

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	107.0844	107.027	1.792	1.95
ZF	113.1000	113.032	2.693	4.12
ZN	115.7813	115.250	3.432	6.26
2y	100.397	100.1270	1.789	1.89
5y	101.475	101.1520	2.805	4.60
10y	102.609	102.1950	3.682	8.09

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	96.675	3.325	76	0.208	DEC	
EDAH09	97.230	2.770	167	0.457	MAR	White Pack
EDAM09	97.210	2.790	258	0.706	JUN	
EDAU09	97.140	2.860	349	0.955	SEP	
EDAZ09	96.840	3.160	440	1.205	DEC	
EDAH10	96.670	3.330	531	1.454	MAR	Red Pack
EDAM10	96.415	3.585	622	1.703	JUN	
EDAU10	96.155	3.845	713	1.953	SEP	
EDAZ10	95.880	4.120	804	2.202	DEC	
EDAH11	95.760	4.240	895	2.451	MAR	Green Pack
EDAM11	95.650	4.350	986	2.701	JUN	
EDAU11	95.610	4.390	1084	2.969	SEP	
EDAZ11	95.535	4.465	1175	3.219	DEC	
EDAH12	95.625	4.375	1266	3.468	MAR	Blue Pack
EDAM12	95.500	4.500	1357	3.717	JUN	
EDAU12	95.570	4.430	1448	3.966	SEP	
EDAZ12	95.360	4.640	1539	4.216	DEC	
EDAH13	95.450	4.550	1630	4.465	MAR	Gold Pack
EDAM13	95.390	4.610	1721	4.714	JUN	
EDZU13	95.405	4.595	1903	5.213	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.999	-12.750	9706.375	
Red Pack	3.559	-12.000	9652.000	Pack Prices
Green Pack	4.381	-10.500	9572.500	
Blue Pack		-5.250	9556.500	
Gold Pack		-3.000	9539.000	

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.

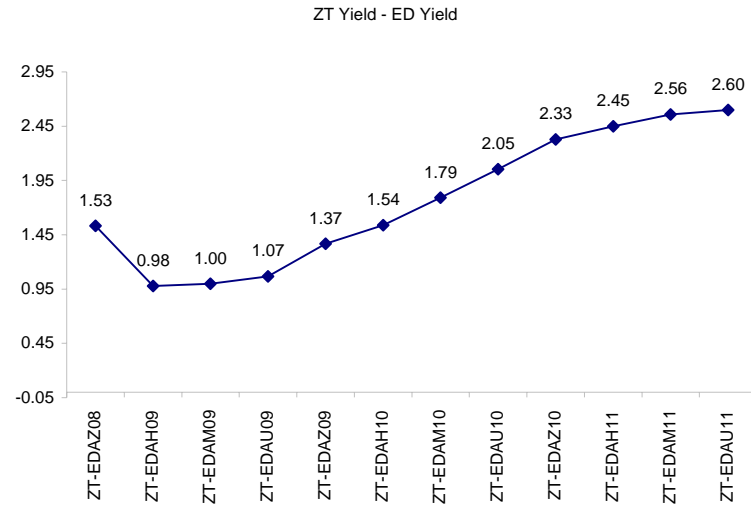
jgoulding@ghco.com

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.

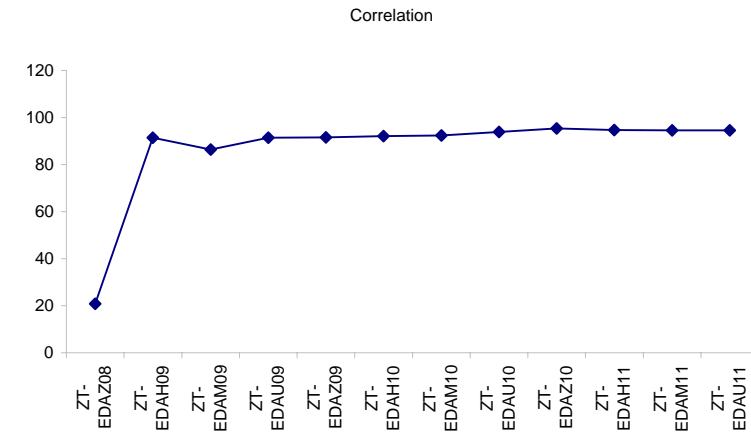
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.409	1.53	ZT-EDAZ08	20.817
EDAH09	9.854	0.98	ZT-EDAH09	91.375
EDAM09	9.874	1.00	ZT-EDAM09	86.381
EDAU09	9.944	1.07	ZT-EDAU09	91.375
EDAZ09	10.244	1.37	ZT-EDAZ09	91.548
EDAH10	10.414	1.54	ZT-EDAH10	92.046
EDAM10	10.669	1.79	ZT-EDAM10	92.431
EDAU10	10.929	2.05	ZT-EDAU10	93.822
EDAZ10	11.204	2.33	ZT-EDAZ10	95.439
EDAH11	11.324	2.45	ZT-EDAH11	94.736
EDAM11	11.434	2.56	ZT-EDAM11	94.512
EDAU11	11.474	2.60	ZT-EDAU11	94.603

