

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	105.3813	105.122	2.770	1.87
ZF	109.9281	109.297	3.452	4.00
ZN	113.1094	113.035	3.909	6.41
2y	100.194	100.0620	2.771	1.87
5y	99.319	99.1020	3.523	4.50
10y	97.844	97.2700	4.142	8.01

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.030	2.970	54	0.147	SEP	
EDAZ08	96.740	3.260	145	0.397	DEC	White
EDAH09	96.600	3.400	236	0.646	MAR	Pack
EDAM09	96.355	3.645	327	0.895	JUN	
EDAU09	96.050	3.950	418	1.145	SEP	
EDAZ09	95.730	4.270	509	1.394	DEC	Red
EDAH10	95.495	4.505	600	1.643	MAR	Pack
EDAM10	95.325	4.675	691	1.892	JUN	
EDAU10	95.210	4.790	782	2.142	SEP	
EDAZ10	95.110	4.890	873	2.391	DEC	Green
EDAH11	95.085	4.915	964	2.640	MAR	Pack
EDAM11	95.040	4.960	1055	2.890	JUN	
EDAU11	95.020	4.980	1153	3.158	SEP	
EDAZ11	94.980	5.020	1244	3.408	DEC	Blue Pack
EDAH12	94.995	5.005	1335	3.657	MAR	
EDAM12	94.940	5.060	1426	3.906	JUN	
EDAU12	94.910	5.090	1517	4.156	SEP	
EDAZ12	94.825	5.175	1608	4.405	DEC	Gold Pack
EDAH13	94.830	5.170	1699	4.654	MAR	
EDAM13	94.800	5.200	1790	4.903	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.393	-5.500	9668.125	
Red Pack	4.459	-7.875	9565.000	Pack
Green Pack	5.018	-5.250	9511.125	Prices
Blue Pack		-0.750	9498.875	
Gold Pack		0.000	9485.000	

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.

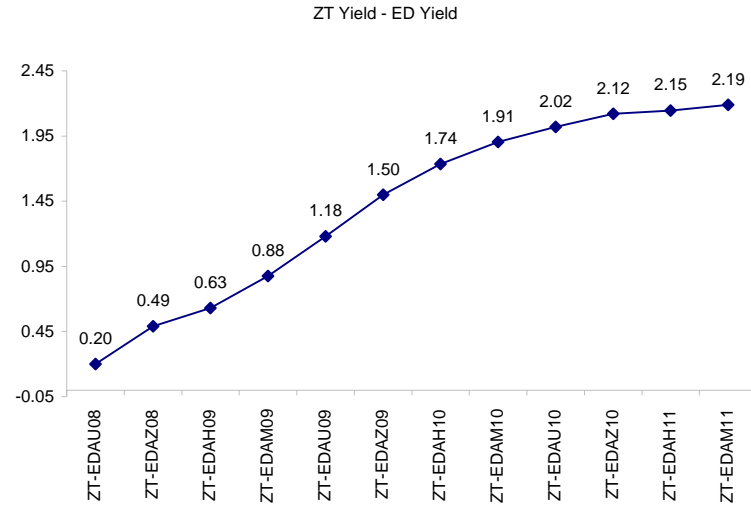
jgoulding@ghco.com

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.

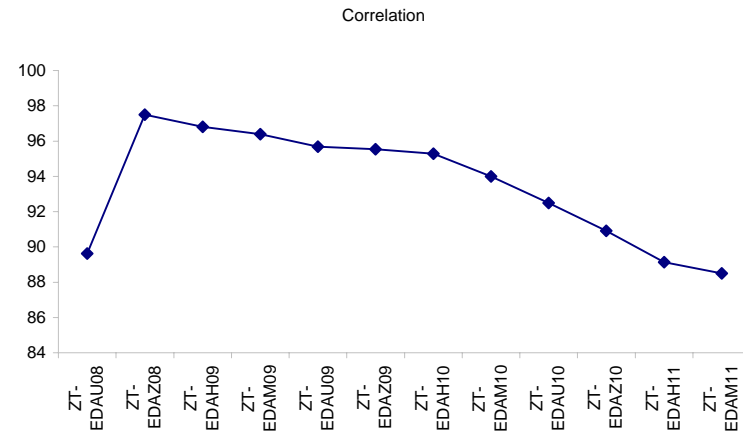
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.351	0.20	ZT-EDAU08	89.630
EDAZ08	8.641	0.49	ZT-EDAZ08	97.500
EDAH09	8.781	0.63	ZT-EDAH09	96.807
EDAM09	9.026	0.88	ZT-EDAM09	96.396
EDAU09	9.331	1.18	ZT-EDAU09	95.677
EDAZ09	9.651	1.50	ZT-EDAZ09	95.535
EDAH10	9.886	1.74	ZT-EDAH10	95.275
EDAM10	10.056	1.91	ZT-EDAM10	93.991
EDAU10	10.171	2.02	ZT-EDAU10	92.485
EDAZ10	10.271	2.12	ZT-EDAZ10	90.903
EDAH11	10.296	2.15	ZT-EDAH11	89.133
EDAM11	10.341	2.19	ZT-EDAM11	88.503

