

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

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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	108.4063	108.1300	0.975	1.874
ZF	115.4219	115.1350	2.242	4.150
ZN	116.8281	116.2650	3.071	5.782
2y	100.2813	100.0900	0.979	1.928
5y	100.7563	100.2420	2.459	4.618
10y	96.2344	96.0750	3.583	8.312

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.4350	0.565	60	0.1637	SEP	
EDAZ09	99.2000	0.800	151	0.4130	DEC	White Pack
EDAH10	98.9700	1.030	242	0.6623	MAR	
EDAM10	98.6500	1.350	333	0.9116	JUN	
EDAU10	98.2900	1.710	424	1.1609	SEP	
EDAZ10	97.8900	2.110	515	1.4103	DEC	Red Pack
EDAH11	97.5100	2.490	606	1.6596	MAR	
EDAM11	97.1300	2.870	697	1.9089	JUN	
EDAU11	96.7750	3.225	795	2.1774	SEP	
EDAZ11	96.4600	3.540	886	2.4267	DEC	Green Pack
EDAH12	96.2350	3.765	977	2.6760	MAR	
EDAM12	96.0300	3.970	1,068	2.9253	JUN	
EDAU12	95.8550	4.145	1,159	3.1746	SEP	
EDAZ12	95.7400	4.260	1,250	3.4240	DEC	Blue Pack
EDAH13	95.6450	4.355	1,341	3.6733	MAR	
EDAM13	95.5300	4.470	1,432	3.9226	JUN	
EDAU13	95.4300	4.570	1,523	4.1719	SEP	
EDAZ13	95.2950	4.705	1,614	4.4212	DEC	Gold Pack
EDAH14	95.2300	4.770	1,705	4.6705	MAR	
EDAM14	95.0650	4.935	1,796	4.9198	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	0.952	3.500	9906.38	
Red Pack	2.341	6.125	9770.50	Pack Prices
Green Pack	3.709	3.625	9637.50	
Blue Pack	4.415	4.000	9569.25	
Gold Pack		3.375	9526.63	

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:**

Jan-00 Regression  
Jan-00 Engineered  
Jan-00 Strip with and without Stubs  
Jan-00 Convexity Bias  
Jan-00 Weighted  
Jan-00 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.

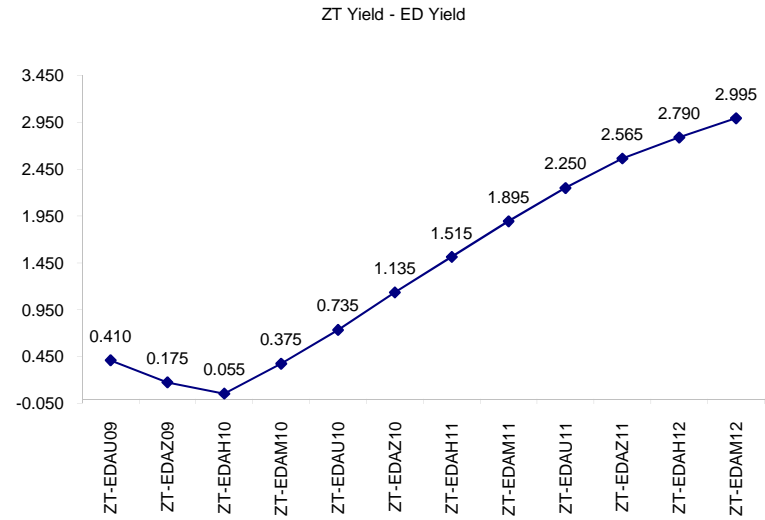
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

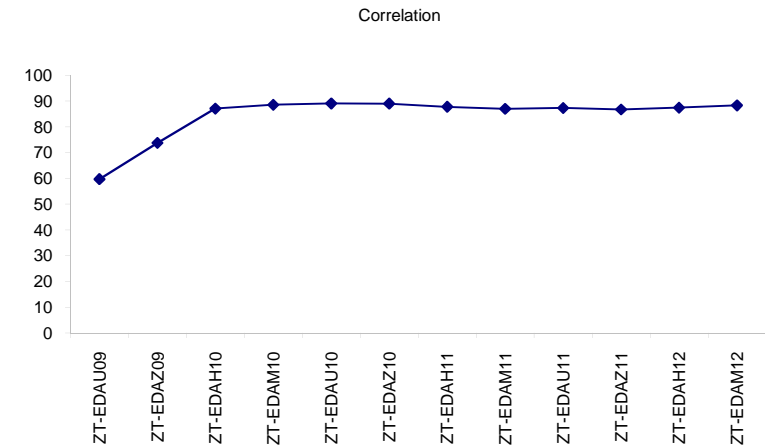
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.97	0.410	ZT-EDAU09	60
EDAZ09	9.21	0.175	ZT-EDAZ09	74
EDAH10	9.44	0.055	ZT-EDAH10	87
EDAM10	9.76	0.375	ZT-EDAM10	89
EDAU10	10.12	0.735	ZT-EDAU10	89
EDAZ10	10.52	1.135	ZT-EDAZ10	89
EDAH11	10.90	1.515	ZT-EDAH11	88
EDAM11	11.28	1.895	ZT-EDAM11	87
EDAU11	11.63	2.250	ZT-EDAU11	87
EDAZ11	11.95	2.565	ZT-EDAZ11	87
EDAH12	12.17	2.790	ZT-EDAH12	87
EDAM12	12.38	2.995	ZT-EDAM12	88

