

## 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	105.9438	105.302	2.377	1.80
ZF	111.1719	111.055	3.131	3.94
ZN	114.9063	114.290	3.731	5.88
2y	99.366	99.1170	2.444	1.93
5y	99.584	99.1870	3.214	4.53
10y	96.875	96.2800	3.886	8.13

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM08	97.090	2.910	52	0.142	JUN	
EDAU08	96.995	3.005	143	0.391	SEP	White
EDAZ08	96.790	3.210	234	0.640	DEC	Pack
EDAH09	96.720	3.280	325	0.890	MAR	
EDAM09	96.555	3.445	416	1.139	JUN	
EDAU09	96.405	3.595	507	1.388	SEP	Red Pack
EDAZ09	96.225	3.775	598	1.638	DEC	
EDAH10	96.120	3.880	689	1.887	MAR	
EDAM10	95.975	4.025	780	2.136	JUN	
EDAU10	95.845	4.155	871	2.386	SEP	Green
EDAZ10	95.680	4.320	962	2.635	DEC	Pack
EDAH11	95.590	4.410	1053	2.884	MAR	
EDAM11	95.510	4.490	1144	3.134	JUN	
EDAU11	95.410	4.590	1242	3.402	SEP	Blue Pack
EDAZ11	95.320	4.680	1333	3.651	DEC	
EDAH12	95.265	4.735	1424	3.901	MAR	
EDAM12	95.200	4.800	1515	4.150	JUN	
EDAU12	95.135	4.865	1606	4.399	SEP	Gold Pack
EDAZ12	95.050	4.950	1697	4.649	DEC	
EDAH13	95.005	4.995	1788	4.898	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	3.169	-8.250	9689.875	
Red Pack	3.759	-11.625	9632.625	Pack Prices
Green Pack	4.332	-10.125	9577.250	
Blue Pack	4.743	-9.625	9537.625	
Gold Pack	5.032	-9.500	9509.750	

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.

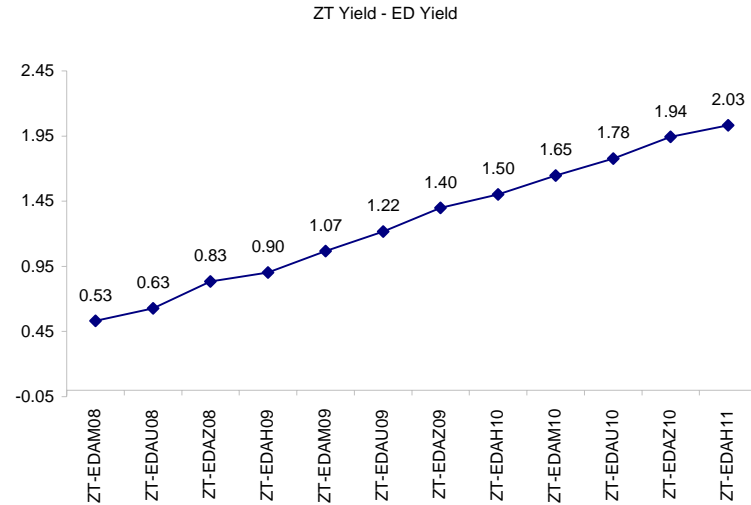
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

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.**

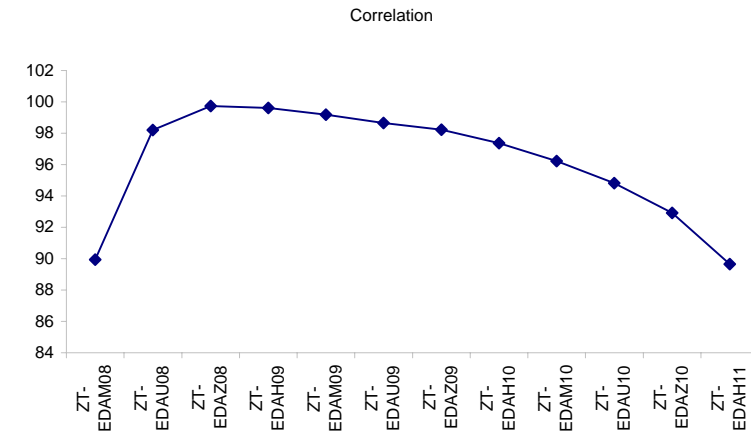
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	8.854	0.53	ZT-EDAM08	89.934
EDAU08	8.949	0.63	ZT-EDAU08	98.198
EDAZ08	9.154	0.83	ZT-EDAZ08	99.745
EDAH09	9.224	0.90	ZT-EDAH09	99.605
EDAM09	9.389	1.07	ZT-EDAM09	99.179
EDAU09	9.539	1.22	ZT-EDAU09	98.647
EDAZ09	9.719	1.40	ZT-EDAZ09	98.224
EDAH10	9.824	1.50	ZT-EDAH10	97.362
EDAM10	9.969	1.65	ZT-EDAM10	96.232
EDAU10	10.099	1.78	ZT-EDAU10	94.825
EDAZ10	10.264	1.94	ZT-EDAZ10	92.912
EDAH11	10.354	2.03	ZT-EDAH11	89.651

