

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	107.4219	107.135	1.452	1.86
ZF	113.3281	113.105	2.595	4.16
ZN	113.3438	113.110	3.870	6.42
2y	99.844	99.2700	1.569	1.95
5y	99.709	99.2270	2.808	4.63
10y	100.391	100.1250	3.949	7.97

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.795	2.205	42	0.114	DEC	
EDAH09	97.775	2.225	133	0.364	MAR	White Pack
EDAM09	97.565	2.435	224	0.613	JUN	
EDAU09	97.360	2.640	315	0.862	SEP	
EDAZ09	97.120	2.880	406	1.112	DEC	
EDAH10	97.020	2.980	497	1.361	MAR	Red Pack
EDAM10	96.790	3.210	588	1.610	JUN	
EDAU10	96.495	3.505	679	1.860	SEP	
EDAZ10	96.095	3.905	770	2.109	DEC	
EDAH11	95.835	4.165	861	2.358	MAR	Green Pack
EDAM11	95.590	4.410	952	2.608	JUN	
EDAU11	95.415	4.585	1050	2.876	SEP	
EDAZ11	#VALUE!	#VALUE!	1141	3.125	DEC	
EDAH12	#VALUE!	#VALUE!	1232	3.375	MAR	Blue Pack
EDAM12	#VALUE!	#VALUE!	1323	3.624	JUN	
EDAU12	94.980	5.020	1414	3.873	SEP	
EDAZ12	94.915	5.085	1505	4.123	DEC	
EDAH13	94.895	5.105	1596	4.372	MAR	Gold Pack
EDAM13	94.845	5.155	1687	4.621	JUN	
EDZU13	#VALUE!	#VALUE!	1869	5.120	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.424	-0.125	9762.375	
Red Pack	3.213	-3.750	9685.625	Pack Prices
Green Pack	4.372	-1.625	9573.375	
Blue Pack		-2.125	9515.875	
Gold Pack	5.282	-2.000	9485.750	

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.

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Correlations (Important)

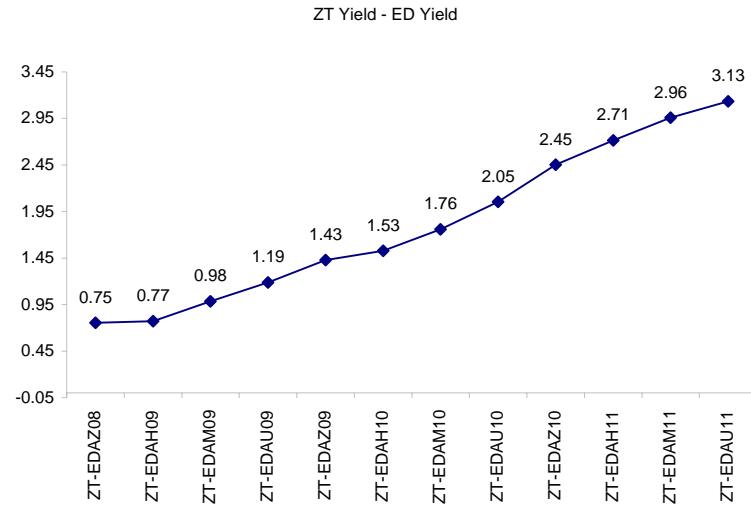
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based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

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	9.627	0.75	ZT-EDAZ08	-23.955
EDAH09	9.647	0.77	ZT-EDAH09	-5.387
EDAM09	9.857	0.98	ZT-EDAM09	-5.144
EDAU09	10.062	1.19	ZT-EDAU09	-5.387
EDAZ09	10.302	1.43	ZT-EDAZ09	-0.525
EDAH10	10.402	1.53	ZT-EDAH10	0.418
EDAM10	10.632	1.76	ZT-EDAM10	-0.084
EDAU10	10.927	2.05	ZT-EDAU10	-2.842
EDAZ10	11.327	2.45	ZT-EDAZ10	-6.553
EDAH11	11.587	2.71	ZT-EDAH11	-9.359
EDAM11	11.832	2.96	ZT-EDAM11	-9.793
EDAU11	12.007	3.13	ZT-EDAU11	-10.985

Price = Outright Decimal Price - Euro Contract Price

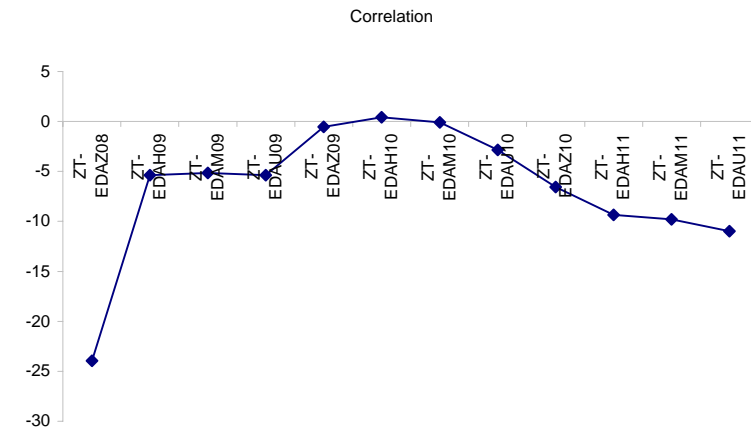
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			ZT Duration	Spread Duration	
EDAZ08	0.114	1.86	1.75	ZT-EDAZ08		
EDAH09	0.364	1.86	1.50	ZT-EDAH09		
EDAM09	0.613	1.86	1.25	ZT-EDAM09		
EDAU09	0.862	1.86	1.00	ZT-EDAU09		
EDAZ09	1.112	1.86	0.75	ZT-EDAZ09		
EDAH10	1.361	1.86	0.50	ZT-EDAH10		
EDAM10	1.610	1.86	0.25	ZT-EDAM10		
EDAU10	1.860	1.86	0.00	ZT-EDAU10		
EDAZ10	2.109	1.86	(0.25)	ZT-EDAZ10		
EDAH11	2.358	1.86	(0.50)	ZT-EDAH11		
EDAM11	2.608	1.86	(0.75)	ZT-EDAM11		
EDAU11	2.876	1.86	(1.02)	ZT-EDAU11		

