

## The Morning Email: TERM TEDS & Dirty TEDS

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**New**

Want something added? Let me know: [jgoulding@ghco.com](mailto: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	106.8594	106.275	1.831	1.87
ZF	113.0625	113.020	2.629	4.02
ZN	117.5313	117.170	3.355	6.60
2y	99.741	99.2370	1.879	1.94
5y	98.953	98.3050	2.721	4.57
10y	99.328	99.1050	3.577	8.23

Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month
EDAM08	97.535	2.465	74	0.202	JUN
EDAU08	97.645	2.355	165	0.451	SEP White
EDAZ08	97.560	2.440	256	0.701	DEC Pack
EDAH09	97.485	2.515	347	0.950	MAR
EDAM09	97.285	2.715	438	1.199	JUN
EDAU09	97.075	2.925	529	1.449	SEP Red Pack
EDAZ09	96.800	3.200	620	1.698	DEC
EDAH10	96.600	3.400	711	1.947	MAR
EDAM10	96.385	3.615	802	2.197	JUN
EDAU10	96.185	3.815	893	2.446	SEP Green
EDAZ10	96.010	3.990	984	2.695	DEC Pack
EDAH11	95.885	4.115	1075	2.945	MAR
EDAM11	95.760	4.240	1166	3.194	JUN
EDAU11	95.660	4.340	1264	3.462	SEP Blue Pack
EDAZ11	95.560	4.440	1355	3.712	DEC
EDAH12	95.485	4.515	1446	3.961	MAR
EDAM12	95.405	4.595	1537	4.210	JUN
EDAU12	95.325	4.675	1628	4.460	SEP Gold Pack
EDAZ12	95.225	4.775	1719	4.709	DEC
EDAH13	95.170	4.830	1810	4.958	MAR

	Last Yield	Net Yield	Last Price	
White Pack	2.493	0.125	9755.625	Pack Prices
Red Pack	3.127	0.125	9694.000	
Green Pack	3.976	-0.625	9611.625	
Blue Pack	4.494	-0.875	9561.625	
Gold Pack	4.841	0.000	9528.125	

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.

**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.

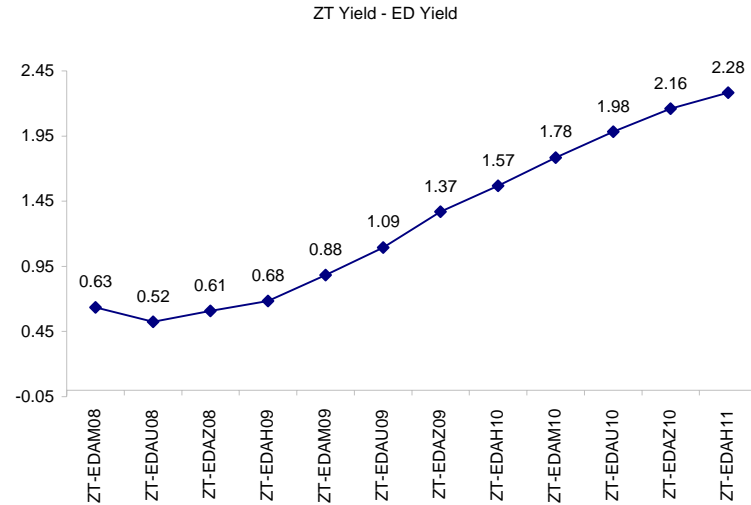
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

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.**

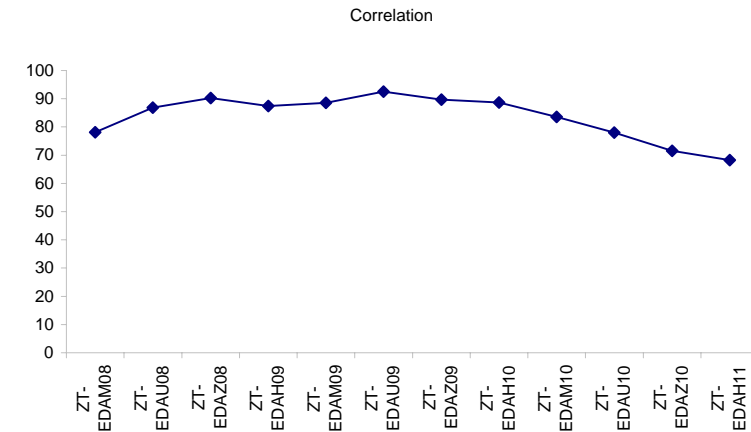
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	9.324	0.63	ZT-EDAM08	78.075
EDAU08	9.214	0.52	ZT-EDAU08	86.904
EDAZ08	9.299	0.61	ZT-EDAZ08	90.301
EDAH09	9.374	0.68	ZT-EDAH09	87.467
EDAM09	9.574	0.88	ZT-EDAM09	88.581
EDAU09	9.784	1.09	ZT-EDAU09	92.479
EDAZ09	10.059	1.37	ZT-EDAZ09	89.681
EDAH10	10.259	1.57	ZT-EDAH10	88.662
EDAM10	10.474	1.78	ZT-EDAM10	83.556
EDAU10	10.674	1.98	ZT-EDAU10	77.994
EDAZ10	10.849	2.16	ZT-EDAZ10	71.548
EDAH11	10.974	2.28	ZT-EDAH11	68.210

