

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	106.5688	106.182	2.081	1.98
ZF	113.1406	113.045	2.722	4.18
ZN	117.2188	117.070	3.303	6.33
2y	100.438	100.1400	2.148	1.91
5y	101.366	101.1170	2.829	4.58
10y	103.344	103.1100	3.595	8.16

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.180	2.820	10	0.027	SEP	
EDAZ08	97.085	2.915	101	0.276	DEC	White Pack
EDAH09	97.205	2.795	192	0.525	MAR	
EDAM09	97.140	2.860	283	0.775	JUN	
EDAU09	96.990	3.010	374	1.024	SEP	
EDAZ09	96.740	3.260	465	1.273	DEC	Red Pack
EDAH10	96.560	3.440	556	1.523	MAR	
EDAM10	96.355	3.645	647	1.772	JUN	
EDAU10	96.175	3.825	738	2.021	SEP	
EDAZ10	96.020	3.980	829	2.271	DEC	Green Pack
EDAH11	95.930	4.070	920	2.520	MAR	
EDAM11	95.840	4.160	1011	2.769	JUN	
EDAU11	95.755	4.245	1109	3.038	SEP	
EDAZ11	95.680	4.320	1200	3.287	DEC	Blue Pack
EDAH12	95.625	4.375	1291	3.536	MAR	
EDAM12	95.580	4.420	1382	3.786	JUN	
EDAU12	95.525	4.475	1473	4.035	SEP	
EDAZ12	95.485	4.515	1564	4.284	DEC	Gold Pack
EDAH13	95.425	4.575	1655	4.534	MAR	
EDAM13	95.350	4.650	1746	4.783	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	2.908	2.188	9715.250	
Red Pack	3.414	5.625	9666.125	Pack Prices
Green Pack	4.106	5.250	9599.125	
Blue Pack		2.375	9565.625	
Gold Pack		1.000	9543.625	

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.

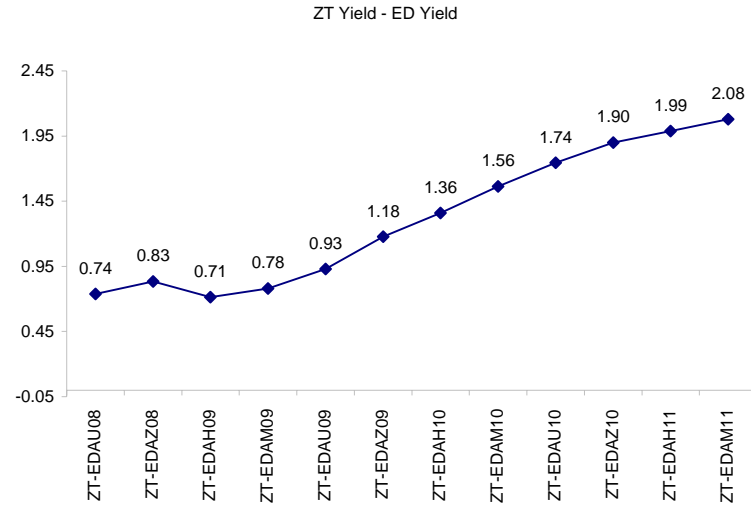
jgoulding@ghco.com

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.

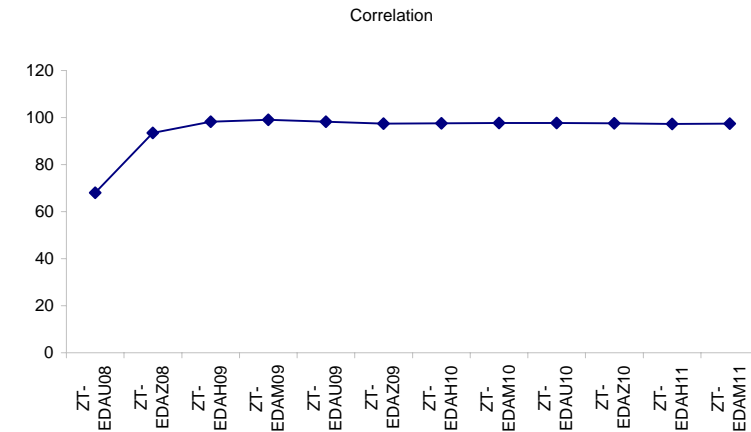
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	9.389	0.74	ZT-EDAU08	67.972
EDAZ08	9.484	0.83	ZT-EDAZ08	93.489
EDAH09	9.364	0.71	ZT-EDAH09	98.199
EDAM09	9.429	0.78	ZT-EDAM09	99.074
EDAU09	9.579	0.93	ZT-EDAU09	98.232
EDAZ09	9.829	1.18	ZT-EDAZ09	97.431
EDAH10	10.009	1.36	ZT-EDAH10	97.498
EDAM10	10.214	1.56	ZT-EDAM10	97.663
EDAU10	10.394	1.74	ZT-EDAU10	97.646
EDAZ10	10.549	1.90	ZT-EDAZ10	97.488
EDAH11	10.639	1.99	ZT-EDAH11	97.319
EDAM11	10.729	2.08	ZT-EDAM11	97.387