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

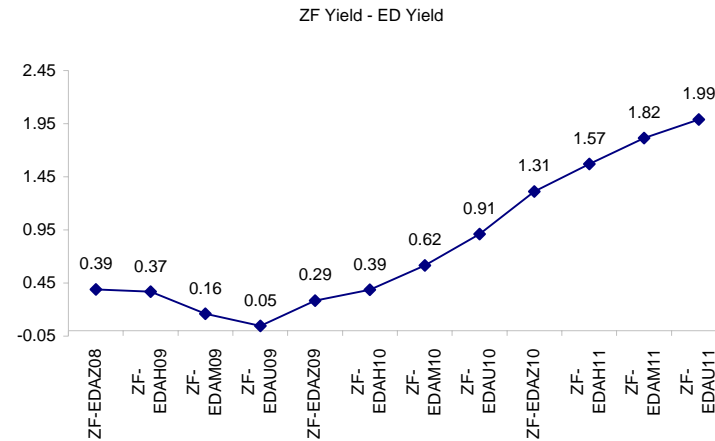


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.533	0.39	ZF-EDAZ08	-87.301
EDAH09	15.553	0.37	ZF-EDAH09	-63.605
EDAM09	15.763	0.16	ZF-EDAM09	1.828
EDAU09	15.968	0.05	ZF-EDAU09	50.182
EDAZ09	16.208	0.29	ZF-EDAZ09	76.345
EDAH10	16.308	0.39	ZF-EDAH10	89.954
EDAM10	16.538	0.62	ZF-EDAM10	95.862
EDAU10	16.833	0.91	ZF-EDAU10	96.486
EDAZ10	17.233	1.31	ZF-EDAZ10	92.742
EDAH11	17.493	1.57	ZF-EDAH11	88.475
EDAM11	17.738	1.82	ZF-EDAM11	86.012
EDAU11	17.913	1.99	ZF-EDAU11	84.036

Price = Outright Decimal Price - Euro Contract Price

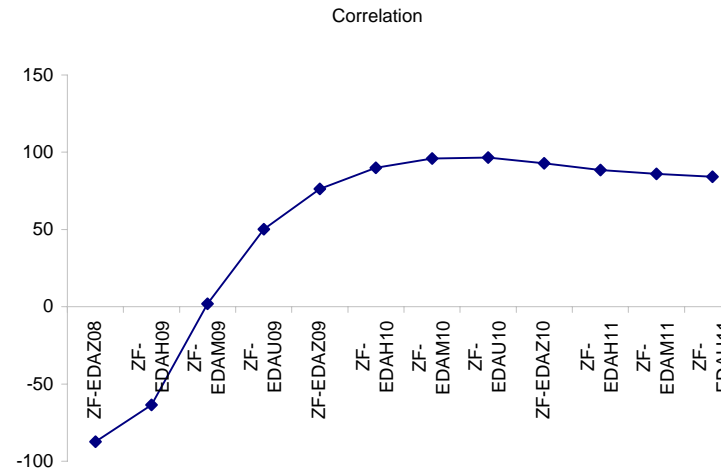
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



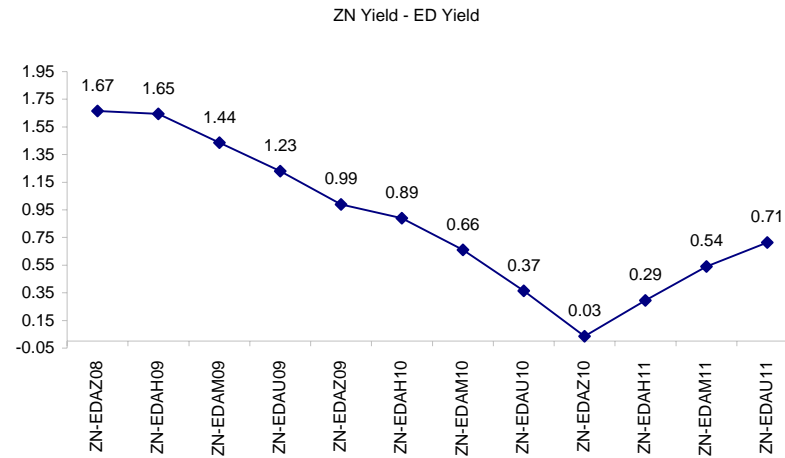
	ED Duration as Fraction of year			ZF Duration	Spread Duration	
EDAZ08	0.114	4.16	4.04	ZF-EDAZ08		
EDAH09	0.364	4.16	3.79	ZF-EDAH09		
EDAM09	0.613	4.16	3.54	ZF-EDAM09		
EDAU09	0.862	4.16	3.29	ZF-EDAU09		
EDAZ09	1.112	4.16	3.04	ZF-EDAZ09		
EDAH10	1.361	4.16	2.80	ZF-EDAH10		
EDAM10	1.610	4.16	2.55	ZF-EDAM10		
EDAU10	1.860	4.16	2.30	ZF-EDAU10		
EDAZ10	2.109	4.16	2.05	ZF-EDAZ10		
EDAH11	2.358	4.16	1.80	ZF-EDAH11		
EDAM11	2.608	4.16	1.55	ZF-EDAM11		
EDAU11	2.876	4.16	1.28	ZF-EDAU11		

