

## **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	108.4531	108.1450	0.946	1.896
ZF	115.8813	115.2820	2.097	4.175
ZN	117.4063	117.1300	2.986	5.808
2y	100.3438	100.1100	0.949	1.950
5y	101.3344	101.1070	2.337	4.643
10y	97.3594	97.1150	3.439	8.350

Eurodollars (ED)						
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.4250	0.575	68	0.1857	SEP	
EDAZ09	99.2150	0.785	159	0.4350	DEC	White Pack
EDAH10	99.0250	0.975	250	0.6843	MAR	
EDAM10	98.7400	1.260	341	0.9336	JUN	
EDAU10	98.4200	1.580	432	1.1829	SEP	
EDAZ10	98.0450	1.955	523	1.4322	DEC	Red Pack
EDAH11	97.7050	2.295	614	1.6815	MAR	
EDAM11	97.3550	2.645	705	1.9309	JUN	
EDAU11	97.0400	2.960	803	2.1993	SEP	
EDAZ11	96.7450	3.255	894	2.4487	DEC	Green Pack
EDAH12	96.5350	3.465	985	2.6980	MAR	
EDAM12	96.3400	3.660	1,076	2.9473	JUN	
EDAU12	96.1800	3.820	1,167	3.1966	SEP	
EDAZ12	96.0100	3.990	1,258	3.4459	DEC	Blue Pack
EDAH13	95.8850	4.115	1,349	3.6952	MAR	
EDAM13	95.7750	4.225	1,440	3.9446	JUN	
EDAU13	95.6500	4.350	1,531	4.1939	SEP	
EDAZ13	95.5200	4.480	1,622	4.4432	DEC	Gold Pack
EDAH14	95.4500	4.550	1,713	4.6925	MAR	
EDAM14	95.3800	4.620	1,804	4.9418	JUN	

	Last Yield	Net Yield	Last Price	
White Pack	0.913	1.875	9910.13	
Red Pack	2.160	3.500	9788.13	Pack Prices
Green Pack	3.410	4.250	9666.50	
Blue Pack		4.125	9595.25	
Gold Pack	4.614	4.750	9550.00	

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.

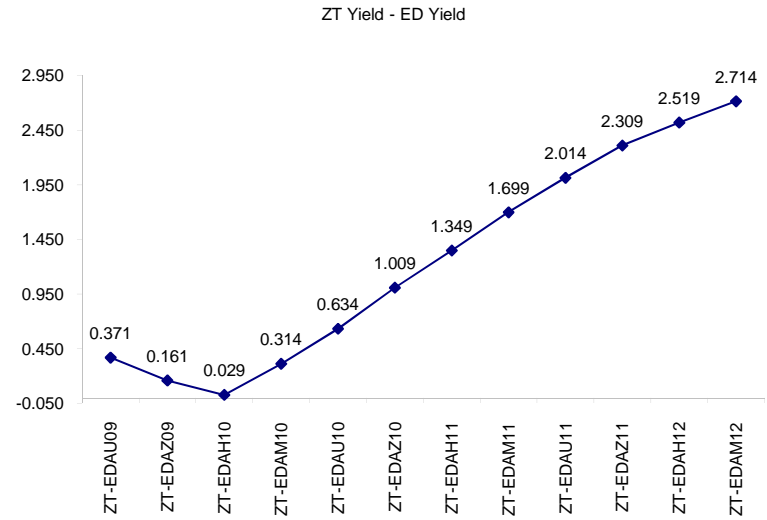
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#### **Correlations (Important)**

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.