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	0.027	1.98	1.95	ZT-EDAU08	
EDAZ08	0.276	1.98	1.71	ZT-EDAZ08	
EDAH09	0.525	1.98	1.46	ZT-EDAH09	
EDAM09	0.775	1.98	1.21	ZT-EDAM09	
EDAU09	1.024	1.98	0.96	ZT-EDAU09	
EDAZ09	1.273	1.98	0.71	ZT-EDAZ09	
EDAH10	1.523	1.98	0.46	ZT-EDAH10	
EDAM10	1.772	1.98	0.21	ZT-EDAM10	
EDAU10	2.021	1.98	(0.04)	ZT-EDAU10	
EDAZ10	2.271	1.98	(0.29)	ZT-EDAZ10	
EDAH11	2.520	1.98	(0.54)	ZT-EDAH11	
EDAM11	2.769	1.98	(0.79)	ZT-EDAM11	

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

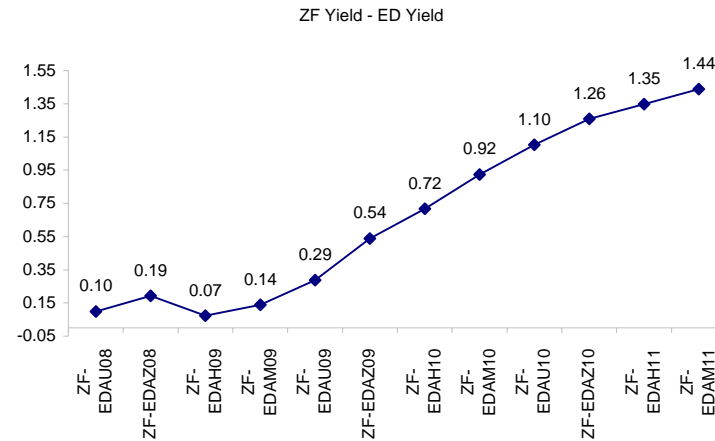


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	15.961	0.10	ZF-EDAU08	66.803
EDAZ08	16.056	0.19	ZF-EDAZ08	88.069
EDAH09	15.936	0.07	ZF-EDAH09	95.332
EDAM09	16.001	0.14	ZF-EDAM09	97.346
EDAU09	16.151	0.29	ZF-EDAU09	97.635
EDAZ09	16.401	0.54	ZF-EDAZ09	97.438
EDAH10	16.581	0.72	ZF-EDAH10	97.887
EDAM10	16.786	0.92	ZF-EDAM10	97.939
EDAU10	16.966	1.10	ZF-EDAU10	98.137
EDAZ10	17.121	1.26	ZF-EDAZ10	98.343
EDAH11	17.211	1.35	ZF-EDAH11	98.273
EDAM11	17.301	1.44	ZF-EDAM11	98.630

Price = Outright Decimal Price - Euro Contract Price

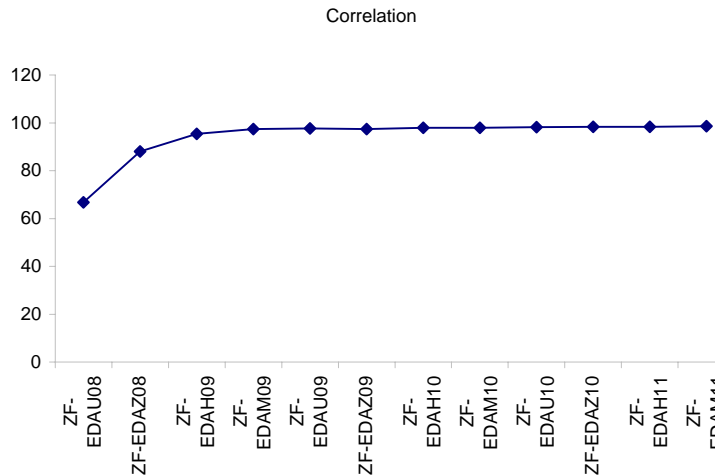
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAU08	0.027	4.18	4.16	ZF-EDAU08		
EDAZ08	0.276	4.18	3.91	ZF-EDAZ08		
EDAH09	0.525	4.18	3.66	ZF-EDAH09		
EDAM09	0.775	4.18	3.41	ZF-EDAM09		
EDAU09	1.024	4.18	3.16	ZF-EDAU09		
EDAZ09	1.273	4.18	2.91	ZF-EDAZ09		
EDAH10	1.523	4.18	2.66	ZF-EDAH10		
EDAM10	1.772	4.18	2.41	ZF-EDAM10		
EDAU10	2.021	4.18	2.16	ZF-EDAU10		
EDAZ10	2.271	4.18	1.91	ZF-EDAZ10		
EDAH11	2.520	4.18	1.66	ZF-EDAH11		
EDAM11	2.769	4.18	1.42	ZF-EDAM11		

