

The Morning Email: TERM TEDS & Dirty TEDS

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Want something added? Let me know: jgoulding@ghco.com

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Treasury Futures and Cash				
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	106.0000	106.000	2.371	1.98
ZF	111.6094	111.195	3.029	4.17
ZN	115.2813	115.090	3.517	6.32
2y	99.891	99.2850	2.429	1.90
5y	99.928	99.2970	3.137	4.57
10y	101.563	101.1800	3.809	8.13

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.190	2.810	7	0.018	SEP	
EDAZ08	97.025	2.975	98	0.268	DEC	White
EDAH09	97.035	2.965	189	0.517	MAR	Pack
EDAM09	96.900	3.100	280	0.766	JUN	
EDAU09	96.690	3.310	371	1.016	SEP	
EDAZ09	96.420	3.580	462	1.265	DEC	Red
EDAH10	96.250	3.750	553	1.514	MAR	Pack
EDAM10	96.060	3.940	644	1.764	JUN	
EDAU10	95.895	4.105	735	2.013	SEP	
EDAZ10	95.745	4.255	826	2.262	DEC	Green
EDAH11	95.675	4.325	917	2.512	MAR	Pack
EDAM11	95.600	4.400	1008	2.761	JUN	
EDAU11	95.550	4.450	1106	3.029	SEP	
EDAZ11	95.490	4.510	1197	3.279	DEC	Blue Pack
EDAH12	95.485	4.515	1288	3.528	MAR	
EDAM12	95.420	4.580	1379	3.777	JUN	
EDAU12	95.350	4.650	1470	4.027	SEP	
EDAZ12	95.295	4.705	1561	4.276	DEC	Gold Pack
EDAH13	95.265	4.735	1652	4.525	MAR	
EDAM13	95.245	4.755	1743	4.775	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.026	-6.563	9703.750	
Red Pack	3.730	-17.500	9635.500	Pack
Green Pack	4.377	-15.750	9572.875	Prices
Blue Pack	4.629	-11.750	9548.625	
Gold Pack	4.834	-12.125	9528.875	

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.

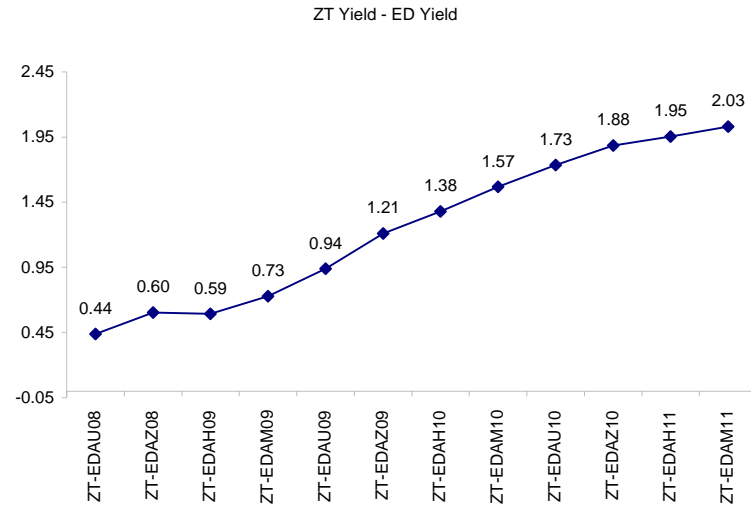
jgoulding@ghco.com

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.

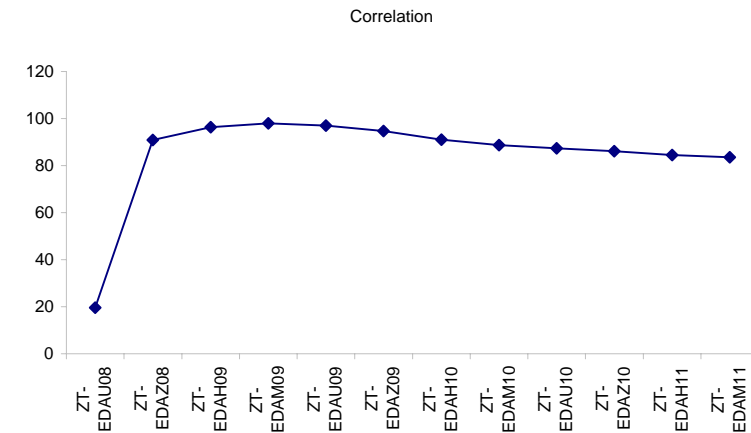
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.810	0.44	ZT-EDAU08	19.578
EDAZ08	8.975	0.60	ZT-EDAZ08	90.897
EDAH09	8.965	0.59	ZT-EDAH09	96.294
EDAM09	9.100	0.73	ZT-EDAM09	97.952
EDAU09	9.310	0.94	ZT-EDAU09	96.993
EDAZ09	9.580	1.21	ZT-EDAZ09	94.731
EDAH10	9.750	1.38	ZT-EDAH10	90.969
EDAM10	9.940	1.57	ZT-EDAM10	88.747
EDAU10	10.105	1.73	ZT-EDAU10	87.324
EDAZ10	10.255	1.88	ZT-EDAZ10	86.172
EDAH11	10.325	1.95	ZT-EDAH11	84.439
EDAM11	10.400	2.03	ZT-EDAM11	83.562