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



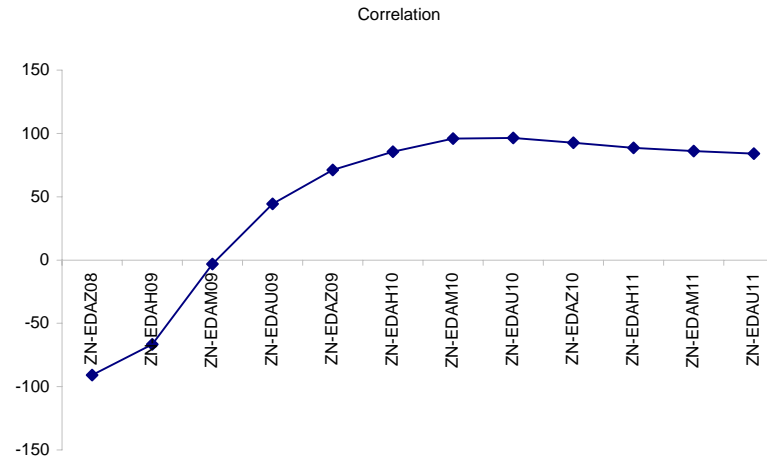
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.549	1.67	ZN-EDAZ08	-90.926
EDAH09	15.569	1.65	ZN-EDAH09	-66.633
EDAM09	15.779	1.44	ZN-EDAM09	-3.188
EDAU09	15.984	1.23	ZN-EDAU09	44.415
EDAZ09	16.224	0.99	ZN-EDAZ09	71.253
EDAH10	16.324	0.89	ZN-EDAH10	85.580
EDAM10	16.554	0.66	ZN-EDAM10	95.862
EDAU10	16.849	0.37	ZN-EDAU10	96.486
EDAZ10	17.249	0.03	ZN-EDAZ10	92.742
EDAH11	17.509	0.29	ZN-EDAH11	88.475
EDAM11	17.754	0.54	ZN-EDAM11	86.012
EDAU11	17.929	0.71	ZN-EDAU11	84.036

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	0.114	6.42	6.31	ZN-EDAZ08		
EDAH09	0.364	6.42	6.06	ZN-EDAH09		
EDAM09	0.613	6.42	5.81	ZN-EDAM09		
EDAU09	0.862	6.42	5.56	ZN-EDAU09		
EDAZ09	1.112	6.42	5.31	ZN-EDAZ09		
EDAH10	1.361	6.42	5.06	ZN-EDAH10		
EDAM10	1.610	6.42	4.81	ZN-EDAM10		
EDAU10	1.860	6.42	4.57	ZN-EDAU10		
EDAZ10	2.109	6.42	4.32	ZN-EDAZ10		
EDAH11	2.358	6.42	4.07	ZN-EDAH11		
EDAM11	2.608	6.42	3.82	ZN-EDAM11		
EDAU11	2.876	6.42	3.55	ZN-EDAU11		

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

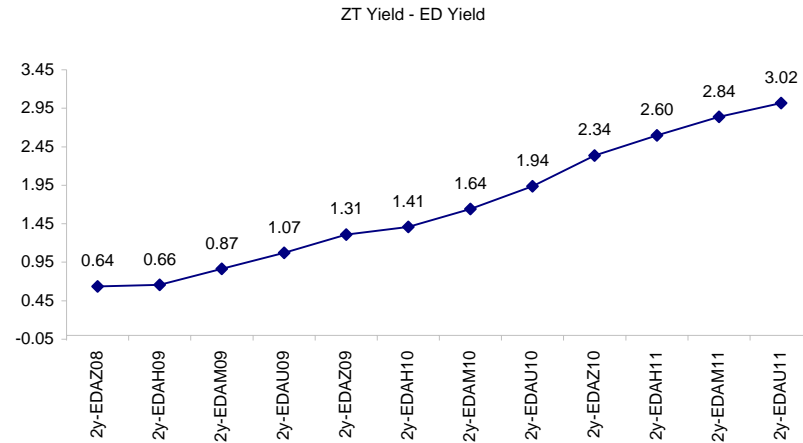


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.049	0.64	2y-EDAZ08	49.824
EDAH09	2.069	0.66	2y-EDAH09	58.514
EDAM09	2.279	0.87	2y-EDAM09	50.819
EDAU09	2.484	1.07	2y-EDAU09	26.409
EDAZ09	2.724	1.31	2y-EDAZ09	3.984
EDAH10	2.824	1.41	2y-EDAH10	-11.147
EDAM10	3.054	1.64	2y-EDAM10	-21.272
EDAU10	3.349	1.94	2y-EDAU10	-24.061
EDAZ10	3.749	2.34	2y-EDAZ10	-19.406
EDAH11	4.009	2.60	2y-EDAH11	-14.408
EDAM11	4.254	2.84	2y-EDAM11	-10.998
EDAU11	4.429	3.02	2y-EDAU11	-7.658