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

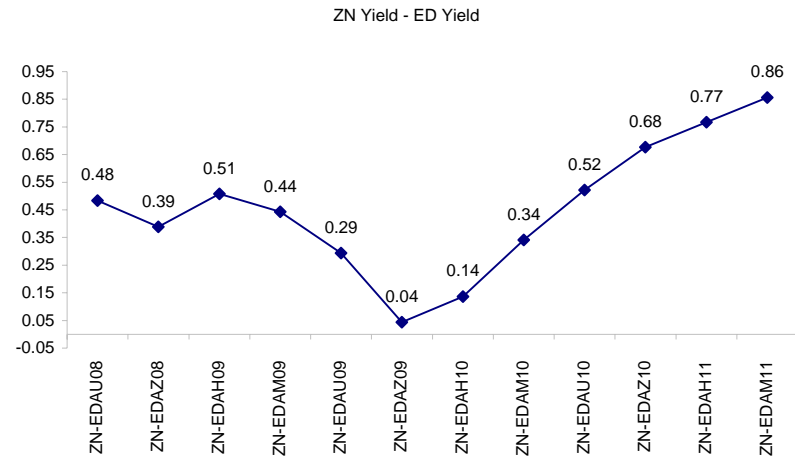


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	20.039	0.48	ZN-EDAU08	65.840
EDAZ08	20.134	0.39	ZN-EDAZ08	86.396
EDAH09	20.014	0.51	ZN-EDAH09	94.666
EDAM09	20.079	0.44	ZN-EDAM09	97.020
EDAU09	20.229	0.29	ZN-EDAU09	97.517
EDAZ09	20.479	0.04	ZN-EDAZ09	97.269
EDAH10	20.659	0.14	ZN-EDAH10	97.887
EDAM10	20.864	0.34	ZN-EDAM10	97.939
EDAU10	21.044	0.52	ZN-EDAU10	98.137
EDAZ10	21.199	0.68	ZN-EDAZ10	98.343
EDAH11	21.289	0.77	ZN-EDAH11	98.273
EDAM11	21.379	0.86	ZN-EDAM11	98.630

Price = Outright Decimal Price - Euro Contract Price

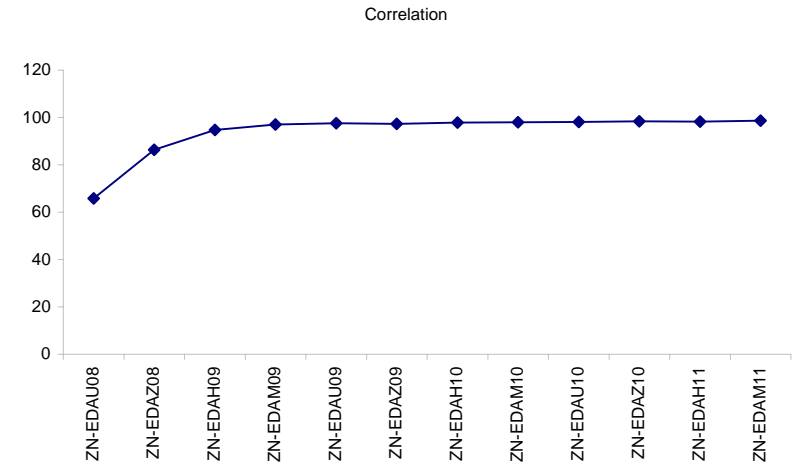
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.027	6.33	6.31	ZN-EDAU08		
EDAZ08	0.276	6.33	6.06	ZN-EDAZ08		
EDAH09	0.525	6.33	5.81	ZN-EDAH09		
EDAM09	0.775	6.33	5.56	ZN-EDAM09		
EDAU09	1.024	6.33	5.31	ZN-EDAU09		
EDAZ09	1.273	6.33	5.06	ZN-EDAZ09		
EDAH10	1.523	6.33	4.81	ZN-EDAH10		
EDAM10	1.772	6.33	4.56	ZN-EDAM10		
EDAU10	2.021	6.33	4.31	ZN-EDAU10		
EDAZ10	2.271	6.33	4.06	ZN-EDAZ10		
EDAH11	2.520	6.33	3.81	ZN-EDAH11		
EDAM11	2.769	6.33	3.57	ZN-EDAM11		

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

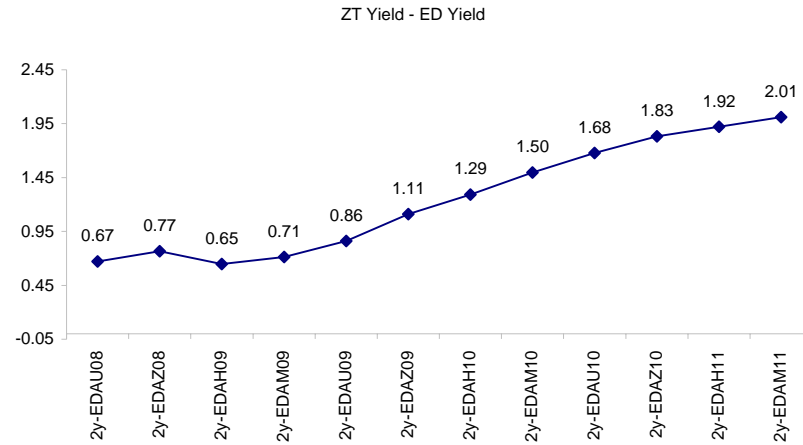


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.257	0.67	2y-EDAU08	-70.578
EDAZ08	3.352	0.77	2y-EDAZ08	-88.203
EDAH09	3.233	0.65	2y-EDAH09	-93.634
EDAM09	3.298	0.71	2y-EDAM09	-95.548
EDAU09	3.447	0.86	2y-EDAU09	-95.444
EDAZ09	3.697	1.11	2y-EDAZ09	-94.699
EDAH10	3.878	1.29	2y-EDAH10	-93.988
EDAM10	4.083	1.50	2y-EDAM10	-93.241
EDAU10	4.263	1.68	2y-EDAU10	-92.571
EDAZ10	4.418	1.83	2y-EDAZ10	-92.498
EDAH11	4.507	1.92	2y-EDAH11	-92.411
EDAM11	4.598	2.01	2y-EDAM11	-92.930