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	
EDAM08	0.202	1.87	1.67	ZT-EDAM08		
EDAU08	0.451	1.87	1.42	ZT-EDAU08		
EDAZ08	0.701	1.87	1.17	ZT-EDAZ08		
EDAH09	0.950	1.87	0.92	ZT-EDAH09		
EDAM09	1.199	1.87	0.67	ZT-EDAM09		
EDAU09	1.449	1.87	0.42	ZT-EDAU09		
EDAZ09	1.698	1.87	0.17	ZT-EDAZ09		
EDAH10	1.947	1.87	(0.08)	ZT-EDAH10		
EDAM10	2.197	1.87	(0.32)	ZT-EDAM10		
EDAU10	2.446	1.87	(0.57)	ZT-EDAU10		
EDAZ10	2.695	1.87	(0.82)	ZT-EDAZ10		
EDAH11	2.945	1.87	(1.07)	ZT-EDAH11		

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

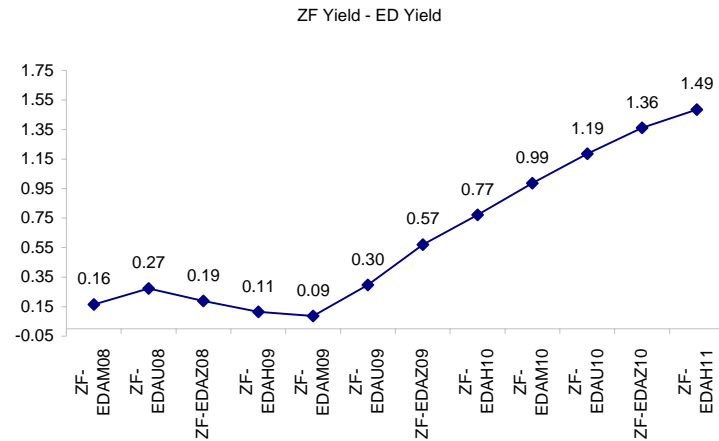


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	15.528	0.16	ZF-EDAM08	89.135
EDAU08	15.418	0.27	ZF-EDAU08	88.627
EDAZ08	15.503	0.19	ZF-EDAZ08	95.574
EDAH09	15.578	0.11	ZF-EDAH09	98.044
EDAM09	15.778	0.09	ZF-EDAM09	98.793
EDAU09	15.988	0.30	ZF-EDAU09	97.469
EDAZ09	16.263	0.57	ZF-EDAZ09	98.523
EDAH10	16.463	0.77	ZF-EDAH10	98.416
EDAM10	16.678	0.99	ZF-EDAM10	98.721
EDAU10	16.878	1.19	ZF-EDAU10	97.956
EDAZ10	17.053	1.36	ZF-EDAZ10	96.542
EDAH11	17.178	1.49	ZF-EDAH11	95.221

Price = Outright Decimal Price - Euro Contract Price

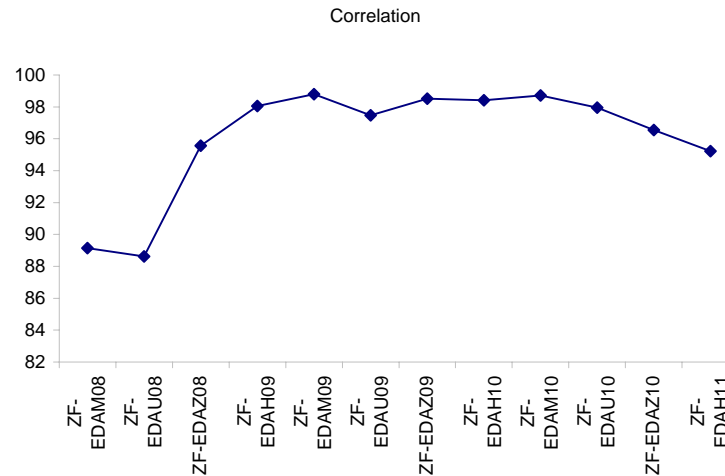
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAM08	0.202	4.02	3.82	ZF-EDAM08	
EDAU08	0.451	4.02	3.57	ZF-EDAU08	
EDAZ08	0.701	4.02	3.32	ZF-EDAZ08	
EDAH09	0.950	4.02	3.07	ZF-EDAH09	
EDAM09	1.199	4.02	2.82	ZF-EDAM09	
EDAU09	1.449	4.02	2.57	ZF-EDAU09	
EDAZ09	1.698	4.02	2.32	ZF-EDAZ09	
EDAH10	1.947	4.02	2.07	ZF-EDAH10	
EDAM10	2.197	4.02	1.82	ZF-EDAM10	
EDAU10	2.446	4.02	1.57	ZF-EDAU10	
EDAZ10	2.695	4.02	1.32	ZF-EDAZ10	
EDAH11	2.945	4.02	1.07	ZF-EDAH11	

