

## **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	108.3656	108.1170	0.930	1.950
ZF	114.8344	114.2670	2.287	4.268
ZN	115.8281	115.2650	3.150	5.894
2y	99.8750	99.2800	0.939	1.970
5y	98.8906	98.2850	2.486	4.689
10y	95.7656	95.2450	3.634	8.424

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.3425	0.657	13	0.0350	JUN	
EDAU09	99.2550	0.745	104	0.2843	SEP	White Pack
EDAZ09	99.0300	0.970	195	0.5336	DEC	
EDAH10	98.8600	1.140	286	0.7829	MAR	
EDAM10	98.5650	1.435	377	1.0322	JUN	
EDAU10	98.2400	1.760	468	1.2815	SEP	Red Pack
EDAZ10	97.8550	2.145	559	1.5308	DEC	
EDAH11	97.5100	2.490	650	1.7802	MAR	
EDAM11	97.1300	2.870	741	2.0295	JUN	
EDAU11	96.7800	3.220	839	2.2980	SEP	Green Pack
EDAZ11	96.4250	3.575	930	2.5473	DEC	
EDAH12	96.1600	3.840	1,021	2.7966	MAR	
EDAM12	95.9050	4.095	1,112	3.0459	JUN	
EDAU12	95.7000	4.300	1,203	3.2952	SEP	Blue Pack
EDAZ12	95.5100	4.490	1,294	3.5445	DEC	
EDAH13	95.4000	4.600	1,385	3.7939	MAR	
EDAM13	95.2750	4.725	1,476	4.0432	JUN	
EDAU13	95.1550	4.845	1,567	4.2925	SEP	Gold Pack
EDAZ13	95.0200	4.980	1,658	4.5418	DEC	
EDAH14	94.9550	5.045	1,749	4.7911	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	0.892	3.937	9912.19	
Red Pack	1.995	6.000	9804.25	Pack Prices
Green Pack	3.453	7.375	9662.38	
Blue Pack	4.481	8.250	9562.88	
Gold Pack	5.028	9.250	9510.13	

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)**

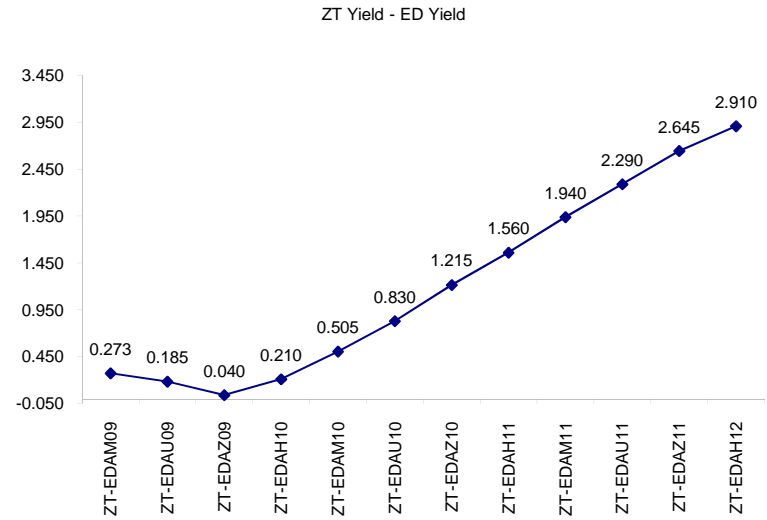
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based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

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.02	0.273	ZT-EDAM09	80
EDAU09	9.11	0.185	ZT-EDAU09	93
EDAZ09	9.34	0.040	ZT-EDAZ09	94
EDAH10	9.51	0.210	ZT-EDAH10	92
EDAM10	9.80	0.505	ZT-EDAM10	88
EDAU10	10.13	0.830	ZT-EDAU10	84
EDAZ10	10.51	1.215	ZT-EDAZ10	81
EDAH11	10.86	1.560	ZT-EDAH11	77
EDAM11	11.24	1.940	ZT-EDAM11	75
EDAU11	11.59	2.290	ZT-EDAU11	75
EDAZ11	11.94	2.645	ZT-EDAZ11	76
EDAH12	12.21	2.910	ZT-EDAH12	77

Price = Outright Decimal Price - Euro Contract Price

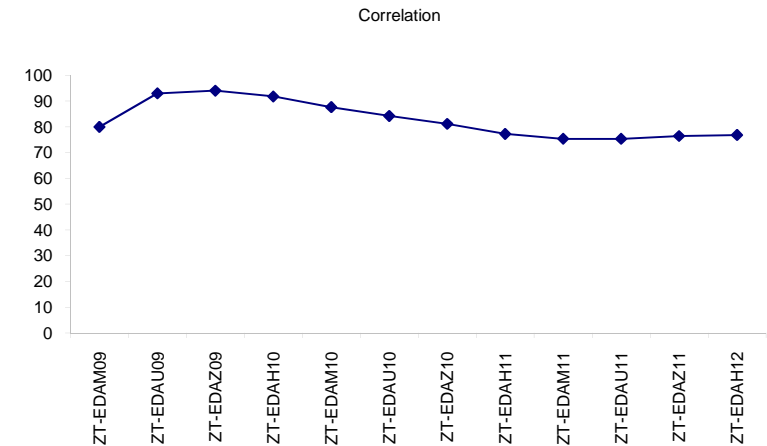
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			ZT Duration	Spread Duration	
EDAM09	0.0350	1.9505	1.9155	ZT-EDAM09		
EDAU09	0.2843	1.9505	1.6662	ZT-EDAU09		
EDAZ09	0.5336	1.9505	1.4169	ZT-EDAZ09		
EDAH10	0.7829	1.9505	1.1676	ZT-EDAH10		
EDAM10	1.0322	1.9505	0.9183	ZT-EDAM10		
EDAU10	1.2815	1.9505	0.6689	ZT-EDAU10		
EDAZ10	1.5308	1.9505	0.4196	ZT-EDAZ10		
EDAH11	1.7802	1.9505	0.1703	ZT-EDAH11		
EDAM11	2.0295	1.9505	-0.0790	ZT-EDAM11		
EDAU11	2.2980	1.9505	-0.3475	ZT-EDAU11		
EDAZ11	2.5473	1.9505	-0.5968	ZT-EDAZ11		
EDAH12	2.7966	1.9505	-0.8461	ZT-EDAH12		