Price = Outright Decimal Price - Euro Contract Price

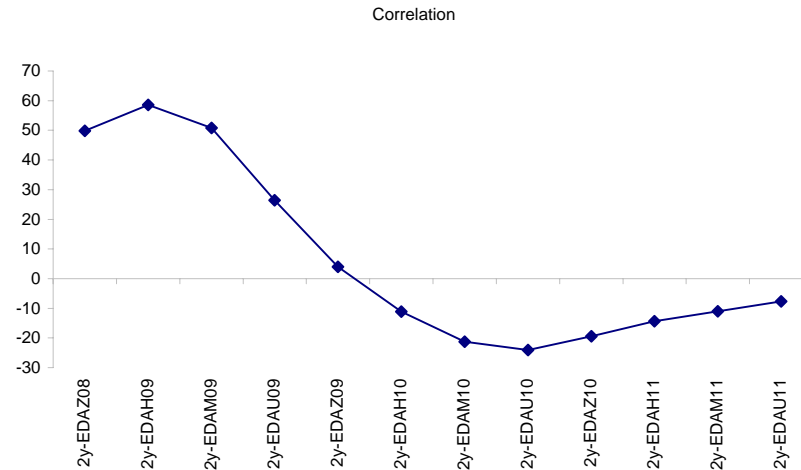
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.114	1.95	1.83	2y-EDAZ08	
EDAH09	0.364	1.95	1.59	2y-EDAH09	
EDAM09	0.613	1.95	1.34	2y-EDAM09	
EDAU09	0.862	1.95	1.09	2y-EDAU09	
EDAZ09	1.112	1.95	0.84	2y-EDAZ09	
EDAH10	1.361	1.95	0.59	2y-EDAH10	
EDAM10	1.610	1.95	0.34	2y-EDAM10	
EDAU10	1.860	1.95	0.09	2y-EDAU10	
EDAZ10	2.109	1.95	(0.16)	2y-EDAZ10	
EDAH11	2.358	1.95	(0.41)	2y-EDAH11	
EDAM11	2.608	1.95	(0.66)	2y-EDAM11	
EDAU11	2.876	1.95	(0.93)	2y-EDAU11	

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

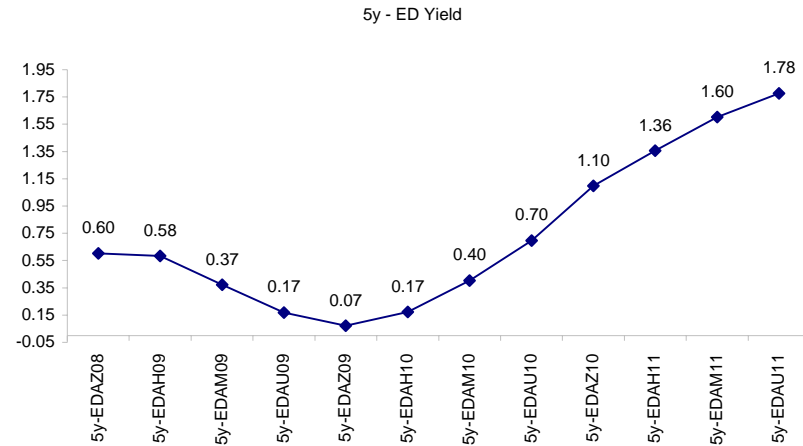


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	1.914	0.60	5y-EDAZ08	82.063
EDAH09	1.934	0.58	5y-EDAH09	62.038
EDAM09	2.144	0.37	5y-EDAM09	2.619
EDAU09	2.349	0.17	5y-EDAU09	-43.950
EDAZ09	2.589	0.07	5y-EDAZ09	-69.566
EDAH10	2.689	0.17	5y-EDAH10	-82.792
EDAM10	2.919	0.40	5y-EDAM10	-88.132
EDAU10	3.214	0.70	5y-EDAU10	-87.281
EDAZ10	3.614	1.10	5y-EDAZ10	-81.808
EDAH11	3.874	1.36	5y-EDAH11	-76.798
EDAM11	4.119	1.60	5y-EDAM11	-74.137
EDAU11	4.294	1.78	5y-EDAU11	-71.784

Price = Outright Decimal Price - Euro Contract Price

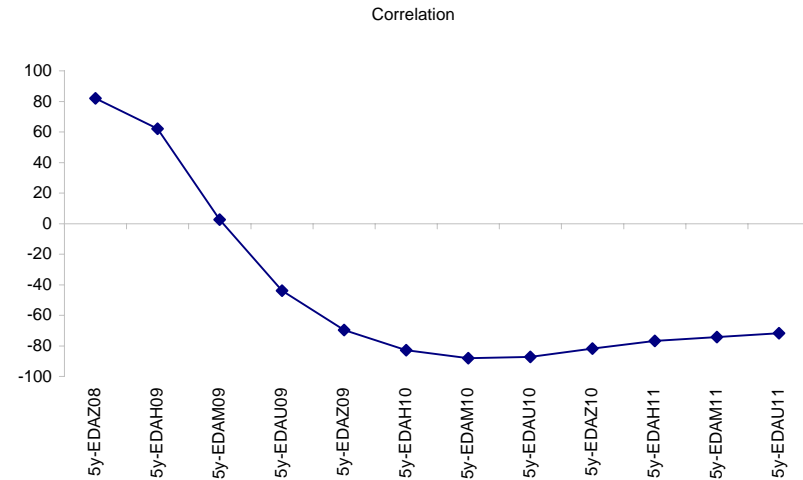
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.114	4.63	4.51	5y-EDAZ08
EDAH09	0.364	4.63	4.27	5y-EDAH09
EDAM09	0.613	4.63	4.02	5y-EDAM09
EDAU09	0.862	4.63	3.77	5y-EDAU09
EDAZ09	1.112	4.63	3.52	5y-EDAZ09
EDAH10	1.361	4.63	3.27	5y-EDAH10
EDAM10	1.610	4.63	3.02	5y-EDAM10
EDAU10	1.860	4.63	2.77	5y-EDAU10
EDAZ10	2.109	4.63	2.52	5y-EDAZ10
EDAH11	2.358	4.63	2.27	5y-EDAH11
EDAM11	2.608	4.63	2.02	5y-EDAM11
EDAU11	2.876	4.63	1.75	5y-EDAU11