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	0.208	1.95	1.74	ZT-EDAZ08		
EDAH09	0.457	1.95	1.49	ZT-EDAH09		
EDAM09	0.706	1.95	1.24	ZT-EDAM09		
EDAU09	0.955	1.95	0.99	ZT-EDAU09		
EDAZ09	1.205	1.95	0.75	ZT-EDAZ09		
EDAH10	1.454	1.95	0.50	ZT-EDAH10		
EDAM10	1.703	1.95	0.25	ZT-EDAM10		
EDAU10	1.953	1.95	(0.00)	ZT-EDAU10		
EDAZ10	2.202	1.95	(0.25)	ZT-EDAZ10		
EDAH11	2.451	1.95	(0.50)	ZT-EDAH11		
EDAM11	2.701	1.95	(0.75)	ZT-EDAM11		
EDAU11	2.969	1.95	(1.02)	ZT-EDAU11		

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

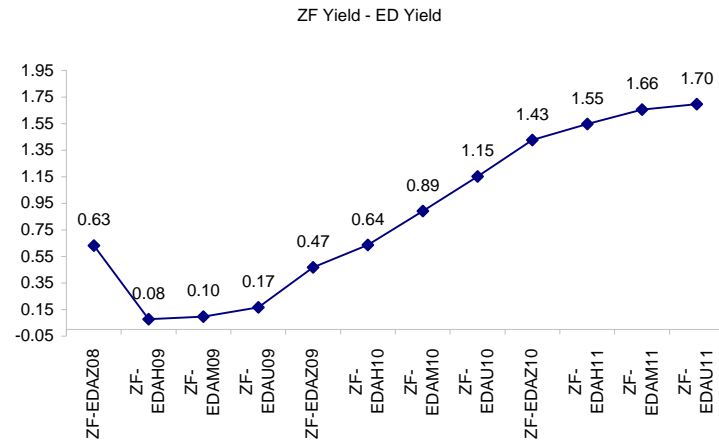


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	16.425	0.63	ZF-EDAZ08	29.909
EDAH09	15.870	0.08	ZF-EDAH09	71.847
EDAM09	15.890	0.10	ZF-EDAM09	89.202
EDAU09	15.960	0.17	ZF-EDAU09	95.718
EDAZ09	16.260	0.47	ZF-EDAZ09	96.556
EDAH10	16.430	0.64	ZF-EDAH10	97.030
EDAM10	16.685	0.89	ZF-EDAM10	97.105
EDAU10	16.945	1.15	ZF-EDAU10	97.853
EDAZ10	17.220	1.43	ZF-EDAZ10	98.787
EDAH11	17.340	1.55	ZF-EDAH11	98.670
EDAM11	17.450	1.66	ZF-EDAM11	98.597
EDAU11	17.490	1.70	ZF-EDAU11	98.629

Price = Outright Decimal Price - Euro Contract Price

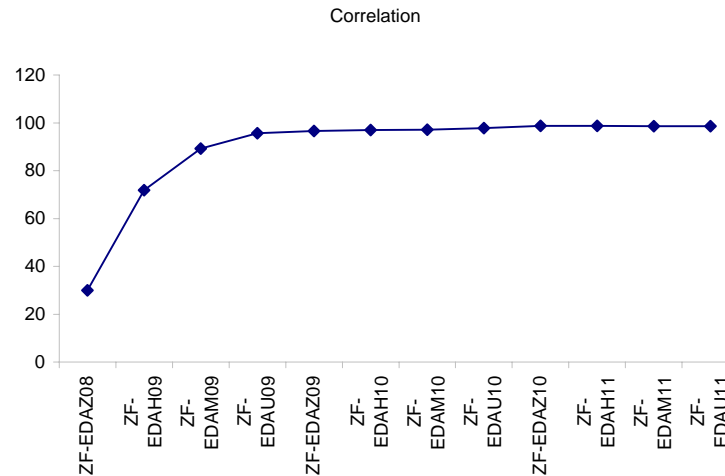
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



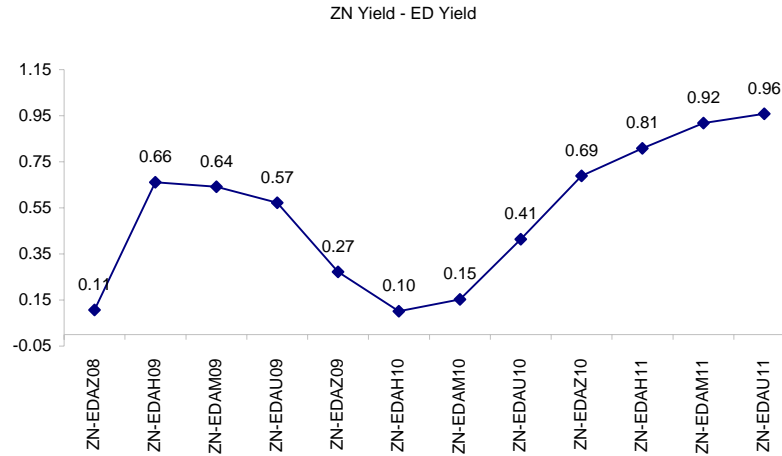
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.208	4.12	3.92	ZF-EDAZ08		
EDAH09	0.457	4.12	3.67	ZF-EDAH09		
EDAM09	0.706	4.12	3.42	ZF-EDAM09		
EDAU09	0.955	4.12	3.17	ZF-EDAU09		
EDAZ09	1.205	4.12	2.92	ZF-EDAZ09		
EDAH10	1.454	4.12	2.67	ZF-EDAH10		
EDAM10	1.703	4.12	2.42	ZF-EDAM10		
EDAU10	1.953	4.12	2.17	ZF-EDAU10		
EDAZ10	2.202	4.12	1.92	ZF-EDAZ10		
EDAH11	2.451	4.12	1.67	ZF-EDAH11		
EDAM11	2.701	4.12	1.42	ZF-EDAM11		
EDAU11	2.969	4.12	1.15	ZF-EDAU11		

