

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	104.8969	104.287	2.871	1.90
ZF	109.2188	109.070	3.545	4.08
ZN	112.1719	112.055	4.091	6.48
2y	99.484	99.1550	2.897	1.87
5y	99.563	99.1800	3.594	4.49
10y	97.563	97.1800	4.174	8.09

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	96.860	3.140	87	0.238	SEP	
EDAZ08	96.520	3.480	178	0.487	DEC	White
EDAH09	96.340	3.660	269	0.736	MAR	Pack
EDAM09	96.155	3.845	360	0.986	JUN	
EDAU09	95.940	4.060	451	1.235	SEP	
EDAZ09	95.700	4.300	542	1.484	DEC	Red
EDAH10	95.525	4.475	633	1.734	MAR	Pack
EDAM10	95.375	4.625	724	1.983	JUN	
EDAU10	95.265	4.735	815	2.232	SEP	
EDAZ10	95.175	4.825	906	2.482	DEC	Green
EDAH11	95.140	4.860	997	2.731	MAR	Pack
EDAM11	95.090	4.910	1088	2.980	JUN	
EDAU11	95.045	4.955	1186	3.249	SEP	
EDAZ11	94.985	5.015	1277	3.498	DEC	Blue Pack
EDAH12	94.965	5.035	1368	3.747	MAR	
EDAM12	94.935	5.065	1459	3.997	JUN	
EDAU12	94.910	5.090	1550	4.246	SEP	
EDAZ12	94.860	5.140	1641	4.495	DEC	Gold Pack
EDAH13	94.840	5.160	1732	4.745	MAR	
EDAM13	94.810	5.190	1823	4.994	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.612	4.625	9646.875	
Red Pack	4.475	4.750	9563.500	Pack
Green Pack	4.960	4.750	9516.750	Prices
Blue Pack	5.152	4.375	9498.250	
Gold Pack	5.284	4.125	9485.500	

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.

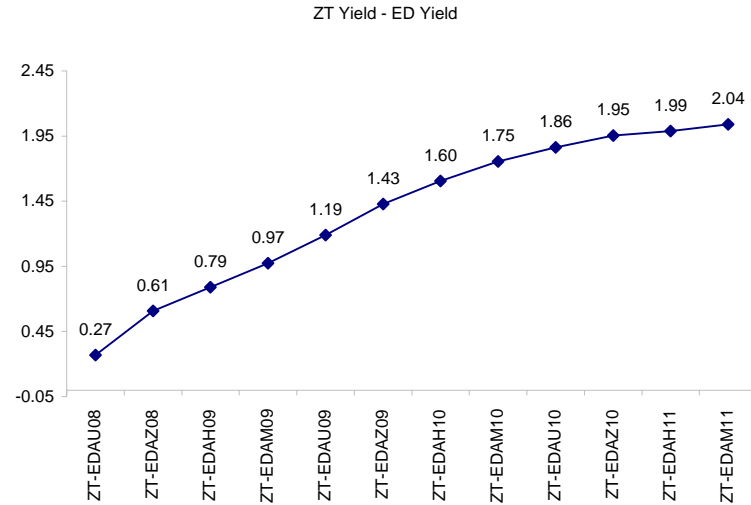
jgoulding@ghco.com

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.

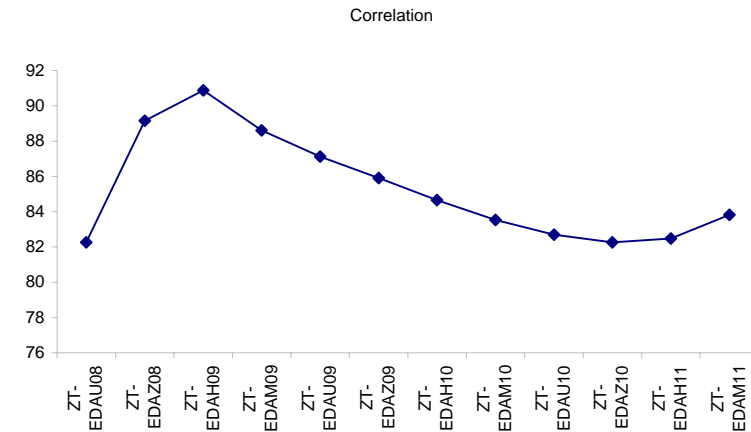
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.037	0.27	ZT-EDAU08	82.262
EDAZ08	8.377	0.61	ZT-EDAZ08	89.152
EDAH09	8.557	0.79	ZT-EDAH09	90.871
EDAM09	8.742	0.97	ZT-EDAM09	88.615
EDAU09	8.957	1.19	ZT-EDAU09	87.119
EDAZ09	9.197	1.43	ZT-EDAZ09	85.906
EDAH10	9.372	1.60	ZT-EDAH10	84.658
EDAM10	9.522	1.75	ZT-EDAM10	83.532
EDAU10	9.632	1.86	ZT-EDAU10	82.686
EDAZ10	9.722	1.95	ZT-EDAZ10	82.263
EDAH11	9.757	1.99	ZT-EDAH11	82.483
EDAM11	9.807	2.04	ZT-EDAM11	83.815

