

## **The Morning Email: TERM TEDS & Dirty TEDS**

### **Table of Contents**

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

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	106.1000	106.032	2.429	1.82
ZF	111.7563	111.242	3.054	3.96
ZN	115.5156	115.165	3.687	6.52
2y	100.531	100.1700	2.472	1.90
5y	100.875	100.2800	3.183	4.54
10y	100.547	100.1750	3.931	8.03

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.185	2.815	35	0.095	SEP	
EDAZ08	96.995	3.005	126	0.345	DEC	White Pack
EDAH09	96.920	3.080	217	0.594	MAR	
EDAM09	96.755	3.245	308	0.843	JUN	
EDAU09	96.520	3.480	399	1.092	SEP	
EDAZ09	96.220	3.780	490	1.342	DEC	Red Pack
EDAH10	95.985	4.015	581	1.591	MAR	
EDAM10	95.770	4.230	672	1.840	JUN	
EDAU10	95.610	4.390	763	2.090	SEP	
EDAZ10	95.475	4.525	854	2.339	DEC	Green Pack
EDAH11	95.415	4.585	945	2.588	MAR	
EDAM11	95.330	4.670	1036	2.838	JUN	
EDAU11	#VALUE!	#VALUE!	1134	3.106	SEP	
EDAZ11	#VALUE!	#VALUE!	1225	3.355	DEC	Blue Pack
EDAH12	95.235	4.765	1316	3.605	MAR	
EDAM12	#VALUE!	#VALUE!	1407	3.854	JUN	
EDAU12	#VALUE!	#VALUE!	1498	4.103	SEP	
EDAZ12	#VALUE!	#VALUE!	1589	4.353	DEC	Gold Pack
EDAH13	#VALUE!	#VALUE!	1680	4.602	MAR	
EDAM13	#VALUE!	#VALUE!	1771	4.851	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	3.102	1.375	9696.375	
Red Pack	3.969	3.375	9612.375	Pack Prices
Green Pack	4.658	3.500	9545.750	
Blue Pack		1.375	9520.750	
Gold Pack		0.000	9500.625	

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.

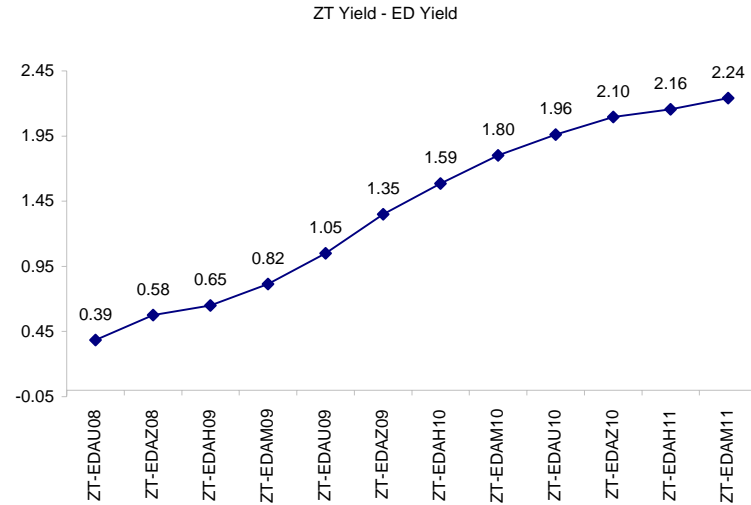
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### 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. So, it's much easier to formulate the correlations based on yield than price.**

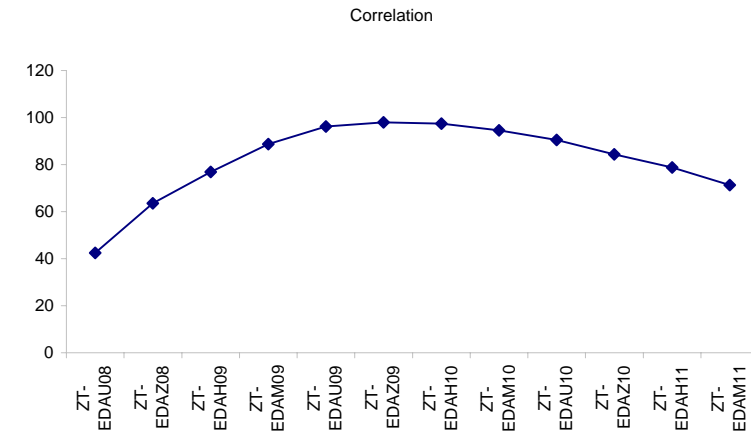
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.915	0.39	ZT-EDAU08	42.472
EDAZ08	9.105	0.58	ZT-EDAZ08	63.562
EDAH09	9.180	0.65	ZT-EDAH09	76.887
EDAM09	9.345	0.82	ZT-EDAM09	88.702
EDAU09	9.580	1.05	ZT-EDAU09	96.168
EDAZ09	9.880	1.35	ZT-EDAZ09	98.017
EDAH10	10.115	1.59	ZT-EDAH10	97.389
EDAM10	10.330	1.80	ZT-EDAM10	94.527
EDAU10	10.490	1.96	ZT-EDAU10	90.432
EDAZ10	10.625	2.10	ZT-EDAZ10	84.316
EDAH11	10.685	2.16	ZT-EDAH11	78.713
EDAM11	10.770	2.24	ZT-EDAM11	71.266