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



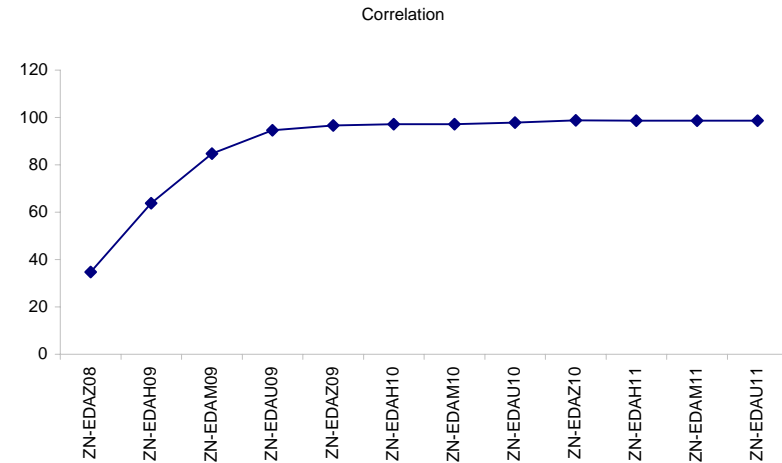
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	19.106	0.11	ZN-EDAZ08	34.723
EDAH09	18.551	0.66	ZN-EDAH09	63.777
EDAM09	18.571	0.64	ZN-EDAM09	84.756
EDAU09	18.641	0.57	ZN-EDAU09	94.543
EDAZ09	18.941	0.27	ZN-EDAZ09	96.566
EDAH10	19.111	0.10	ZN-EDAH10	97.103
EDAM10	19.366	0.15	ZN-EDAM10	97.105
EDAU10	19.626	0.41	ZN-EDAU10	97.853
EDAZ10	19.901	0.69	ZN-EDAZ10	98.787
EDAH11	20.021	0.81	ZN-EDAH11	98.670
EDAM11	20.131	0.92	ZN-EDAM11	98.597
EDAU11	20.171	0.96	ZN-EDAU11	98.629

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	0.208	6.26	6.06	ZN-EDAZ08		
EDAH09	0.457	6.26	5.81	ZN-EDAH09		
EDAM09	0.706	6.26	5.56	ZN-EDAM09		
EDAU09	0.955	6.26	5.31	ZN-EDAU09		
EDAZ09	1.205	6.26	5.06	ZN-EDAZ09		
EDAH10	1.454	6.26	4.81	ZN-EDAH10		
EDAM10	1.703	6.26	4.56	ZN-EDAM10		
EDAU10	1.953	6.26	4.31	ZN-EDAU10		
EDAZ10	2.202	6.26	4.06	ZN-EDAZ10		
EDAH11	2.451	6.26	3.81	ZN-EDAH11		
EDAM11	2.701	6.26	3.56	ZN-EDAM11		
EDAU11	2.969	6.26	3.29	ZN-EDAU11		

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

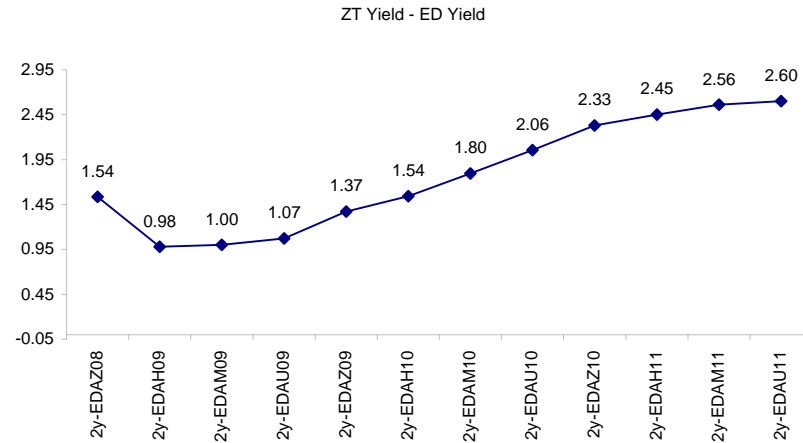


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	3.722	1.54	2y-EDAZ08	-19.081
EDAH09	3.167	0.98	2y-EDAH09	-71.719
EDAM09	3.187	1.00	2y-EDAM09	-84.255
EDAU09	3.257	1.07	2y-EDAU09	-87.003
EDAZ09	3.557	1.37	2y-EDAZ09	-86.486
EDAH10	3.727	1.54	2y-EDAH10	-86.873
EDAM10	3.982	1.80	2y-EDAM10	-87.418
EDAU10	4.242	2.06	2y-EDAU10	-89.085
EDAZ10	4.517	2.33	2y-EDAZ10	-90.936
EDAH11	4.637	2.45	2y-EDAH11	-89.153
EDAM11	4.747	2.56	2y-EDAM11	-88.815
EDAU11	4.787	2.60	2y-EDAU11	-88.803