Price = Outright Decimal Price - Euro Contract Price

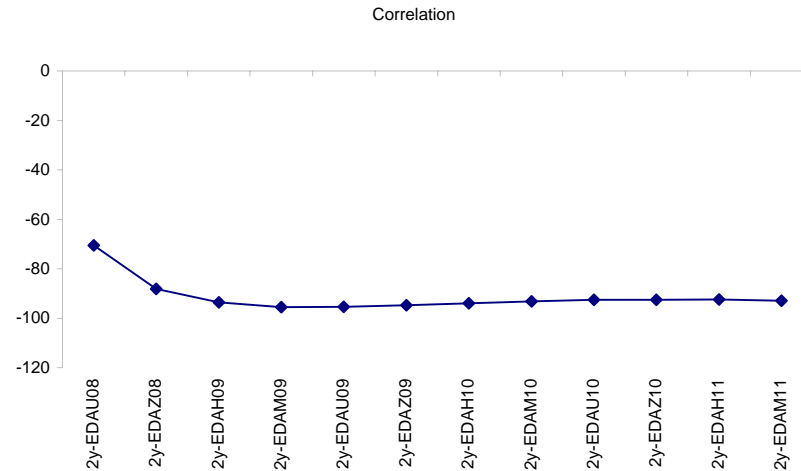
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.027	1.91	1.88	2y-EDAU08	
EDAZ08	0.276	1.91	1.63	2y-EDAZ08	
EDAH09	0.525	1.91	1.38	2y-EDAH09	
EDAM09	0.775	1.91	1.13	2y-EDAM09	
EDAU09	1.024	1.91	0.89	2y-EDAU09	
EDAZ09	1.273	1.91	0.64	2y-EDAZ09	
EDAH10	1.523	1.91	0.39	2y-EDAH10	
EDAM10	1.772	1.91	0.14	2y-EDAM10	
EDAU10	2.021	1.91	(0.11)	2y-EDAU10	
EDAZ10	2.271	1.91	(0.36)	2y-EDAZ10	
EDAH11	2.520	1.91	(0.61)	2y-EDAH11	
EDAM11	2.769	1.91	(0.86)	2y-EDAM11	

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

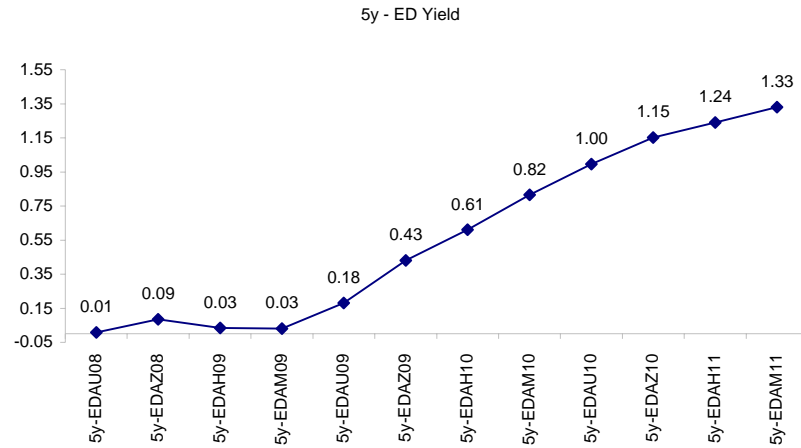


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.186	0.01	5y-EDAU08	-69.375
EDAZ08	4.281	0.09	5y-EDAZ08	-86.467
EDAH09	4.161	0.03	5y-EDAH09	-93.488
EDAM09	4.226	0.03	5y-EDAM09	-96.136
EDAU09	4.376	0.18	5y-EDAU09	-97.187
EDAZ09	4.626	0.43	5y-EDAZ09	-97.148
EDAH10	4.806	0.61	5y-EDAH10	-96.767
EDAM10	5.011	0.82	5y-EDAM10	-96.061
EDAU10	5.191	1.00	5y-EDAU10	-95.578
EDAZ10	5.346	1.15	5y-EDAZ10	-95.665
EDAH11	5.436	1.24	5y-EDAH11	-95.663
EDAM11	5.526	1.33	5y-EDAM11	-96.177

Price = Outright Decimal Price - Euro Contract Price

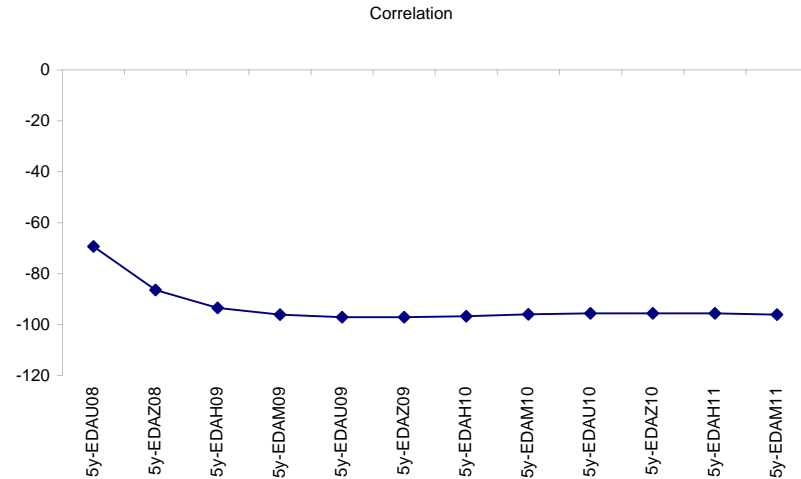
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.027	4.58	4.56	5y-EDAU08
EDAZ08	0.276	4.58	4.31	5y-EDAZ08
EDAH09	0.525	4.58	4.06	5y-EDAH09
EDAM09	0.775	4.58	3.81	5y-EDAM09
EDAU09	1.024	4.58	3.56	5y-EDAU09
EDAZ09	1.273	4.58	3.31	5y-EDAZ09
EDAH10	1.523	4.58	3.06	5y-EDAH10
EDAM10	1.772	4.58	2.81	5y-EDAM10
EDAU10	2.021	4.58	2.56	5y-EDAU10
EDAZ10	2.271	4.58	2.31	5y-EDAZ10
EDAH11	2.520	4.58	2.06	5y-EDAH11
EDAM11	2.769	4.58	1.81	5y-EDAM11