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

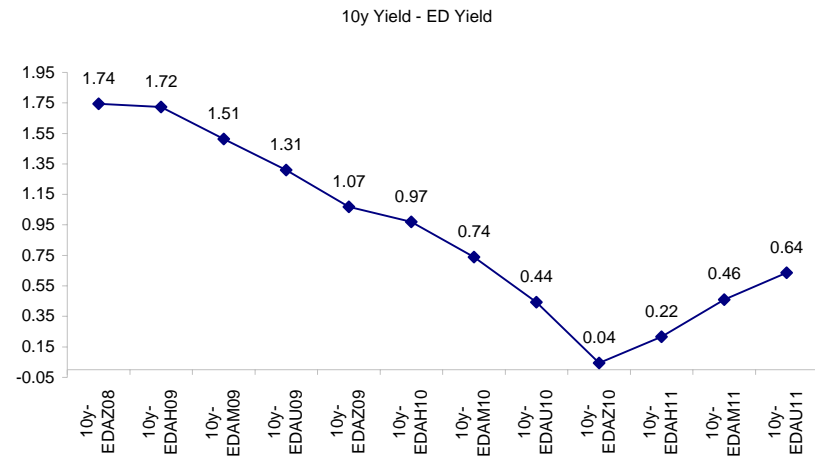


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	1.914	1.74	10y-EDAZ08	82.278
EDAH09	1.934	1.72	10y-EDAH09	60.950
EDAM09	2.144	1.51	10y-EDAM09	-2.115
EDAU09	2.349	1.31	10y-EDAU09	-49.665
EDAZ09	2.589	1.07	10y-EDAZ09	-74.812
EDAH10	2.689	0.97	10y-EDAH10	-87.768
EDAM10	2.919	0.74	10y-EDAM10	-92.969
EDAU10	3.214	0.44	10y-EDAU10	-92.628
EDAZ10	3.614	0.04	10y-EDAZ10	-88.017
EDAH11	3.874	0.22	10y-EDAH11	-83.507
EDAM11	4.119	0.46	10y-EDAM11	-80.881
EDAU11	4.294	0.64	10y-EDAU11	-78.804

Price = Outright Decimal Price - Euro Contract Price

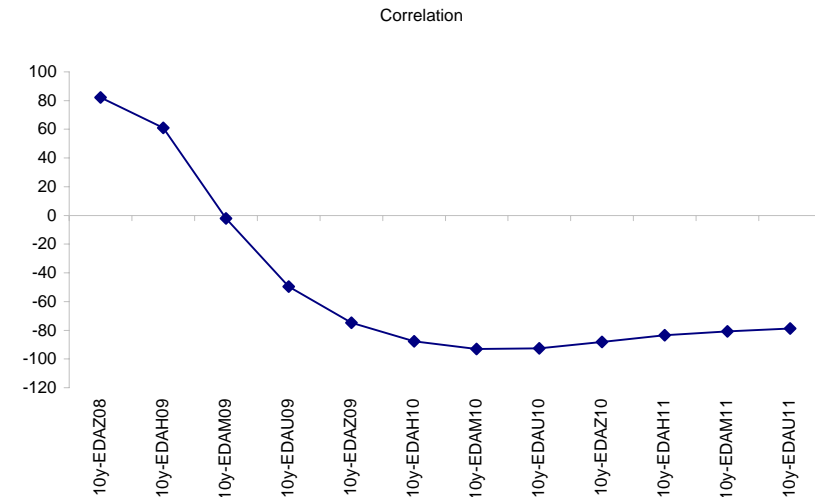
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.114	7.97	7.85	10y-EDAZ08
EDAH09	0.364	7.97	7.60	10y-EDAH09
EDAM09	0.613	7.97	7.35	10y-EDAM09
EDAU09	0.862	7.97	7.10	10y-EDAU09
EDAZ09	1.112	7.97	6.85	10y-EDAZ09
EDAH10	1.361	7.97	6.60	10y-EDAH10
EDAM10	1.610	7.97	6.36	10y-EDAM10
EDAU10	1.860	7.97	6.11	10y-EDAU10
EDAZ10	2.109	7.97	5.86	10y-EDAZ10
EDAH11	2.358	7.97	5.61	10y-EDAH11
EDAM11	2.608	7.97	5.36	10y-EDAM11
EDAU11	2.876	7.97	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.

