

The Morning Email: TERM TEDS & Dirty TEDS

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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	106.9125	106.292	1.900	1.95
ZF	112.6406	112.205	2.788	4.12
ZN	115.0625	115.020	3.571	6.25
2y	100.188	100.0600	1.896	1.88
5y	101.078	101.0250	2.892	4.60
10y	102.031	102.0100	3.750	8.08

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	96.645	3.355	75	0.205	DEC	
EDAH09	97.140	2.860	166	0.454	MAR	White Pack
EDAM09	97.065	2.935	257	0.703	JUN	
EDAU09	96.985	3.015	348	0.953	SEP	
EDAZ09	96.695	3.305	439	1.202	DEC	
EDAH10	96.525	3.475	530	1.451	MAR	Red Pack
EDAM10	96.275	3.725	621	1.701	JUN	
EDAU10	96.010	3.990	712	1.950	SEP	
EDAZ10	95.740	4.260	803	2.199	DEC	
EDAH11	95.640	4.360	894	2.449	MAR	Green Pack
EDAM11	95.565	4.435	985	2.698	JUN	
EDAU11	95.505	4.495	1083	2.966	SEP	
EDAZ11	95.440	4.560	1174	3.216	DEC	
EDAH12	95.400	4.600	1265	3.465	MAR	Blue Pack
EDAM12	95.305	4.695	1356	3.714	JUN	
EDAU12	95.255	4.745	1447	3.964	SEP	
EDAZ12	95.185	4.815	1538	4.213	DEC	
EDAH13	95.165	4.835	1629	4.462	MAR	Gold Pack
EDAM13	95.115	4.885	1720	4.712	JUN	
EDZU13	95.405	4.595	1902	5.210	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	3.107	10.500	9695.875	
Red Pack	3.708	12.125	9637.625	Pack Prices
Green Pack	4.498	7.625	9561.250	
Blue Pack		1.750	9536.625	
Gold Pack		0.000	9517.375	

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.

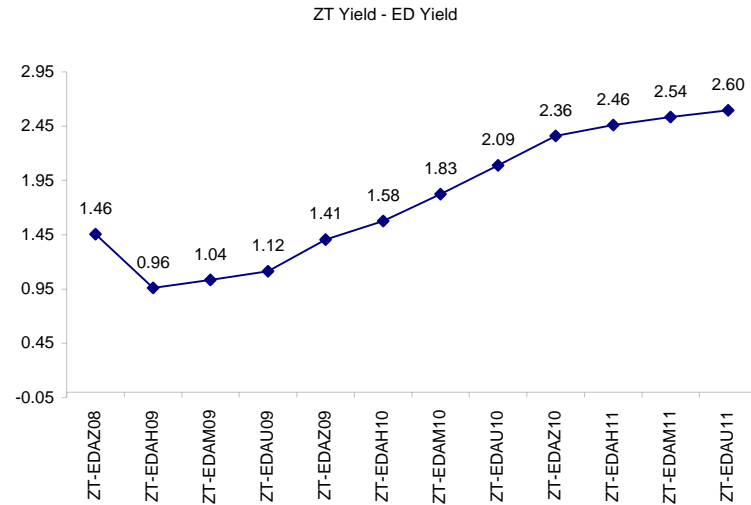
jgoulding@ghco.com

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.

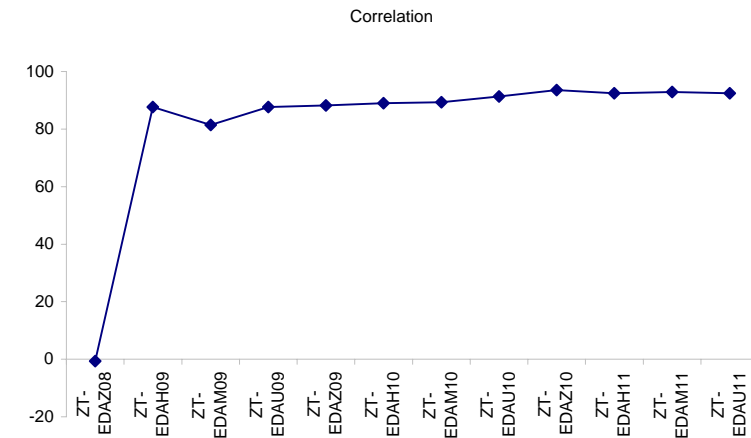
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.268	1.46	ZT-EDAZ08	-0.635
EDAH09	9.773	0.96	ZT-EDAH09	87.620
EDAM09	9.848	1.04	ZT-EDAM09	81.428
EDAU09	9.928	1.12	ZT-EDAU09	87.620
EDAZ09	10.218	1.41	ZT-EDAZ09	88.176
EDAH10	10.388	1.58	ZT-EDAH10	88.960
EDAM10	10.638	1.83	ZT-EDAM10	89.355
EDAU10	10.903	2.09	ZT-EDAU10	91.302
EDAZ10	11.173	2.36	ZT-EDAZ10	93.605
EDAH11	11.273	2.46	ZT-EDAH11	92.449
EDAM11	11.348	2.54	ZT-EDAM11	92.913
EDAU11	11.408	2.60	ZT-EDAU11	92.383

