

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

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	107.5156	107.165	1.520	1.87
ZF	113.2875	113.092	2.699	4.16
ZN	113.6875	113.220	3.832	6.44
2y	99.797	99.2550	1.600	1.96
5y	101.522	101.1670	2.783	4.52
10y	100.734	100.2350	3.908	7.98

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.675	2.325	46	0.125	DEC	
EDAH09	97.815	2.185	137	0.375	MAR	White Pack
EDAM09	97.710	2.290	228	0.624	JUN	
EDAU09	97.560	2.440	319	0.873	SEP	
EDAZ09	97.340	2.660	410	1.123	DEC	
EDAH10	97.185	2.815	501	1.372	MAR	Red Pack
EDAM10	96.895	3.105	592	1.621	JUN	
EDAU10	96.535	3.465	683	1.871	SEP	
EDAZ10	96.085	3.915	774	2.120	DEC	
EDAH11	95.800	4.200	865	2.369	MAR	Green Pack
EDAM11	95.560	4.440	956	2.619	JUN	
EDAU11	95.385	4.615	1054	2.887	SEP	
EDAZ11	95.230	4.770	1145	3.136	DEC	
EDAH12	95.215	4.785	1236	3.386	MAR	Blue Pack
EDAM12	95.170	4.830	1327	3.635	JUN	
EDAU12	95.100	4.900	1418	3.884	SEP	
EDAZ12	94.995	5.005	1509	4.134	DEC	
EDAH13	94.990	5.010	1600	4.383	MAR	Gold Pack
EDAM13	94.935	5.065	1691	4.632	JUN	
EDZU13	94.830	5.170	1873	5.131	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.356	-2.500	9769.000	Pack Prices
Red Pack	3.076	-4.000	9698.875	
Green Pack	4.400	-1.875	9570.750	
Blue Pack	4.948	-1.500	9517.875	
Gold Pack	5.183	0.000	9495.250	

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

Correlations (Important)

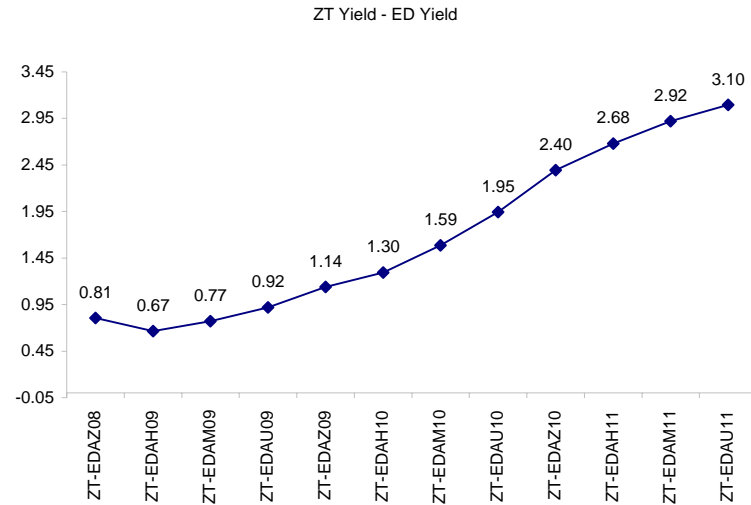
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based on yield than price.

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.841	0.81	ZT-EDAZ08	22.441
EDAH09	9.701	0.67	ZT-EDAH09	-25.174
EDAM09	9.806	0.77	ZT-EDAM09	-14.559
EDAU09	9.956	0.92	ZT-EDAU09	-25.174
EDAZ09	10.176	1.14	ZT-EDAZ09	-7.626
EDAH10	10.331	1.30	ZT-EDAH10	12.920
EDAM10	10.621	1.59	ZT-EDAM10	29.074
EDAU10	10.981	1.95	ZT-EDAU10	35.570
EDAZ10	11.431	2.40	ZT-EDAZ10	36.037
EDAH11	11.716	2.68	ZT-EDAH11	32.380
EDAM11	11.956	2.92	ZT-EDAM11	29.539
EDAU11	12.131	3.10	ZT-EDAU11	25.013

Price = Outright Decimal Price - Euro Contract Price

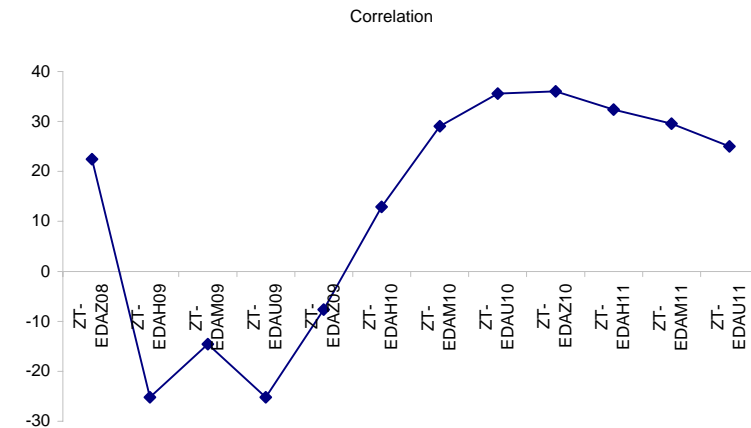
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