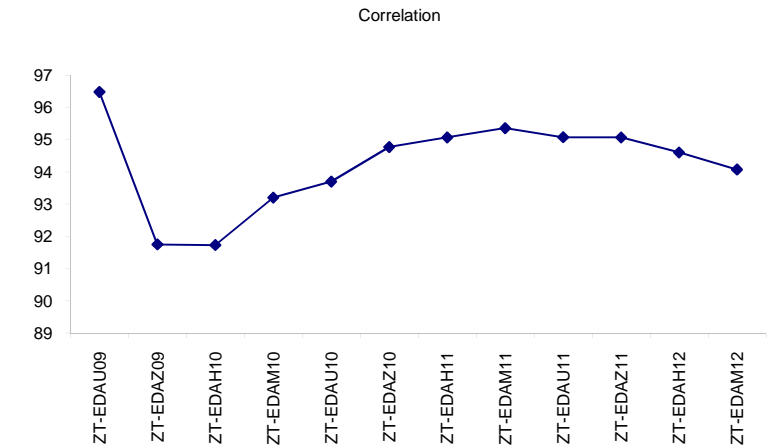
ZT				Correlation* (percent)
Spread Price	Spread Yield	Spread Name		
EDAU09	9.03	0.371	ZT-EDAU09	96
EDAZ09	9.24	0.161	ZT-EDAZ09	92
EDAH10	9.43	0.029	ZT-EDAH10	92
EDAM10	9.71	0.314	ZT-EDAM10	93
EDAU10	10.03	0.634	ZT-EDAU10	94
EDAZ10	10.41	1.009	ZT-EDAZ10	95
EDAH11	10.75	1.349	ZT-EDAH11	95
EDAM11	11.10	1.699	ZT-EDAM11	95
EDAU11	11.41	2.014	ZT-EDAU11	95
EDAZ11	11.71	2.309	ZT-EDAZ11	95
EDAH12	11.92	2.519	ZT-EDAH12	95
EDAM12	12.11	2.714	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	0.1857	1.8961	1.7105	ZT-EDAU09		
EDAZ09	0.4350	1.8961	1.4612	ZT-EDAZ09		
EDAH10	0.6843	1.8961	1.2118	ZT-EDAH10		
EDAM10	0.9336	1.8961	0.9625	ZT-EDAM10		
EDAU10	1.1829	1.8961	0.7132	ZT-EDAU10		
EDAZ10	1.4322	1.8961	0.4639	ZT-EDAZ10		
EDAH11	1.6815	1.8961	0.2146	ZT-EDAH11		
EDAM11	1.9309	1.8961	-0.0347	ZT-EDAM11		
EDAU11	2.1993	1.8961	-0.3032	ZT-EDAU11		
EDAZ11	2.4487	1.8961	-0.5525	ZT-EDAZ11		
EDAH12	2.6980	1.8961	-0.8019	ZT-EDAH12		
EDAM12	2.9473	1.8961	-1.0512	ZT-EDAM12		

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

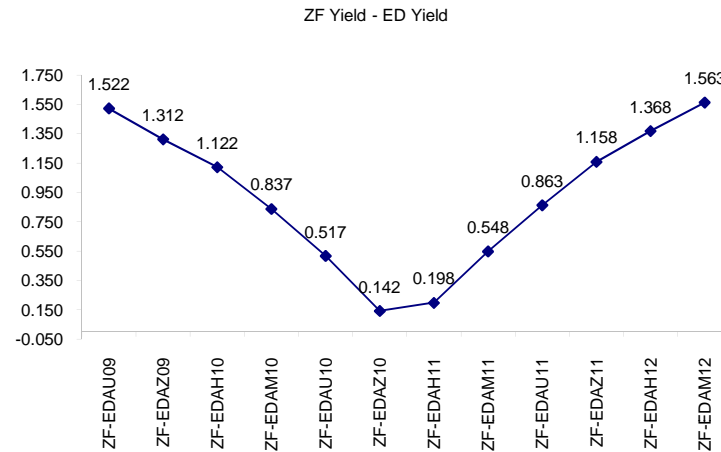


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	16.46	1.522	ZF-EDAU09	97
EDAZ09	16.67	1.312	ZF-EDAZ09	89
EDAH10	16.86	1.122	ZF-EDAH10	92
EDAM10	17.14	0.837	ZF-EDAM10	95
EDAU10	17.46	0.517	ZF-EDAU10	96
EDAZ10	17.84	0.142	ZF-EDAZ10	98
EDAH11	18.18	0.198	ZF-EDAH11	98
EDAM11	18.53	0.548	ZF-EDAM11	98
EDAU11	18.84	0.863	ZF-EDAU11	99
EDAZ11	19.14	1.158	ZF-EDAZ11	99
EDAH12	19.35	1.368	ZF-EDAH12	99
EDAM12	19.54	1.563	ZF-EDAM12	98