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	0.142	1.80	1.66	ZT-EDAM08		
EDAU08	0.391	1.80	1.41	ZT-EDAU08		
EDAZ08	0.640	1.80	1.16	ZT-EDAZ08		
EDAH09	0.890	1.80	0.91	ZT-EDAH09		
EDAM09	1.139	1.80	0.66	ZT-EDAM09		
EDAU09	1.388	1.80	0.41	ZT-EDAU09		
EDAZ09	1.638	1.80	0.16	ZT-EDAZ09		
EDAH10	1.887	1.80	(0.09)	ZT-EDAH10		
EDAM10	2.136	1.80	(0.33)	ZT-EDAM10		
EDAU10	2.386	1.80	(0.58)	ZT-EDAU10		
EDAZ10	2.635	1.80	(0.83)	ZT-EDAZ10		
EDAH11	2.884	1.80	(1.08)	ZT-EDAH11		

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

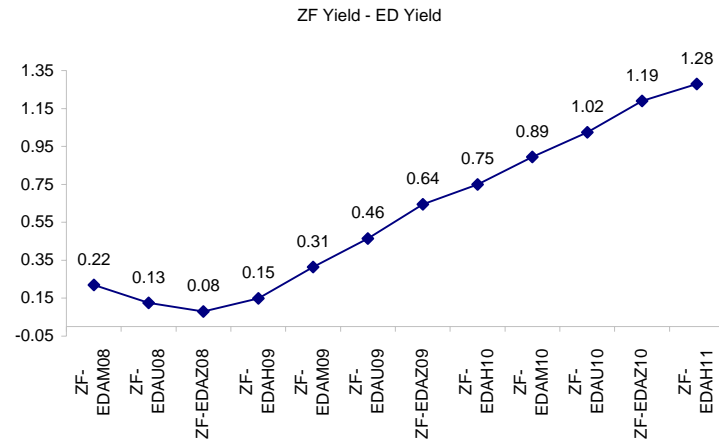


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	14.082	0.22	ZF-EDAM08	88.003
EDAU08	14.177	0.13	ZF-EDAU08	96.977
EDAZ08	14.382	0.08	ZF-EDAZ08	99.552
EDAH09	14.452	0.15	ZF-EDAH09	99.899
EDAM09	14.617	0.31	ZF-EDAM09	99.804
EDAU09	14.767	0.46	ZF-EDAU09	99.497
EDAZ09	14.947	0.64	ZF-EDAZ09	99.157
EDAH10	15.052	0.75	ZF-EDAH10	98.519
EDAM10	15.197	0.89	ZF-EDAM10	97.653
EDAU10	15.327	1.02	ZF-EDAU10	96.488
EDAZ10	15.492	1.19	ZF-EDAZ10	95.010
EDAH11	15.582	1.28	ZF-EDAH11	92.148

Price = Outright Decimal Price - Euro Contract Price

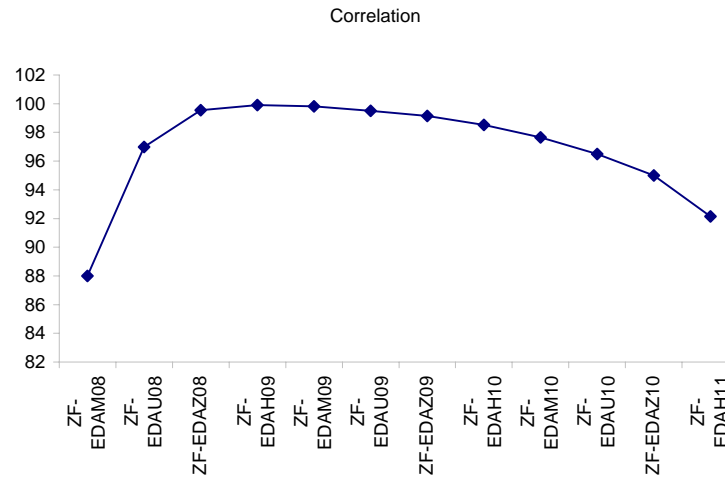
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAM08	0.142	3.94	3.80	ZF-EDAM08	
EDAU08	0.391	3.94	3.55	ZF-EDAU08	
EDAZ08	0.640	3.94	3.30	ZF-EDAZ08	
EDAH09	0.890	3.94	3.05	ZF-EDAH09	
EDAM09	1.139	3.94	2.80	ZF-EDAM09	
EDAU09	1.388	3.94	2.55	ZF-EDAU09	
EDAZ09	1.638	3.94	2.30	ZF-EDAZ09	
EDAH10	1.887	3.94	2.05	ZF-EDAH10	
EDAM10	2.136	3.94	1.80	ZF-EDAM10	
EDAU10	2.386	3.94	1.55	ZF-EDAU10	
EDAZ10	2.635	3.94	1.30	ZF-EDAZ10	
EDAH11	2.884	3.94	1.06	ZF-EDAH11	

