

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	108.5063	108.162	0.924	1.74
ZF	117.9844	117.315	1.753	4.00
ZN	119.9375	119.300	3.195	6.27
2y	100.631	100.2020	1.164	1.90
5y	103.022	103.0070	2.044	4.59
10y	104.438	104.1400	3.226	8.31

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAZ08	97.918	2.083	21	0.057	DEC	
EDAH09	98.035	1.965	112	0.306	MAR	White Pack
EDAM09	98.000	2.000	203	0.555	JUN	
EDAU09	97.900	2.100	294	0.805	SEP	
EDAZ09	97.735	2.265	385	1.054	DEC	
EDAH10	97.670	2.330	476	1.303	MAR	Red Pack
EDAM10	97.525	2.475	567	1.553	JUN	
EDAU10	97.330	2.670	658	1.802	SEP	
EDAZ10	97.040	2.960	749	2.051	DEC	
EDAH11	96.835	3.165	840	2.301	MAR	Green Pack
EDAM11	96.590	3.410	931	2.550	JUN	
EDAU11	96.320	3.680	1029	2.818	SEP	
EDAZ11	96.130	3.870	1120	3.068	DEC	
EDAH12	96.100	3.900	1211	3.317	MAR	Blue Pack
EDAM12	95.980	4.020	1302	3.566	JUN	
EDAU12	95.915	4.085	1393	3.816	SEP	
EDAZ12	95.780	4.220	1484	4.065	DEC	
EDAH13	95.855	4.145	1575	4.314	MAR	Gold Pack
EDAM13	#VALUE!	#VALUE!	1666	4.564	JUN	
EDZU13	#VALUE!	#VALUE!	1848	5.062	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	2.076	-6.625	9796.313	Pack Prices
Red Pack	2.484	-12.250	9756.500	
Green Pack	3.378	-11.750	9669.625	
Blue Pack	4.064	-11.500	9603.125	
Gold Pack		-2.750	9578.625	

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.

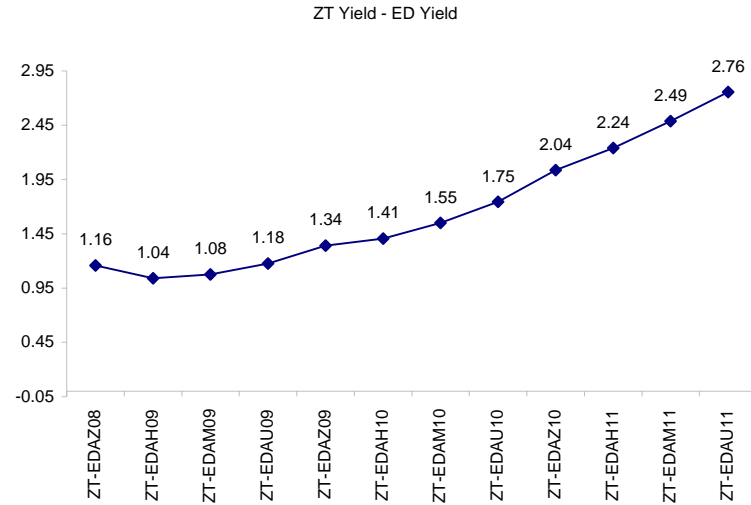
jgoulding@ghco.com

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.

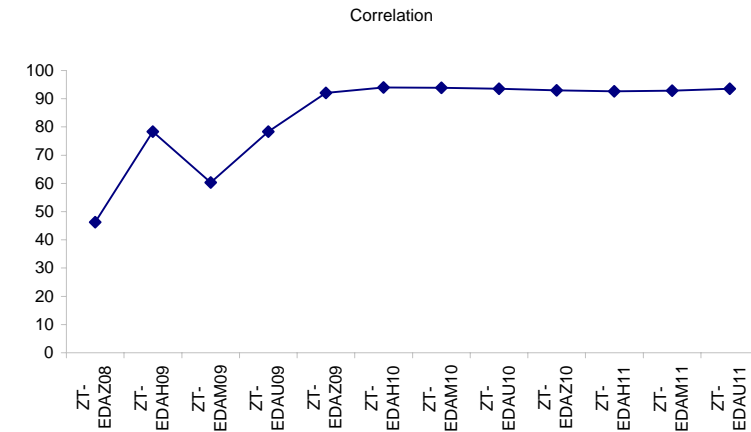
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	10.589	1.16	ZT-EDAZ08	46.310
EDAH09	10.471	1.04	ZT-EDAH09	78.382
EDAM09	10.506	1.08	ZT-EDAM09	60.333
EDAU09	10.606	1.18	ZT-EDAU09	78.382
EDAZ09	10.771	1.34	ZT-EDAZ09	92.071
EDAH10	10.836	1.41	ZT-EDAH10	93.979
EDAM10	10.981	1.55	ZT-EDAM10	93.902
EDAU10	11.176	1.75	ZT-EDAU10	93.496
EDAZ10	11.466	2.04	ZT-EDAZ10	92.949
EDAH11	11.671	2.24	ZT-EDAH11	92.585
EDAM11	11.916	2.49	ZT-EDAM11	92.811
EDAU11	12.186	2.76	ZT-EDAU11	93.572