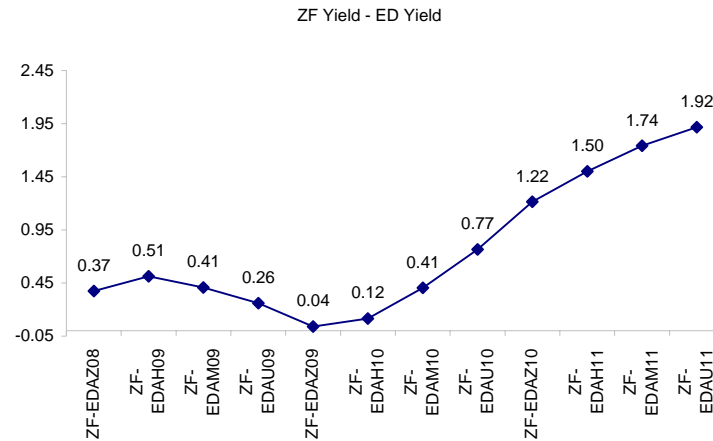
	ED Duration as Fraction of year			ZT Duration	Spread Duration	
EDAZ08	0.125	1.87	1.75	ZT-EDAZ08		
EDAH09	0.375	1.87	1.50	ZT-EDAH09		
EDAM09	0.624	1.87	1.25	ZT-EDAM09		
EDAU09	0.873	1.87	1.00	ZT-EDAU09		
EDAZ09	1.123	1.87	0.75	ZT-EDAZ09		
EDAH10	1.372	1.87	0.50	ZT-EDAH10		
EDAM10	1.621	1.87	0.25	ZT-EDAM10		
EDAU10	1.871	1.87	0.00	ZT-EDAU10		
EDAZ10	2.120	1.87	(0.25)	ZT-EDAZ10		
EDAH11	2.369	1.87	(0.50)	ZT-EDAH11		
EDAM11	2.619	1.87	(0.75)	ZT-EDAM11		
EDAU11	2.887	1.87	(1.02)	ZT-EDAU11		

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



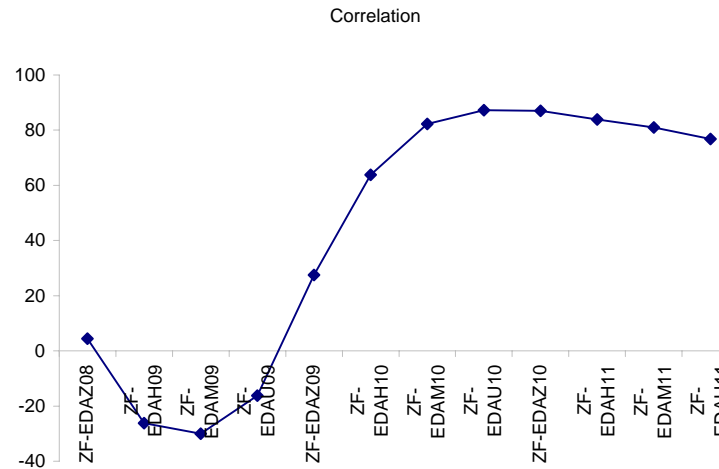
ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.613	0.37	ZF-EDAZ08	4.420
EDAH09	15.473	0.51	ZF-EDAH09	-26.199
EDAM09	15.578	0.41	ZF-EDAM09	-30.044
EDAU09	15.728	0.26	ZF-EDAU09	-16.208
EDAZ09	15.948	0.04	ZF-EDAZ09	27.452
EDAH10	16.103	0.12	ZF-EDAH10	63.796
EDAM10	16.393	0.41	ZF-EDAM10	82.236
EDAU10	16.753	0.77	ZF-EDAU10	87.280
EDAZ10	17.203	1.22	ZF-EDAZ10	87.016
EDAH11	17.488	1.50	ZF-EDAH11	83.926
EDAM11	17.728	1.74	ZF-EDAM11	80.993
EDAU11	17.903	1.92	ZF-EDAU11	76.843

Price = Outright Decimal Price - Euro Contract Price
 Yield = ABS (Proxy Yield - Implied Euro Contract yield)
 *Correlation = ED Correlation to Treasury Future over 10 days