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	0.147	1.87	1.72	ZT-EDAU08		
EDAZ08	0.397	1.87	1.47	ZT-EDAZ08		
EDAH09	0.646	1.87	1.22	ZT-EDAH09		
EDAM09	0.895	1.87	0.97	ZT-EDAM09		
EDAU09	1.145	1.87	0.72	ZT-EDAU09		
EDAZ09	1.394	1.87	0.47	ZT-EDAZ09		
EDAH10	1.643	1.87	0.22	ZT-EDAH10		
EDAM10	1.892	1.87	(0.03)	ZT-EDAM10		
EDAU10	2.142	1.87	(0.27)	ZT-EDAU10		
EDAZ10	2.391	1.87	(0.52)	ZT-EDAZ10		
EDAH11	2.640	1.87	(0.77)	ZT-EDAH11		
EDAM11	2.890	1.87	(1.02)	ZT-EDAM11		

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

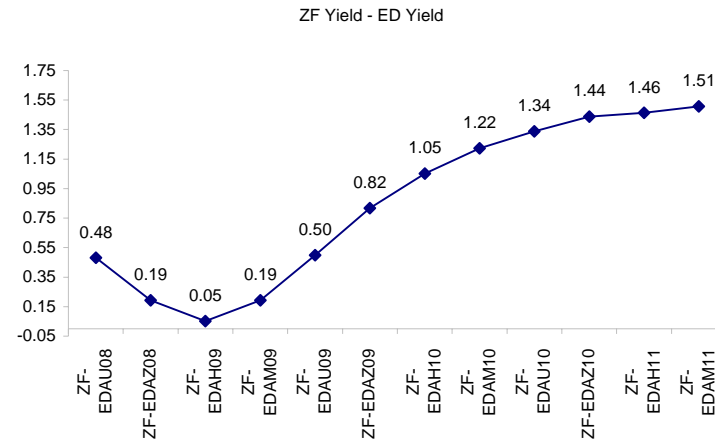


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	12.898	0.48	ZF-EDAU08	81.113
EDAZ08	13.188	0.19	ZF-EDAZ08	96.524
EDAH09	13.328	0.05	ZF-EDAH09	98.331
EDAM09	13.573	0.19	ZF-EDAM09	98.703
EDAU09	13.878	0.50	ZF-EDAU09	98.659
EDAZ09	14.198	0.82	ZF-EDAZ09	98.766
EDAH10	14.433	1.05	ZF-EDAH10	98.796
EDAM10	14.603	1.22	ZF-EDAM10	98.507
EDAU10	14.718	1.34	ZF-EDAU10	97.977
EDAZ10	14.818	1.44	ZF-EDAZ10	97.240
EDAH11	14.843	1.46	ZF-EDAH11	96.224
EDAM11	14.888	1.51	ZF-EDAM11	95.962

Price = Outright Decimal Price - Euro Contract Price

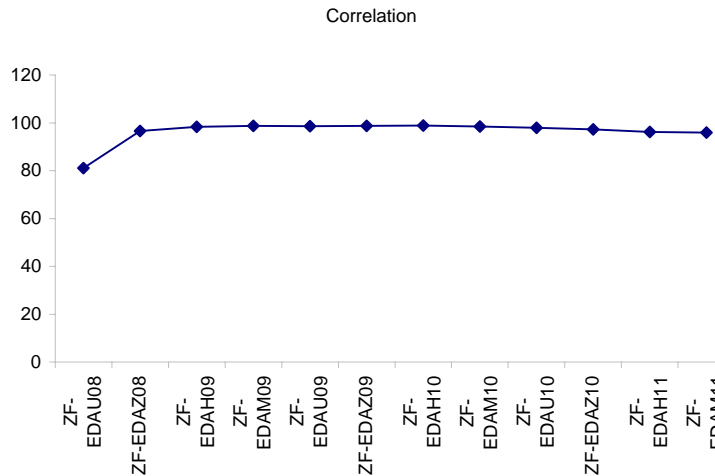
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	ZF Duration	Spread Duration	
EDAU08	0.147	4.00	3.85	ZF-EDAU08
EDAZ08	0.397	4.00	3.60	ZF-EDAZ08
EDAH09	0.646	4.00	3.35	ZF-EDAH09
EDAM09	0.895	4.00	3.10	ZF-EDAM09
EDAU09	1.145	4.00	2.85	ZF-EDAU09
EDAZ09	1.394	4.00	2.60	ZF-EDAZ09
EDAH10	1.643	4.00	2.35	ZF-EDAH10
EDAM10	1.892	4.00	2.10	ZF-EDAM10
EDAU10	2.142	4.00	1.85	ZF-EDAU10
EDAZ10	2.391	4.00	1.60	ZF-EDAZ10
EDAH11	2.640	4.00	1.36	ZF-EDAH11
EDAM11	2.890	4.00	1.11	ZF-EDAM11