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	ZT Duration	Spread Duration	
EDAU09	0.1637	1.8742	1.7105	ZT-EDAU09
EDAZ09	0.4130	1.8742	1.4612	ZT-EDAZ09
EDAH10	0.6623	1.8742	1.2119	ZT-EDAH10
EDAM10	0.9116	1.8742	0.9626	ZT-EDAM10
EDAU10	1.1609	1.8742	0.7132	ZT-EDAU10
EDAZ10	1.4103	1.8742	0.4639	ZT-EDAZ10
EDAH11	1.6596	1.8742	0.2146	ZT-EDAH11
EDAM11	1.9089	1.8742	-0.0347	ZT-EDAM11
EDAU11	2.1774	1.8742	-0.3032	ZT-EDAU11
EDAZ11	2.4267	1.8742	-0.5525	ZT-EDAZ11
EDAH12	2.6760	1.8742	-0.8018	ZT-EDAH12
EDAM12	2.9253	1.8742	-1.0511	ZT-EDAM12

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

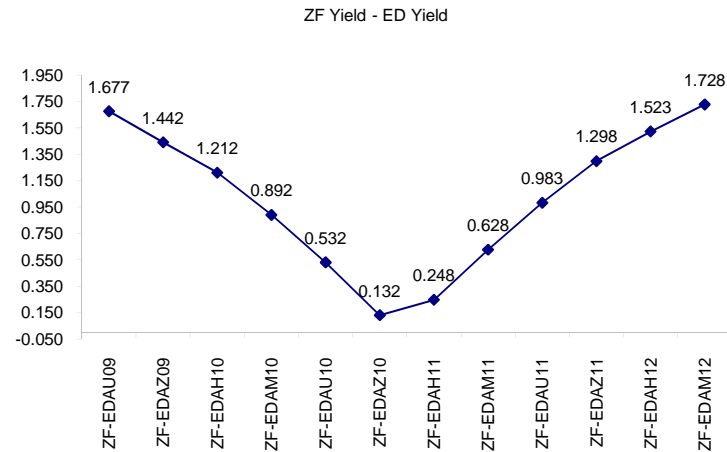


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	15.99	1.677	ZF-EDAU09	64
EDAZ09	16.22	1.442	ZF-EDAZ09	76
EDAH10	16.45	1.212	ZF-EDAH10	88
EDAM10	16.77	0.892	ZF-EDAM10	90
EDAU10	17.13	0.532	ZF-EDAU10	92
EDAZ10	17.53	0.132	ZF-EDAZ10	92
EDAH11	17.91	0.248	ZF-EDAH11	91
EDAM11	18.29	0.628	ZF-EDAM11	91
EDAU11	18.65	0.983	ZF-EDAU11	92
EDAZ11	18.96	1.298	ZF-EDAZ11	92
EDAH12	19.19	1.523	ZF-EDAH12	92
EDAM12	19.39	1.728	ZF-EDAM12	93

Price = Outright Decimal Price - Euro Contract Price

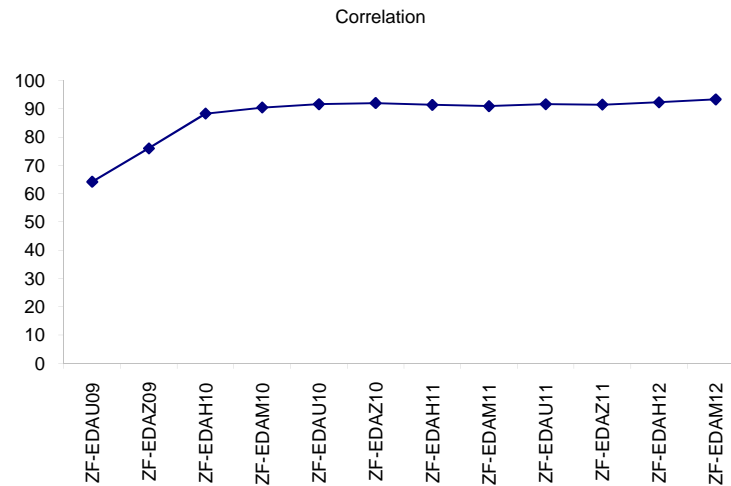
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



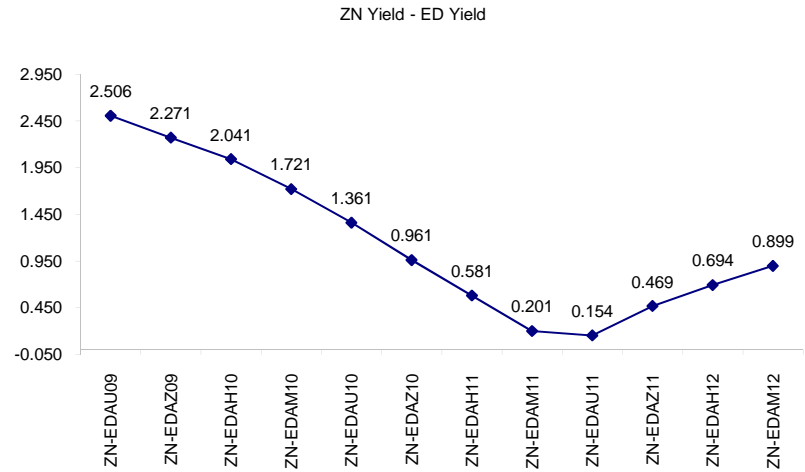
	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU09	0.1637	4.1498	3.9861	ZF-EDAU09	
EDAZ09	0.4130	4.1498	3.7368	ZF-EDAZ09	
EDAH10	0.6623	4.1498	3.4875	ZF-EDAH10	
EDAM10	0.9116	4.1498	3.2382	ZF-EDAM10	
EDAU10	1.1609	4.1498	2.9889	ZF-EDAU10	
EDAZ10	1.4103	4.1498	2.7395	ZF-EDAZ10	
EDAH11	1.6596	4.1498	2.4902	ZF-EDAH11	
EDAM11	1.9089	4.1498	2.2409	ZF-EDAM11	
EDAU11	2.1774	4.1498	1.9724	ZF-EDAU11	
EDAZ11	2.4267	4.1498	1.7231	ZF-EDAZ11	
EDAH12	2.6760	4.1498	1.4738	ZF-EDAH12	
EDAM12	2.9253	4.1498	1.2245	ZF-EDAM12	