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

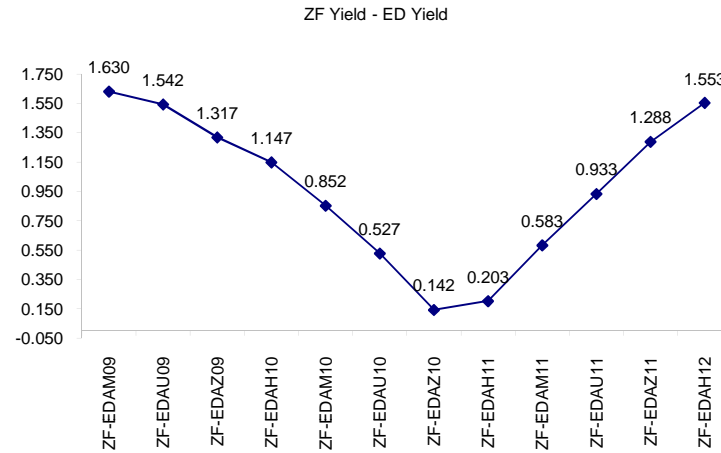


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	15.49	1.630	ZF-EDAM09	47
EDAU09	15.58	1.542	ZF-EDAU09	81
EDAZ09	15.80	1.317	ZF-EDAZ09	88
EDAH10	15.97	1.147	ZF-EDAH10	94
EDAM10	16.27	0.852	ZF-EDAM10	97
EDAU10	16.59	0.527	ZF-EDAU10	98
EDAZ10	16.98	0.142	ZF-EDAZ10	99
EDAH11	17.32	0.203	ZF-EDAH11	99
EDAM11	17.70	0.583	ZF-EDAM11	99
EDAU11	18.05	0.933	ZF-EDAU11	99
EDAZ11	18.41	1.288	ZF-EDAZ11	99
EDAH12	18.67	1.553	ZF-EDAH12	100

Price = Outright Decimal Price - Euro Contract Price

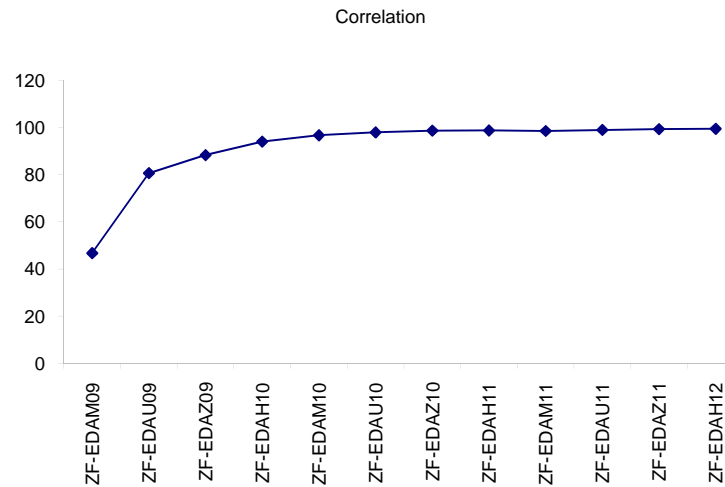
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAM09	0.0350	4.2675	4.2325	ZF-EDAM09	
EDAU09	0.2843	4.2675	3.9832	ZF-EDAU09	
EDAZ09	0.5336	4.2675	3.7339	ZF-EDAZ09	
EDAH10	0.7829	4.2675	3.4846	ZF-EDAH10	
EDAM10	1.0322	4.2675	3.2353	ZF-EDAM10	
EDAU10	1.2815	4.2675	2.9860	ZF-EDAU10	
EDAZ10	1.5308	4.2675	2.7367	ZF-EDAZ10	
EDAH11	1.7802	4.2675	2.4873	ZF-EDAH11	
EDAM11	2.0295	4.2675	2.2380	ZF-EDAM11	
EDAU11	2.2980	4.2675	1.9695	ZF-EDAU11	
EDAZ11	2.5473	4.2675	1.7202	ZF-EDAZ11	
EDAH12	2.7966	4.2675	1.4709	ZF-EDAH12	