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

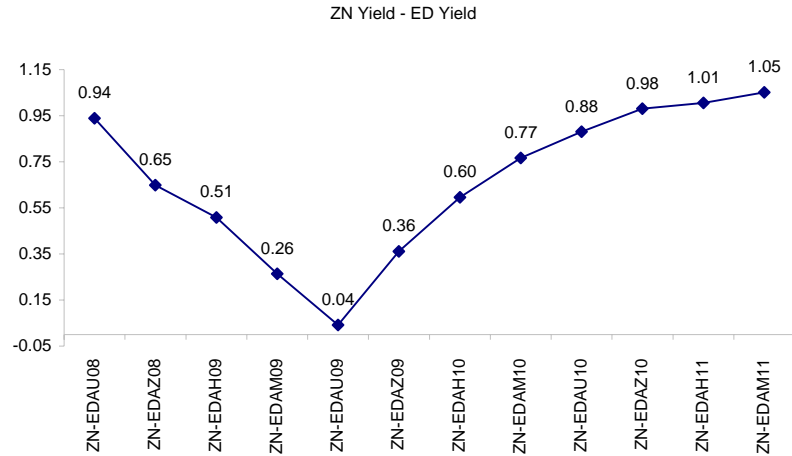


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	16.079	0.94	ZN-EDAU08	71.692
EDAZ08	16.369	0.65	ZN-EDAZ08	92.861
EDAH09	16.509	0.51	ZN-EDAH09	96.303
EDAM09	16.754	0.26	ZN-EDAM09	96.993
EDAU09	17.059	0.04	ZN-EDAU09	97.244
EDAZ09	17.379	0.36	ZN-EDAZ09	97.526
EDAH10	17.614	0.60	ZN-EDAH10	98.796
EDAM10	17.784	0.77	ZN-EDAM10	98.507
EDAU10	17.899	0.88	ZN-EDAU10	97.977
EDAZ10	17.999	0.98	ZN-EDAZ10	97.240
EDAH11	18.024	1.01	ZN-EDAH11	96.224
EDAM11	18.069	1.05	ZN-EDAM11	95.962

Price = Outright Decimal Price - Euro Contract Price

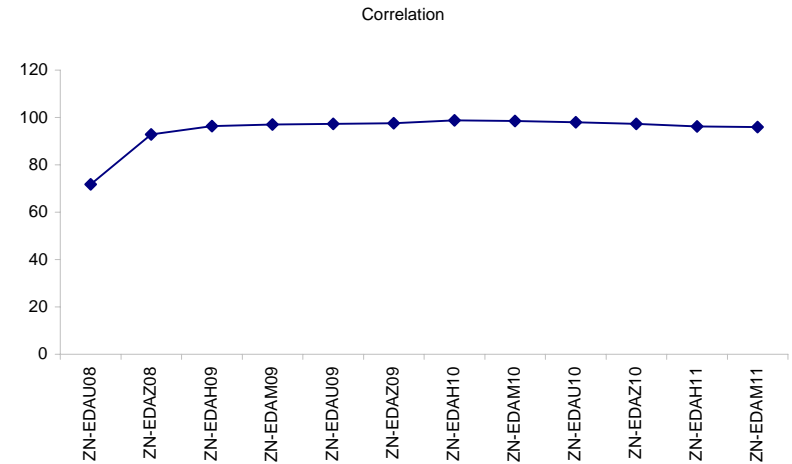
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.147	6.41	6.26	ZN-EDAU08		
EDAZ08	0.397	6.41	6.01	ZN-EDAZ08		
EDAH09	0.646	6.41	5.76	ZN-EDAH09		
EDAM09	0.895	6.41	5.51	ZN-EDAM09		
EDAU09	1.145	6.41	5.26	ZN-EDAU09		
EDAZ09	1.394	6.41	5.02	ZN-EDAZ09		
EDAH10	1.643	6.41	4.77	ZN-EDAH10		
EDAM10	1.892	6.41	4.52	ZN-EDAM10		
EDAU10	2.142	6.41	4.27	ZN-EDAU10		
EDAZ10	2.391	6.41	4.02	ZN-EDAZ10		
EDAH11	2.640	6.41	3.77	ZN-EDAH11		
EDAM11	2.890	6.41	3.52	ZN-EDAM11		

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

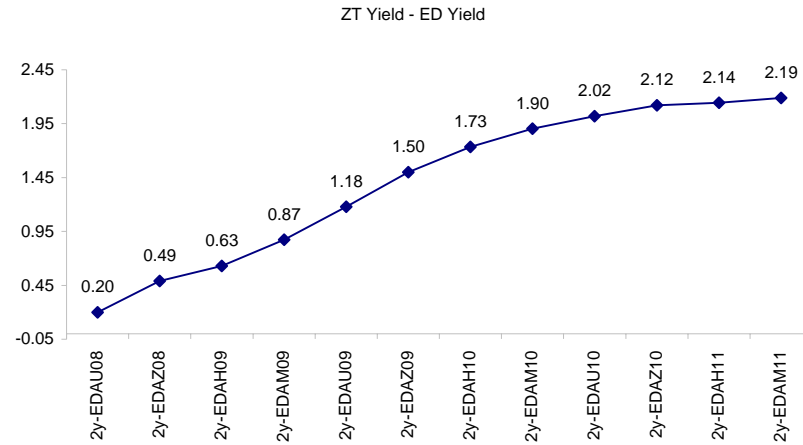


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.164	0.20	2y-EDAU08	-90.737
EDAZ08	3.454	0.49	2y-EDAZ08	-93.771
EDAH09	3.594	0.63	2y-EDAH09	-93.098
EDAM09	3.839	0.87	2y-EDAM09	-92.845
EDAU09	4.144	1.18	2y-EDAU09	-92.132
EDAZ09	4.464	1.50	2y-EDAZ09	-91.967
EDAH10	4.699	1.73	2y-EDAH10	-91.650
EDAM10	4.869	1.90	2y-EDAM10	-90.004
EDAU10	4.984	2.02	2y-EDAU10	-87.995
EDAZ10	5.084	2.12	2y-EDAZ10	-86.073
EDAH11	5.109	2.14	2y-EDAH11	-84.117
EDAM11	5.154	2.19	2y-EDAM11	-83.728