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	0.205	1.95	1.74	ZT-EDAZ08		
EDAH09	0.454	1.95	1.49	ZT-EDAH09		
EDAM09	0.703	1.95	1.24	ZT-EDAM09		
EDAU09	0.953	1.95	0.99	ZT-EDAU09		
EDAZ09	1.202	1.95	0.74	ZT-EDAZ09		
EDAH10	1.451	1.95	0.50	ZT-EDAH10		
EDAM10	1.701	1.95	0.25	ZT-EDAM10		
EDAU10	1.950	1.95	(0.00)	ZT-EDAU10		
EDAZ10	2.199	1.95	(0.25)	ZT-EDAZ10		
EDAH11	2.449	1.95	(0.50)	ZT-EDAH11		
EDAM11	2.698	1.95	(0.75)	ZT-EDAM11		
EDAU11	2.966	1.95	(1.02)	ZT-EDAU11		

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

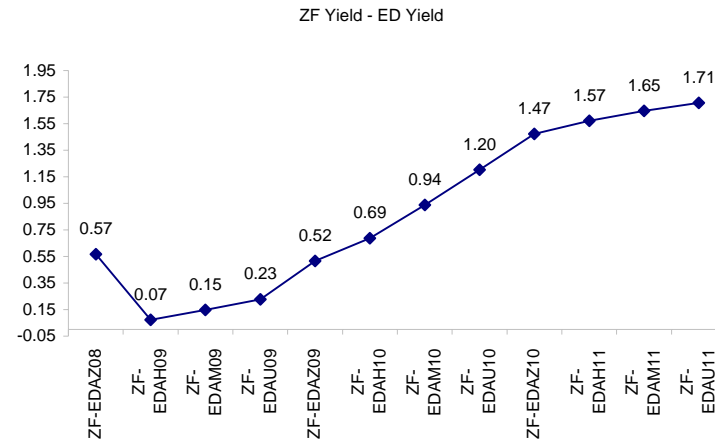


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	15.996	0.57	ZF-EDAZ08	8.076
EDAH09	15.501	0.07	ZF-EDAH09	65.933
EDAM09	15.576	0.15	ZF-EDAM09	85.607
EDAU09	15.656	0.23	ZF-EDAU09	93.428
EDAZ09	15.946	0.52	ZF-EDAZ09	94.583
EDAH10	16.116	0.69	ZF-EDAH10	95.286
EDAM10	16.366	0.94	ZF-EDAM10	95.411
EDAU10	16.631	1.20	ZF-EDAU10	96.626
EDAZ10	16.901	1.47	ZF-EDAZ10	98.063
EDAH11	17.001	1.57	ZF-EDAH11	97.832
EDAM11	17.076	1.65	ZF-EDAM11	98.014
EDAU11	17.136	1.71	ZF-EDAU11	97.739

Price = Outright Decimal Price - Euro Contract Price

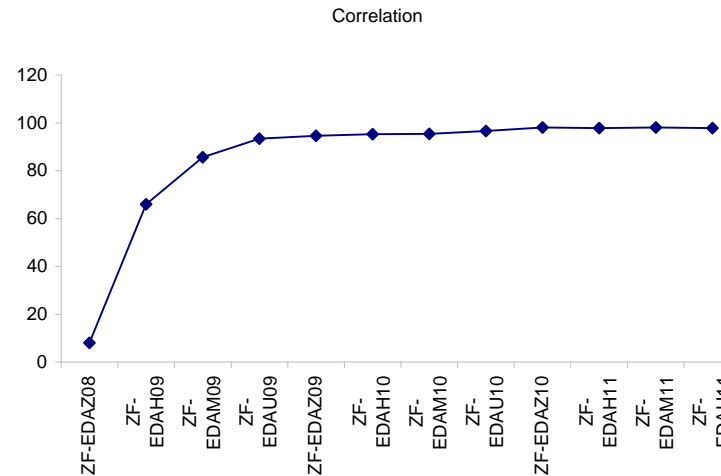
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			ZF Duration	Spread Duration	
EDAZ08	0.205	4.12	3.91	ZF-EDAZ08		
EDAH09	0.454	4.12	3.66	ZF-EDAH09		
EDAM09	0.703	4.12	3.41	ZF-EDAM09		
EDAU09	0.953	4.12	3.16	ZF-EDAU09		
EDAZ09	1.202	4.12	2.92	ZF-EDAZ09		
EDAH10	1.451	4.12	2.67	ZF-EDAH10		
EDAM10	1.701	4.12	2.42	ZF-EDAM10		
EDAU10	1.950	4.12	2.17	ZF-EDAU10		
EDAZ10	2.199	4.12	1.92	ZF-EDAZ10		
EDAH11	2.449	4.12	1.67	ZF-EDAH11		
EDAM11	2.698	4.12	1.42	ZF-EDAM11		
EDAU11	2.966	4.12	1.15	ZF-EDAU11		