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	0.057	1.74	1.68	ZT-EDAZ08
EDAH09	0.306	1.74	1.44	ZT-EDAH09
EDAM09	0.555	1.74	1.19	ZT-EDAM09
EDAU09	0.805	1.74	0.94	ZT-EDAU09
EDAZ09	1.054	1.74	0.69	ZT-EDAZ09
EDAH10	1.303	1.74	0.44	ZT-EDAH10
EDAM10	1.553	1.74	0.19	ZT-EDAM10
EDAU10	1.802	1.74	(0.06)	ZT-EDAU10
EDAZ10	2.051	1.74	(0.31)	ZT-EDAZ10
EDAH11	2.301	1.74	(0.56)	ZT-EDAH11
EDAM11	2.550	1.74	(0.81)	ZT-EDAM11
EDAU11	2.818	1.74	(1.08)	ZT-EDAU11

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

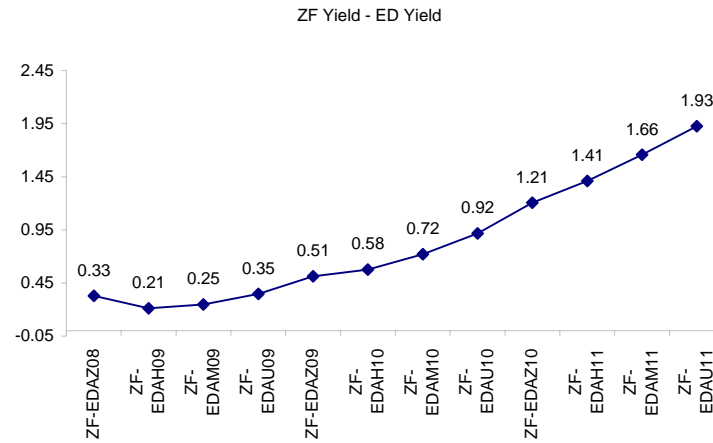


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	20.067	0.33	ZF-EDAZ08	18.153
EDAH09	19.949	0.21	ZF-EDAH09	22.371
EDAM09	19.984	0.25	ZF-EDAM09	33.338
EDAU09	20.084	0.35	ZF-EDAU09	53.496
EDAZ09	20.249	0.51	ZF-EDAZ09	75.458
EDAH10	20.314	0.58	ZF-EDAH10	86.412
EDAM10	20.459	0.72	ZF-EDAM10	93.604
EDAU10	20.654	0.92	ZF-EDAU10	96.838
EDAZ10	20.944	1.21	ZF-EDAZ10	97.819
EDAH11	21.149	1.41	ZF-EDAH11	97.968
EDAM11	21.394	1.66	ZF-EDAM11	97.744
EDAU11	21.664	1.93	ZF-EDAU11	97.228

Price = Outright Decimal Price - Euro Contract Price

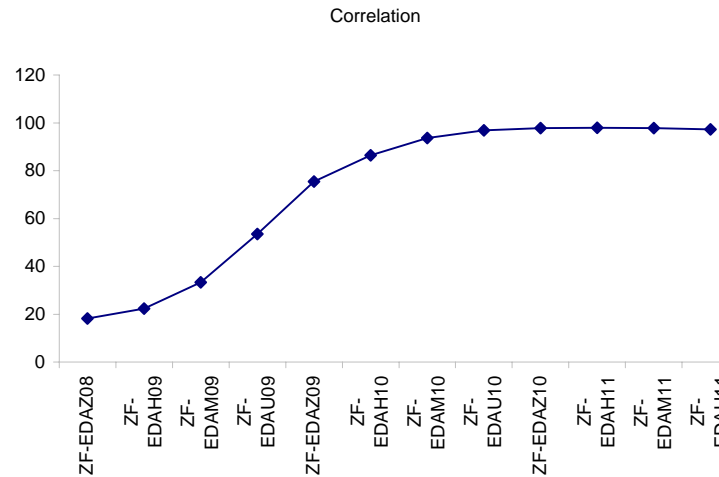
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



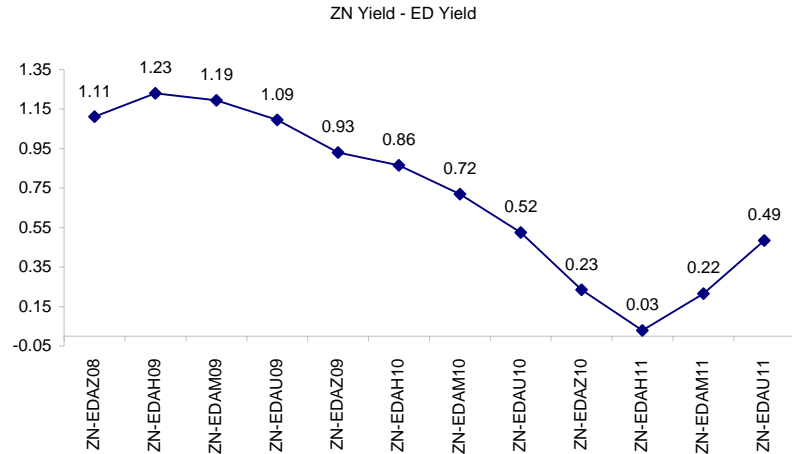
ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAZ08	0.057	4.00	3.94	ZF-EDAZ08		
EDAH09	0.306	4.00	3.69	ZF-EDAH09		
EDAM09	0.555	4.00	3.44	ZF-EDAM09		
EDAU09	0.805	4.00	3.19	ZF-EDAU09		
EDAZ09	1.054	4.00	2.94	ZF-EDAZ09		
EDAH10	1.303	4.00	2.69	ZF-EDAH10		
EDAM10	1.553	4.00	2.44	ZF-EDAM10		
EDAU10	1.802	4.00	2.19	ZF-EDAU10		
EDAZ10	2.051	4.00	1.95	ZF-EDAZ10		
EDAH11	2.301	4.00	1.70	ZF-EDAH11		
EDAM11	2.550	4.00	1.45	ZF-EDAM11		
EDAU11	2.818	4.00	1.18	ZF-EDAU11		