Price = Outright Decimal Price - Euro Contract Price

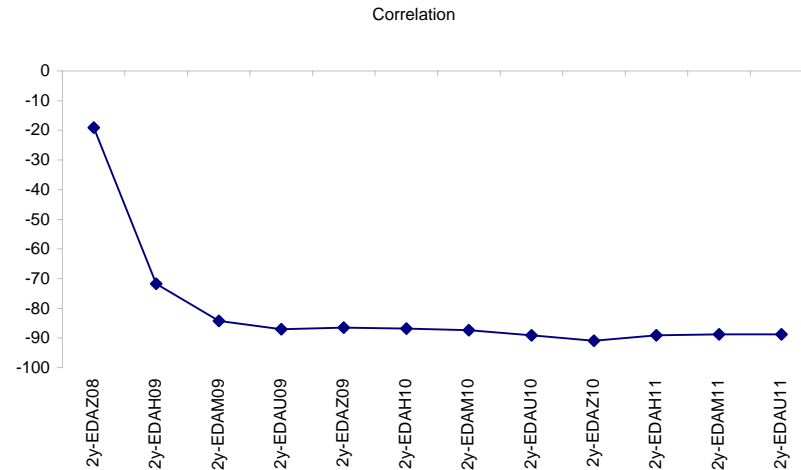
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.208	1.89	1.68	2y-EDAZ08	
EDAH09	0.457	1.89	1.43	2y-EDAH09	
EDAM09	0.706	1.89	1.18	2y-EDAM09	
EDAU09	0.955	1.89	0.93	2y-EDAU09	
EDAZ09	1.205	1.89	0.68	2y-EDAZ09	
EDAH10	1.454	1.89	0.43	2y-EDAH10	
EDAM10	1.703	1.89	0.18	2y-EDAM10	
EDAU10	1.953	1.89	(0.07)	2y-EDAU10	
EDAZ10	2.202	1.89	(0.32)	2y-EDAZ10	
EDAH11	2.451	1.89	(0.57)	2y-EDAH11	
EDAM11	2.701	1.89	(0.81)	2y-EDAM11	
EDAU11	2.969	1.89	(1.08)	2y-EDAU11	

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

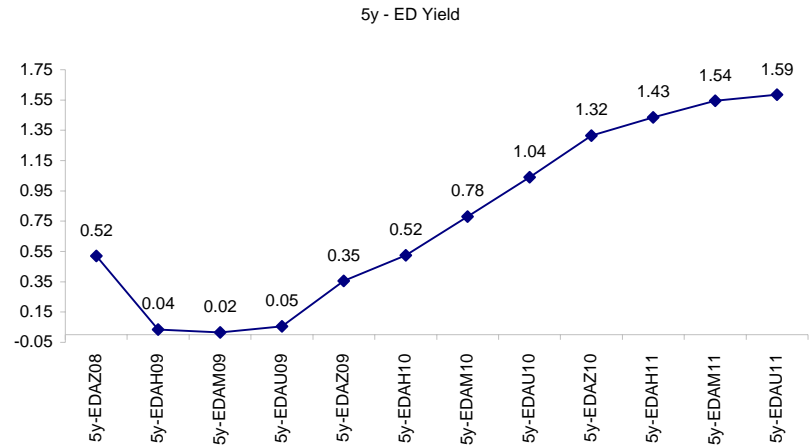


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.800	0.52	5y-EDAZ08	-23.750
EDAH09	4.245	0.04	5y-EDAH09	-68.137
EDAM09	4.265	0.02	5y-EDAM09	-84.787
EDAU09	4.335	0.05	5y-EDAU09	-90.997
EDAZ09	4.635	0.35	5y-EDAZ09	-92.035
EDAH10	4.805	0.52	5y-EDAH10	-92.690
EDAM10	5.060	0.78	5y-EDAM10	-92.895
EDAU10	5.320	1.04	5y-EDAU10	-94.100
EDAZ10	5.595	1.32	5y-EDAZ10	-95.641
EDAH11	5.715	1.43	5y-EDAH11	-94.976
EDAM11	5.825	1.54	5y-EDAM11	-95.185
EDAU11	5.865	1.59	5y-EDAU11	-95.168

Price = Outright Decimal Price - Euro Contract Price

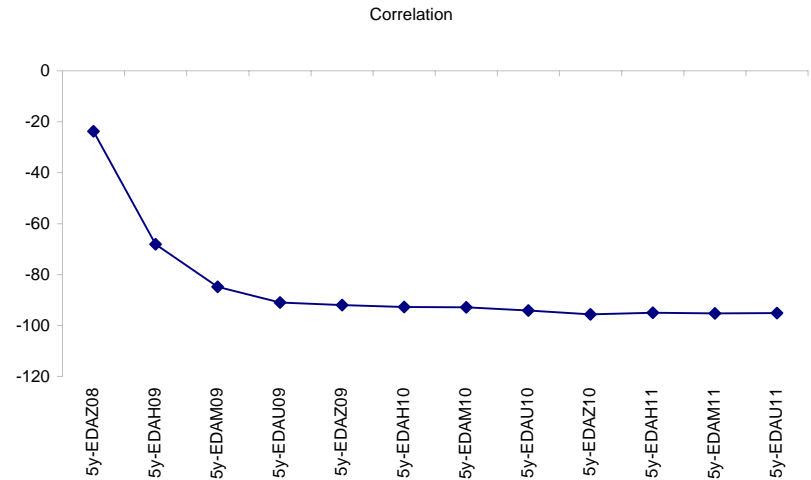
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.208	4.60	4.40	5y-EDAZ08
EDAH09	0.457	4.60	4.15	5y-EDAH09
EDAM09	0.706	4.60	3.90	5y-EDAM09
EDAU09	0.955	4.60	3.65	5y-EDAU09
EDAZ09	1.205	4.60	3.40	5y-EDAZ09
EDAH10	1.454	4.60	3.15	5y-EDAH10
EDAM10	1.703	4.60	2.90	5y-EDAM10
EDAU10	1.953	4.60	2.65	5y-EDAU10
EDAZ10	2.202	4.60	2.40	5y-EDAZ10
EDAH11	2.451	4.60	2.15	5y-EDAH11
EDAM11	2.701	4.60	1.90	5y-EDAM11
EDAU11	2.969	4.60	1.63	5y-EDAU11

