

## The Morning Email: TERM TEDS & Dirty TEDS

### Table of Contents

<b>Pg 1</b>	Quotes
<b>Pg 2</b>	Dirty TED: ZT vs Eurodollar Contracts
<b>Pg 3</b>	Dirty TED: ZF vs Eurodollar Contracts
<b>Pg 4</b>	Dirty TED: ZN vs Eurodollar Contracts
<b>Pg 5</b>	TERM TED: 2y vs Eurodollar Contracts
<b>Pg 6</b>	TERM TED: 5y vs Eurodollar Contracts
<b>Pg 7</b>	TERM TED: 10y vs Eurodollar Contracts
<b>Pg 8</b>	Dirty TED Curve
<b>Pg 9</b>	TED Curve
<b>Pg 10</b>	2y Basis TED Curve
<b>Pg 11</b>	5y Basis TED Curve
<b>Pg 12</b>	10y Basis TED Curve
<b>Pg 13</b>	Packs
<b>Pg 14</b>	2y, 5y, 10y Basis Curves vs ED

**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	106.4438	106.142	2.108	1.81
ZF	112.2406	112.077	2.856	3.95
ZN	116.1250	116.040	3.550	5.91
2y	99.859	99.2750	2.194	1.94
5y	97.969	97.3100	2.944	4.59
10y	98.125	98.0400	3.728	8.16

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM08	97.165	2.835	53	0.145	JUN	
EDAU08	97.170	2.830	144	0.394	SEP	White
EDAZ08	97.075	2.925	235	0.643	DEC	Pack
EDAH09	97.070	2.930	326	0.892	MAR	
EDAM09	96.930	3.070	417	1.142	JUN	
EDAU09	96.770	3.230	508	1.391	SEP	Red Pack
EDAZ09	96.565	3.435	599	1.640	DEC	
EDAH10	96.430	3.570	690	1.890	MAR	
EDAM10	96.260	3.740	781	2.139	JUN	
EDAU10	96.095	3.905	872	2.388	SEP	Green
EDAZ10	95.940	4.060	963	2.638	DEC	Pack
EDAH11	95.835	4.165	1054	2.887	MAR	
EDAM11	95.725	4.275	1145	3.136	JUN	
EDAU11	95.625	4.375	1243	3.405	SEP	Blue Pack
EDAZ11	95.535	4.465	1334	3.654	DEC	
EDAH12	95.460	4.540	1425	3.903	MAR	
EDAM12	95.410	4.590	1516	4.153	JUN	
EDAU12	95.345	4.655	1607	4.402	SEP	Gold Pack
EDAZ12	95.250	4.750	1698	4.651	DEC	
EDAH13	95.190	4.810	1789	4.901	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	2.941	2.625	9712.000	
Red Pack	3.401	1.750	9667.375	Pack
Green Pack	4.063	-0.500	9603.250	Prices
Blue Pack		-0.125	9559.125	
Gold Pack		0.000	9528.500	

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)

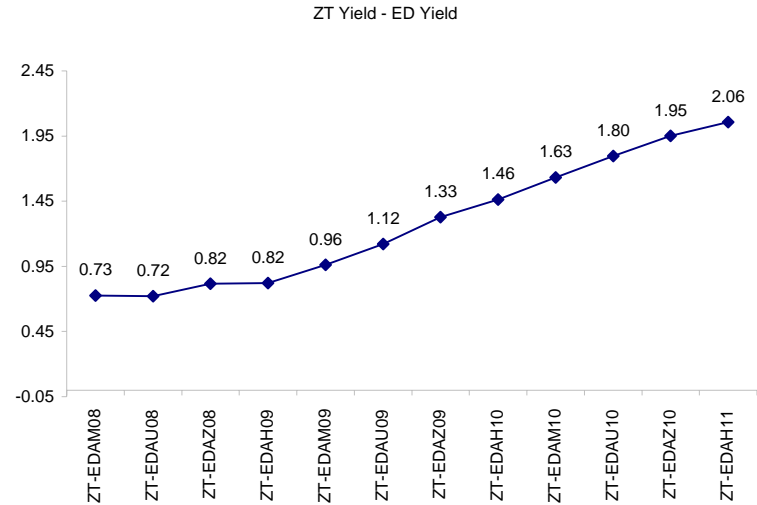
**Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days.**

ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	9.279	0.73	ZT-EDAM08	98.736
EDAU08	9.274	0.72	ZT-EDAU08	99.667
EDAZ08	9.369	0.82	ZT-EDAZ08	99.623
EDAH09	9.374	0.82	ZT-EDAH09	99.475
EDAM09	9.514	0.96	ZT-EDAM09	99.055
EDAU09	9.674	1.12	ZT-EDAU09	98.443
EDAZ09	9.879	1.33	ZT-EDAZ09	97.801
EDAH10	10.014	1.46	ZT-EDAH10	96.691
EDAM10	10.184	1.63	ZT-EDAM10	95.295
EDAU10	10.349	1.80	ZT-EDAU10	93.598
EDAZ10	10.504	1.95	ZT-EDAZ10	91.257
EDAH11	10.609	2.06	ZT-EDAH11	87.719

