

## **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

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	108.3500	108.1120	0.955	1.956
ZF	115.2969	115.0950	2.172	4.276
ZN	116.7031	116.2250	3.036	5.907
2y	99.8594	99.2750	0.946	1.975
5y	99.3125	99.1000	2.397	4.698
10y	96.5156	96.1650	3.543	8.440

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.3400	0.660	17	0.0454	JUN	
EDAU09	99.2650	0.735	108	0.2947	SEP	White Pack
EDAZ09	99.0550	0.945	199	0.5441	DEC	
EDAH10	98.9100	1.090	290	0.7934	MAR	
EDAM10	98.6400	1.360	381	1.0427	JUN	
EDAU10	98.3350	1.665	472	1.2920	SEP	Red Pack
EDAZ10	97.9650	2.035	563	1.5413	DEC	
EDAH11	97.6400	2.360	654	1.7906	MAR	
EDAM11	97.2900	2.710	745	2.0399	JUN	
EDAU11	96.9550	3.045	843	2.3084	SEP	Green Pack
EDAZ11	96.6150	3.385	934	2.5577	DEC	
EDAH12	96.3600	3.640	1,025	2.8071	MAR	
EDAM12	96.1250	3.875	1,116	3.0564	JUN	
EDAU12	95.9350	4.065	1,207	3.3057	SEP	Blue Pack
EDAZ12	95.7500	4.250	1,298	3.5550	DEC	
EDAH13	95.6550	4.345	1,389	3.8043	MAR	
EDAM13	95.5250	4.475	1,480	4.0536	JUN	
EDAU13	95.4150	4.585	1,571	4.3030	SEP	Gold Pack
EDAZ13	95.2850	4.715	1,662	4.5523	DEC	
EDAH14	95.2200	4.780	1,753	4.8016	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	0.871	4.625	9914.25	
Red Pack	1.890	9.875	9814.50	Pack Prices
Green Pack	3.266	15.625	9680.50	
Blue Pack	4.235	20.000	9586.63	
Gold Pack	4.758	24.000	9536.13	

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)**

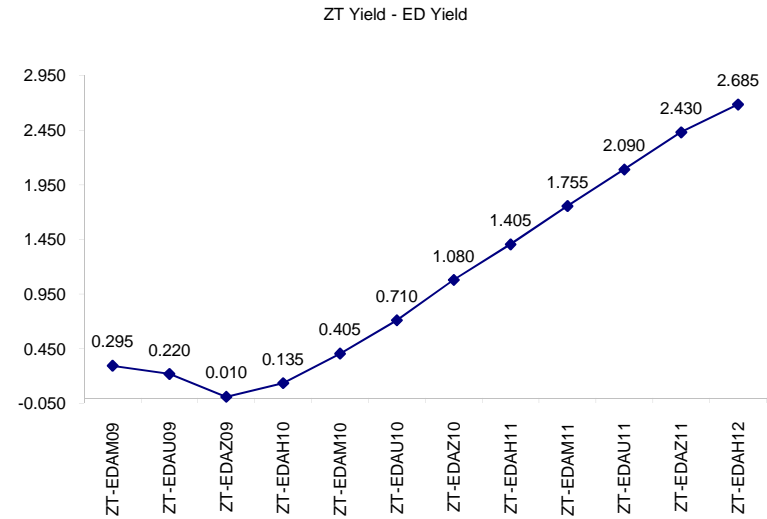
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based on yield than price.

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.01	0.295	ZT-EDAM09	87
EDAU09	9.09	0.220	ZT-EDAU09	82
EDAZ09	9.30	0.010	ZT-EDAZ09	75
EDAH10	9.44	0.135	ZT-EDAH10	74
EDAM10	9.71	0.405	ZT-EDAM10	69
EDAU10	10.02	0.710	ZT-EDAU10	61
EDAZ10	10.39	1.080	ZT-EDAZ10	55
EDAH11	10.71	1.405	ZT-EDAH11	49
EDAM11	11.06	1.755	ZT-EDAM11	46
EDAU11	11.40	2.090	ZT-EDAU11	41
EDAZ11	11.74	2.430	ZT-EDAZ11	37
EDAH12	11.99	2.685	ZT-EDAH12	34

