

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

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Want something added? Let me know: [jgoulding@ghco.com](mailto:jgoulding@ghco.com)

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Treasury Futures and Cash				
	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.2406	108.0770	1.038	1.911
ZF	114.9594	114.3070	2.304	4.186
ZN	116.3594	116.1150	3.130	5.815
2y	100.1406	100.0450	1.053	1.965
5y	100.5219	100.1670	2.512	4.654
10y	96.5625	96.1800	3.541	8.355

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.3650	0.635	74	0.2021	SEP	
EDAZ09	99.1450	0.855	165	0.4514	DEC	White Pack
EDAH10	98.8950	1.105	256	0.7007	MAR	
EDAM10	98.5250	1.475	347	0.9500	JUN	
EDAU10	98.1500	1.850	438	1.1993	SEP	
EDAZ10	97.7550	2.245	529	1.4487	DEC	Red Pack
EDAH11	97.4100	2.590	620	1.6980	MAR	
EDAM11	97.0750	2.925	711	1.9473	JUN	
EDAU11	96.7750	3.225	809	2.2158	SEP	
EDAZ11	96.4850	3.515	900	2.4651	DEC	Green Pack
EDAH12	96.2900	3.710	991	2.7144	MAR	
EDAM12	96.0900	3.910	1,082	2.9637	JUN	
EDAU12	95.9300	4.070	1,173	3.2130	SEP	
EDAZ12	95.7800	4.220	1,264	3.4624	DEC	Blue Pack
EDAH13	95.7000	4.300	1,355	3.7117	MAR	
EDAM13	95.5900	4.410	1,446	3.9610	JUN	
EDAU13	95.4750	4.525	1,537	4.2103	SEP	
EDAZ13	95.3500	4.650	1,628	4.4596	DEC	Gold Pack
EDAH14	95.2950	4.705	1,719	4.7089	MAR	
EDAM14	95.2200	4.780	1,810	4.9582	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	1.035	0.625	9898.25	
Red Pack	2.451	-0.500	9759.75	Pack Prices
Green Pack	3.673	-1.375	9641.00	
Blue Pack		-0.750	9575.00	
Gold Pack		-0.875	9533.75	

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.

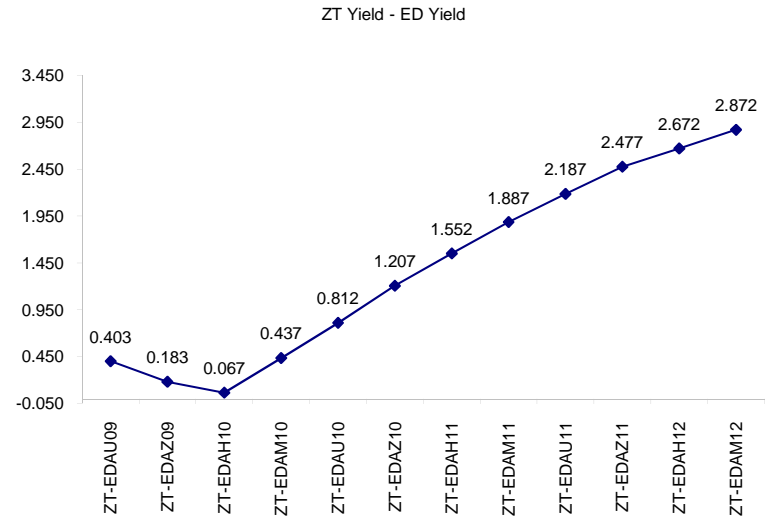
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

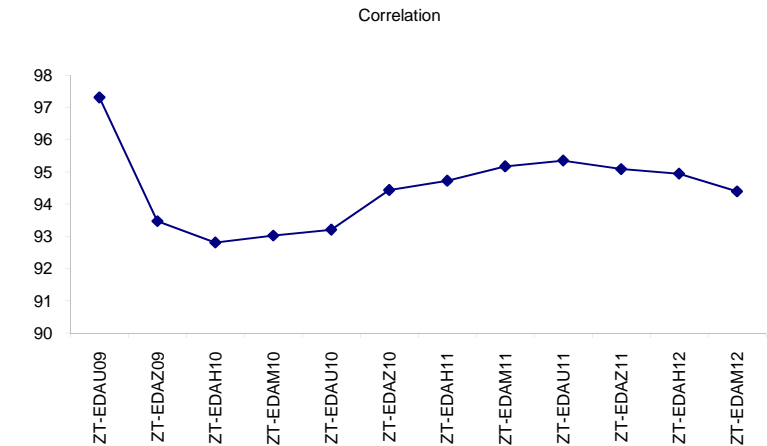
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.88	0.403	ZT-EDAU09	97
EDAZ09	9.10	0.183	ZT-EDAZ09	93
EDAH10	9.35	0.067	ZT-EDAH10	93
EDAM10	9.72	0.437	ZT-EDAM10	93
EDAU10	10.09	0.812	ZT-EDAU10	93
EDAZ10	10.49	1.207	ZT-EDAZ10	94
EDAH11	10.83	1.552	ZT-EDAH11	95
EDAM11	11.17	1.887	ZT-EDAM11	95
EDAU11	11.47	2.187	ZT-EDAU11	95
EDAZ11	11.76	2.477	ZT-EDAZ11	95
EDAH12	11.95	2.672	ZT-EDAH12	95
EDAM12	12.15	2.872	ZT-EDAM12	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			ZT Duration	Spread Duration	
EDAU09	0.2021	1.9114	1.7093	ZT-EDAU09		
EDAZ09	0.4514	1.9114	1.4600	ZT-EDAZ09		
EDAH10	0.7007	1.9114	1.2107	ZT-EDAH10		
EDAM10	0.9500	1.9114	0.9614	ZT-EDAM10		
EDAU10	1.1993	1.9114	0.7121	ZT-EDAU10		
EDAZ10	1.4487	1.9114	0.4627	ZT-EDAZ10		
EDAH11	1.6980	1.9114	0.2134	ZT-EDAH11		
EDAM11	1.9473	1.9114	-0.0359	ZT-EDAM11		
EDAU11	2.2158	1.9114	-0.3044	ZT-EDAU11		
EDAZ11	2.4651	1.9114	-0.5537	ZT-EDAZ11		
EDAH12	2.7144	1.9114	-0.8030	ZT-EDAH12		
EDAM12	2.9637	1.9114	-1.0523	ZT-EDAM12		