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

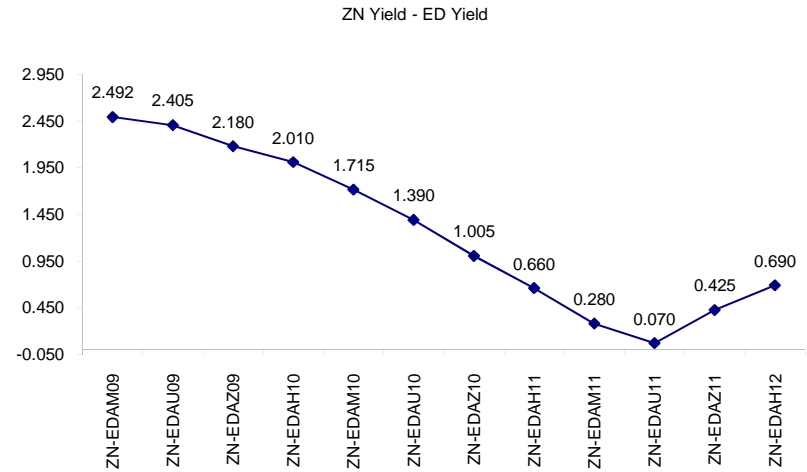


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	16.49	2.492	ZN-EDAM09	53
EDAU09	16.57	2.405	ZN-EDAU09	84
EDAZ09	16.80	2.180	ZN-EDAZ09	90
EDAH10	16.97	2.010	ZN-EDAH10	94
EDAM10	17.26	1.715	ZN-EDAM10	95
EDAU10	17.59	1.390	ZN-EDAU10	97
EDAZ10	17.97	1.005	ZN-EDAZ10	97
EDAH11	18.32	0.660	ZN-EDAH11	97
EDAM11	18.70	0.280	ZN-EDAM11	97
EDAU11	19.05	0.070	ZN-EDAU11	98
EDAZ11	19.40	0.425	ZN-EDAZ11	98
EDAH12	19.67	0.690	ZN-EDAH12	99

Price = Outright Decimal Price - Euro Contract Price

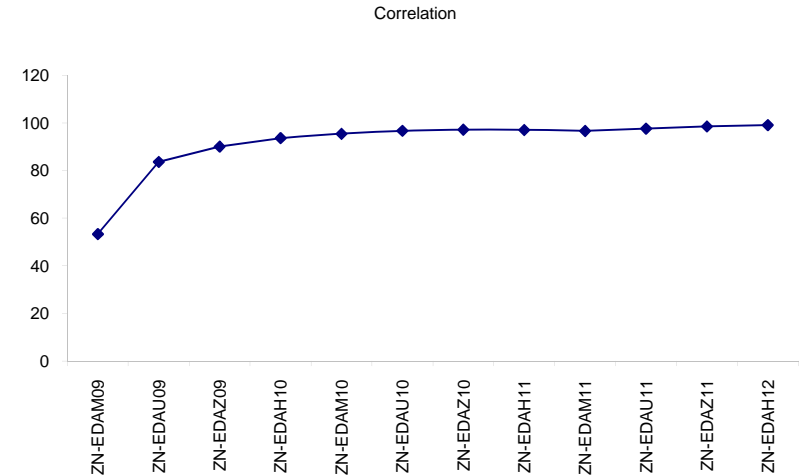
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year			
	Fraction of year	ZN Duration	Spread Duration
EDAM09	0.0350	5.8944	5.8594
EDAU09	0.2843	5.8944	5.6101
EDAZ09	0.5336	5.8944	5.3608
EDAH10	0.7829	5.8944	5.1115
EDAM10	1.0322	5.8944	4.8621
EDAU10	1.2815	5.8944	4.6128
EDAZ10	1.5308	5.8944	4.3635
EDAH11	1.7802	5.8944	4.1142
EDAM11	2.0295	5.8944	3.8649
EDAU11	2.2980	5.8944	3.5964
EDAZ11	2.5473	5.8944	3.3471
EDAH12	2.7966	5.8944	3.0978

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



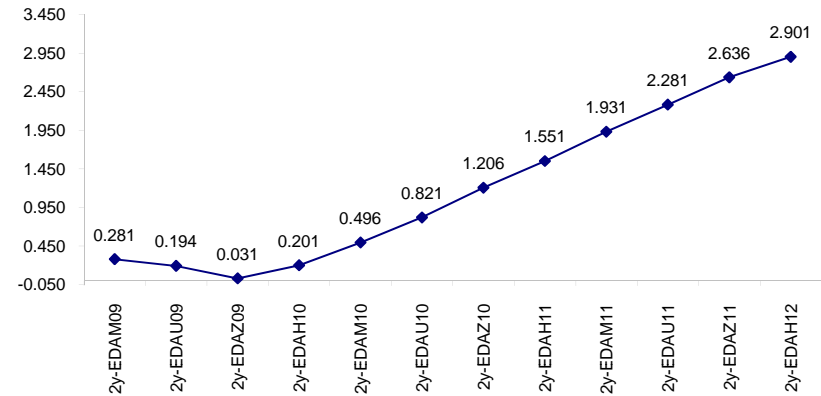
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.53	0.281	2y-EDAM09	-60
EDAU09	0.62	0.194	2y-EDAU09	-84
EDAZ09	0.84	0.031	2y-EDAZ09	-90
EDAH10	1.02	0.201	2y-EDAH10	-94
EDAM10	1.31	0.496	2y-EDAM10	-96
EDAU10	1.63	0.821	2y-EDAU10	-96
EDAZ10	2.02	1.206	2y-EDAZ10	-94
EDAH11	2.36	1.551	2y-EDAH11	-92
EDAM11	2.75	1.931	2y-EDAM11	-91
EDAU11	3.10	2.281	2y-EDAU11	-91
EDAZ11	3.45	2.636	2y-EDAZ11	-91
EDAH12	3.72	2.901	2y-EDAH12	-92