Price = Outright Decimal Price - Euro Contract Price

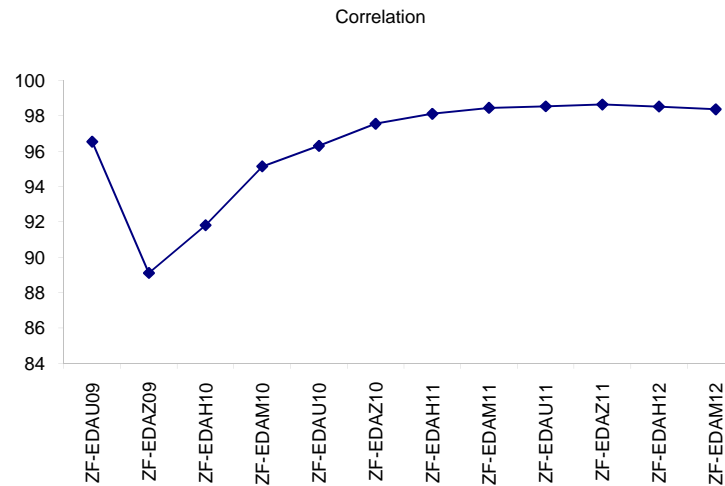
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAU09	0.1857	4.1751	3.9894	ZF-EDAU09	
EDAZ09	0.4350	4.1751	3.7401	ZF-EDAZ09	
EDAH10	0.6843	4.1751	3.4908	ZF-EDAH10	
EDAM10	0.9336	4.1751	3.2415	ZF-EDAM10	
EDAU10	1.1829	4.1751	2.9921	ZF-EDAU10	
EDAZ10	1.4322	4.1751	2.7428	ZF-EDAZ10	
EDAH11	1.6815	4.1751	2.4935	ZF-EDAH11	
EDAM11	1.9309	4.1751	2.2442	ZF-EDAM11	
EDAU11	2.1993	4.1751	1.9757	ZF-EDAU11	
EDAZ11	2.4487	4.1751	1.7264	ZF-EDAZ11	
EDAH12	2.6980	4.1751	1.4771	ZF-EDAH12	
EDAM12	2.9473	4.1751	1.2278	ZF-EDAM12	