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

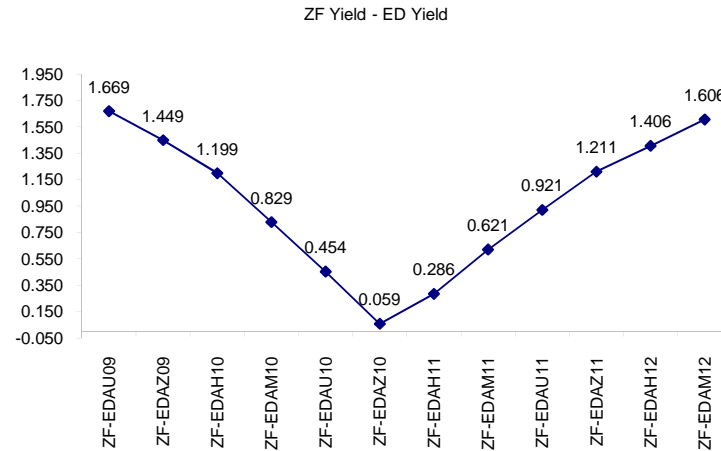


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	15.59	1.669	ZF-EDAU09	97
EDAZ09	15.81	1.449	ZF-EDAZ09	92
EDAH10	16.06	1.199	ZF-EDAH10	93
EDAM10	16.43	0.829	ZF-EDAM10	94
EDAU10	16.81	0.454	ZF-EDAU10	95
EDAZ10	17.20	0.059	ZF-EDAZ10	97
EDAH11	17.55	0.286	ZF-EDAH11	98
EDAM11	17.88	0.621	ZF-EDAM11	99
EDAU11	18.18	0.921	ZF-EDAU11	99
EDAZ11	18.47	1.211	ZF-EDAZ11	99
EDAH12	18.67	1.406	ZF-EDAH12	99
EDAM12	18.87	1.606	ZF-EDAM12	99

Price = Outright Decimal Price - Euro Contract Price

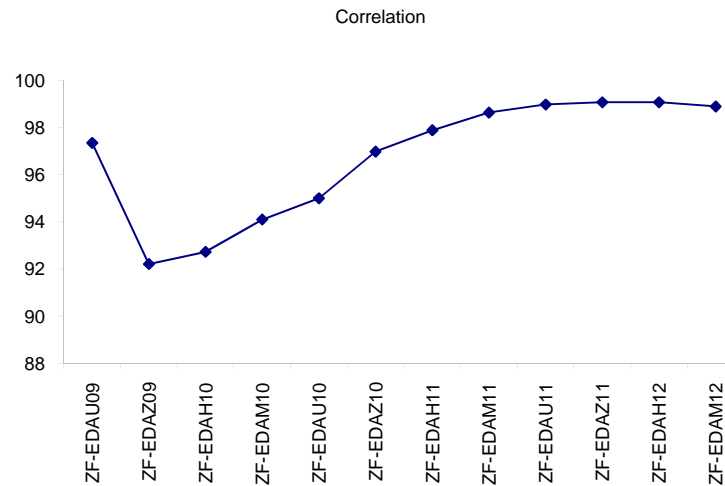
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU09	0.2021	4.1860	3.9840	ZF-EDAU09	
EDAZ09	0.4514	4.1860	3.7346	ZF-EDAZ09	
EDAH10	0.7007	4.1860	3.4853	ZF-EDAH10	
EDAM10	0.9500	4.1860	3.2360	ZF-EDAM10	
EDAU10	1.1993	4.1860	2.9867	ZF-EDAU10	
EDAZ10	1.4487	4.1860	2.7374	ZF-EDAZ10	
EDAH11	1.6980	4.1860	2.4881	ZF-EDAH11	
EDAM11	1.9473	4.1860	2.2388	ZF-EDAM11	
EDAU11	2.2158	4.1860	1.9703	ZF-EDAU11	
EDAZ11	2.4651	4.1860	1.7209	ZF-EDAZ11	
EDAH12	2.7144	4.1860	1.4716	ZF-EDAH12	
EDAM12	2.9637	4.1860	1.2223	ZF-EDAM12	

