

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	108.6156	108.197	0.895	1.84
ZF	118.0781	118.025	1.886	4.31
ZN	120.1563	120.050	2.952	6.53
2y	100.813	100.2600	1.063	1.97
5y	103.359	103.1150	2.021	4.63
10y	105.141	105.0450	3.140	8.26

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.935	2.065	55	0.150	DEC	
EDAH09	98.070	1.930	146	0.399	MAR	White Pack
EDAM09	98.035	1.965	237	0.649	JUN	
EDAU09	97.960	2.040	328	0.898	SEP	
EDAZ09	97.820	2.180	419	1.147	DEC	
EDAH10	97.765	2.235	510	1.397	MAR	Red Pack
EDAM10	97.615	2.385	601	1.646	JUN	
EDAU10	97.410	2.590	692	1.895	SEP	
EDAZ10	97.100	2.900	783	2.145	DEC	
EDAH11	96.895	3.105	874	2.394	MAR	Green Pack
EDAM11	96.685	3.315	965	2.643	JUN	
EDAU11	96.475	3.525	1063	2.912	SEP	
EDAZ11	96.290	3.710	1154	3.161	DEC	
EDAH12	96.265	3.735	1245	3.410	MAR	Blue Pack
EDAM12	96.100	3.900	1336	3.660	JUN	
EDAU12	96.025	3.975	1427	3.909	SEP	
EDAZ12	95.955	4.045	1518	4.158	DEC	
EDAH13	96.010	3.990	1609	4.408	MAR	Gold Pack
EDAM13	95.855	4.145	1700	4.657	JUN	
EDZU13	95.795	4.205	1882	5.156	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.038	-15.313	9800.000	
Red Pack	2.394	-18.125	9765.250	Pack Prices
Green Pack	3.282	-20.250	9678.875	
Blue Pack	3.921	-17.625	9617.000	
Gold Pack		-5.000	9592.375	

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.

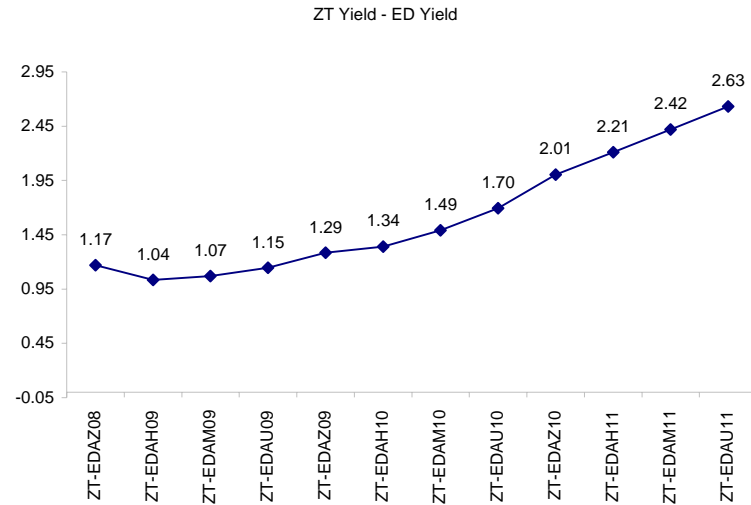
jgoulding@ghco.com

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.

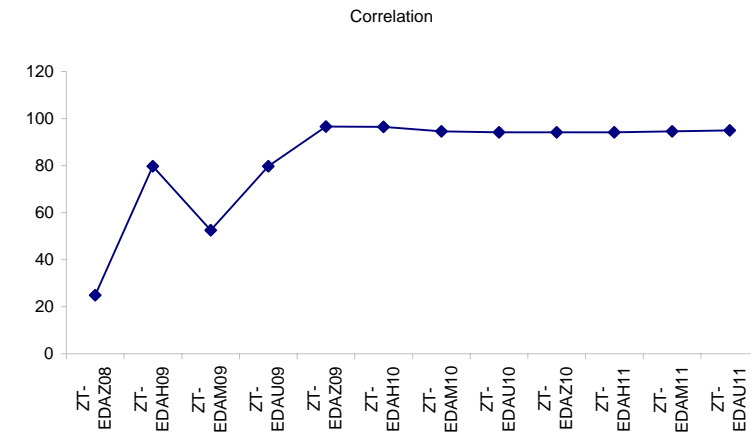
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.681	1.17	ZT-EDAZ08	24.845
EDAH09	10.546	1.04	ZT-EDAH09	79.694
EDAM09	10.581	1.07	ZT-EDAM09	52.476
EDAU09	10.656	1.15	ZT-EDAU09	79.694
EDAZ09	10.796	1.29	ZT-EDAZ09	96.578
EDAH10	10.851	1.34	ZT-EDAH10	96.399
EDAM10	11.001	1.49	ZT-EDAM10	94.519
EDAU10	11.206	1.70	ZT-EDAU10	94.131
EDAZ10	11.516	2.01	ZT-EDAZ10	94.092
EDAH11	11.721	2.21	ZT-EDAH11	94.174
EDAM11	11.931	2.42	ZT-EDAM11	94.614
EDAU11	12.141	2.63	ZT-EDAU11	94.982