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

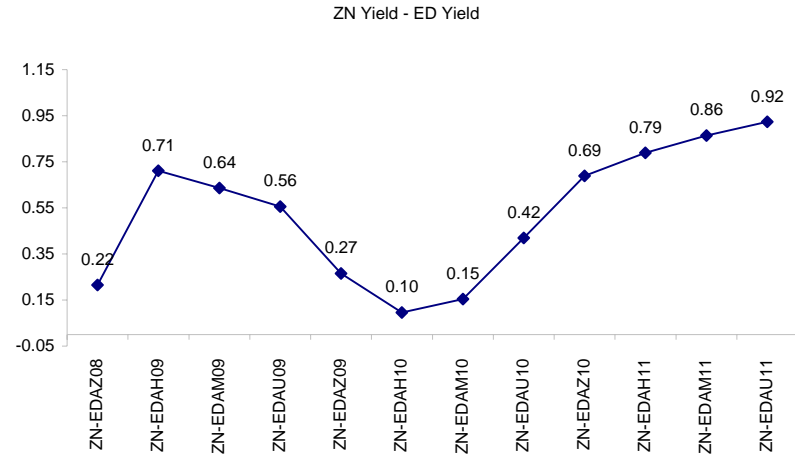


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	18.418	0.22	ZN-EDAZ08	15.826
EDAH09	17.923	0.71	ZN-EDAH09	54.299
EDAM09	17.998	0.64	ZN-EDAM09	79.025
EDAU09	18.078	0.56	ZN-EDAU09	90.609
EDAZ09	18.368	0.27	ZN-EDAZ09	93.272
EDAH10	18.538	0.10	ZN-EDAH10	93.595
EDAM10	18.788	0.15	ZN-EDAM10	95.411
EDAU10	19.053	0.42	ZN-EDAU10	96.626
EDAZ10	19.323	0.69	ZN-EDAZ10	98.063
EDAH11	19.423	0.79	ZN-EDAH11	97.832
EDAM11	19.498	0.86	ZN-EDAM11	98.014
EDAU11	19.558	0.92	ZN-EDAU11	97.739

Price = Outright Decimal Price - Euro Contract Price

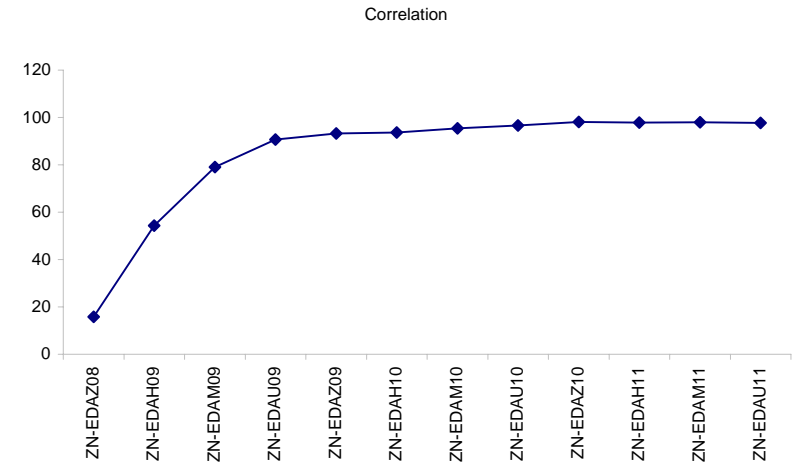
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAZ08	0.205	6.25	6.04	ZN-EDAZ08		
EDAH09	0.454	6.25	5.80	ZN-EDAH09		
EDAM09	0.703	6.25	5.55	ZN-EDAM09		
EDAU09	0.953	6.25	5.30	ZN-EDAU09		
EDAZ09	1.202	6.25	5.05	ZN-EDAZ09		
EDAH10	1.451	6.25	4.80	ZN-EDAH10		
EDAM10	1.701	6.25	4.55	ZN-EDAM10		
EDAU10	1.950	6.25	4.30	ZN-EDAU10		
EDAZ10	2.199	6.25	4.05	ZN-EDAZ10		
EDAH11	2.449	6.25	3.80	ZN-EDAH11		
EDAM11	2.698	6.25	3.55	ZN-EDAM11		
EDAU11	2.966	6.25	3.28	ZN-EDAU11		

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

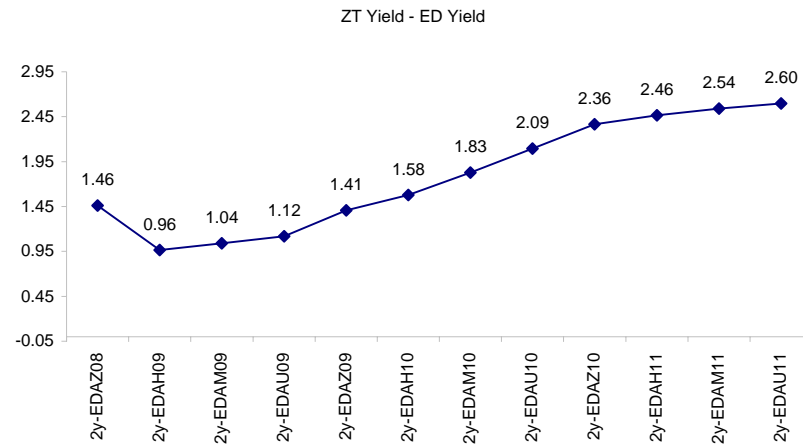


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.543	1.46	2y-EDAZ08	4.983
EDAH09	3.048	0.96	2y-EDAH09	-64.803
EDAM09	3.123	1.04	2y-EDAM09	-77.491
EDAU09	3.203	1.12	2y-EDAU09	-80.583
EDAZ09	3.492	1.41	2y-EDAZ09	-79.849
EDAH10	3.662	1.58	2y-EDAH10	-80.796
EDAM10	3.912	1.83	2y-EDAM10	-81.535
EDAU10	4.177	2.09	2y-EDAU10	-83.682
EDAZ10	4.447	2.36	2y-EDAZ10	-85.969
EDAH11	4.548	2.46	2y-EDAH11	-83.287
EDAM11	4.623	2.54	2y-EDAM11	-83.822
EDAU11	4.683	2.60	2y-EDAU11	-82.557