Price = Outright Decimal Price - Euro Contract Price

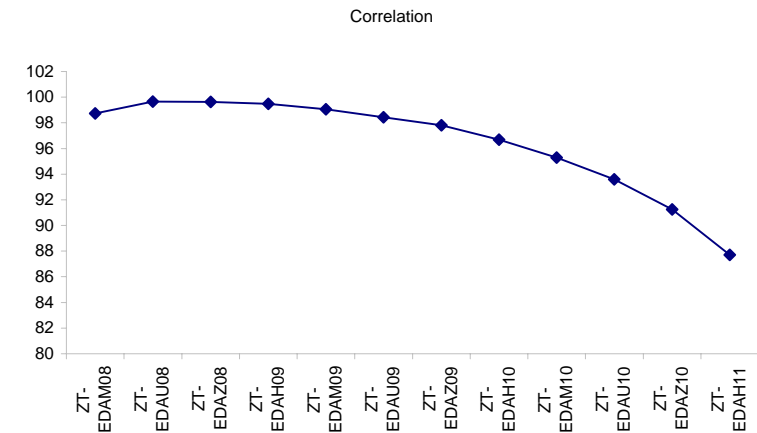
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZT Duration	Spread Duration	
EDAM08	0.145	1.81	1.67	ZT-EDAM08		
EDAU08	0.394	1.81	1.42	ZT-EDAU08		
EDAZ08	0.643	1.81	1.17	ZT-EDAZ08		
EDAH09	0.892	1.81	0.92	ZT-EDAH09		
EDAM09	1.142	1.81	0.67	ZT-EDAM09		
EDAU09	1.391	1.81	0.42	ZT-EDAU09		
EDAZ09	1.640	1.81	0.17	ZT-EDAZ09		
EDAH10	1.890	1.81	(0.08)	ZT-EDAH10		
EDAM10	2.139	1.81	(0.33)	ZT-EDAM10		
EDAU10	2.388	1.81	(0.58)	ZT-EDAU10		
EDAZ10	2.638	1.81	(0.83)	ZT-EDAZ10		
EDAH11	2.887	1.81	(1.07)	ZT-EDAH11		

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

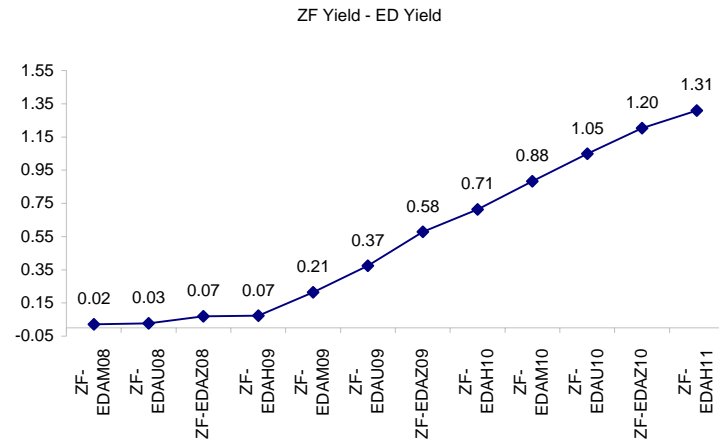


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	15.076	0.02	ZF-EDAM08	98.362
EDAU08	15.071	0.03	ZF-EDAU08	99.407
EDAZ08	15.166	0.07	ZF-EDAZ08	99.758
EDAH09	15.171	0.07	ZF-EDAH09	99.825
EDAM09	15.311	0.21	ZF-EDAM09	99.673
EDAU09	15.471	0.37	ZF-EDAU09	99.252
EDAZ09	15.676	0.58	ZF-EDAZ09	98.743
EDAH10	15.811	0.71	ZF-EDAH10	97.801
EDAM10	15.981	0.88	ZF-EDAM10	96.726
EDAU10	16.146	1.05	ZF-EDAU10	95.302
EDAZ10	16.301	1.20	ZF-EDAZ10	93.325
EDAH11	16.406	1.31	ZF-EDAH11	90.057

Price = Outright Decimal Price - Euro Contract Price

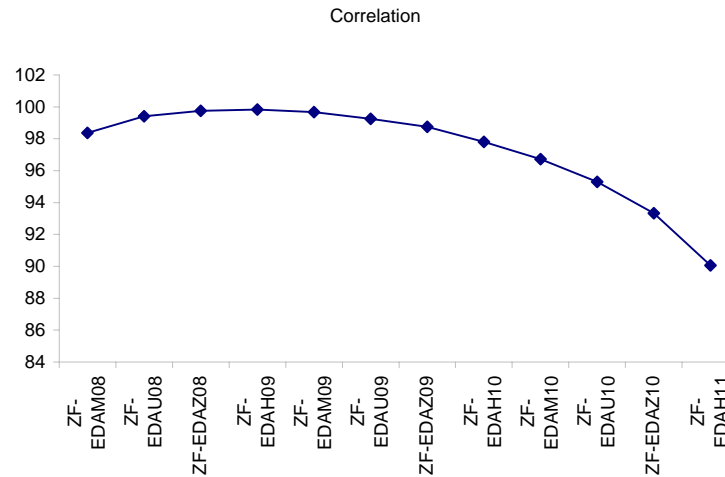
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAM08	0.145	3.95	3.81	ZF-EDAM08	
EDAU08	0.394	3.95	3.56	ZF-EDAU08	
EDAZ08	0.643	3.95	3.31	ZF-EDAZ08	
EDAH09	0.892	3.95	3.06	ZF-EDAH09	
EDAM09	1.142	3.95	2.81	ZF-EDAM09	
EDAU09	1.391	3.95	2.56	ZF-EDAU09	
EDAZ09	1.640	3.95	2.31	ZF-EDAZ09	
EDAH10	1.890	3.95	2.07	ZF-EDAH10	
EDAM10	2.139	3.95	1.82	ZF-EDAM10	
EDAU10	2.388	3.95	1.57	ZF-EDAU10	
EDAZ10	2.638	3.95	1.32	ZF-EDAZ10	
EDAH11	2.887	3.95	1.07	ZF-EDAH11	