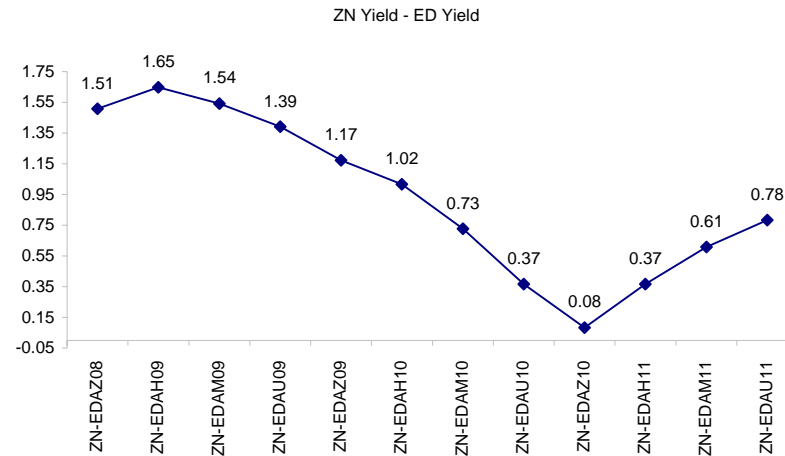
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.125	4.16	4.04	ZF-EDAZ08		
EDAH09	0.375	4.16	3.79	ZF-EDAH09		
EDAM09	0.624	4.16	3.54	ZF-EDAM09		
EDAU09	0.873	4.16	3.29	ZF-EDAU09		
EDAZ09	1.123	4.16	3.04	ZF-EDAZ09		
EDAH10	1.372	4.16	2.79	ZF-EDAH10		
EDAM10	1.621	4.16	2.54	ZF-EDAM10		
EDAU10	1.871	4.16	2.29	ZF-EDAU10		
EDAZ10	2.120	4.16	2.04	ZF-EDAZ10		
EDAH11	2.369	4.16	1.80	ZF-EDAH11		
EDAM11	2.619	4.16	1.55	ZF-EDAM11		
EDAU11	2.887	4.16	1.28	ZF-EDAU11		

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



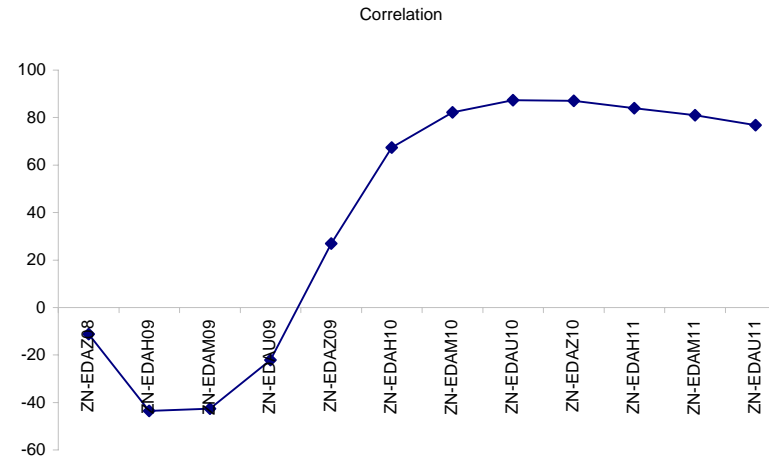
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	16.013	1.51	ZN-EDAZ08	-11.268
EDAH09	15.873	1.65	ZN-EDAH09	-43.493
EDAM09	15.978	1.54	ZN-EDAM09	-42.617
EDAU09	16.128	1.39	ZN-EDAU09	-22.108
EDAZ09	16.348	1.17	ZN-EDAZ09	26.878
EDAH10	16.503	1.02	ZN-EDAH10	67.423
EDAM10	16.793	0.73	ZN-EDAM10	82.236
EDAU10	17.153	0.37	ZN-EDAU10	87.280
EDAZ10	17.603	0.08	ZN-EDAZ10	87.016
EDAH11	17.888	0.37	ZN-EDAH11	83.926
EDAM11	18.128	0.61	ZN-EDAM11	80.993
EDAU11	18.303	0.78	ZN-EDAU11	76.843

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	0.125	6.44	6.31	ZN-EDAZ08		
EDAH09	0.375	6.44	6.06	ZN-EDAH09		
EDAM09	0.624	6.44	5.81	ZN-EDAM09		
EDAU09	0.873	6.44	5.57	ZN-EDAU09		
EDAZ09	1.123	6.44	5.32	ZN-EDAZ09		
EDAH10	1.372	6.44	5.07	ZN-EDAH10		
EDAM10	1.621	6.44	4.82	ZN-EDAM10		
EDAU10	1.871	6.44	4.57	ZN-EDAU10		
EDAZ10	2.120	6.44	4.32	ZN-EDAZ10		
EDAH11	2.369	6.44	4.07	ZN-EDAH11		
EDAM11	2.619	6.44	3.82	ZN-EDAM11		
EDAU11	2.887	6.44	3.55	ZN-EDAU11		