Price = Outright Decimal Price - Euro Contract Price

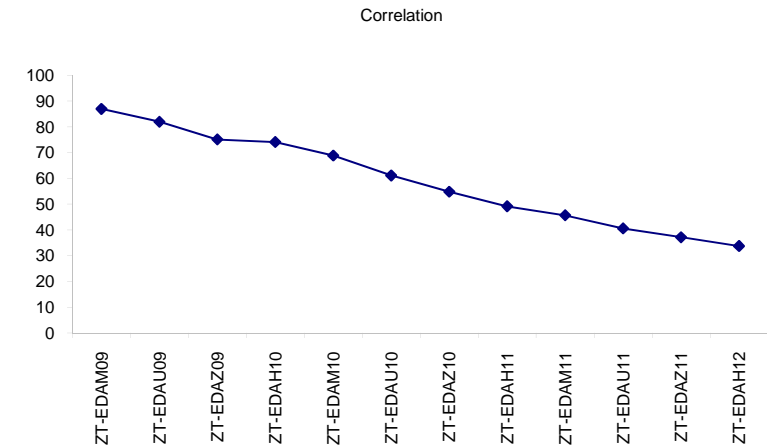
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZT Duration	Spread Duration	
EDAM09	0.0454	1.9557	1.9103	1.9103	ZT-EDAM09
EDAU09	0.2947	1.9557	1.6610	1.6610	ZT-EDAU09
EDAZ09	0.5441	1.9557	1.4116	1.4116	ZT-EDAZ09
EDAH10	0.7934	1.9557	1.1623	1.1623	ZT-EDAH10
EDAM10	1.0427	1.9557	0.9130	0.9130	ZT-EDAM10
EDAU10	1.2920	1.9557	0.6637	0.6637	ZT-EDAU10
EDAZ10	1.5413	1.9557	0.4144	0.4144	ZT-EDAZ10
EDAH11	1.7906	1.9557	0.1651	0.1651	ZT-EDAH11
EDAM11	2.0399	1.9557	-0.0843	-0.0843	ZT-EDAM11
EDAU11	2.3084	1.9557	-0.3527	-0.3527	ZT-EDAU11
EDAZ11	2.5577	1.9557	-0.6021	-0.6021	ZT-EDAZ11
EDAH12	2.8071	1.9557	-0.8514	-0.8514	ZT-EDAH12

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

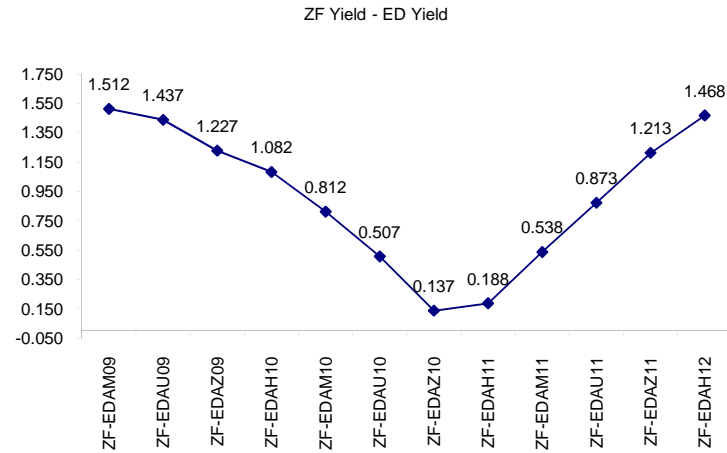


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	15.96	1.512	ZF-EDAM09	49
EDAU09	16.03	1.437	ZF-EDAU09	73
EDAZ09	16.24	1.227	ZF-EDAZ09	84
EDAH10	16.39	1.082	ZF-EDAH10	87
EDAM10	16.66	0.812	ZF-EDAM10	91
EDAU10	16.96	0.507	ZF-EDAU10	94
EDAZ10	17.33	0.137	ZF-EDAZ10	97
EDAH11	17.66	0.188	ZF-EDAH11	98
EDAM11	18.01	0.538	ZF-EDAM11	98
EDAU11	18.34	0.873	ZF-EDAU11	99
EDAZ11	18.68	1.213	ZF-EDAZ11	99
EDAH12	18.94	1.468	ZF-EDAH12	99

Price = Outright Decimal Price - Euro Contract Price

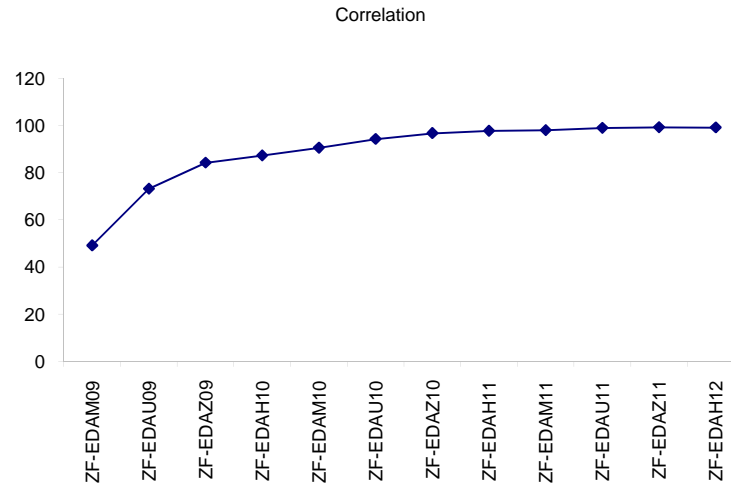
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