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

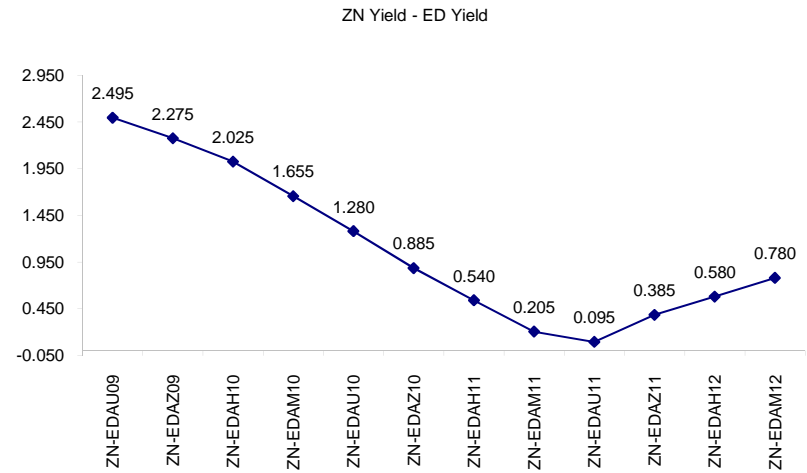


	ZN			Correlation* (percent)
	Spread Price	Spread Yield	Spread Name	
EDAU09	16.99	2.495	ZN-EDAU09	95
EDAZ09	17.21	2.275	ZN-EDAZ09	93
EDAH10	17.46	2.025	ZN-EDAH10	95
EDAM10	17.83	1.655	ZN-EDAM10	97
EDAU10	18.21	1.280	ZN-EDAU10	97
EDAZ10	18.60	0.885	ZN-EDAZ10	98
EDAH11	18.95	0.540	ZN-EDAH11	98
EDAM11	19.28	0.205	ZN-EDAM11	98
EDAU11	19.58	0.095	ZN-EDAU11	98
EDAZ11	19.87	0.385	ZN-EDAZ11	98
EDAH12	20.07	0.580	ZN-EDAH12	97
EDAM12	20.27	0.780	ZN-EDAM12	97

Price = Outright Decimal Price - Euro Contract Price

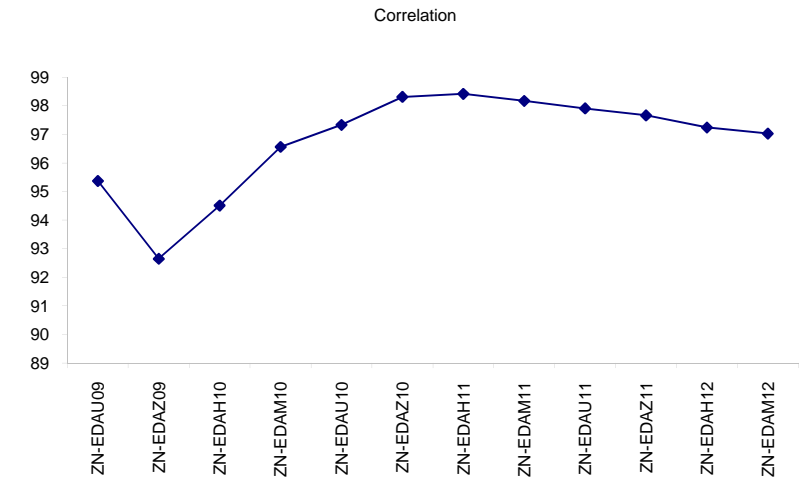
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



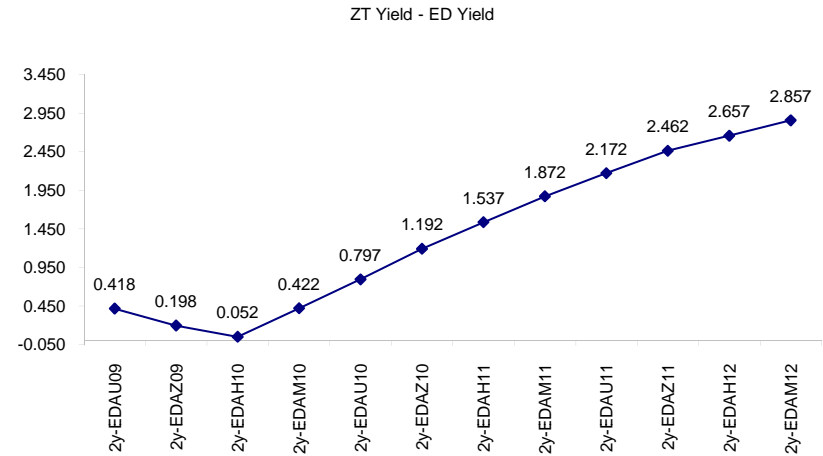
	ED Duration as			ZN Spread Duration
	Fraction of year	Duration	Duration	
EDAU09	0.2021	5.8153	5.6132	ZN-EDAU09
EDAZ09	0.4514	5.8153	5.3639	ZN-EDAZ09
EDAH10	0.7007	5.8153	5.1146	ZN-EDAH10
EDAM10	0.9500	5.8153	4.8653	ZN-EDAM10
EDAU10	1.1993	5.8153	4.6160	ZN-EDAU10
EDAZ10	1.4487	5.8153	4.3667	ZN-EDAZ10
EDAH11	1.6980	5.8153	4.1173	ZN-EDAH11
EDAM11	1.9473	5.8153	3.8680	ZN-EDAM11
EDAU11	2.2158	5.8153	3.5995	ZN-EDAU11
EDAZ11	2.4651	5.8153	3.3502	ZN-EDAZ11
EDAH12	2.7144	5.8153	3.1009	ZN-EDAH12
EDAM12	2.9637	5.8153	2.8516	ZN-EDAM12