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

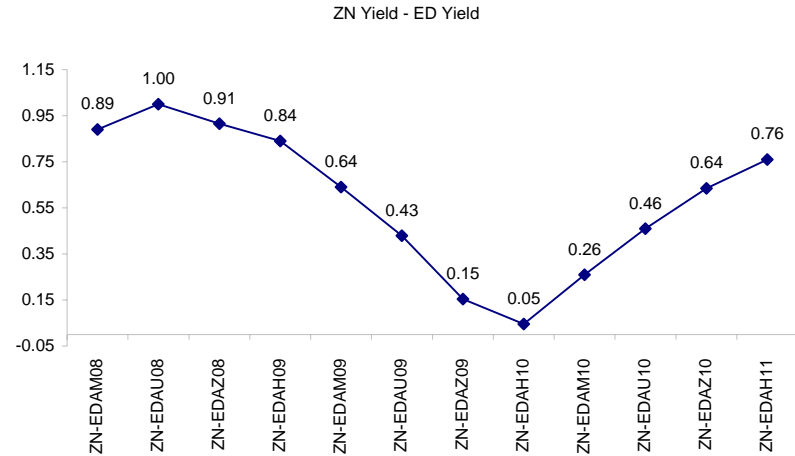


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	19.996	0.89	ZN-EDAM08	89.830
EDAU08	19.886	1.00	ZN-EDAU08	84.549
EDAZ08	19.971	0.91	ZN-EDAZ08	90.600
EDAH09	20.046	0.84	ZN-EDAH09	94.091
EDAM09	20.246	0.64	ZN-EDAM09	93.496
EDAU09	20.456	0.43	ZN-EDAU09	89.288
EDAZ09	20.731	0.15	ZN-EDAZ09	91.770
EDAH10	20.931	0.05	ZN-EDAH10	98.416
EDAM10	21.146	0.26	ZN-EDAM10	98.721
EDAU10	21.346	0.46	ZN-EDAU10	97.956
EDAZ10	21.521	0.64	ZN-EDAZ10	96.542
EDAH11	21.646	0.76	ZN-EDAH11	95.221

Price = Outright Decimal Price - Euro Contract Price

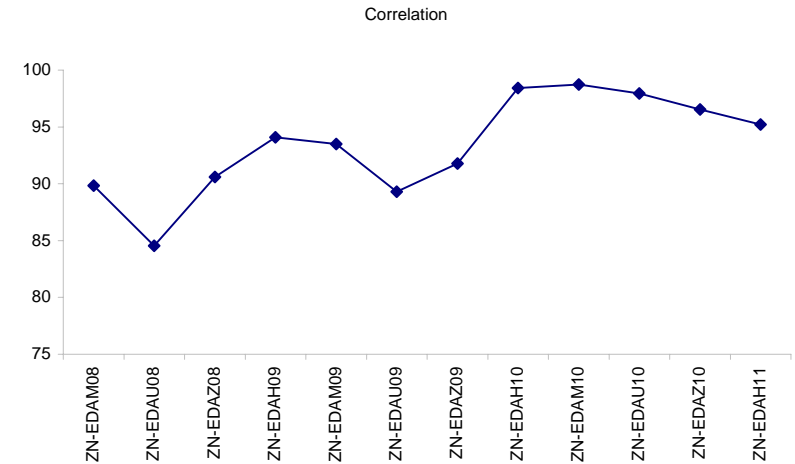
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAM08	0.202	6.60	6.40	ZN-EDAM08		
EDAU08	0.451	6.60	6.15	ZN-EDAU08		
EDAZ08	0.701	6.60	5.90	ZN-EDAZ08		
EDAH09	0.950	6.60	5.65	ZN-EDAH09		
EDAM09	1.199	6.60	5.40	ZN-EDAM09		
EDAU09	1.449	6.60	5.15	ZN-EDAU09		
EDAZ09	1.698	6.60	4.91	ZN-EDAZ09		
EDAH10	1.947	6.60	4.66	ZN-EDAH10		
EDAM10	2.197	6.60	4.41	ZN-EDAM10		
EDAU10	2.446	6.60	4.16	ZN-EDAU10		
EDAZ10	2.695	6.60	3.91	ZN-EDAZ10		
EDAH11	2.945	6.60	3.66	ZN-EDAH11		

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

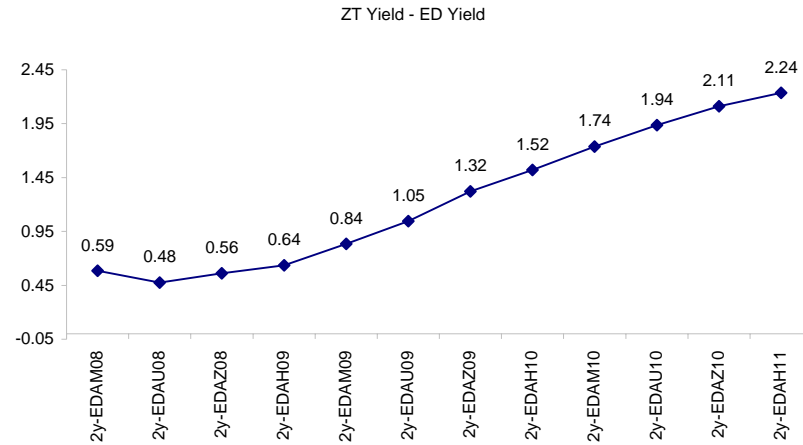


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.206	0.59	2y-EDAM08	-92.435
EDAU08	2.096	0.48	2y-EDAU08	-93.936
EDAZ08	2.181	0.56	2y-EDAZ08	-92.435
EDAH09	2.256	0.64	2y-EDAH09	-94.035
EDAM09	2.456	0.84	2y-EDAM09	-92.913
EDAU09	2.666	1.05	2y-EDAU09	-92.239
EDAZ09	2.941	1.32	2y-EDAZ09	-92.168
EDAH10	3.141	1.52	2y-EDAH10	-92.448
EDAM10	3.356	1.74	2y-EDAM10	-91.454
EDAU10	3.556	1.94	2y-EDAU10	-87.995
EDAZ10	3.731	2.11	2y-EDAZ10	-83.032
EDAH11	3.856	2.24	2y-EDAH11	-79.490