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	0.238	1.90	1.66	ZT-EDAU08		
EDAZ08	0.487	1.90	1.41	ZT-EDAZ08		
EDAH09	0.736	1.90	1.16	ZT-EDAH09		
EDAM09	0.986	1.90	0.91	ZT-EDAM09		
EDAU09	1.235	1.90	0.66	ZT-EDAU09		
EDAZ09	1.484	1.90	0.41	ZT-EDAZ09		
EDAH10	1.734	1.90	0.16	ZT-EDAH10		
EDAM10	1.983	1.90	(0.08)	ZT-EDAM10		
EDAU10	2.232	1.90	(0.33)	ZT-EDAU10		
EDAZ10	2.482	1.90	(0.58)	ZT-EDAZ10		
EDAH11	2.731	1.90	(0.83)	ZT-EDAH11		
EDAM11	2.980	1.90	(1.08)	ZT-EDAM11		

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

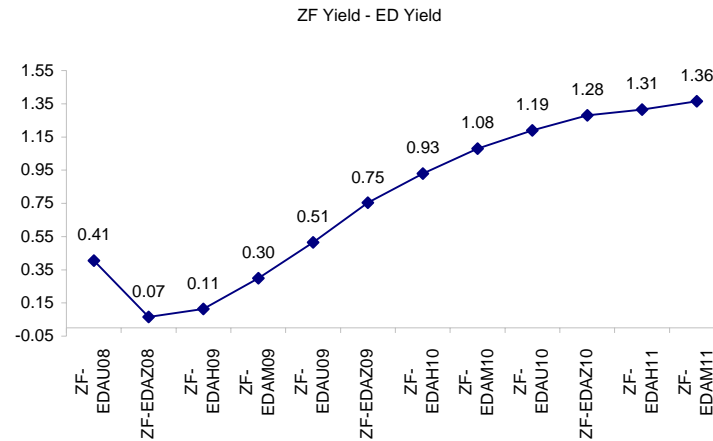


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	12.359	0.41	ZF-EDAU08	83.021
EDAZ08	12.699	0.07	ZF-EDAZ08	88.363
EDAH09	12.879	0.11	ZF-EDAH09	89.562
EDAM09	13.064	0.30	ZF-EDAM09	87.120
EDAU09	13.279	0.51	ZF-EDAU09	86.050
EDAZ09	13.519	0.75	ZF-EDAZ09	85.821
EDAH10	13.694	0.93	ZF-EDAH10	85.083
EDAM10	13.844	1.08	ZF-EDAM10	84.560
EDAU10	13.954	1.19	ZF-EDAU10	84.157
EDAZ10	14.044	1.28	ZF-EDAZ10	84.398
EDAH11	14.079	1.31	ZF-EDAH11	84.835
EDAM11	14.129	1.36	ZF-EDAM11	86.293

Price = Outright Decimal Price - Euro Contract Price

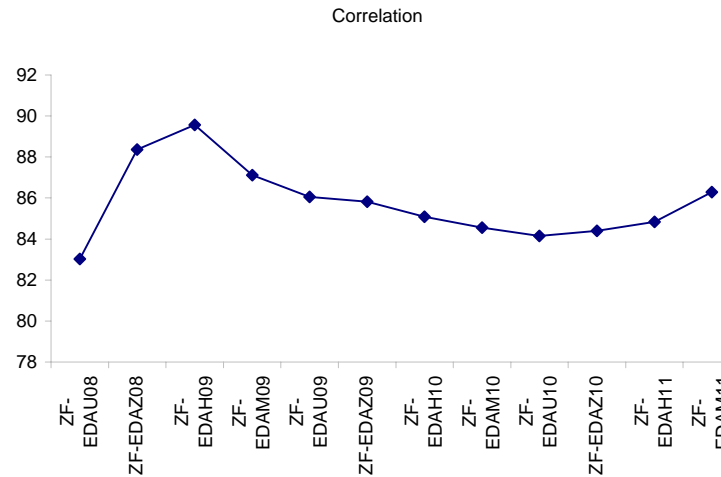
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			ZF Duration	Spread Duration	
EDAU08	0.238	4.08	3.84	ZF-EDAU08		
EDAZ08	0.487	4.08	3.59	ZF-EDAZ08		
EDAH09	0.736	4.08	3.34	ZF-EDAH09		
EDAM09	0.986	4.08	3.09	ZF-EDAM09		
EDAU09	1.235	4.08	2.84	ZF-EDAU09		
EDAZ09	1.484	4.08	2.59	ZF-EDAZ09		
EDAH10	1.734	4.08	2.34	ZF-EDAH10		
EDAM10	1.983	4.08	2.09	ZF-EDAM10		
EDAU10	2.232	4.08	1.84	ZF-EDAU10		
EDAZ10	2.482	4.08	1.59	ZF-EDAZ10		
EDAH11	2.731	4.08	1.35	ZF-EDAH11		
EDAM11	2.980	4.08	1.10	ZF-EDAM11		