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

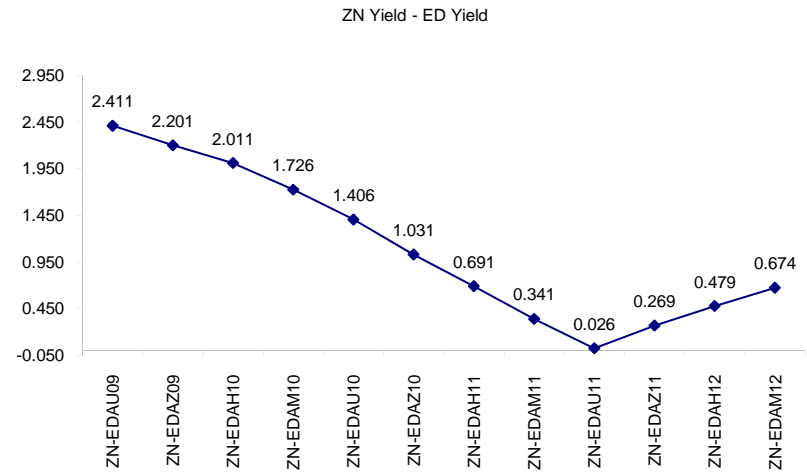


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	17.98	2.411	ZN-EDAU09	91
EDAZ09	18.19	2.201	ZN-EDAZ09	82
EDAH10	18.38	2.011	ZN-EDAH10	87
EDAM10	18.67	1.726	ZN-EDAM10	92
EDAU10	18.99	1.406	ZN-EDAU10	94
EDAZ10	19.36	1.031	ZN-EDAZ10	95
EDAH11	19.70	0.691	ZN-EDAH11	95
EDAM11	20.05	0.341	ZN-EDAM11	95
EDAU11	20.37	0.026	ZN-EDAU11	96
EDAZ11	20.66	0.269	ZN-EDAZ11	96
EDAH12	20.87	0.479	ZN-EDAH12	96
EDAM12	21.07	0.674	ZN-EDAM12	96

Price = Outright Decimal Price - Euro Contract Price

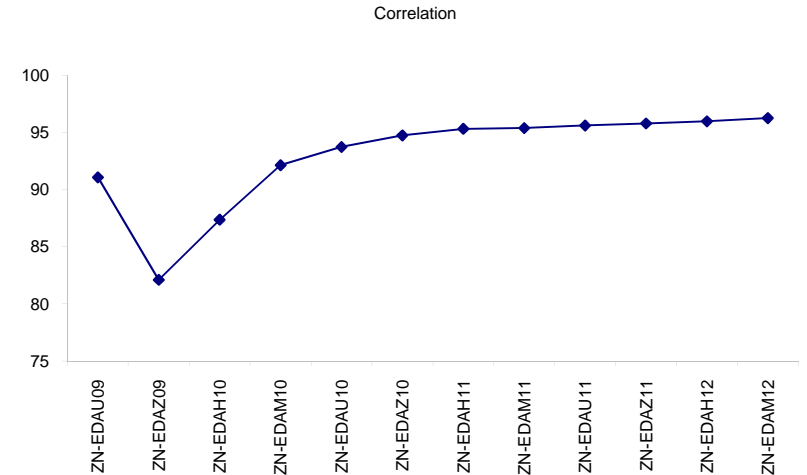
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year			
	Fraction of year	ZN Duration	Spread Duration
EDAU09	0.1857	5.8083	5.6226
EDAZ09	0.4350	5.8083	5.3733
EDAH10	0.6843	5.8083	5.1240
EDAM10	0.9336	5.8083	4.8747
EDAU10	1.1829	5.8083	4.6253
EDAZ10	1.4322	5.8083	4.3760
EDAH11	1.6815	5.8083	4.1267
EDAM11	1.9309	5.8083	3.8774
EDAU11	2.1993	5.8083	3.6089
EDAZ11	2.4487	5.8083	3.3596
EDAH12	2.6980	5.8083	3.1103
EDAM12	2.9473	5.8083	2.8610

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



	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.92	0.374	2y-EDAU09	-98
EDAZ09	1.13	0.164	2y-EDAZ09	-95
EDAH10	1.32	0.026	2y-EDAH10	-95
EDAM10	1.60	0.311	2y-EDAM10	-95
EDAU10	1.92	0.631	2y-EDAU10	-95
EDAZ10	2.30	1.006	2y-EDAZ10	-96
EDAH11	2.64	1.346	2y-EDAH11	-96
EDAM11	2.99	1.696	2y-EDAM11	-96
EDAU11	3.30	2.011	2y-EDAU11	-95
EDAZ11	3.60	2.306	2y-EDAZ11	-95
EDAH12	3.81	2.516	2y-EDAH12	-94
EDAM12	4.00	2.711	2y-EDAM12	-94