Price = Outright Decimal Price - Euro Contract Price

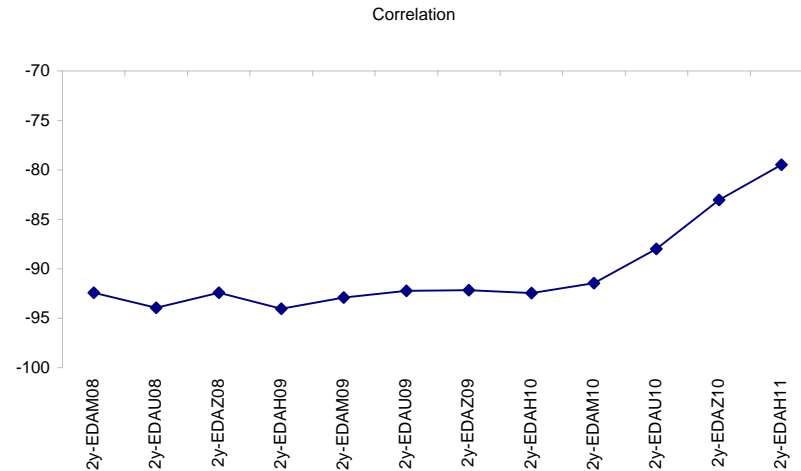
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAM08	0.202	1.94	1.74		2y-EDAM08
EDAU08	0.451	1.94	1.49		2y-EDAU08
EDAZ08	0.701	1.94	1.24		2y-EDAZ08
EDAH09	0.950	1.94	0.99		2y-EDAH09
EDAM09	1.199	1.94	0.75		2y-EDAM09
EDAU09	1.449	1.94	0.50		2y-EDAU09
EDAZ09	1.698	1.94	0.25		2y-EDAZ09
EDAH10	1.947	1.94	(0.00)		2y-EDAH10
EDAM10	2.197	1.94	(0.25)		2y-EDAM10
EDAU10	2.446	1.94	(0.50)		2y-EDAU10
EDAZ10	2.695	1.94	(0.75)		2y-EDAZ10
EDAH11	2.945	1.94	(1.00)		2y-EDAH11

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

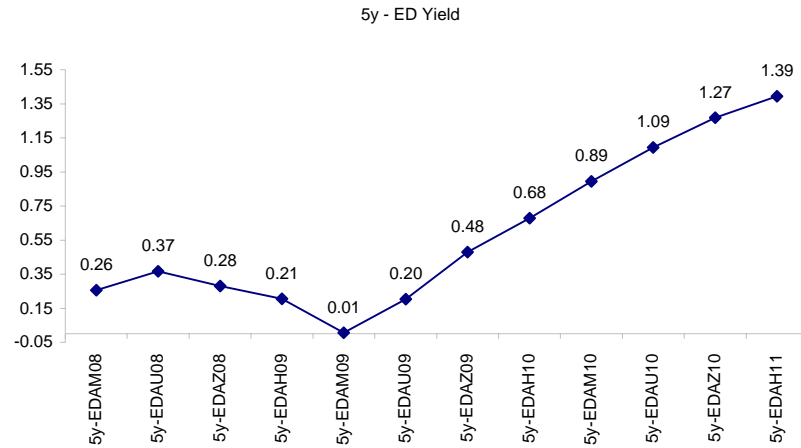


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	1.418	0.26	5y-EDAM08	-93.556
EDAU08	1.308	0.37	5y-EDAU08	-92.200
EDAZ08	1.393	0.28	5y-EDAZ08	-93.556
EDAH09	1.468	0.21	5y-EDAH09	-97.926
EDAM09	1.668	0.01	5y-EDAM09	-97.530
EDAU09	1.878	0.20	5y-EDAU09	-95.544
EDAZ09	2.153	0.48	5y-EDAZ09	-96.721
EDAH10	2.353	0.68	5y-EDAH10	-97.000
EDAM10	2.568	0.89	5y-EDAM10	-97.571
EDAU10	2.768	1.09	5y-EDAU10	-96.098
EDAZ10	2.943	1.27	5y-EDAZ10	-93.544
EDAH11	3.068	1.39	5y-EDAH11	-91.227

Price = Outright Decimal Price - Euro Contract Price

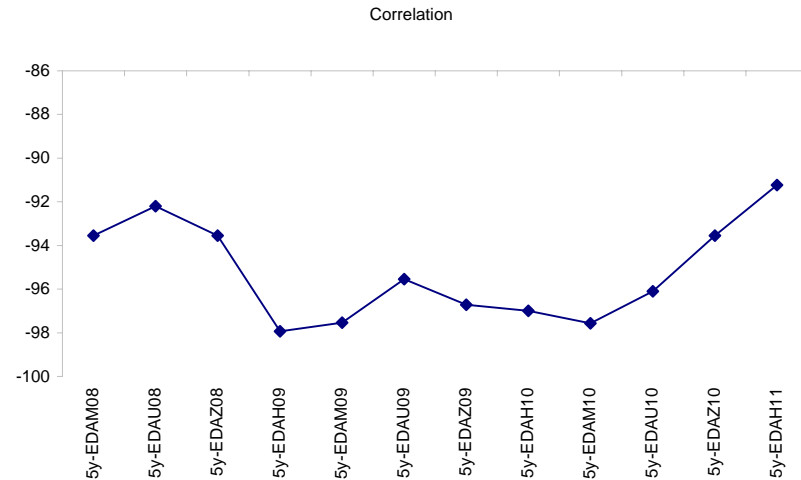
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAM08	0.202	4.57	4.37	5y-EDAM08
EDAU08	0.451	4.57	4.12	5y-EDAU08
EDAZ08	0.701	4.57	3.87	5y-EDAZ08
EDAH09	0.950	4.57	3.62	5y-EDAH09
EDAM09	1.199	4.57	3.37	5y-EDAM09
EDAU09	1.449	4.57	3.12	5y-EDAU09
EDAZ09	1.698	4.57	2.87	5y-EDAZ09
EDAH10	1.947	4.57	2.62	5y-EDAH10
EDAM10	2.197	4.57	2.38	5y-EDAM10
EDAU10	2.446	4.57	2.13	5y-EDAU10
EDAZ10	2.695	4.57	1.88	5y-EDAZ10
EDAH11	2.945	4.57	1.63	5y-EDAH11