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

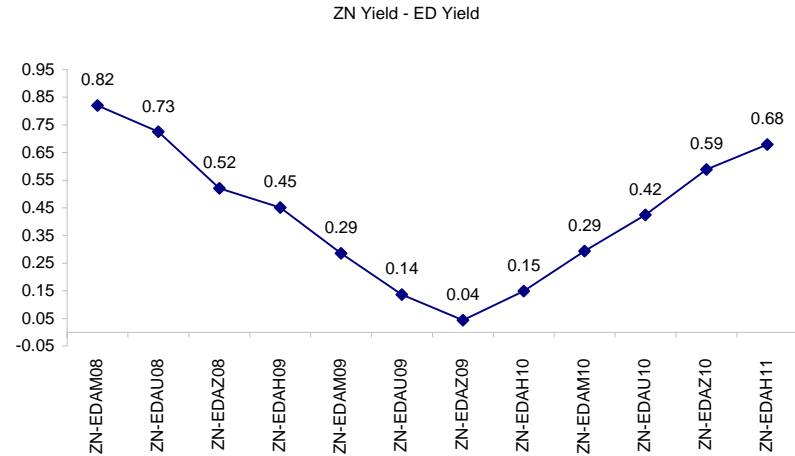


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	17.816	0.82	ZN-EDAM08	84.611
EDAU08	17.911	0.73	ZN-EDAU08	93.837
EDAZ08	18.116	0.52	ZN-EDAZ08	97.834
EDAH09	18.186	0.45	ZN-EDAH09	98.904
EDAM09	18.351	0.29	ZN-EDAM09	99.401
EDAU09	18.501	0.14	ZN-EDAU09	99.554
EDAZ09	18.681	0.04	ZN-EDAZ09	99.492
EDAH10	18.786	0.15	ZN-EDAH10	98.519
EDAM10	18.931	0.29	ZN-EDAM10	97.653
EDAU10	19.061	0.42	ZN-EDAU10	96.488
EDAZ10	19.226	0.59	ZN-EDAZ10	95.010
EDAH11	19.316	0.68	ZN-EDAH11	92.148

Price = Outright Decimal Price - Euro Contract Price

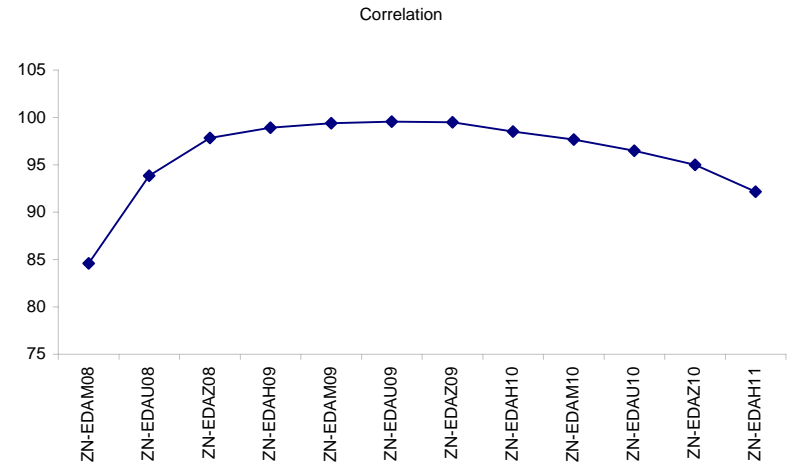
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAM08	0.142	5.88	5.74	ZN-EDAM08		
EDAU08	0.391	5.88	5.49	ZN-EDAU08		
EDAZ08	0.640	5.88	5.24	ZN-EDAZ08		
EDAH09	0.890	5.88	4.99	ZN-EDAH09		
EDAM09	1.139	5.88	4.75	ZN-EDAM09		
EDAU09	1.388	5.88	4.50	ZN-EDAU09		
EDAZ09	1.638	5.88	4.25	ZN-EDAZ09		
EDAH10	1.887	5.88	4.00	ZN-EDAH10		
EDAM10	2.136	5.88	3.75	ZN-EDAM10		
EDAU10	2.386	5.88	3.50	ZN-EDAU10		
EDAZ10	2.635	5.88	3.25	ZN-EDAZ10		
EDAH11	2.884	5.88	3.00	ZN-EDAH11		

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

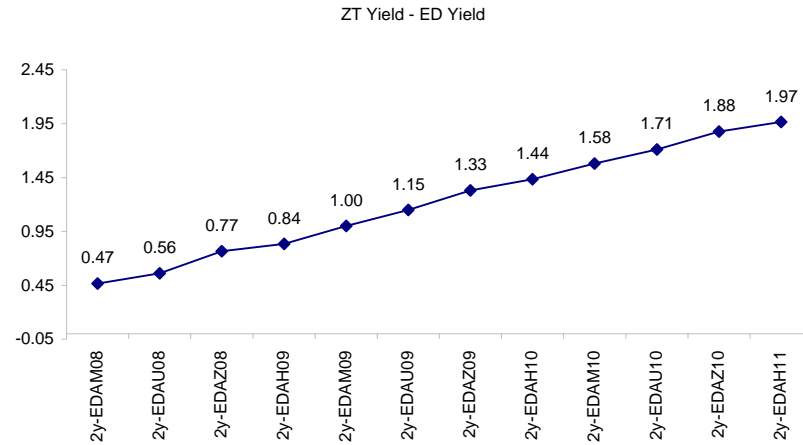


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.276	0.47	2y-EDAM08	-85.446
EDAU08	2.371	0.56	2y-EDAU08	-96.297
EDAZ08	2.576	0.77	2y-EDAZ08	-99.077
EDAH09	2.646	0.84	2y-EDAH09	-99.463
EDAM09	2.811	1.00	2y-EDAM09	-99.078
EDAU09	2.961	1.15	2y-EDAU09	-98.475
EDAZ09	3.141	1.33	2y-EDAZ09	-97.901
EDAH10	3.246	1.44	2y-EDAH10	-96.949
EDAM10	3.391	1.58	2y-EDAM10	-95.761
EDAU10	3.521	1.71	2y-EDAU10	-94.202
EDAZ10	3.686	1.88	2y-EDAZ10	-92.506
EDAH11	3.776	1.97	2y-EDAH11	-89.118