Price = Outright Decimal Price - Euro Contract Price

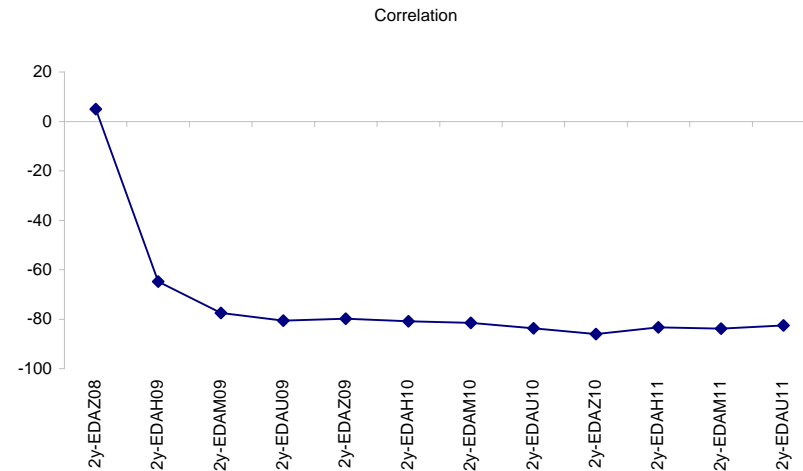
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.205	1.88	1.68	2y-EDAZ08	
EDAH09	0.454	1.88	1.43	2y-EDAH09	
EDAM09	0.703	1.88	1.18	2y-EDAM09	
EDAU09	0.953	1.88	0.93	2y-EDAU09	
EDAZ09	1.202	1.88	0.68	2y-EDAZ09	
EDAH10	1.451	1.88	0.43	2y-EDAH10	
EDAM10	1.701	1.88	0.18	2y-EDAM10	
EDAU10	1.950	1.88	(0.07)	2y-EDAU10	
EDAZ10	2.199	1.88	(0.32)	2y-EDAZ10	
EDAH11	2.449	1.88	(0.57)	2y-EDAH11	
EDAM11	2.698	1.88	(0.82)	2y-EDAM11	
EDAU11	2.966	1.88	(1.08)	2y-EDAU11	

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

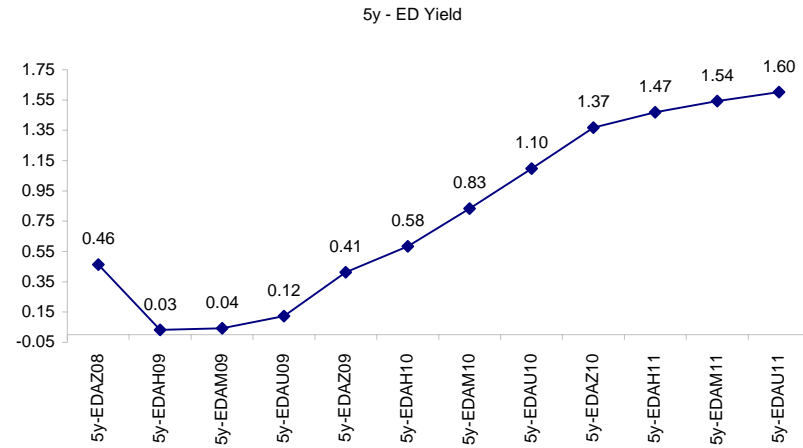


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.433	0.46	5y-EDAZ08	2.429
EDAH09	3.938	0.03	5y-EDAH09	-61.657
EDAM09	4.013	0.04	5y-EDAM09	-79.595
EDAU09	4.093	0.12	5y-EDAU09	-86.117
EDAZ09	4.383	0.41	5y-EDAZ09	-86.992
EDAH10	4.553	0.58	5y-EDAH10	-88.059
EDAM10	4.803	0.83	5y-EDAM10	-88.673
EDAU10	5.068	1.10	5y-EDAU10	-90.678
EDAZ10	5.338	1.37	5y-EDAZ10	-92.978
EDAH11	5.438	1.47	5y-EDAH11	-91.871
EDAM11	5.513	1.54	5y-EDAM11	-92.172
EDAU11	5.573	1.60	5y-EDAU11	-91.850

Price = Outright Decimal Price - Euro Contract Price

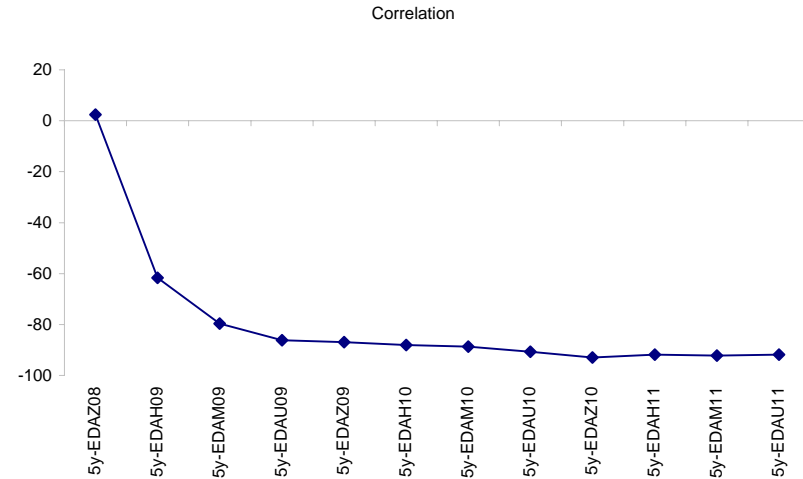
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.205	4.60	4.39	5y-EDAZ08
EDAH09	0.454	4.60	4.14	5y-EDAH09
EDAM09	0.703	4.60	3.89	5y-EDAM09
EDAU09	0.953	4.60	3.65	5y-EDAU09
EDAZ09	1.202	4.60	3.40	5y-EDAZ09
EDAH10	1.451	4.60	3.15	5y-EDAH10
EDAM10	1.701	4.60	2.90	5y-EDAM10
EDAU10	1.950	4.60	2.65	5y-EDAU10
EDAZ10	2.199	4.60	2.40	5y-EDAZ10
EDAH11	2.449	4.60	2.15	5y-EDAH11
EDAM11	2.698	4.60	1.90	5y-EDAM11
EDAU11	2.966	4.60	1.63	5y-EDAU11