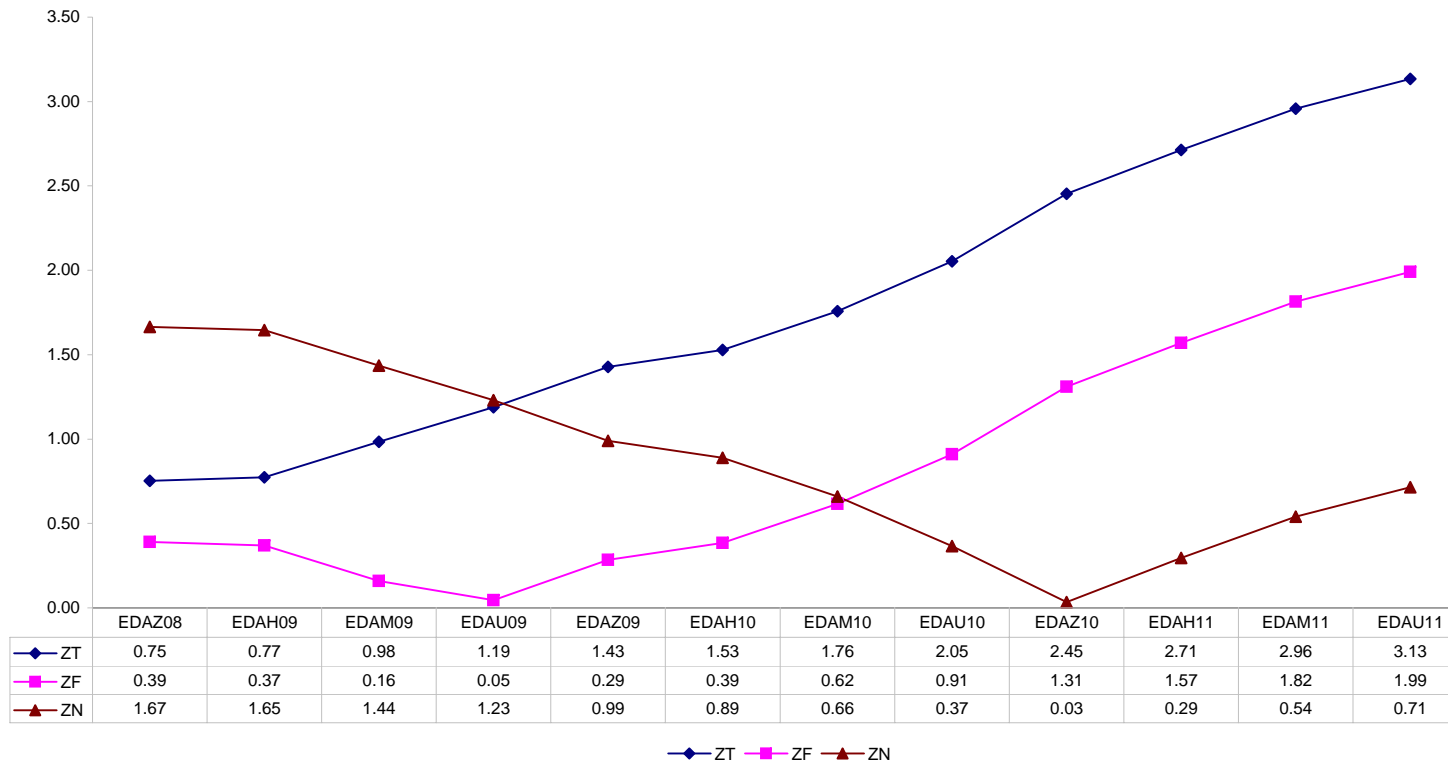
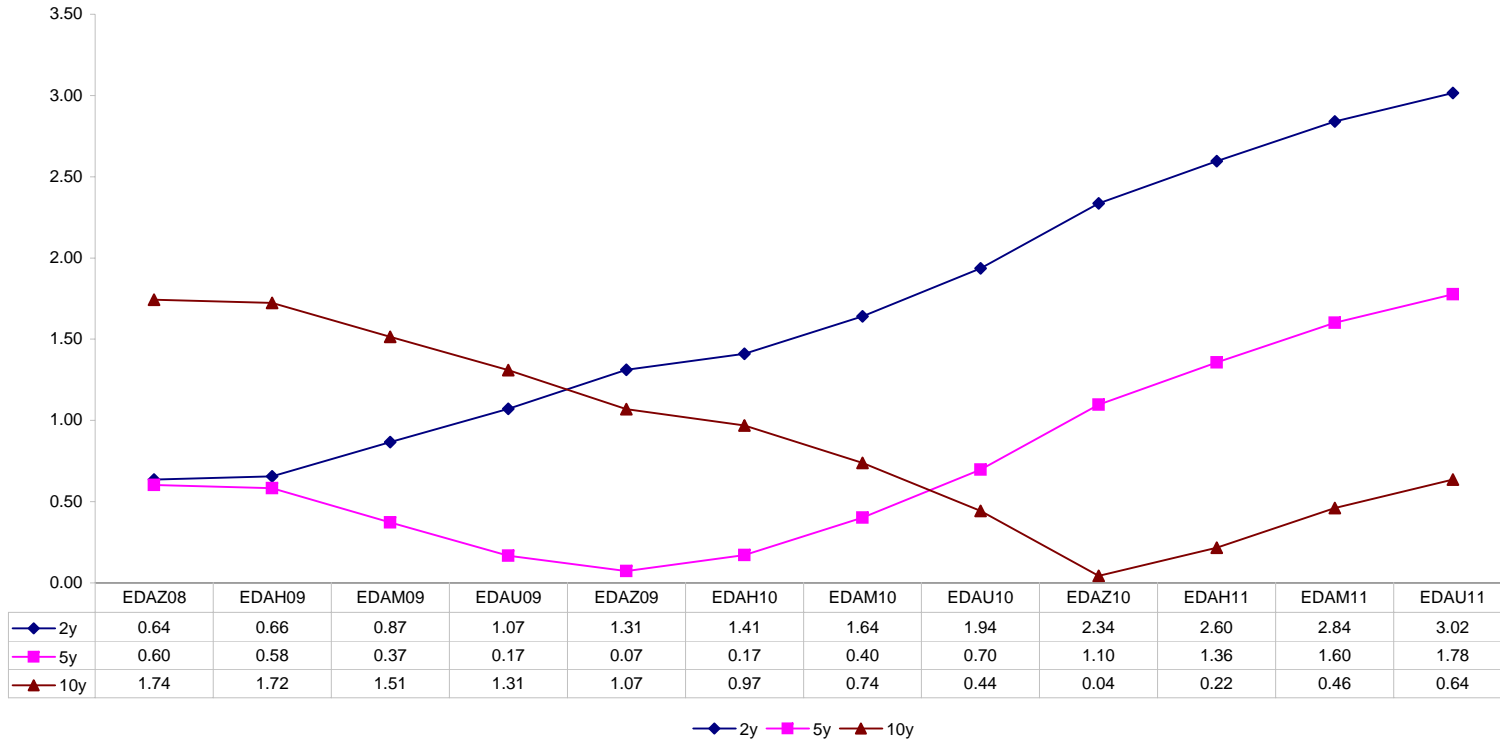
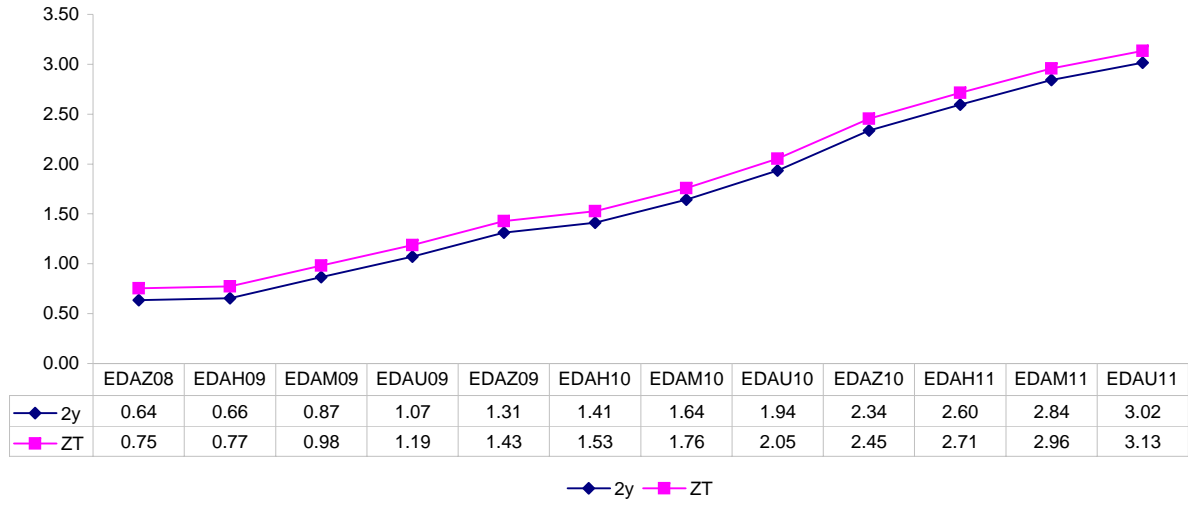