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



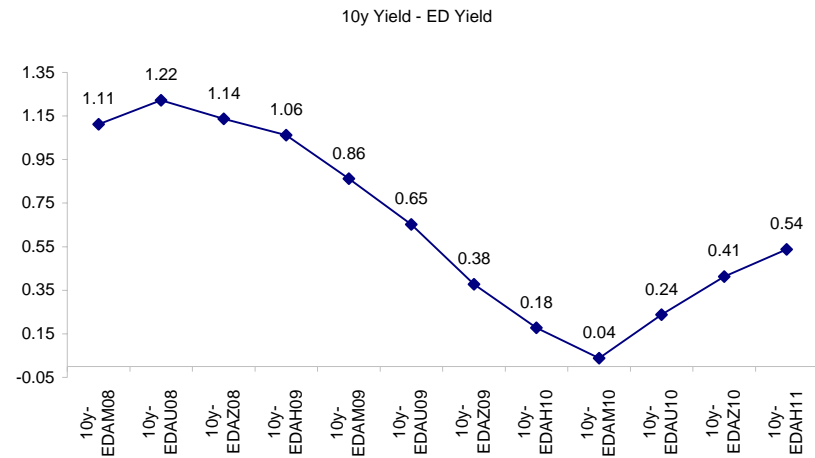


10y				Correlation* (percent)
Spread Price	Spread Yield	Spread Name		
EDAM08	1.418	1.11	10y-EDAM08	-86.164
EDAU08	1.308	1.22	10y-EDAU08	-84.510
EDAZ08	1.393	1.14	10y-EDAZ08	-86.164
EDAH09	1.468	1.06	10y-EDAH09	-94.983
EDAM09	1.668	0.86	10y-EDAM09	-96.034
EDAU09	1.878	0.65	10y-EDAU09	-94.404
EDAZ09	2.153	0.38	10y-EDAZ09	-95.724
EDAH10	2.353	0.18	10y-EDAH10	-95.398
EDAM10	2.568	0.04	10y-EDAM10	-96.045
EDAU10	2.768	0.24	10y-EDAU10	-95.509
EDAZ10	2.943	0.41	10y-EDAZ10	-94.819
EDAH11	3.068	0.54	10y-EDAH11	-93.857

Price = Outright Decimal Price - Euro Contract Price

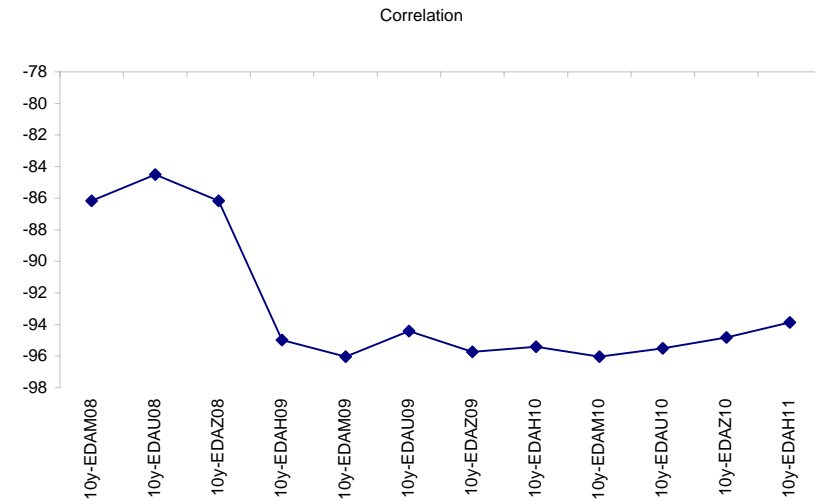
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as				Spread Duration	10y-EDAM08
Fraction of year	10Y Duration	Spread Duration			
EDAM08	0.202	8.23	8.03	10y-EDAM08	
EDAU08	0.451	8.23	7.78	10y-EDAU08	
EDAZ08	0.701	8.23	7.53	10y-EDAZ08	
EDAH09	0.950	8.23	7.28	10y-EDAH09	
EDAM09	1.199	8.23	7.04	10y-EDAM09	
EDAU09	1.449	8.23	6.79	10y-EDAU09	
EDAZ09	1.698	8.23	6.54	10y-EDAZ09	
EDAH10	1.947	8.23	6.29	10y-EDAH10	
EDAM10	2.197	8.23	6.04	10y-EDAM10	
EDAU10	2.446	8.23	5.79	10y-EDAU10	
EDAZ10	2.695	8.23	5.54	10y-EDAZ10	
EDAH11	2.945	8.23	5.29	10y-EDAH11	

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.