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

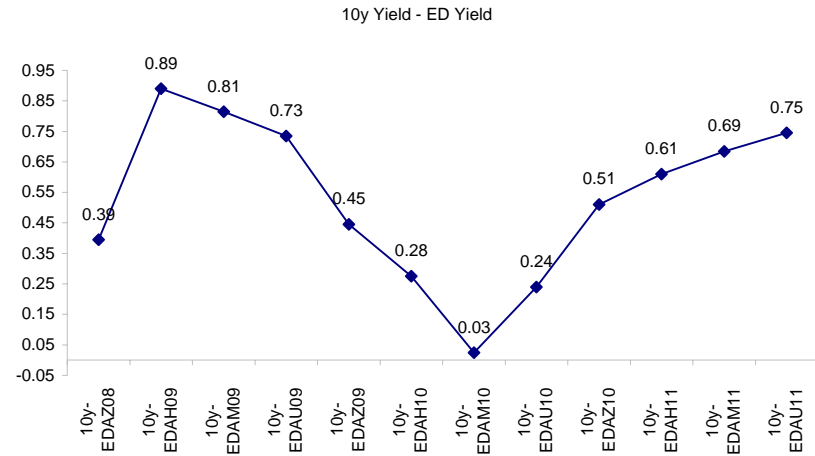


	10y			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAZ08	4.433	0.39	10y-EDAZ08	-17.578
EDAH09	3.938	0.89	10y-EDAH09	-72.360
EDAM09	4.013	0.81	10y-EDAM09	-88.443
EDAU09	4.093	0.73	10y-EDAU09	-92.985
EDAZ09	4.383	0.45	10y-EDAZ09	-93.322
EDAH10	4.553	0.28	10y-EDAH10	-93.582
EDAM10	4.803	0.03	10y-EDAM10	-93.990
EDAU10	5.068	0.24	10y-EDAU10	-95.139
EDAZ10	5.338	0.51	10y-EDAZ10	-96.024
EDAH11	5.438	0.61	10y-EDAH11	-94.446
EDAM11	5.513	0.69	10y-EDAM11	-94.118
EDAU11	5.573	0.75	10y-EDAU11	-93.732

Price = Outright Decimal Price - Euro Contract Price

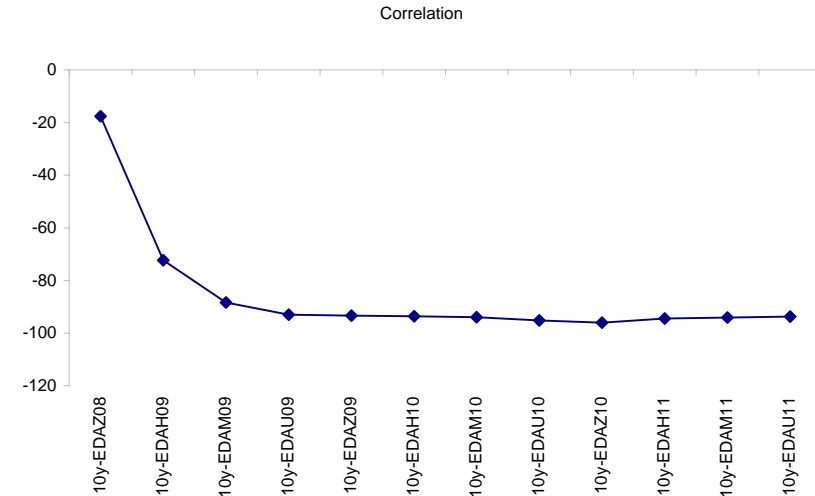
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.205	8.08	7.87	10y-EDAZ08
EDAH09	0.454	8.08	7.62	10y-EDAH09
EDAM09	0.703	8.08	7.37	10y-EDAM09
EDAU09	0.953	8.08	7.13	10y-EDAU09
EDAZ09	1.202	8.08	6.88	10y-EDAZ09
EDAH10	1.451	8.08	6.63	10y-EDAH10
EDAM10	1.701	8.08	6.38	10y-EDAM10
EDAU10	1.950	8.08	6.13	10y-EDAU10
EDAZ10	2.199	8.08	5.88	10y-EDAZ10
EDAH11	2.449	8.08	5.63	10y-EDAH11
EDAM11	2.698	8.08	5.38	10y-EDAM11
EDAU11	2.966	8.08	5.11	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.