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

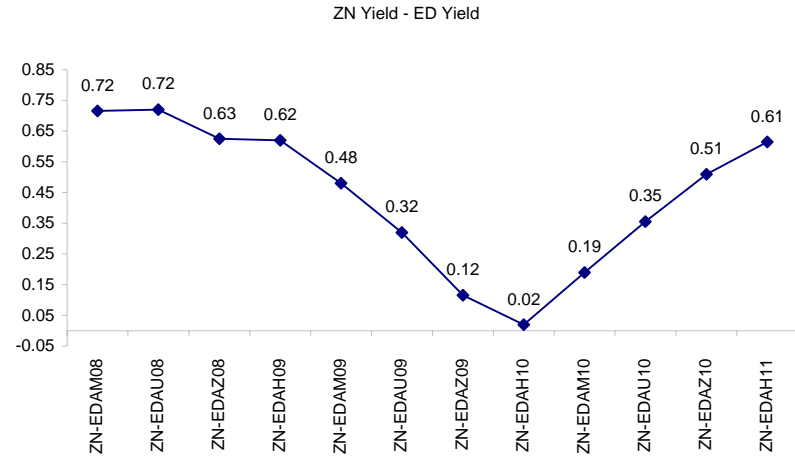


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	18.960	0.72	ZN-EDAM08	96.854
EDAU08	18.955	0.72	ZN-EDAU08	97.388
EDAZ08	19.050	0.63	ZN-EDAZ08	98.368
EDAH09	19.055	0.62	ZN-EDAH09	98.784
EDAM09	19.195	0.48	ZN-EDAM09	99.262
EDAU09	19.355	0.32	ZN-EDAU09	99.392
EDAZ09	19.560	0.12	ZN-EDAZ09	99.371
EDAH10	19.695	0.02	ZN-EDAH10	97.801
EDAM10	19.865	0.19	ZN-EDAM10	96.726
EDAU10	20.030	0.35	ZN-EDAU10	95.302
EDAZ10	20.185	0.51	ZN-EDAZ10	93.325
EDAH11	20.290	0.61	ZN-EDAH11	90.057

Price = Outright Decimal Price - Euro Contract Price

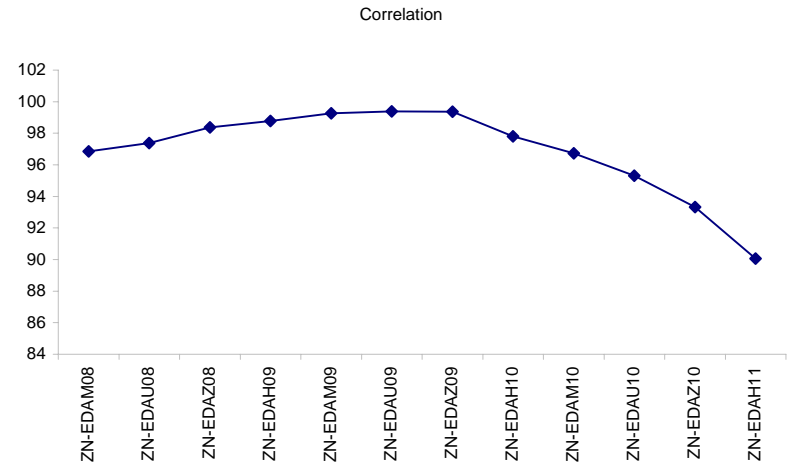
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM08	0.145	5.91	5.76	ZN-EDAM08
EDAU08	0.394	5.91	5.51	ZN-EDAU08
EDAZ08	0.643	5.91	5.26	ZN-EDAZ08
EDAH09	0.892	5.91	5.02	ZN-EDAH09
EDAM09	1.142	5.91	4.77	ZN-EDAM09
EDAU09	1.391	5.91	4.52	ZN-EDAU09
EDAZ09	1.640	5.91	4.27	ZN-EDAZ09
EDAH10	1.890	5.91	4.02	ZN-EDAH10
EDAM10	2.139	5.91	3.77	ZN-EDAM10
EDAU10	2.388	5.91	3.52	ZN-EDAU10
EDAZ10	2.638	5.91	3.27	ZN-EDAZ10
EDAH11	2.887	5.91	3.02	ZN-EDAH11

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

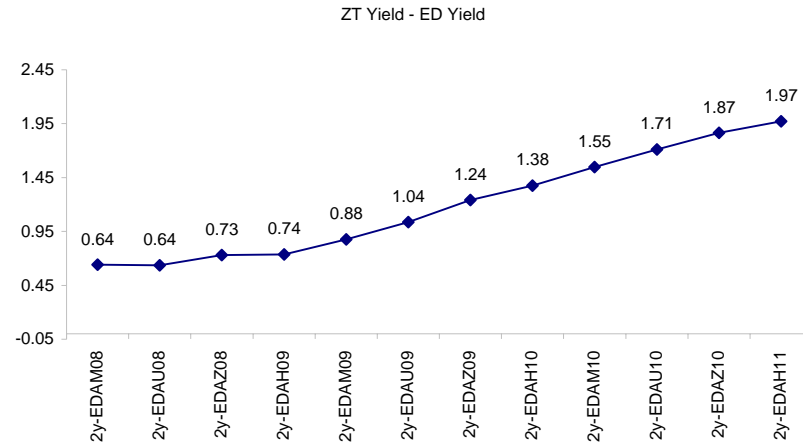


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.694	0.64	2y-EDAM08	-96.632
EDAU08	2.689	0.64	2y-EDAU08	-99.190
EDAZ08	2.784	0.73	2y-EDAZ08	-99.342
EDAH09	2.789	0.74	2y-EDAH09	-99.222
EDAM09	2.929	0.88	2y-EDAM09	-98.637
EDAU09	3.089	1.04	2y-EDAU09	-97.763
EDAZ09	3.294	1.24	2y-EDAZ09	-96.922
EDAH10	3.429	1.38	2y-EDAH10	-95.468
EDAM10	3.599	1.55	2y-EDAM10	-94.049
EDAU10	3.764	1.71	2y-EDAU10	-92.193
EDAZ10	3.919	1.87	2y-EDAZ10	-89.837
EDAH11	4.024	1.97	2y-EDAH11	-85.895