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

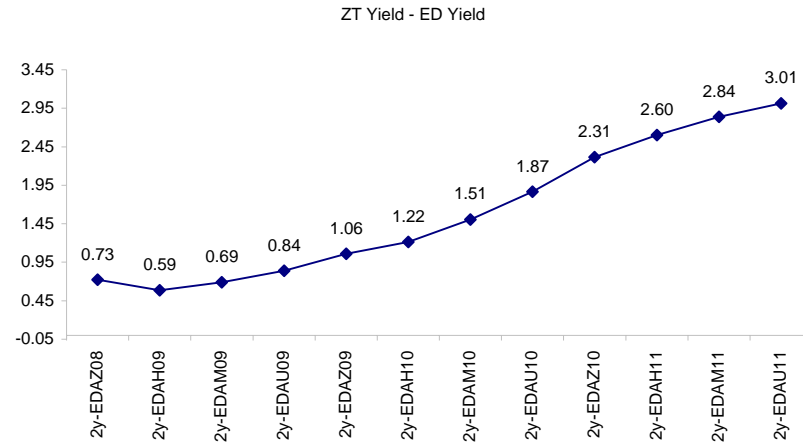


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.122	0.73	2y-EDAZ08	17.353
EDAH09	1.982	0.59	2y-EDAH09	33.220
EDAM09	2.087	0.69	2y-EDAM09	43.578
EDAU09	2.237	0.84	2y-EDAU09	37.325
EDAZ09	2.457	1.06	2y-EDAZ09	6.296
EDAH10	2.612	1.22	2y-EDAH10	-25.993
EDAM10	2.902	1.51	2y-EDAM10	-45.235
EDAU10	3.262	1.87	2y-EDAU10	-50.711
EDAZ10	3.712	2.31	2y-EDAZ10	-48.264
EDAH11	3.997	2.60	2y-EDAH11	-43.697
EDAM11	4.237	2.84	2y-EDAM11	-40.050
EDAU11	4.412	3.01	2y-EDAU11	-35.568

Price = Outright Decimal Price - Euro Contract Price

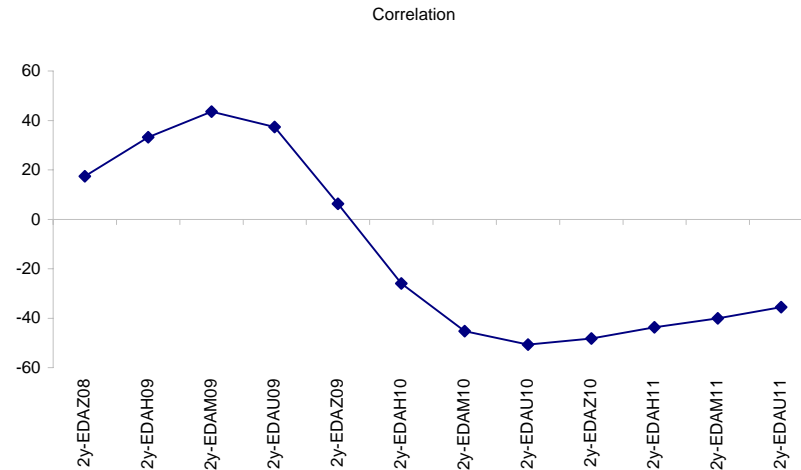
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.125	1.96	1.83	2y-EDAZ08	
EDAH09	0.375	1.96	1.58	2y-EDAH09	
EDAM09	0.624	1.96	1.34	2y-EDAM09	
EDAU09	0.873	1.96	1.09	2y-EDAU09	
EDAZ09	1.123	1.96	0.84	2y-EDAZ09	
EDAH10	1.372	1.96	0.59	2y-EDAH10	
EDAM10	1.621	1.96	0.34	2y-EDAM10	
EDAU10	1.871	1.96	0.09	2y-EDAU10	
EDAZ10	2.120	1.96	(0.16)	2y-EDAZ10	
EDAH11	2.369	1.96	(0.41)	2y-EDAH11	
EDAM11	2.619	1.96	(0.66)	2y-EDAM11	
EDAU11	2.887	1.96	(0.93)	2y-EDAU11	

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

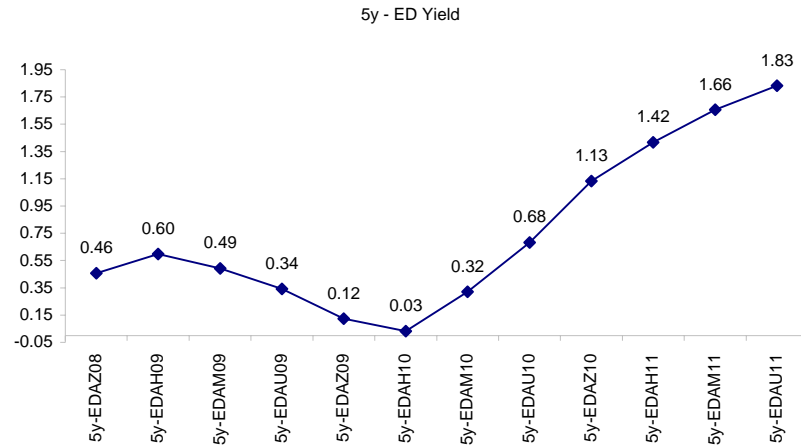


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.847	0.46	5y-EDAZ08	23.747
EDAH09	3.707	0.60	5y-EDAH09	47.200
EDAM09	3.812	0.49	5y-EDAM09	39.133
EDAU09	3.962	0.34	5y-EDAU09	12.750
EDAZ09	4.182	0.12	5y-EDAZ09	-34.496
EDAH10	4.337	0.03	5y-EDAH10	-71.127
EDAM10	4.627	0.32	5y-EDAM10	-85.912
EDAU10	4.987	0.68	5y-EDAU10	-88.255
EDAZ10	5.437	1.13	5y-EDAZ10	-86.682
EDAH11	5.722	1.42	5y-EDAH11	-84.302
EDAM11	5.962	1.66	5y-EDAM11	-81.895
EDAU11	6.137	1.83	5y-EDAU11	-78.842