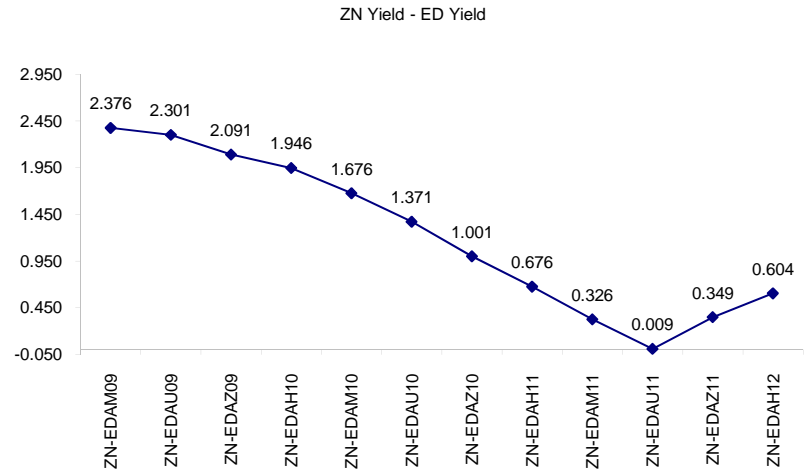
	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAM09	0.0454	4.2759	4.2304	ZF-EDAM09	
EDAU09	0.2947	4.2759	3.9811	ZF-EDAU09	
EDAZ09	0.5441	4.2759	3.7318	ZF-EDAZ09	
EDAH10	0.7934	4.2759	3.4825	ZF-EDAH10	
EDAM10	1.0427	4.2759	3.2332	ZF-EDAM10	
EDAU10	1.2920	4.2759	2.9839	ZF-EDAU10	
EDAZ10	1.5413	4.2759	2.7346	ZF-EDAZ10	
EDAH11	1.7906	4.2759	2.4852	ZF-EDAH11	
EDAM11	2.0399	4.2759	2.2359	ZF-EDAM11	
EDAU11	2.3084	4.2759	1.9674	ZF-EDAU11	
EDAZ11	2.5577	4.2759	1.7181	ZF-EDAZ11	
EDAH12	2.8071	4.2759	1.4688	ZF-EDAH12	

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



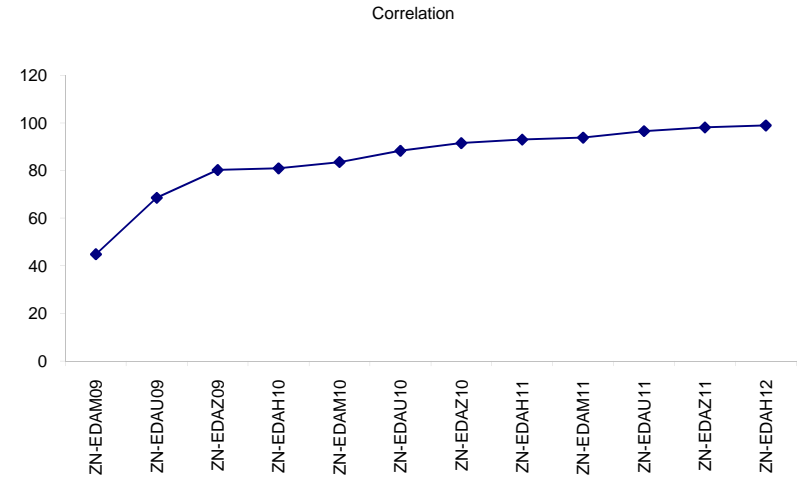
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	17.36	2.376	ZN-EDAM09	45
EDAU09	17.44	2.301	ZN-EDAU09	69
EDAZ09	17.65	2.091	ZN-EDAZ09	80
EDAH10	17.79	1.946	ZN-EDAH10	81
EDAM10	18.06	1.676	ZN-EDAM10	83
EDAU10	18.37	1.371	ZN-EDAU10	88
EDAZ10	18.74	1.001	ZN-EDAZ10	91
EDAH11	19.06	0.676	ZN-EDAH11	93
EDAM11	19.41	0.326	ZN-EDAM11	94
EDAU11	19.75	0.009	ZN-EDAU11	97
EDAZ11	20.09	0.349	ZN-EDAZ11	98
EDAH12	20.34	0.604	ZN-EDAH12	99

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	ZN Duration	Spread Duration
EDAM09	0.0454	5.9068	5.8614
EDAU09	0.2947	5.9068	5.6121
EDAZ09	0.5441	5.9068	5.3628
EDAH10	0.7934	5.9068	5.1135
EDAM10	1.0427	5.9068	4.8642
EDAU10	1.2920	5.9068	4.6148
EDAZ10	1.5413	5.9068	4.3655
EDAH11	1.7906	5.9068	4.1162
EDAM11	2.0399	5.9068	3.8669
EDAU11	2.3084	5.9068	3.5984
EDAZ11	2.5577	5.9068	3.3491
EDAH12	2.8071	5.9068	3.0998

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



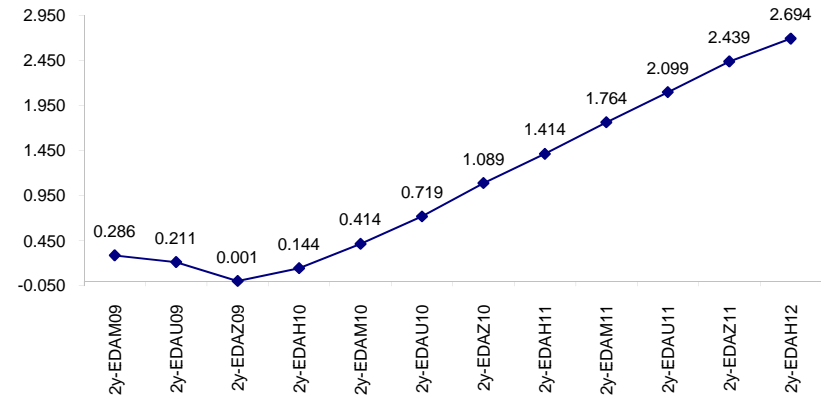
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.52	0.286	2y-EDAM09	-28
EDAU09	0.59	0.211	2y-EDAU09	-57
EDAZ09	0.80	0.001	2y-EDAZ09	-76
EDAH10	0.95	0.144	2y-EDAH10	-86
EDAM10	1.22	0.414	2y-EDAM10	-92
EDAU10	1.52	0.719	2y-EDAU10	-94
EDAZ10	1.89	1.089	2y-EDAZ10	-94
EDAH11	2.22	1.414	2y-EDAH11	-94
EDAM11	2.57	1.764	2y-EDAM11	-93
EDAU11	2.90	2.099	2y-EDAU11	-91
EDAZ11	3.24	2.439	2y-EDAZ11	-90
EDAH12	3.50	2.694	2y-EDAH12	-89

