

## 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	108.0688	108.0220	1.114	1.916
ZF	114.7969	114.2550	2.324	4.191
ZN	116.4063	116.1300	3.110	5.822
2y	99.9906	99.3170	1.121	1.970
5y	100.4125	100.1320	2.533	4.658
10y	96.9844	96.3150	3.485	8.366

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.3300	0.670	76	0.2076	SEP	
EDAZ09	99.0800	0.920	167	0.4569	DEC	White Pack
EDAH10	98.8250	1.175	258	0.7062	MAR	
EDAM10	98.4650	1.535	349	0.9555	JUN	
EDAU10	98.1050	1.895	440	1.2048	SEP	
EDAZ10	97.7200	2.280	531	1.4541	DEC	Red Pack
EDAH11	97.3900	2.610	622	1.7035	MAR	
EDAM11	97.0550	2.945	713	1.9528	JUN	
EDAU11	96.7650	3.235	811	2.2213	SEP	
EDAZ11	96.4850	3.515	902	2.4706	DEC	Green Pack
EDAH12	96.2950	3.705	993	2.7199	MAR	
EDAM12	96.1000	3.900	1,084	2.9692	JUN	
EDAU12	95.9650	4.035	1,175	3.2185	SEP	
EDAZ12	95.8050	4.195	1,266	3.4678	DEC	Blue Pack
EDAH13	95.7250	4.275	1,357	3.7172	MAR	
EDAM13	95.6600	4.340	1,448	3.9665	JUN	
EDAU13	95.5500	4.450	1,539	4.2158	SEP	
EDAZ13	95.4150	4.585	1,630	4.4651	DEC	Gold Pack
EDAH14	95.3700	4.630	1,721	4.7144	MAR	
EDAM14	95.3400	4.660	1,812	4.9637	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	1.093	-2.375	9892.50	
Red Pack	2.482	-4.625	9756.75	Pack Prices
Green Pack	3.672	-2.750	9641.13	
Blue Pack		-1.500	9578.50	
Gold Pack		0.000	9544.00	

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.

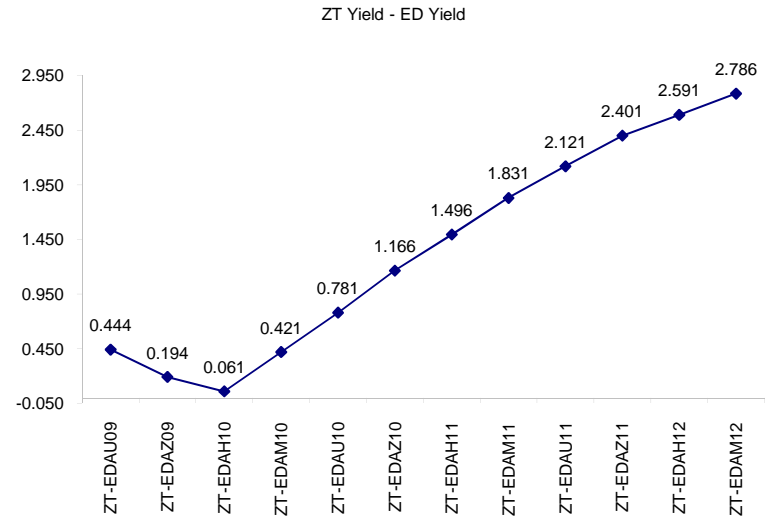
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

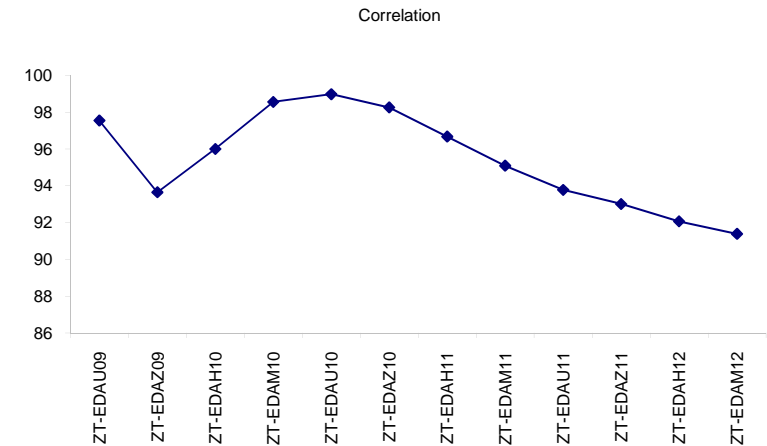
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.74	0.444	ZT-EDAU09	98
EDAZ09	8.99	0.194	ZT-EDAZ09	94
EDAH10	9.24	0.061	ZT-EDAH10	96
EDAM10	9.60	0.421	ZT-EDAM10	99
EDAU10	9.96	0.781	ZT-EDAU10	99
EDAZ10	10.35	1.166	ZT-EDAZ10	98
EDAH11	10.68	1.496	ZT-EDAH11	97
EDAM11	11.01	1.831	ZT-EDAM11	95
EDAU11	11.30	2.121	ZT-EDAU11	94
EDAZ11	11.58	2.401	ZT-EDAZ11	93
EDAH12	11.77	2.591	ZT-EDAH12	92
EDAM12	11.97	2.786	ZT-EDAM12	91