Price = Outright Decimal Price - Euro Contract Price

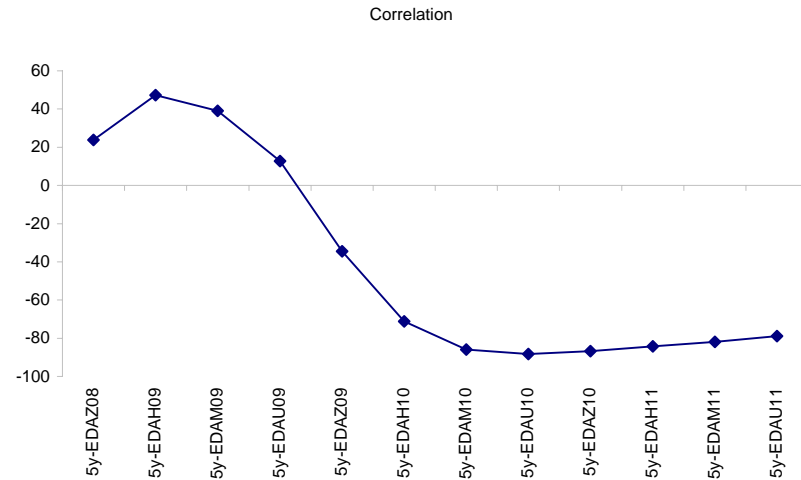
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.125	4.52	4.40	5y-EDAZ08
EDAH09	0.375	4.52	4.15	5y-EDAH09
EDAM09	0.624	4.52	3.90	5y-EDAM09
EDAU09	0.873	4.52	3.65	5y-EDAU09
EDAZ09	1.123	4.52	3.40	5y-EDAZ09
EDAH10	1.372	4.52	3.15	5y-EDAH10
EDAM10	1.621	4.52	2.90	5y-EDAM10
EDAU10	1.871	4.52	2.65	5y-EDAU10
EDAZ10	2.120	4.52	2.40	5y-EDAZ10
EDAH11	2.369	4.52	2.15	5y-EDAH11
EDAM11	2.619	4.52	1.90	5y-EDAM11
EDAU11	2.887	4.52	1.64	5y-EDAU11

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

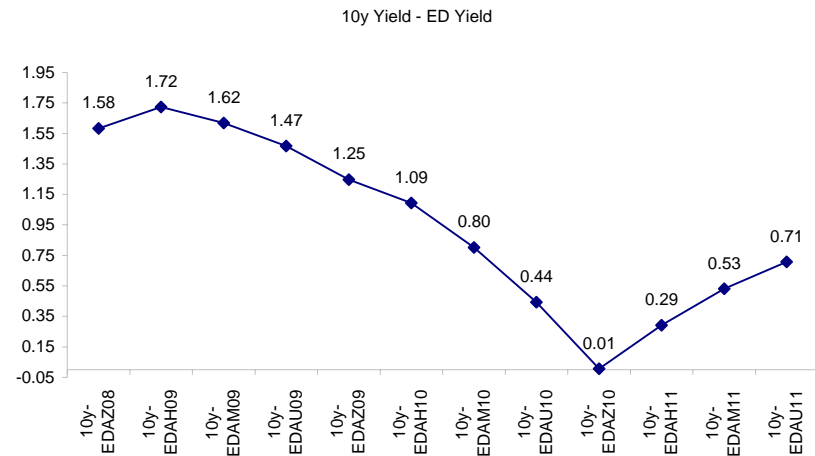


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.847	1.58	10y-EDAZ08	32.655
EDAH09	3.707	1.72	10y-EDAH09	52.165
EDAM09	3.812	1.62	10y-EDAM09	36.020
EDAU09	3.962	1.47	10y-EDAU09	3.444
EDAZ09	4.182	1.25	10y-EDAZ09	-45.112
EDAH10	4.337	1.09	10y-EDAH10	-80.096
EDAM10	4.627	0.80	10y-EDAM10	-91.740
EDAU10	4.987	0.44	10y-EDAU10	-92.806
EDAZ10	5.437	0.01	10y-EDAZ10	-91.553
EDAH11	5.722	0.29	10y-EDAH11	-90.285
EDAM11	5.962	0.53	10y-EDAM11	-88.558
EDAU11	6.137	0.71	10y-EDAU11	-86.569