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	0.150	1.84	1.69	ZT-EDAZ08	
EDAH09	0.399	1.84	1.44	ZT-EDAH09	
EDAM09	0.649	1.84	1.19	ZT-EDAM09	
EDAU09	0.898	1.84	0.94	ZT-EDAU09	
EDAZ09	1.147	1.84	0.69	ZT-EDAZ09	
EDAH10	1.397	1.84	0.44	ZT-EDAH10	
EDAM10	1.646	1.84	0.19	ZT-EDAM10	
EDAU10	1.895	1.84	(0.06)	ZT-EDAU10	
EDAZ10	2.145	1.84	(0.31)	ZT-EDAZ10	
EDAH11	2.394	1.84	(0.56)	ZT-EDAH11	
EDAM11	2.643	1.84	(0.81)	ZT-EDAM11	
EDAU11	2.912	1.84	(1.08)	ZT-EDAU11	

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

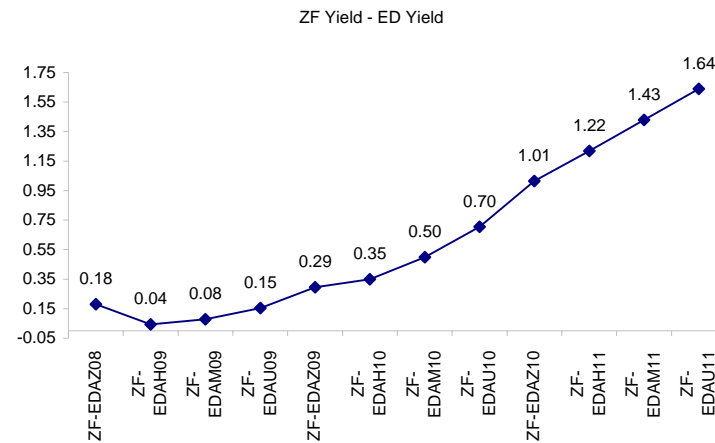


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	20.143	0.18	ZF-EDAZ08	-3.164
EDAH09	20.008	0.04	ZF-EDAH09	13.060
EDAM09	20.043	0.08	ZF-EDAM09	27.599
EDAU09	20.118	0.15	ZF-EDAU09	59.322
EDAZ09	20.258	0.29	ZF-EDAZ09	87.023
EDAH10	20.313	0.35	ZF-EDAH10	95.557
EDAM10	20.463	0.50	ZF-EDAM10	97.910
EDAU10	20.668	0.70	ZF-EDAU10	98.964
EDAZ10	20.978	1.01	ZF-EDAZ10	99.169
EDAH11	21.183	1.22	ZF-EDAH11	99.101
EDAM11	21.393	1.43	ZF-EDAM11	99.045
EDAU11	21.603	1.64	ZF-EDAU11	98.897

Price = Outright Decimal Price - Euro Contract Price

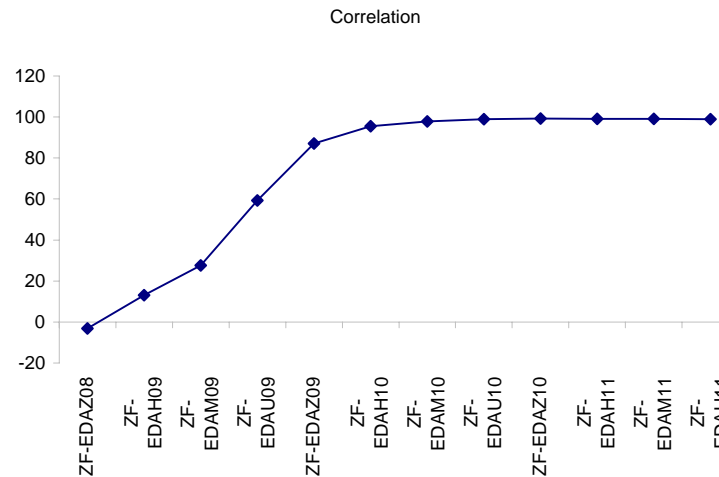
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



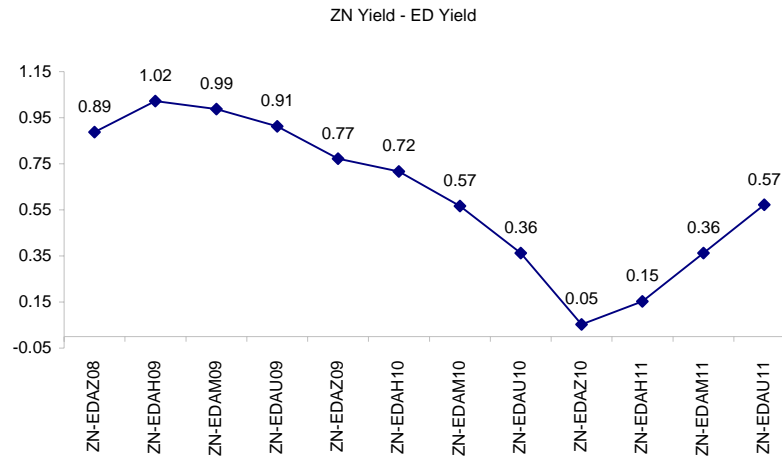
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.150	4.31	4.16	ZF-EDAZ08		
EDAH09	0.399	4.31	3.91	ZF-EDAH09		
EDAM09	0.649	4.31	3.66	ZF-EDAM09		
EDAU09	0.898	4.31	3.41	ZF-EDAU09		
EDAZ09	1.147	4.31	3.16	ZF-EDAZ09		
EDAH10	1.397	4.31	2.91	ZF-EDAH10		
EDAM10	1.646	4.31	2.66	ZF-EDAM10		
EDAU10	1.895	4.31	2.41	ZF-EDAU10		
EDAZ10	2.145	4.31	2.16	ZF-EDAZ10		
EDAH11	2.394	4.31	1.91	ZF-EDAH11		
EDAM11	2.643	4.31	1.66	ZF-EDAM11		
EDAU11	2.912	4.31	1.40	ZF-EDAU11		