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

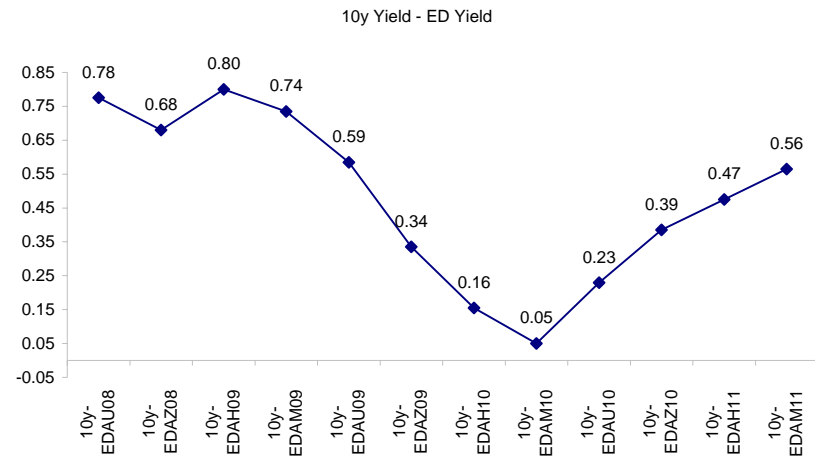


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	4.186	0.78	10y-EDAU08	-69.094
EDAZ08	4.281	0.68	10y-EDAZ08	-86.982
EDAH09	4.161	0.80	10y-EDAH09	-93.874
EDAM09	4.226	0.74	10y-EDAM09	-96.514
EDAU09	4.376	0.59	10y-EDAU09	-97.585
EDAZ09	4.626	0.34	10y-EDAZ09	-97.577
EDAH10	4.806	0.16	10y-EDAH10	-97.138
EDAM10	5.011	0.05	10y-EDAM10	-96.418
EDAU10	5.191	0.23	10y-EDAU10	-95.909
EDAZ10	5.346	0.39	10y-EDAZ10	-95.996
EDAH11	5.436	0.47	10y-EDAH11	-95.974
EDAM11	5.526	0.56	10y-EDAM11	-96.474

Price = Outright Decimal Price - Euro Contract Price

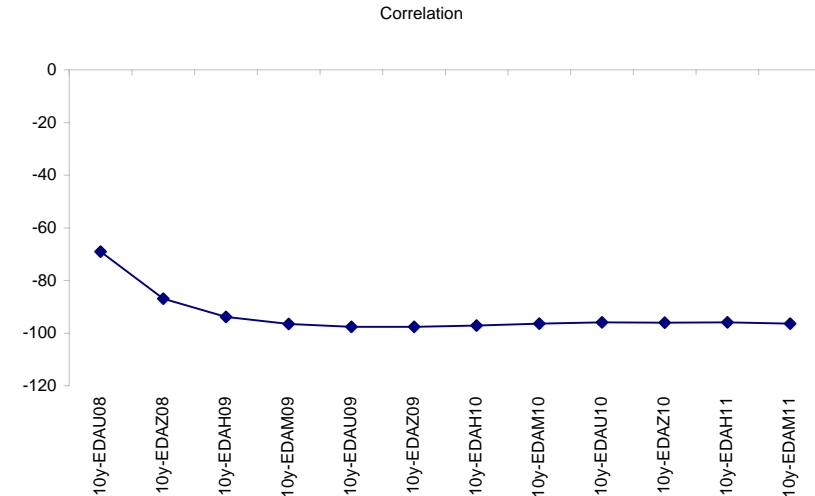
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.027	8.16	8.13	10y-EDAU08
EDAZ08	0.276	8.16	7.88	10y-EDAZ08
EDAH09	0.525	8.16	7.63	10y-EDAH09
EDAM09	0.775	8.16	7.39	10y-EDAM09
EDAU09	1.024	8.16	7.14	10y-EDAU09
EDAZ09	1.273	8.16	6.89	10y-EDAZ09
EDAH10	1.523	8.16	6.64	10y-EDAH10
EDAM10	1.772	8.16	6.39	10y-EDAM10
EDAU10	2.021	8.16	6.14	10y-EDAU10
EDAZ10	2.271	8.16	5.89	10y-EDAZ10
EDAH11	2.520	8.16	5.64	10y-EDAH11
EDAM11	2.769	8.16	5.39	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.