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



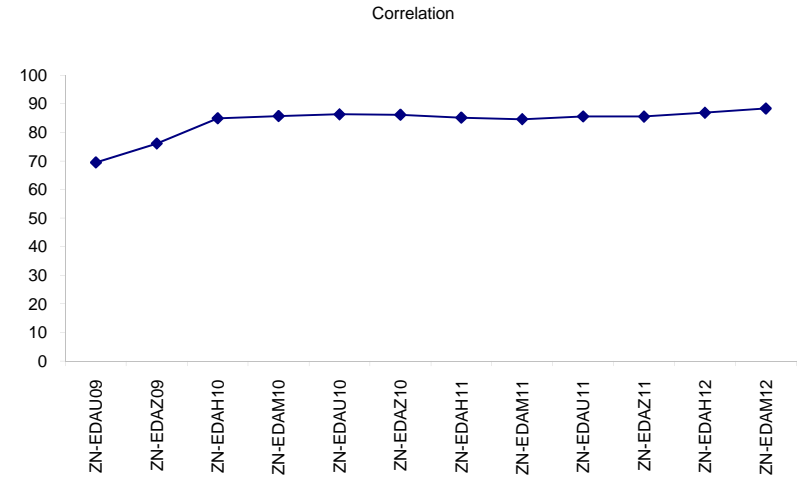
	ZN			Correlation* (percent)
	Spread Price	Spread Yield	Spread Name	
EDAU09	17.39	2.506	ZN-EDAU09	70
EDAZ09	17.63	2.271	ZN-EDAZ09	76
EDAH10	17.86	2.041	ZN-EDAH10	85
EDAM10	18.18	1.721	ZN-EDAM10	86
EDAU10	18.54	1.361	ZN-EDAU10	86
EDAZ10	18.94	0.961	ZN-EDAZ10	86
EDAH11	19.32	0.581	ZN-EDAH11	85
EDAM11	19.70	0.201	ZN-EDAM11	85
EDAU11	20.05	0.154	ZN-EDAU11	86
EDAZ11	20.37	0.469	ZN-EDAZ11	86
EDAH12	20.59	0.694	ZN-EDAH12	87
EDAM12	20.80	0.899	ZN-EDAM12	88

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			ZN Spread Duration
	Fraction of year	ZN Duration	Spread Duration	
EDAU09	0.1637	5.7815	5.6178	ZN-EDAU09
EDAZ09	0.4130	5.7815	5.3685	ZN-EDAZ09
EDAH10	0.6623	5.7815	5.1192	ZN-EDAH10
EDAM10	0.9116	5.7815	4.8699	ZN-EDAM10
EDAU10	1.1609	5.7815	4.6206	ZN-EDAU10
EDAZ10	1.4103	5.7815	4.3713	ZN-EDAZ10
EDAH11	1.6596	5.7815	4.1220	ZN-EDAH11
EDAM11	1.9089	5.7815	3.8726	ZN-EDAM11
EDAU11	2.1774	5.7815	3.6041	ZN-EDAU11
EDAZ11	2.4267	5.7815	3.3548	ZN-EDAZ11
EDAH12	2.6760	5.7815	3.1055	ZN-EDAH12
EDAM12	2.9253	5.7815	2.8562	ZN-EDAM12

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



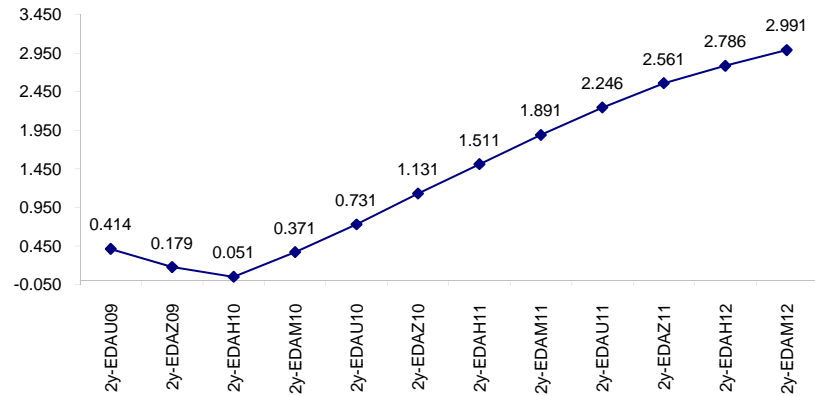
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.85	0.414	2y-EDAU09	-58
EDAZ09	1.08	0.179	2y-EDAZ09	-78
EDAH10	1.31	0.051	2y-EDAH10	-91
EDAM10	1.63	0.371	2y-EDAM10	-93
EDAU10	1.99	0.731	2y-EDAU10	-94
EDAZ10	2.39	1.131	2y-EDAZ10	-95
EDAH11	2.77	1.511	2y-EDAH11	-94
EDAM11	3.15	1.891	2y-EDAM11	-94
EDAU11	3.51	2.246	2y-EDAU11	-93
EDAZ11	3.82	2.561	2y-EDAZ11	-93
EDAH12	4.05	2.786	2y-EDAH12	-93
EDAM12	4.25	2.991	2y-EDAM12	-93