Price = Outright Decimal Price - Euro Contract Price

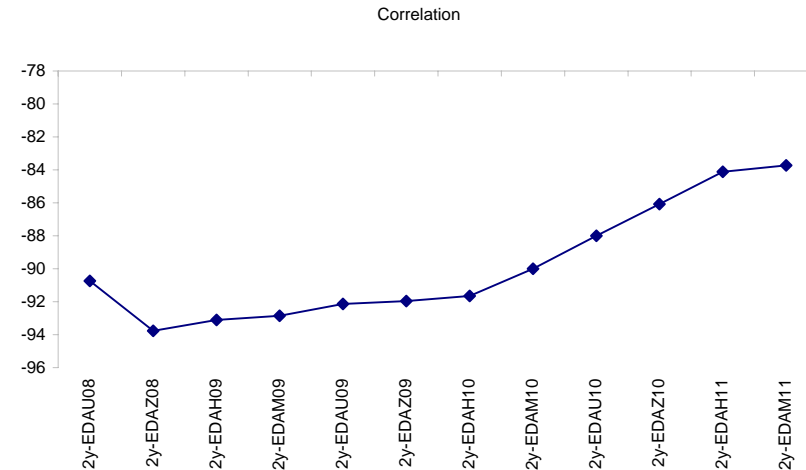
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	2Y Duration	Spread Duration		
EDAU08	0.147	1.87	1.72	2y-EDAU08
EDAZ08	0.397	1.87	1.47	2y-EDAZ08
EDAH09	0.646	1.87	1.22	2y-EDAH09
EDAM09	0.895	1.87	0.97	2y-EDAM09
EDAU09	1.145	1.87	0.72	2y-EDAU09
EDAZ09	1.394	1.87	0.47	2y-EDAZ09
EDAH10	1.643	1.87	0.22	2y-EDAH10
EDAM10	1.892	1.87	(0.03)	2y-EDAM10
EDAU10	2.142	1.87	(0.27)	2y-EDAU10
EDAZ10	2.391	1.87	(0.52)	2y-EDAZ10
EDAH11	2.640	1.87	(0.77)	2y-EDAH11
EDAM11	2.890	1.87	(1.02)	2y-EDAM11

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

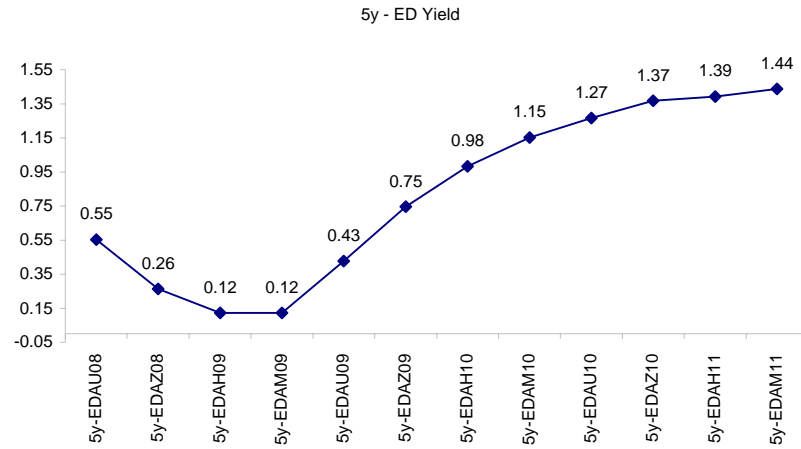


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.289	0.55	5y-EDAU08	-81.242
EDAZ08	2.579	0.26	5y-EDAZ08	-94.103
EDAH09	2.719	0.12	5y-EDAH09	-96.101
EDAM09	2.964	0.12	5y-EDAM09	-96.593
EDAU09	3.269	0.43	5y-EDAU09	-96.617
EDAZ09	3.589	0.75	5y-EDAZ09	-96.754
EDAH10	3.824	0.98	5y-EDAH10	-96.793
EDAM10	3.994	1.15	5y-EDAM10	-96.355
EDAU10	4.109	1.27	5y-EDAU10	-95.566
EDAZ10	4.209	1.37	5y-EDAZ10	-94.643
EDAH11	4.234	1.39	5y-EDAH11	-93.582
EDAM11	4.279	1.44	5y-EDAM11	-93.463

Price = Outright Decimal Price - Euro Contract Price

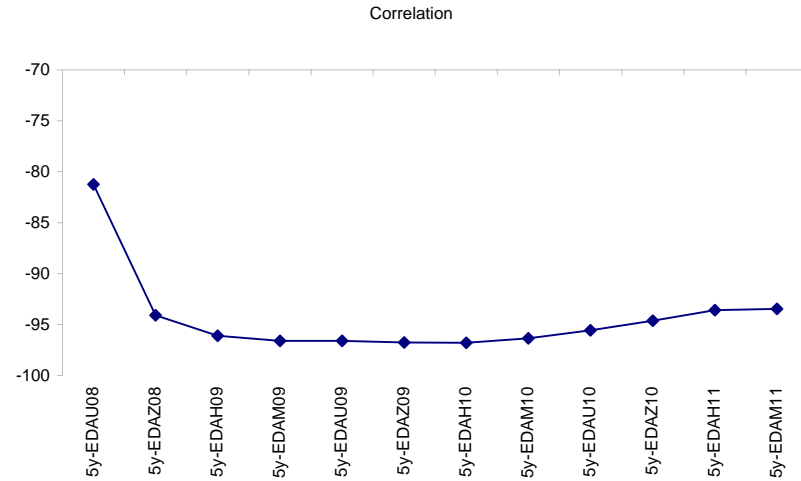
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.147	4.50	4.35	5y-EDAU08
EDAZ08	0.397	4.50	4.10	5y-EDAZ08
EDAH09	0.646	4.50	3.85	5y-EDAH09
EDAM09	0.895	4.50	3.60	5y-EDAM09
EDAU09	1.145	4.50	3.35	5y-EDAU09
EDAZ09	1.394	4.50	3.10	5y-EDAZ09
EDAH10	1.643	4.50	2.85	5y-EDAH10
EDAM10	1.892	4.50	2.60	5y-EDAM10
EDAU10	2.142	4.50	2.35	5y-EDAU10
EDAZ10	2.391	4.50	2.11	5y-EDAZ10
EDAH11	2.640	4.50	1.86	5y-EDAH11
EDAM11	2.890	4.50	1.61	5y-EDAM11