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	
EDAU08	0.018	1.98	1.96	ZT-EDAU08	
EDAZ08	0.268	1.98	1.71	ZT-EDAZ08	
EDAH09	0.517	1.98	1.46	ZT-EDAH09	
EDAM09	0.766	1.98	1.21	ZT-EDAM09	
EDAU09	1.016	1.98	0.96	ZT-EDAU09	
EDAZ09	1.265	1.98	0.71	ZT-EDAZ09	
EDAH10	1.514	1.98	0.46	ZT-EDAH10	
EDAM10	1.764	1.98	0.21	ZT-EDAM10	
EDAU10	2.013	1.98	(0.04)	ZT-EDAU10	
EDAZ10	2.262	1.98	(0.29)	ZT-EDAZ10	
EDAH11	2.512	1.98	(0.54)	ZT-EDAH11	
EDAM11	2.761	1.98	(0.79)	ZT-EDAM11	

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

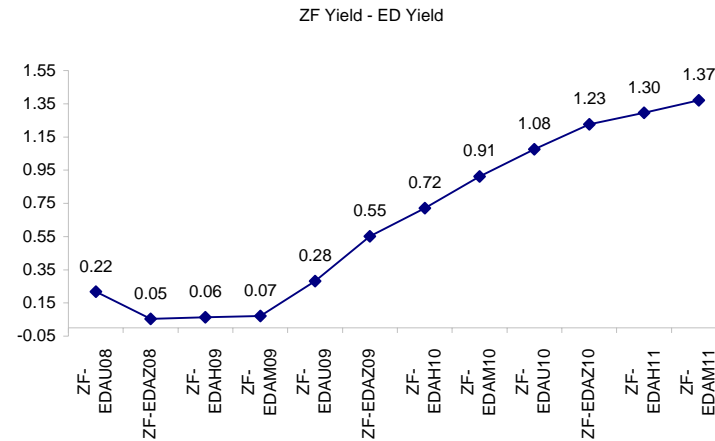


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	14.419	0.22	ZF-EDAU08	18.756
EDAZ08	14.584	0.05	ZF-EDAZ08	86.550
EDAH09	14.574	0.06	ZF-EDAH09	92.929
EDAM09	14.709	0.07	ZF-EDAM09	96.088
EDAU09	14.919	0.28	ZF-EDAU09	97.006
EDAZ09	15.189	0.55	ZF-EDAZ09	95.791
EDAH10	15.359	0.72	ZF-EDAH10	92.753
EDAM10	15.549	0.91	ZF-EDAM10	90.507
EDAU10	15.714	1.08	ZF-EDAU10	89.327
EDAZ10	15.864	1.23	ZF-EDAZ10	88.694
EDAH11	15.934	1.30	ZF-EDAH11	87.057
EDAM11	16.009	1.37	ZF-EDAM11	86.468

Price = Outright Decimal Price - Euro Contract Price

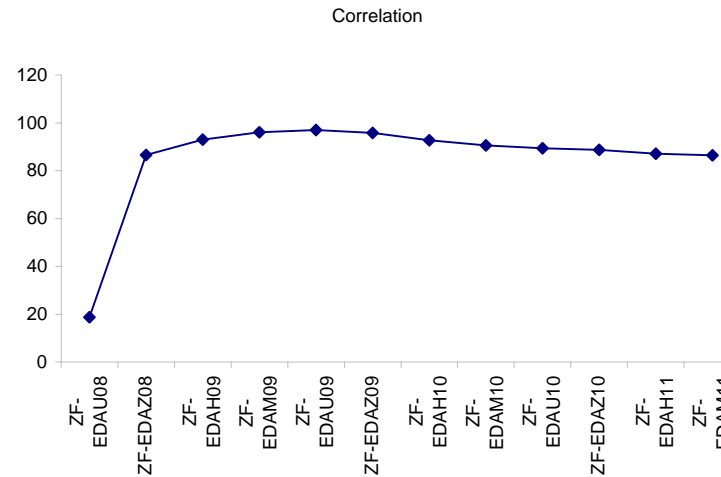
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAU08	0.018	4.17	4.16	ZF-EDAU08		
EDAZ08	0.268	4.17	3.91	ZF-EDAZ08		
EDAH09	0.517	4.17	3.66	ZF-EDAH09		
EDAM09	0.766	4.17	3.41	ZF-EDAM09		
EDAU09	1.016	4.17	3.16	ZF-EDAU09		
EDAZ09	1.265	4.17	2.91	ZF-EDAZ09		
EDAH10	1.514	4.17	2.66	ZF-EDAH10		
EDAM10	1.764	4.17	2.41	ZF-EDAM10		
EDAU10	2.013	4.17	2.16	ZF-EDAU10		
EDAZ10	2.262	4.17	1.91	ZF-EDAZ10		
EDAH11	2.512	4.17	1.66	ZF-EDAH11		
EDAM11	2.761	4.17	1.41	ZF-EDAM11		