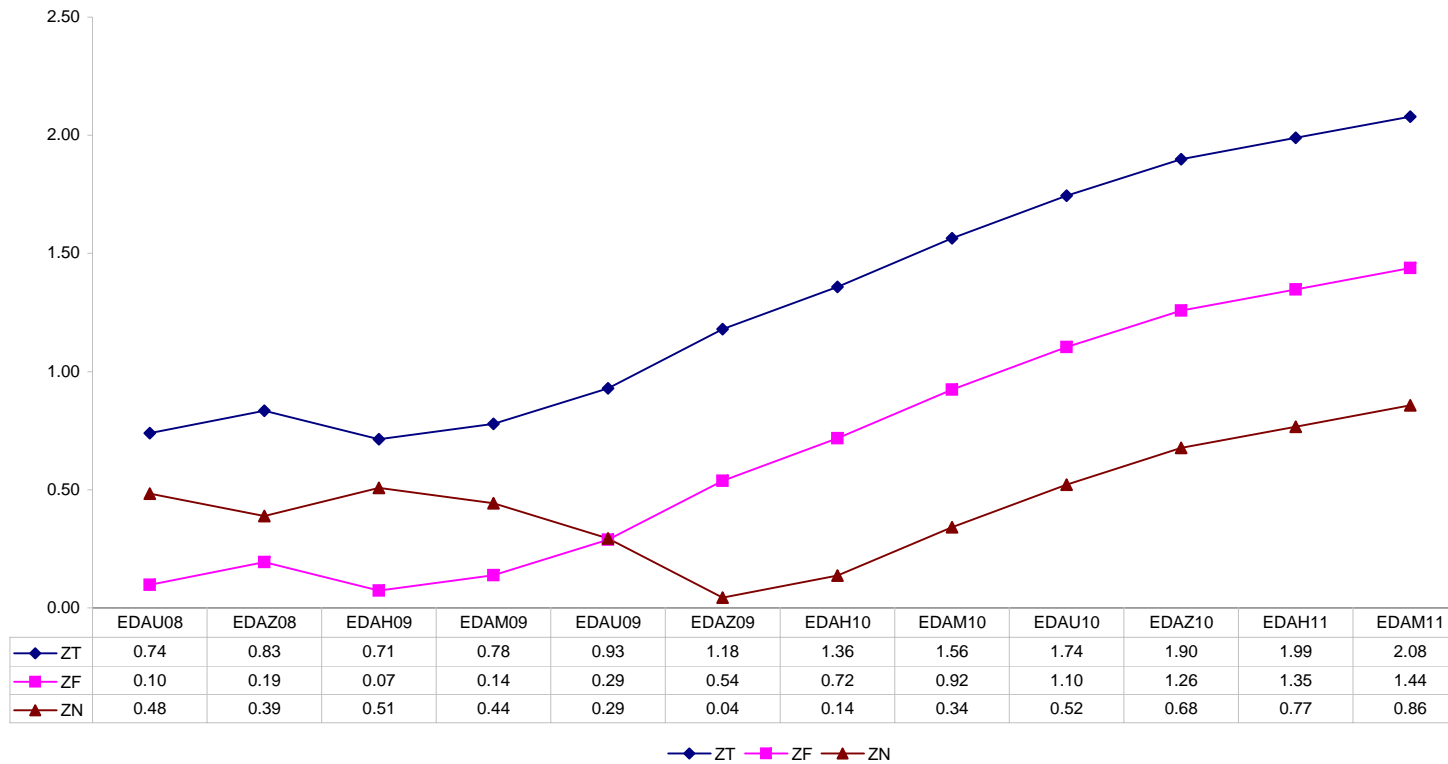
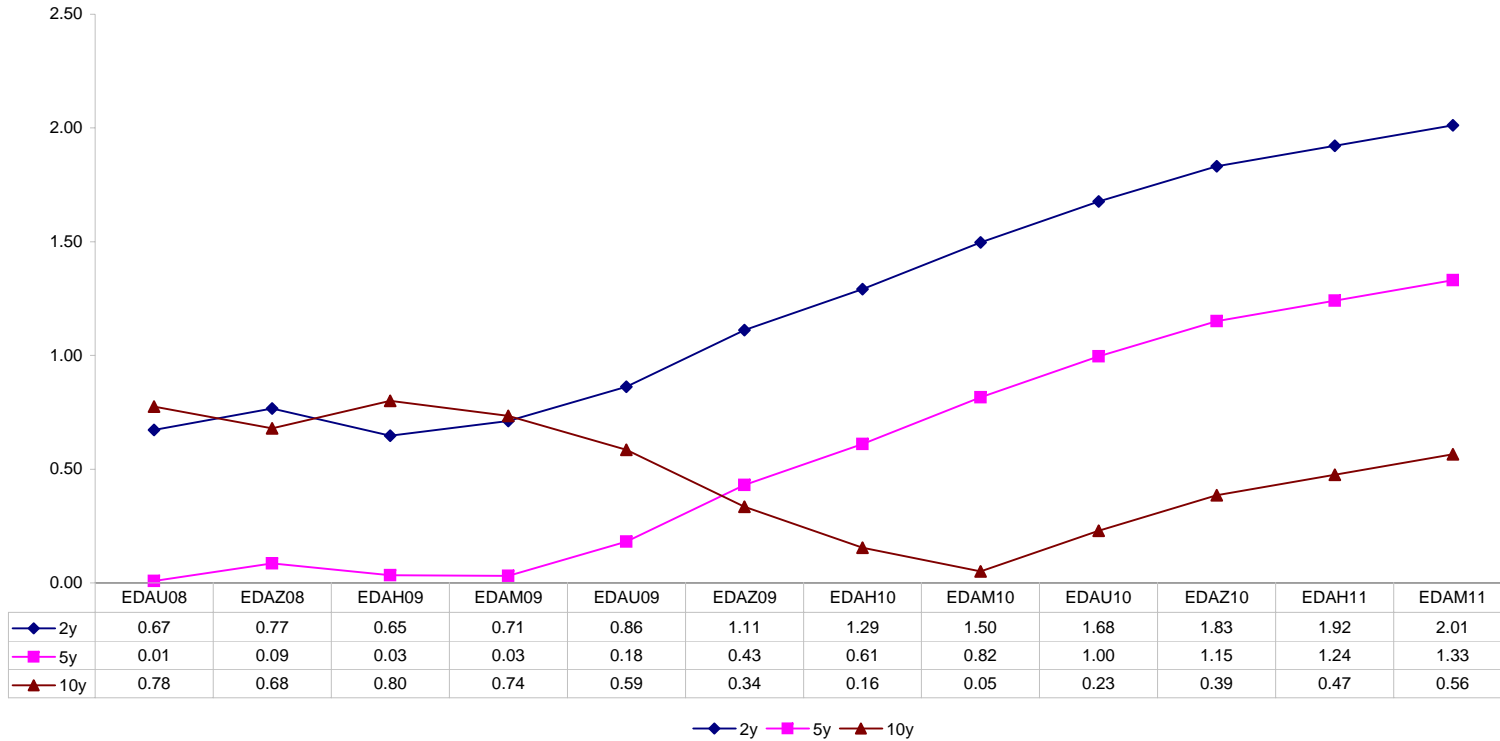
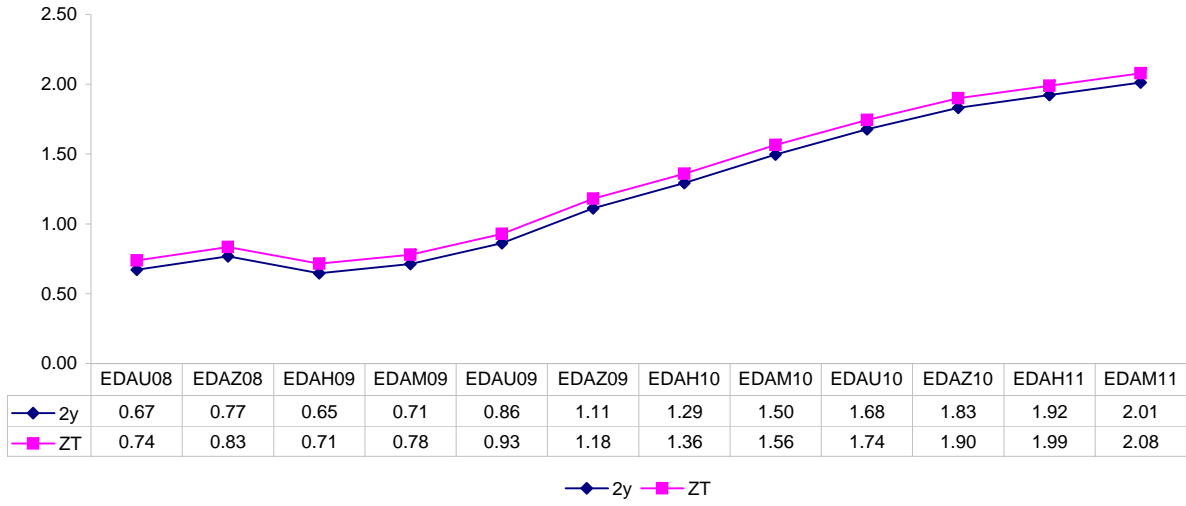