Price = Outright Decimal Price - Euro Contract Price

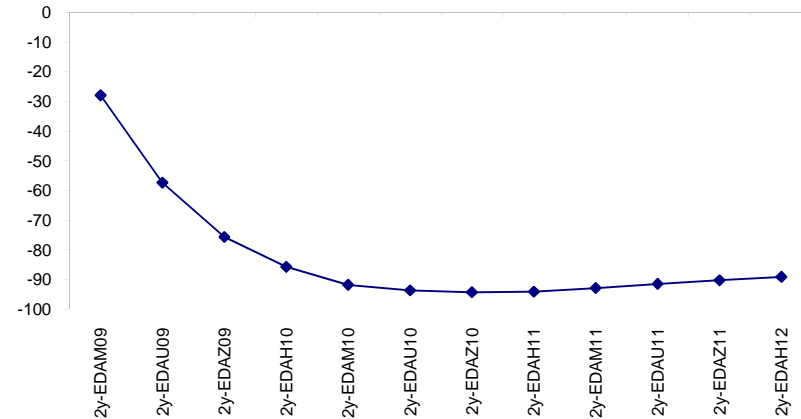
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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

ZT Yield - ED Yield



Correlation



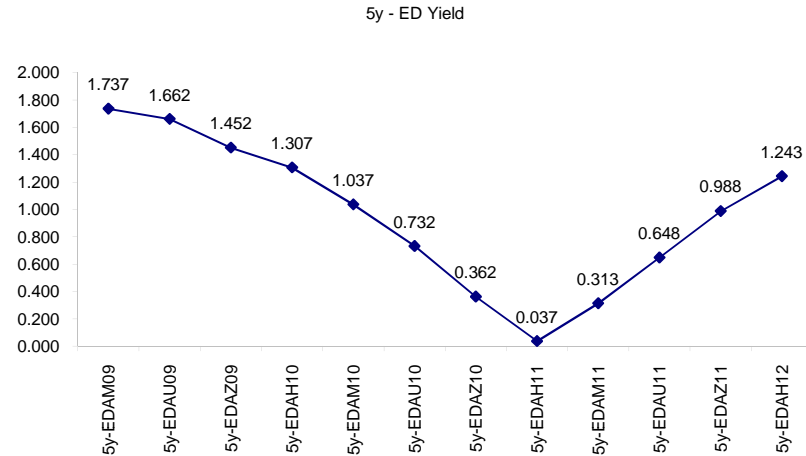
ED Duration as

	Fraction of year	2Y Duration	Spread Duration	
EDAM09	0.0454	1.9748	1.9294	2y-EDAM09
EDAU09	0.2947	1.9748	1.6801	2y-EDAU09
EDAZ09	0.5441	1.9748	1.4307	2y-EDAZ09
EDAH10	0.7934	1.9748	1.1814	2y-EDAH10
EDAM10	1.0427	1.9748	0.9321	2y-EDAM10
EDAU10	1.2920	1.9748	0.6828	2y-EDAU10
EDAZ10	1.5413	1.9748	0.4335	2y-EDAZ10
EDAH11	1.7906	1.9748	0.1842	2y-EDAH11
EDAM11	2.0399	1.9748	-0.0651	2y-EDAM11
EDAU11	2.3084	1.9748	-0.3336	2y-EDAU11
EDAZ11	2.5577	1.9748	-0.5830	2y-EDAZ11
EDAH12	2.8071	1.9748	-0.8323	2y-EDAH12

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

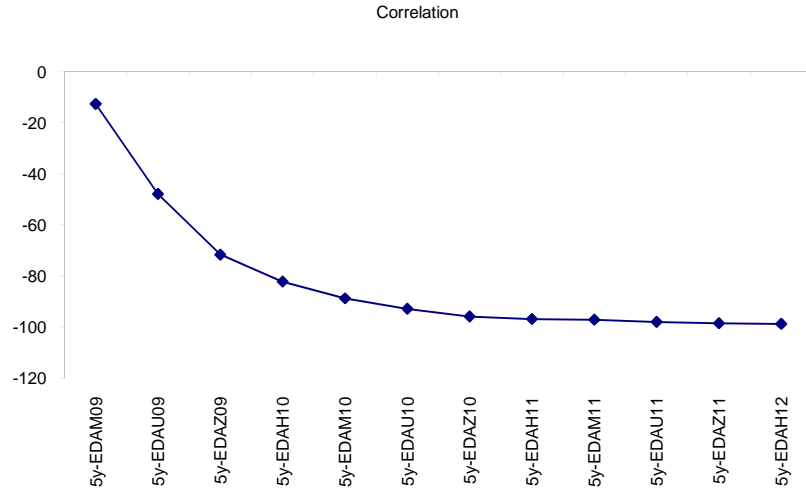
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.03	1.737	5y-EDAM09	-12
EDAU09	0.05	1.662	5y-EDAU09	-48
EDAZ09	0.26	1.452	5y-EDAZ09	-72
EDAH10	0.40	1.307	5y-EDAH10	-82
EDAM10	0.67	1.037	5y-EDAM10	-89
EDAU10	0.98	0.732	5y-EDAU10	-93
EDAZ10	1.35	0.362	5y-EDAZ10	-96
EDAH11	1.67	0.037	5y-EDAH11	-97
EDAM11	2.02	0.313	5y-EDAM11	-97
EDAU11	2.36	0.648	5y-EDAU11	-98
EDAZ11	2.70	0.988	5y-EDAZ11	-99
EDAH12	2.95	1.243	5y-EDAH12	-99