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



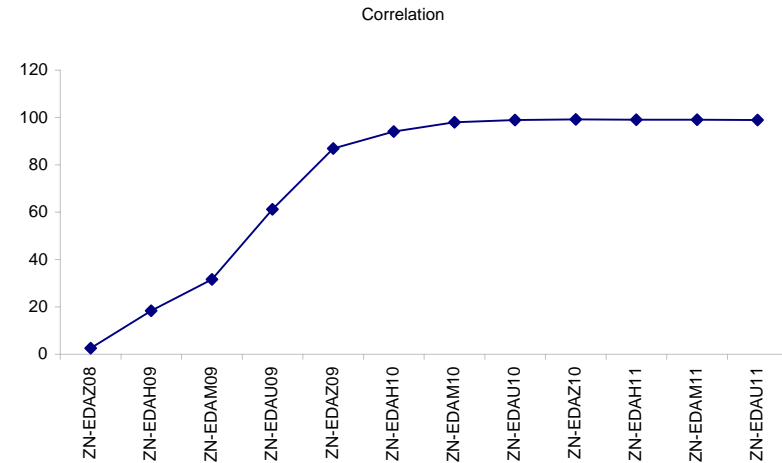
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	22.221	0.89	ZN-EDAZ08	2.568
EDAH09	22.086	1.02	ZN-EDAH09	18.366
EDAM09	22.121	0.99	ZN-EDAM09	31.584
EDAU09	22.196	0.91	ZN-EDAU09	61.168
EDAZ09	22.336	0.77	ZN-EDAZ09	86.888
EDAH10	22.391	0.72	ZN-EDAH10	94.062
EDAM10	22.541	0.57	ZN-EDAM10	97.910
EDAU10	22.746	0.36	ZN-EDAU10	98.964
EDAZ10	23.056	0.05	ZN-EDAZ10	99.169
EDAH11	23.261	0.15	ZN-EDAH11	99.101
EDAM11	23.471	0.36	ZN-EDAM11	99.045
EDAU11	23.681	0.57	ZN-EDAU11	98.897

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	0.150	6.53	6.38	ZN-EDAZ08		
EDAH09	0.399	6.53	6.13	ZN-EDAH09		
EDAM09	0.649	6.53	5.88	ZN-EDAM09		
EDAU09	0.898	6.53	5.63	ZN-EDAU09		
EDAZ09	1.147	6.53	5.39	ZN-EDAZ09		
EDAH10	1.397	6.53	5.14	ZN-EDAH10		
EDAM10	1.646	6.53	4.89	ZN-EDAM10		
EDAU10	1.895	6.53	4.64	ZN-EDAU10		
EDAZ10	2.145	6.53	4.39	ZN-EDAZ10		
EDAH11	2.394	6.53	4.14	ZN-EDAH11		
EDAM11	2.643	6.53	3.89	ZN-EDAM11		
EDAU11	2.912	6.53	3.62	ZN-EDAU11		

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

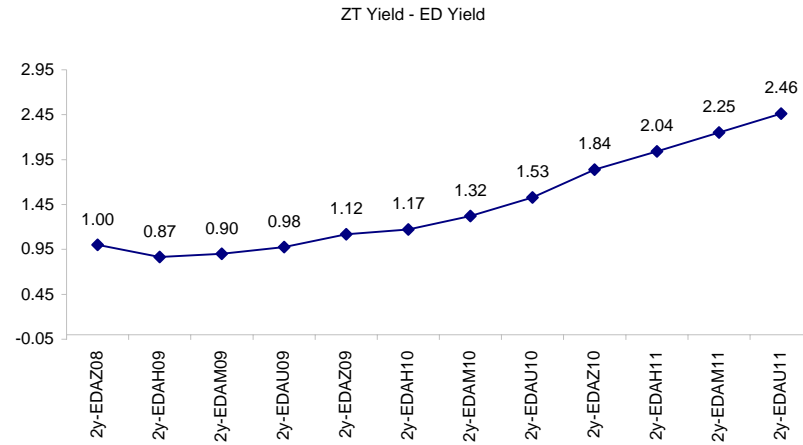


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.878	1.00	2y-EDAZ08	-28.157
EDAH09	2.743	0.87	2y-EDAH09	-46.555
EDAM09	2.778	0.90	2y-EDAM09	-60.909
EDAU09	2.853	0.98	2y-EDAU09	-84.321
EDAZ09	2.993	1.12	2y-EDAZ09	-96.934
EDAH10	3.048	1.17	2y-EDAH10	-98.208
EDAM10	3.198	1.32	2y-EDAM10	-97.878
EDAU10	3.403	1.53	2y-EDAU10	-97.862
EDAZ10	3.713	1.84	2y-EDAZ10	-97.679
EDAH11	3.918	2.04	2y-EDAH11	-97.426
EDAM11	4.128	2.25	2y-EDAM11	-97.149
EDAU11	4.338	2.46	2y-EDAU11	-97.117