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	0.095	1.82	1.72	ZT-EDAU08		
EDAZ08	0.345	1.82	1.47	ZT-EDAZ08		
EDAH09	0.594	1.82	1.23	ZT-EDAH09		
EDAM09	0.843	1.82	0.98	ZT-EDAM09		
EDAU09	1.092	1.82	0.73	ZT-EDAU09		
EDAZ09	1.342	1.82	0.48	ZT-EDAZ09		
EDAH10	1.591	1.82	0.23	ZT-EDAH10		
EDAM10	1.840	1.82	(0.02)	ZT-EDAM10		
EDAU10	2.090	1.82	(0.27)	ZT-EDAU10		
EDAZ10	2.339	1.82	(0.52)	ZT-EDAZ10		
EDAH11	2.588	1.82	(0.77)	ZT-EDAH11		
EDAM11	2.838	1.82	(1.02)	ZT-EDAM11		

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

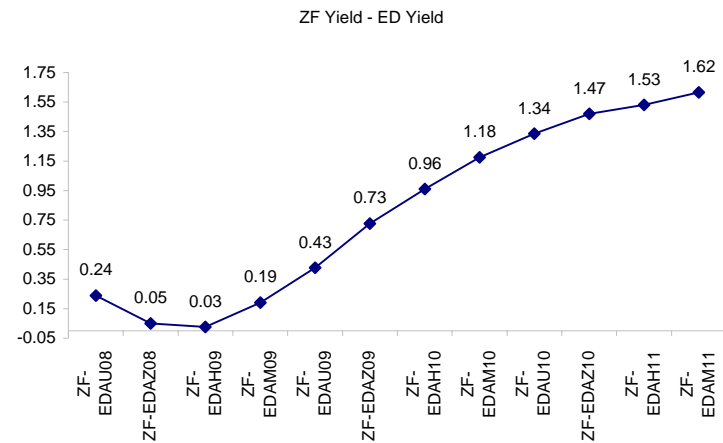


ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	14.571	0.24	ZF-EDAU08	43.600
EDAZ08	14.761	0.05	ZF-EDAZ08	61.210
EDAH09	14.836	0.03	ZF-EDAH09	74.615
EDAM09	15.001	0.19	ZF-EDAM09	87.216
EDAU09	15.236	0.43	ZF-EDAU09	95.882
EDAZ09	15.536	0.73	ZF-EDAZ09	98.418
EDAH10	15.771	0.96	ZF-EDAH10	98.005
EDAM10	15.986	1.18	ZF-EDAM10	95.036
EDAU10	16.146	1.34	ZF-EDAU10	90.441
EDAZ10	16.281	1.47	ZF-EDAZ10	84.011
EDAH11	16.341	1.53	ZF-EDAH11	78.325
EDAM11	16.426	1.62	ZF-EDAM11	70.320

Price = Outright Decimal Price - Euro Contract Price

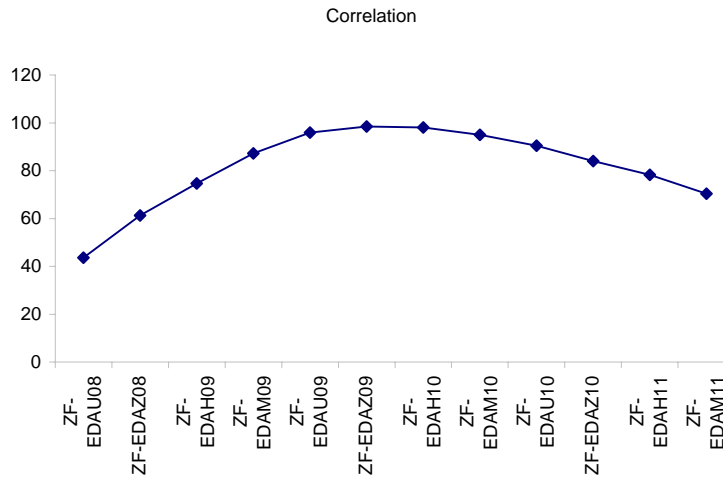
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZF Duration	Spread Duration	
EDAU08	0.095	3.96	3.86	ZF-EDAU08		
EDAZ08	0.345	3.96	3.61	ZF-EDAZ08		
EDAH09	0.594	3.96	3.36	ZF-EDAH09		
EDAM09	0.843	3.96	3.11	ZF-EDAM09		
EDAU09	1.092	3.96	2.86	ZF-EDAU09		
EDAZ09	1.342	3.96	2.61	ZF-EDAZ09		
EDAH10	1.591	3.96	2.36	ZF-EDAH10		
EDAM10	1.840	3.96	2.11	ZF-EDAM10		
EDAU10	2.090	3.96	1.87	ZF-EDAU10		
EDAZ10	2.339	3.96	1.62	ZF-EDAZ10		
EDAH11	2.588	3.96	1.37	ZF-EDAH11		
EDAM11	2.838	3.96	1.12	ZF-EDAM11		