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		
EDAM09	0.0454	4.6977	4.6523	5y-EDAM09
EDAU09	0.2947	4.6977	4.4030	5y-EDAU09
EDAZ09	0.5441	4.6977	4.1537	5y-EDAZ09
EDAH10	0.7934	4.6977	3.9044	5y-EDAH10
EDAM10	1.0427	4.6977	3.6550	5y-EDAM10
EDAU10	1.2920	4.6977	3.4057	5y-EDAU10
EDAZ10	1.5413	4.6977	3.1564	5y-EDAZ10
EDAH11	1.7906	4.6977	2.9071	5y-EDAH11
EDAM11	2.0399	4.6977	2.6578	5y-EDAM11
EDAU11	2.3084	4.6977	2.3893	5y-EDAU11
EDAZ11	2.5577	4.6977	2.1400	5y-EDAZ11
EDAH12	2.8071	4.6977	1.8907	5y-EDAH12

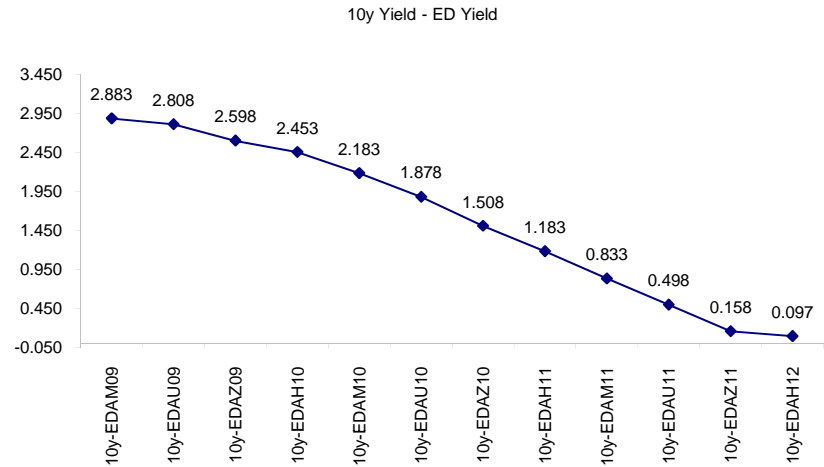
The farther away from 0 the spread duration is the riskier the trade.





10y				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.03	2.883	10y-EDAM09	-15
EDAU09	0.05	2.808	10y-EDAU09	-48
EDAZ09	0.26	2.598	10y-EDAZ09	-73
EDAH10	0.40	2.453	10y-EDAH10	-82
EDAM10	0.67	2.183	10y-EDAM10	-87
EDAU10	0.98	1.878	10y-EDAU10	-90
EDAZ10	1.35	1.508	10y-EDAZ10	-92
EDAH11	1.67	1.183	10y-EDAH11	-92
EDAM11	2.02	0.833	10y-EDAM11	-93
EDAU11	2.36	0.498	10y-EDAU11	-94
EDAZ11	2.70	0.158	10y-EDAZ11	-95
EDAH12	2.95	0.097	10y-EDAH12	-96

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	
EDAM09	0.0454	8.4397	8.3943	10y-EDAM09		
EDAU09	0.2947	8.4397	8.1450	10y-EDAU09		
EDAZ09	0.5441	8.4397	7.8957	10y-EDAZ09		
EDAH10	0.7934	8.4397	7.6464	10y-EDAH10		
EDAM10	1.0427	8.4397	7.3971	10y-EDAM10		
EDAU10	1.2920	8.4397	7.1477	10y-EDAU10		
EDAZ10	1.5413	8.4397	6.8984	10y-EDAZ10		
EDAH11	1.7906	8.4397	6.6491	10y-EDAH11		
EDAM11	2.0399	8.4397	6.3998	10y-EDAM11		
EDAU11	2.3084	8.4397	6.1313	10y-EDAU11		
EDAZ11	2.5577	8.4397	5.8820	10y-EDAZ11		
EDAH12	2.8071	8.4397	5.6327	10y-EDAH12		