Price = Outright Decimal Price - Euro Contract Price

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

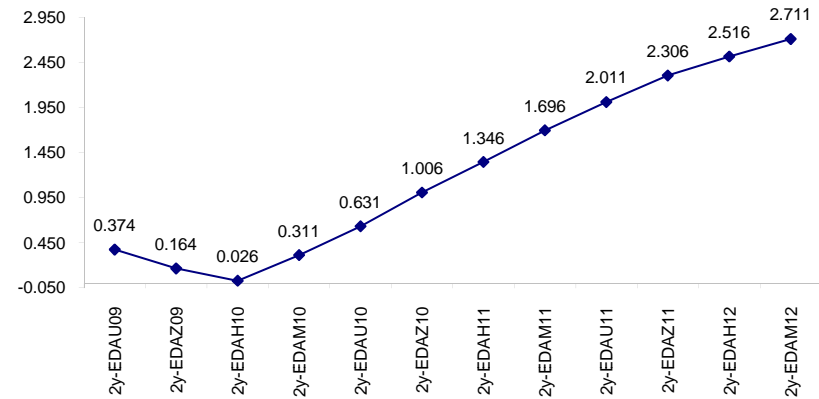
\*Correlation = ED Correlation to Treasury Future over 10 days.

ED Duration as

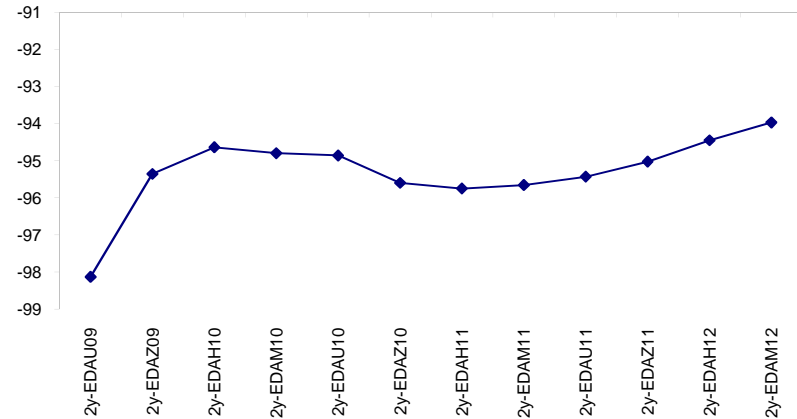
	Fraction of year	2Y Duration	Spread Duration	
EDAU09	0.1857	1.9496	1.7640	2y-EDAU09
EDAZ09	0.4350	1.9496	1.5146	2y-EDAZ09
EDAH10	0.6843	1.9496	1.2653	2y-EDAH10
EDAM10	0.9336	1.9496	1.0160	2y-EDAM10
EDAU10	1.1829	1.9496	0.7667	2y-EDAU10
EDAZ10	1.4322	1.9496	0.5174	2y-EDAZ10
EDAH11	1.6815	1.9496	0.2681	2y-EDAH11
EDAM11	1.9309	1.9496	0.0188	2y-EDAM11
EDAU11	2.1993	1.9496	-0.2497	2y-EDAU11
EDAZ11	2.4487	1.9496	-0.4991	2y-EDAZ11
EDAH12	2.6980	1.9496	-0.7484	2y-EDAH12
EDAM12	2.9473	1.9496	-0.9977	2y-EDAM12