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

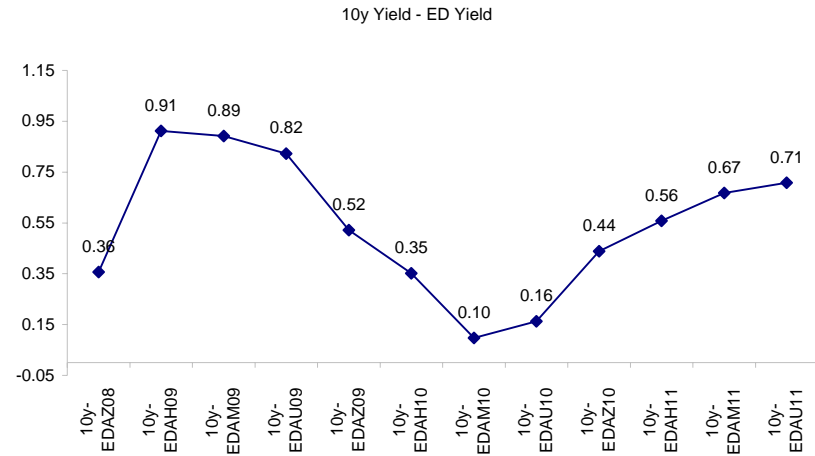


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	4.800	0.36	10y-EDAZ08	-39.382
EDAH09	4.245	0.91	10y-EDAH09	-74.367
EDAM09	4.265	0.89	10y-EDAM09	-89.485
EDAU09	4.335	0.82	10y-EDAU09	-94.786
EDAZ09	4.635	0.52	10y-EDAZ09	-95.719
EDAH10	4.805	0.35	10y-EDAH10	-95.946
EDAM10	5.060	0.10	10y-EDAM10	-95.874
EDAU10	5.320	0.16	10y-EDAU10	-96.416
EDAZ10	5.595	0.44	10y-EDAZ10	-97.033
EDAH11	5.715	0.56	10y-EDAH11	-96.060
EDAM11	5.825	0.67	10y-EDAM11	-96.212
EDAU11	5.865	0.71	10y-EDAU11	-95.942

Price = Outright Decimal Price - Euro Contract Price

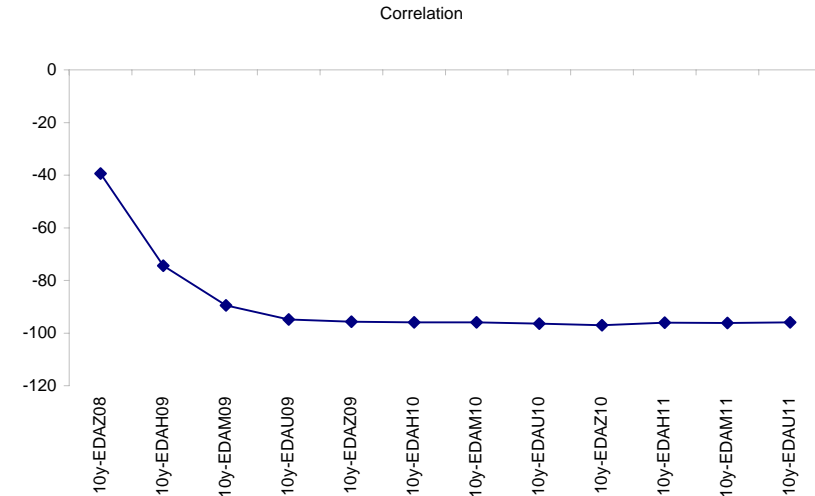
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.208	8.09	7.88	10y-EDAZ08
EDAH09	0.457	8.09	7.63	10y-EDAH09
EDAM09	0.706	8.09	7.38	10y-EDAM09
EDAU09	0.955	8.09	7.13	10y-EDAU09
EDAZ09	1.205	8.09	6.88	10y-EDAZ09
EDAH10	1.454	8.09	6.63	10y-EDAH10
EDAM10	1.703	8.09	6.39	10y-EDAM10
EDAU10	1.953	8.09	6.14	10y-EDAU10
EDAZ10	2.202	8.09	5.89	10y-EDAZ10
EDAH11	2.451	8.09	5.64	10y-EDAH11
EDAM11	2.701	8.09	5.39	10y-EDAM11
EDAU11	2.969	8.09	5.12	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.