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

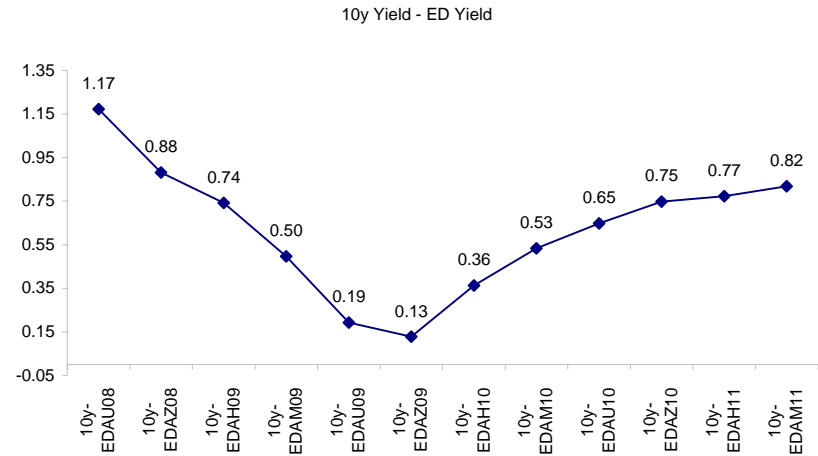


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.289	1.17	10y-EDAU08	-72.488
EDAZ08	2.579	0.88	10y-EDAZ08	-91.240
EDAH09	2.719	0.74	10y-EDAH09	-94.769
EDAM09	2.964	0.50	10y-EDAM09	-95.353
EDAU09	3.269	0.19	10y-EDAU09	-95.584
EDAZ09	3.589	0.13	10y-EDAZ09	-95.826
EDAH10	3.824	0.36	10y-EDAH10	-96.087
EDAM10	3.994	0.53	10y-EDAM10	-96.455
EDAU10	4.109	0.65	10y-EDAU10	-96.447
EDAZ10	4.209	0.75	10y-EDAZ10	-96.189
EDAH11	4.234	0.77	10y-EDAH11	-95.731
EDAM11	4.279	0.82	10y-EDAM11	-95.774

Price = Outright Decimal Price - Euro Contract Price

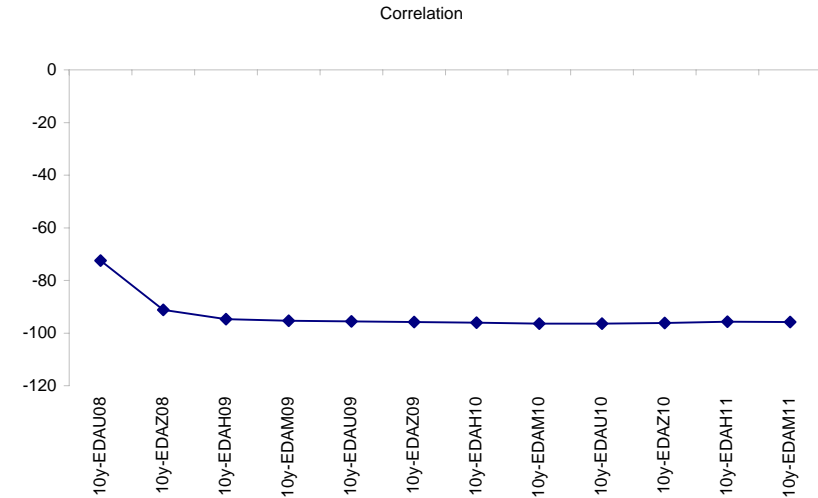
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.147	8.01	7.86	10y-EDAU08
EDAZ08	0.397	8.01	7.61	10y-EDAZ08
EDAH09	0.646	8.01	7.36	10y-EDAH09
EDAM09	0.895	8.01	7.11	10y-EDAM09
EDAU09	1.145	8.01	6.86	10y-EDAU09
EDAZ09	1.394	8.01	6.61	10y-EDAZ09
EDAH10	1.643	8.01	6.36	10y-EDAH10
EDAM10	1.892	8.01	6.11	10y-EDAM10
EDAU10	2.142	8.01	5.86	10y-EDAU10
EDAZ10	2.391	8.01	5.62	10y-EDAZ10
EDAH11	2.640	8.01	5.37	10y-EDAH11
EDAM11	2.890	8.01	5.12	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.