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

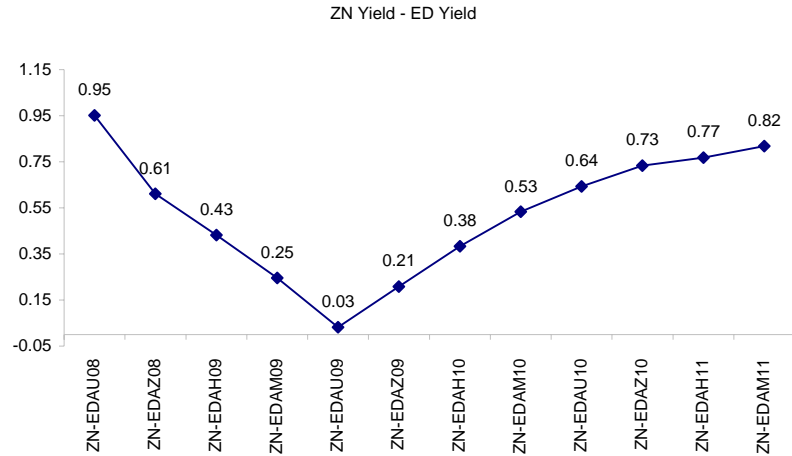


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	15.312	0.95	ZN-EDAU08	87.279
EDAZ08	15.652	0.61	ZN-EDAZ08	92.542
EDAH09	15.832	0.43	ZN-EDAH09	94.204
EDAM09	16.017	0.25	ZN-EDAM09	92.982
EDAU09	16.232	0.03	ZN-EDAU09	92.365
EDAZ09	16.472	0.21	ZN-EDAZ09	92.002
EDAH10	16.647	0.38	ZN-EDAH10	85.083
EDAM10	16.797	0.53	ZN-EDAM10	84.560
EDAU10	16.907	0.64	ZN-EDAU10	84.157
EDAZ10	16.997	0.73	ZN-EDAZ10	84.398
EDAH11	17.032	0.77	ZN-EDAH11	84.835
EDAM11	17.082	0.82	ZN-EDAM11	86.293

Price = Outright Decimal Price - Euro Contract Price

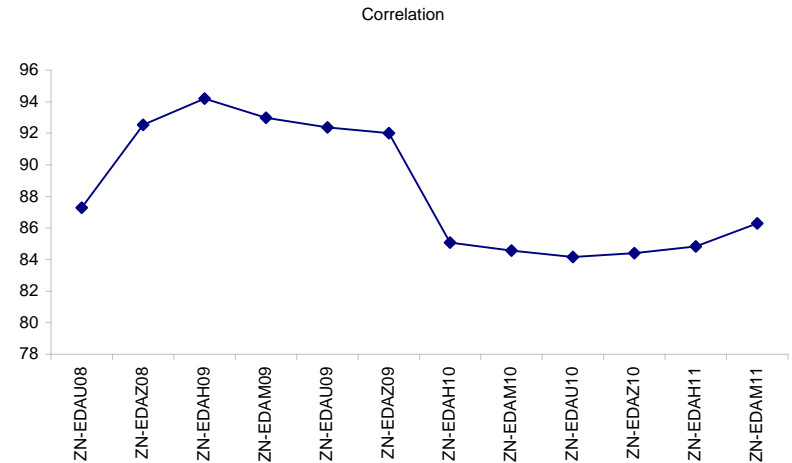
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.238	6.48	6.24	ZN-EDAU08		
EDAZ08	0.487	6.48	5.99	ZN-EDAZ08		
EDAH09	0.736	6.48	5.74	ZN-EDAH09		
EDAM09	0.986	6.48	5.49	ZN-EDAM09		
EDAU09	1.235	6.48	5.24	ZN-EDAU09		
EDAZ09	1.484	6.48	4.99	ZN-EDAZ09		
EDAH10	1.734	6.48	4.74	ZN-EDAH10		
EDAM10	1.983	6.48	4.49	ZN-EDAM10		
EDAU10	2.232	6.48	4.24	ZN-EDAU10		
EDAZ10	2.482	6.48	4.00	ZN-EDAZ10		
EDAH11	2.731	6.48	3.75	ZN-EDAH11		
EDAM11	2.980	6.48	3.50	ZN-EDAM11		

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

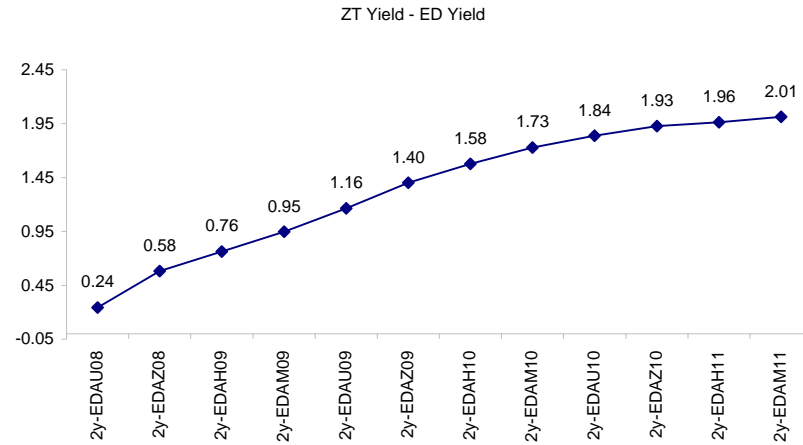


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.624	0.24	2y-EDAU08	-86.325
EDAZ08	2.964	0.58	2y-EDAZ08	-91.165
EDAH09	3.144	0.76	2y-EDAH09	-93.189
EDAM09	3.329	0.95	2y-EDAM09	-92.908
EDAU09	3.544	1.16	2y-EDAU09	-92.160
EDAZ09	3.784	1.40	2y-EDAZ09	-90.784
EDAH10	3.959	1.58	2y-EDAH10	-88.897
EDAM10	4.109	1.73	2y-EDAM10	-86.813
EDAU10	4.219	1.84	2y-EDAU10	-85.450
EDAZ10	4.309	1.93	2y-EDAZ10	-83.917
EDAH11	4.344	1.96	2y-EDAH11	-83.598
EDAM11	4.394	2.01	2y-EDAM11	-83.993