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	0.2076	1.9160	1.7085	ZT-EDAU09		
EDAZ09	0.4569	1.9160	1.4591	ZT-EDAZ09		
EDAH10	0.7062	1.9160	1.2098	ZT-EDAH10		
EDAM10	0.9555	1.9160	0.9605	ZT-EDAM10		
EDAU10	1.2048	1.9160	0.7112	ZT-EDAU10		
EDAZ10	1.4541	1.9160	0.4619	ZT-EDAZ10		
EDAH11	1.7035	1.9160	0.2126	ZT-EDAH11		
EDAM11	1.9528	1.9160	-0.0367	ZT-EDAM11		
EDAU11	2.2213	1.9160	-0.3052	ZT-EDAU11		
EDAZ11	2.4706	1.9160	-0.5546	ZT-EDAZ11		
EDAH12	2.7199	1.9160	-0.8039	ZT-EDAH12		
EDAM12	2.9692	1.9160	-1.0532	ZT-EDAM12		

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

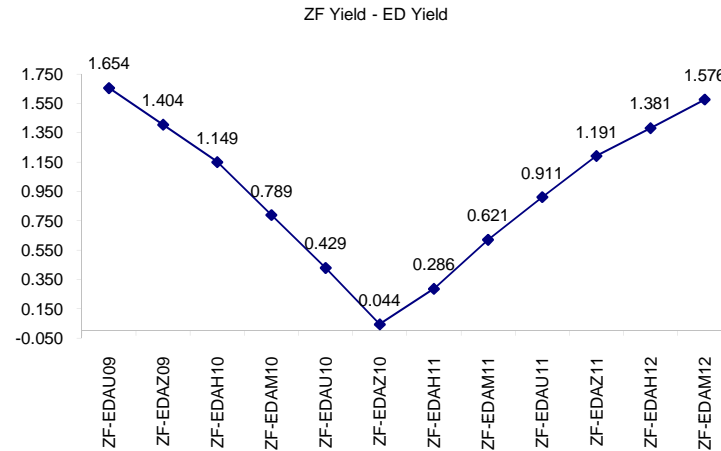


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	15.47	1.654	ZF-EDAU09	97
EDAZ09	15.72	1.404	ZF-EDAZ09	88
EDAH10	15.97	1.149	ZF-EDAH10	91
EDAM10	16.33	0.789	ZF-EDAM10	95
EDAU10	16.69	0.429	ZF-EDAU10	97
EDAZ10	17.08	0.044	ZF-EDAZ10	98
EDAH11	17.41	0.286	ZF-EDAH11	99
EDAM11	17.74	0.621	ZF-EDAM11	98
EDAU11	18.03	0.911	ZF-EDAU11	98
EDAZ11	18.31	1.191	ZF-EDAZ11	98
EDAH12	18.50	1.381	ZF-EDAH12	98
EDAM12	18.70	1.576	ZF-EDAM12	97

Price = Outright Decimal Price - Euro Contract Price

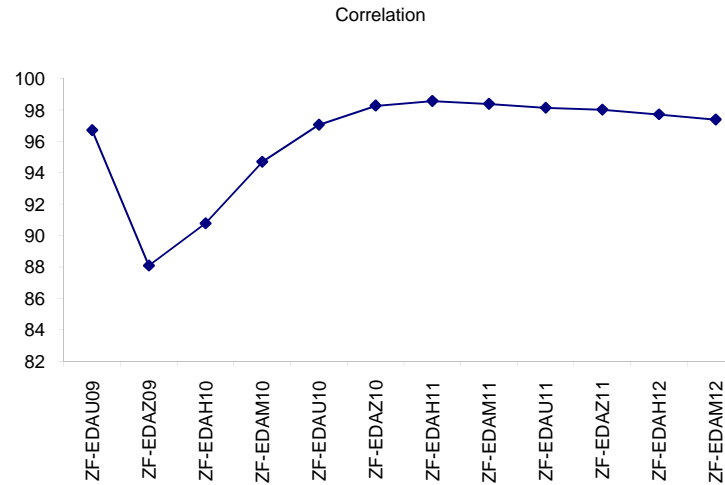
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



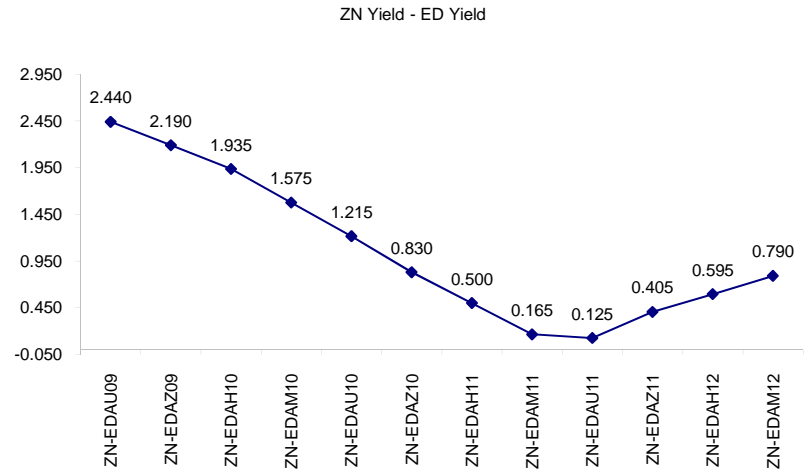
	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU09	0.2076	4.1909	3.9834	ZF-EDAU09	
EDAZ09	0.4569	4.1909	3.7341	ZF-EDAZ09	
EDAH10	0.7062	4.1909	3.4847	ZF-EDAH10	
EDAM10	0.9555	4.1909	3.2354	ZF-EDAM10	
EDAU10	1.2048	4.1909	2.9861	ZF-EDAU10	
EDAZ10	1.4541	4.1909	2.7368	ZF-EDAZ10	
EDAH11	1.7035	4.1909	2.4875	ZF-EDAH11	
EDAM11	1.9528	4.1909	2.2382	ZF-EDAM11	
EDAU11	2.2213	4.1909	1.9697	ZF-EDAU11	
EDAZ11	2.4706	4.1909	1.7204	ZF-EDAZ11	
EDAH12	2.7199	4.1909	1.4710	ZF-EDAH12	
EDAM12	2.9692	4.1909	1.2217	ZF-EDAM12	