Price = Outright Decimal Price - Euro Contract Price

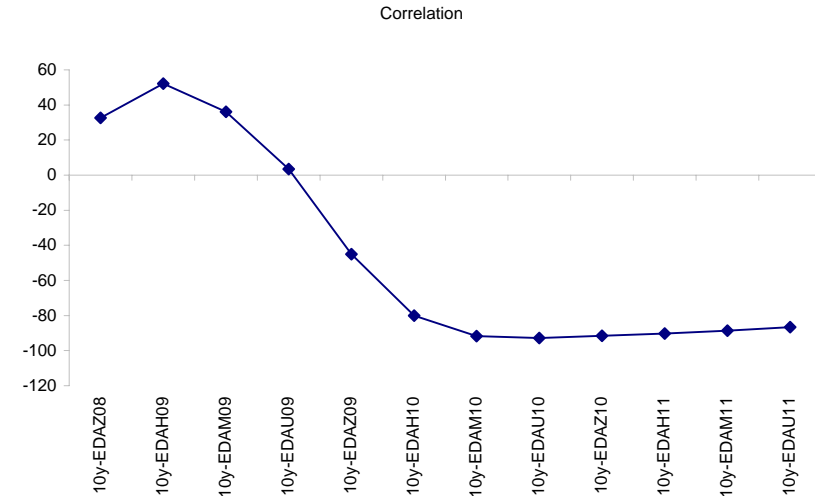
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.125	7.98	7.86	10y-EDAZ08
EDAH09	0.375	7.98	7.61	10y-EDAH09
EDAM09	0.624	7.98	7.36	10y-EDAM09
EDAU09	0.873	7.98	7.11	10y-EDAU09
EDAZ09	1.123	7.98	6.86	10y-EDAZ09
EDAH10	1.372	7.98	6.61	10y-EDAH10
EDAM10	1.621	7.98	6.36	10y-EDAM10
EDAU10	1.871	7.98	6.11	10y-EDAU10
EDAZ10	2.120	7.98	5.86	10y-EDAZ10
EDAH11	2.369	7.98	5.61	10y-EDAH11
EDAM11	2.619	7.98	5.36	10y-EDAM11
EDAU11	2.887	7.98	5.09	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.