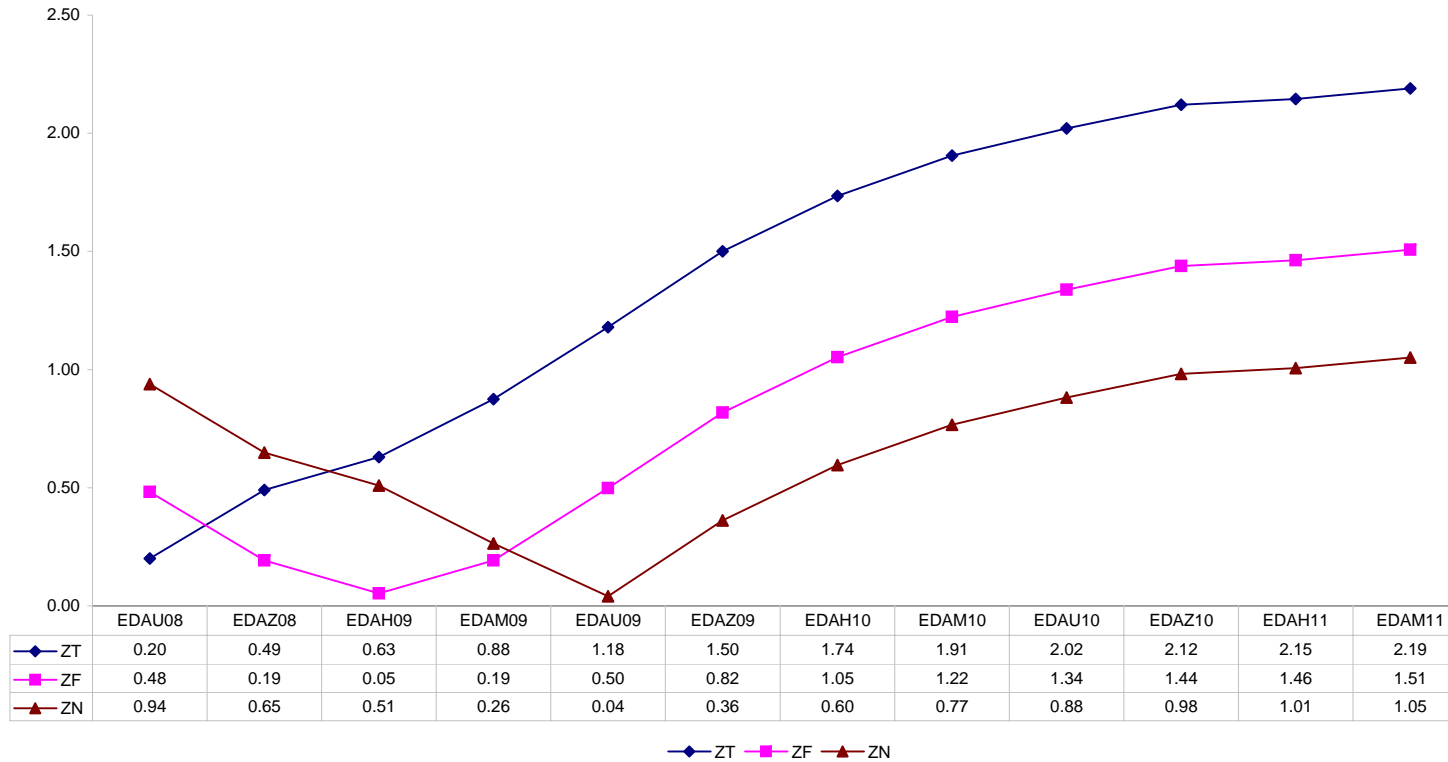
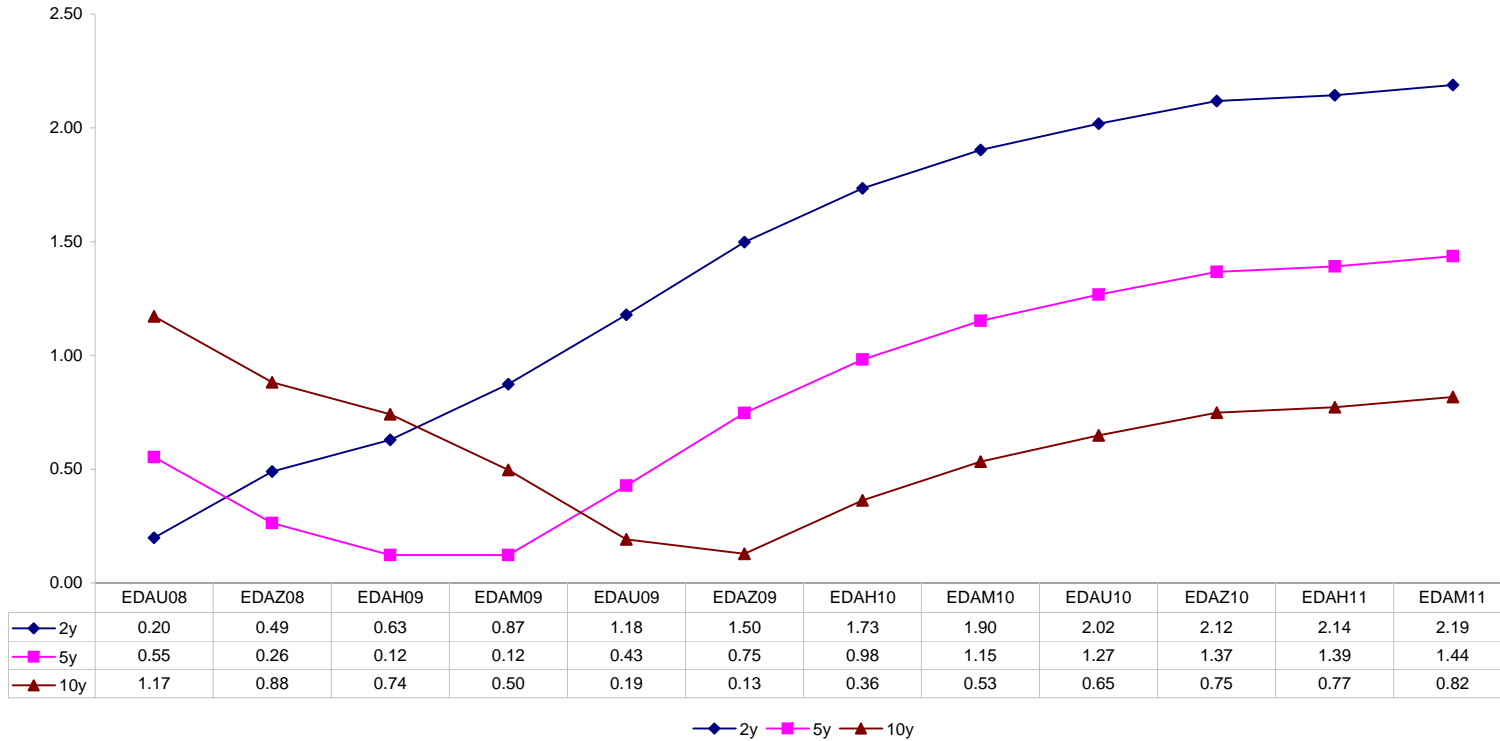
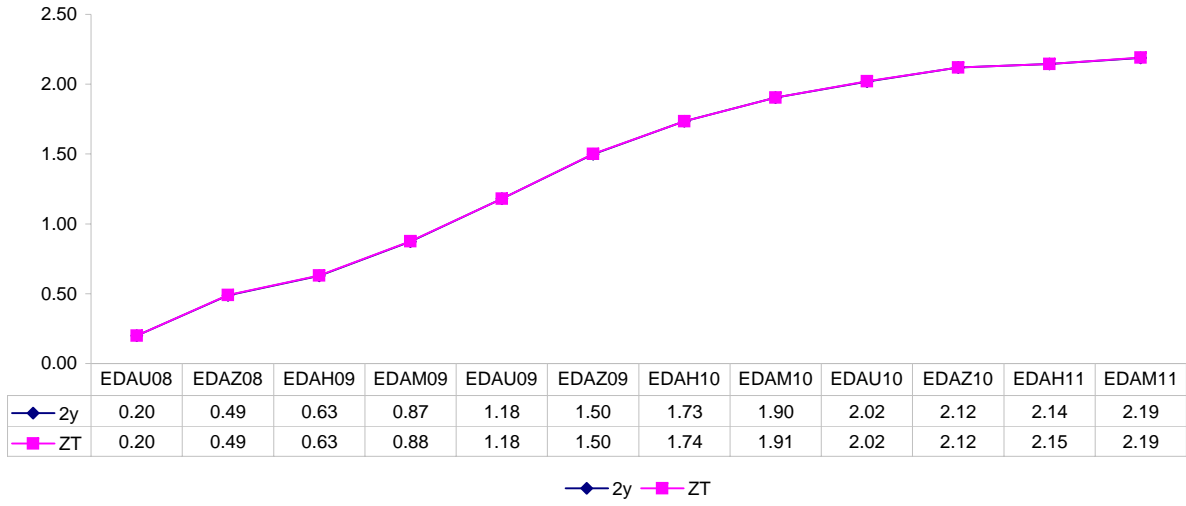