Price = Outright Decimal Price - Euro Contract Price

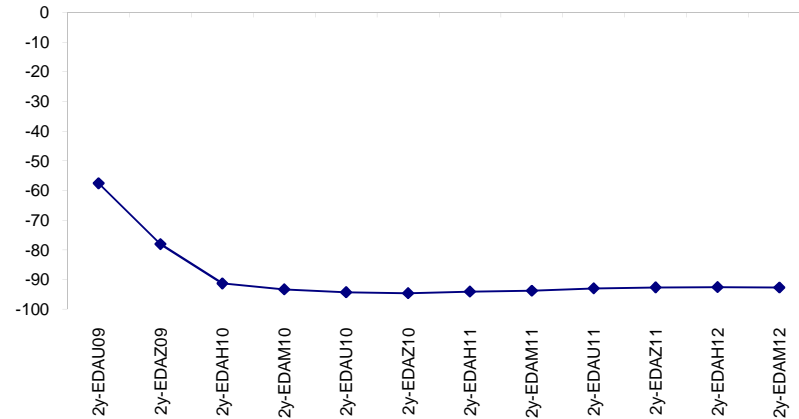
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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

ZT Yield - ED Yield



Correlation



ED Duration as

	Fraction of year	2Y Duration	Spread Duration	
EDAU09	0.1637	1.9277	1.7640	2y-EDAU09
EDAZ09	0.4130	1.9277	1.5147	2y-EDAZ09
EDAH10	0.6623	1.9277	1.2654	2y-EDAH10
EDAM10	0.9116	1.9277	1.0161	2y-EDAM10
EDAU10	1.1609	1.9277	0.7667	2y-EDAU10
EDAZ10	1.4103	1.9277	0.5174	2y-EDAZ10
EDAH11	1.6596	1.9277	0.2681	2y-EDAH11
EDAM11	1.9089	1.9277	0.0188	2y-EDAM11
EDAU11	2.1774	1.9277	-0.2497	2y-EDAU11
EDAZ11	2.4267	1.9277	-0.4990	2y-EDAZ11
EDAH12	2.6760	1.9277	-0.7483	2y-EDAH12
EDAM12	2.9253	1.9277	-0.9976	2y-EDAM12

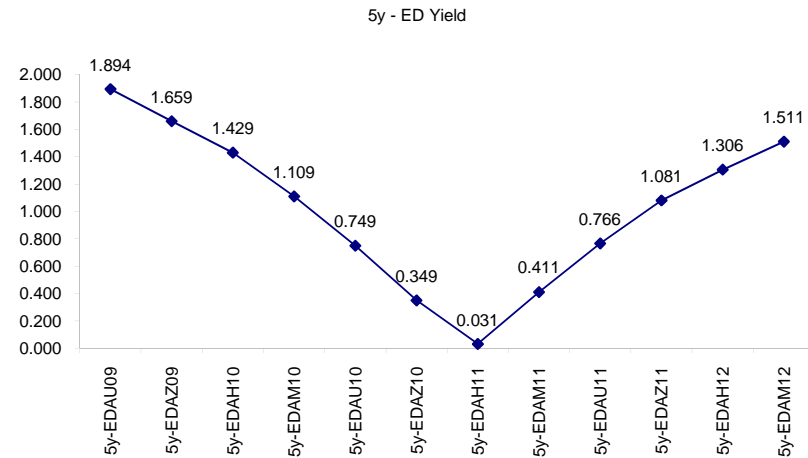
The farther away from 0 the spread duration is the riskier the trade.

5y				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.32	1.894	5y-EDAU09	-60
EDAZ09	1.56	1.659	5y-EDAZ09	-79
EDAH10	1.79	1.429	5y-EDAH10	-90
EDAM10	2.11	1.109	5y-EDAM10	-92
EDAU10	2.47	0.749	5y-EDAU10	-94
EDAZ10	2.87	0.349	5y-EDAZ10	-95
EDAH11	3.25	0.031	5y-EDAH11	-96
EDAM11	3.63	0.411	5y-EDAM11	-96
EDAU11	3.98	0.766	5y-EDAU11	-97
EDAZ11	4.30	1.081	5y-EDAZ11	-97
EDAH12	4.52	1.306	5y-EDAH12	-97
EDAM12	4.73	1.511	5y-EDAM12	-98