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



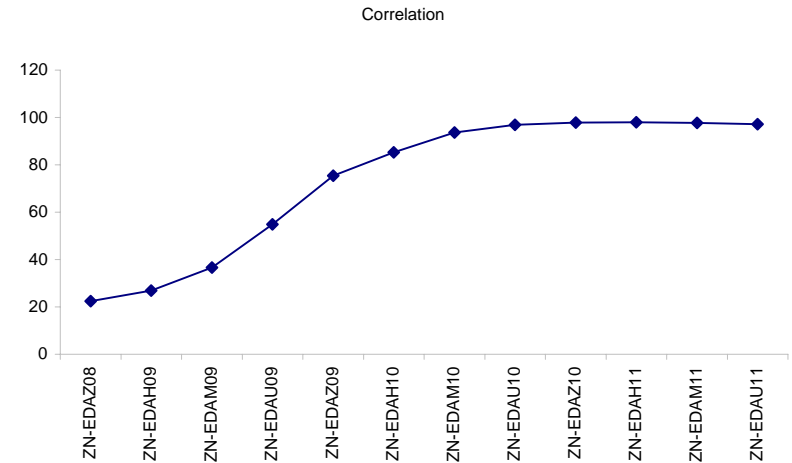
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	22.020	1.11	ZN-EDAZ08	22.458
EDAH09	21.903	1.23	ZN-EDAH09	26.869
EDAM09	21.938	1.19	ZN-EDAM09	36.570
EDAU09	22.038	1.09	ZN-EDAU09	54.838
EDAZ09	22.203	0.93	ZN-EDAZ09	75.363
EDAH10	22.268	0.86	ZN-EDAH10	85.251
EDAM10	22.413	0.72	ZN-EDAM10	93.604
EDAU10	22.608	0.52	ZN-EDAU10	96.838
EDAZ10	22.898	0.23	ZN-EDAZ10	97.819
EDAH11	23.103	0.03	ZN-EDAH11	97.968
EDAM11	23.348	0.22	ZN-EDAM11	97.744
EDAU11	23.618	0.49	ZN-EDAU11	97.228

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	0.057	6.27	6.22	ZN-EDAZ08		
EDAH09	0.306	6.27	5.97	ZN-EDAH09		
EDAM09	0.555	6.27	5.72	ZN-EDAM09		
EDAU09	0.805	6.27	5.47	ZN-EDAU09		
EDAZ09	1.054	6.27	5.22	ZN-EDAZ09		
EDAH10	1.303	6.27	4.97	ZN-EDAH10		
EDAM10	1.553	6.27	4.72	ZN-EDAM10		
EDAU10	1.802	6.27	4.47	ZN-EDAU10		
EDAZ10	2.051	6.27	4.22	ZN-EDAZ10		
EDAH11	2.301	6.27	3.97	ZN-EDAH11		
EDAM11	2.550	6.27	3.72	ZN-EDAM11		
EDAU11	2.818	6.27	3.46	ZN-EDAU11		

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

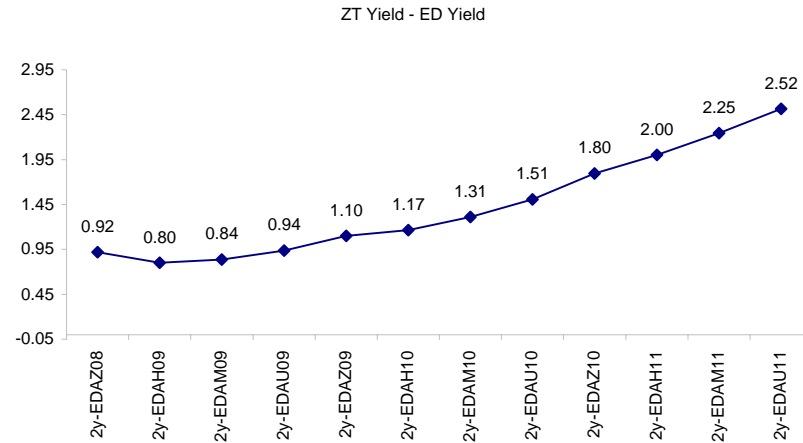


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	2.714	0.92	2y-EDAZ08	-42.848
EDAH09	2.596	0.80	2y-EDAH09	-55.903
EDAM09	2.631	0.84	2y-EDAM09	-64.498
EDAU09	2.731	0.94	2y-EDAU09	-82.971
EDAZ09	2.896	1.10	2y-EDAZ09	-96.224
EDAH10	2.961	1.17	2y-EDAH10	-97.604
EDAM10	3.106	1.31	2y-EDAM10	-95.124
EDAU10	3.301	1.51	2y-EDAU10	-92.838
EDAZ10	3.591	1.80	2y-EDAZ10	-91.095
EDAH11	3.796	2.00	2y-EDAH11	-90.279
EDAM11	4.041	2.25	2y-EDAM11	-90.541
EDAU11	4.311	2.52	2y-EDAU11	-92.177