Price = Outright Decimal Price - Euro Contract Price

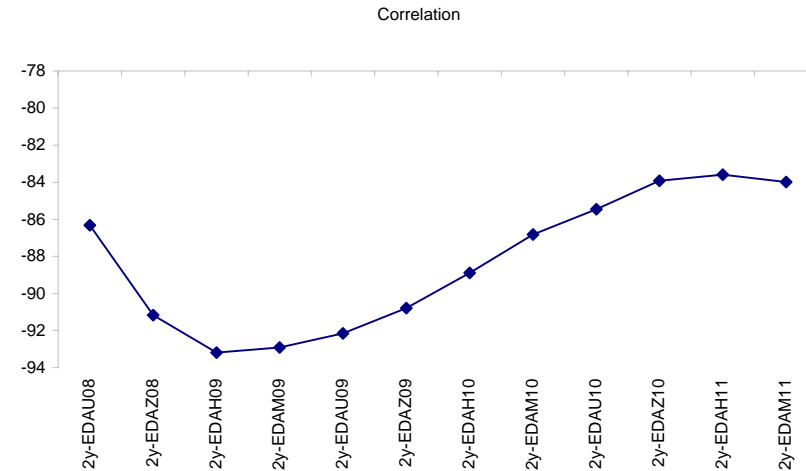
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	2Y Duration	Spread Duration		
EDAU08	0.238	1.87	1.63	2y-EDAU08
EDAZ08	0.487	1.87	1.38	2y-EDAZ08
EDAH09	0.736	1.87	1.14	2y-EDAH09
EDAM09	0.986	1.87	0.89	2y-EDAM09
EDAU09	1.235	1.87	0.64	2y-EDAU09
EDAZ09	1.484	1.87	0.39	2y-EDAZ09
EDAH10	1.734	1.87	0.14	2y-EDAH10
EDAM10	1.983	1.87	(0.11)	2y-EDAM10
EDAU10	2.232	1.87	(0.36)	2y-EDAU10
EDAZ10	2.482	1.87	(0.61)	2y-EDAZ10
EDAH11	2.731	1.87	(0.86)	2y-EDAH11
EDAM11	2.980	1.87	(1.11)	2y-EDAM11

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

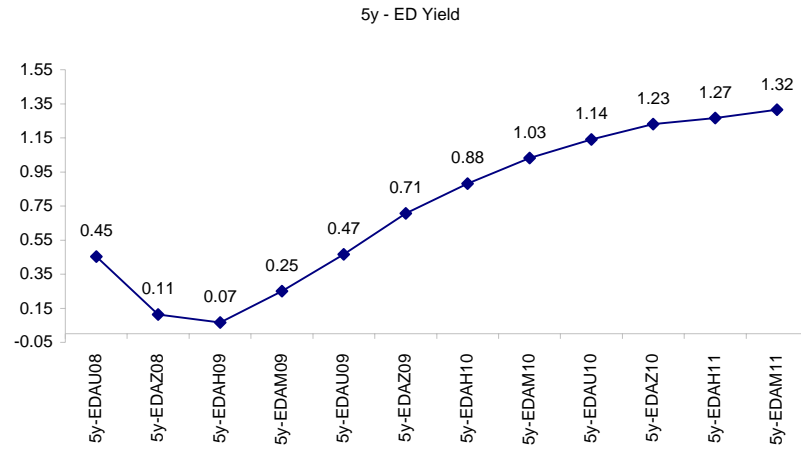


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.703	0.45	5y-EDAU08	-87.667
EDAZ08	3.043	0.11	5y-EDAZ08	-91.402
EDAH09	3.223	0.07	5y-EDAH09	-92.502
EDAM09	3.408	0.25	5y-EDAM09	-90.900
EDAU09	3.623	0.47	5y-EDAU09	-90.007
EDAZ09	3.863	0.71	5y-EDAZ09	-89.393
EDAH10	4.038	0.88	5y-EDAH10	-88.158
EDAM10	4.188	1.03	5y-EDAM10	-87.030
EDAU10	4.298	1.14	5y-EDAU10	-86.248
EDAZ10	4.388	1.23	5y-EDAZ10	-85.688
EDAH11	4.423	1.27	5y-EDAH11	-85.755
EDAM11	4.473	1.32	5y-EDAM11	-86.729

Price = Outright Decimal Price - Euro Contract Price

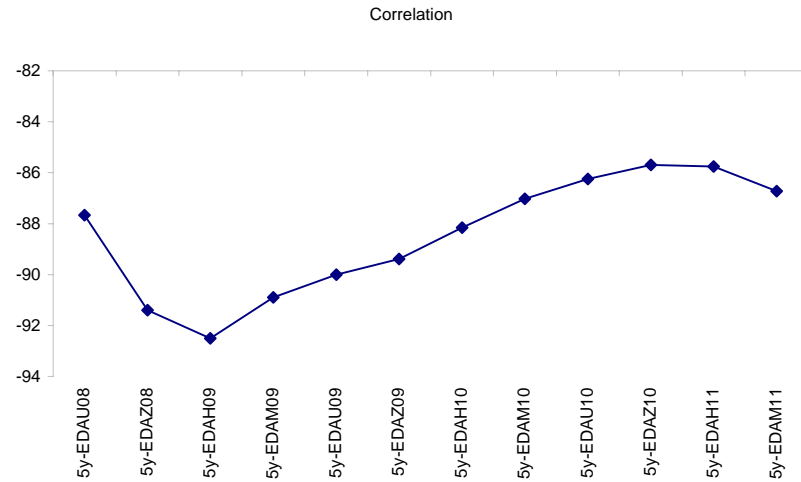
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	5Y Duration	Spread Duration		
EDAU08	0.238	4.49	4.25	5y-EDAU08
EDAZ08	0.487	4.49	4.00	5y-EDAZ08
EDAH09	0.736	4.49	3.75	5y-EDAH09
EDAM09	0.986	4.49	3.50	5y-EDAM09
EDAU09	1.235	4.49	3.25	5y-EDAU09
EDAZ09	1.484	4.49	3.00	5y-EDAZ09
EDAH10	1.734	4.49	2.75	5y-EDAH10
EDAM10	1.983	4.49	2.50	5y-EDAM10
EDAU10	2.232	4.49	2.25	5y-EDAU10
EDAZ10	2.482	4.49	2.00	5y-EDAZ10
EDAH11	2.731	4.49	1.75	5y-EDAH11
EDAM11	2.980	4.49	1.51	5y-EDAM11