Price = Outright Decimal Price - Euro Contract Price

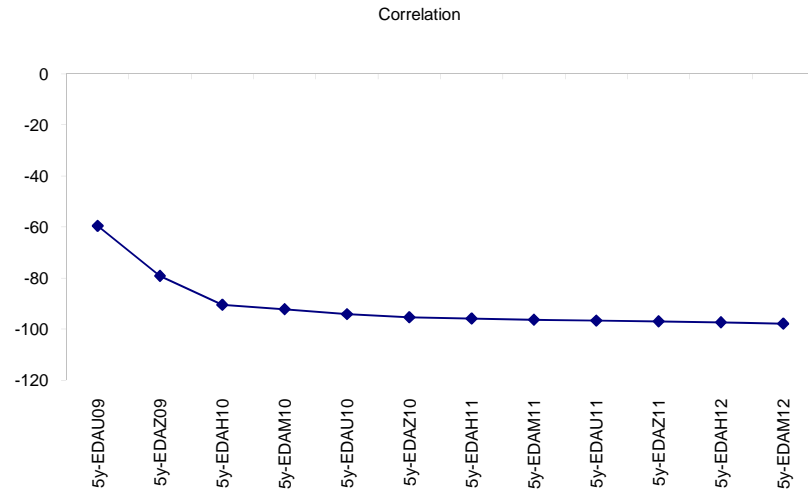
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				5Y Duration	Spread Duration	
EDAU09	0.1637	4.6180	4.4543	5y-EDAU09		
EDAZ09	0.4130	4.6180	4.2050	5y-EDAZ09		
EDAH10	0.6623	4.6180	3.9556	5y-EDAH10		
EDAM10	0.9116	4.6180	3.7063	5y-EDAM10		
EDAU10	1.1609	4.6180	3.4570	5y-EDAU10		
EDAZ10	1.4103	4.6180	3.2077	5y-EDAZ10		
EDAH11	1.6596	4.6180	2.9584	5y-EDAH11		
EDAM11	1.9089	4.6180	2.7091	5y-EDAM11		
EDAU11	2.1774	4.6180	2.4406	5y-EDAU11		
EDAZ11	2.4267	4.6180	2.1913	5y-EDAZ11		
EDAH12	2.6760	4.6180	1.9419	5y-EDAH12		
EDAM12	2.9253	4.6180	1.6926	5y-EDAM12		

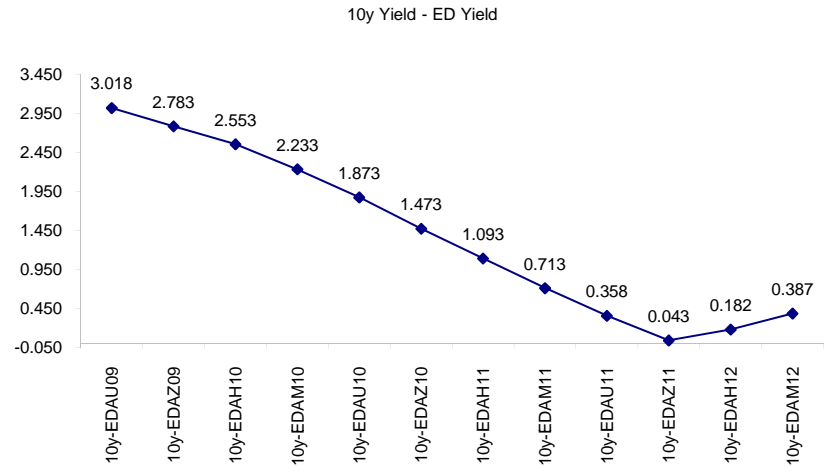
The farther away from 0 the spread duration is the riskier the trade.





	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.32	3.018	10y-EDAU09	-58
EDAZ09	1.56	2.783	10y-EDAZ09	-79
EDAH10	1.79	2.553	10y-EDAH10	-88
EDAM10	2.11	2.233	10y-EDAM10	-89
EDAU10	2.47	1.873	10y-EDAU10	-91
EDAZ10	2.87	1.473	10y-EDAZ10	-93
EDAH11	3.25	1.093	10y-EDAH11	-94
EDAM11	3.63	0.713	10y-EDAM11	-95
EDAU11	3.98	0.358	10y-EDAU11	-96
EDAZ11	4.30	0.043	10y-EDAZ11	-96
EDAH12	4.52	0.182	10y-EDAH12	-97
EDAM12	4.73	0.387	10y-EDAM12	-98

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		
EDAU09	0.1637	8.3125	8.1488	10y-EDAU09
EDAZ09	0.4130	8.3125	7.8995	10y-EDAZ09
EDAH10	0.6623	8.3125	7.6502	10y-EDAH10
EDAM10	0.9116	8.3125	7.4009	10y-EDAM10
EDAU10	1.1609	8.3125	7.1515	10y-EDAU10
EDAZ10	1.4103	8.3125	6.9022	10y-EDAZ10
EDAH11	1.6596	8.3125	6.6529	10y-EDAH11
EDAM11	1.9089	8.3125	6.4036	10y-EDAM11
EDAU11	2.1774	8.3125	6.1351	10y-EDAU11
EDAZ11	2.4267	8.3125	5.8858	10y-EDAZ11
EDAH12	2.6760	8.3125	5.6365	10y-EDAH12
EDAM12	2.9253	8.3125	5.3872	10y-EDAM12