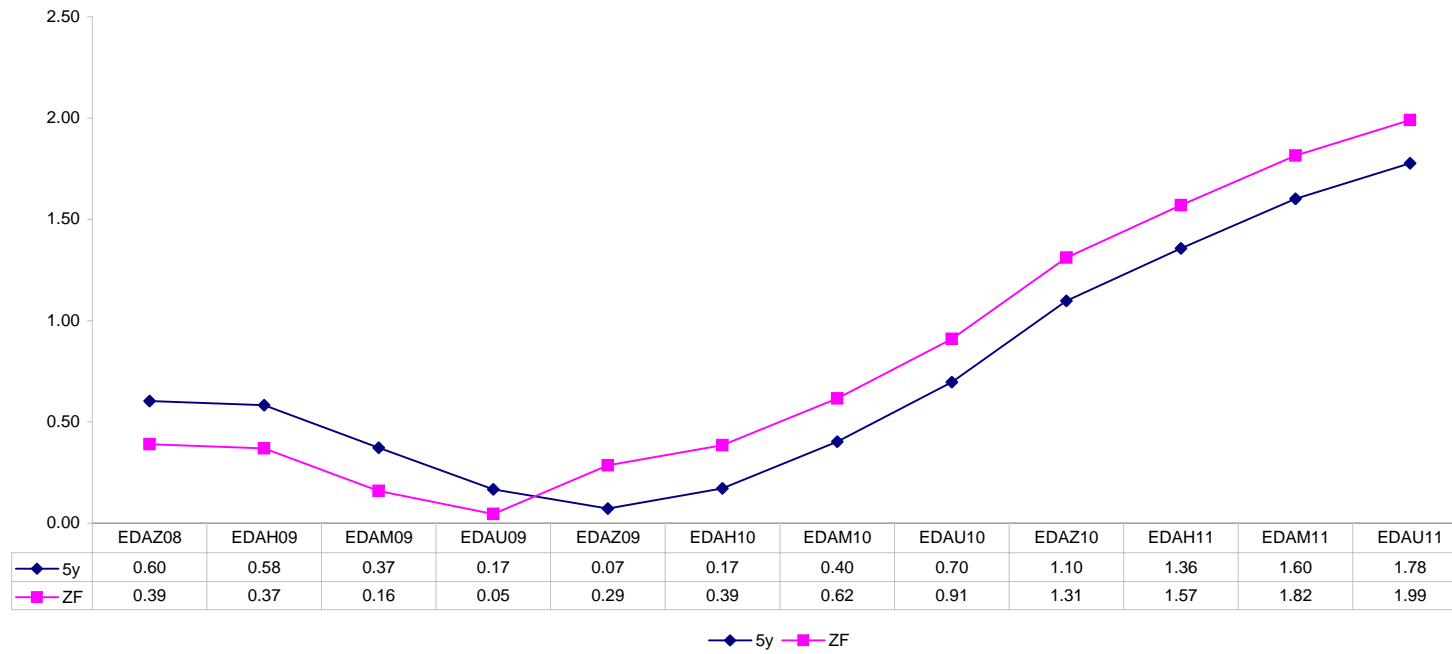
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