Price = Outright Decimal Price - Euro Contract Price

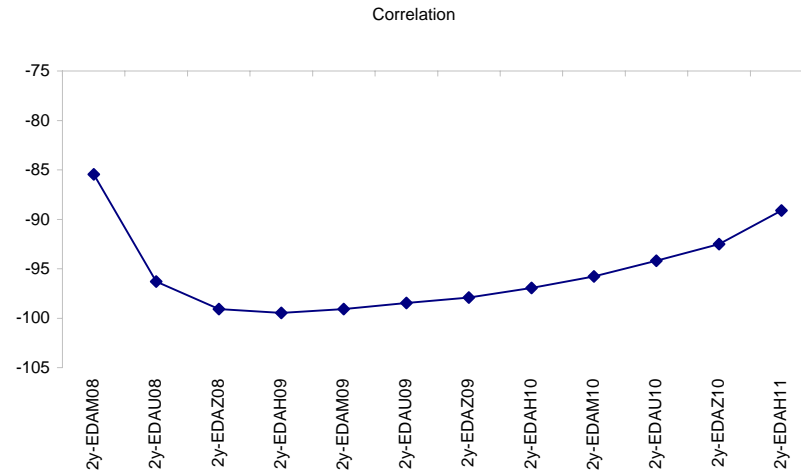
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			2Y Duration	Spread Duration	
EDAM08	0.142	1.93	1.79	2y-EDAM08		
EDAU08	0.391	1.93	1.54	2y-EDAU08		
EDAZ08	0.640	1.93	1.29	2y-EDAZ08		
EDAH09	0.890	1.93	1.04	2y-EDAH09		
EDAM09	1.139	1.93	0.79	2y-EDAM09		
EDAU09	1.388	1.93	0.54	2y-EDAU09		
EDAZ09	1.638	1.93	0.29	2y-EDAZ09		
EDAH10	1.887	1.93	0.04	2y-EDAH10		
EDAM10	2.136	1.93	(0.21)	2y-EDAM10		
EDAU10	2.386	1.93	(0.46)	2y-EDAU10		
EDAZ10	2.635	1.93	(0.71)	2y-EDAZ10		
EDAH11	2.884	1.93	(0.95)	2y-EDAH11		

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

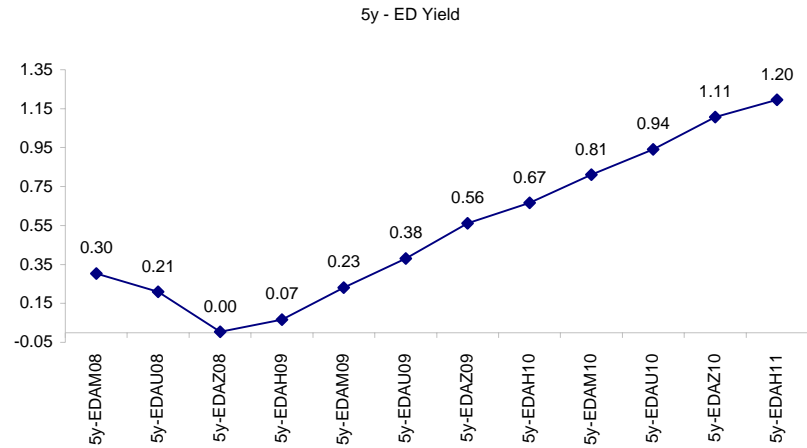


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.494	0.30	5y-EDAM08	-82.988
EDAU08	2.589	0.21	5y-EDAU08	-94.005
EDAZ08	2.794	0.00	5y-EDAZ08	-82.988
EDAH09	2.864	0.07	5y-EDAH09	-98.977
EDAM09	3.029	0.23	5y-EDAM09	-99.103
EDAU09	3.179	0.38	5y-EDAU09	-98.901
EDAZ09	3.359	0.56	5y-EDAZ09	-98.499
EDAH10	3.464	0.67	5y-EDAH10	-97.982
EDAM10	3.609	0.81	5y-EDAM10	-97.266
EDAU10	3.739	0.94	5y-EDAU10	-96.178
EDAZ10	3.904	1.11	5y-EDAZ10	-95.168
EDAH11	3.994	1.20	5y-EDAH11	-92.573

Price = Outright Decimal Price - Euro Contract Price

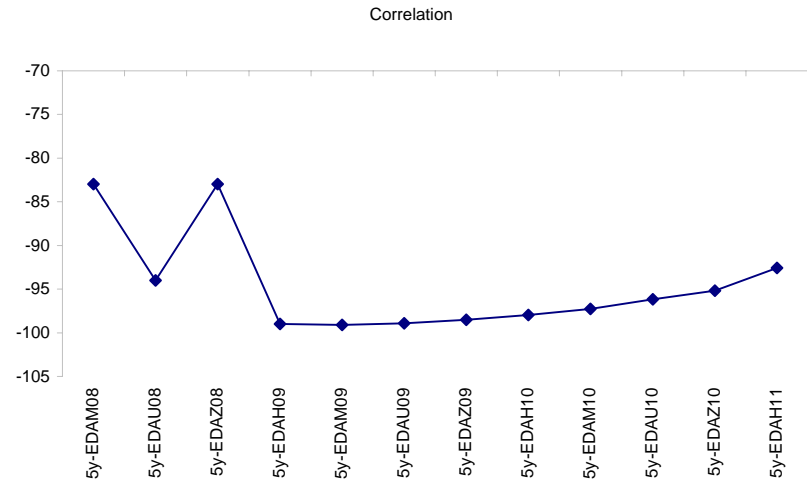
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAM08	0.142	4.53	4.39	5y-EDAM08
EDAU08	0.391	4.53	4.14	5y-EDAU08
EDAZ08	0.640	4.53	3.89	5y-EDAZ08
EDAH09	0.890	4.53	3.64	5y-EDAH09
EDAM09	1.139	4.53	3.39	5y-EDAM09
EDAU09	1.388	4.53	3.14	5y-EDAU09
EDAZ09	1.638	4.53	2.89	5y-EDAZ09
EDAH10	1.887	4.53	2.64	5y-EDAH10
EDAM10	2.136	4.53	2.39	5y-EDAM10
EDAU10	2.386	4.53	2.14	5y-EDAU10
EDAZ10	2.635	4.53	1.89	5y-EDAZ10
EDAH11	2.884	4.53	1.64	5y-EDAH11