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

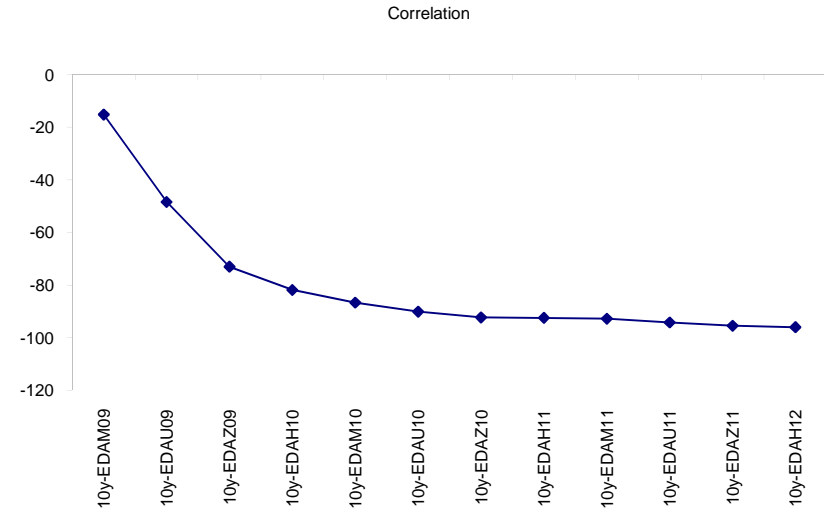


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