Price = Outright Decimal Price - Euro Contract Price

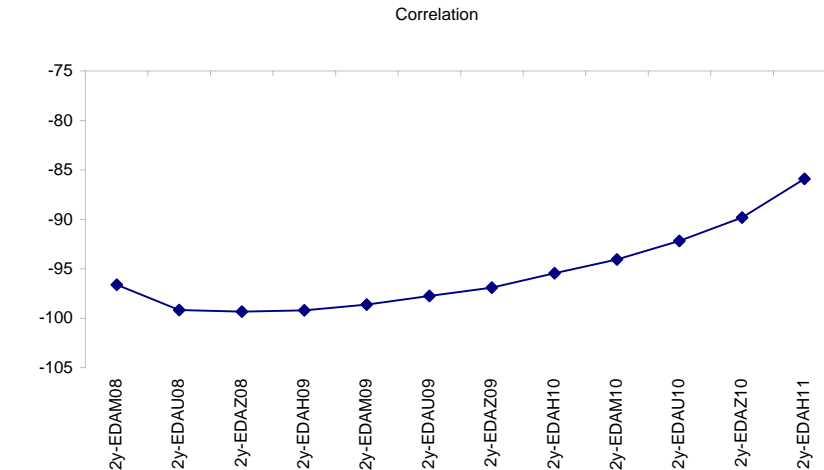
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	2Y Duration	Spread Duration		
EDAM08	0.145	1.94	1.80	2y-EDAM08
EDAU08	0.394	1.94	1.55	2y-EDAU08
EDAZ08	0.643	1.94	1.30	2y-EDAZ08
EDAH09	0.892	1.94	1.05	2y-EDAH09
EDAM09	1.142	1.94	0.80	2y-EDAM09
EDAU09	1.391	1.94	0.55	2y-EDAU09
EDAZ09	1.640	1.94	0.30	2y-EDAZ09
EDAH10	1.890	1.94	0.05	2y-EDAH10
EDAM10	2.139	1.94	(0.20)	2y-EDAM10
EDAU10	2.388	1.94	(0.45)	2y-EDAU10
EDAZ10	2.638	1.94	(0.70)	2y-EDAZ10
EDAH11	2.887	1.94	(0.95)	2y-EDAH11

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

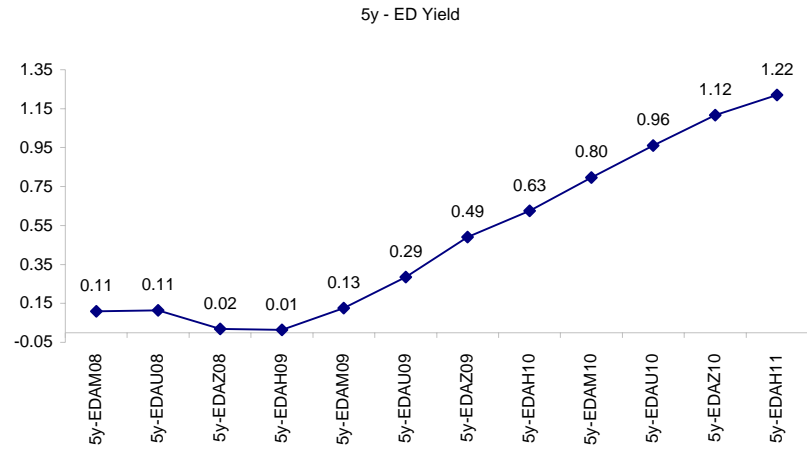


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	0.804	0.11	5y-EDAM08	-96.381
EDAU08	0.799	0.11	5y-EDAU08	-98.348
EDAZ08	0.894	0.02	5y-EDAZ08	-96.381
EDAH09	0.899	0.01	5y-EDAH09	-99.335
EDAM09	1.039	0.13	5y-EDAM09	-99.243
EDAU09	1.199	0.29	5y-EDAU09	-98.856
EDAZ09	1.404	0.49	5y-EDAZ09	-98.337
EDAH10	1.539	0.63	5y-EDAH10	-97.423
EDAM10	1.709	0.80	5y-EDAM10	-96.518
EDAU10	1.874	0.96	5y-EDAU10	-95.213
EDAZ10	2.029	1.12	5y-EDAZ10	-93.543
EDAH11	2.134	1.22	5y-EDAH11	-90.384