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

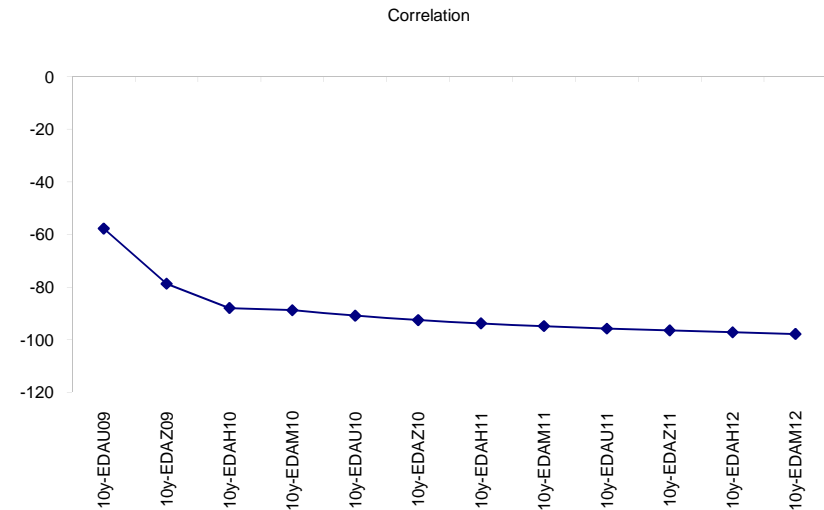


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