Price = Outright Decimal Price - Euro Contract Price

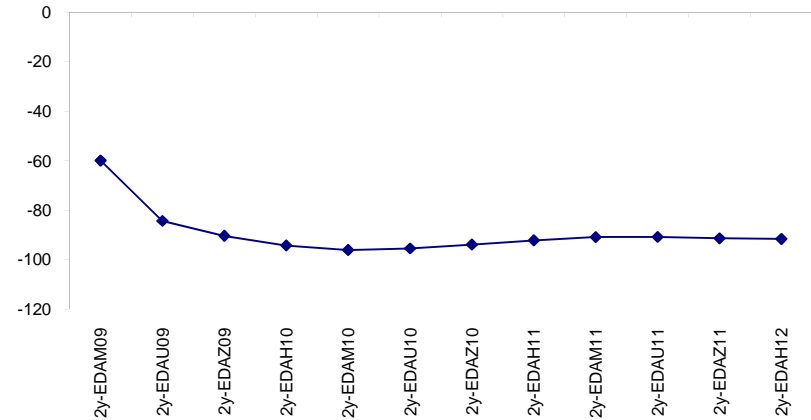
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

\*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	0.0350	1.9696	1.9346	2y-EDAM09
EDAU09	0.2843	1.9696	1.6853	2y-EDAU09
EDAZ09	0.5336	1.9696	1.4360	2y-EDAZ09
EDAH10	0.7829	1.9696	1.1867	2y-EDAH10
EDAM10	1.0322	1.9696	0.9374	2y-EDAM10
EDAU10	1.2815	1.9696	0.6881	2y-EDAU10
EDAZ10	1.5308	1.9696	0.4388	2y-EDAZ10
EDAH11	1.7802	1.9696	0.1894	2y-EDAH11
EDAM11	2.0295	1.9696	-0.0599	2y-EDAM11
EDAU11	2.2980	1.9696	-0.3284	2y-EDAU11
EDAZ11	2.5473	1.9696	-0.5777	2y-EDAZ11
EDAH12	2.7966	1.9696	-0.8270	2y-EDAH12

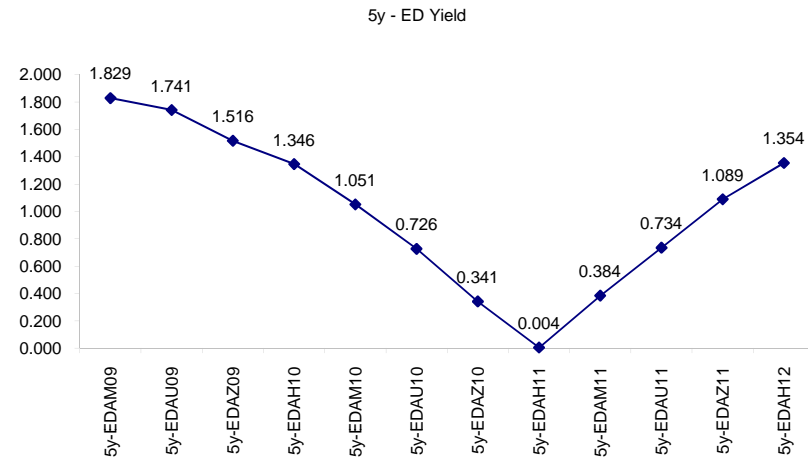
The farther away from 0 the spread duration is the riskier the trade.

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.45	1.829	5y-EDAM09	-44
EDAU09	-0.36	1.741	5y-EDAU09	-81
EDAZ09	-0.14	1.516	5y-EDAZ09	-88
EDAH10	0.03	1.346	5y-EDAH10	-94
EDAM10	0.33	1.051	5y-EDAM10	-97
EDAU10	0.65	0.726	5y-EDAU10	-97
EDAZ10	1.04	0.341	5y-EDAZ10	-98
EDAH11	1.38	0.004	5y-EDAH11	-98
EDAM11	1.76	0.384	5y-EDAM11	-98
EDAU11	2.11	0.734	5y-EDAU11	-98
EDAZ11	2.47	1.089	5y-EDAZ11	-99
EDAH12	2.73	1.354	5y-EDAH12	-99

Price = Outright Decimal Price - Euro Contract Price

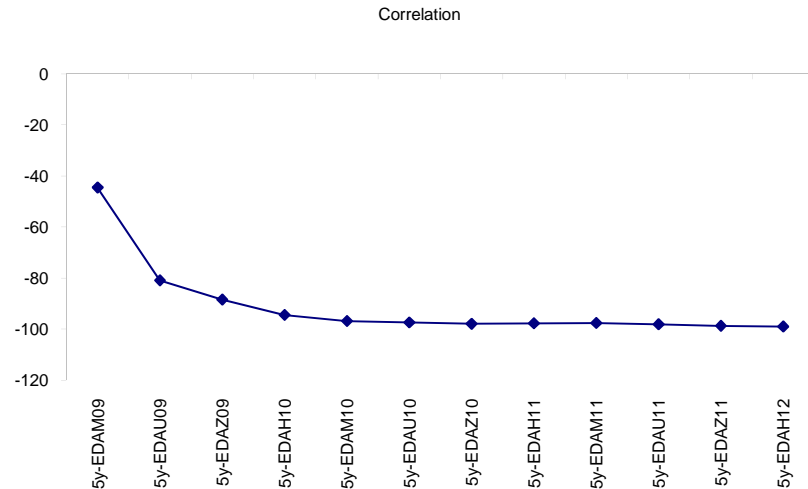
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