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



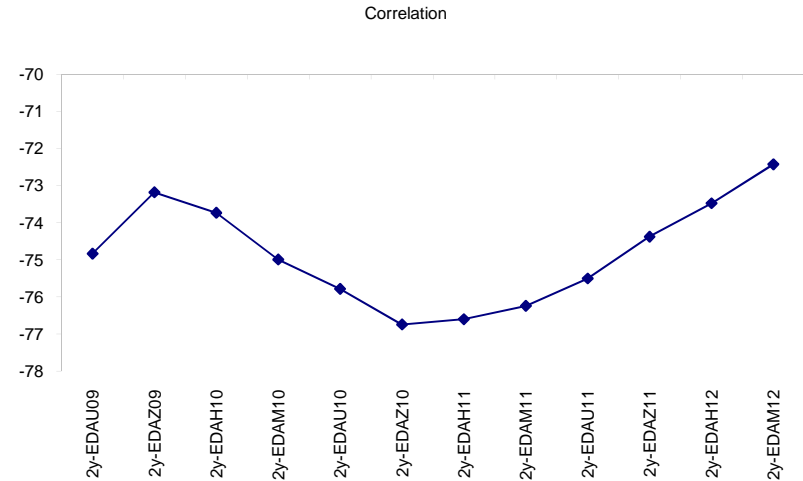
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.78	0.418	2y-EDAU09	-75
EDAZ09	1.00	0.198	2y-EDAZ09	-73
EDAH10	1.25	0.052	2y-EDAH10	-74
EDAM10	1.62	0.422	2y-EDAM10	-75
EDAU10	1.99	0.797	2y-EDAU10	-76
EDAZ10	2.39	1.192	2y-EDAZ10	-77
EDAH11	2.73	1.537	2y-EDAH11	-77
EDAM11	3.07	1.872	2y-EDAM11	-76
EDAU11	3.37	2.172	2y-EDAU11	-76
EDAZ11	3.66	2.462	2y-EDAZ11	-74
EDAH12	3.85	2.657	2y-EDAH12	-73
EDAM12	4.05	2.857	2y-EDAM12	-72

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	
EDAU09	0.2021	1.9648	1.7627	2y-EDAU09
EDAZ09	0.4514	1.9648	1.5134	2y-EDAZ09
EDAH10	0.7007	1.9648	1.2641	2y-EDAH10
EDAM10	0.9500	1.9648	1.0148	2y-EDAM10
EDAU10	1.1993	1.9648	0.7655	2y-EDAU10
EDAZ10	1.4487	1.9648	0.5161	2y-EDAZ10
EDAH11	1.6980	1.9648	0.2668	2y-EDAH11
EDAM11	1.9473	1.9648	0.0175	2y-EDAM11
EDAU11	2.2158	1.9648	-0.2510	2y-EDAU11
EDAZ11	2.4651	1.9648	-0.5003	2y-EDAZ11
EDAH12	2.7144	1.9648	-0.7496	2y-EDAH12
EDAM12	2.9637	1.9648	-0.9989	2y-EDAM12

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

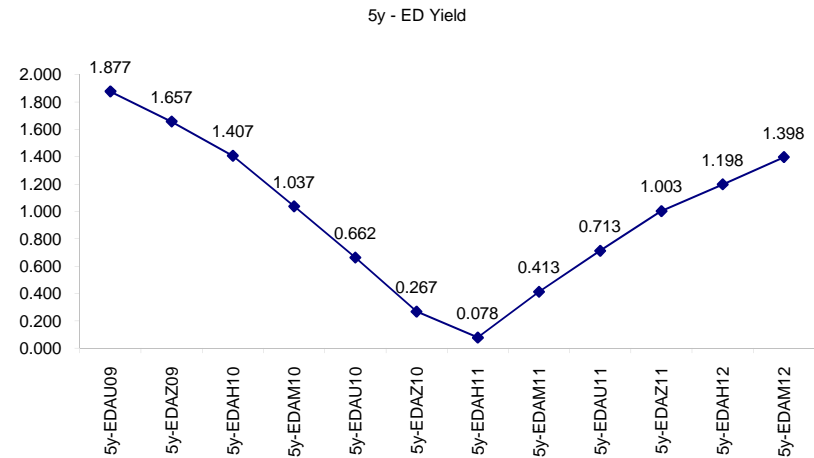


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.16	1.877	5y-EDAU09	-96
EDAZ09	1.38	1.657	5y-EDAZ09	-90
EDAH10	1.63	1.407	5y-EDAH10	-91
EDAM10	2.00	1.037	5y-EDAM10	-93
EDAU10	2.37	0.662	5y-EDAU10	-94
EDAZ10	2.77	0.267	5y-EDAZ10	-96
EDAH11	3.11	0.078	5y-EDAH11	-97
EDAM11	3.45	0.413	5y-EDAM11	-98
EDAU11	3.75	0.713	5y-EDAU11	-98
EDAZ11	4.04	1.003	5y-EDAZ11	-98
EDAH12	4.23	1.198	5y-EDAH12	-98
EDAM12	4.43	1.398	5y-EDAM12	-98