Price = Outright Decimal Price - Euro Contract Price

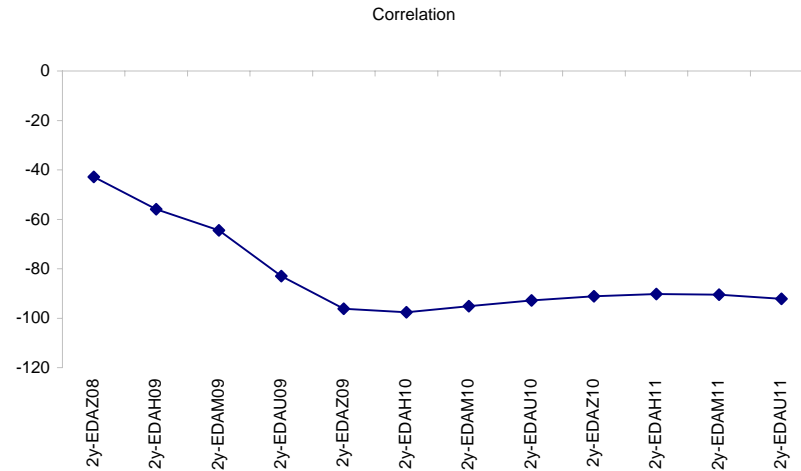
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			2Y Duration	Spread Duration	
EDAZ08	0.057	1.90	1.84	2y-EDAZ08		
EDAH09	0.306	1.90	1.59	2y-EDAH09		
EDAM09	0.555	1.90	1.34	2y-EDAM09		
EDAU09	0.805	1.90	1.09	2y-EDAU09		
EDAZ09	1.054	1.90	0.84	2y-EDAZ09		
EDAH10	1.303	1.90	0.59	2y-EDAH10		
EDAM10	1.553	1.90	0.34	2y-EDAM10		
EDAU10	1.802	1.90	0.09	2y-EDAU10		
EDAZ10	2.051	1.90	(0.16)	2y-EDAZ10		
EDAH11	2.301	1.90	(0.41)	2y-EDAH11		
EDAM11	2.550	1.90	(0.65)	2y-EDAM11		
EDAU11	2.818	1.90	(0.92)	2y-EDAU11		

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

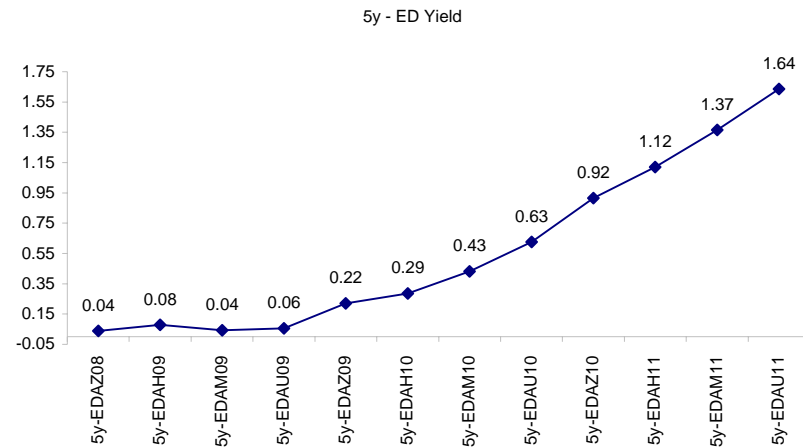


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAZ08	5.104	0.04	5y-EDAZ08	-26.564
EDAH09	4.987	0.08	5y-EDAH09	-38.213
EDAM09	5.022	0.04	5y-EDAM09	-47.007
EDAU09	5.122	0.06	5y-EDAU09	-65.552
EDAZ09	5.287	0.22	5y-EDAZ09	-84.445
EDAH10	5.352	0.29	5y-EDAH10	-91.834
EDAM10	5.497	0.43	5y-EDAM10	-96.117
EDAU10	5.692	0.63	5y-EDAU10	-98.036
EDAZ10	5.982	0.92	5y-EDAZ10	-98.864
EDAH11	6.187	1.12	5y-EDAH11	-99.122
EDAM11	6.432	1.37	5y-EDAM11	-99.197
EDAU11	6.702	1.64	5y-EDAU11	-98.964

Price = Outright Decimal Price - Euro Contract Price

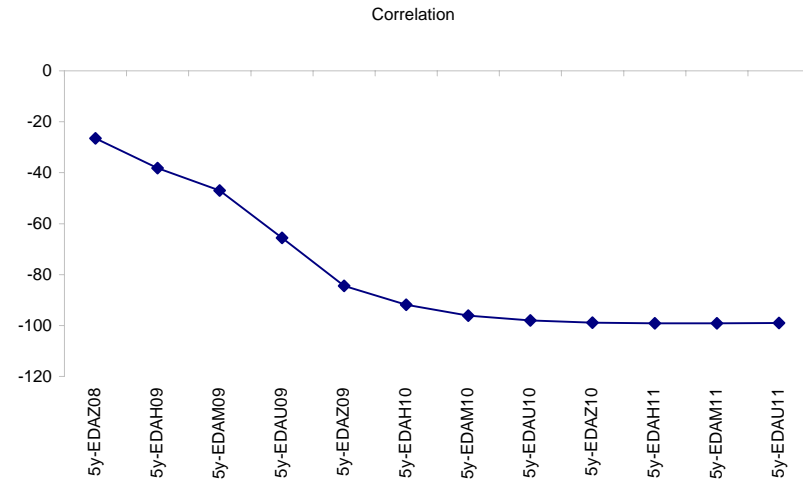
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	5Y Duration	Spread Duration		
EDAZ08	0.057	4.59	4.54	5y-EDAZ08
EDAH09	0.306	4.59	4.29	5y-EDAH09
EDAM09	0.555	4.59	4.04	5y-EDAM09
EDAU09	0.805	4.59	3.79	5y-EDAU09
EDAZ09	1.054	4.59	3.54	5y-EDAZ09
EDAH10	1.303	4.59	3.29	5y-EDAH10
EDAM10	1.553	4.59	3.04	5y-EDAM10
EDAU10	1.802	4.59	2.79	5y-EDAU10
EDAZ10	2.051	4.59	2.54	5y-EDAZ10
EDAH11	2.301	4.59	2.29	5y-EDAH11
EDAM11	2.550	4.59	2.04	5y-EDAM11
EDAU11	2.818	4.59	1.78	5y-EDAU11