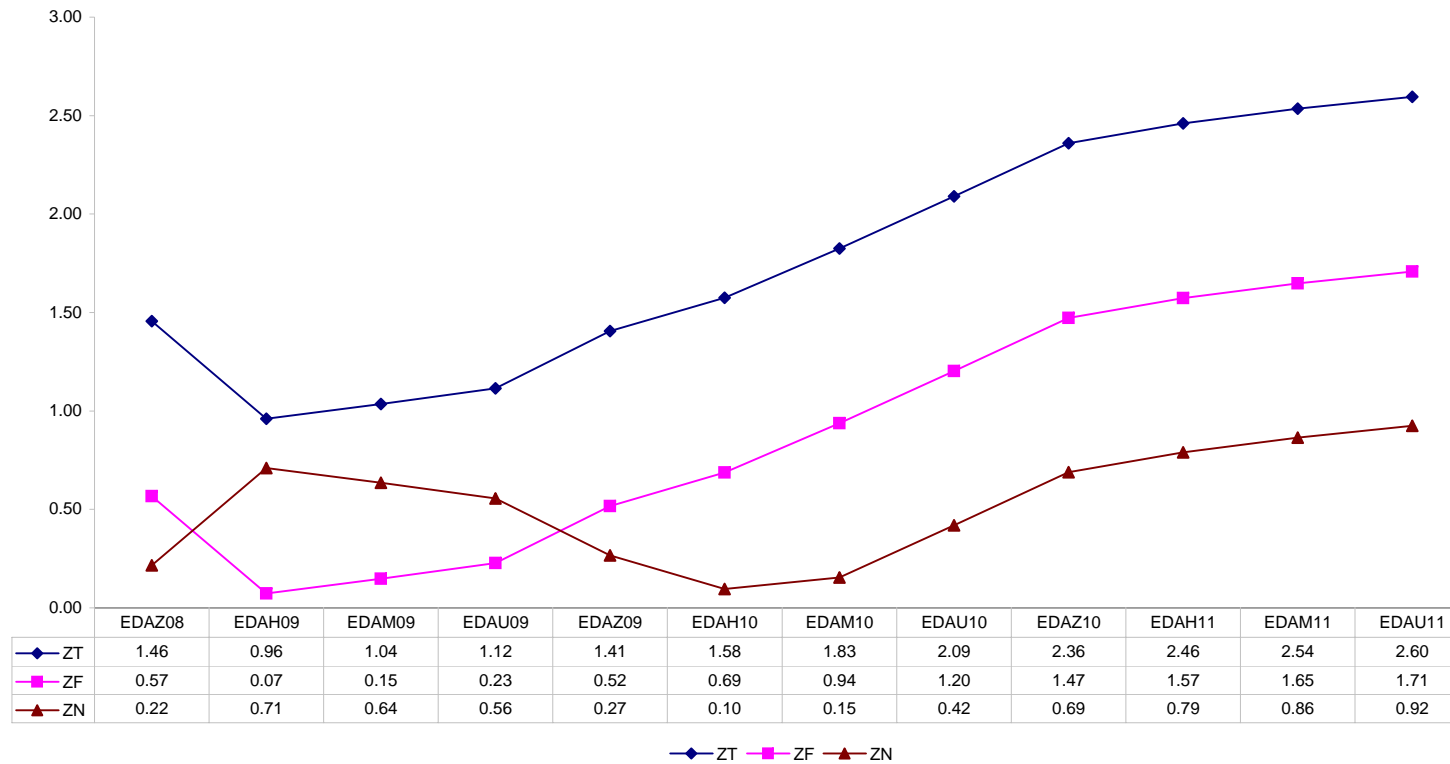
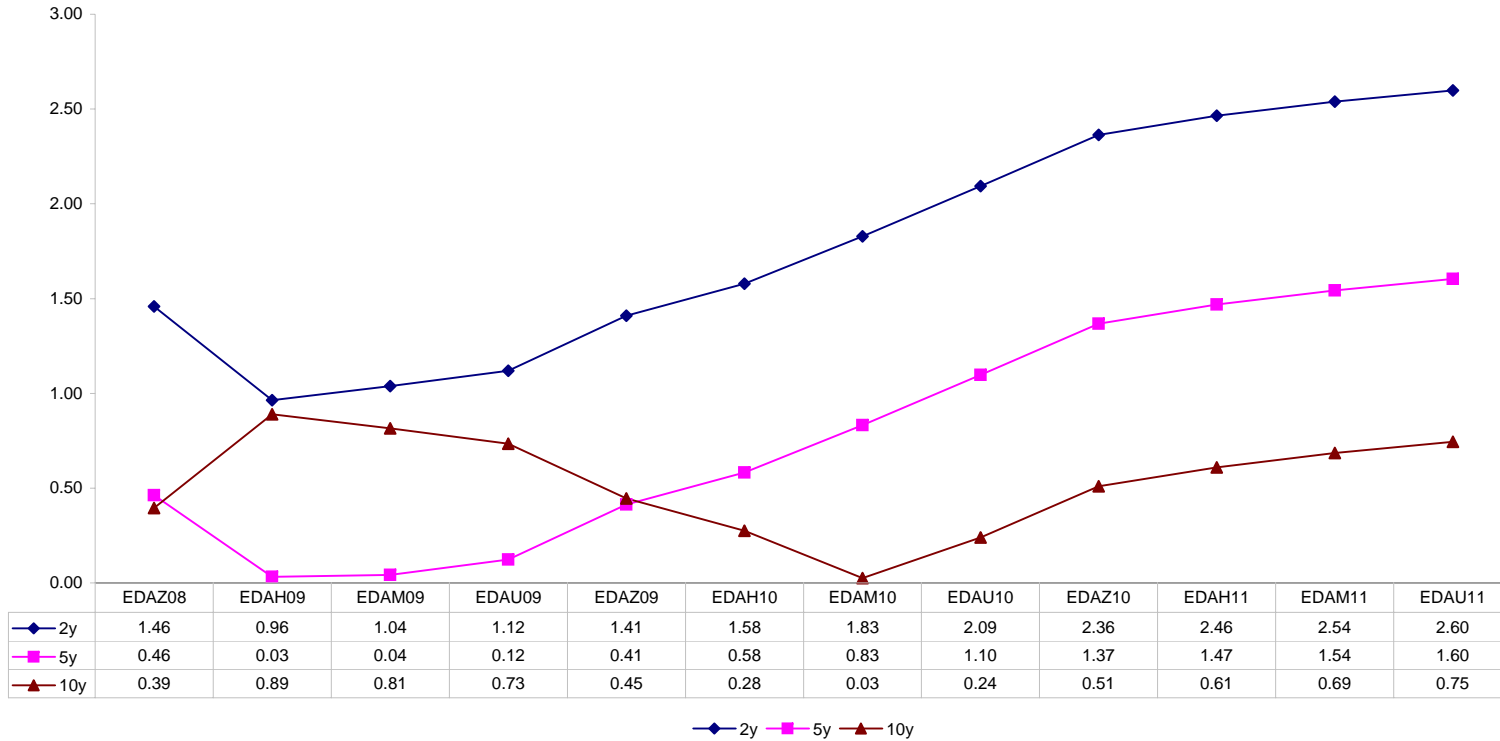
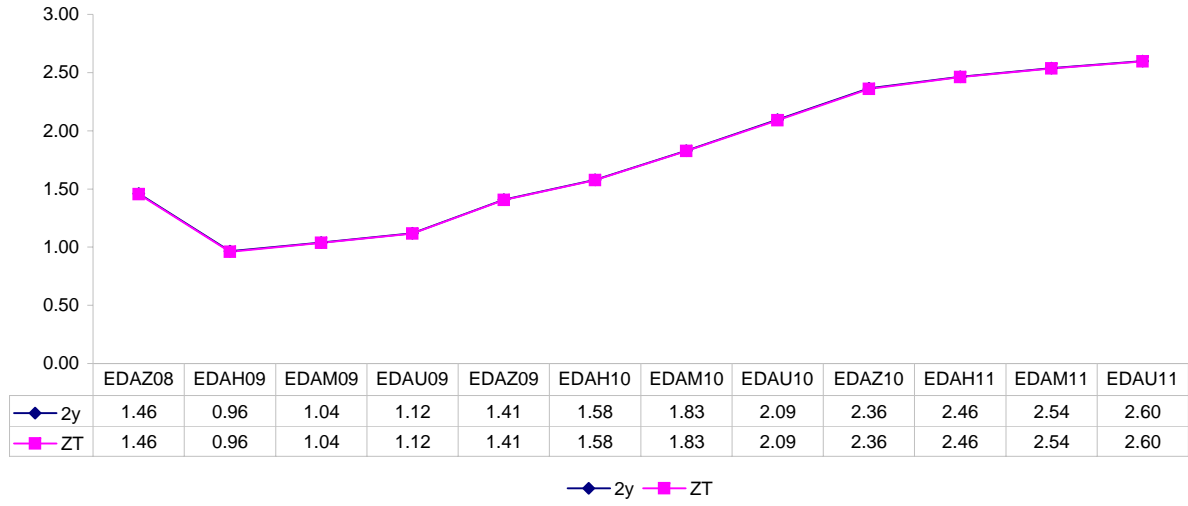