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

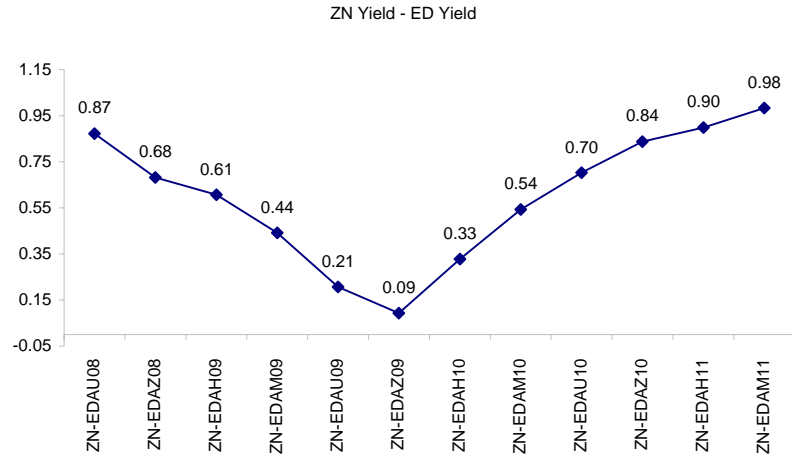


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	18.331	0.87	ZN-EDAU08	44.549
EDAZ08	18.521	0.68	ZN-EDAZ08	64.541
EDAH09	18.596	0.61	ZN-EDAH09	78.573
EDAM09	18.761	0.44	ZN-EDAM09	89.428
EDAU09	18.996	0.21	ZN-EDAU09	96.263
EDAZ09	19.296	0.09	ZN-EDAZ09	97.695
EDAH10	19.531	0.33	ZN-EDAH10	98.005
EDAM10	19.746	0.54	ZN-EDAM10	95.036
EDAU10	19.906	0.70	ZN-EDAU10	90.441
EDAZ10	20.041	0.84	ZN-EDAZ10	84.011
EDAH11	20.101	0.90	ZN-EDAH11	78.325
EDAM11	20.186	0.98	ZN-EDAM11	70.320

Price = Outright Decimal Price - Euro Contract Price

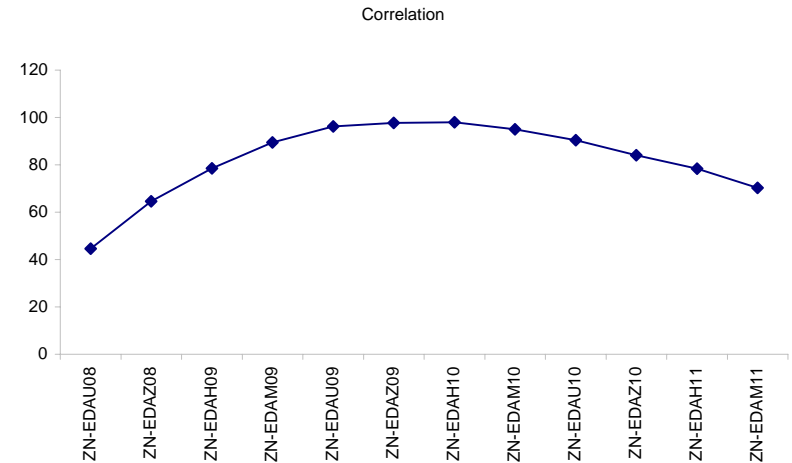
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAU08	0.095	6.52	6.42	ZN-EDAU08		
EDAZ08	0.345	6.52	6.17	ZN-EDAZ08		
EDAH09	0.594	6.52	5.92	ZN-EDAH09		
EDAM09	0.843	6.52	5.67	ZN-EDAM09		
EDAU09	1.092	6.52	5.42	ZN-EDAU09		
EDAZ09	1.342	6.52	5.18	ZN-EDAZ09		
EDAH10	1.591	6.52	4.93	ZN-EDAH10		
EDAM10	1.840	6.52	4.68	ZN-EDAM10		
EDAU10	2.090	6.52	4.43	ZN-EDAU10		
EDAZ10	2.339	6.52	4.18	ZN-EDAZ10		
EDAH11	2.588	6.52	3.93	ZN-EDAH11		
EDAM11	2.838	6.52	3.68	ZN-EDAM11		

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

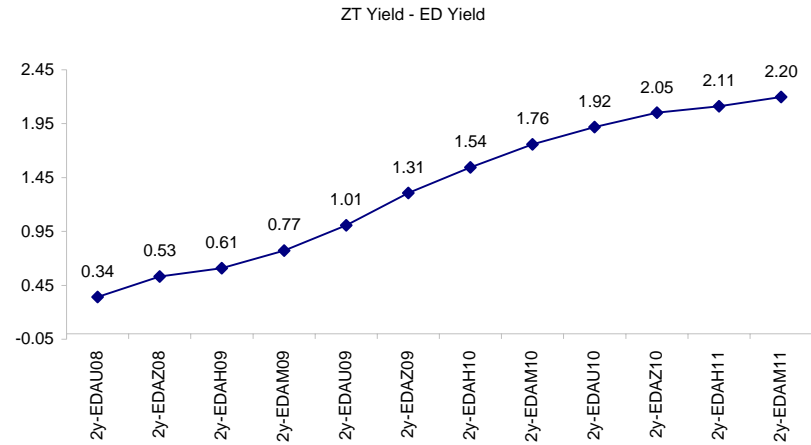


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.346	0.34	2y-EDAU08	-38.193
EDAZ08	3.536	0.53	2y-EDAZ08	-60.468
EDAH09	3.611	0.61	2y-EDAH09	-74.098
EDAM09	3.776	0.77	2y-EDAM09	-87.160
EDAU09	4.011	1.01	2y-EDAU09	-94.107
EDAZ09	4.311	1.31	2y-EDAZ09	-96.334
EDAH10	4.546	1.54	2y-EDAH10	-96.789
EDAM10	4.761	1.76	2y-EDAM10	-95.667
EDAU10	4.921	1.92	2y-EDAU10	-93.450
EDAZ10	5.056	2.05	2y-EDAZ10	-89.398
EDAH11	5.116	2.11	2y-EDAH11	-84.789
EDAM11	5.201	2.20	2y-EDAM11	-79.287