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

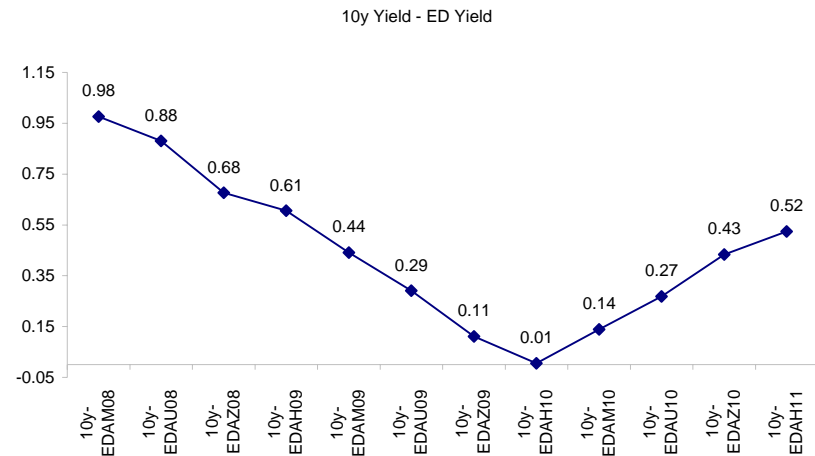


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.494	0.98	10y-EDAM08	-79.246
EDAU08	2.589	0.88	10y-EDAU08	-88.917
EDAZ08	2.794	0.68	10y-EDAZ08	-79.246
EDAH09	2.864	0.61	10y-EDAH09	-95.736
EDAM09	3.029	0.44	10y-EDAM09	-96.607
EDAU09	3.179	0.29	10y-EDAU09	-97.197
EDAZ09	3.359	0.11	10y-EDAZ09	-97.424
EDAH10	3.464	0.01	10y-EDAH10	-97.627
EDAM10	3.609	0.14	10y-EDAM10	-97.725
EDAU10	3.739	0.27	10y-EDAU10	-97.473
EDAZ10	3.904	0.43	10y-EDAZ10	-97.424
EDAH11	3.994	0.52	10y-EDAH11	-96.086

Price = Outright Decimal Price - Euro Contract Price

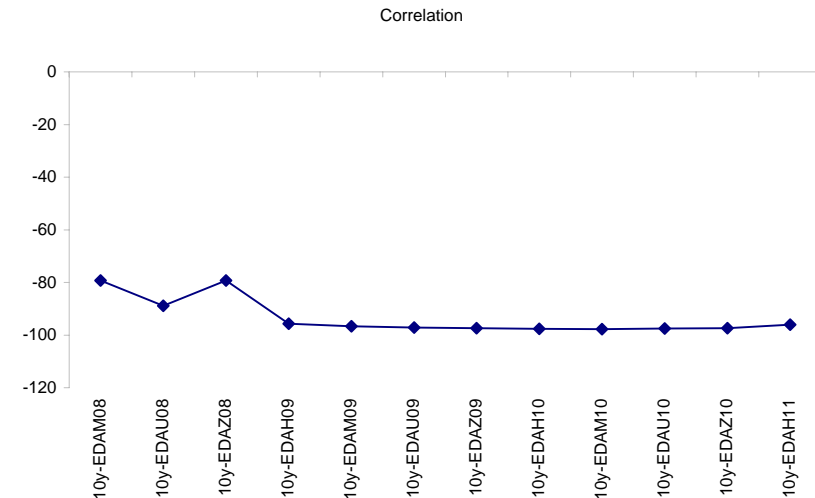
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAM08	0.142	8.13	7.99	10y-EDAM08
EDAU08	0.391	8.13	7.74	10y-EDAU08
EDAZ08	0.640	8.13	7.49	10y-EDAZ08
EDAH09	0.890	8.13	7.25	10y-EDAH09
EDAM09	1.139	8.13	7.00	10y-EDAM09
EDAU09	1.388	8.13	6.75	10y-EDAU09
EDAZ09	1.638	8.13	6.50	10y-EDAZ09
EDAH10	1.887	8.13	6.25	10y-EDAH10
EDAM10	2.136	8.13	6.00	10y-EDAM10
EDAU10	2.386	8.13	5.75	10y-EDAU10
EDAZ10	2.635	8.13	5.50	10y-EDAZ10
EDAH11	2.884	8.13	5.25	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.