Price = Outright Decimal Price - Euro Contract Price

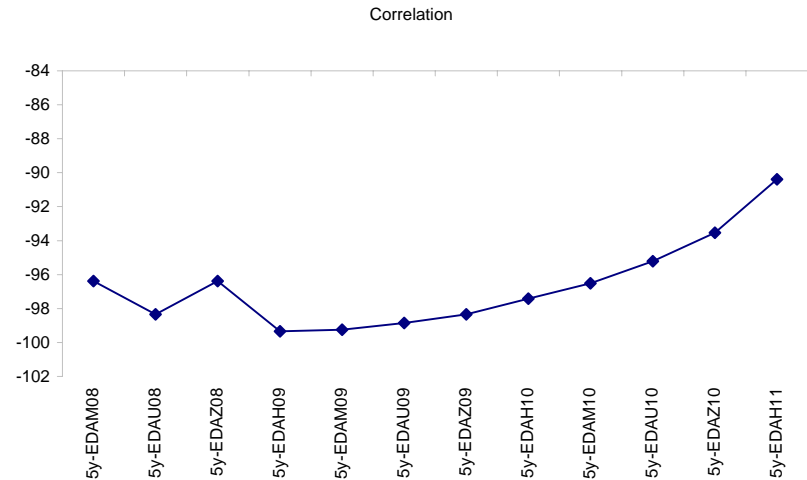
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAM08	0.145	4.59	4.45	5y-EDAM08
EDAU08	0.394	4.59	4.20	5y-EDAU08
EDAZ08	0.643	4.59	3.95	5y-EDAZ08
EDAH09	0.892	4.59	3.70	5y-EDAH09
EDAM09	1.142	4.59	3.45	5y-EDAM09
EDAU09	1.391	4.59	3.20	5y-EDAU09
EDAZ09	1.640	4.59	2.95	5y-EDAZ09
EDAH10	1.890	4.59	2.70	5y-EDAH10
EDAM10	2.139	4.59	2.45	5y-EDAM10
EDAU10	2.388	4.59	2.20	5y-EDAU10
EDAZ10	2.638	4.59	1.95	5y-EDAZ10
EDAH11	2.887	4.59	1.70	5y-EDAH11

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



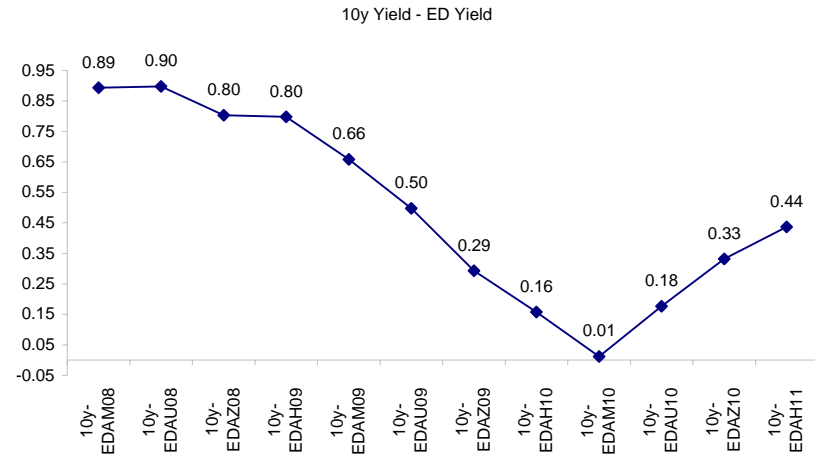


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	0.804	0.89	10y-EDAM08	-92.095
EDAU08	0.799	0.90	10y-EDAU08	-92.572
EDAZ08	0.894	0.80	10y-EDAZ08	-92.095
EDAH09	0.899	0.80	10y-EDAH09	-94.979
EDAM09	1.039	0.66	10y-EDAM09	-95.835
EDAU09	1.199	0.50	10y-EDAU09	-96.491
EDAZ09	1.404	0.29	10y-EDAZ09	-96.900
EDAH10	1.539	0.16	10y-EDAH10	-97.098
EDAM10	1.709	0.01	10y-EDAM10	-97.385
EDAU10	1.874	0.18	10y-EDAU10	-97.298
EDAZ10	2.029	0.33	10y-EDAZ10	-97.113
EDAH11	2.134	0.44	10y-EDAH11	-95.675

Price = Outright Decimal Price - Euro Contract Price

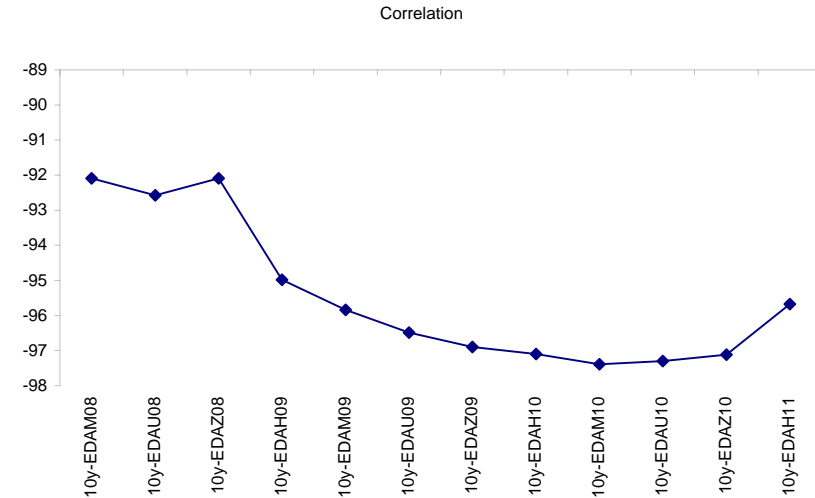
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAM08	0.145	8.16	8.02	10y-EDAM08
EDAU08	0.394	8.16	7.77	10y-EDAU08
EDAZ08	0.643	8.16	7.52	10y-EDAZ08
EDAH09	0.892	8.16	7.27	10y-EDAH09
EDAM09	1.142	8.16	7.02	10y-EDAM09
EDAU09	1.391	8.16	6.77	10y-EDAU09
EDAZ09	1.640	8.16	6.52	10y-EDAZ09
EDAH10	1.890	8.16	6.27	10y-EDAH10
EDAM10	2.139	8.16	6.02	10y-EDAM10
EDAU10	2.388	8.16	5.77	10y-EDAU10
EDAZ10	2.638	8.16	5.52	10y-EDAZ10
EDAH11	2.887	8.16	5.27	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.