Price = Outright Decimal Price - Euro Contract Price

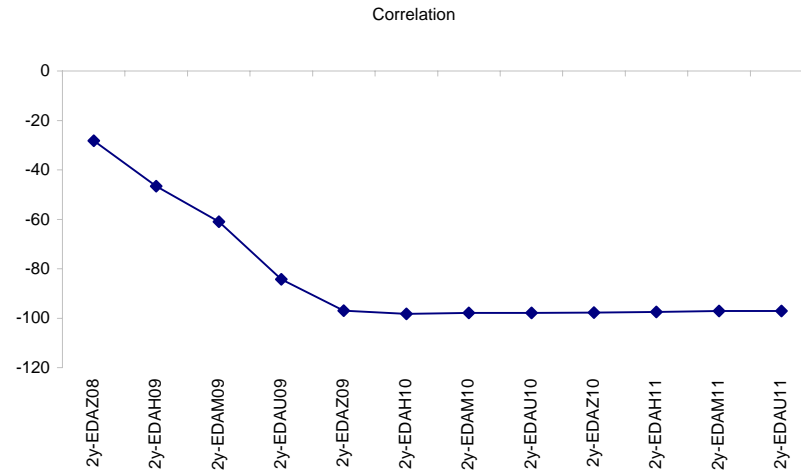
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAZ08	0.150	1.97	1.82	2y-EDAZ08	
EDAH09	0.399	1.97	1.58	2y-EDAH09	
EDAM09	0.649	1.97	1.33	2y-EDAM09	
EDAU09	0.898	1.97	1.08	2y-EDAU09	
EDAZ09	1.147	1.97	0.83	2y-EDAZ09	
EDAH10	1.397	1.97	0.58	2y-EDAH10	
EDAM10	1.646	1.97	0.33	2y-EDAM10	
EDAU10	1.895	1.97	0.08	2y-EDAU10	
EDAZ10	2.145	1.97	(0.17)	2y-EDAZ10	
EDAH11	2.394	1.97	(0.42)	2y-EDAH11	
EDAM11	2.643	1.97	(0.67)	2y-EDAM11	
EDAU11	2.912	1.97	(0.94)	2y-EDAU11	

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

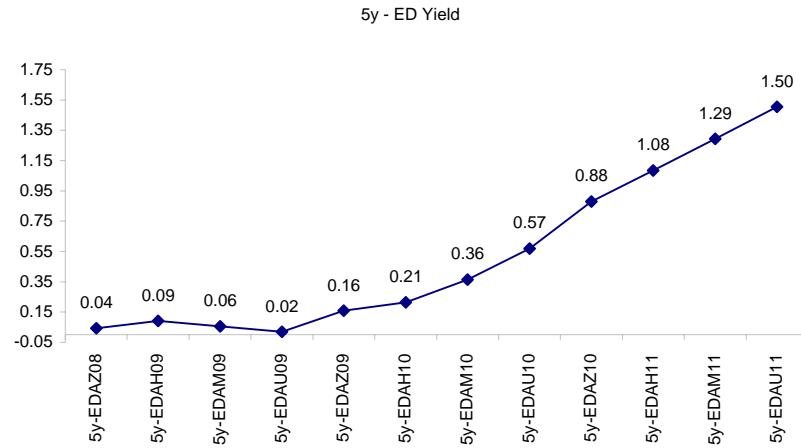


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	5.424	0.04	5y-EDAZ08	-17.428
EDAH09	5.289	0.09	5y-EDAH09	-37.564
EDAM09	5.324	0.06	5y-EDAM09	-51.361
EDAU09	5.399	0.02	5y-EDAU09	-75.844
EDAZ09	5.539	0.16	5y-EDAZ09	-92.225
EDAH10	5.594	0.21	5y-EDAH10	-96.521
EDAM10	5.744	0.36	5y-EDAM10	-98.016
EDAU10	5.949	0.57	5y-EDAU10	-98.989
EDAZ10	6.259	0.88	5y-EDAZ10	-99.513
EDAH11	6.464	1.08	5y-EDAH11	-99.729
EDAM11	6.674	1.29	5y-EDAM11	-99.623
EDAU11	6.884	1.50	5y-EDAU11	-99.480

Price = Outright Decimal Price - Euro Contract Price

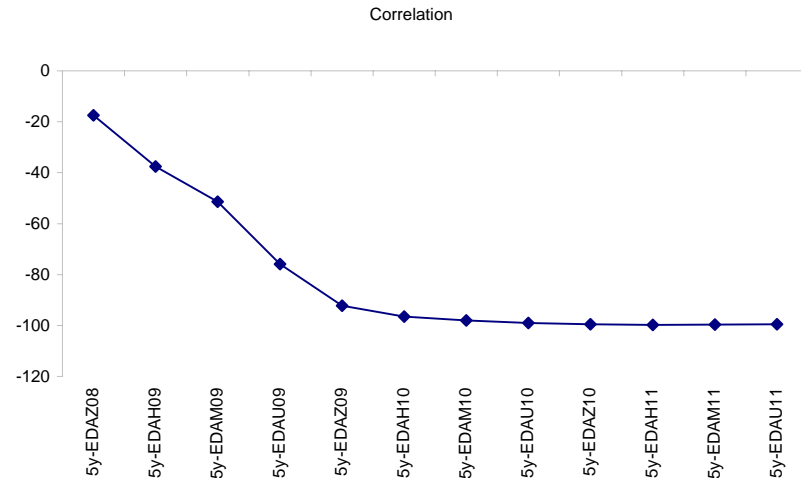
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAZ08	0.150	4.63	4.48	5y-EDAZ08
EDAH09	0.399	4.63	4.23	5y-EDAH09
EDAM09	0.649	4.63	3.98	5y-EDAM09
EDAU09	0.898	4.63	3.73	5y-EDAU09
EDAZ09	1.147	4.63	3.48	5y-EDAZ09
EDAH10	1.397	4.63	3.23	5y-EDAH10
EDAM10	1.646	4.63	2.98	5y-EDAM10
EDAU10	1.895	4.63	2.73	5y-EDAU10
EDAZ10	2.145	4.63	2.48	5y-EDAZ10
EDAH11	2.394	4.63	2.23	5y-EDAH11
EDAM11	2.643	4.63	1.98	5y-EDAM11
EDAU11	2.912	4.63	1.72	5y-EDAU11