Price = Outright Decimal Price - Euro Contract Price

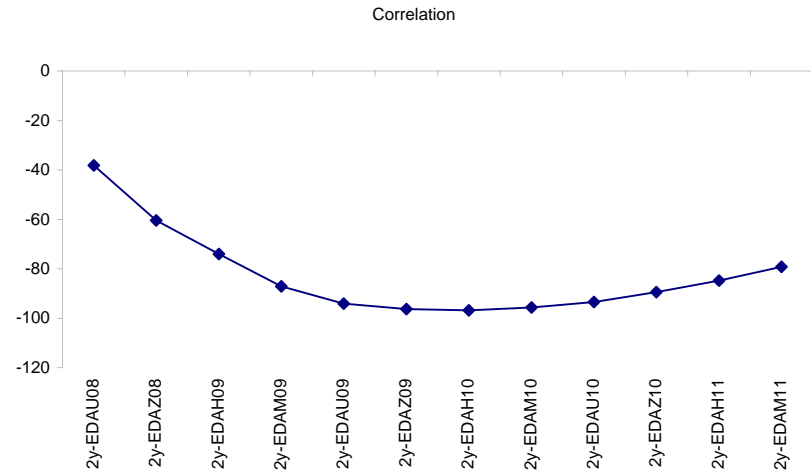
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAU08	0.095	1.90	1.81	2y-EDAU08	
EDAZ08	0.345	1.90	1.56	2y-EDAZ08	
EDAH09	0.594	1.90	1.31	2y-EDAH09	
EDAM09	0.843	1.90	1.06	2y-EDAM09	
EDAU09	1.092	1.90	0.81	2y-EDAU09	
EDAZ09	1.342	1.90	0.56	2y-EDAZ09	
EDAH10	1.591	1.90	0.31	2y-EDAH10	
EDAM10	1.840	1.90	0.06	2y-EDAM10	
EDAU10	2.090	1.90	(0.19)	2y-EDAU10	
EDAZ10	2.339	1.90	(0.44)	2y-EDAZ10	
EDAH11	2.588	1.90	(0.68)	2y-EDAH11	
EDAM11	2.838	1.90	(0.93)	2y-EDAM11	

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

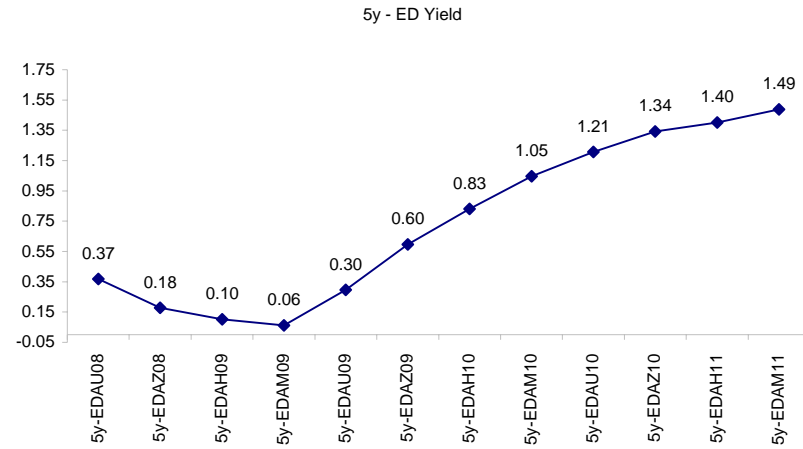


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.690	0.37	5y-EDAU08	-44.989
EDAZ08	3.880	0.18	5y-EDAZ08	-64.053
EDAH09	3.955	0.10	5y-EDAH09	-77.538
EDAM09	4.120	0.06	5y-EDAM09	-89.924
EDAU09	4.355	0.30	5y-EDAU09	-96.786
EDAZ09	4.655	0.60	5y-EDAZ09	-98.531
EDAH10	4.890	0.83	5y-EDAH10	-98.291
EDAM10	5.105	1.05	5y-EDAM10	-96.690
EDAU10	5.265	1.21	5y-EDAU10	-93.406
EDAZ10	5.400	1.34	5y-EDAZ10	-88.126
EDAH11	5.460	1.40	5y-EDAH11	-82.979
EDAM11	5.545	1.49	5y-EDAM11	-76.258

Price = Outright Decimal Price - Euro Contract Price

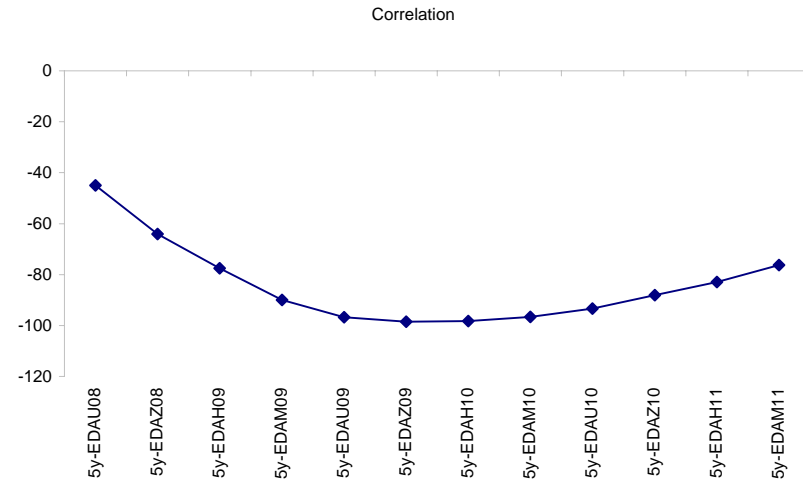
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.095	4.54	4.44	5y-EDAU08
EDAZ08	0.345	4.54	4.20	5y-EDAZ08
EDAH09	0.594	4.54	3.95	5y-EDAH09
EDAM09	0.843	4.54	3.70	5y-EDAM09
EDAU09	1.092	4.54	3.45	5y-EDAU09
EDAZ09	1.342	4.54	3.20	5y-EDAZ09
EDAH10	1.591	4.54	2.95	5y-EDAH10
EDAM10	1.840	4.54	2.70	5y-EDAM10
EDAU10	2.090	4.54	2.45	5y-EDAU10
EDAZ10	2.339	4.54	2.20	5y-EDAZ10
EDAH11	2.588	4.54	1.95	5y-EDAH11
EDAM11	2.838	4.54	1.70	5y-EDAM11