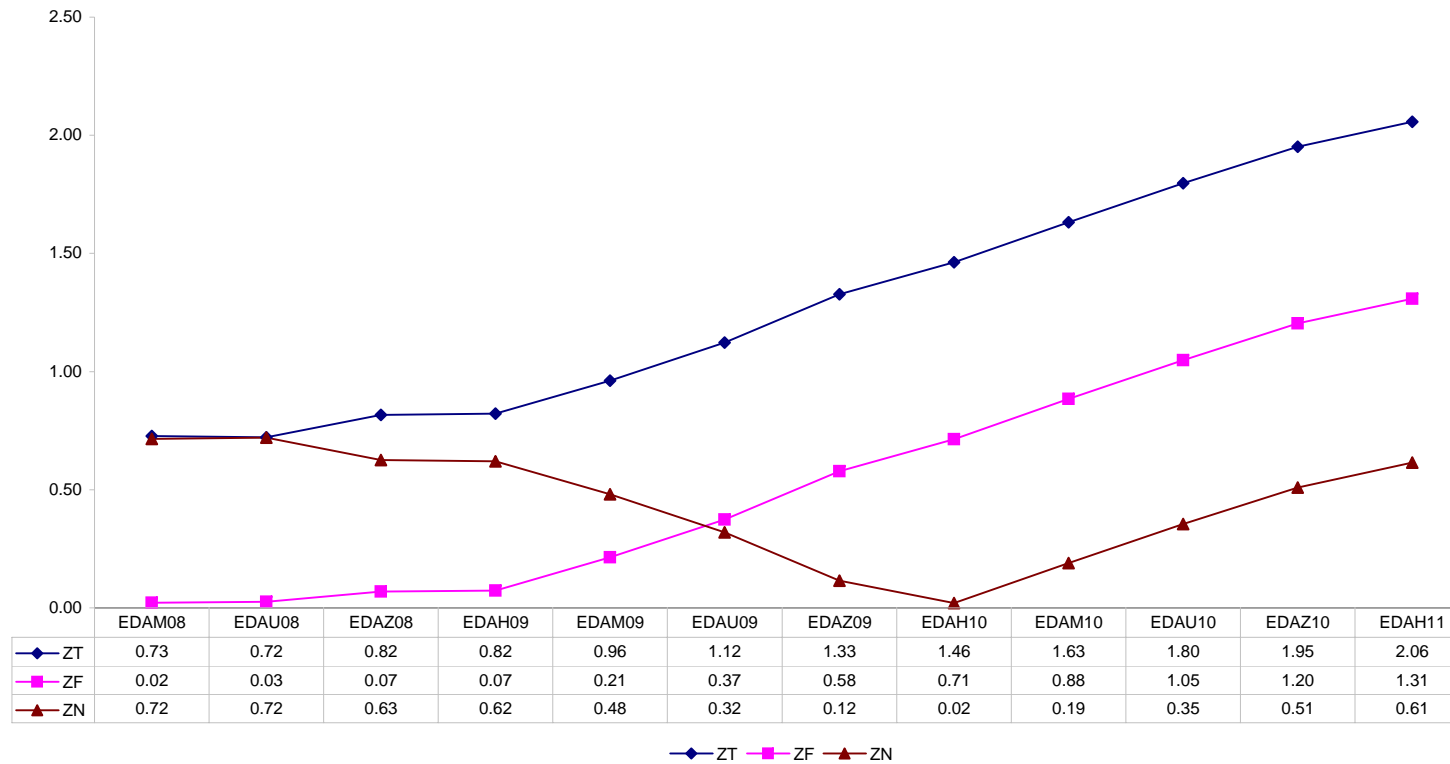
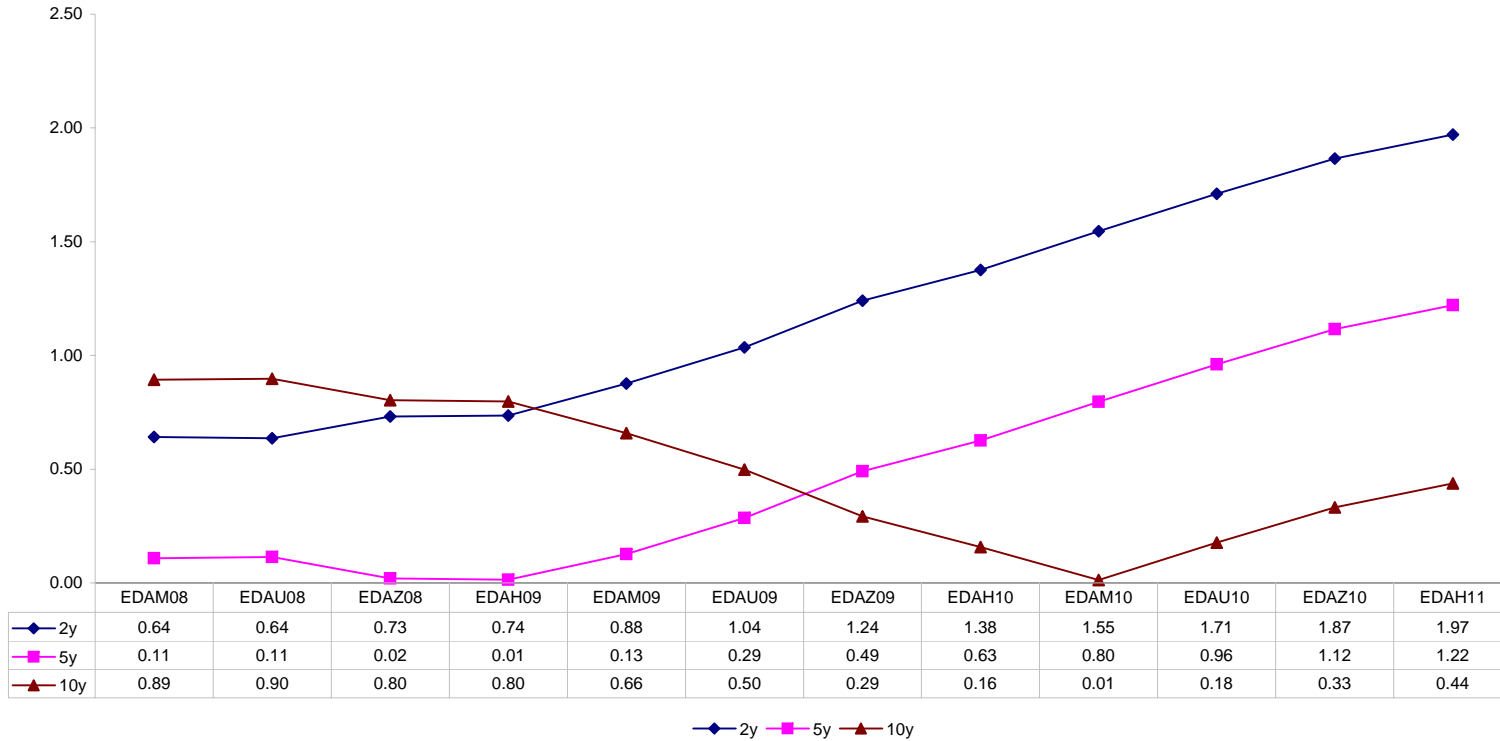
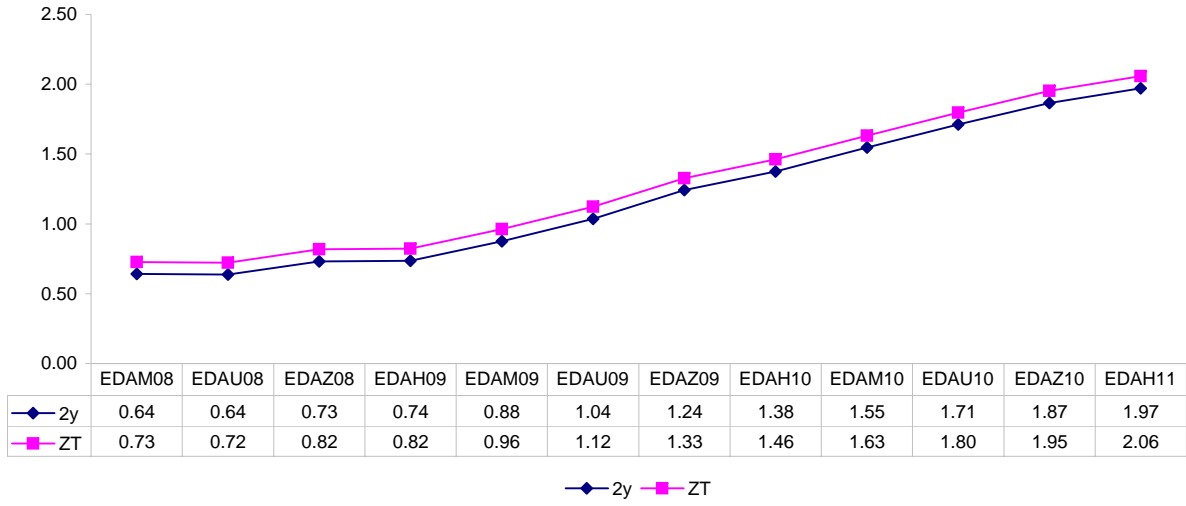