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

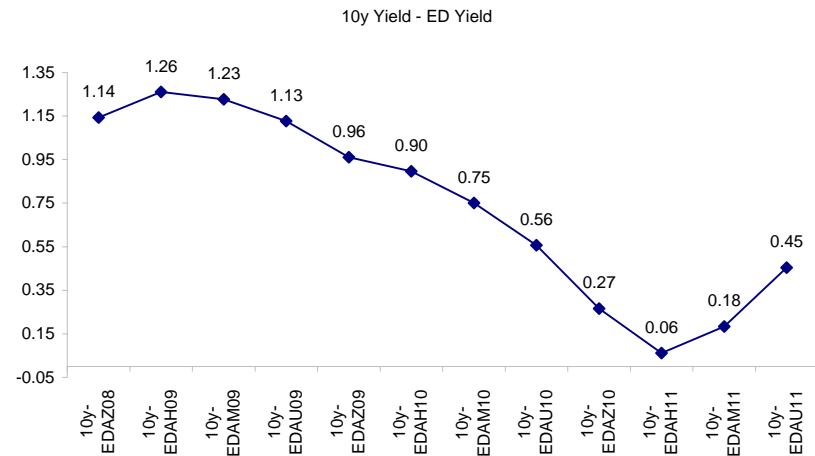


	10y			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAZ08	5.104	1.14	10y-EDAZ08	-46.809
EDAH09	4.987	1.26	10y-EDAH09	-54.045
EDAM09	5.022	1.23	10y-EDAM09	-61.172
EDAU09	5.122	1.13	10y-EDAU09	-74.363
EDAZ09	5.287	0.96	10y-EDAZ09	-85.435
EDAH10	5.352	0.90	10y-EDAH10	-87.237
EDAM10	5.497	0.75	10y-EDAM10	-90.521
EDAU10	5.692	0.56	10y-EDAU10	-93.221
EDAZ10	5.982	0.27	10y-EDAZ10	-94.718
EDAH11	6.187	0.06	10y-EDAH11	-95.732
EDAM11	6.432	0.18	10y-EDAM11	-96.388
EDAU11	6.702	0.45	10y-EDAU11	-96.426

Price = Outright Decimal Price - Euro Contract Price

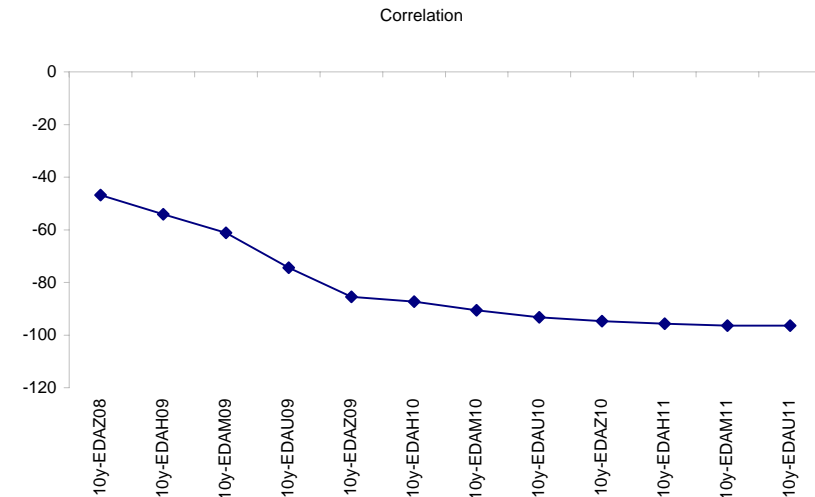
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as			
	Fraction of year	10Y Duration	Spread Duration	
EDAZ08	0.057	8.31	8.25	10y-EDAZ08
EDAH09	0.306	8.31	8.00	10y-EDAH09
EDAM09	0.555	8.31	7.75	10y-EDAM09
EDAU09	0.805	8.31	7.50	10y-EDAU09
EDAZ09	1.054	8.31	7.26	10y-EDAZ09
EDAH10	1.303	8.31	7.01	10y-EDAH10
EDAM10	1.553	8.31	6.76	10y-EDAM10
EDAU10	1.802	8.31	6.51	10y-EDAU10
EDAZ10	2.051	8.31	6.26	10y-EDAZ10
EDAH11	2.301	8.31	6.01	10y-EDAH11
EDAM11	2.550	8.31	5.76	10y-EDAM11
EDAU11	2.818	8.31	5.49	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.