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



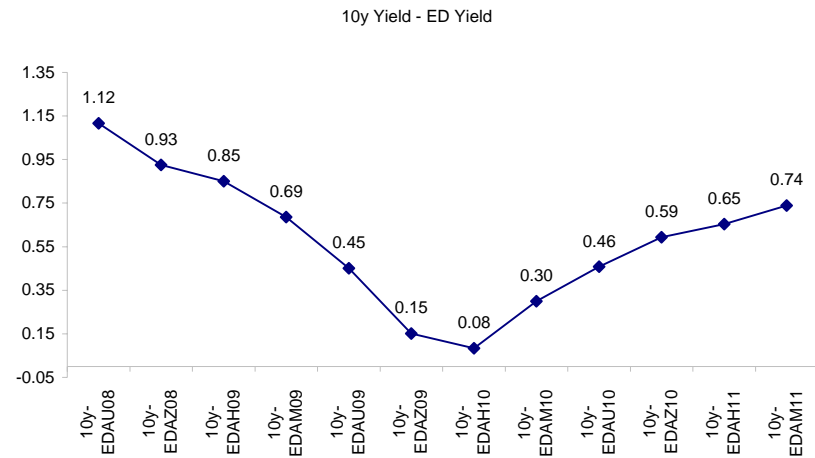


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.690	1.12	10y-EDAU08	-37.833
EDAZ08	3.880	0.93	10y-EDAZ08	-57.820
EDAH09	3.955	0.85	10y-EDAH09	-74.004
EDAM09	4.120	0.69	10y-EDAM09	-87.304
EDAU09	4.355	0.45	10y-EDAU09	-91.990
EDAZ09	4.655	0.15	10y-EDAZ09	-92.941
EDAH10	4.890	0.08	10y-EDAH10	-93.992
EDAM10	5.105	0.30	10y-EDAM10	-95.525
EDAU10	5.265	0.46	10y-EDAU10	-95.391
EDAZ10	5.400	0.59	10y-EDAZ10	-93.100
EDAH11	5.460	0.65	10y-EDAH11	-89.871
EDAM11	5.545	0.74	10y-EDAM11	-85.385

Price = Outright Decimal Price - Euro Contract Price

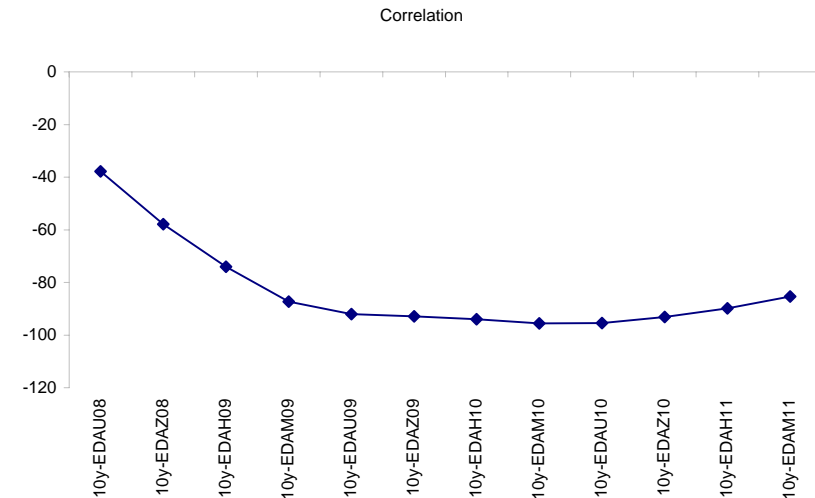
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.095	8.03	7.94	10y-EDAU08
EDAZ08	0.345	8.03	7.69	10y-EDAZ08
EDAH09	0.594	8.03	7.44	10y-EDAH09
EDAM09	0.843	8.03	7.19	10y-EDAM09
EDAU09	1.092	8.03	6.94	10y-EDAU09
EDAZ09	1.342	8.03	6.69	10y-EDAZ09
EDAH10	1.591	8.03	6.44	10y-EDAH10
EDAM10	1.840	8.03	6.19	10y-EDAM10
EDAU10	2.090	8.03	5.94	10y-EDAU10
EDAZ10	2.339	8.03	5.69	10y-EDAZ10
EDAH11	2.588	8.03	5.44	10y-EDAH11
EDAM11	2.838	8.03	5.19	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.