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

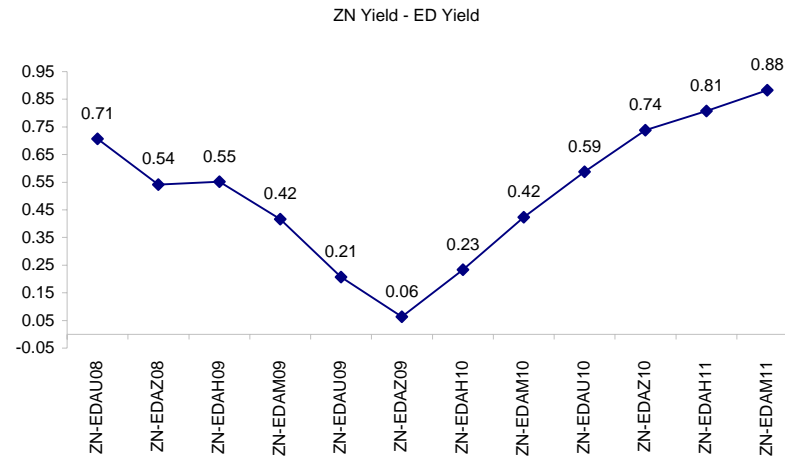


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	18.091	0.71	ZN-EDAU08	24.240
EDAZ08	18.256	0.54	ZN-EDAZ08	86.121
EDAH09	18.246	0.55	ZN-EDAH09	92.887
EDAM09	18.381	0.42	ZN-EDAM09	96.411
EDAU09	18.591	0.21	ZN-EDAU09	97.586
EDAZ09	18.861	0.06	ZN-EDAZ09	96.691
EDAH10	19.031	0.23	ZN-EDAH10	92.753
EDAM10	19.221	0.42	ZN-EDAM10	90.507
EDAU10	19.386	0.59	ZN-EDAU10	89.327
EDAZ10	19.536	0.74	ZN-EDAZ10	88.694
EDAH11	19.606	0.81	ZN-EDAH11	87.057
EDAM11	19.681	0.88	ZN-EDAM11	86.468

Price = Outright Decimal Price - Euro Contract Price

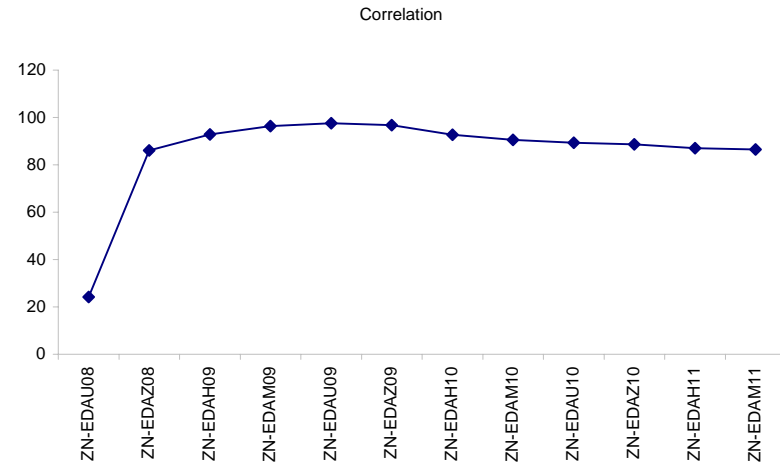
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.018	6.32	6.30	ZN-EDAU08		
EDAZ08	0.268	6.32	6.05	ZN-EDAZ08		
EDAH09	0.517	6.32	5.80	ZN-EDAH09		
EDAM09	0.766	6.32	5.55	ZN-EDAM09		
EDAU09	1.016	6.32	5.30	ZN-EDAU09		
EDAZ09	1.265	6.32	5.05	ZN-EDAZ09		
EDAH10	1.514	6.32	4.80	ZN-EDAH10		
EDAM10	1.764	6.32	4.55	ZN-EDAM10		
EDAU10	2.013	6.32	4.30	ZN-EDAU10		
EDAZ10	2.262	6.32	4.05	ZN-EDAZ10		
EDAH11	2.512	6.32	3.80	ZN-EDAH11		
EDAM11	2.761	6.32	3.55	ZN-EDAM11		

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

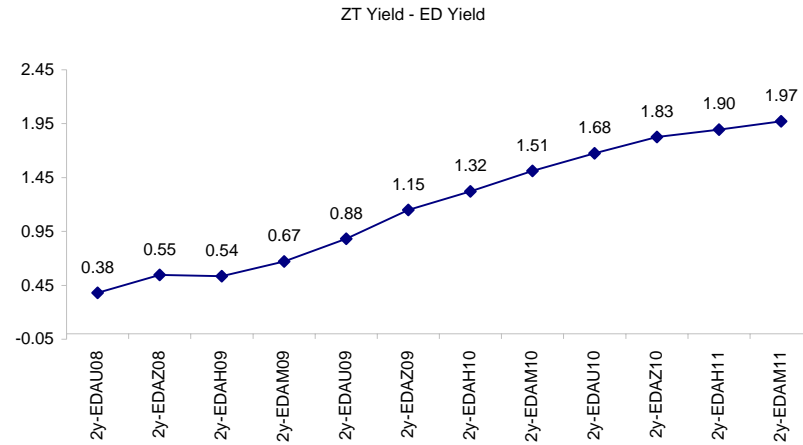


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.701	0.38	2y-EDAU08	2.338
EDAZ08	2.866	0.55	2y-EDAZ08	-66.854
EDAH09	2.856	0.54	2y-EDAH09	-78.036
EDAM09	2.991	0.67	2y-EDAM09	-80.395
EDAU09	3.201	0.88	2y-EDAU09	-79.060
EDAZ09	3.471	1.15	2y-EDAZ09	-74.571
EDAH10	3.641	1.32	2y-EDAH10	-66.174
EDAM10	3.831	1.51	2y-EDAM10	-61.357
EDAU10	3.996	1.68	2y-EDAU10	-58.746
EDAZ10	4.146	1.83	2y-EDAZ10	-57.204
EDAH11	4.216	1.90	2y-EDAH11	-54.869
EDAM11	4.291	1.97	2y-EDAM11	-54.151