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



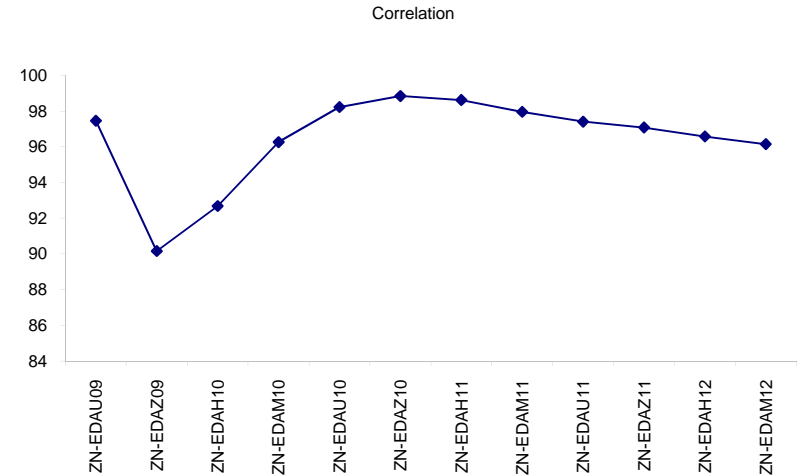
	ZN			Correlation* (percent)
	Spread Price	Spread Yield	Spread Name	
EDAU09	17.08	2.440	ZN-EDAU09	97
EDAZ09	17.33	2.190	ZN-EDAZ09	90
EDAH10	17.58	1.935	ZN-EDAH10	93
EDAM10	17.94	1.575	ZN-EDAM10	96
EDAU10	18.30	1.215	ZN-EDAU10	98
EDAZ10	18.69	0.830	ZN-EDAZ10	99
EDAH11	19.02	0.500	ZN-EDAH11	99
EDAM11	19.35	0.165	ZN-EDAM11	98
EDAU11	19.64	0.125	ZN-EDAU11	97
EDAZ11	19.92	0.405	ZN-EDAZ11	97
EDAH12	20.11	0.595	ZN-EDAH12	97
EDAM12	20.31	0.790	ZN-EDAM12	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			ZN Spread Duration
	Fraction of year	ZN Duration	Spread Duration	
EDAU09	0.2076	5.8219	5.6144	ZN-EDAU09
EDAZ09	0.4569	5.8219	5.3651	ZN-EDAZ09
EDAH10	0.7062	5.8219	5.1158	ZN-EDAH10
EDAM10	0.9555	5.8219	4.8664	ZN-EDAM10
EDAU10	1.2048	5.8219	4.6171	ZN-EDAU10
EDAZ10	1.4541	5.8219	4.3678	ZN-EDAZ10
EDAH11	1.7035	5.8219	4.1185	ZN-EDAH11
EDAM11	1.9528	5.8219	3.8692	ZN-EDAM11
EDAU11	2.2213	5.8219	3.6007	ZN-EDAU11
EDAZ11	2.4706	5.8219	3.3514	ZN-EDAZ11
EDAH12	2.7199	5.8219	3.1021	ZN-EDAH12
EDAM12	2.9692	5.8219	2.8527	ZN-EDAM12

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

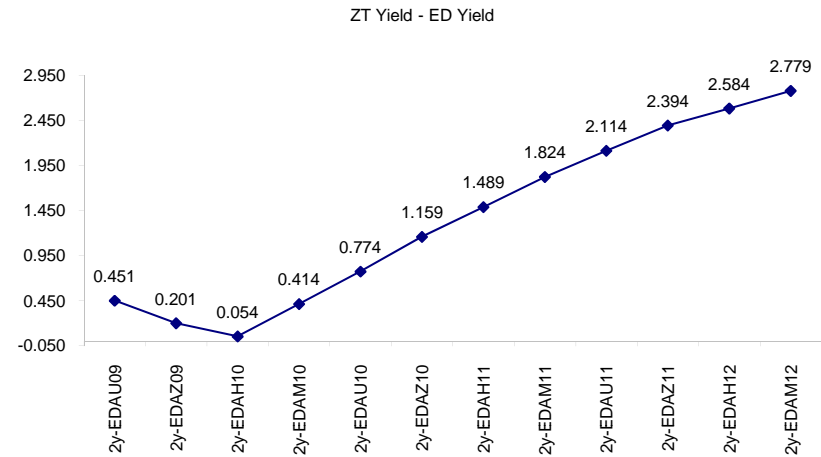


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.66	0.451	2y-EDAU09	-79
EDAZ09	0.91	0.201	2y-EDAZ09	-79
EDAH10	1.17	0.054	2y-EDAH10	-82
EDAM10	1.53	0.414	2y-EDAM10	-85
EDAU10	1.89	0.774	2y-EDAU10	-85
EDAZ10	2.27	1.159	2y-EDAZ10	-84
EDAH11	2.60	1.489	2y-EDAH11	-82
EDAM11	2.94	1.824	2y-EDAM11	-79
EDAU11	3.23	2.114	2y-EDAU11	-77
EDAZ11	3.51	2.394	2y-EDAZ11	-75
EDAH12	3.70	2.584	2y-EDAH12	-73
EDAM12	3.89	2.779	2y-EDAM12	-72