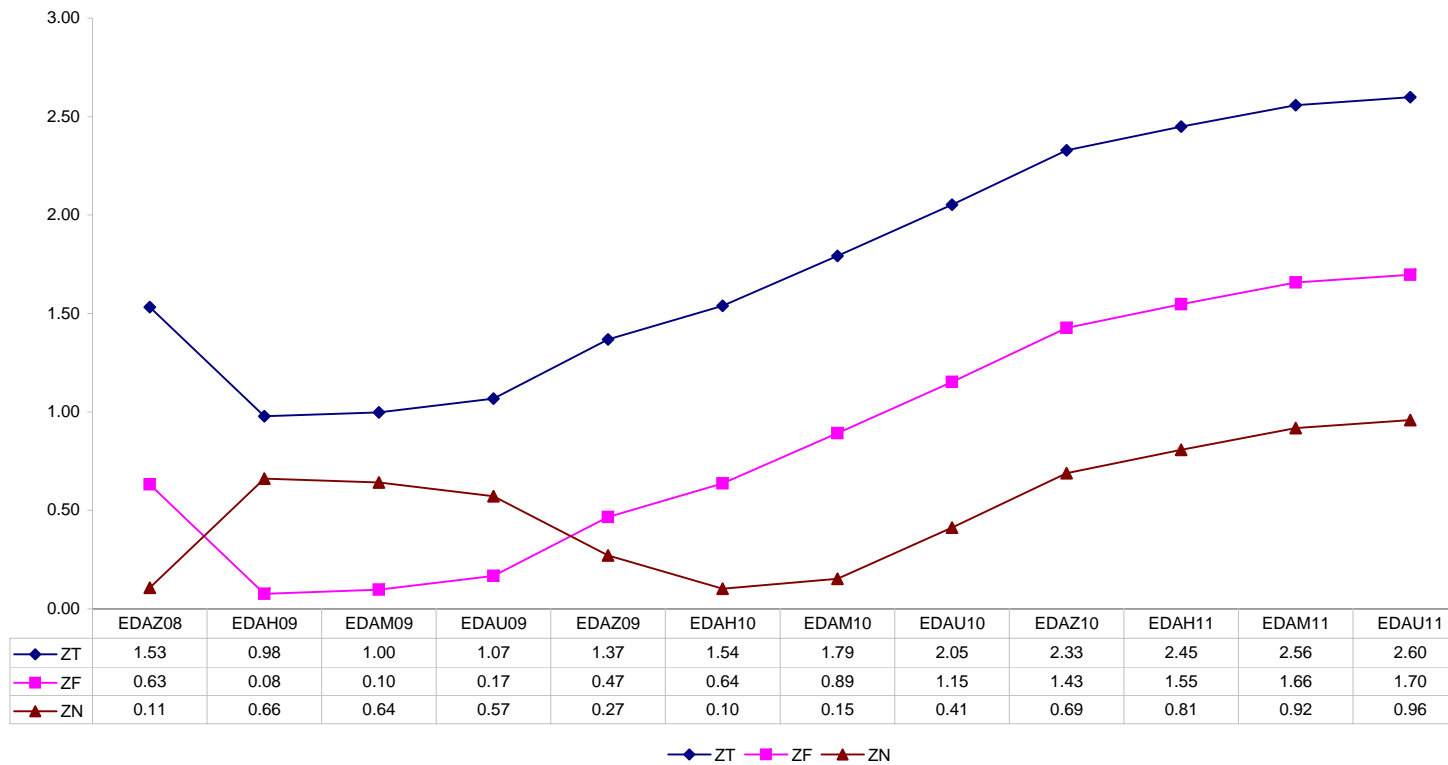
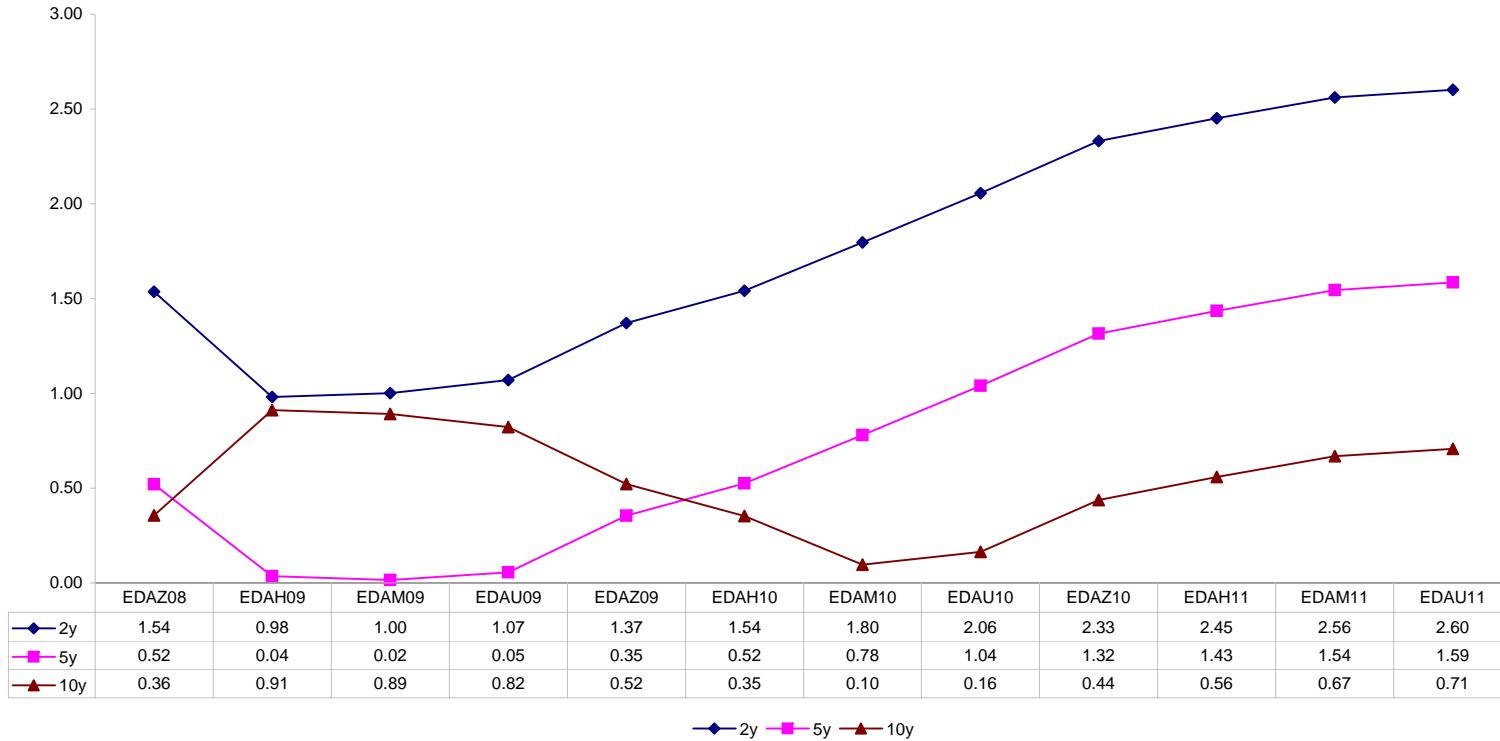
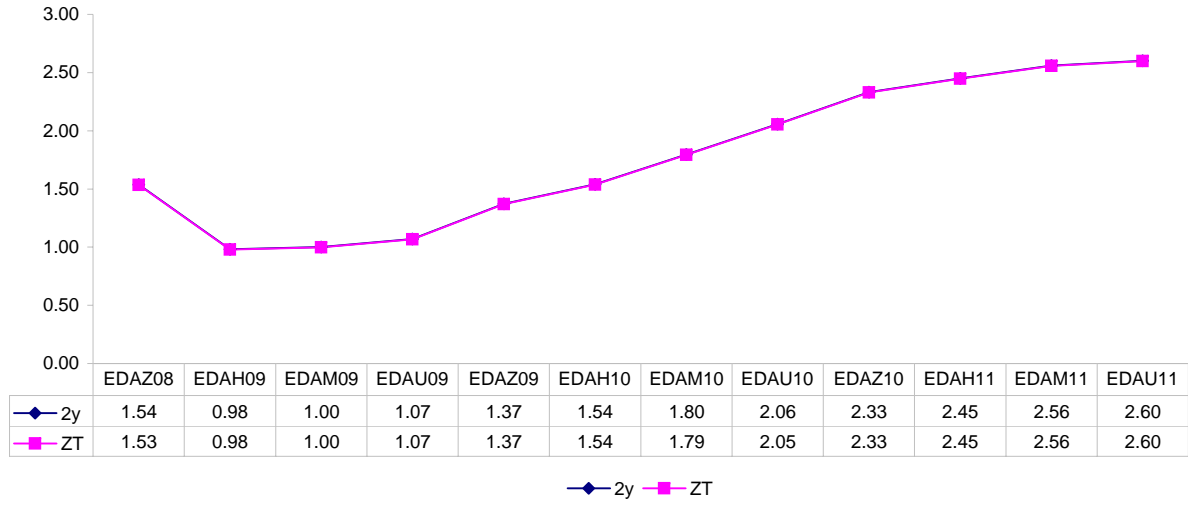