Price = Outright Decimal Price - Euro Contract Price

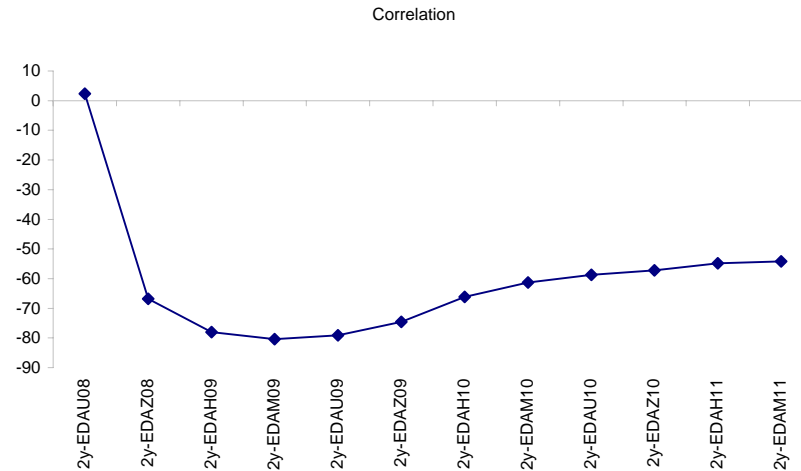
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.018	1.90	1.89	2y-EDAU08	
EDAZ08	0.268	1.90	1.64	2y-EDAZ08	
EDAH09	0.517	1.90	1.39	2y-EDAH09	
EDAM09	0.766	1.90	1.14	2y-EDAM09	
EDAU09	1.016	1.90	0.89	2y-EDAU09	
EDAZ09	1.265	1.90	0.64	2y-EDAZ09	
EDAH10	1.514	1.90	0.39	2y-EDAH10	
EDAM10	1.764	1.90	0.14	2y-EDAM10	
EDAU10	2.013	1.90	(0.11)	2y-EDAU10	
EDAZ10	2.262	1.90	(0.36)	2y-EDAZ10	
EDAH11	2.512	1.90	(0.61)	2y-EDAH11	
EDAM11	2.761	1.90	(0.86)	2y-EDAM11	

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

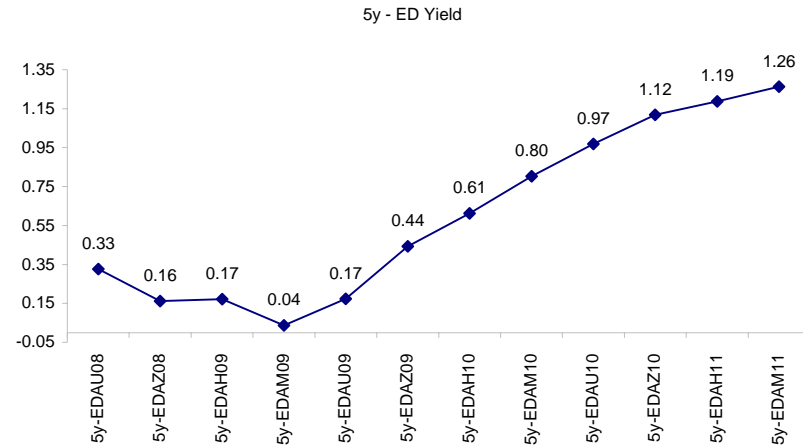


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.738	0.33	5y-EDAU08	-6.133
EDAZ08	2.903	0.16	5y-EDAZ08	-72.350
EDAH09	2.893	0.17	5y-EDAH09	-84.464
EDAM09	3.028	0.04	5y-EDAM09	-88.074
EDAU09	3.238	0.17	5y-EDAU09	-88.816
EDAZ09	3.508	0.44	5y-EDAZ09	-86.225
EDAH10	3.678	0.61	5y-EDAH10	-79.732
EDAM10	3.868	0.80	5y-EDAM10	-75.426
EDAU10	4.033	0.97	5y-EDAU10	-73.275
EDAZ10	4.183	1.12	5y-EDAZ10	-72.261
EDAH11	4.253	1.19	5y-EDAH11	-70.340
EDAM11	4.328	1.26	5y-EDAM11	-69.911

Price = Outright Decimal Price - Euro Contract Price

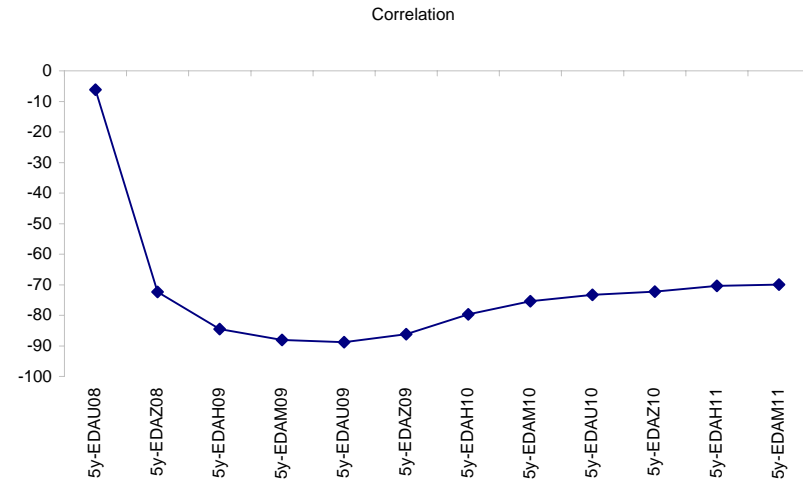
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.018	4.57	4.55	5y-EDAU08
EDAZ08	0.268	4.57	4.30	5y-EDAZ08
EDAH09	0.517	4.57	4.05	5y-EDAH09
EDAM09	0.766	4.57	3.80	5y-EDAM09
EDAU09	1.016	4.57	3.56	5y-EDAU09
EDAZ09	1.265	4.57	3.31	5y-EDAZ09
EDAH10	1.514	4.57	3.06	5y-EDAH10
EDAM10	1.764	4.57	2.81	5y-EDAM10
EDAU10	2.013	4.57	2.56	5y-EDAU10
EDAZ10	2.262	4.57	2.31	5y-EDAZ10
EDAH11	2.512	4.57	2.06	5y-EDAH11
EDAM11	2.761	4.57	1.81	5y-EDAM11