Price = Outright Decimal Price - Euro Contract Price

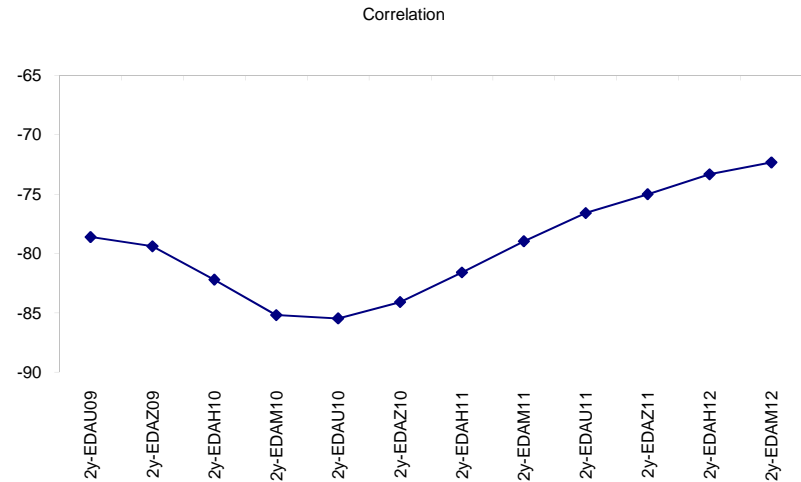
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as		Spread Duration	
	Fraction of year	2Y Duration		
EDAU09	0.2076	1.9695	1.7620	2y-EDAU09
EDAZ09	0.4569	1.9695	1.5126	2y-EDAZ09
EDAH10	0.7062	1.9695	1.2633	2y-EDAH10
EDAM10	0.9555	1.9695	1.0140	2y-EDAM10
EDAU10	1.2048	1.9695	0.7647	2y-EDAU10
EDAZ10	1.4541	1.9695	0.5154	2y-EDAZ10
EDAH11	1.7035	1.9695	0.2661	2y-EDAH11
EDAM11	1.9528	1.9695	0.0168	2y-EDAM11
EDAU11	2.2213	1.9695	-0.2517	2y-EDAU11
EDAZ11	2.4706	1.9695	-0.5011	2y-EDAZ11
EDAH12	2.7199	1.9695	-0.7504	2y-EDAH12
EDAM12	2.9692	1.9695	-0.9997	2y-EDAM12

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

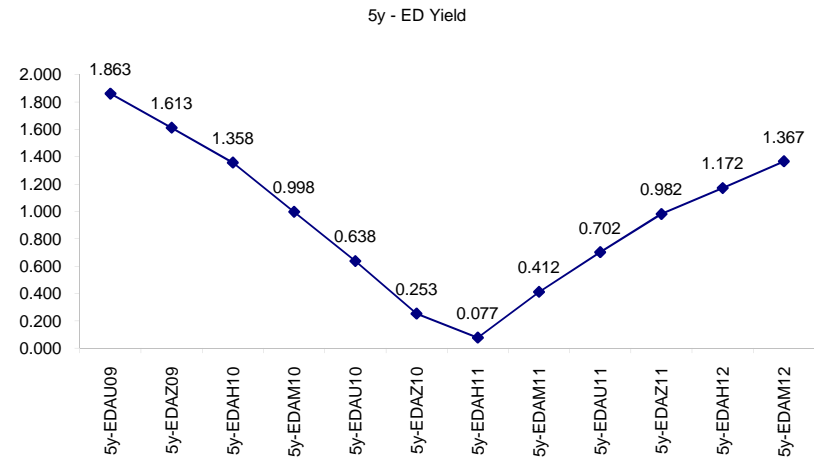


5y				Correlation* (percent)
Spread Price	Spread Yield	Spread Name		
EDAU09	1.08	1.863	5y-EDAU09	-95
EDAZ09	1.33	1.613	5y-EDAZ09	-85
EDAH10	1.59	1.358	5y-EDAH10	-88
EDAM10	1.95	0.998	5y-EDAM10	-93
EDAU10	2.31	0.638	5y-EDAU10	-96
EDAZ10	2.69	0.253	5y-EDAZ10	-98
EDAH11	3.02	0.077	5y-EDAH11	-98
EDAM11	3.36	0.412	5y-EDAM11	-98
EDAU11	3.65	0.702	5y-EDAU11	-98
EDAZ11	3.93	0.982	5y-EDAZ11	-98
EDAH12	4.12	1.172	5y-EDAH12	-98
EDAM12	4.31	1.367	5y-EDAM12	-98