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

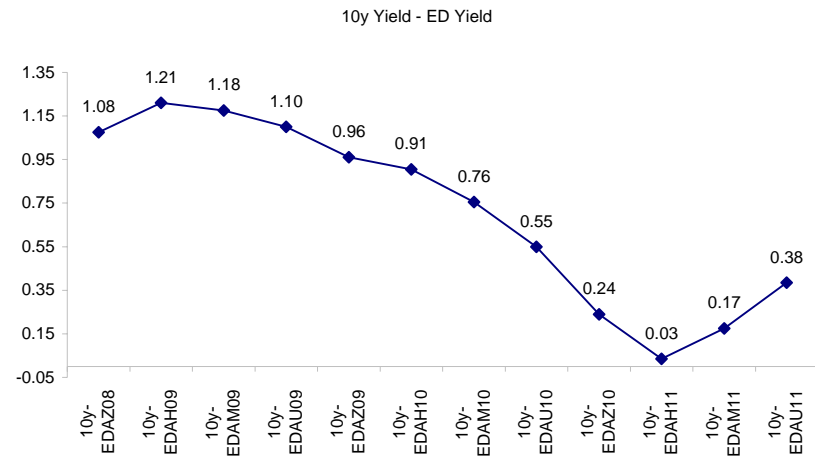


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	5.424	1.08	10y-EDAZ08	-39.021
EDAH09	5.289	1.21	10y-EDAH09	-54.809
EDAM09	5.324	1.18	10y-EDAM09	-64.576
EDAU09	5.399	1.10	10y-EDAU09	-80.841
EDAZ09	5.539	0.96	10y-EDAZ09	-88.674
EDAH10	5.594	0.91	10y-EDAH10	-87.931
EDAM10	5.744	0.76	10y-EDAM10	-88.725
EDAU10	5.949	0.55	10y-EDAU10	-90.665
EDAZ10	6.259	0.24	10y-EDAZ10	-92.148
EDAH11	6.464	0.03	10y-EDAH11	-93.781
EDAM11	6.674	0.17	10y-EDAM11	-95.189
EDAU11	6.884	0.38	10y-EDAU11	-95.949

Price = Outright Decimal Price - Euro Contract Price

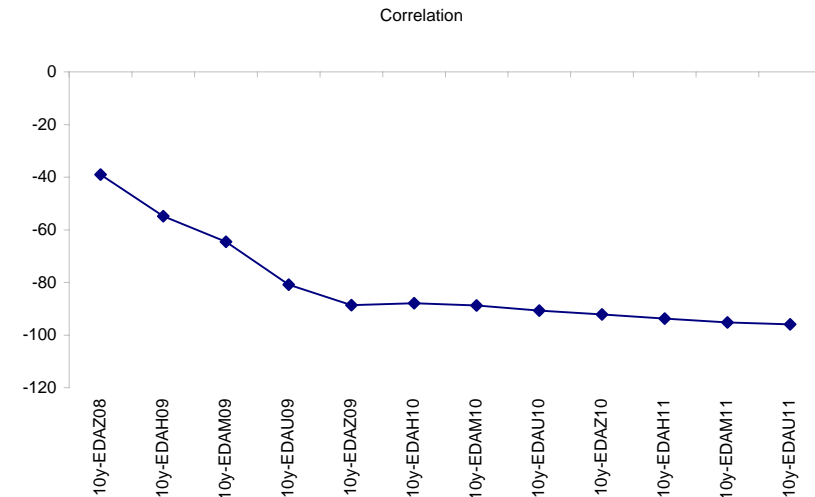
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.150	8.26	8.11	10y-EDAZ08
EDAH09	0.399	8.26	7.87	10y-EDAH09
EDAM09	0.649	8.26	7.62	10y-EDAM09
EDAU09	0.898	8.26	7.37	10y-EDAU09
EDAZ09	1.147	8.26	7.12	10y-EDAZ09
EDAH10	1.397	8.26	6.87	10y-EDAH10
EDAM10	1.646	8.26	6.62	10y-EDAM10
EDAU10	1.895	8.26	6.37	10y-EDAU10
EDAZ10	2.145	8.26	6.12	10y-EDAZ10
EDAH11	2.394	8.26	5.87	10y-EDAH11
EDAM11	2.643	8.26	5.62	10y-EDAM11
EDAU11	2.912	8.26	5.35	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.