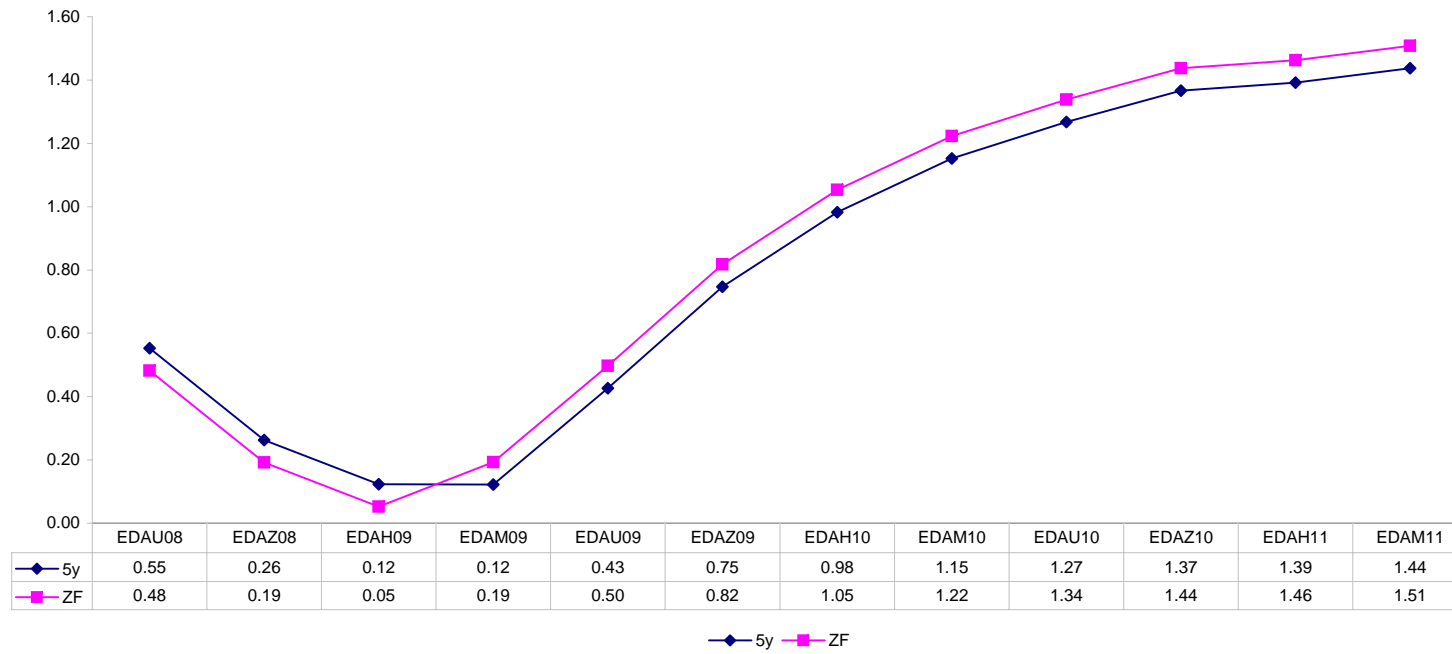
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