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

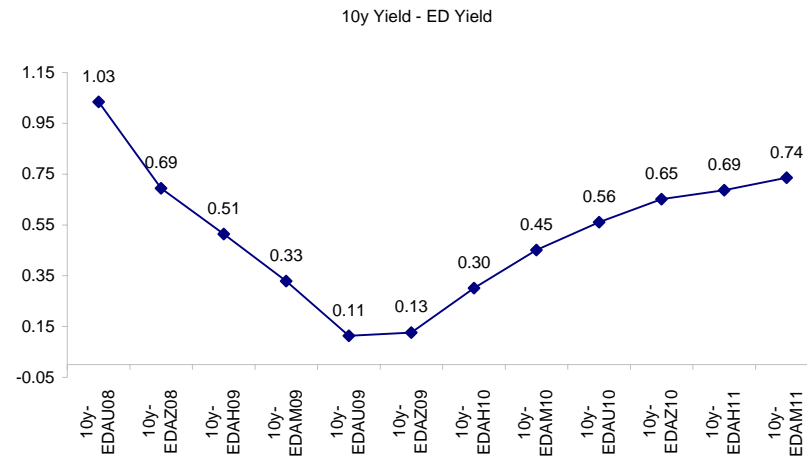


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.703	1.03	10y-EDAU08	-80.573
EDAZ08	3.043	0.69	10y-EDAZ08	-84.669
EDAH09	3.223	0.51	10y-EDAH09	-85.530
EDAM09	3.408	0.33	10y-EDAM09	-82.344
EDAU09	3.623	0.11	10y-EDAU09	-80.889
EDAZ09	3.863	0.13	10y-EDAZ09	-80.307
EDAH10	4.038	0.30	10y-EDAH10	-79.094
EDAM10	4.188	0.45	10y-EDAM10	-78.413
EDAU10	4.298	0.56	10y-EDAU10	-78.218
EDAZ10	4.388	0.65	10y-EDAZ10	-78.617
EDAH11	4.423	0.69	10y-EDAH11	-79.273
EDAM11	4.473	0.74	10y-EDAM11	-80.950

Price = Outright Decimal Price - Euro Contract Price

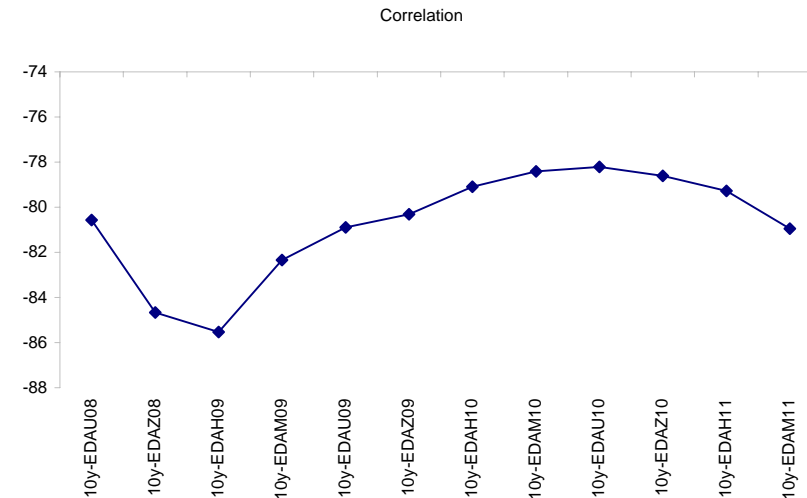
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.238	8.09	7.85	10y-EDAU08
EDAZ08	0.487	8.09	7.60	10y-EDAZ08
EDAH09	0.736	8.09	7.35	10y-EDAH09
EDAM09	0.986	8.09	7.10	10y-EDAM09
EDAU09	1.235	8.09	6.85	10y-EDAU09
EDAZ09	1.484	8.09	6.60	10y-EDAZ09
EDAH10	1.734	8.09	6.35	10y-EDAH10
EDAM10	1.983	8.09	6.10	10y-EDAM10
EDAU10	2.232	8.09	5.85	10y-EDAU10
EDAZ10	2.482	8.09	5.60	10y-EDAZ10
EDAH11	2.731	8.09	5.35	10y-EDAH11
EDAM11	2.980	8.09	5.11	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.

