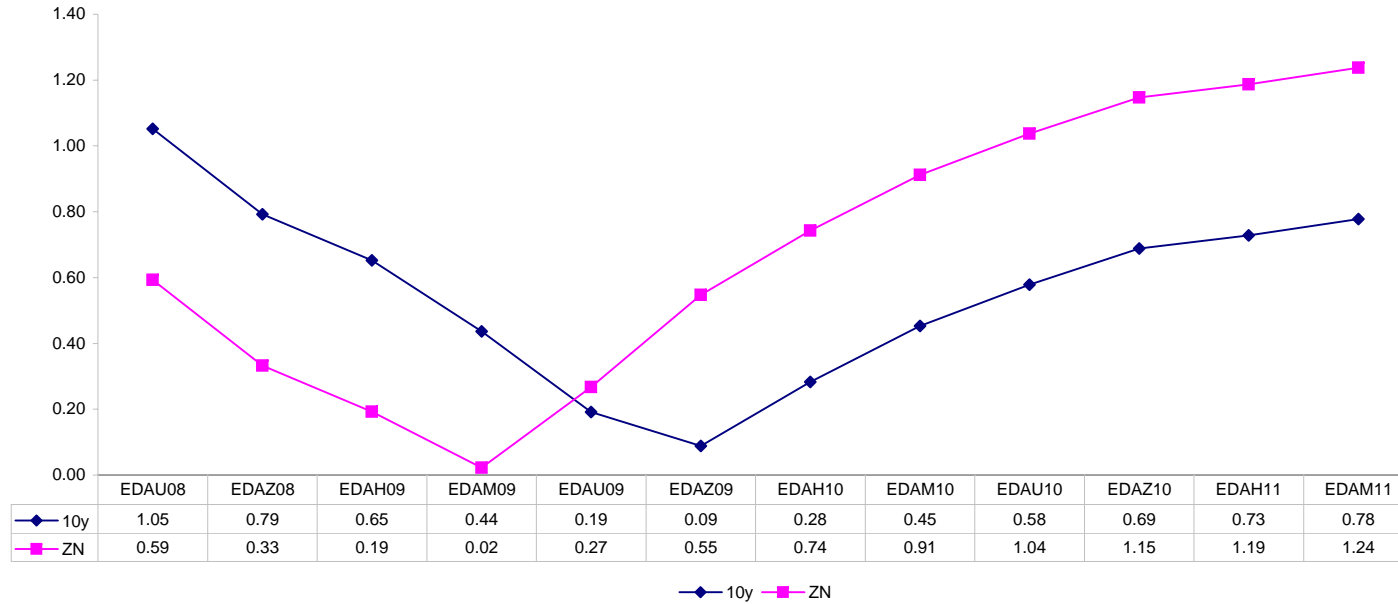
2y Basis TED Curve



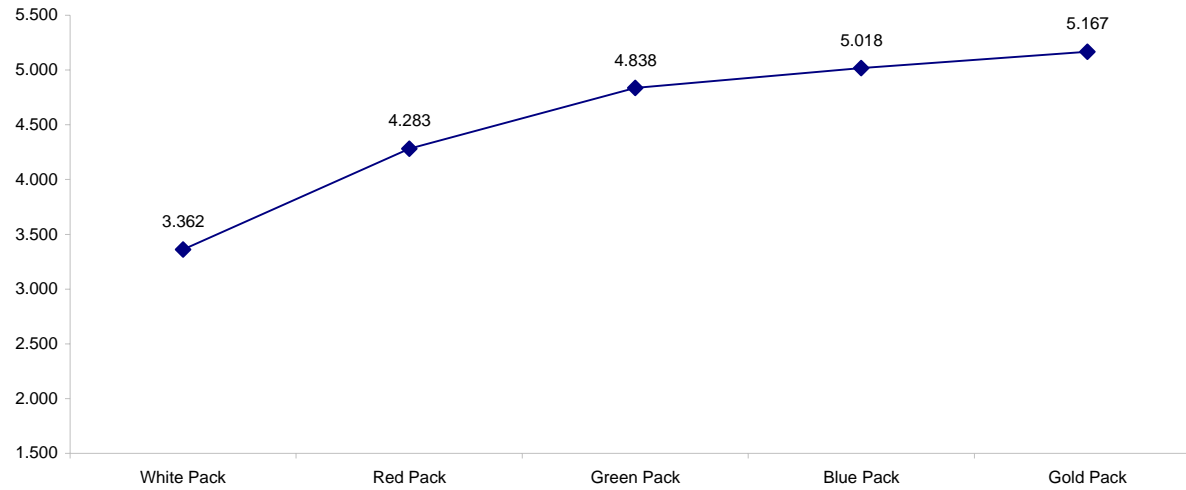
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.362	-3.875	9671.125
Red Pack	4.283	-4.500	9582.000
Green Pack	4.838	-3.250	9528.500
Blue Pack	5.018	-1.000	9511.125
Gold Pack	5.167	-0.625	9496.750



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