Price = Outright Decimal Price - Euro Contract Price

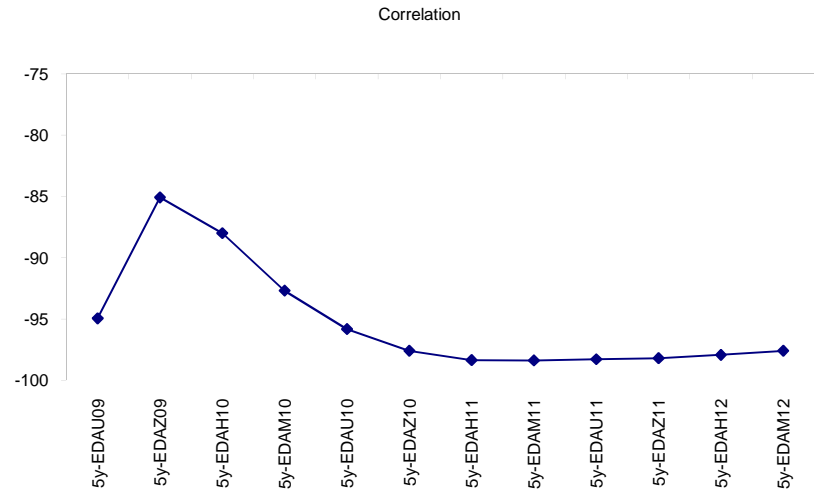
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



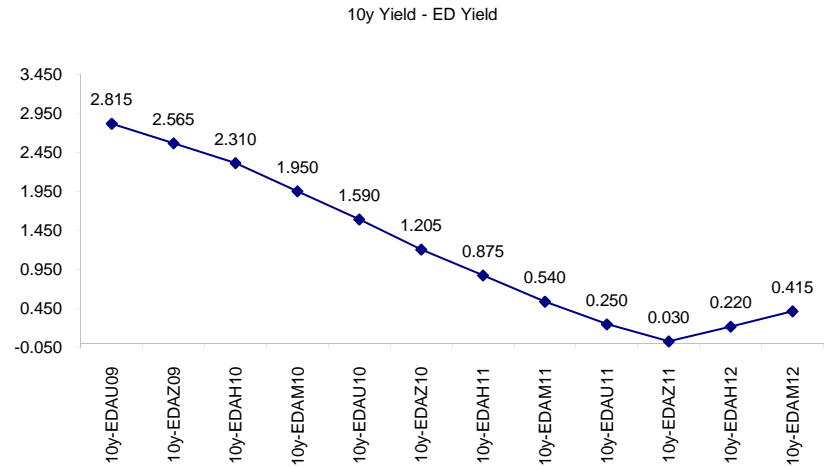
	ED Duration as		Spread Duration	
	Fraction of year	5Y Duration		
EDAU09	0.2076	4.6584	4.4508	5y-EDAU09
EDAZ09	0.4569	4.6584	4.2015	5y-EDAZ09
EDAH10	0.7062	4.6584	3.9522	5y-EDAH10
EDAM10	0.9555	4.6584	3.7028	5y-EDAM10
EDAU10	1.2048	4.6584	3.4535	5y-EDAU10
EDAZ10	1.4541	4.6584	3.2042	5y-EDAZ10
EDAH11	1.7035	4.6584	2.9549	5y-EDAH11
EDAM11	1.9528	4.6584	2.7056	5y-EDAM11
EDAU11	2.2213	4.6584	2.4371	5y-EDAU11
EDAZ11	2.4706	4.6584	2.1878	5y-EDAZ11
EDAH12	2.7199	4.6584	1.9385	5y-EDAH12
EDAM12	2.9692	4.6584	1.6892	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	1.08	2.815	10y-EDAU09	-96
EDAZ09	1.33	2.565	10y-EDAZ09	-89
EDAH10	1.59	2.310	10y-EDAH10	-91
EDAM10	1.95	1.950	10y-EDAM10	-93
EDAU10	2.31	1.590	10y-EDAU10	-95
EDAZ10	2.69	1.205	10y-EDAZ10	-95
EDAH11	3.02	0.875	10y-EDAH11	-95
EDAM11	3.36	0.540	10y-EDAM11	-95
EDAU11	3.65	0.250	10y-EDAU11	-95
EDAZ11	3.93	0.030	10y-EDAZ11	-94
EDAH12	4.12	0.220	10y-EDAH12	-94
EDAM12	4.31	0.415	10y-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				10Y Duration	Spread Duration	
EDAU09	0.2076	8.3661	8.1585	10y-EDAU09		
EDAZ09	0.4569	8.3661	7.9092	10y-EDAZ09		
EDAH10	0.7062	8.3661	7.6599	10y-EDAH10		
EDAM10	0.9555	8.3661	7.4106	10y-EDAM10		
EDAU10	1.2048	8.3661	7.1613	10y-EDAU10		
EDAZ10	1.4541	8.3661	6.9119	10y-EDAZ10		
EDAH11	1.7035	8.3661	6.6626	10y-EDAH11		
EDAM11	1.9528	8.3661	6.4133	10y-EDAM11		
EDAU11	2.2213	8.3661	6.1448	10y-EDAU11		
EDAZ11	2.4706	8.3661	5.8955	10y-EDAZ11		
EDAH12	2.7199	8.3661	5.6462	10y-EDAH12		
EDAM12	2.9692	8.3661	5.3969	10y-EDAM12		