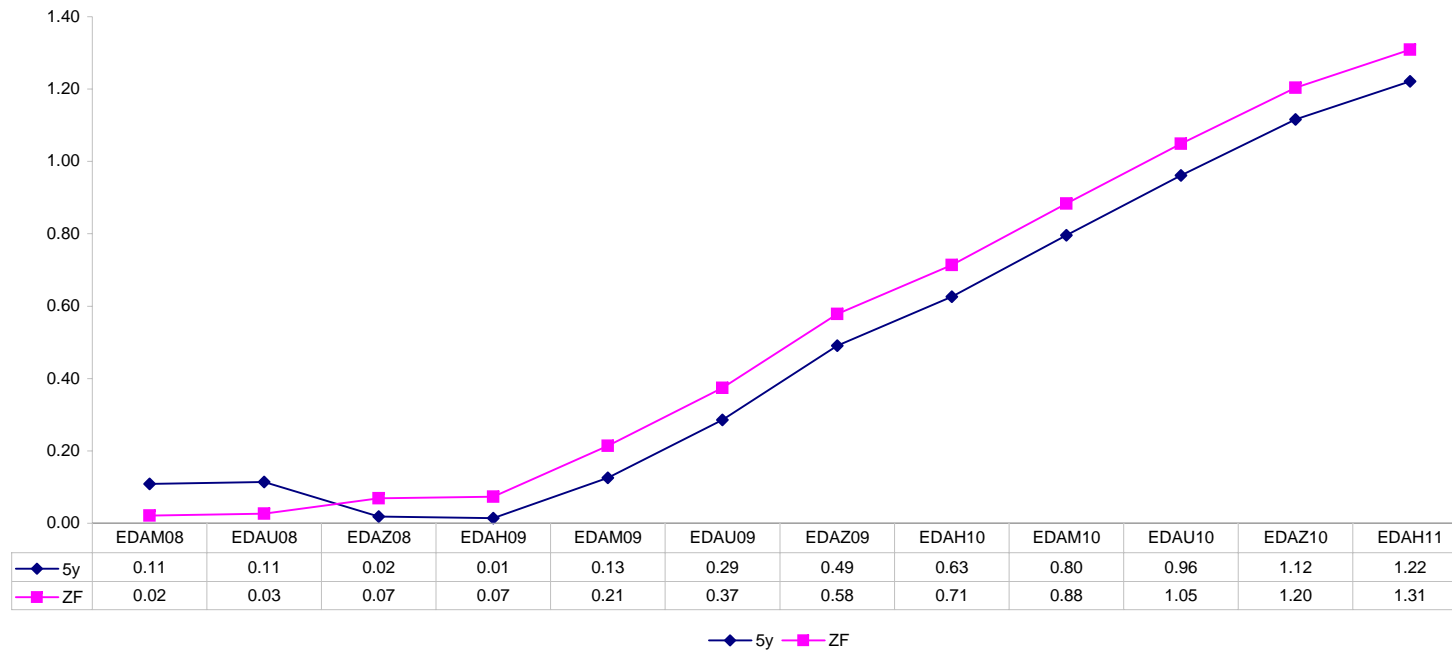
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