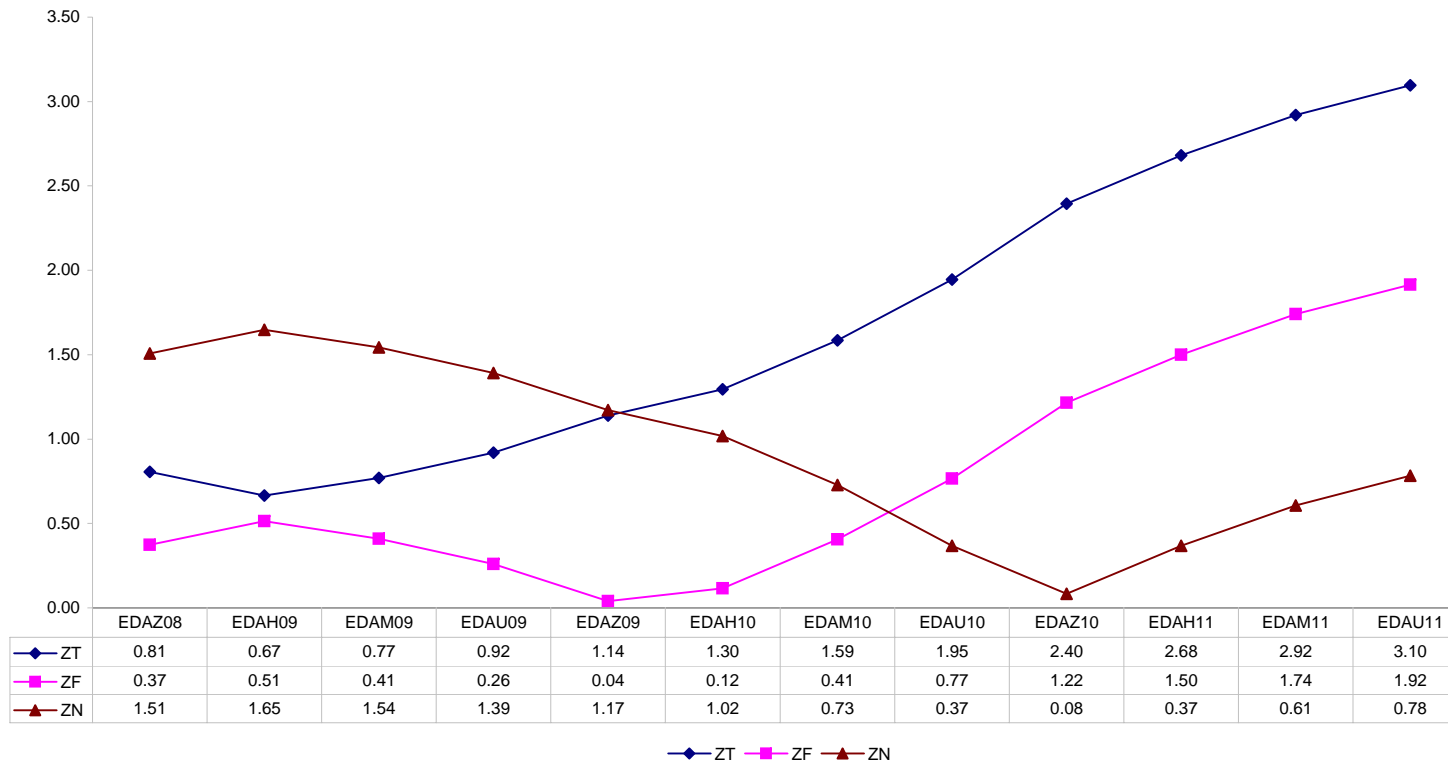
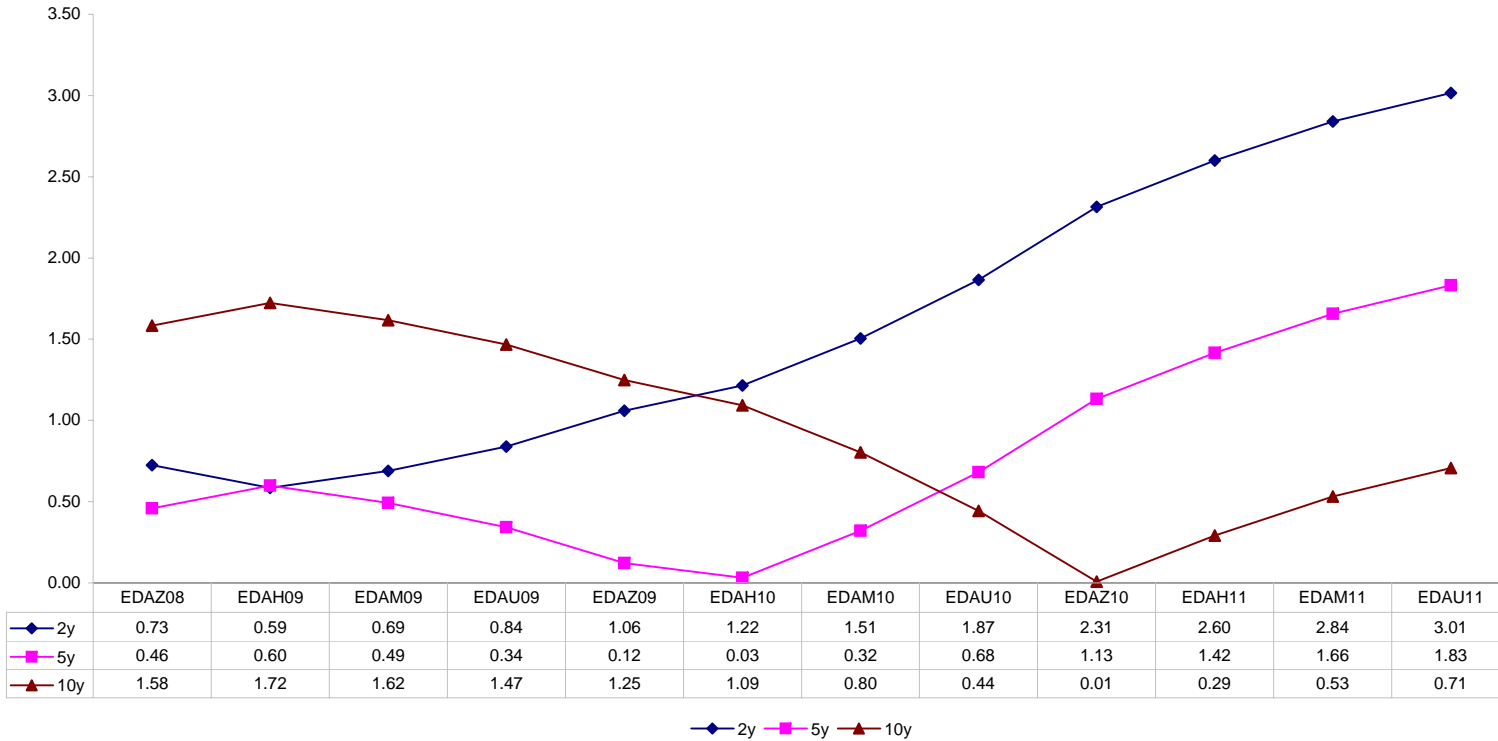
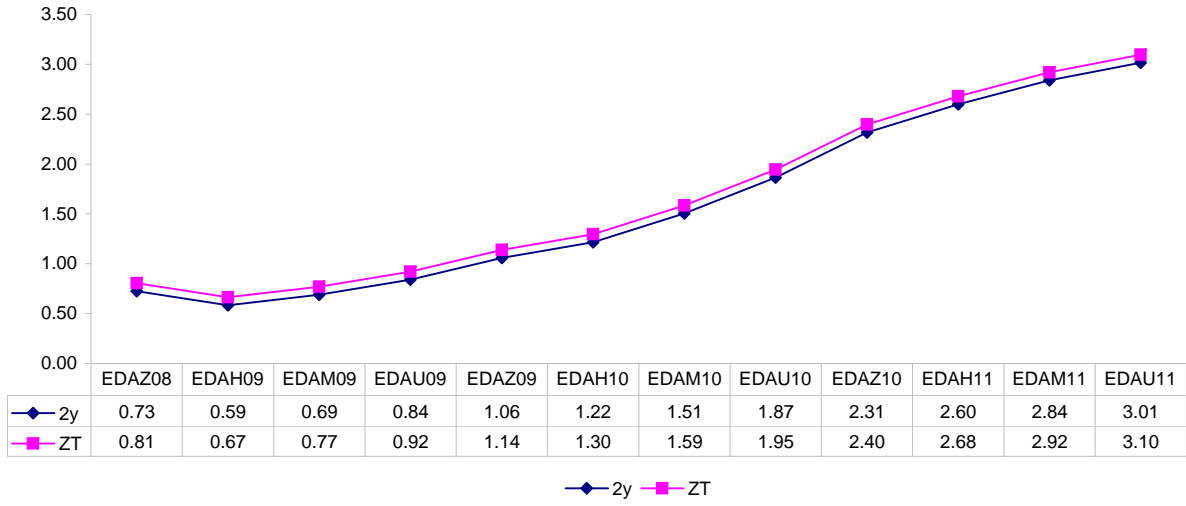


Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



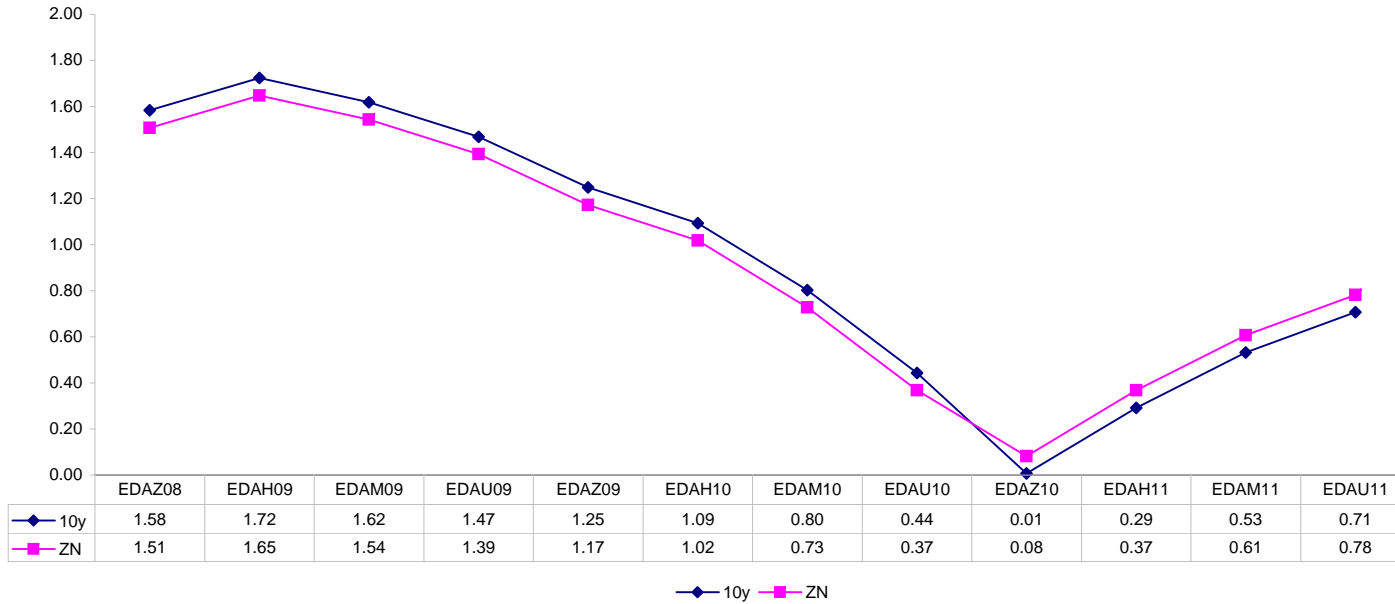
2y Basis TED Curve



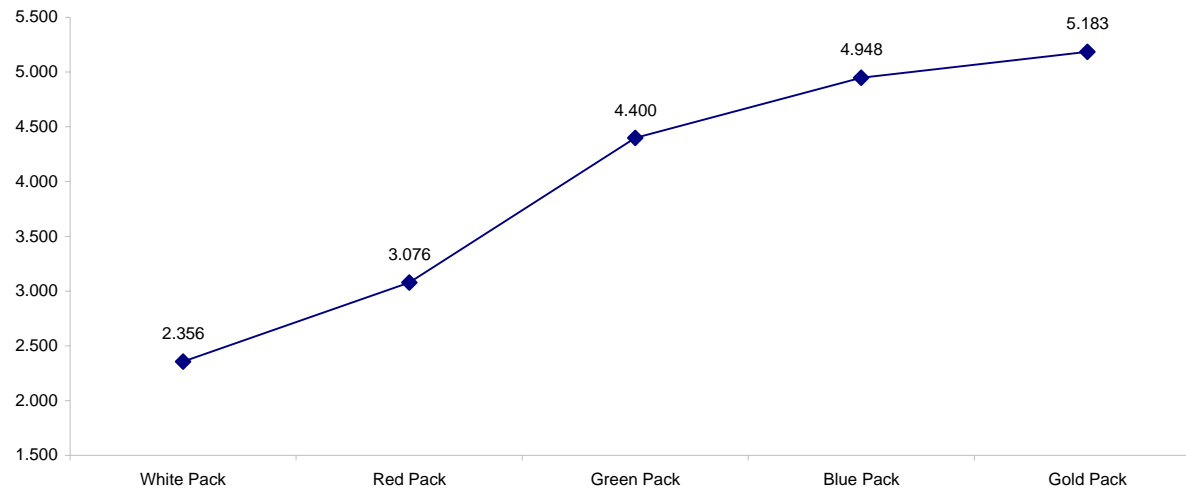
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.356	-2.500	9769.000
Red Pack	3.076	-4.000	9698.875
Green Pack	4.400	-1.875	9570.750
Blue Pack	4.948	-1.500	9517.875
Gold Pack	5.183	0.000	9495.250



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