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

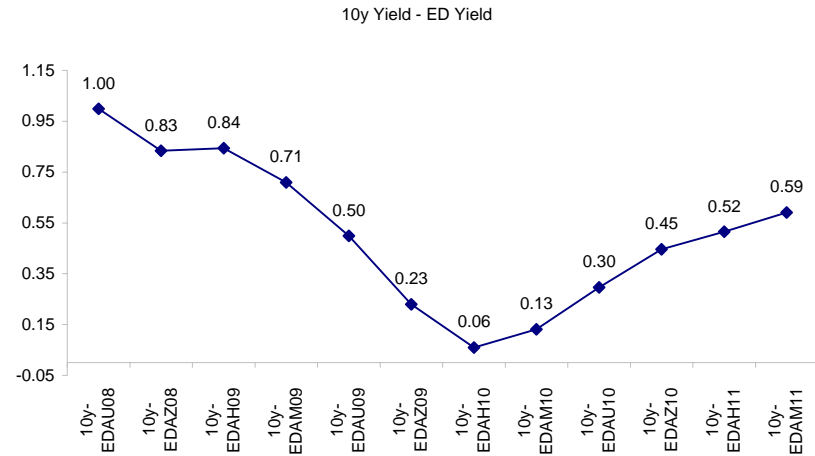


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.738	1.00	10y-EDAU08	-25.349
EDAZ08	2.903	0.83	10y-EDAZ08	-78.285
EDAH09	2.893	0.84	10y-EDAH09	-89.122
EDAM09	3.028	0.71	10y-EDAM09	-92.914
EDAU09	3.238	0.50	10y-EDAU09	-94.415
EDAZ09	3.508	0.23	10y-EDAZ09	-93.897
EDAH10	3.678	0.06	10y-EDAH10	-90.756
EDAM10	3.868	0.13	10y-EDAM10	-87.885
EDAU10	4.033	0.30	10y-EDAU10	-86.318
EDAZ10	4.183	0.45	10y-EDAZ10	-85.768
EDAH11	4.253	0.52	10y-EDAH11	-84.582
EDAM11	4.328	0.59	10y-EDAM11	-84.522

Price = Outright Decimal Price - Euro Contract Price

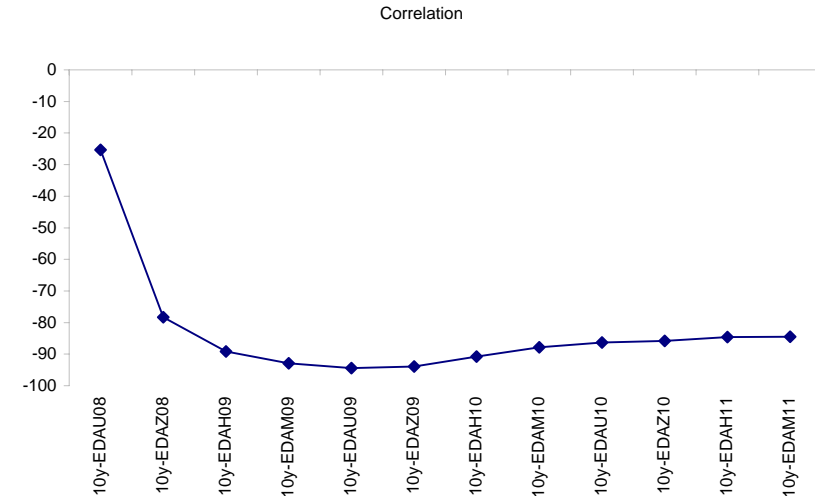
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.018	8.13	8.11	10y-EDAU08
EDAZ08	0.268	8.13	7.86	10y-EDAZ08
EDAH09	0.517	8.13	7.61	10y-EDAH09
EDAM09	0.766	8.13	7.37	10y-EDAM09
EDAU09	1.016	8.13	7.12	10y-EDAU09
EDAZ09	1.265	8.13	6.87	10y-EDAZ09
EDAH10	1.514	8.13	6.62	10y-EDAH10
EDAM10	1.764	8.13	6.37	10y-EDAM10
EDAU10	2.013	8.13	6.12	10y-EDAU10
EDAZ10	2.262	8.13	5.87	10y-EDAZ10
EDAH11	2.512	8.13	5.62	10y-EDAH11
EDAM11	2.761	8.13	5.37	10y-EDAM11

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.