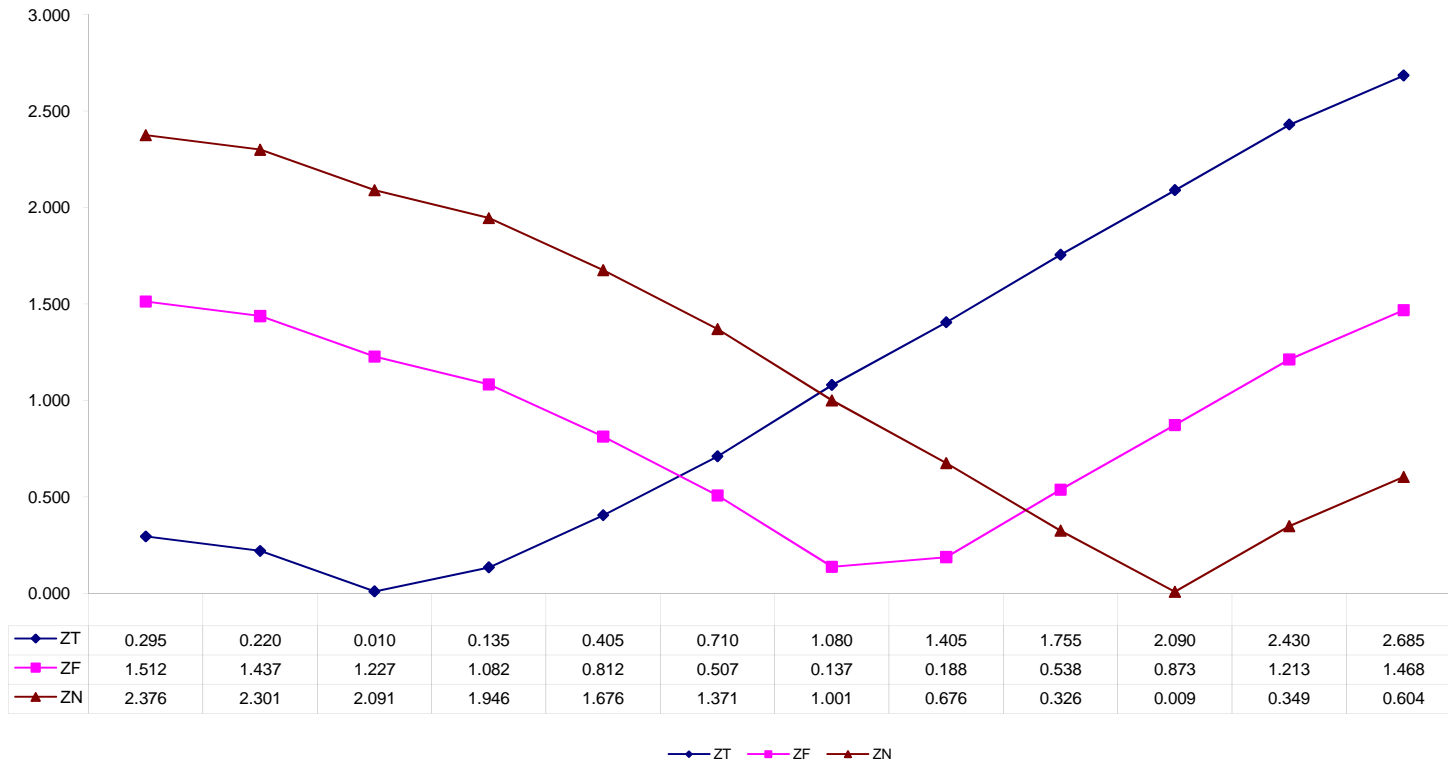
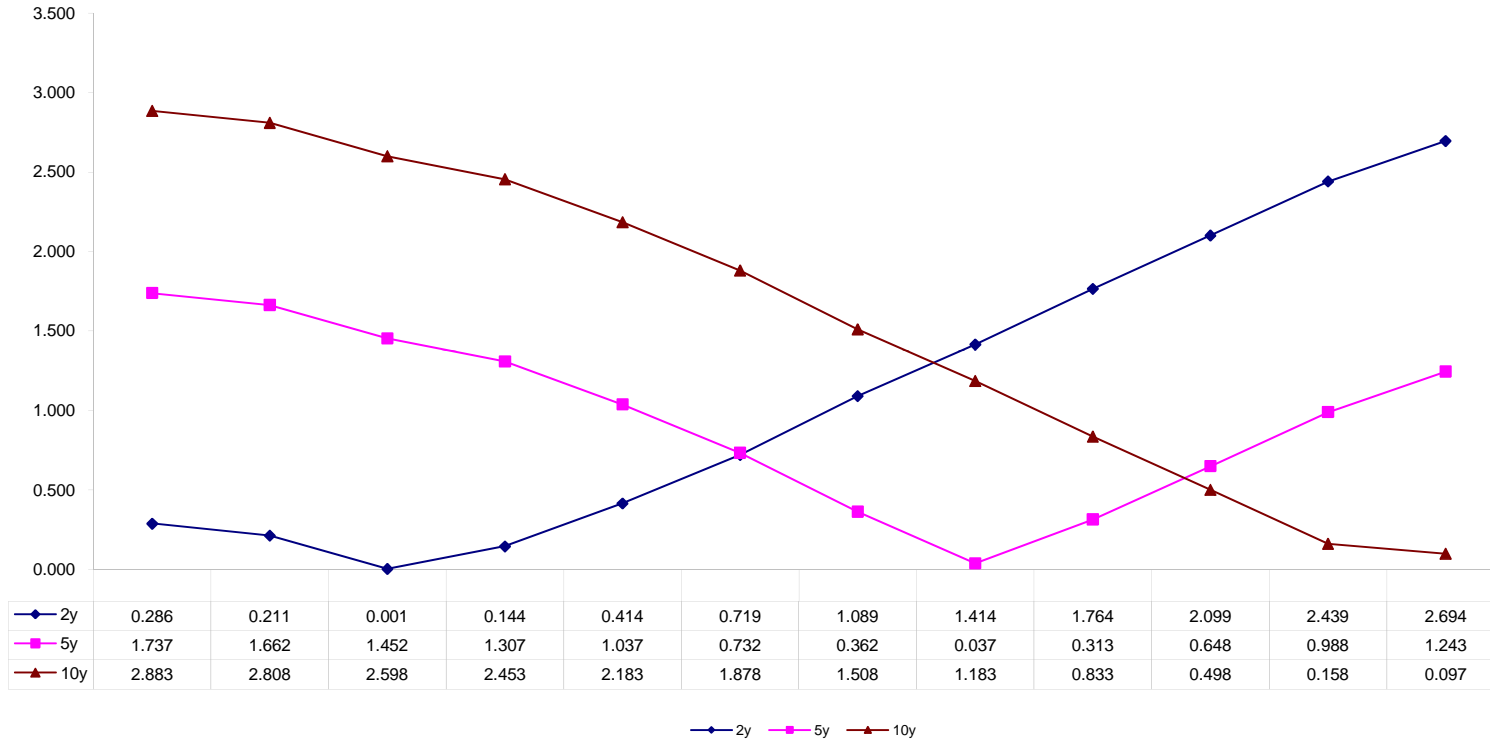
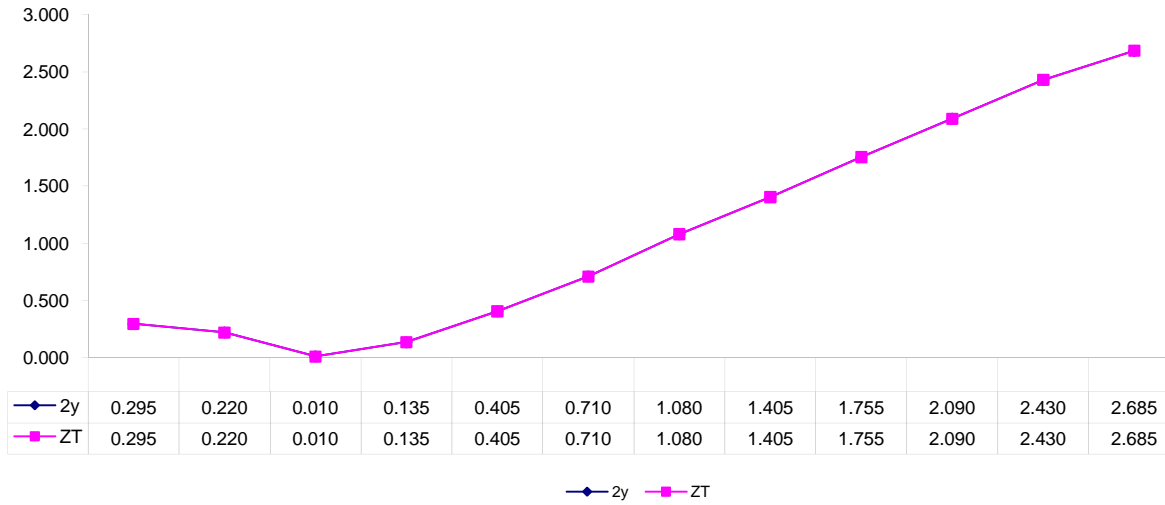
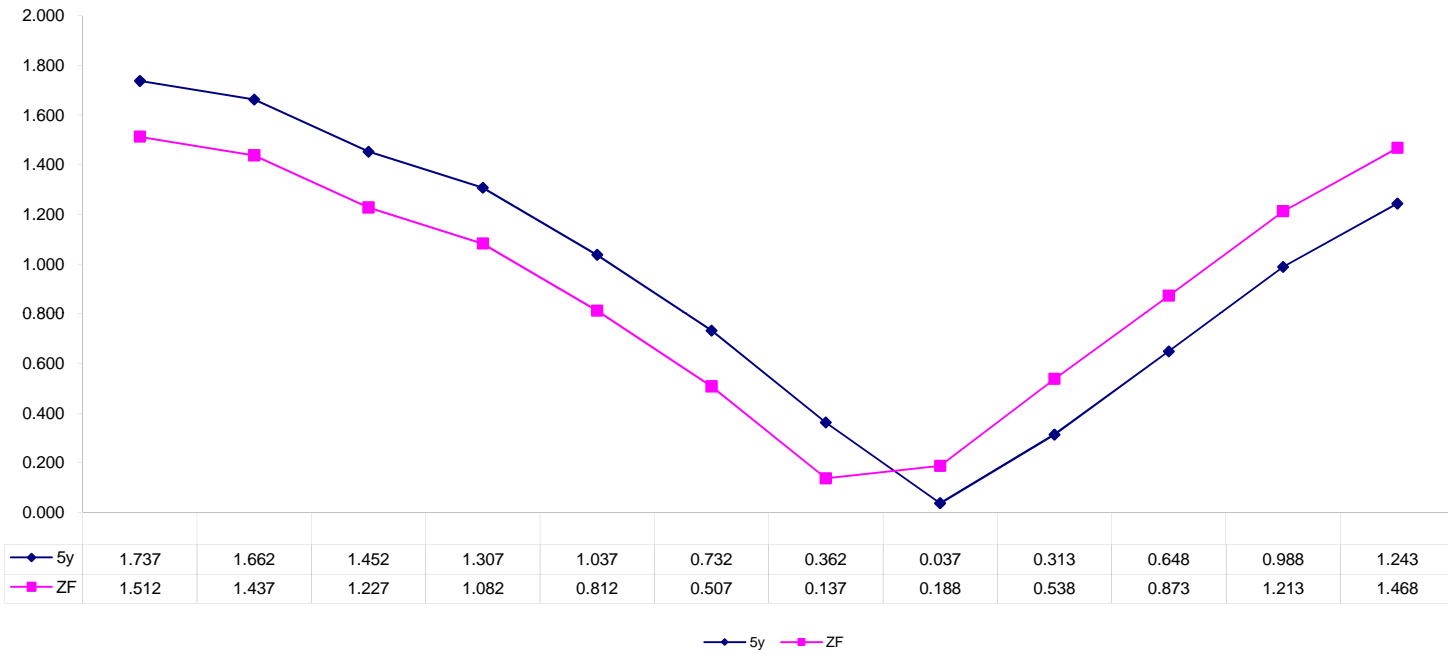