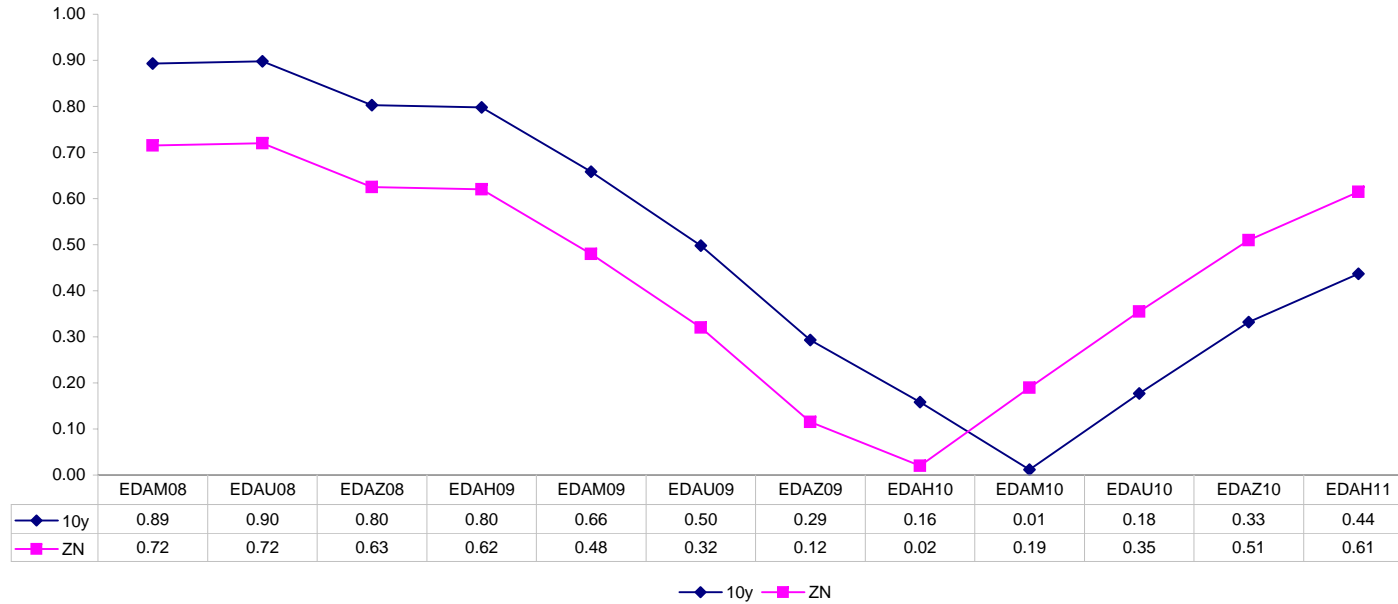
2y Basis TED Curve



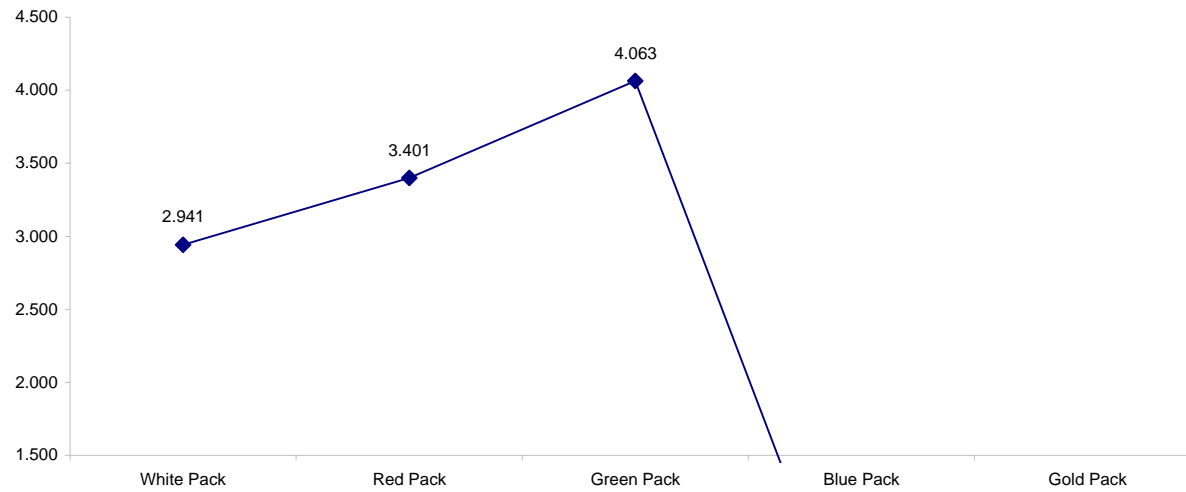
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	2.941	2.625	9712.000
Red Pack	3.401	1.750	9667.375
Green Pack	4.063	-0.500	9603.250
Blue Pack		-0.125	9559.125
Gold Pack		0.000	9528.500



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