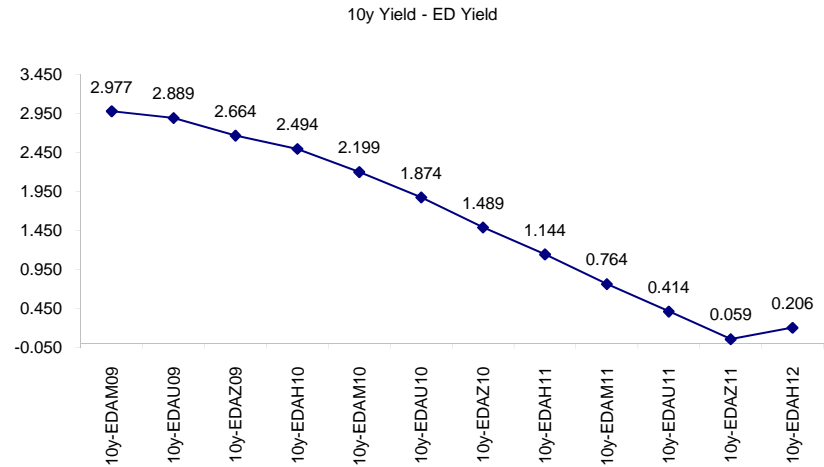
	ED Duration as Fraction of year			
	5Y Duration	Spread Duration		
EDAM09	0.0350	4.6893	4.6543	5y-EDAM09
EDAU09	0.2843	4.6893	4.4050	5y-EDAU09
EDAZ09	0.5336	4.6893	4.1557	5y-EDAZ09
EDAH10	0.7829	4.6893	3.9064	5y-EDAH10
EDAM10	1.0322	4.6893	3.6571	5y-EDAM10
EDAU10	1.2815	4.6893	3.4078	5y-EDAU10
EDAZ10	1.5308	4.6893	3.1584	5y-EDAZ10
EDAH11	1.7802	4.6893	2.9091	5y-EDAH11
EDAM11	2.0295	4.6893	2.6598	5y-EDAM11
EDAU11	2.2980	4.6893	2.3913	5y-EDAU11
EDAZ11	2.5473	4.6893	2.1420	5y-EDAZ11
EDAH12	2.7966	4.6893	1.8927	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	-0.45	2.977	10y-EDAM09	-61
EDAU09	-0.36	2.889	10y-EDAU09	-88
EDAZ09	-0.14	2.664	10y-EDAZ09	-94
EDAH10	0.03	2.494	10y-EDAH10	-95
EDAM10	0.33	2.199	10y-EDAM10	-94
EDAU10	0.65	1.874	10y-EDAU10	-94
EDAZ10	1.04	1.489	10y-EDAZ10	-93
EDAH11	1.38	1.144	10y-EDAH11	-91
EDAM11	1.76	0.764	10y-EDAM11	-90
EDAU11	2.11	0.414	10y-EDAU11	-92
EDAZ11	2.47	0.059	10y-EDAZ11	-93
EDAH12	2.73	0.206	10y-EDAH12	-94

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	0.0350	8.4240	8.3891	10y-EDAM09		
EDAU09	0.2843	8.4240	8.1398	10y-EDAU09		
EDAZ09	0.5336	8.4240	7.8904	10y-EDAZ09		
EDAH10	0.7829	8.4240	7.6411	10y-EDAH10		
EDAM10	1.0322	8.4240	7.3918	10y-EDAM10		
EDAU10	1.2815	8.4240	7.1425	10y-EDAU10		
EDAZ10	1.5308	8.4240	6.8932	10y-EDAZ10		
EDAH11	1.7802	8.4240	6.6439	10y-EDAH11		
EDAM11	2.0295	8.4240	6.3945	10y-EDAM11		
EDAU11	2.2980	8.4240	6.1261	10y-EDAU11		
EDAZ11	2.5473	8.4240	5.8767	10y-EDAZ11		
EDAH12	2.7966	8.4240	5.6274	10y-EDAH12		