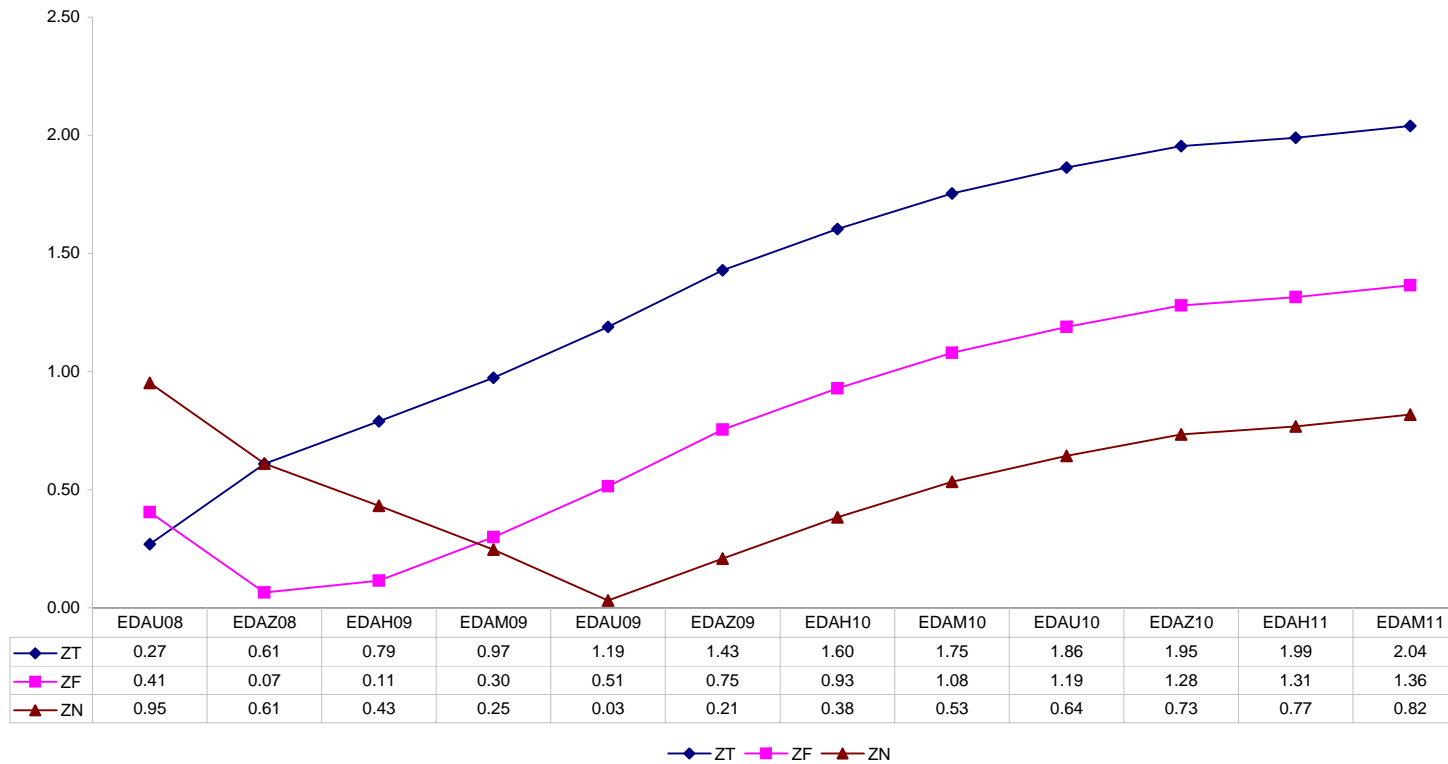
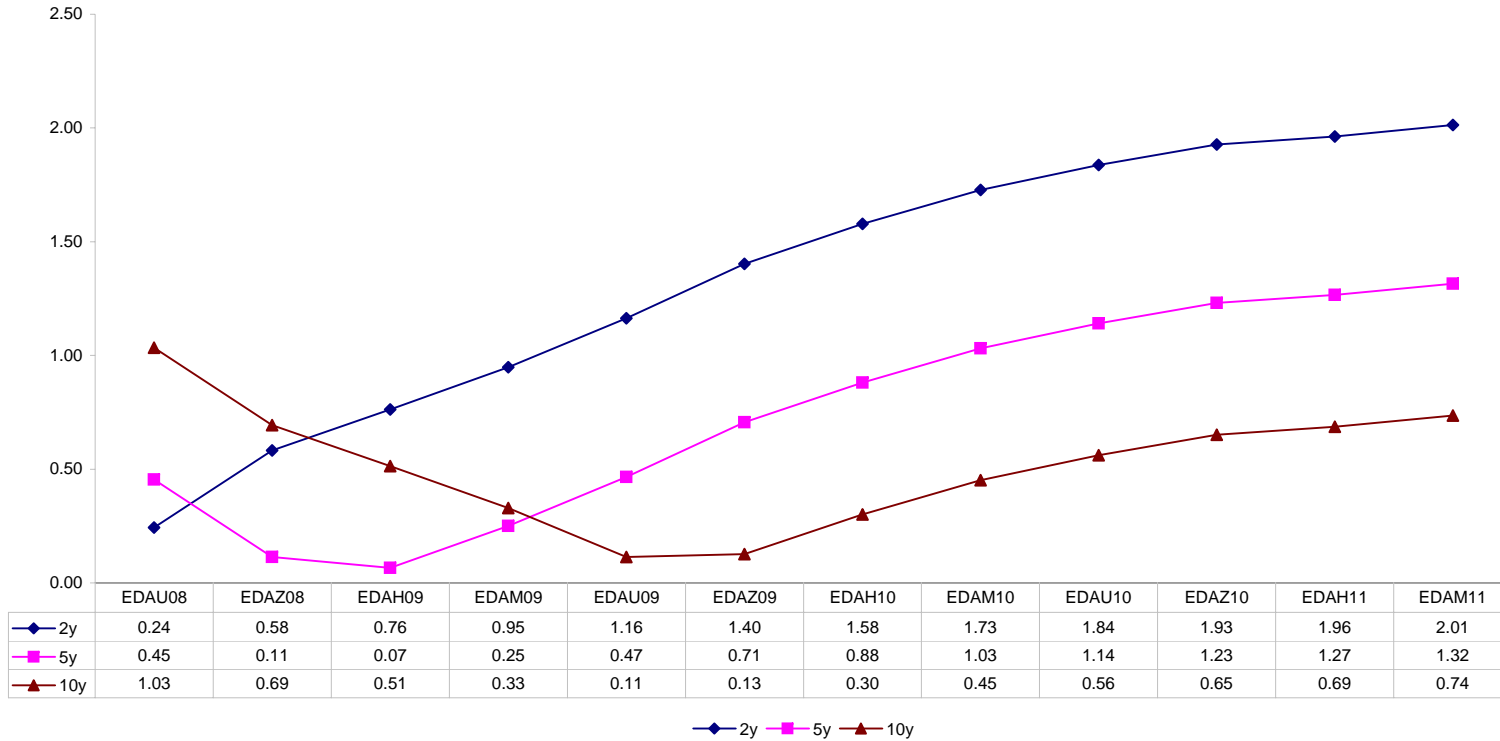
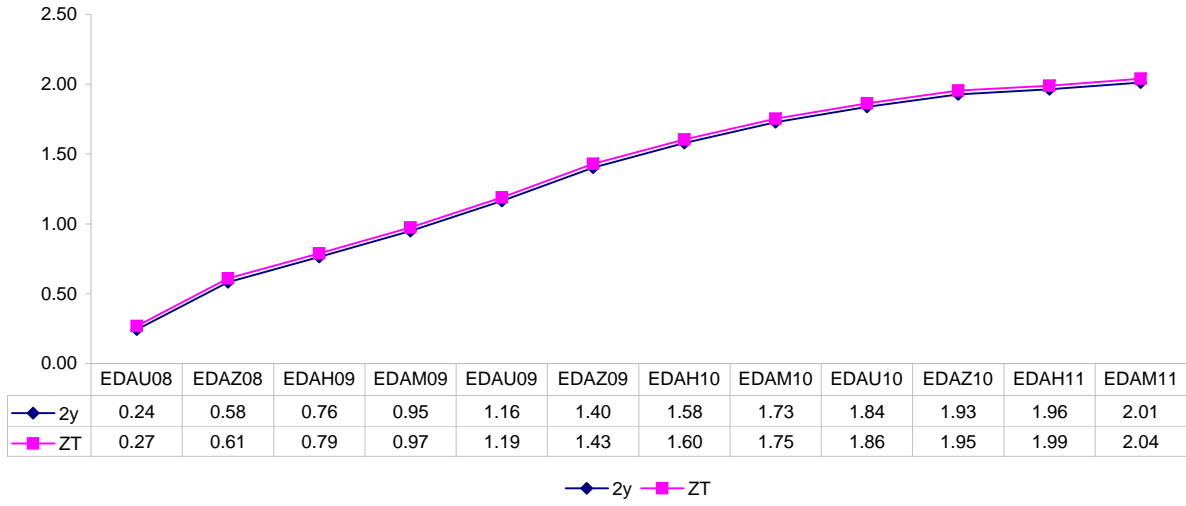