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

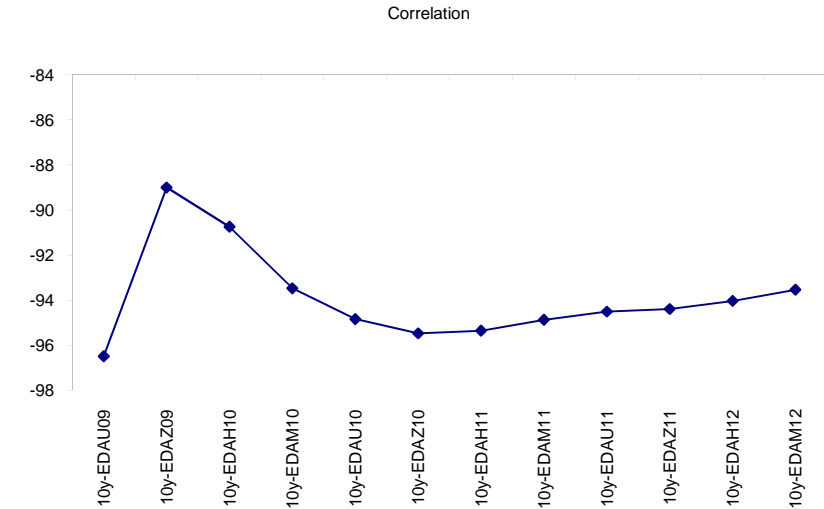


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