Price = Outright Decimal Price - Euro Contract Price

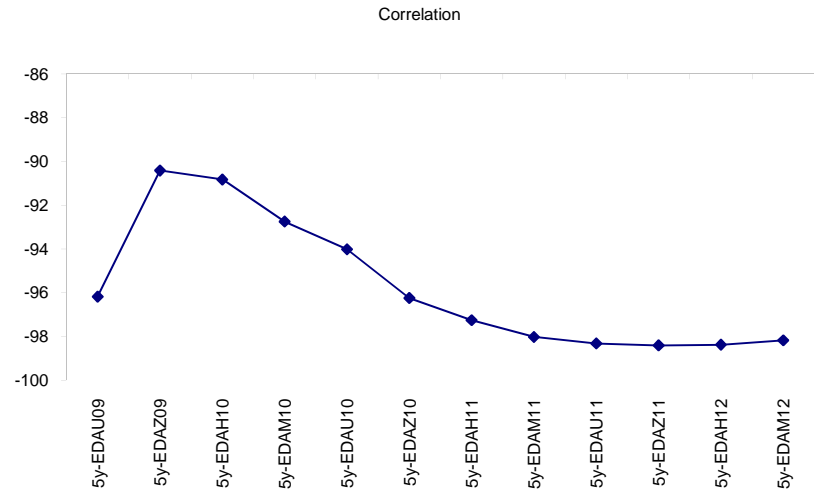
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



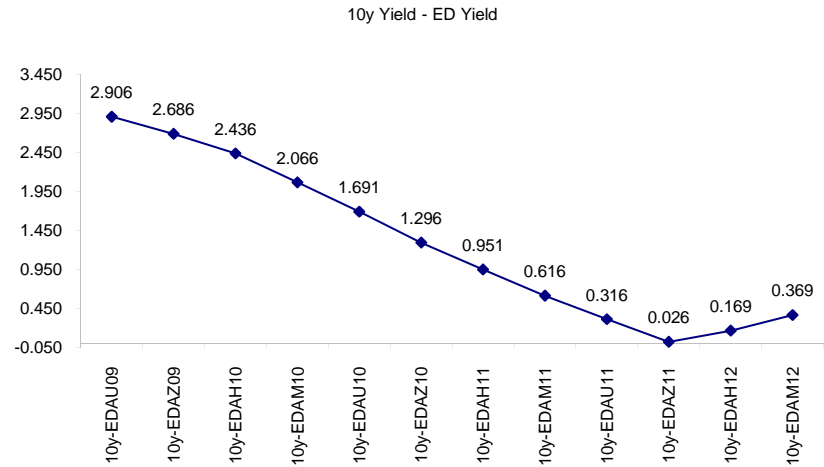
	ED Duration as Fraction of year		5Y Duration	Spread Duration	
EDAU09	0.2021	4.6535	4.4515	5y-EDAU09	
EDAZ09	0.4514	4.6535	4.2021	5y-EDAZ09	
EDAH10	0.7007	4.6535	3.9528	5y-EDAH10	
EDAM10	0.9500	4.6535	3.7035	5y-EDAM10	
EDAU10	1.1993	4.6535	3.4542	5y-EDAU10	
EDAZ10	1.4487	4.6535	3.2049	5y-EDAZ10	
EDAH11	1.6980	4.6535	2.9556	5y-EDAH11	
EDAM11	1.9473	4.6535	2.7063	5y-EDAM11	
EDAU11	2.2158	4.6535	2.4378	5y-EDAU11	
EDAZ11	2.4651	4.6535	2.1884	5y-EDAZ11	
EDAH12	2.7144	4.6535	1.9391	5y-EDAH12	
EDAM12	2.9637	4.6535	1.6898	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	1.16	2.906	10y-EDAU09	-92
EDAZ09	1.38	2.686	10y-EDAZ09	-89
EDAH10	1.63	2.436	10y-EDAH10	-91
EDAM10	2.00	2.066	10y-EDAM10	-93
EDAU10	2.37	1.691	10y-EDAU10	-94
EDAZ10	2.77	1.296	10y-EDAZ10	-96
EDAH11	3.11	0.951	10y-EDAH11	-96
EDAM11	3.45	0.616	10y-EDAM11	-96
EDAU11	3.75	0.316	10y-EDAU11	-96
EDAZ11	4.04	0.026	10y-EDAZ11	-96
EDAH12	4.23	0.169	10y-EDAH12	-95
EDAM12	4.43	0.369	10y-EDAM12	-95

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	0.2021	8.3545	8.1524	10y-EDAU09
EDAZ09	0.4514	8.3545	7.9031	10y-EDAZ09
EDAH10	0.7007	8.3545	7.6538	10y-EDAH10
EDAM10	0.9500	8.3545	7.4045	10y-EDAM10
EDAU10	1.1993	8.3545	7.1552	10y-EDAU10
EDAZ10	1.4487	8.3545	6.9059	10y-EDAZ10
EDAH11	1.6980	8.3545	6.6565	10y-EDAH11
EDAM11	1.9473	8.3545	6.4072	10y-EDAM11
EDAU11	2.2158	8.3545	6.1387	10y-EDAU11
EDAZ11	2.4651	8.3545	5.8894	10y-EDAZ11
EDAH12	2.7144	8.3545	5.6401	10y-EDAH12
EDAM12	2.9637	8.3545	5.3908	10y-EDAM12