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

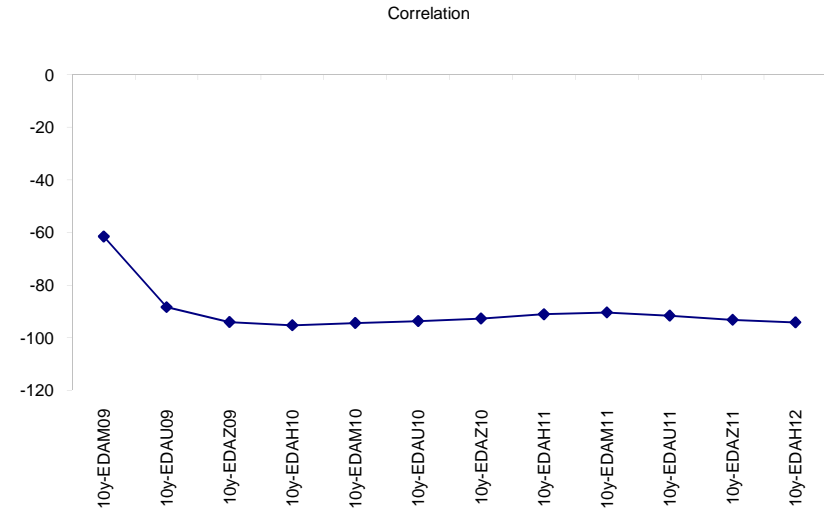


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