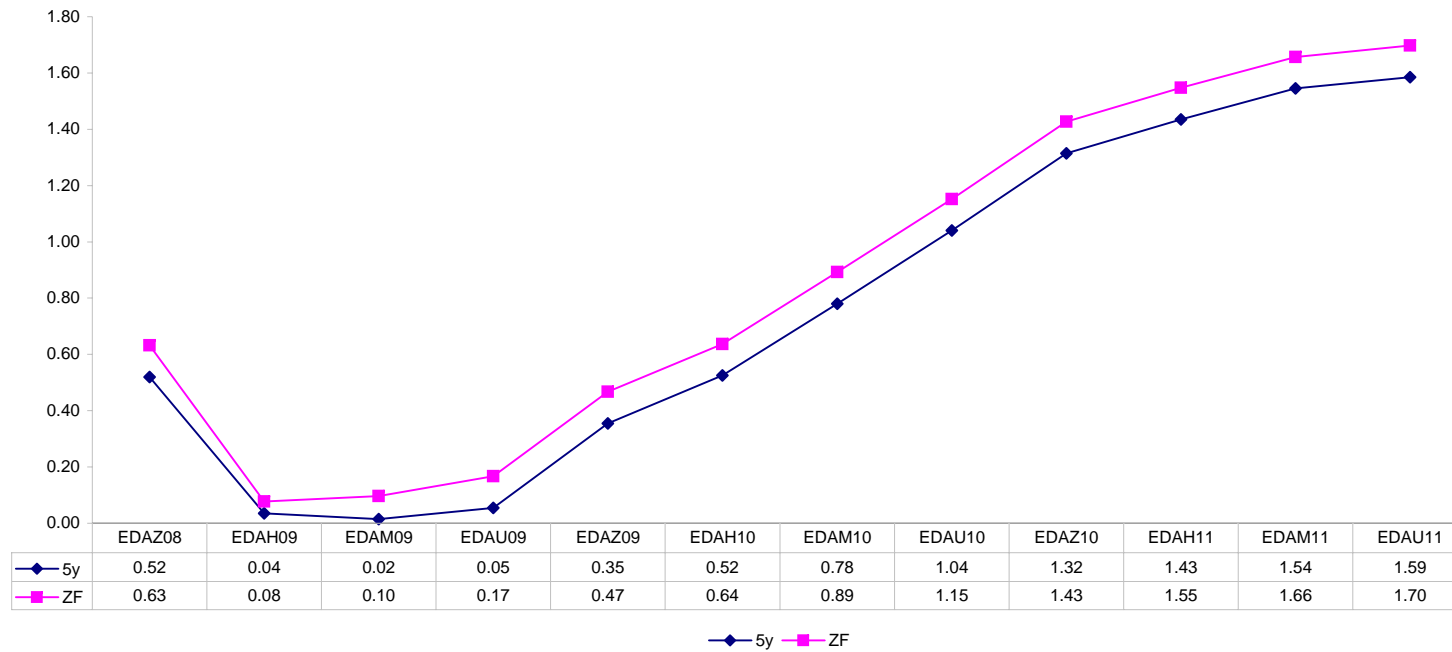
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