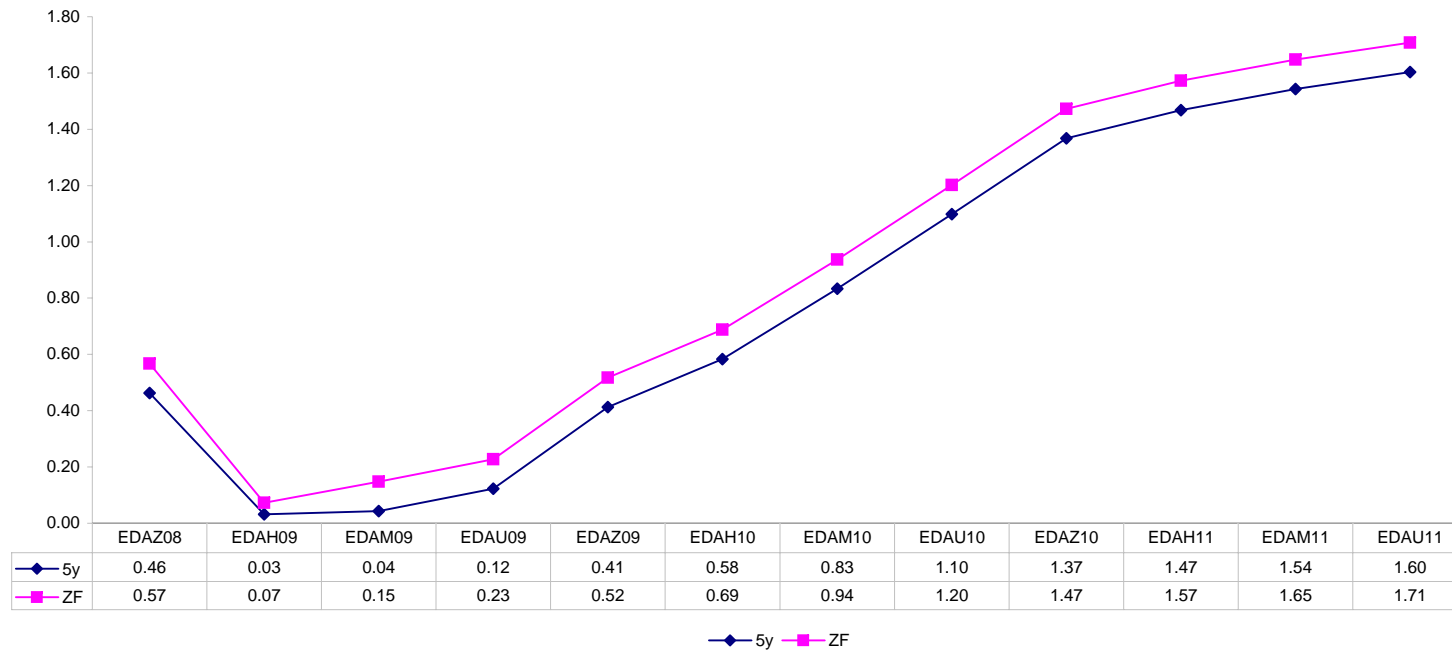
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