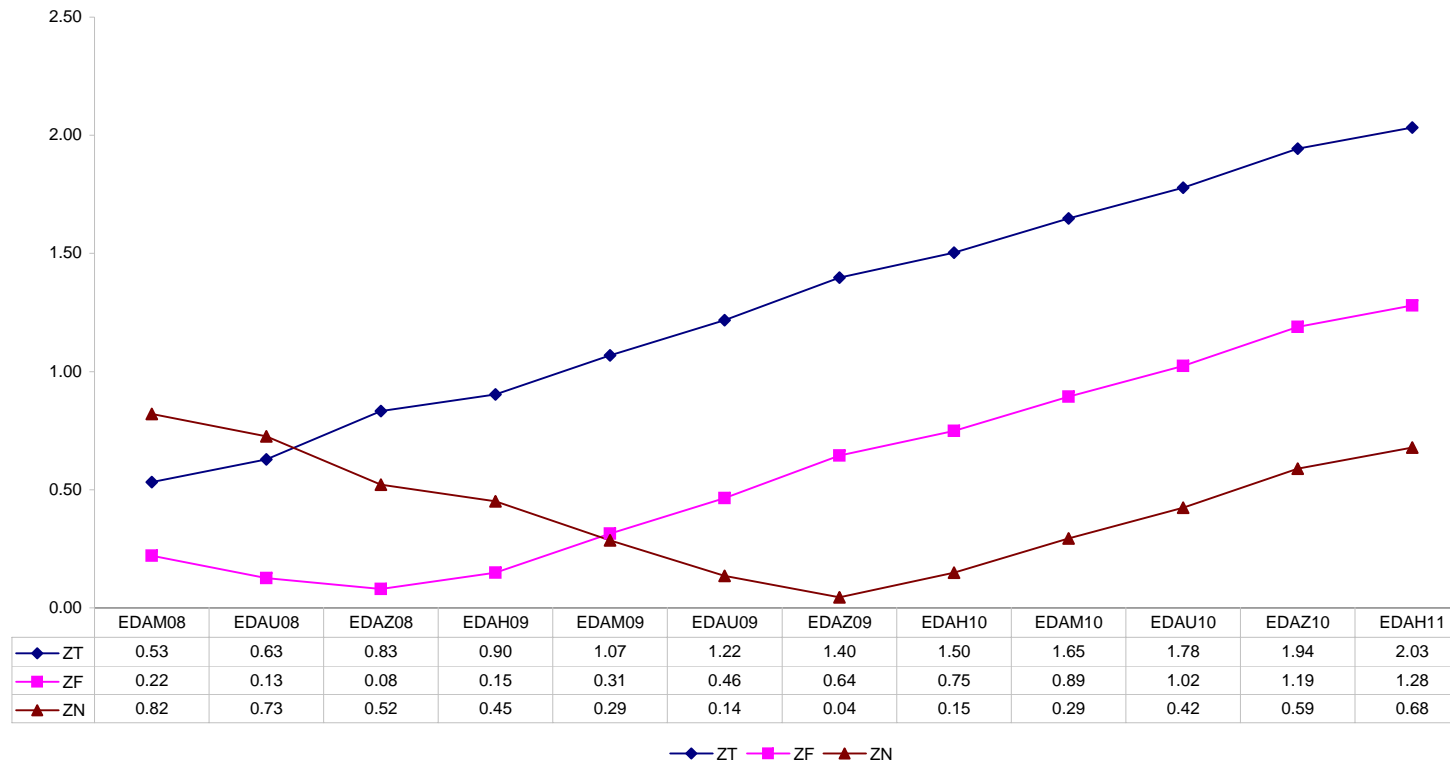
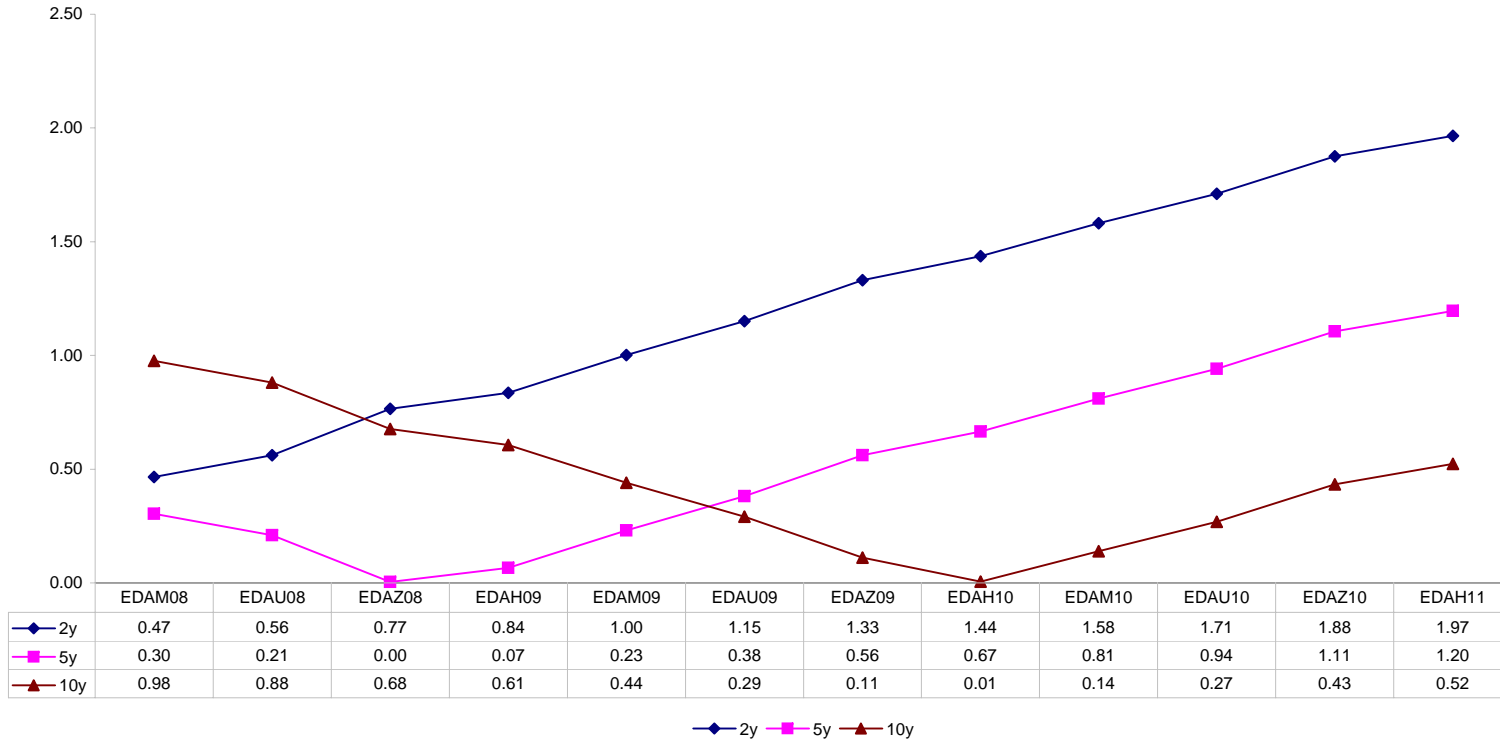
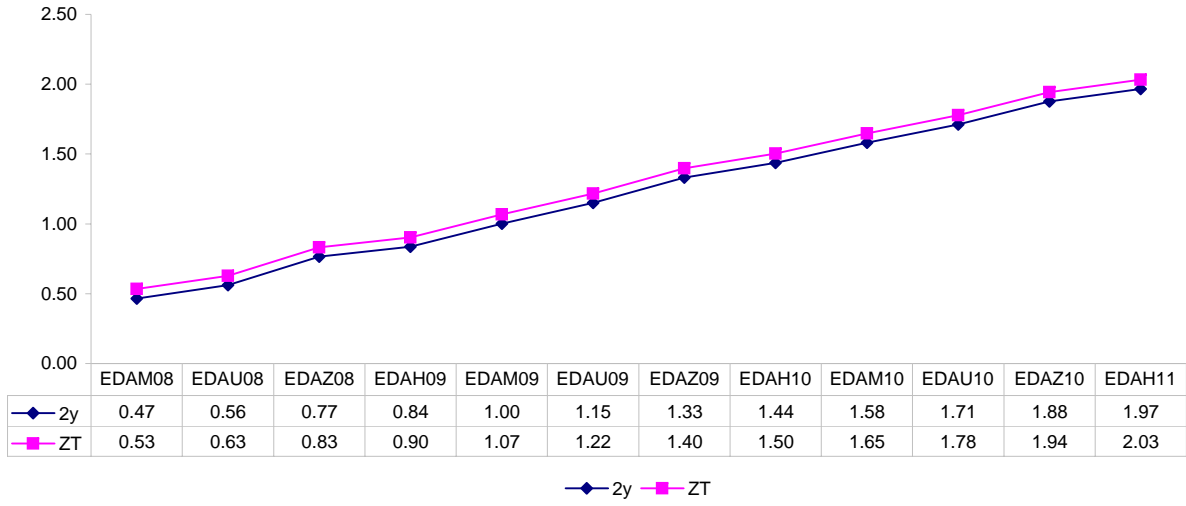