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

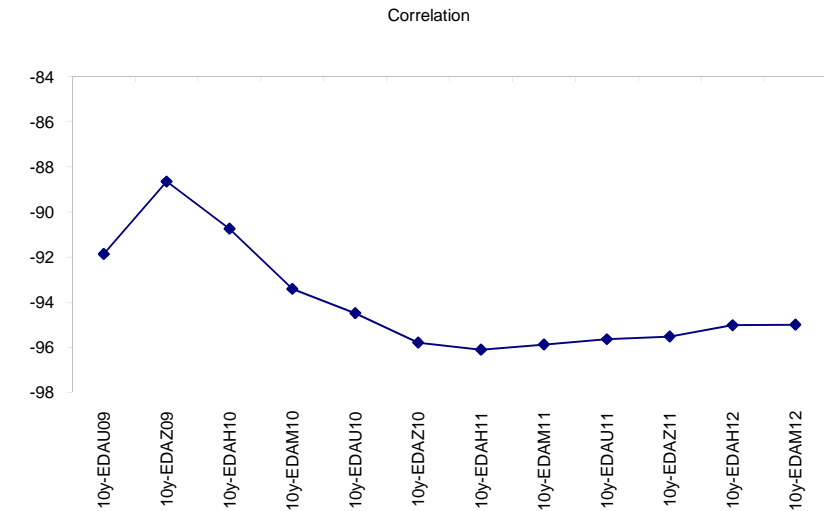


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