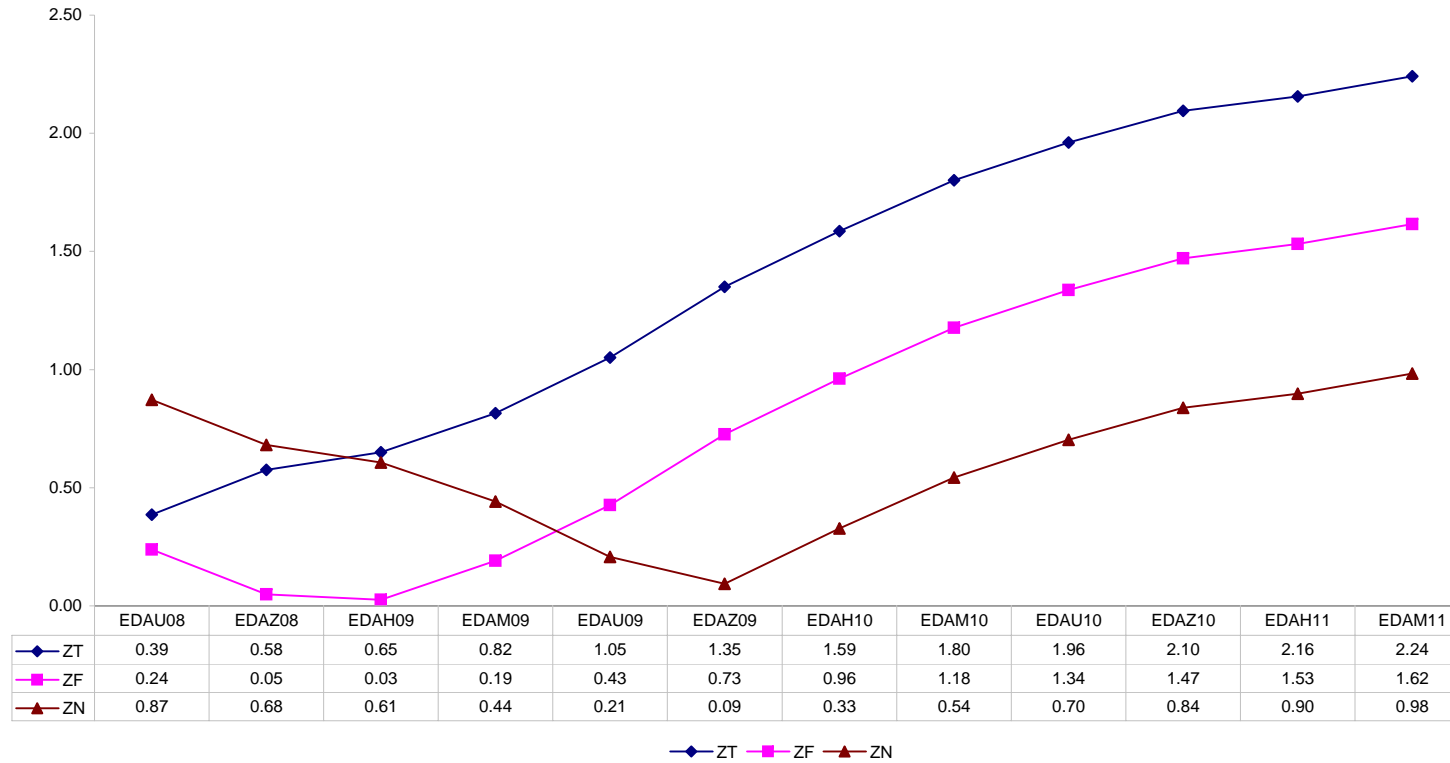
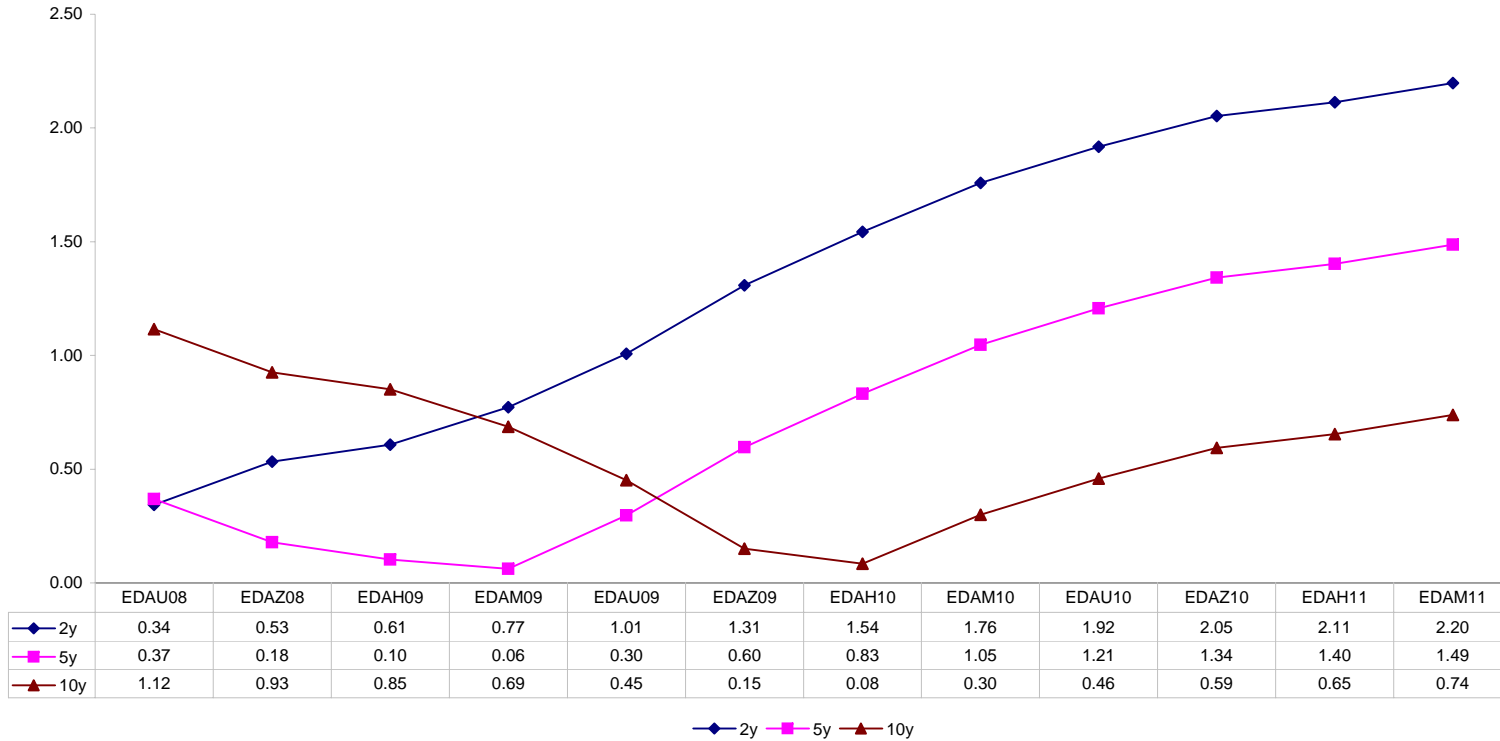
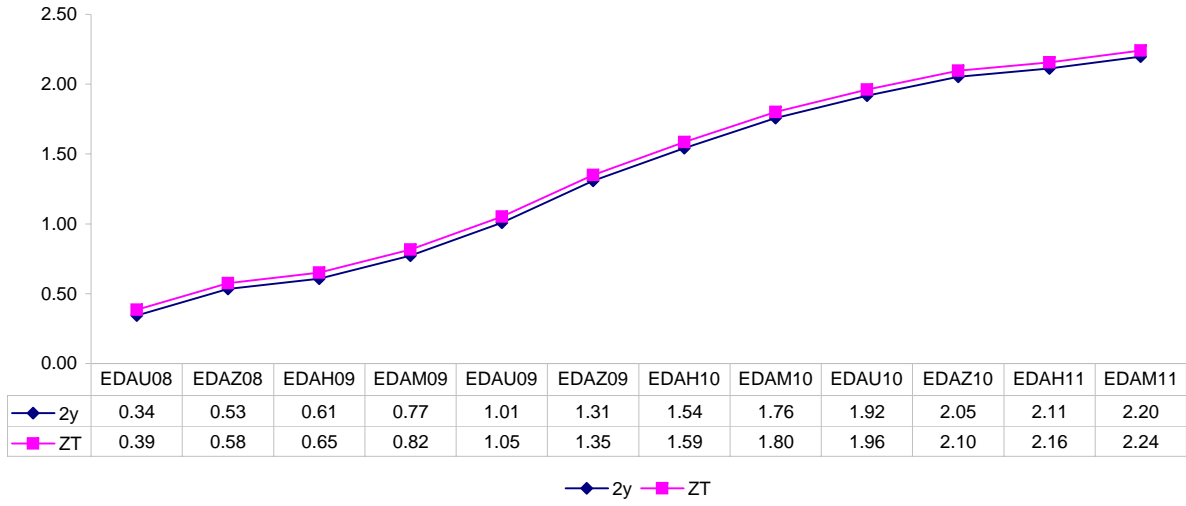