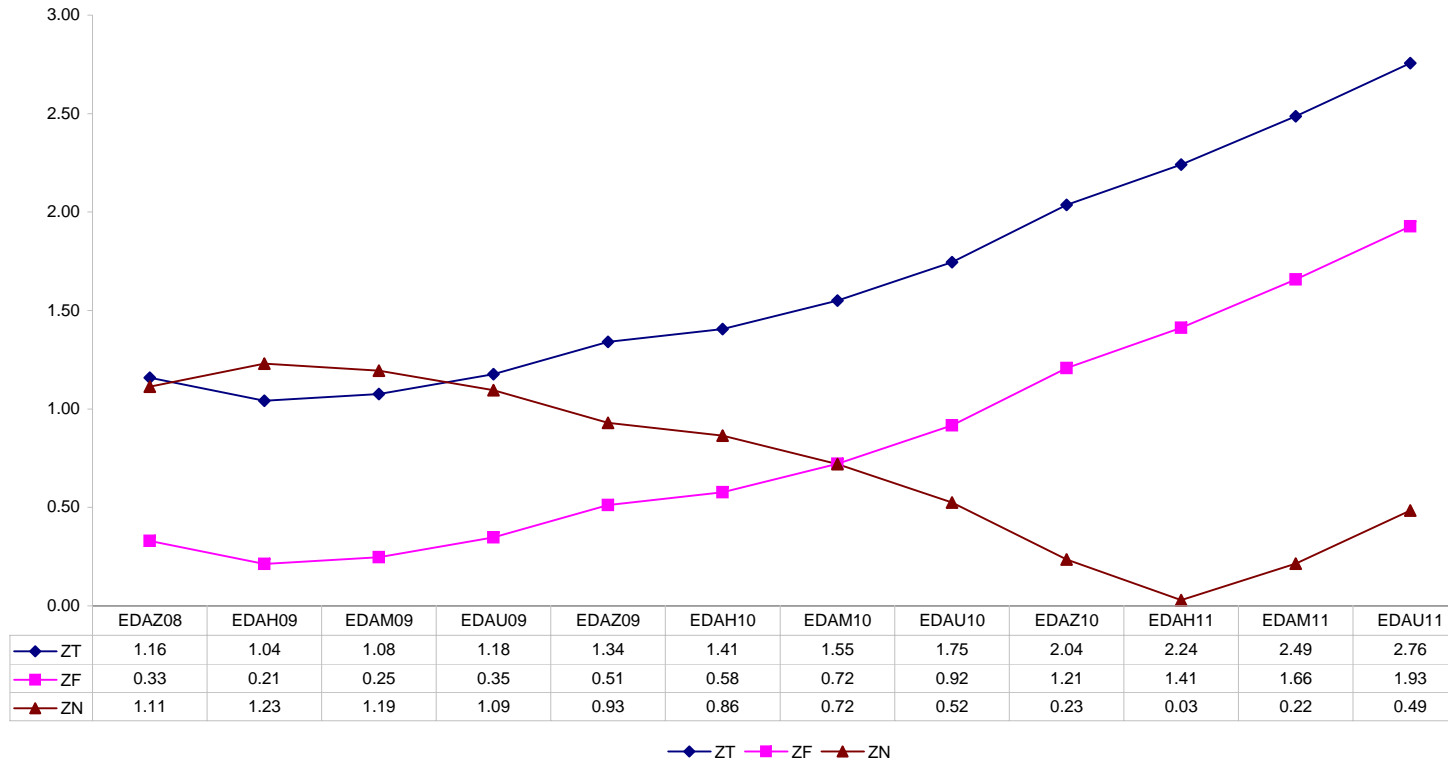
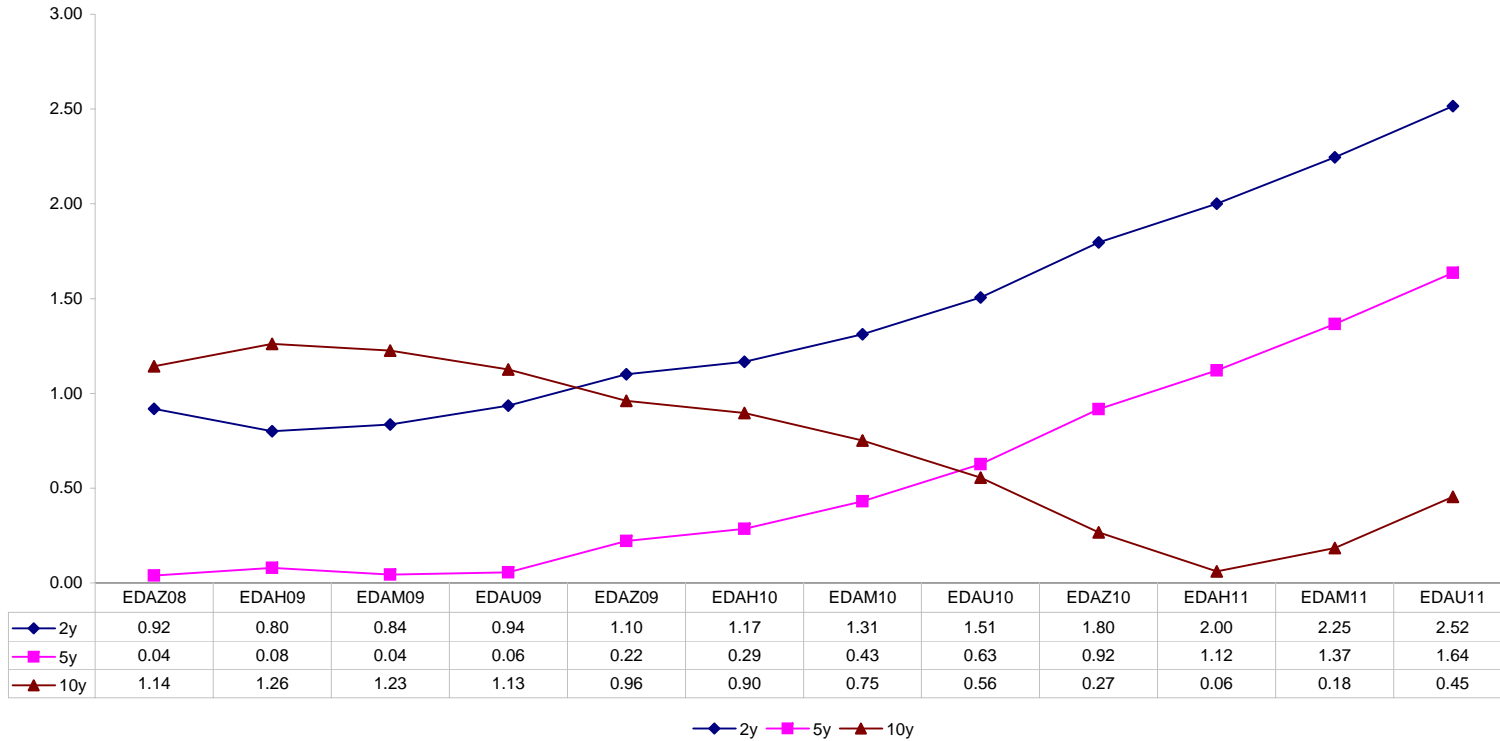
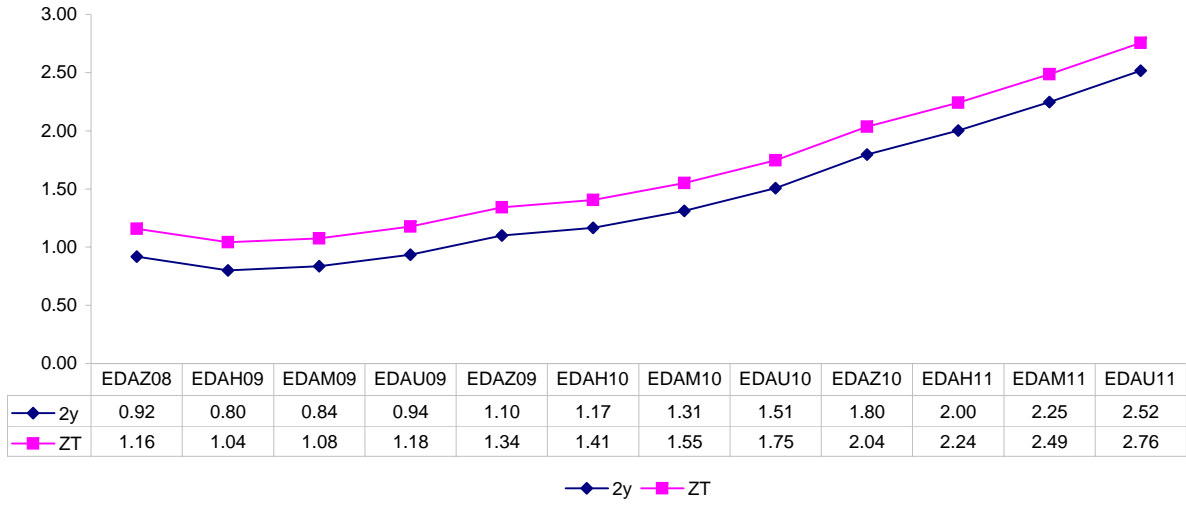