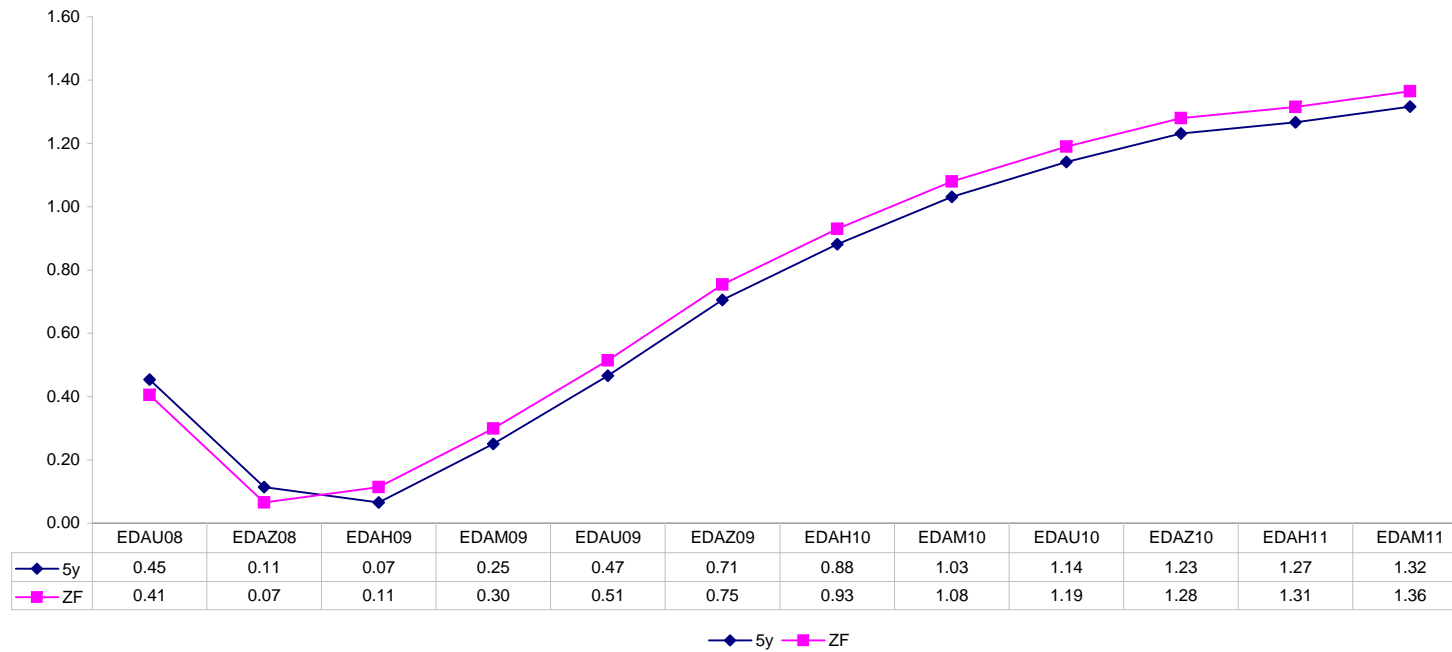
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