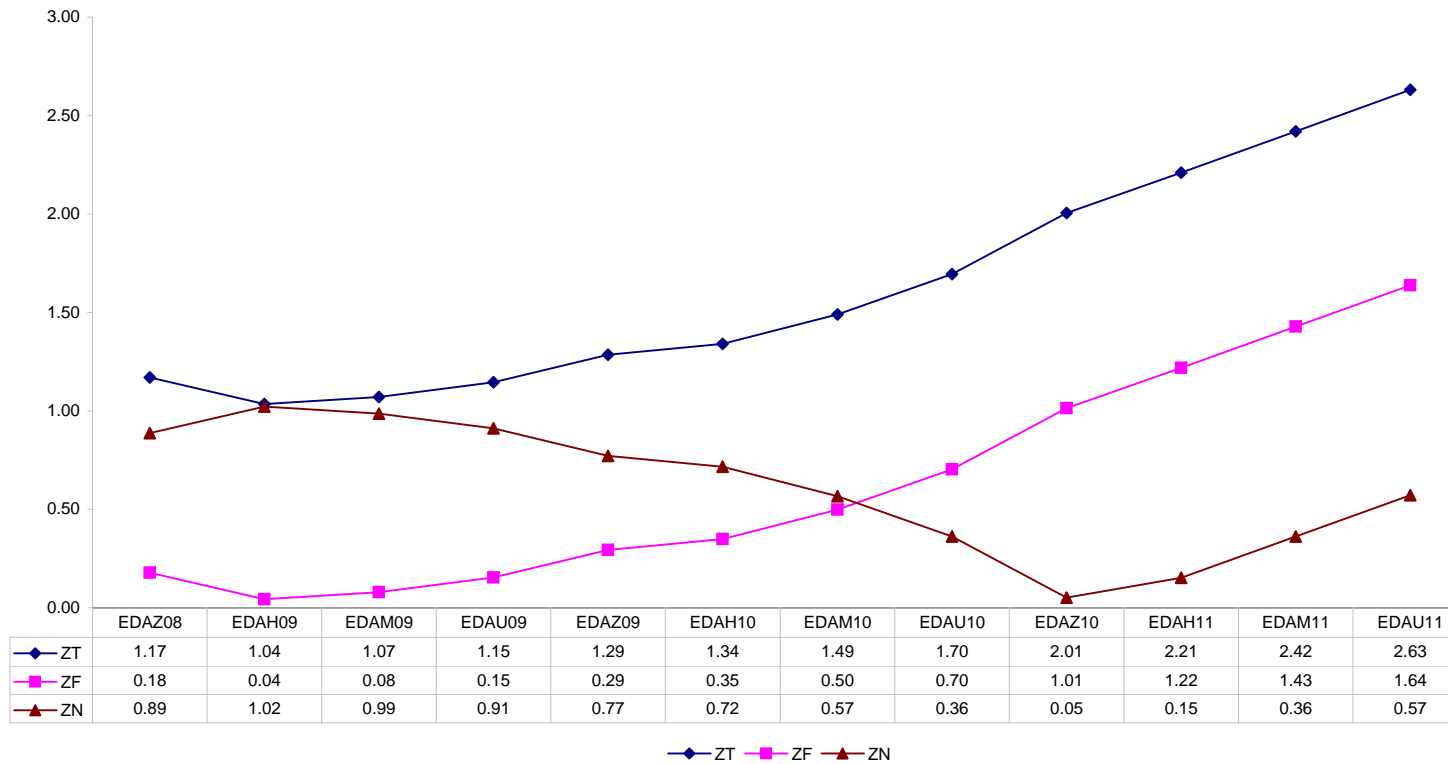
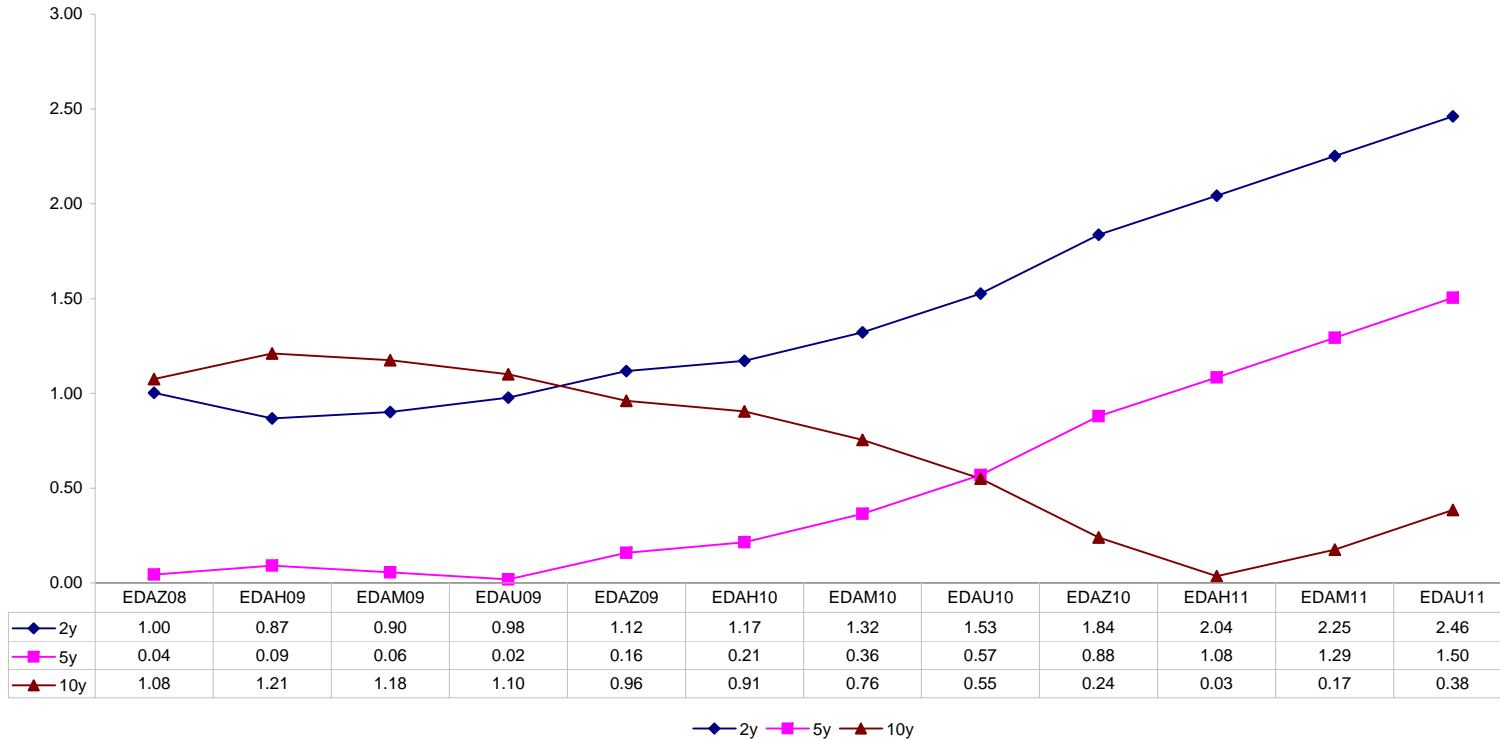
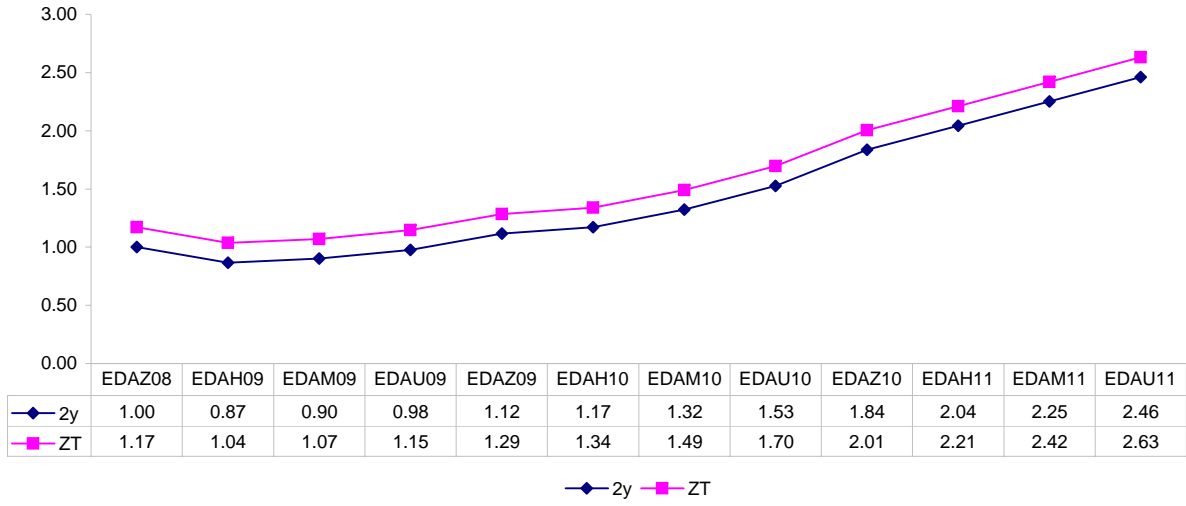