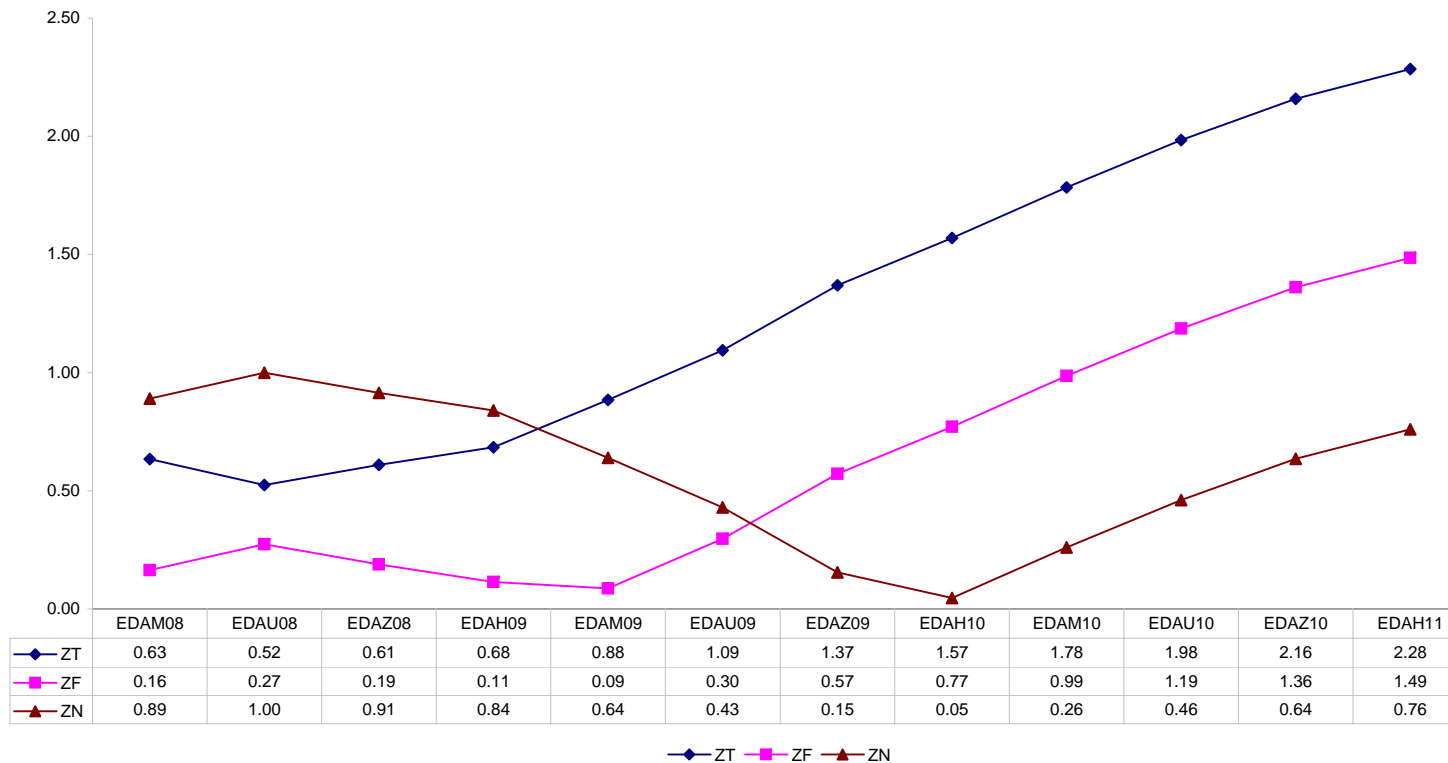
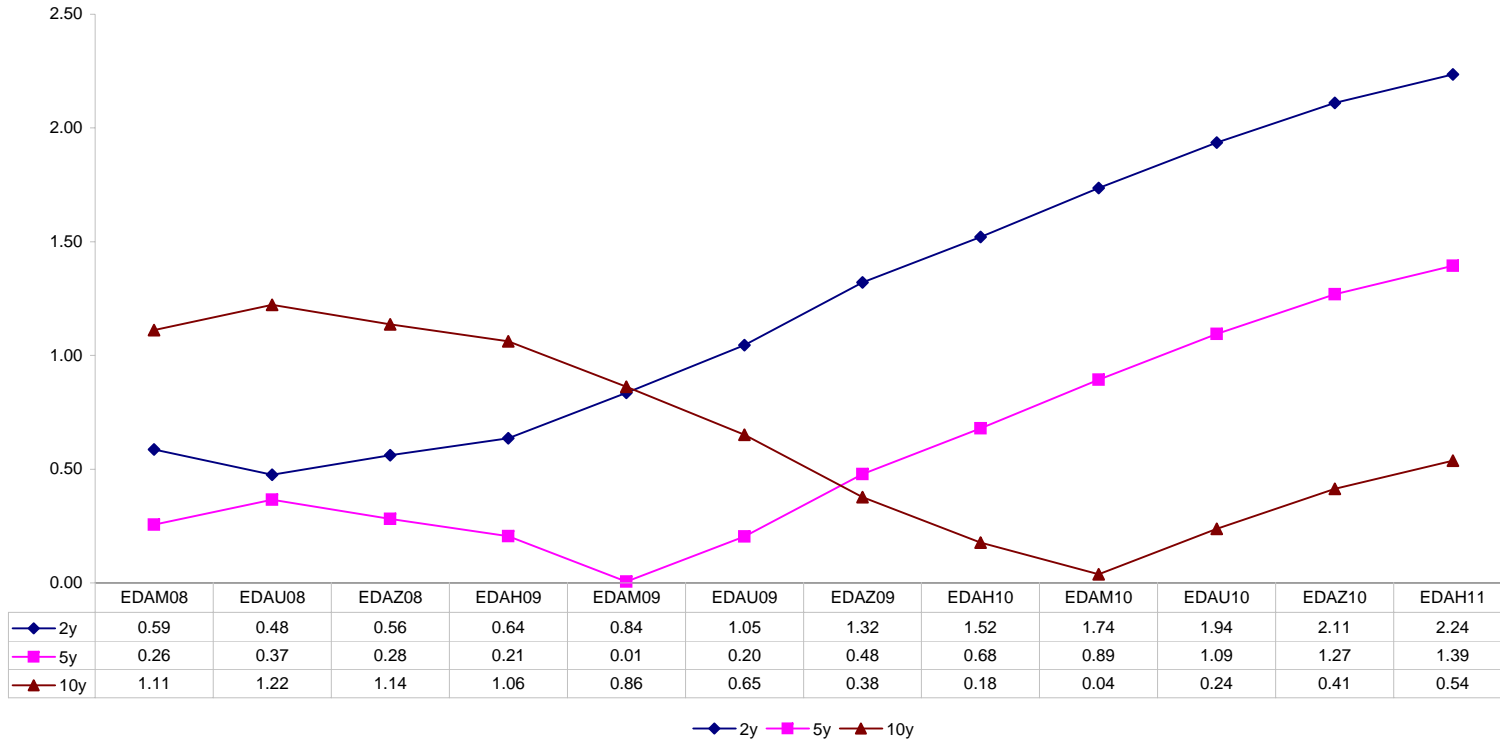
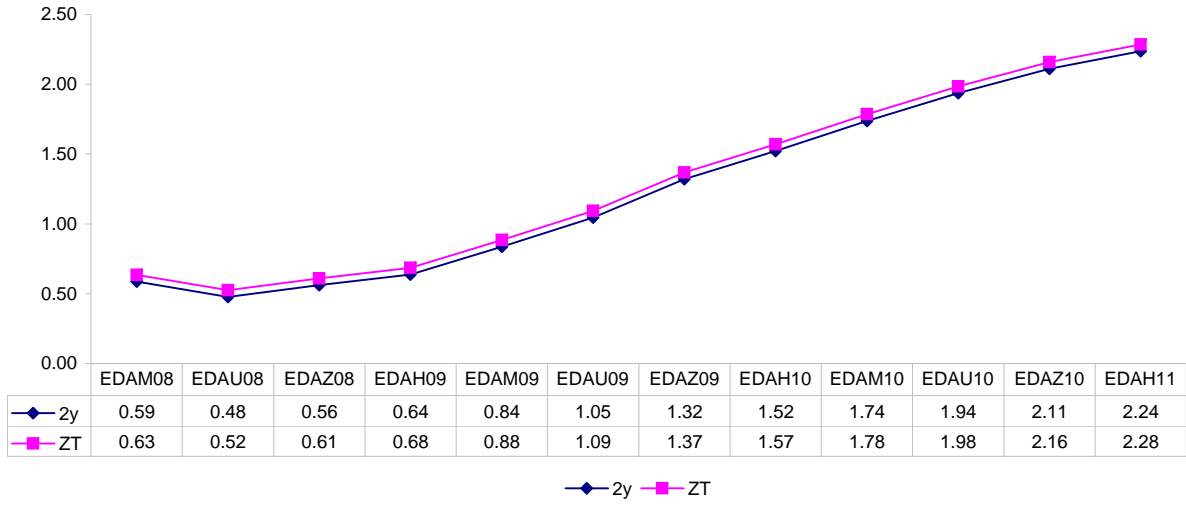