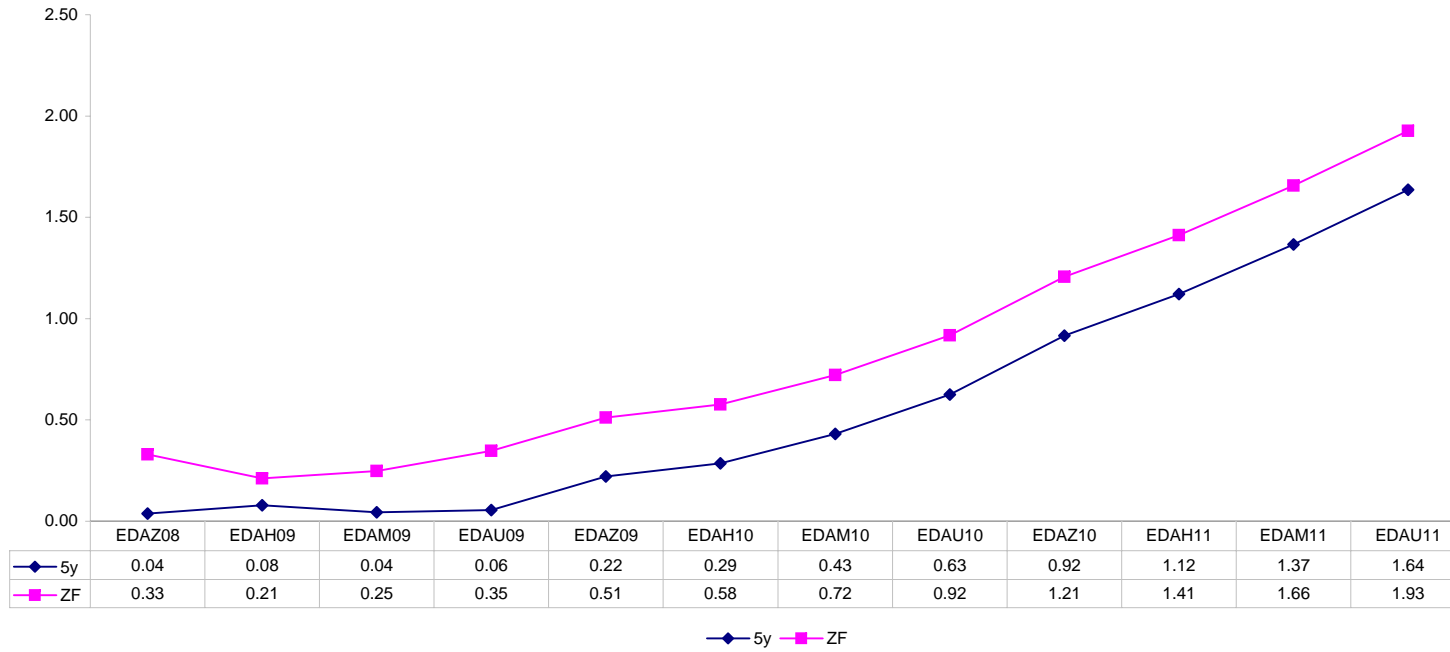
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