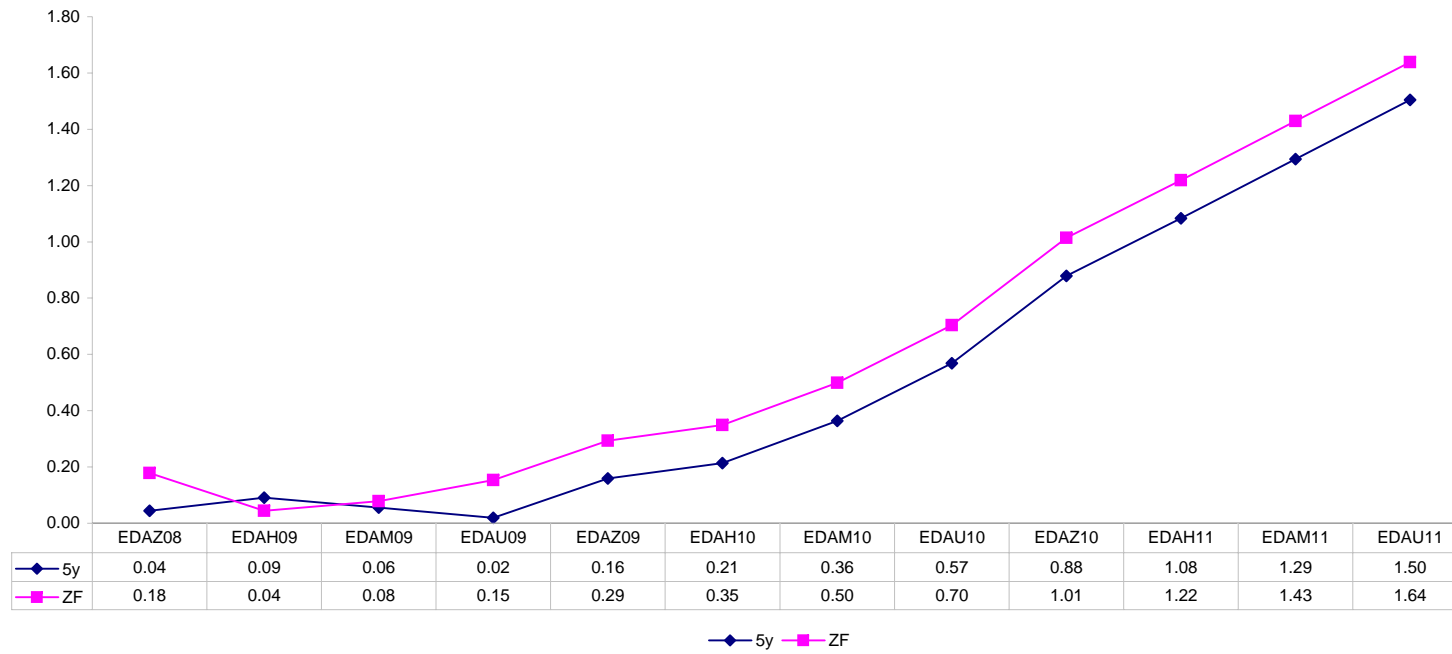
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