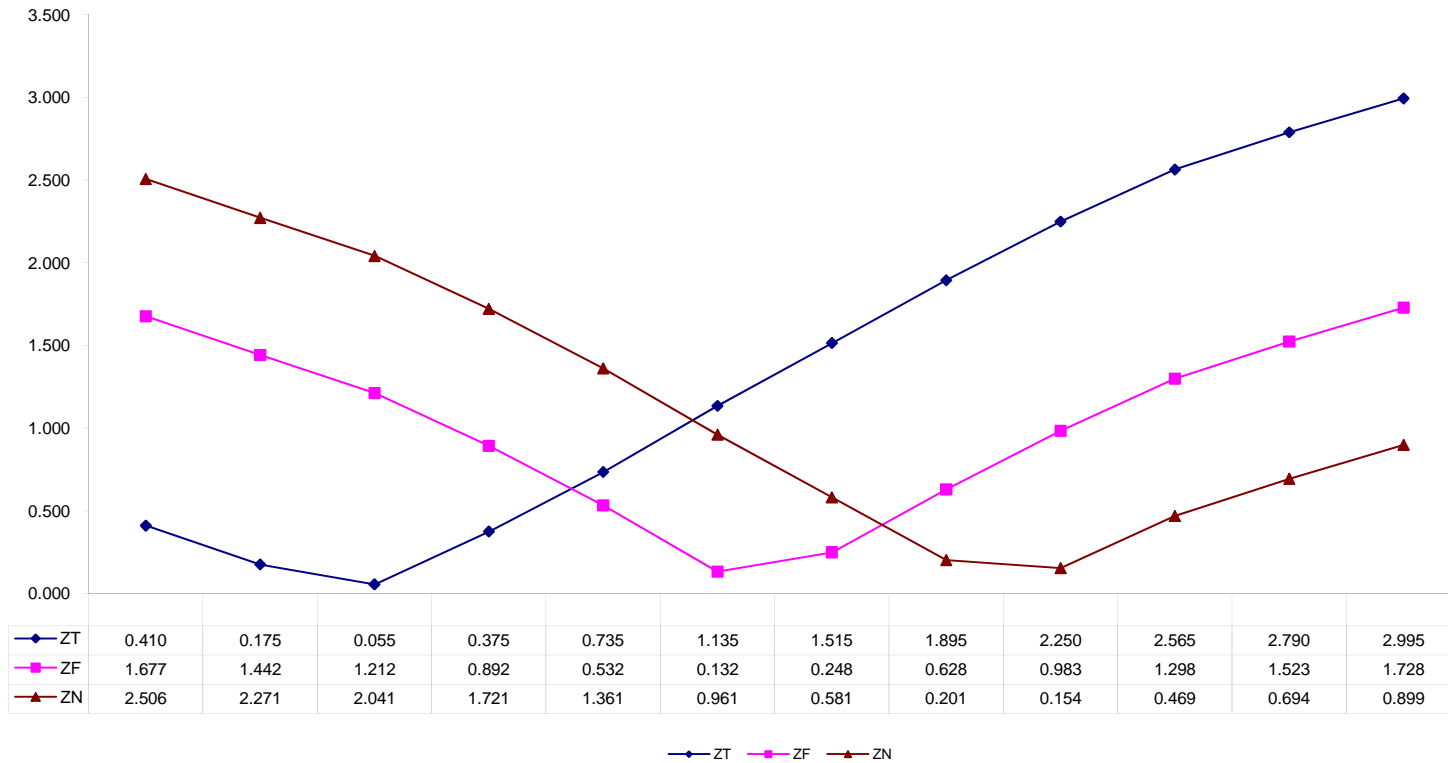
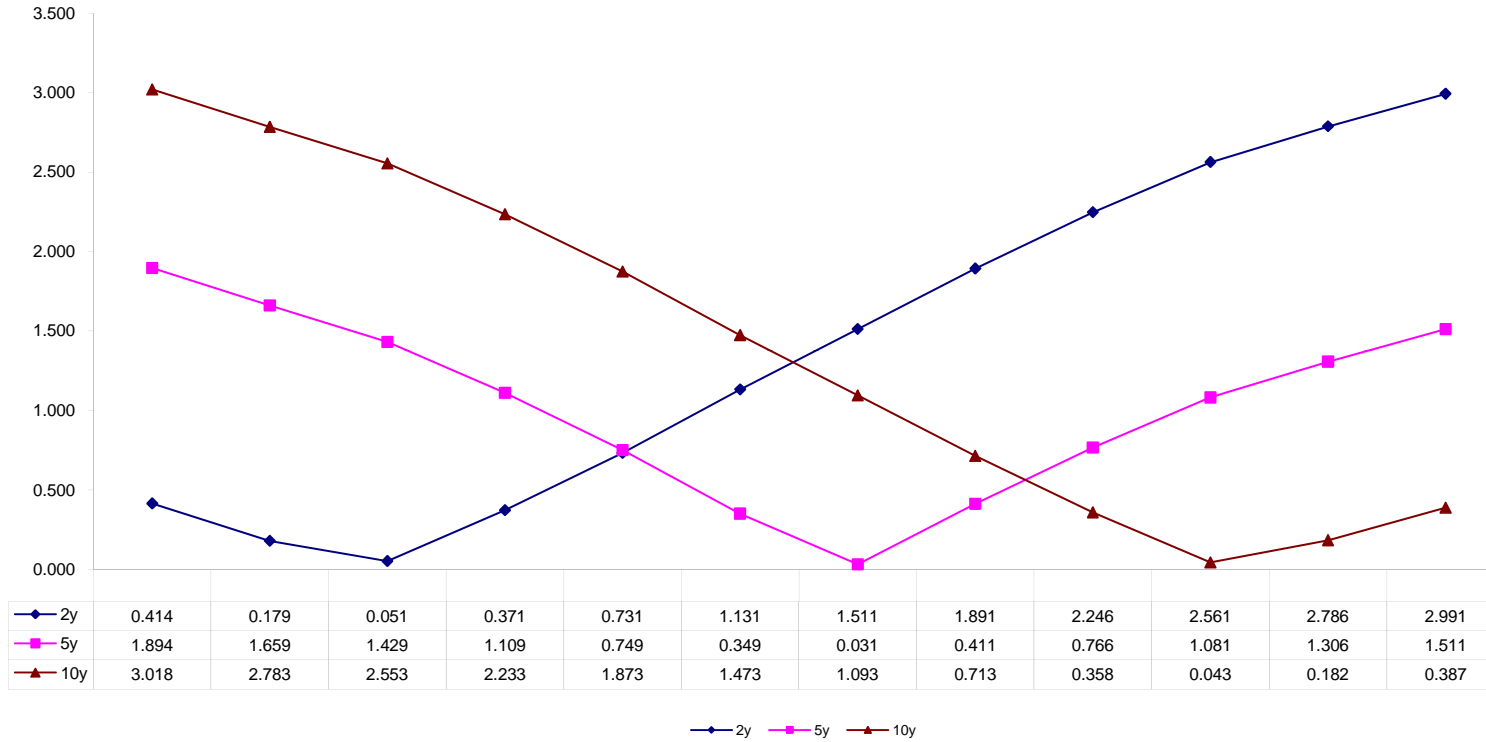
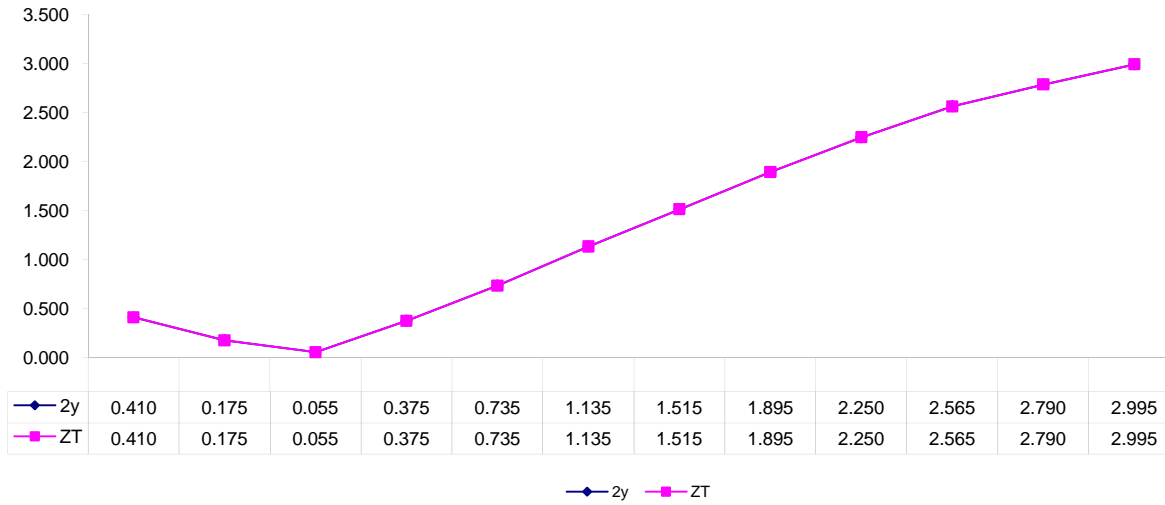
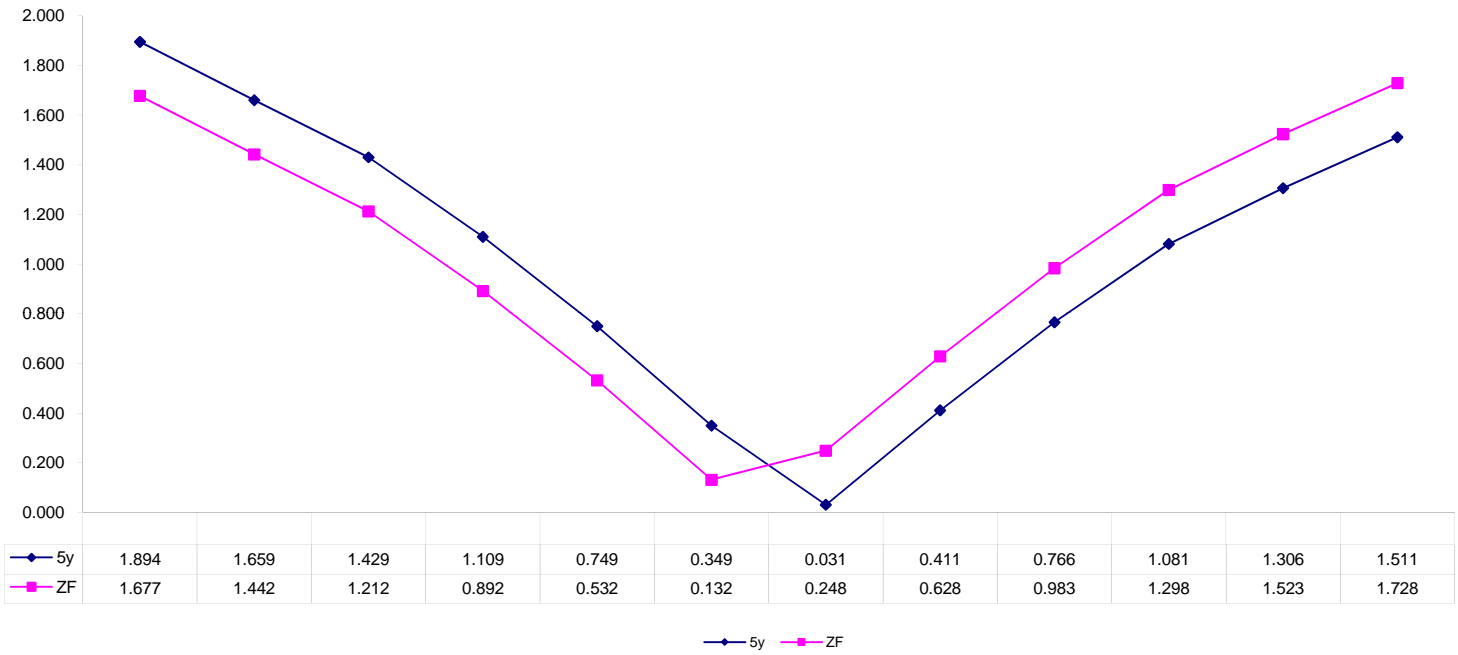