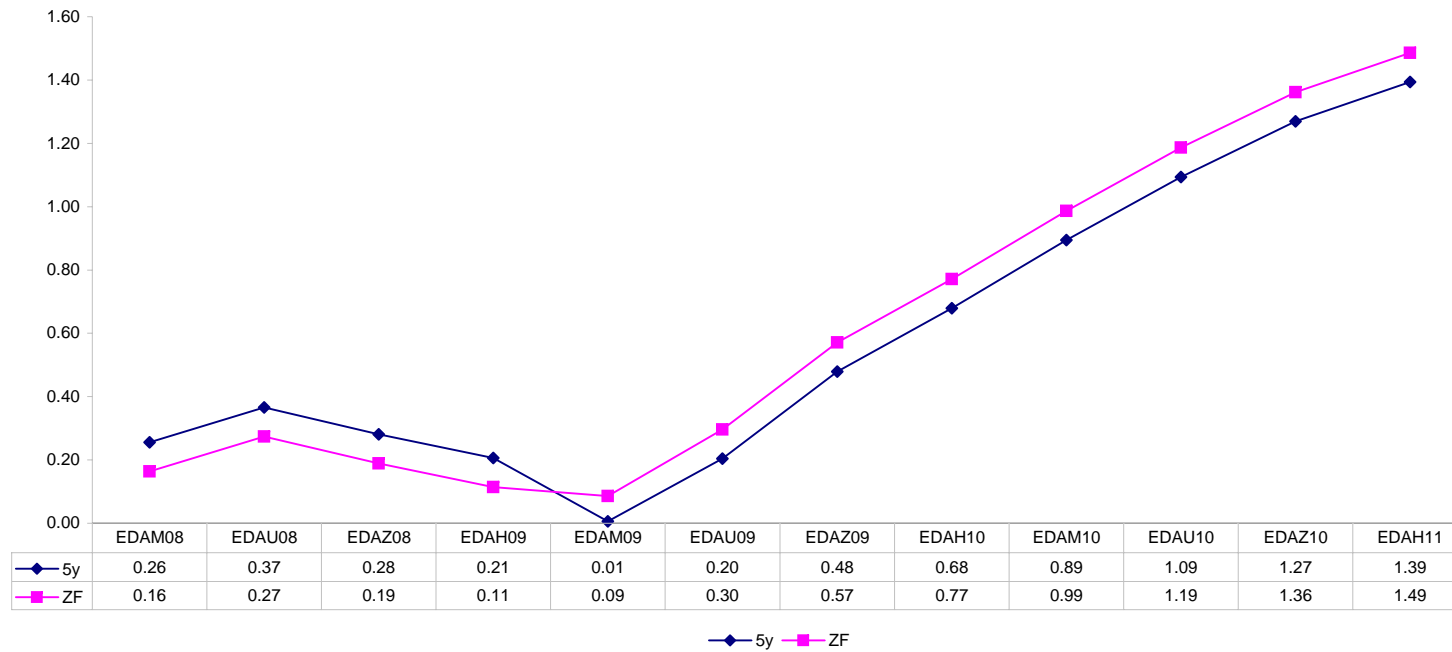
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