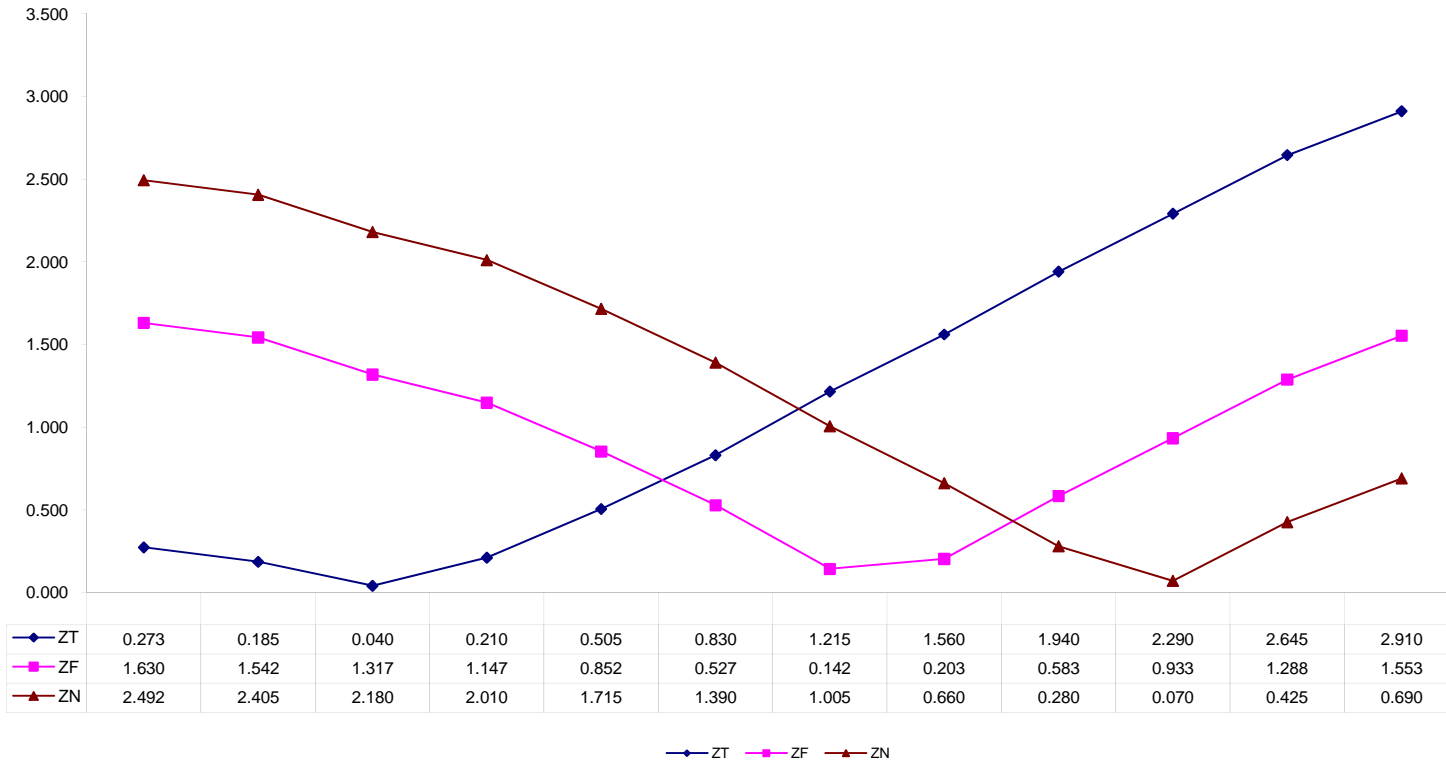
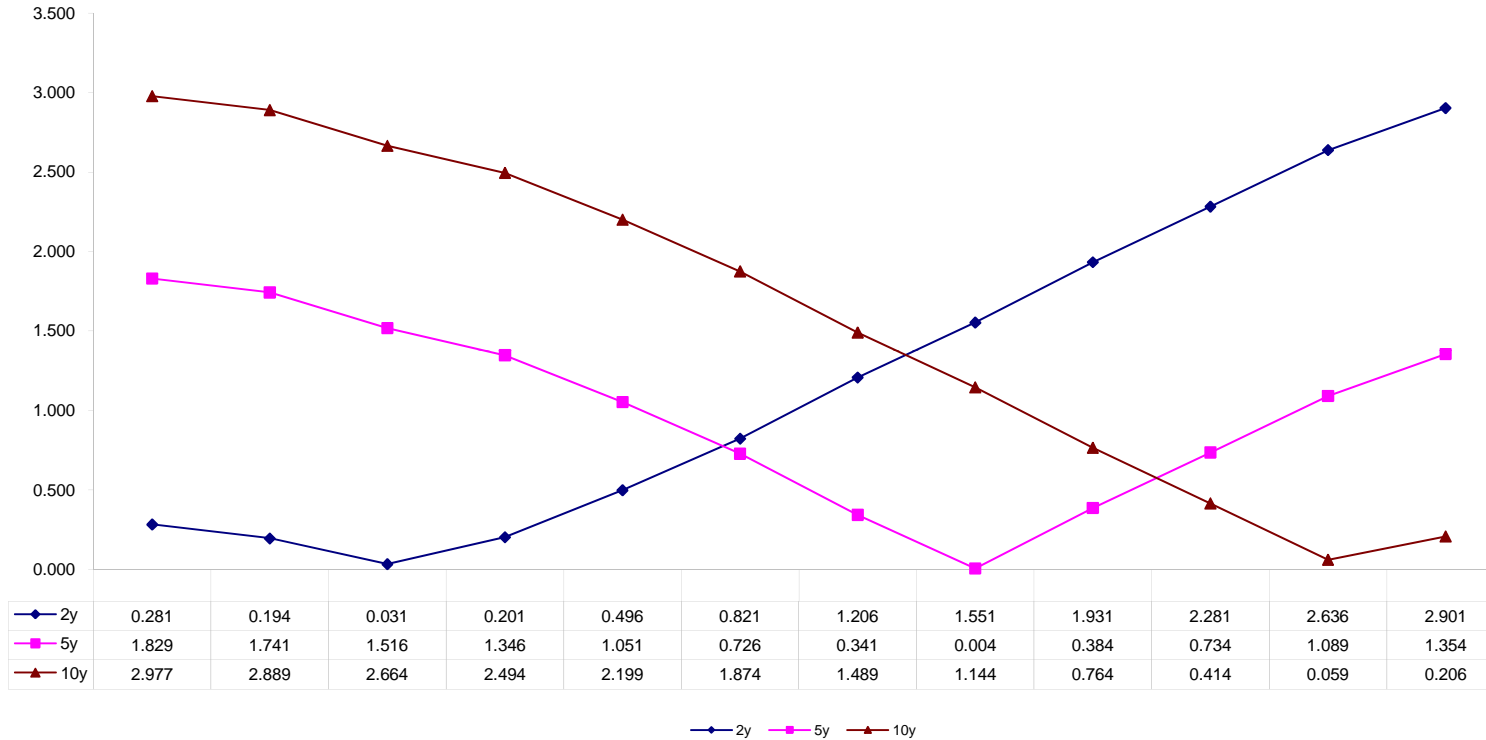
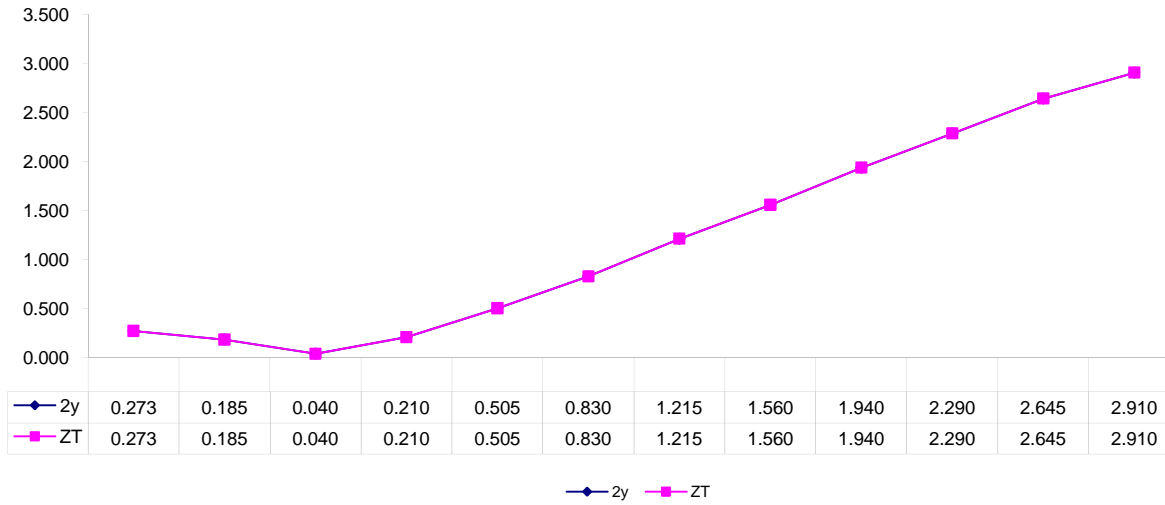
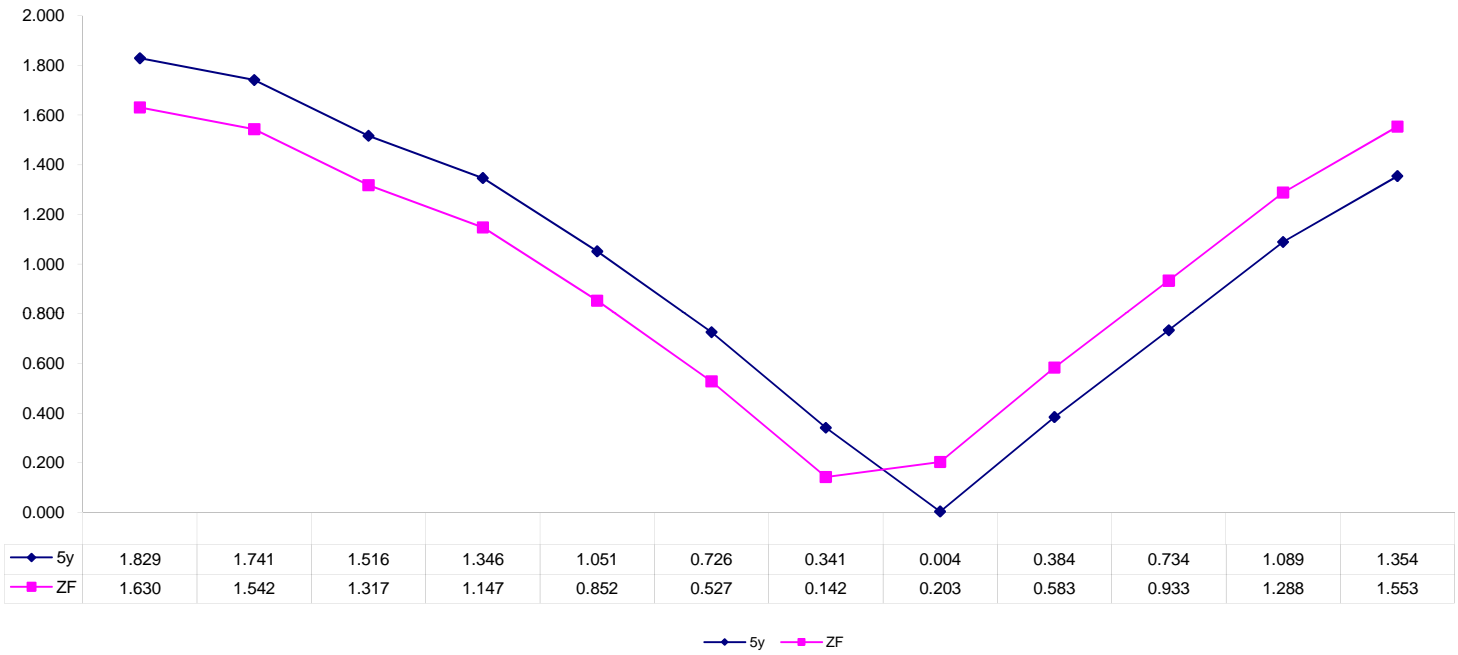