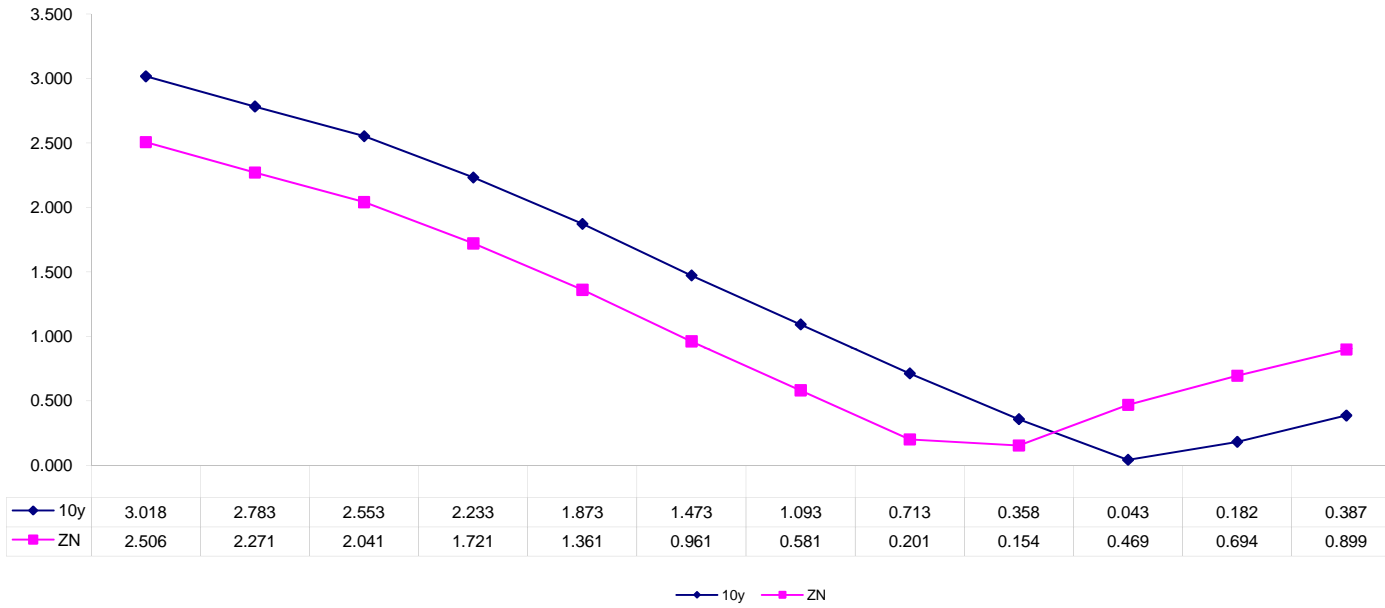
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	0.952	3.500	9906.3750
Red Pack	2.341	6.125	9770.5000
Green Pack	3.709	3.625	9637.5000
Blue Pack	4.415	4.000	9569.2500
Gold Pack		3.375	9526.6250