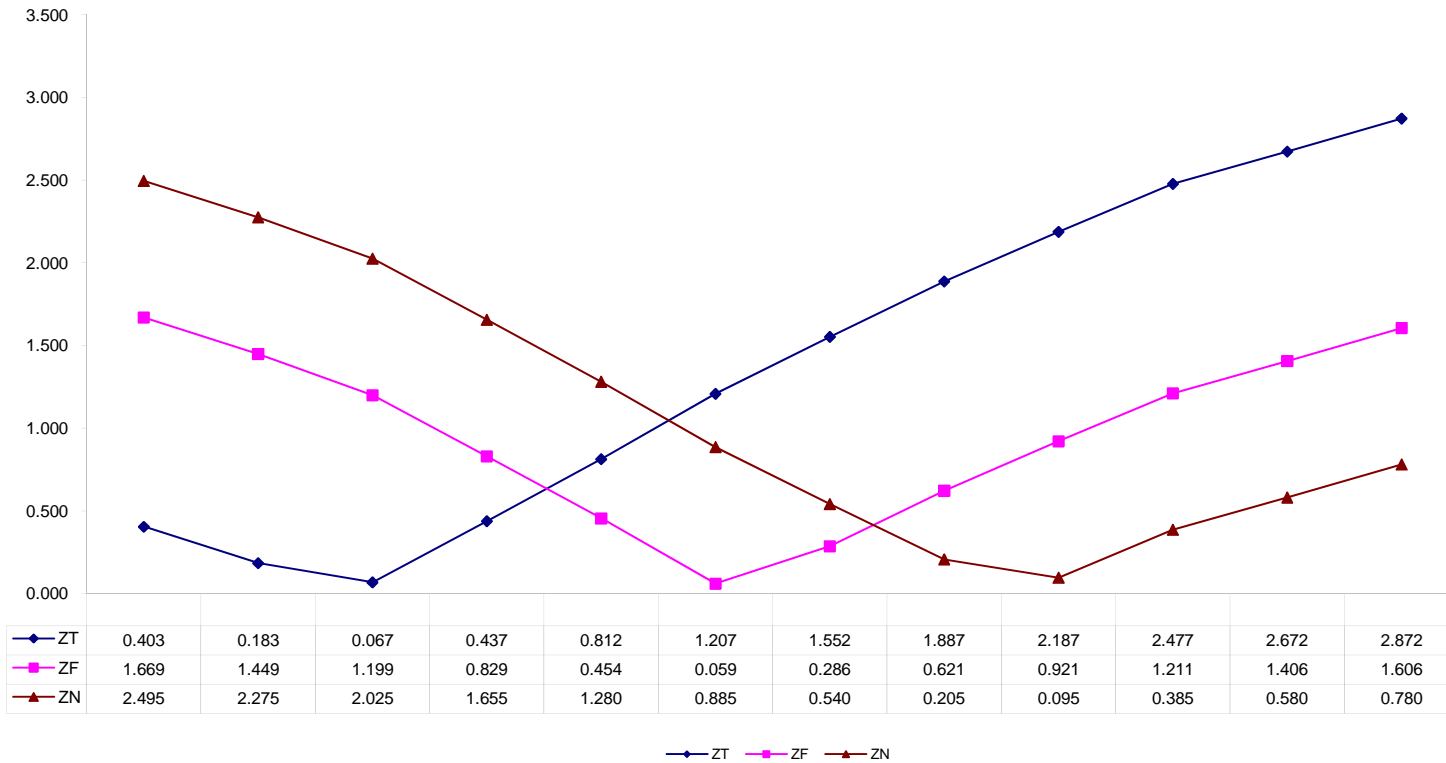
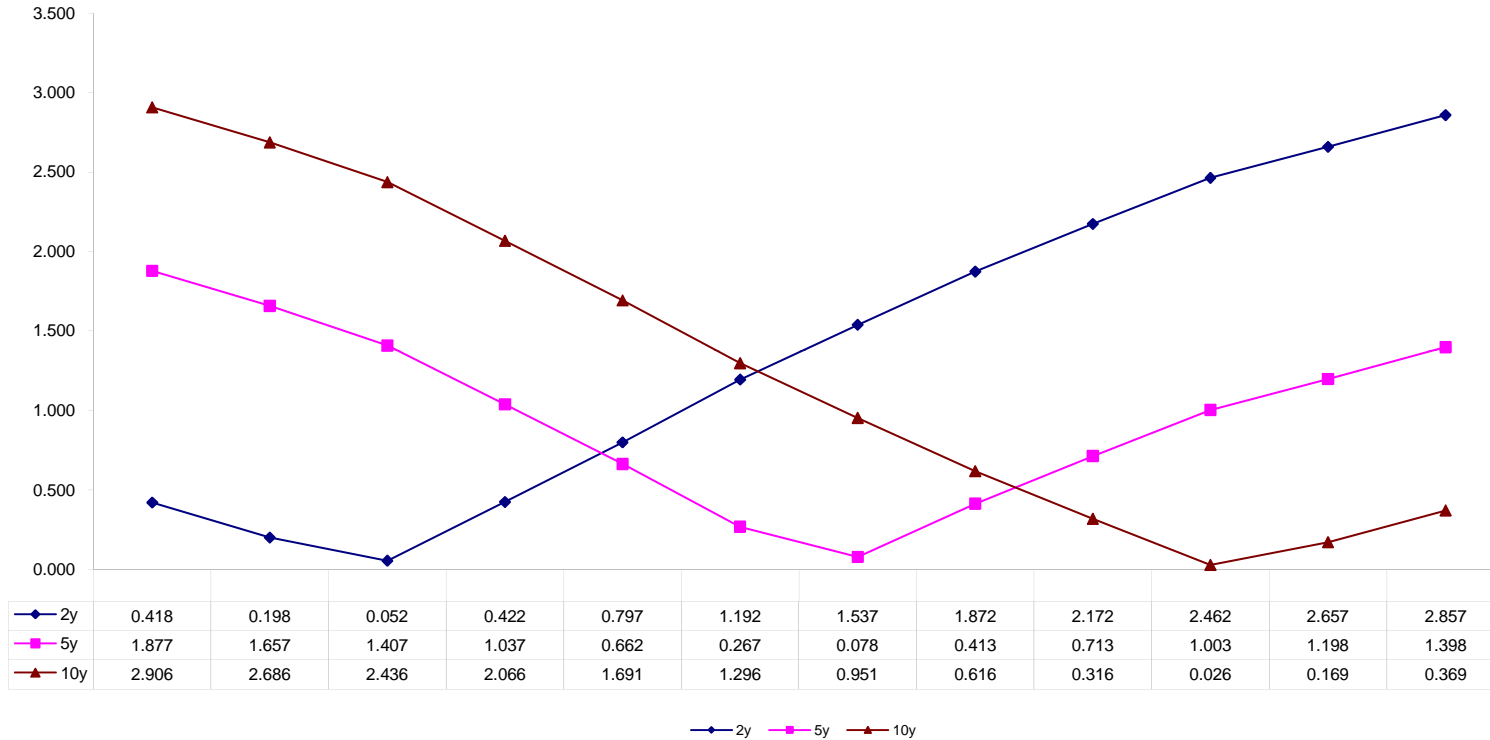
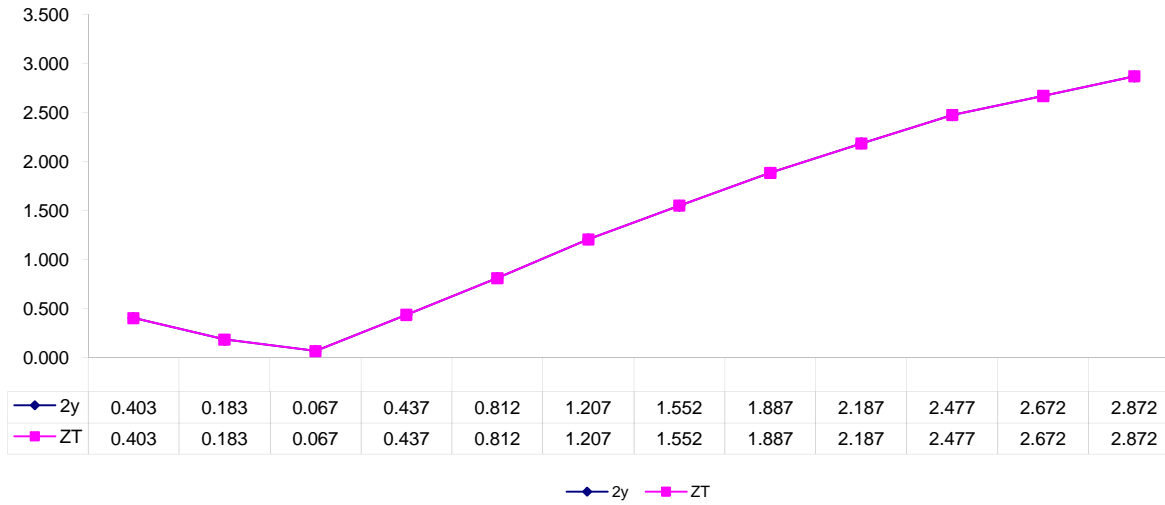
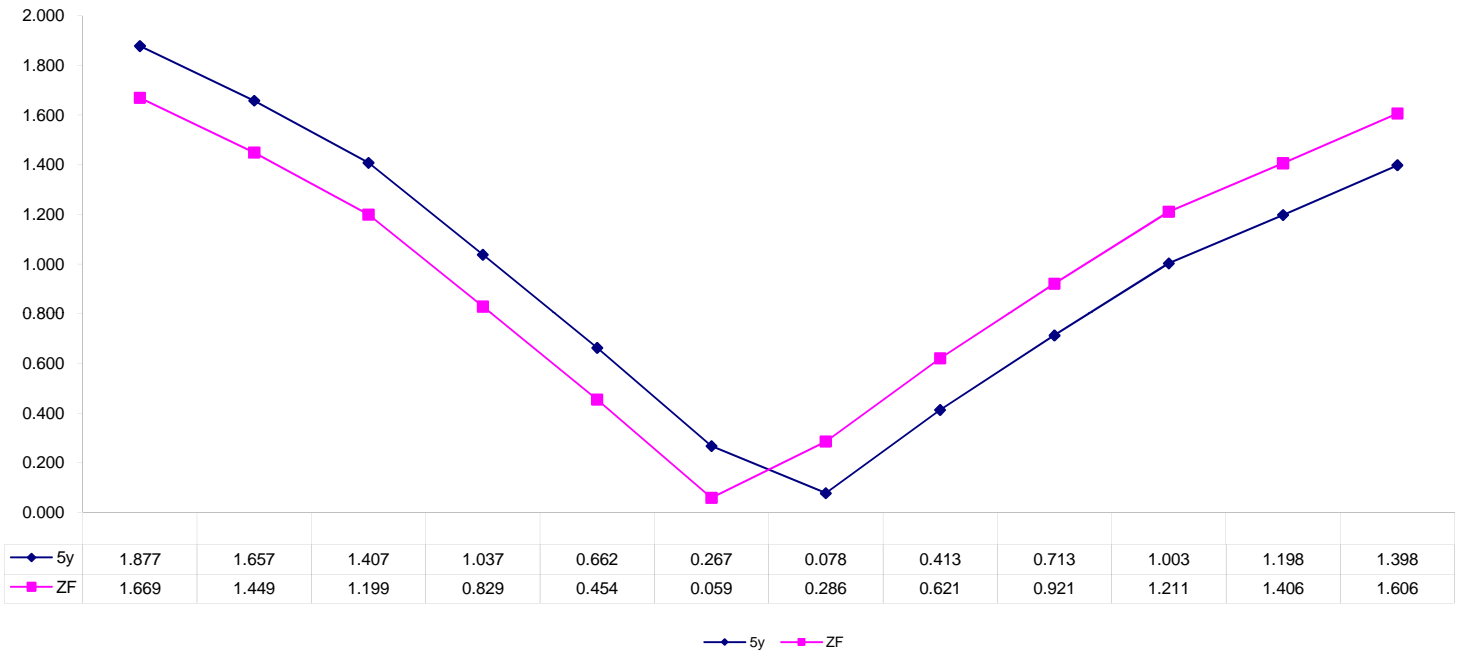