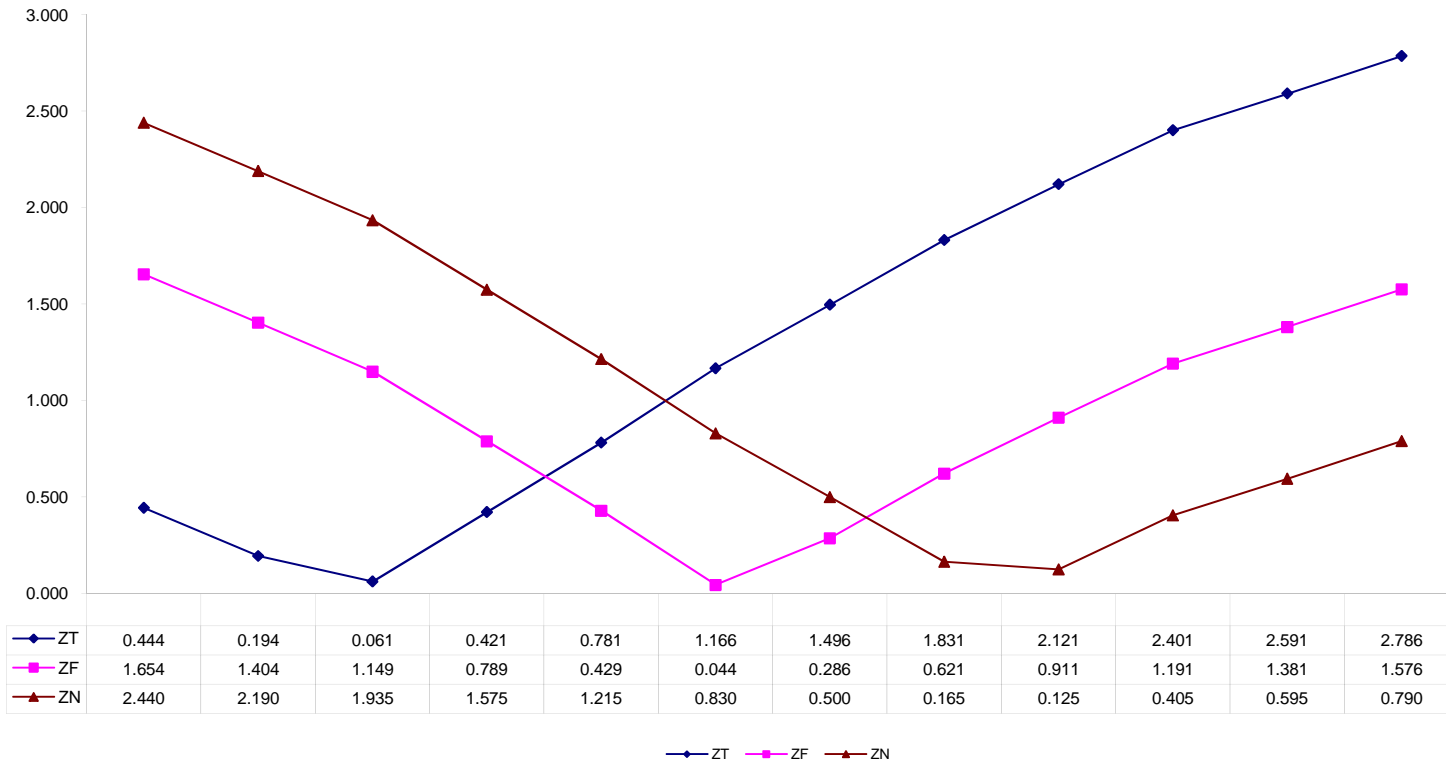
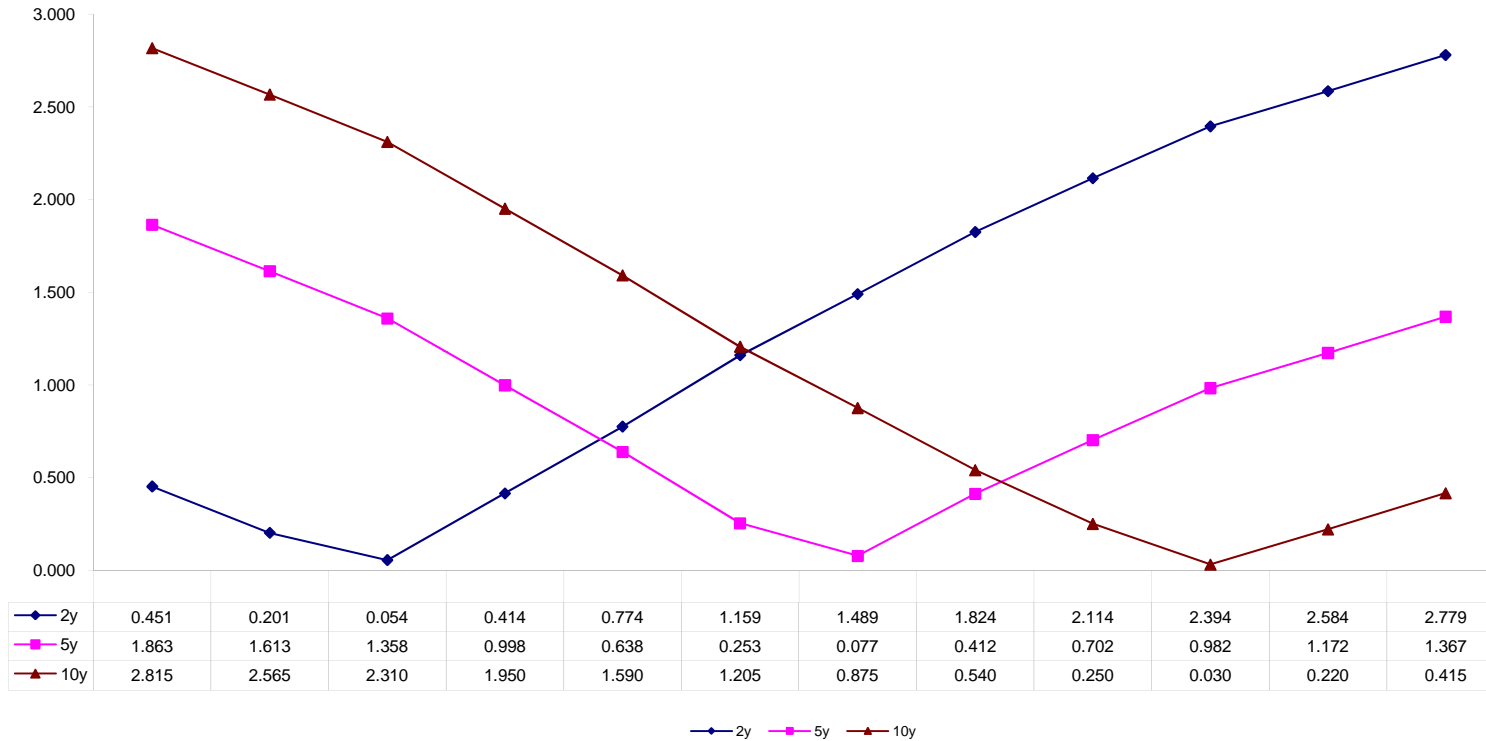
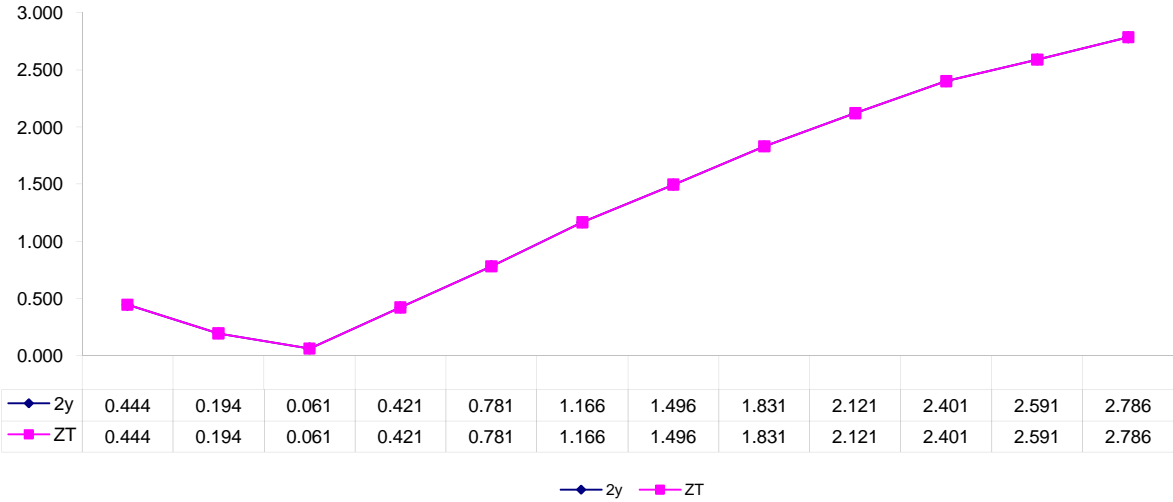
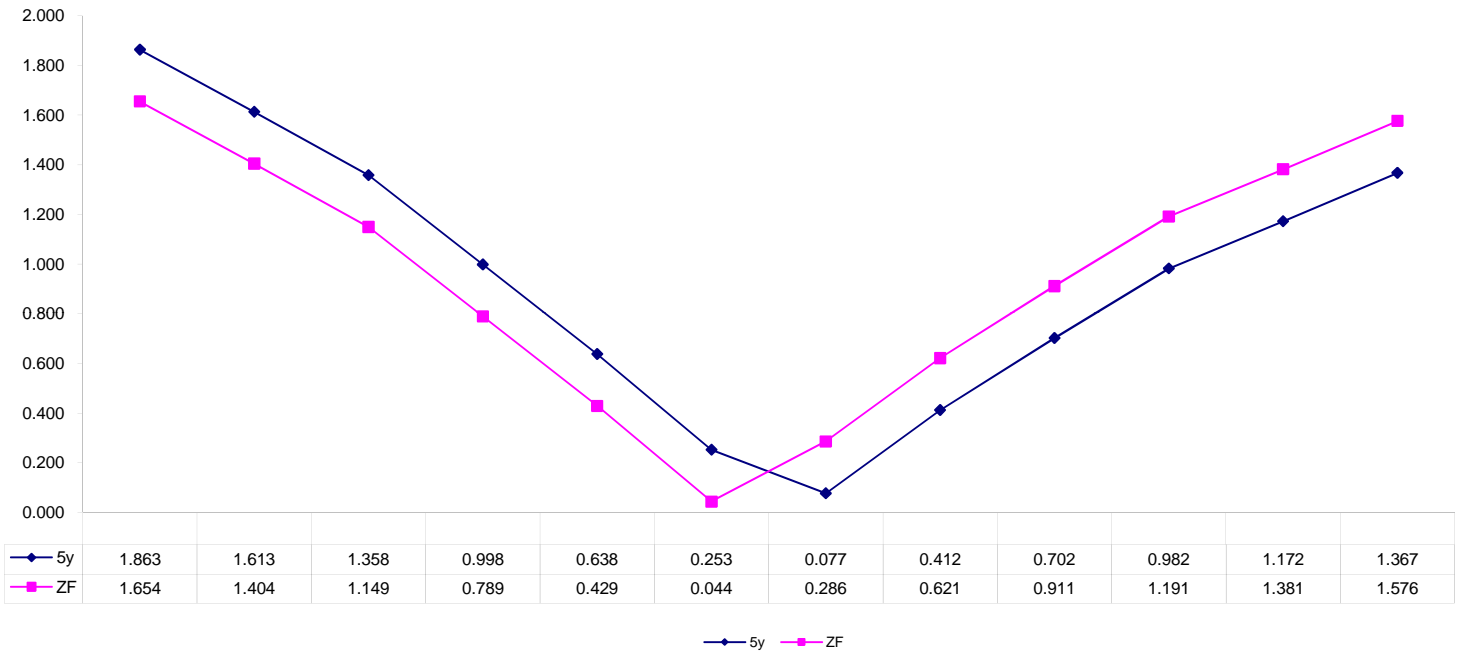