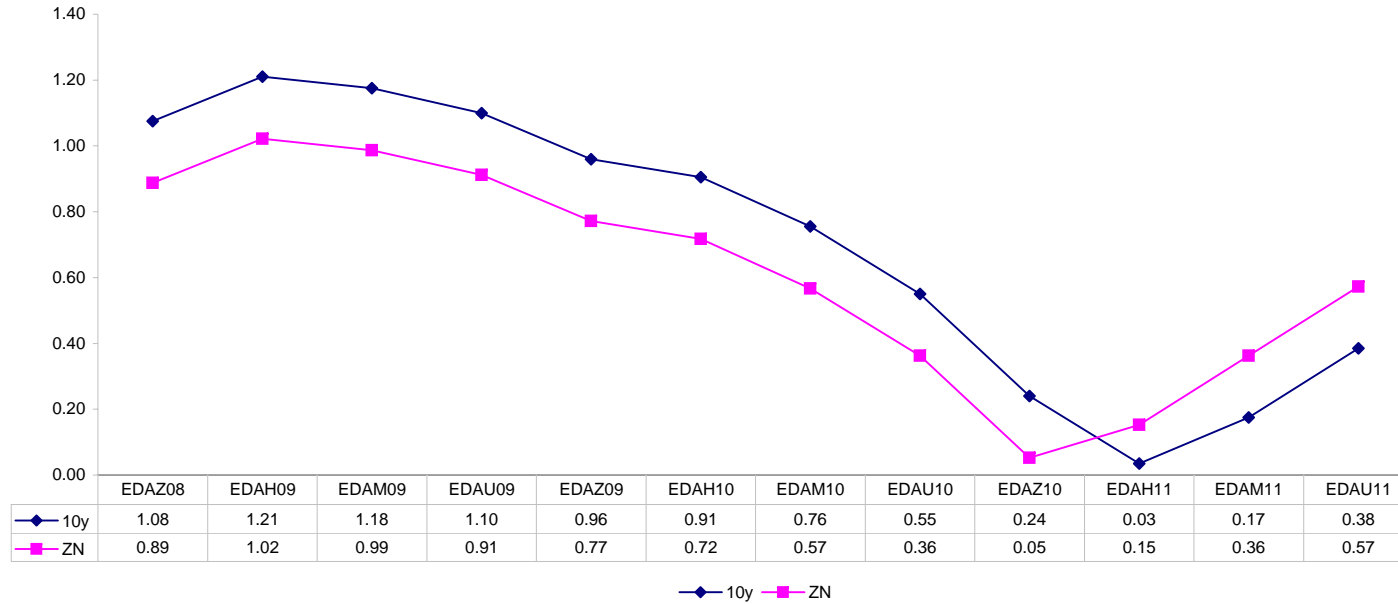
2y Basis TED Curve



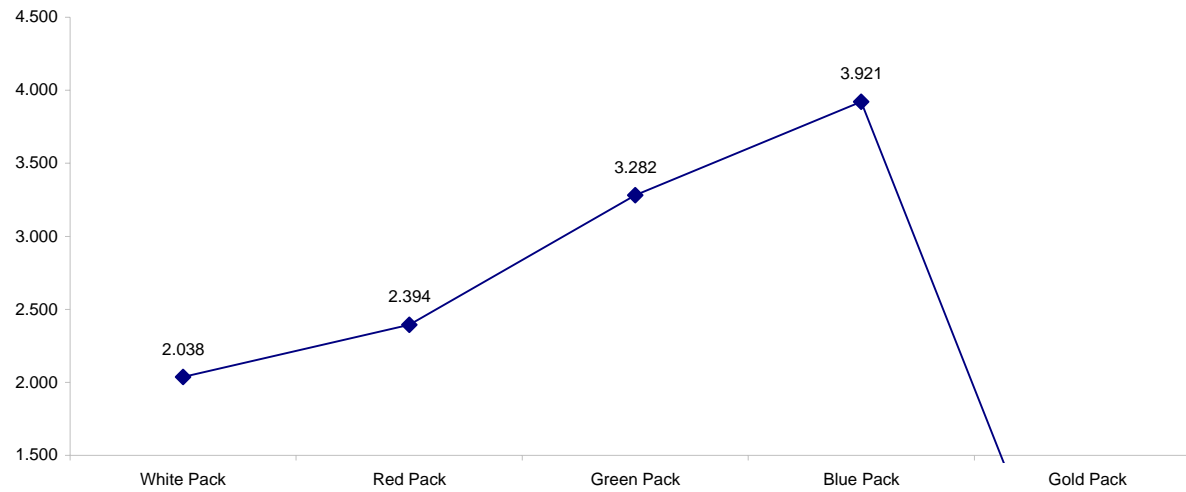
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.038	-15.313	9800.000
Red Pack	2.394	-18.125	9765.250
Green Pack	3.282	-20.250	9678.875
Blue Pack	3.921	-17.625	9617.000
Gold Pack		-5.000	9592.375



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