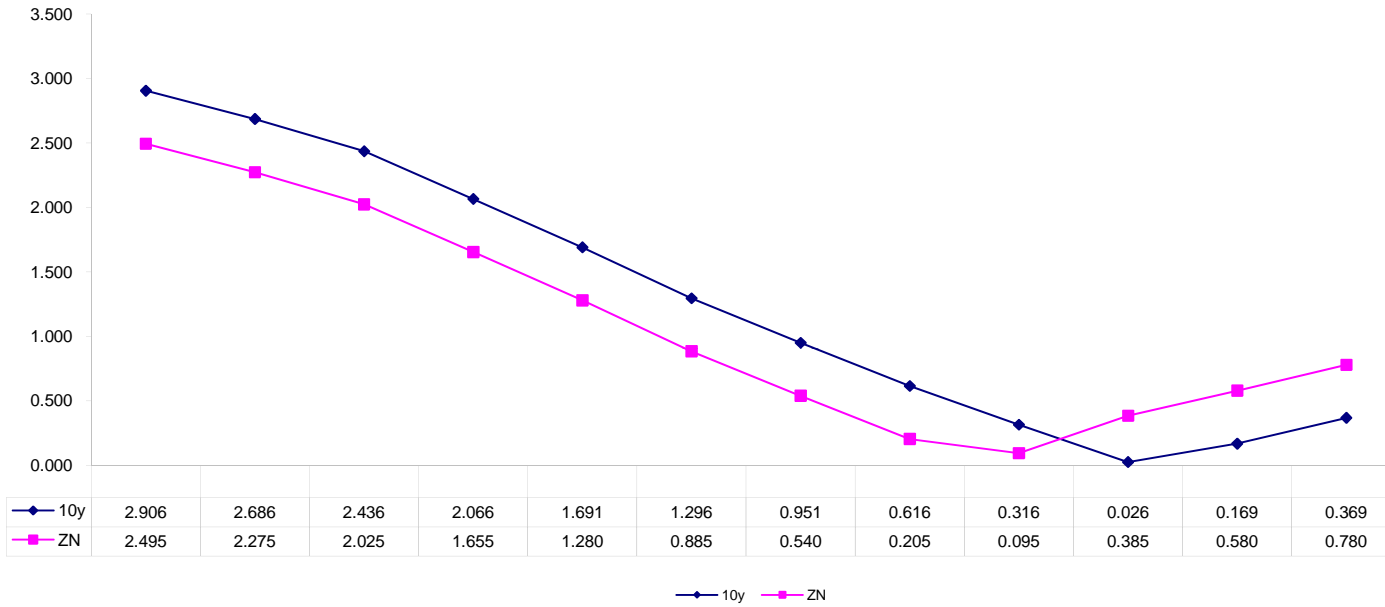
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	1.035	0.625	9898.2500
Red Pack	2.451	-0.500	9759.7500
Green Pack	3.673	-1.375	9641.0000
Blue Pack		-0.750	9575.0000
Gold Pack		-0.875	9533.7500