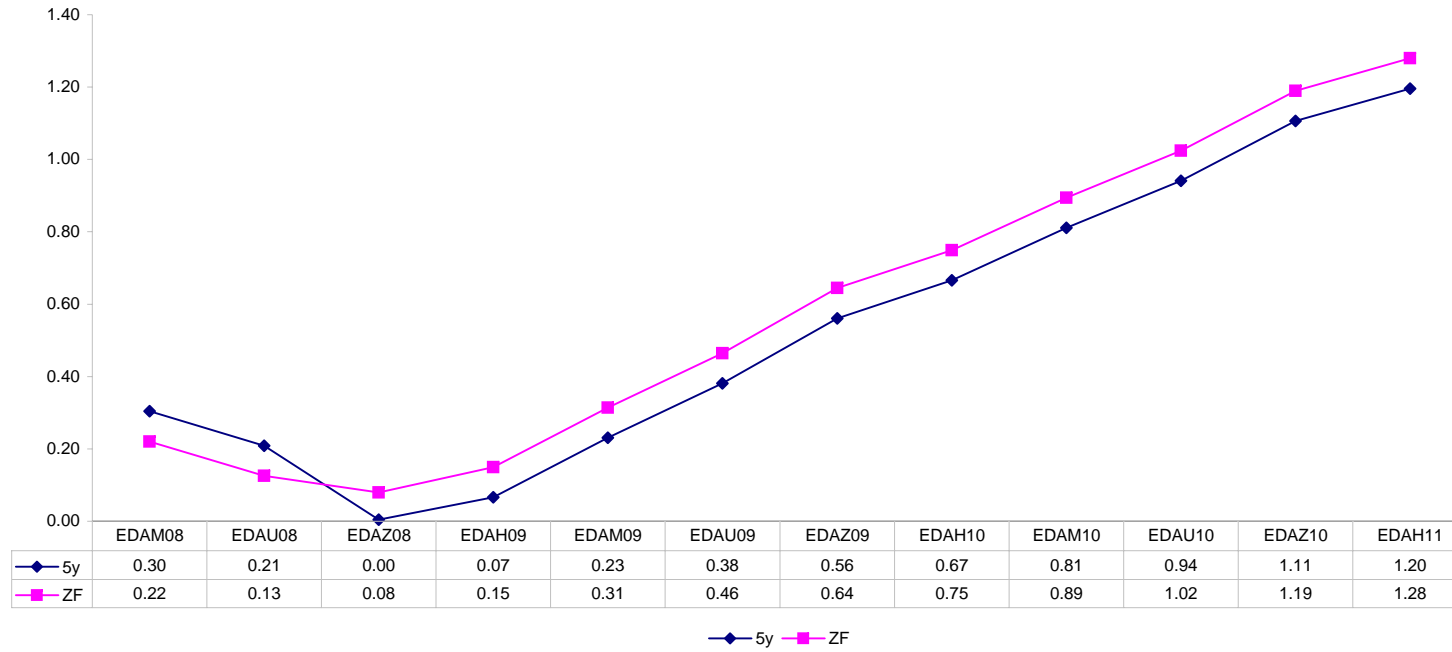
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