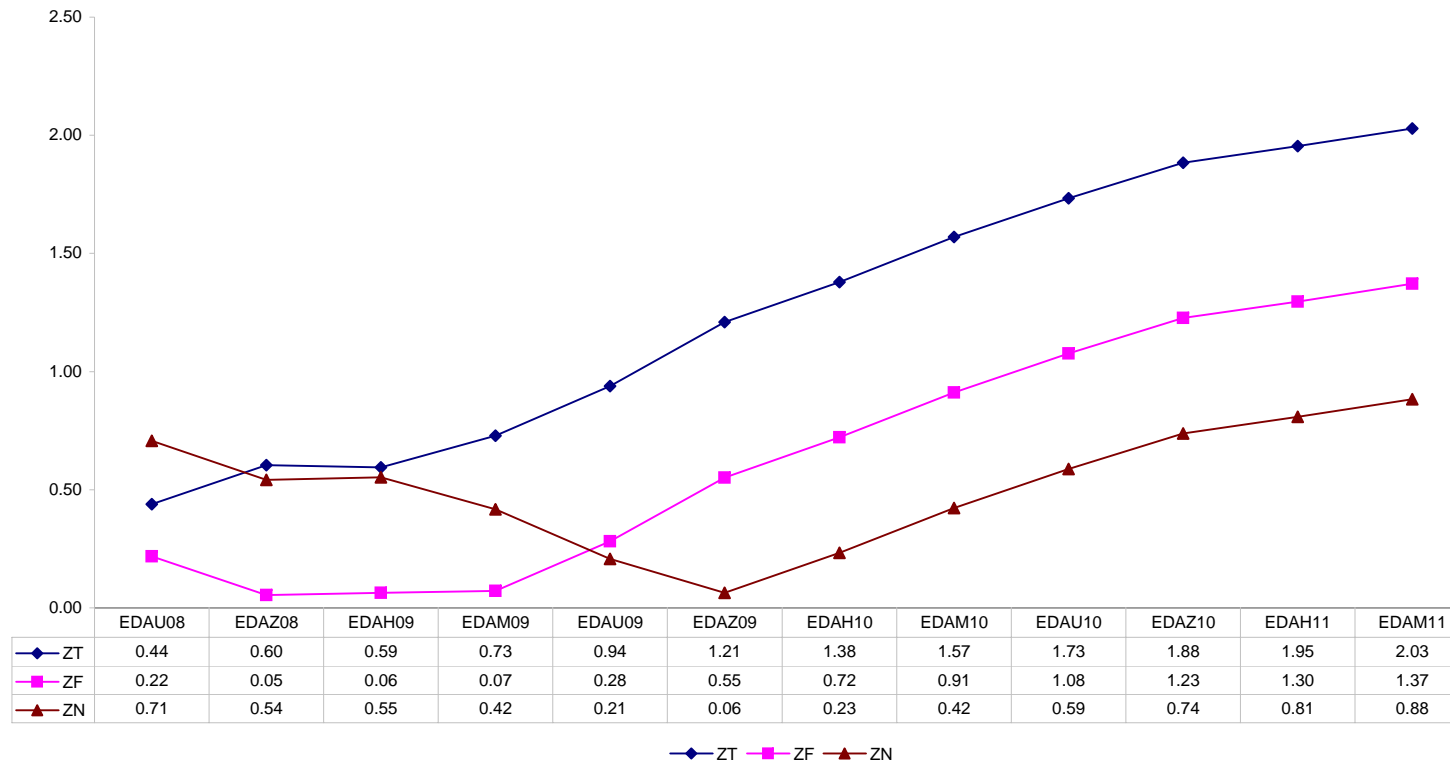
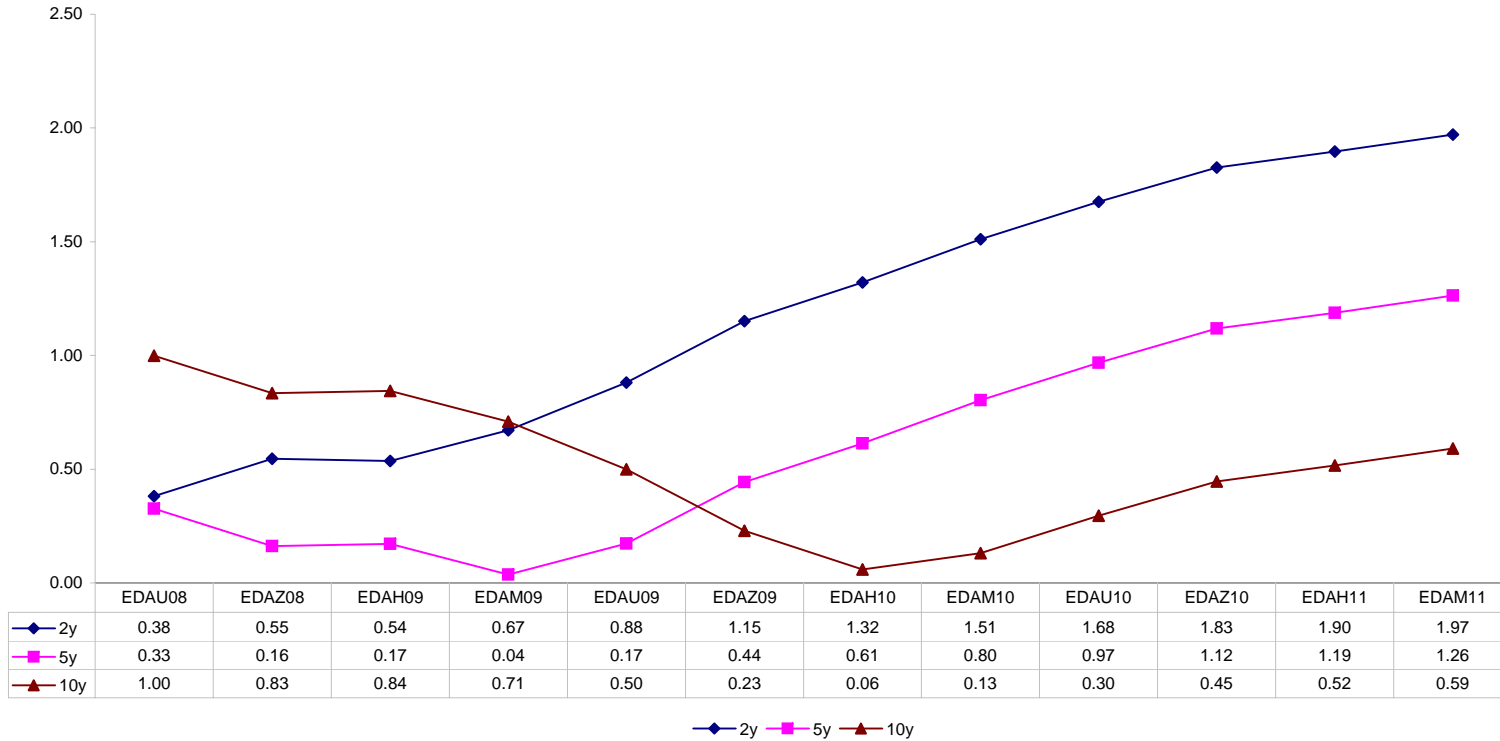
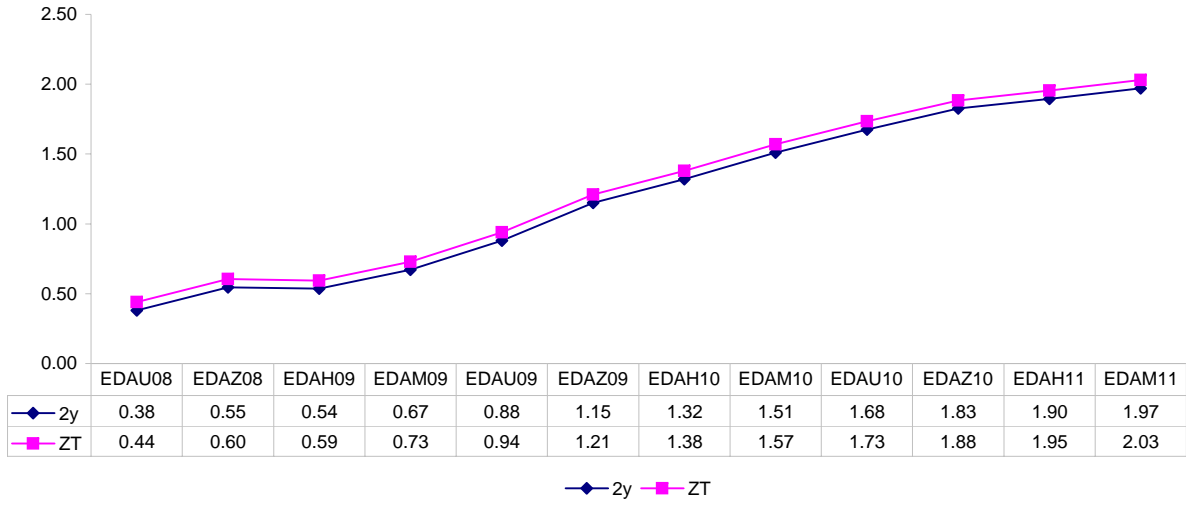