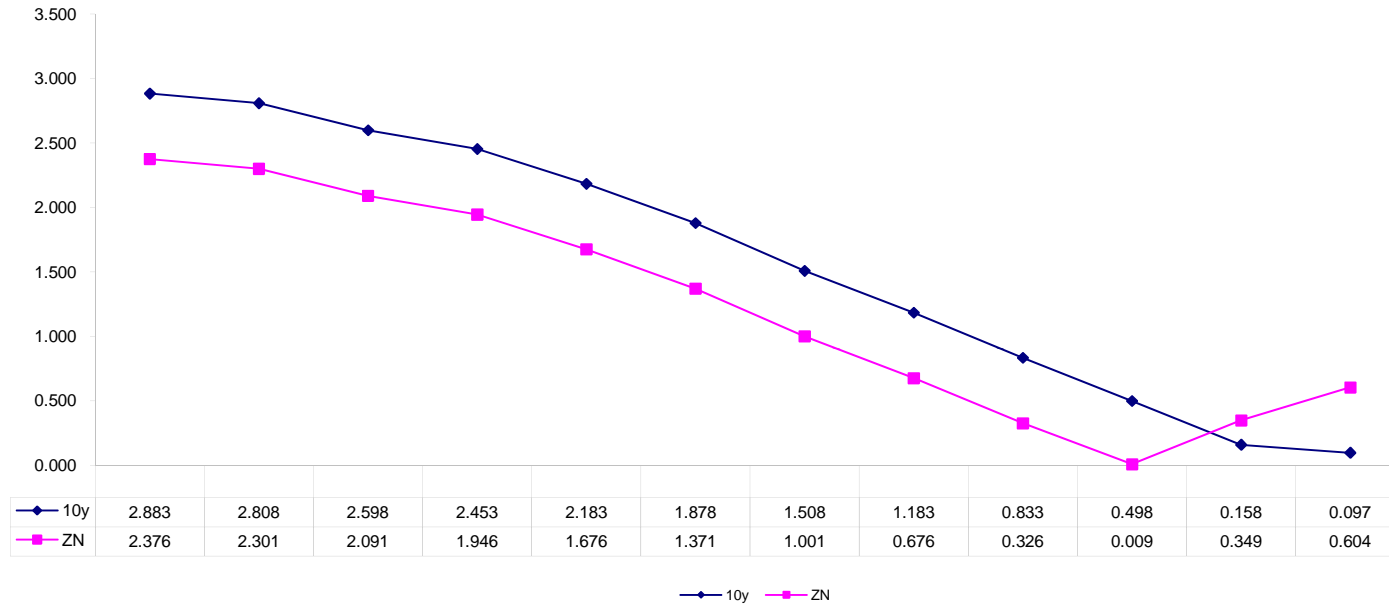
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	0.871	4.625	9914.2500
Red Pack	1.890	9.875	9814.5000
Green Pack	3.266	15.625	9680.5000
Blue Pack	4.235	20.000	9586.6250
Gold Pack	4.758	24.000	9536.1250