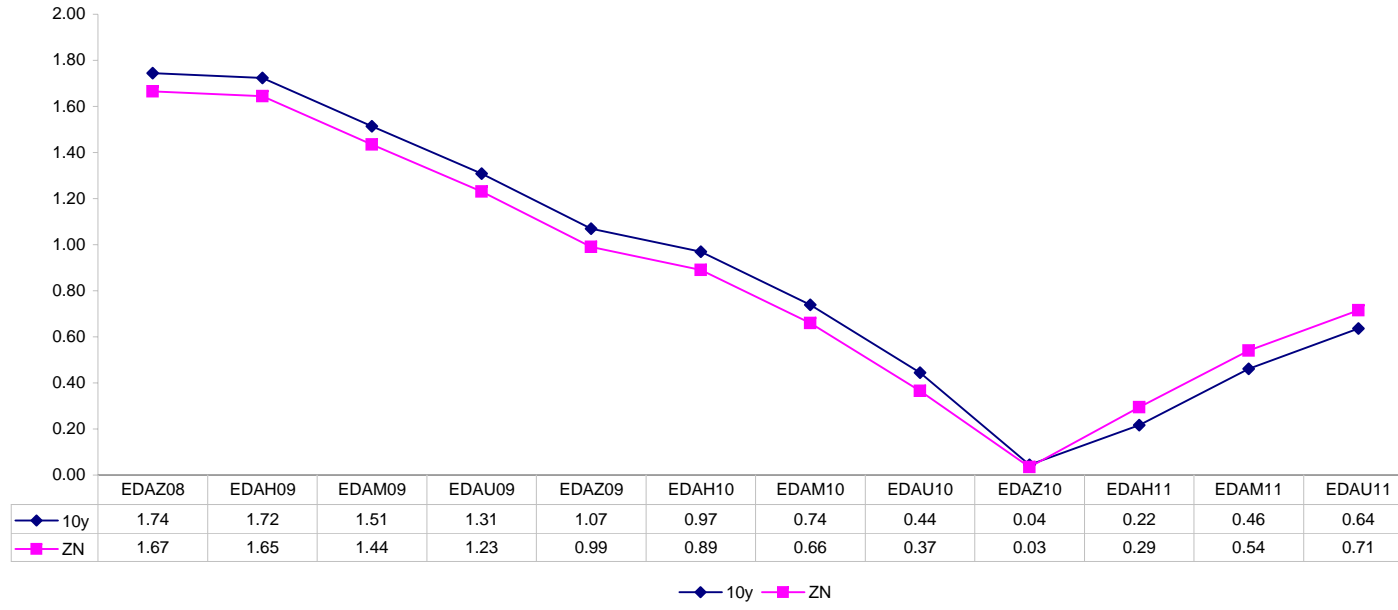
2y Basis TED Curve



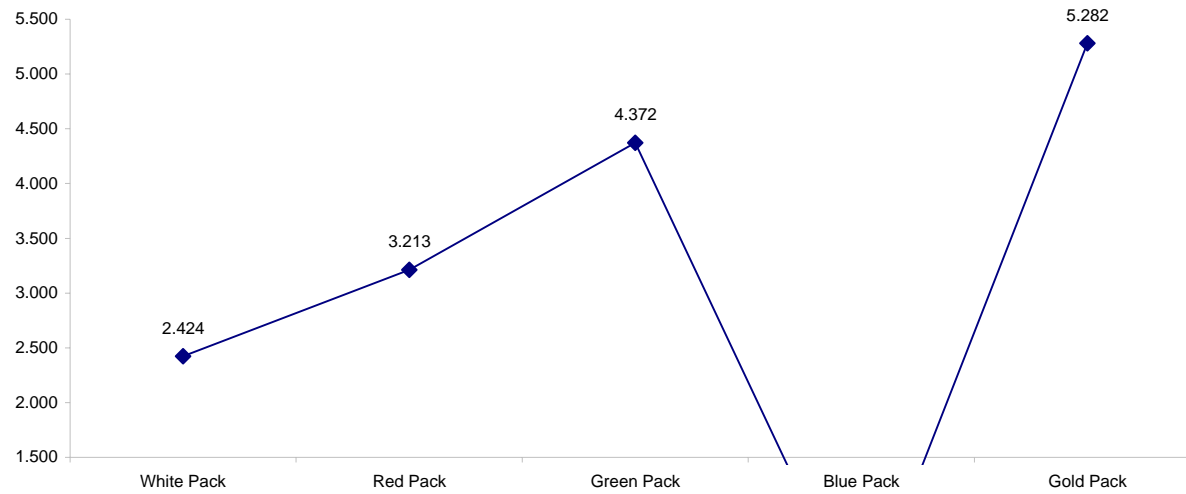
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.424	-0.125	9762.375
Red Pack	3.213	-3.750	9685.625
Green Pack	4.372	-1.625	9573.375
Blue Pack		-2.125	9515.875
Gold Pack	5.282	-2.000	9485.750



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