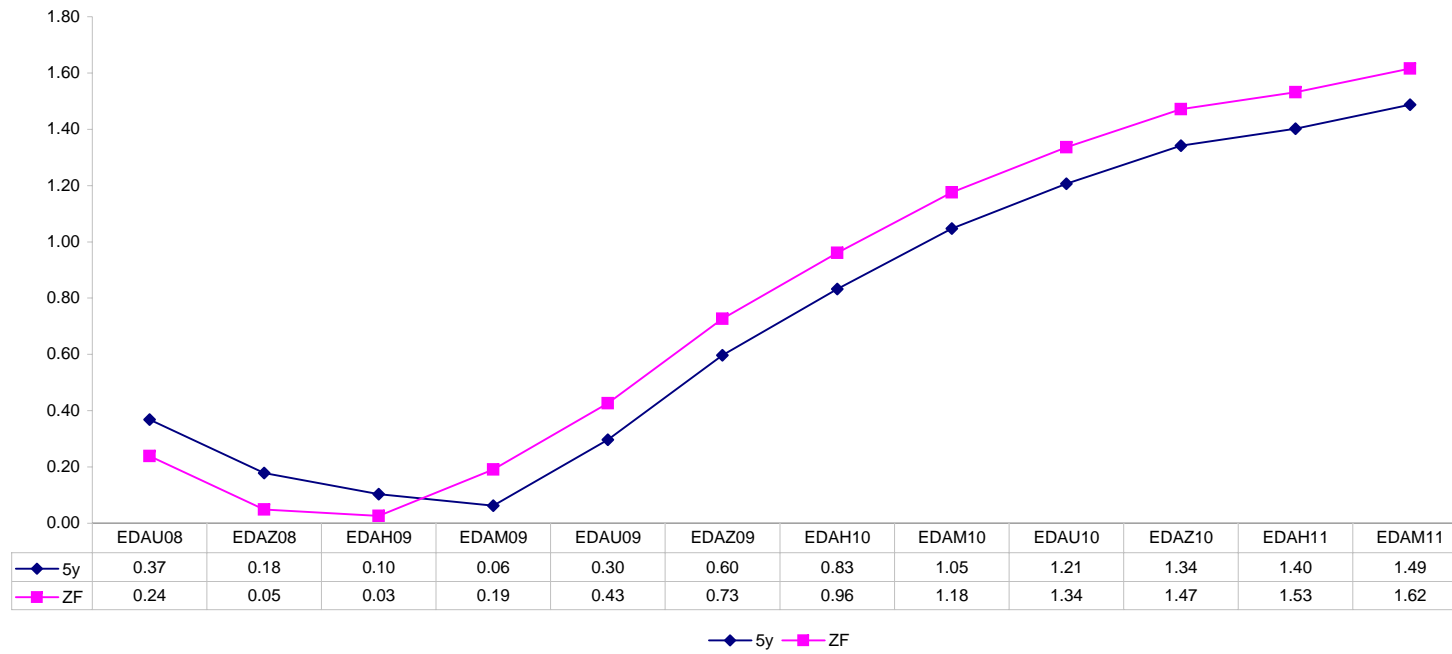
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