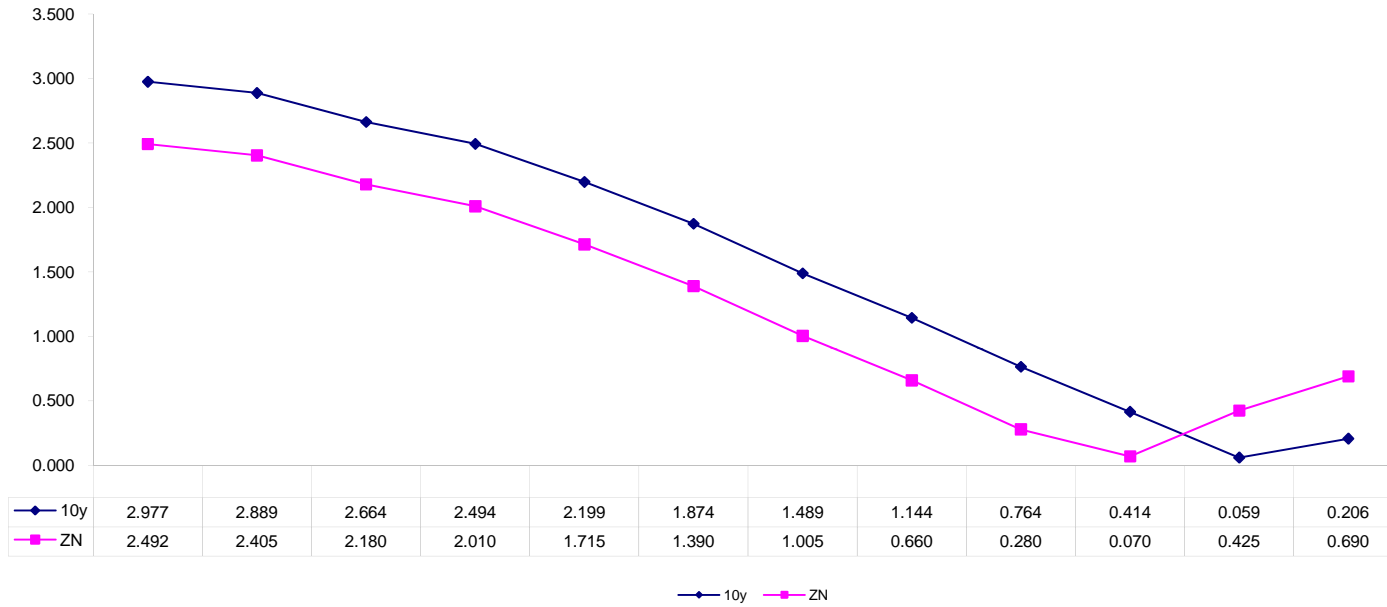
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	0.892	3.937	9912.1875
Red Pack	1.995	6.000	9804.2500
Green Pack	3.453	7.375	9662.3750
Blue Pack	4.481	8.250	9562.8750
Gold Pack	5.028	9.250	9510.1250