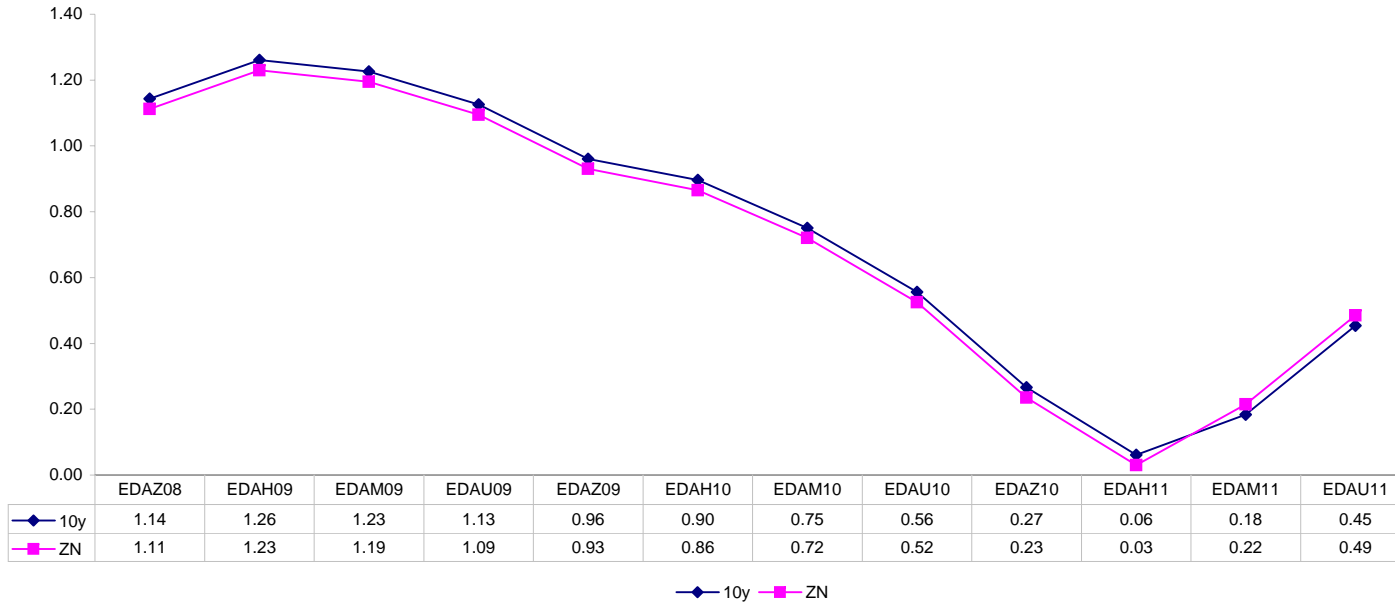
2y Basis TED Curve



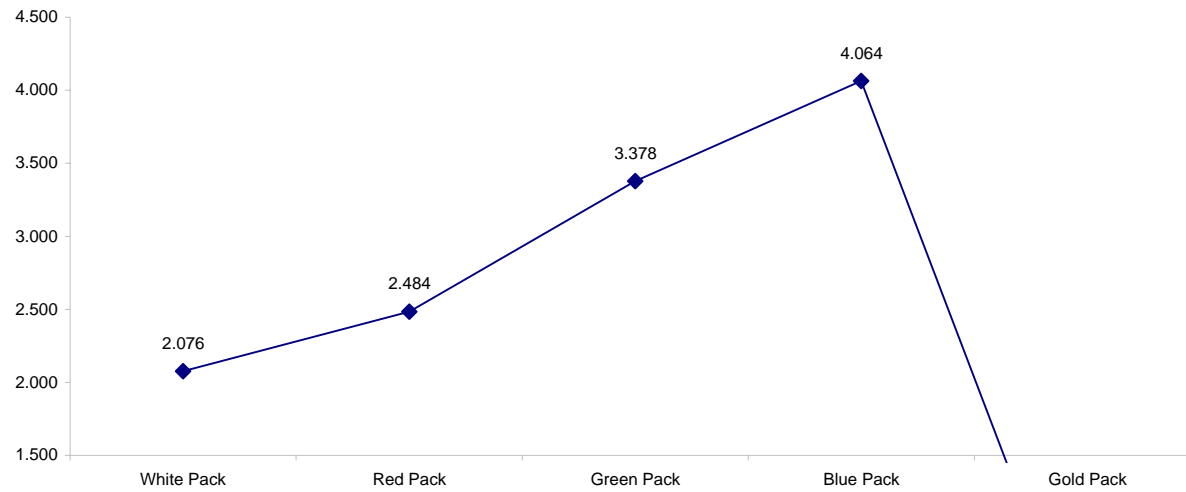
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.076	-6.625	9796.313
Red Pack	2.484	-12.250	9756.500
Green Pack	3.378	-11.750	9669.625
Blue Pack	4.064	-11.500	9603.125
Gold Pack		-2.750	9578.625



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