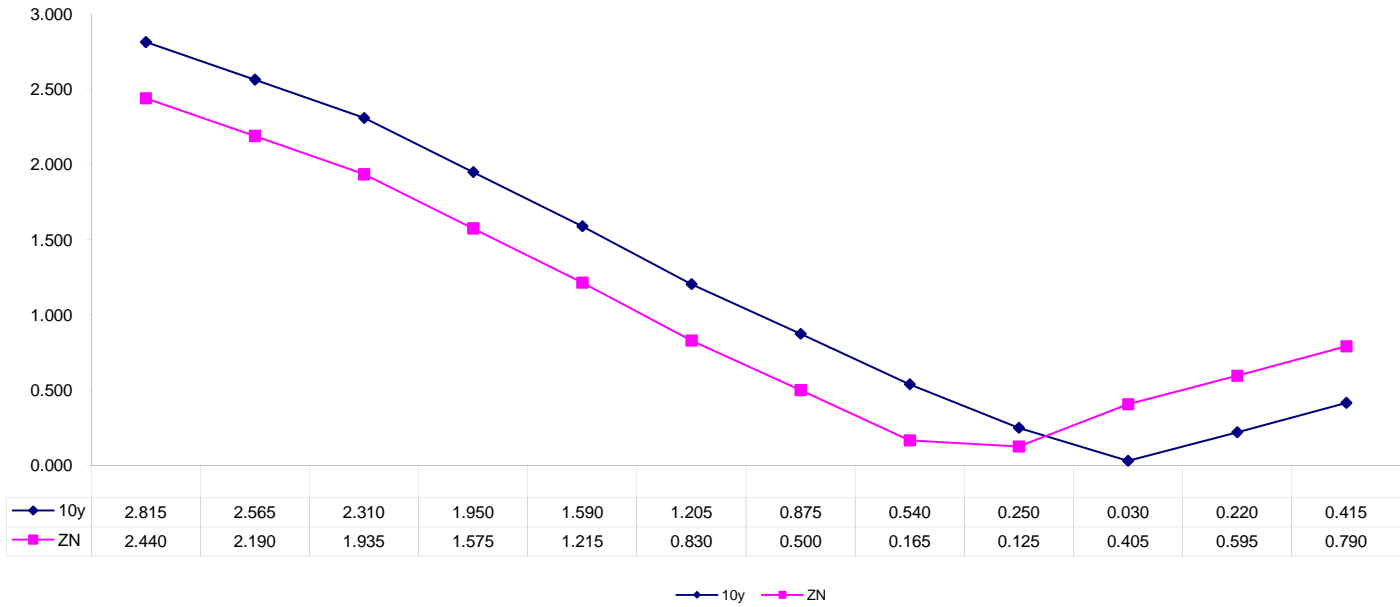
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	1.093	-2.375	9892.5000
Red Pack	2.482	-4.625	9756.7500
Green Pack	3.672	-2.750	9641.1250
Blue Pack		-1.500	9578.5000
Gold Pack		0.000	9544.0000