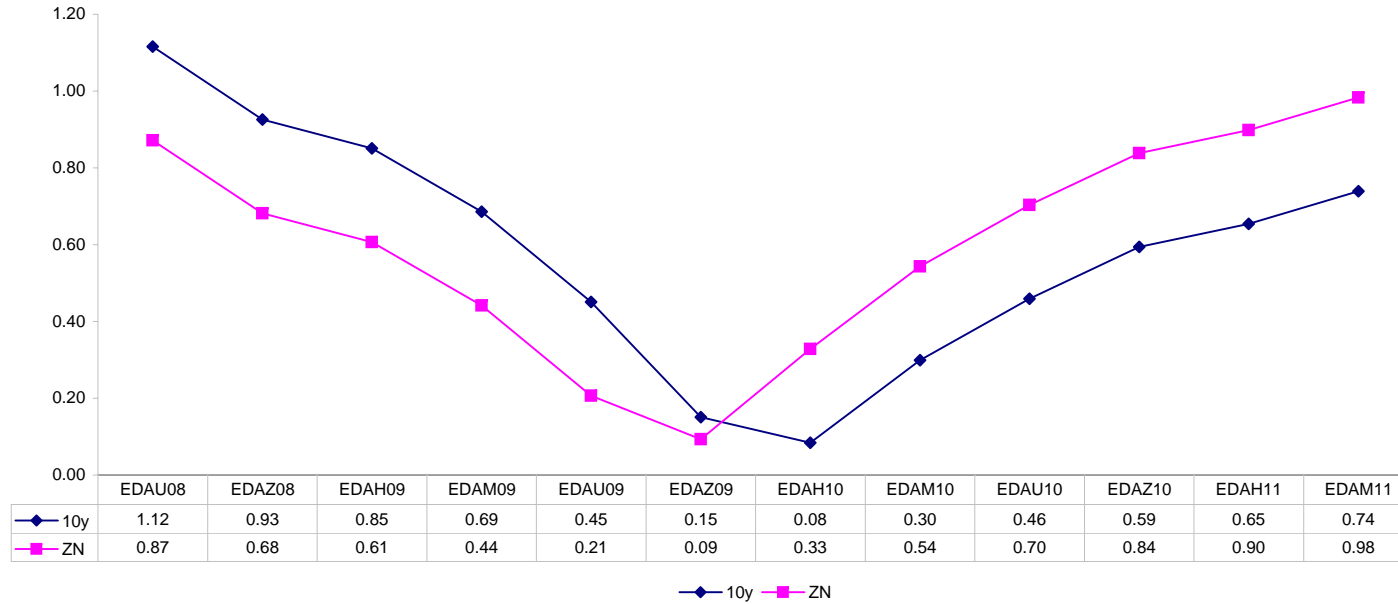
2y Basis TED Curve



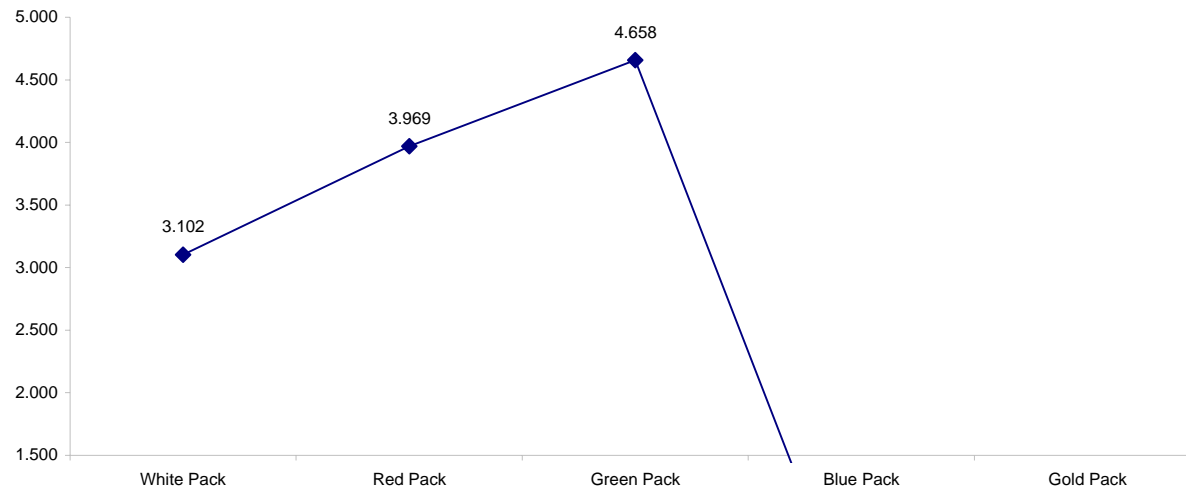
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.102	1.375	9696.375
Red Pack	3.969	3.375	9612.375
Green Pack	4.658	3.500	9545.750
Blue Pack		1.375	9520.750
Gold Pack		0.000	9500.625



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