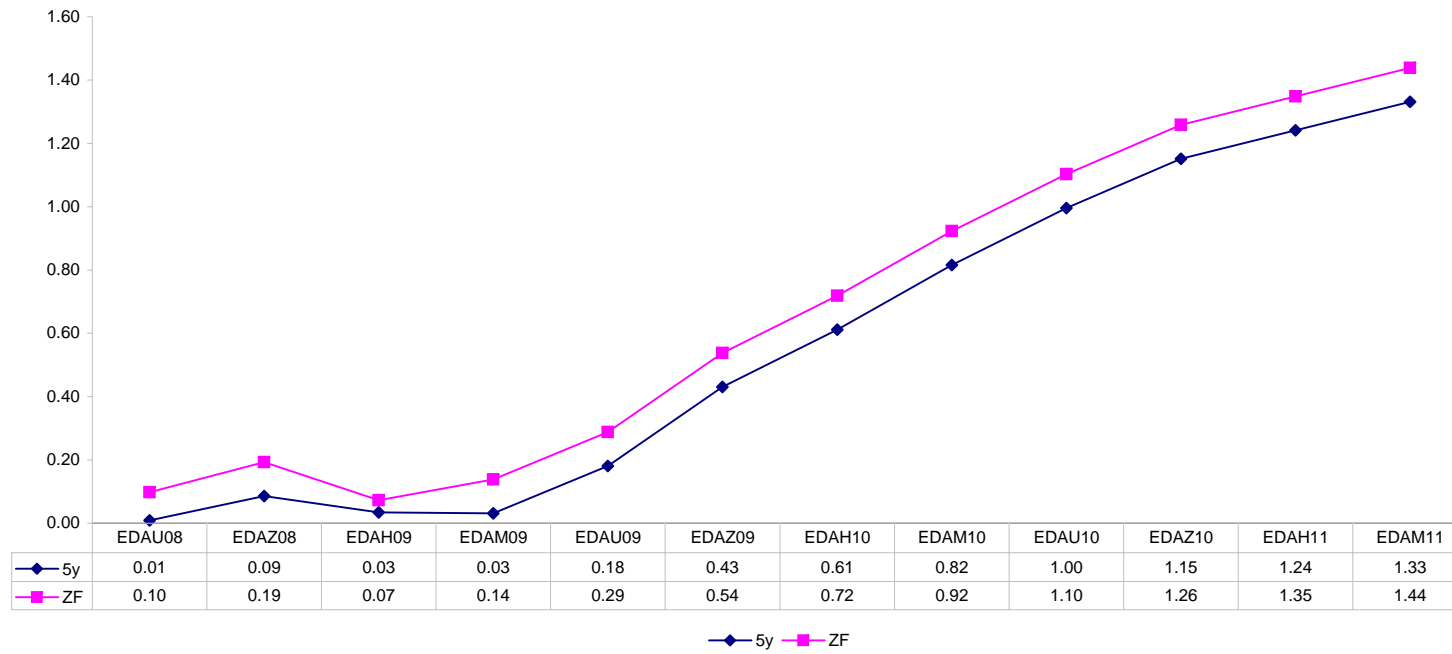
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