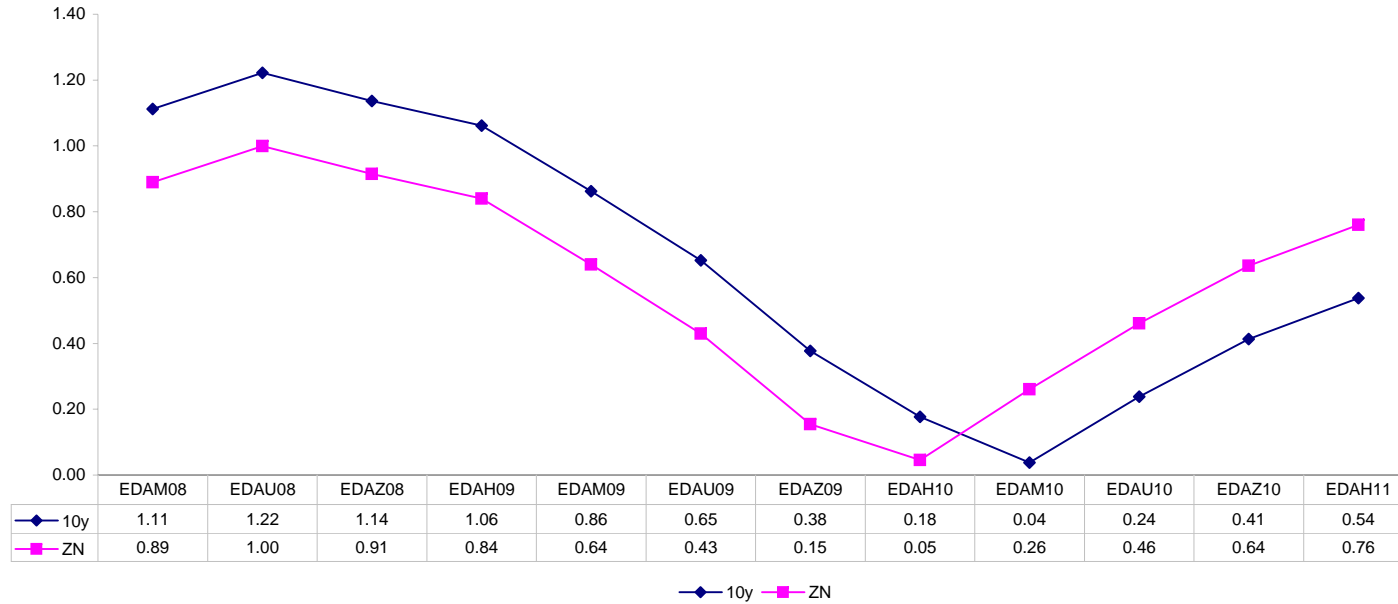
2y Basis TED Curve



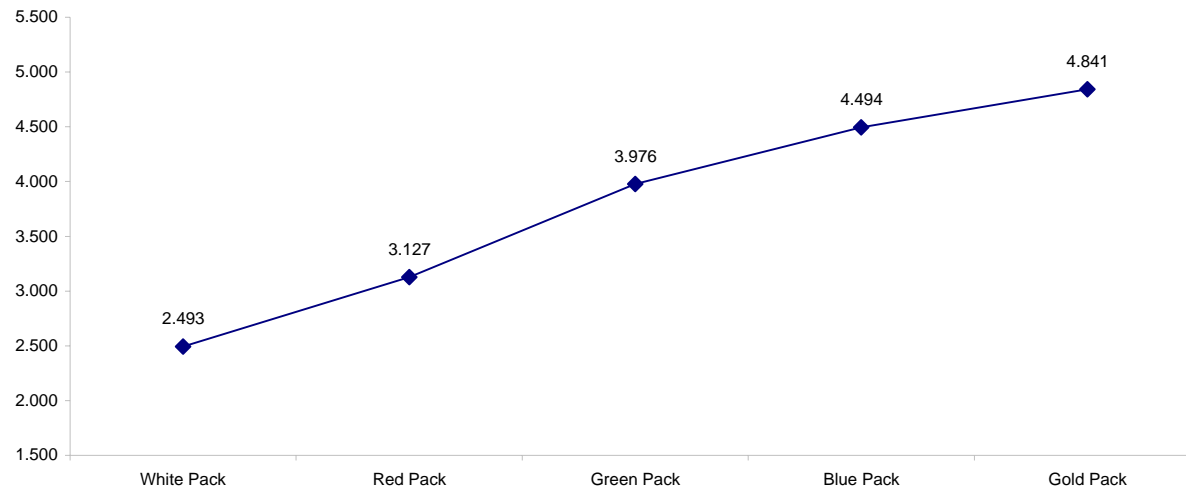
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.493	0.125	9755.625
Red Pack	3.127	0.125	9694.000
Green Pack	3.976	-0.625	9611.625
Blue Pack	4.494	-0.875	9561.625
Gold Pack	4.841	0.000	9528.125



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