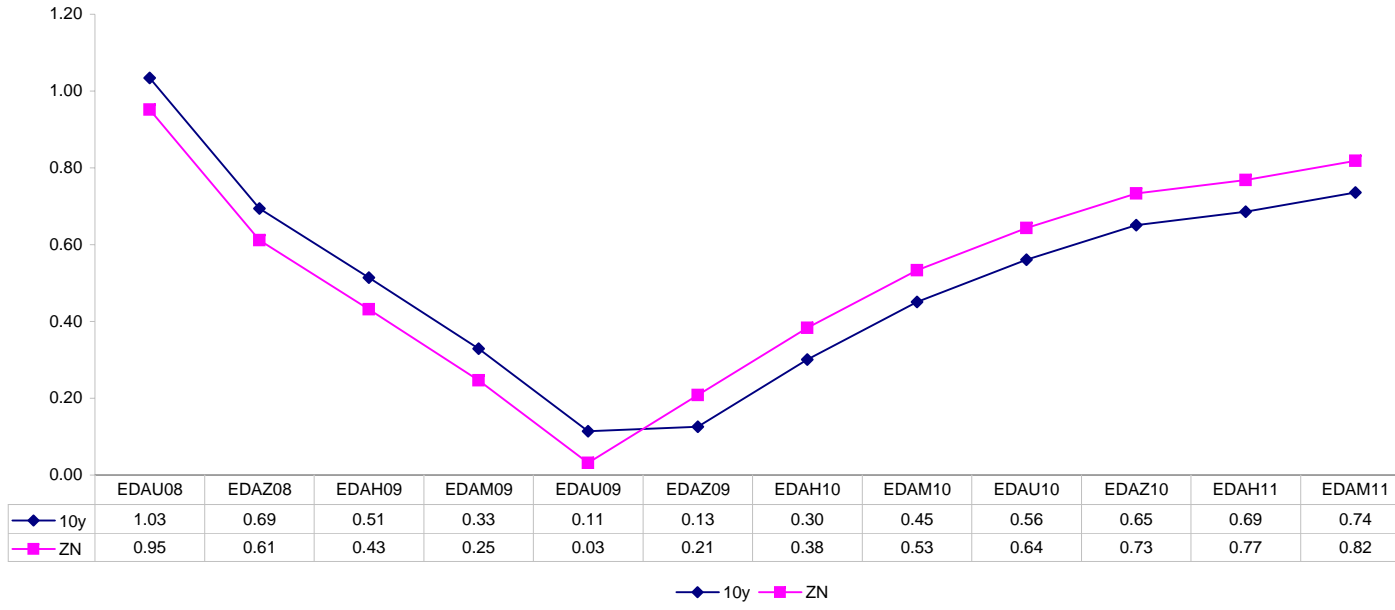
2y Basis TED Curve



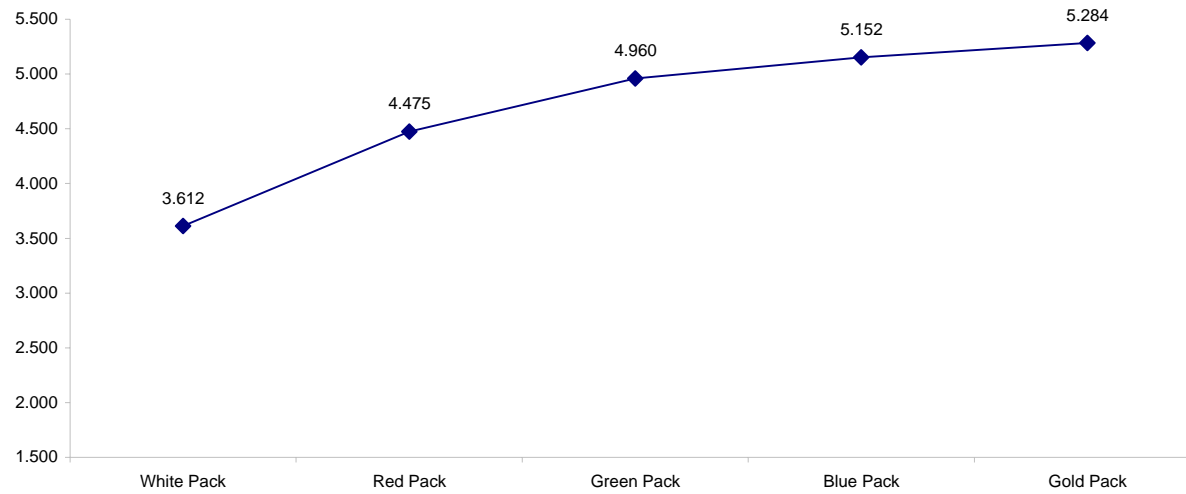
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.612	4.625	9646.875
Red Pack	4.475	4.750	9563.500
Green Pack	4.960	4.750	9516.750
Blue Pack	5.152	4.375	9498.250
Gold Pack	5.284	4.125	9485.500



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