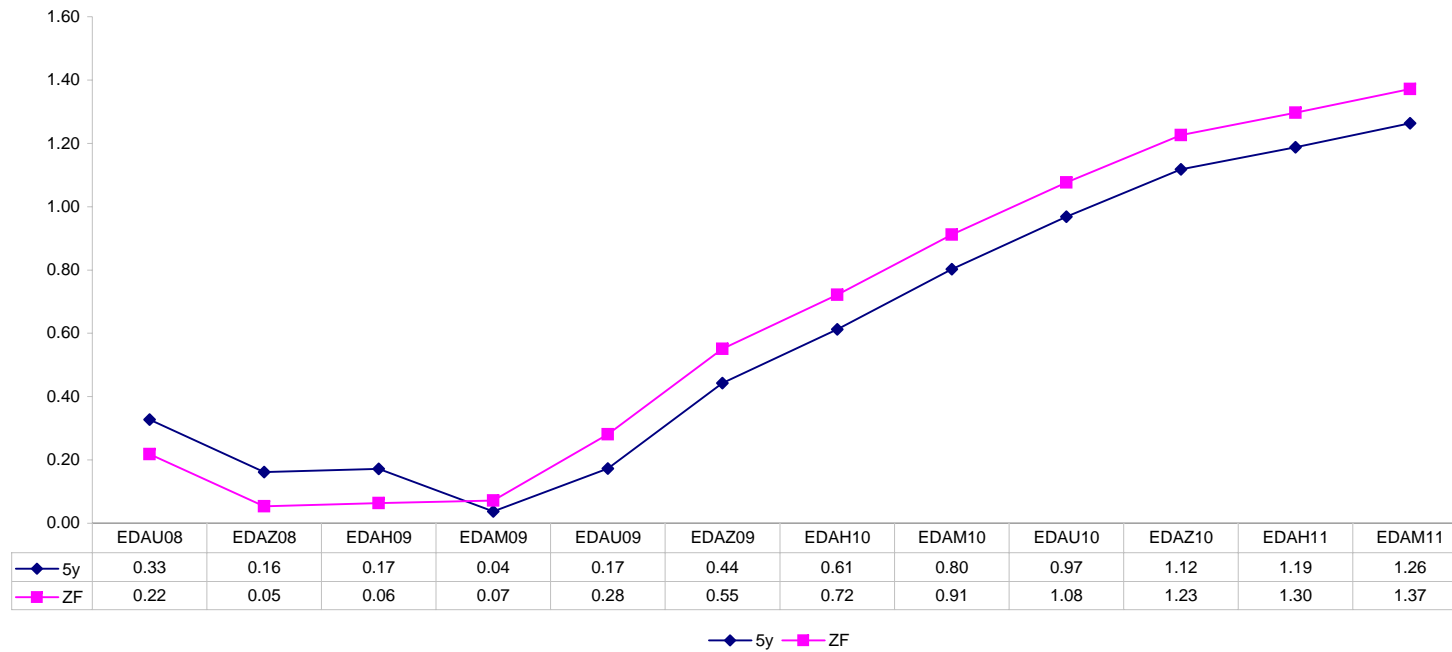
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