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

ZT Yield - ED Yield

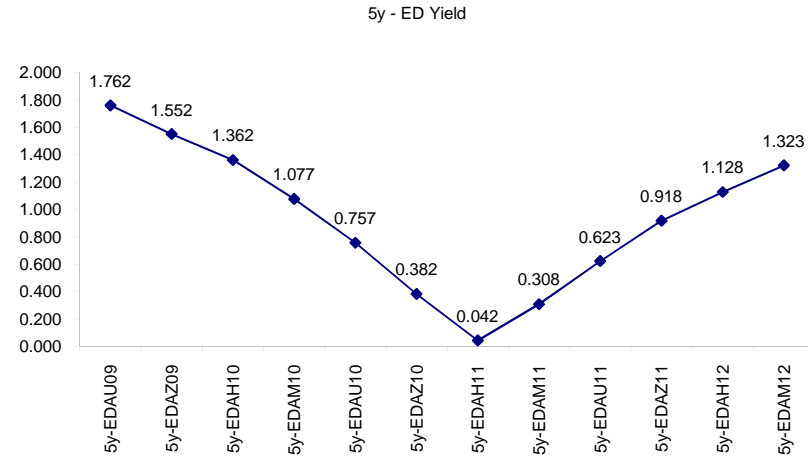


Correlation



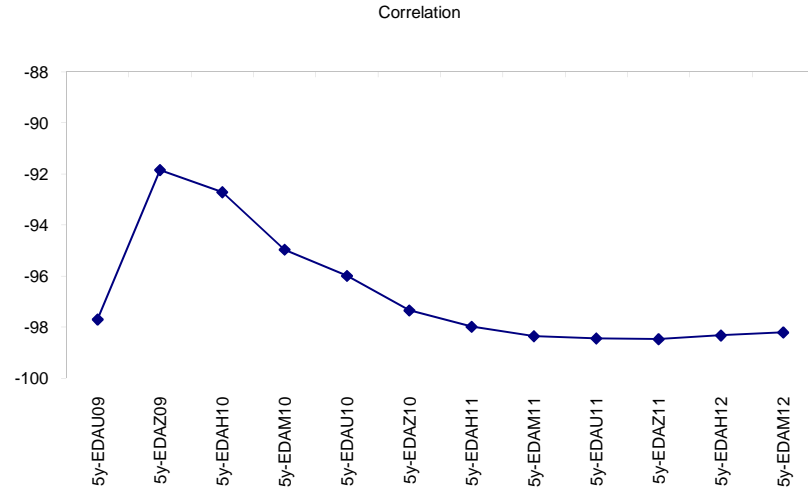
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.91	1.762	5y-EDAU09	-98
EDAZ09	2.12	1.552	5y-EDAZ09	-92
EDAH10	2.31	1.362	5y-EDAH10	-93
EDAM10	2.59	1.077	5y-EDAM10	-95
EDAU10	2.91	0.757	5y-EDAU10	-96
EDAZ10	3.29	0.382	5y-EDAZ10	-97
EDAH11	3.63	0.042	5y-EDAH11	-98
EDAM11	3.98	0.308	5y-EDAM11	-98
EDAU11	4.29	0.623	5y-EDAU11	-98
EDAZ11	4.59	0.918	5y-EDAZ11	-98
EDAH12	4.80	1.128	5y-EDAH12	-98
EDAM12	4.99	1.323	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	0.1857	4.6435	4.4578	5y-EDAU09	
EDAZ09	0.4350	4.6435	4.2085	5y-EDAZ09	
EDAH10	0.6843	4.6435	3.9592	5y-EDAH10	
EDAM10	0.9336	4.6435	3.7099	5y-EDAM10	
EDAU10	1.1829	4.6435	3.4606	5y-EDAU10	
EDAZ10	1.4322	4.6435	3.2112	5y-EDAZ10	
EDAH11	1.6815	4.6435	2.9619	5y-EDAH11	
EDAM11	1.9309	4.6435	2.7126	5y-EDAM11	
EDAU11	2.1993	4.6435	2.4441	5y-EDAU11	
EDAZ11	2.4487	4.6435	2.1948	5y-EDAZ11	
EDAH12	2.6980	4.6435	1.9455	5y-EDAH12	
EDAM12	2.9473	4.6435	1.6962	5y-EDAM12	