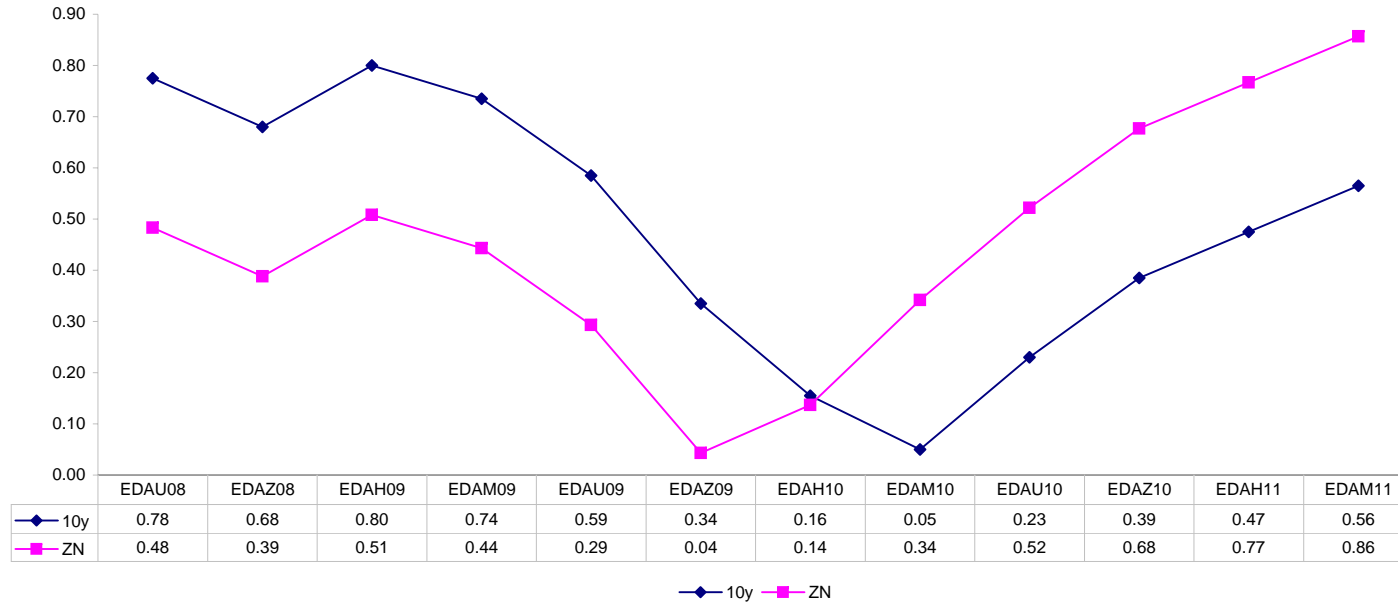
2y Basis TED Curve



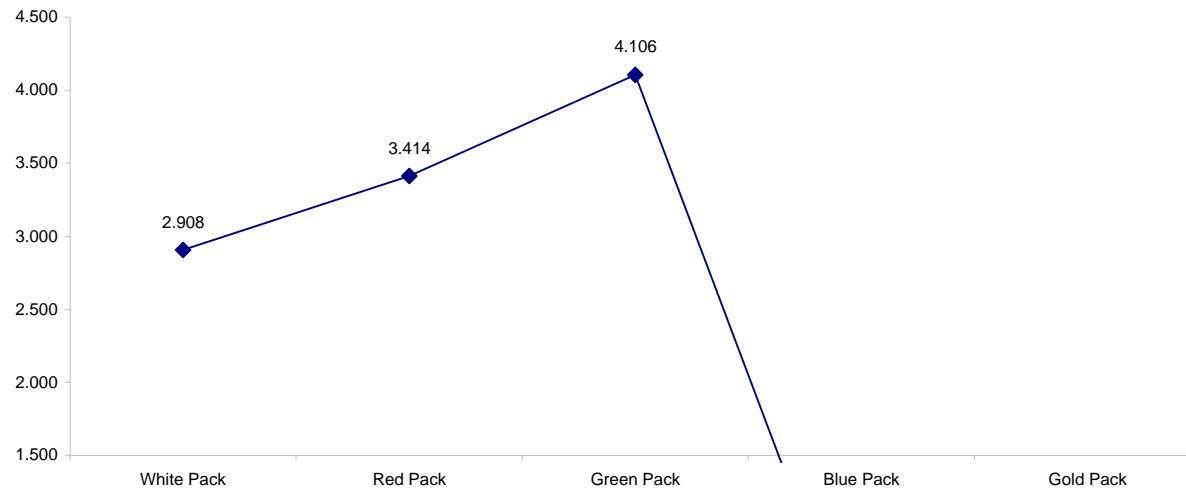
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.908	2.188	9715.250
Red Pack	3.414	5.625	9666.125
Green Pack	4.106	5.250	9599.125
Blue Pack		2.375	9565.625
Gold Pack		1.000	9543.625



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