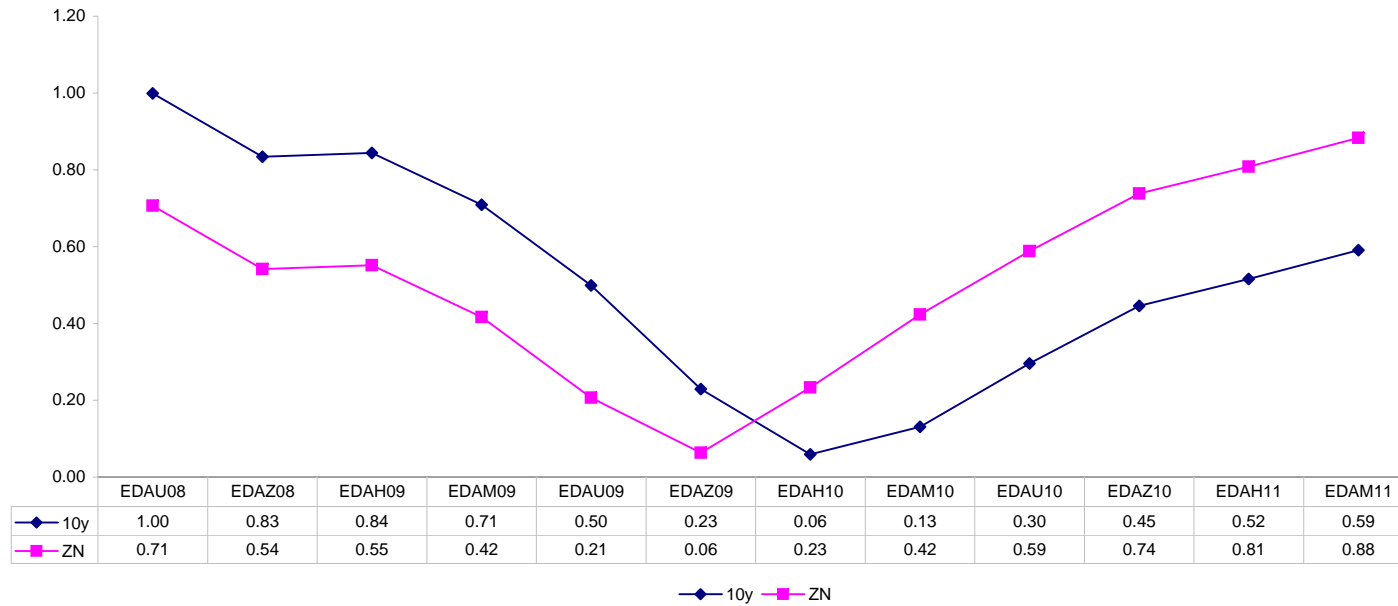
2y Basis TED Curve



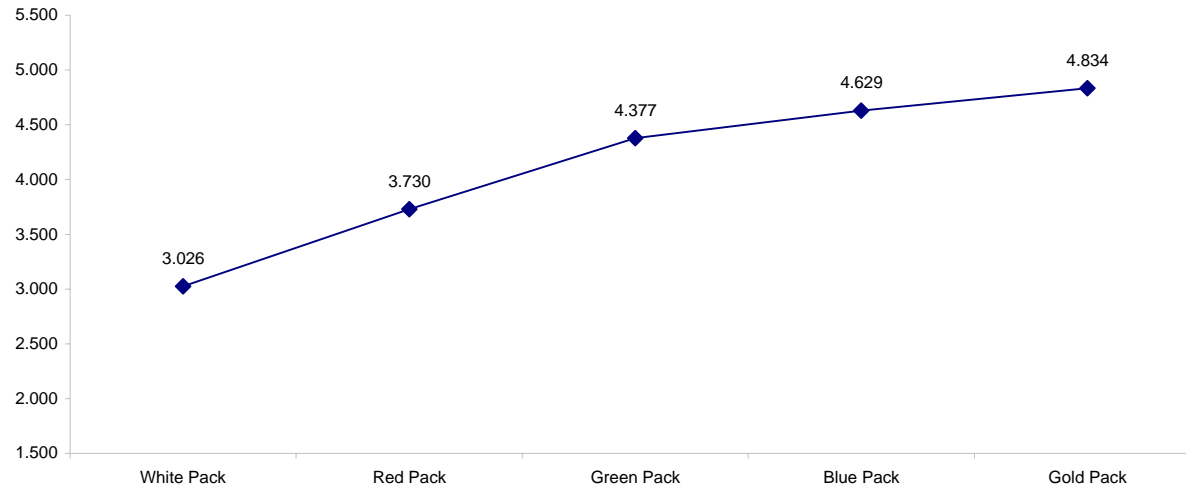
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.026	-6.563	9703.750
Red Pack	3.730	-17.500	9635.500
Green Pack	4.377	-15.750	9572.875
Blue Pack	4.629	-11.750	9548.625
Gold Pack	4.834	-12.125	9528.875



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