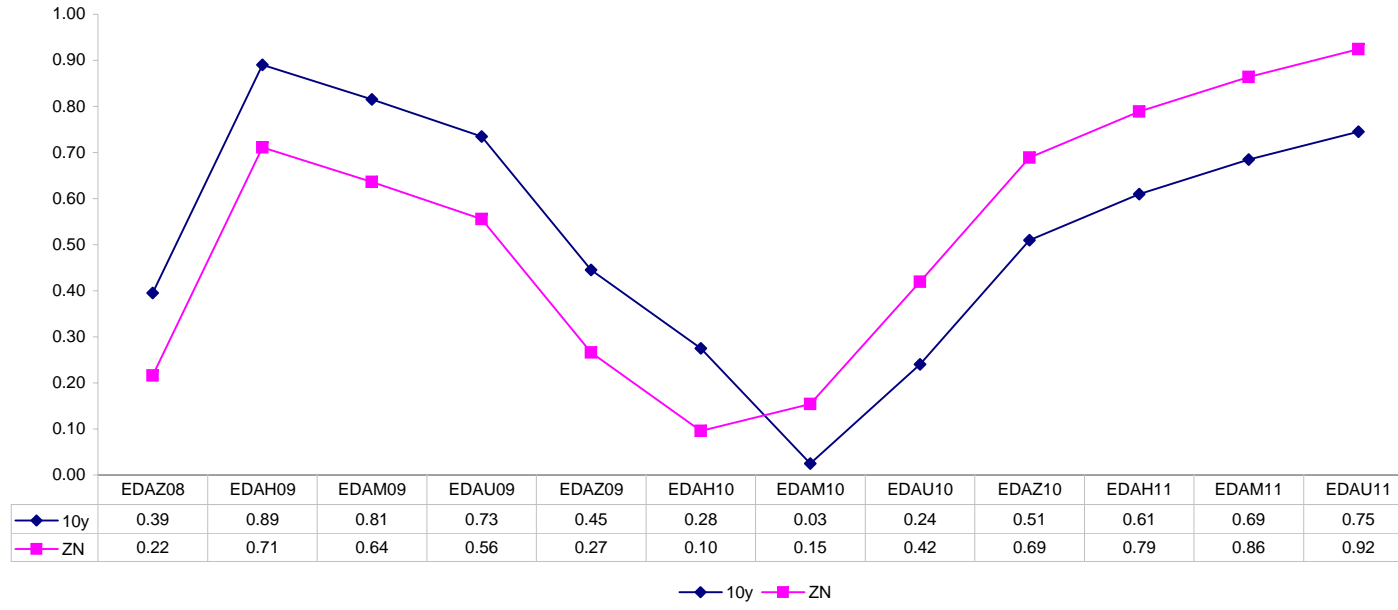
2y Basis TED Curve



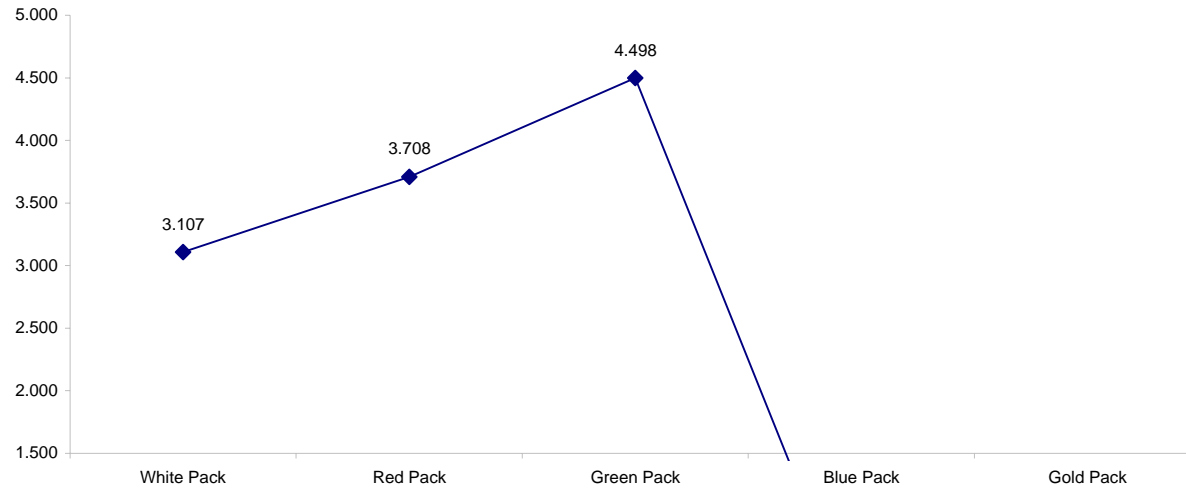
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.107	10.500	9695.875
Red Pack	3.708	12.125	9637.625
Green Pack	4.498	7.625	9561.250
Blue Pack		1.750	9536.625
Gold Pack		0.000	9517.375



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