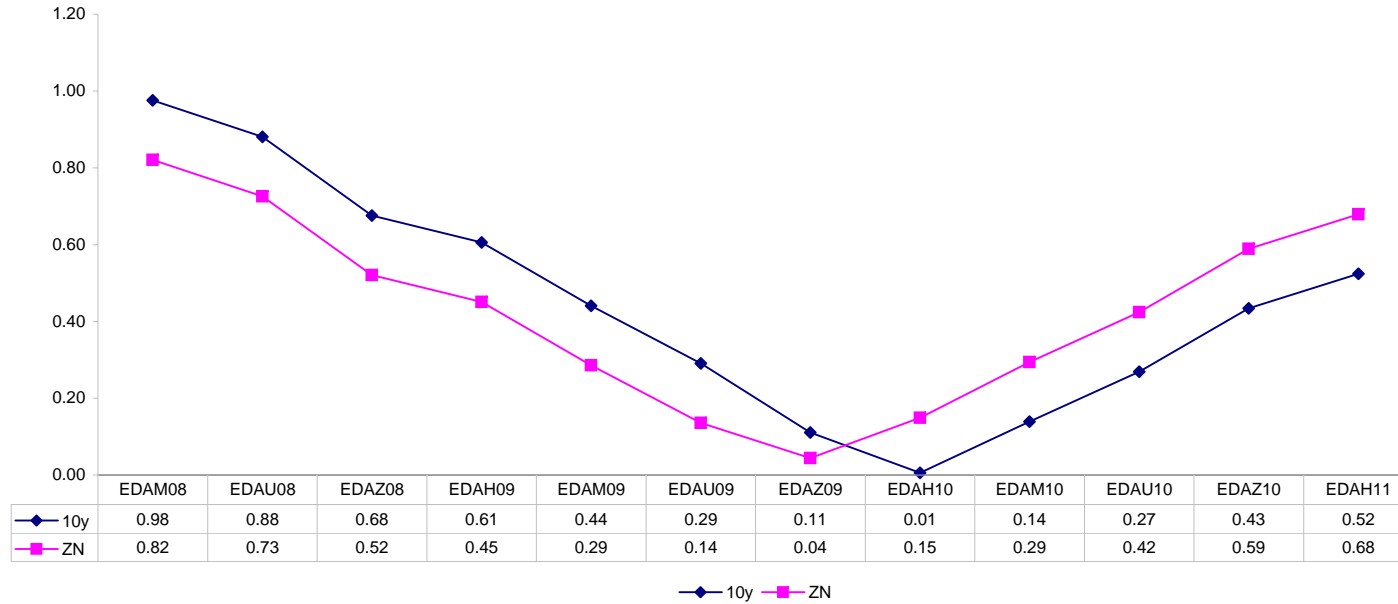
2y Basis TED Curve



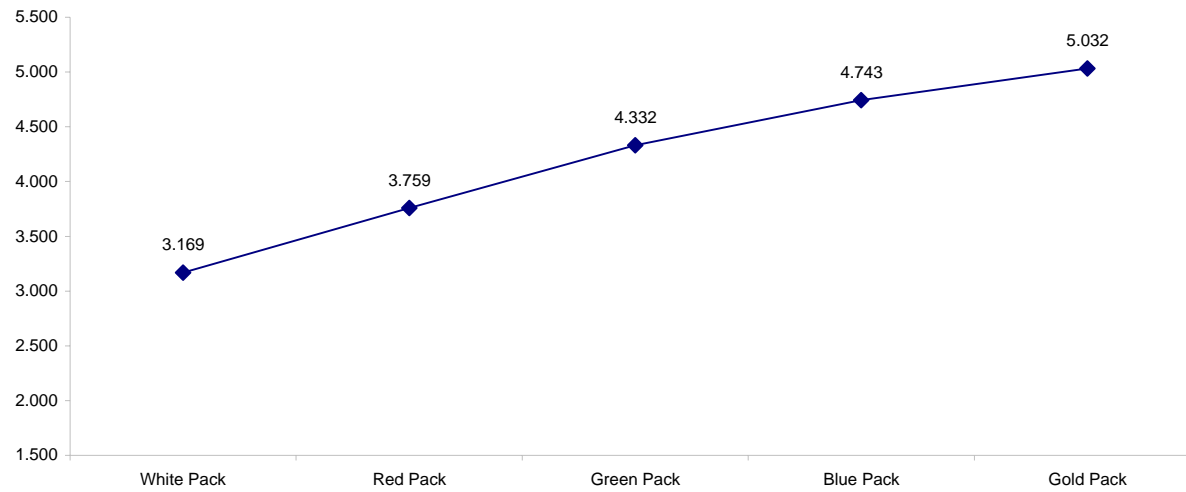
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.169	-8.250	9689.875
Red Pack	3.759	-11.625	9632.625
Green Pack	4.332	-10.125	9577.250
Blue Pack	4.743	-9.625	9537.625
Gold Pack	5.032	-9.500	9509.750



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