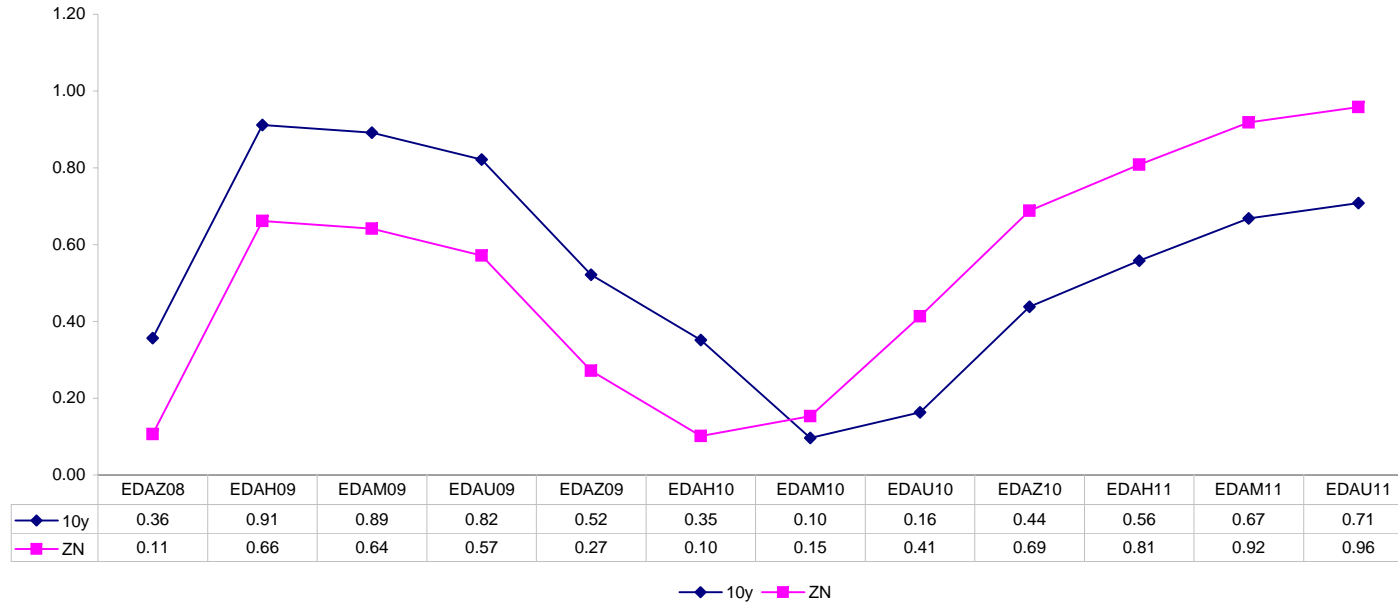
2y Basis TED Curve



5y Basis TED Curve

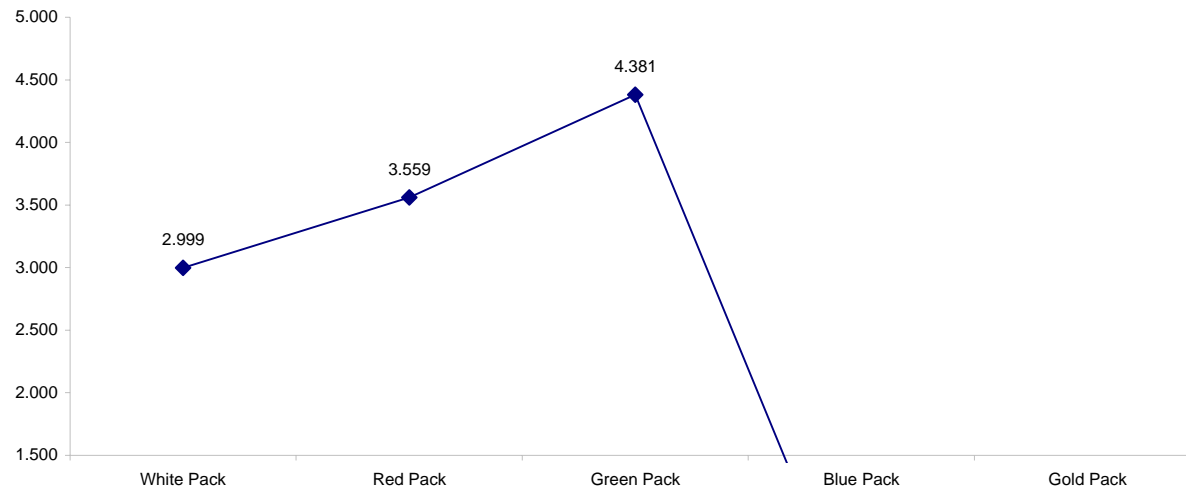


10y Basis TED Curve



Packs

	Last Yield	Net Last Yield	Last Price
White Pack	2.999	-12.750	9706.375
Red Pack	3.559	-12.000	9652.000
Green Pack	4.381	-10.500	9572.500
Blue Pack		-5.250	9556.500
Gold Pack		-3.000	9539.000



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