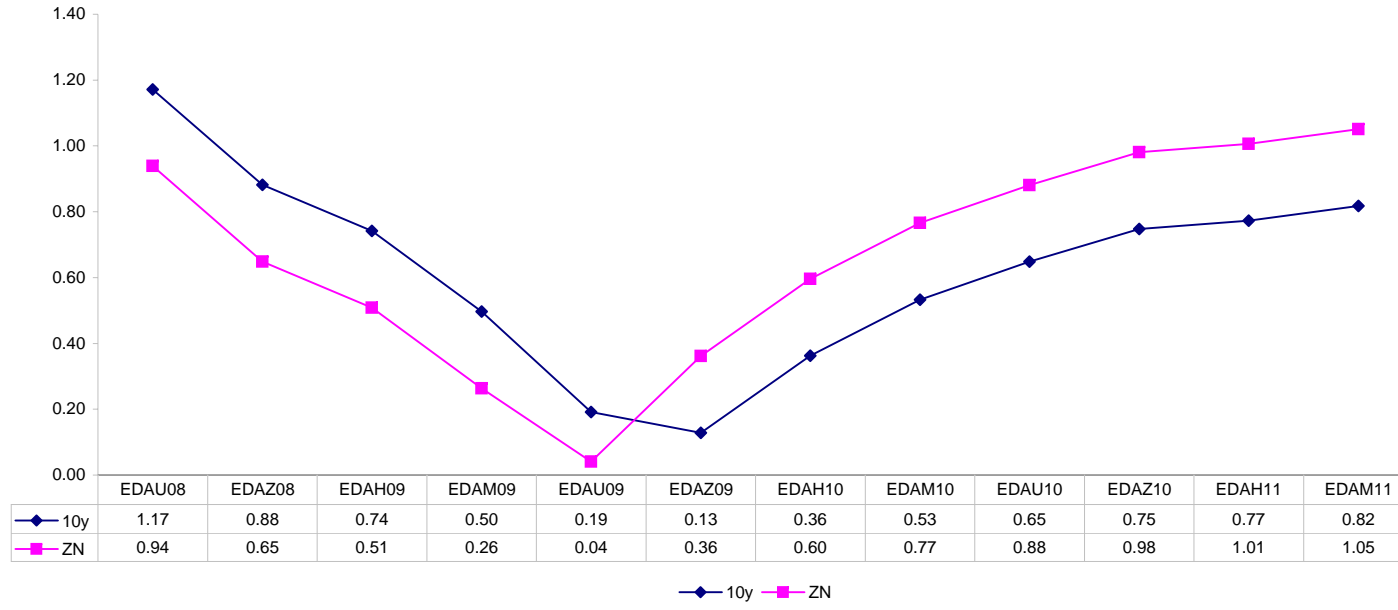
2y Basis TED Curve



5y Basis TED Curve

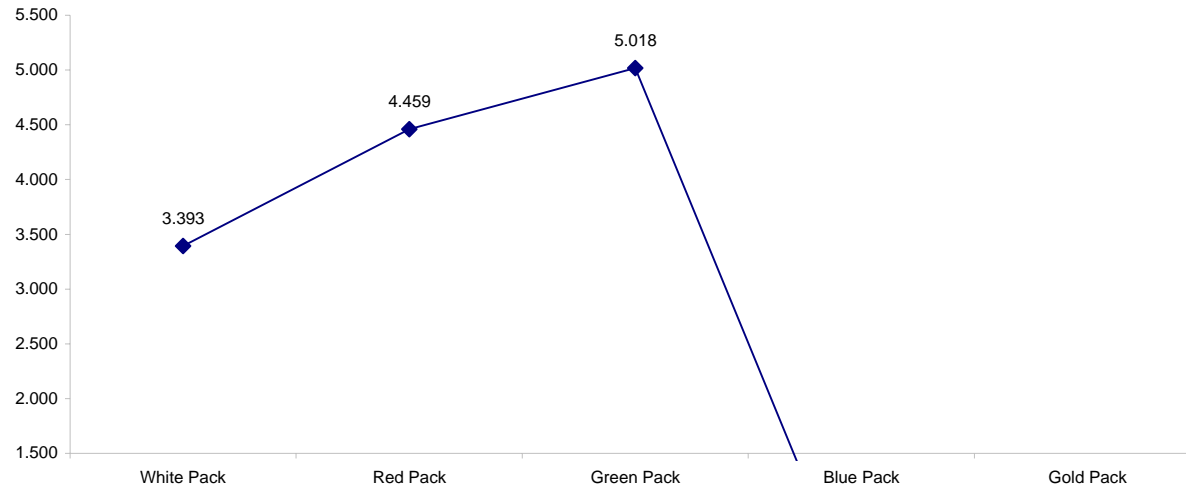


10y Basis TED Curve



Packs

	Last Yield	Net Last Yield	Last Price
White Pack	3.393	-5.500	9668.125
Red Pack	4.459	-7.875	9565.000
Green Pack	5.018	-5.250	9511.125
Blue Pack		-0.750	9498.875
Gold Pack		0.000	9485.000



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