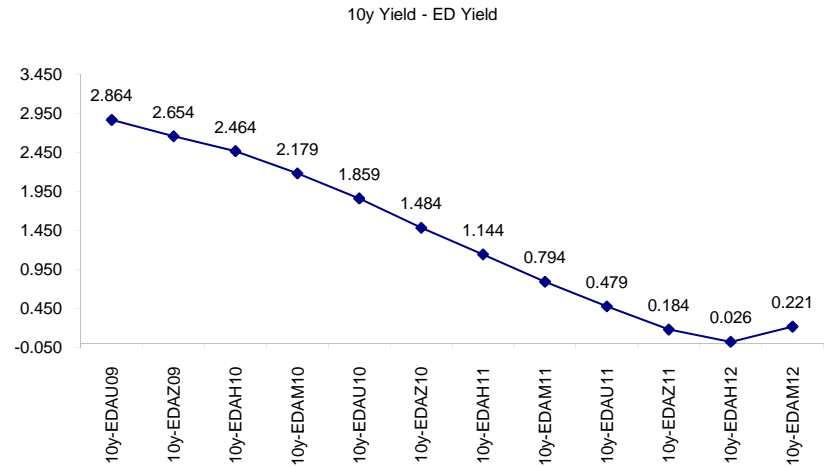
The farther away from 0 the spread duration is the riskier the trade.





	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.91	2.864	10y-EDAU09	-81
EDAZ09	2.12	2.654	10y-EDAZ09	-74
EDAH10	2.31	2.464	10y-EDAH10	-76
EDAM10	2.59	2.179	10y-EDAM10	-79
EDAU10	2.91	1.859	10y-EDAU10	-81
EDAZ10	3.29	1.484	10y-EDAZ10	-83
EDAH11	3.63	1.144	10y-EDAH11	-85
EDAM11	3.98	0.794	10y-EDAM11	-87
EDAU11	4.29	0.479	10y-EDAU11	-89
EDAZ11	4.59	0.184	10y-EDAZ11	-90
EDAH12	4.80	0.026	10y-EDAH12	-91
EDAM12	4.99	0.221	10y-EDAM12	-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



	ED Duration as Fraction of year			
	10Y Duration	Spread Duration		
EDAU09	0.1857	8.3498	8.1642	10y-EDAU09
EDAZ09	0.4350	8.3498	7.9148	10y-EDAZ09
EDAH10	0.6843	8.3498	7.6655	10y-EDAH10
EDAM10	0.9336	8.3498	7.4162	10y-EDAM10
EDAU10	1.1829	8.3498	7.1669	10y-EDAU10
EDAZ10	1.4322	8.3498	6.9176	10y-EDAZ10
EDAH11	1.6815	8.3498	6.6683	10y-EDAH11
EDAM11	1.9309	8.3498	6.4190	10y-EDAM11
EDAU11	2.1993	8.3498	6.1505	10y-EDAU11
EDAZ11	2.4487	8.3498	5.9011	10y-EDAZ11
EDAH12	2.6980	8.3498	5.6518	10y-EDAH12
EDAM12	2.9473	8.3498	5.4025	10y-EDAM12

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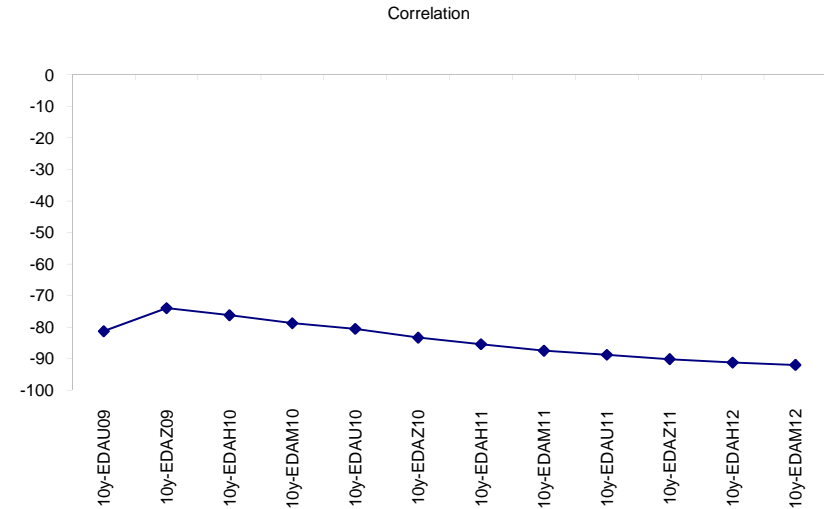


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

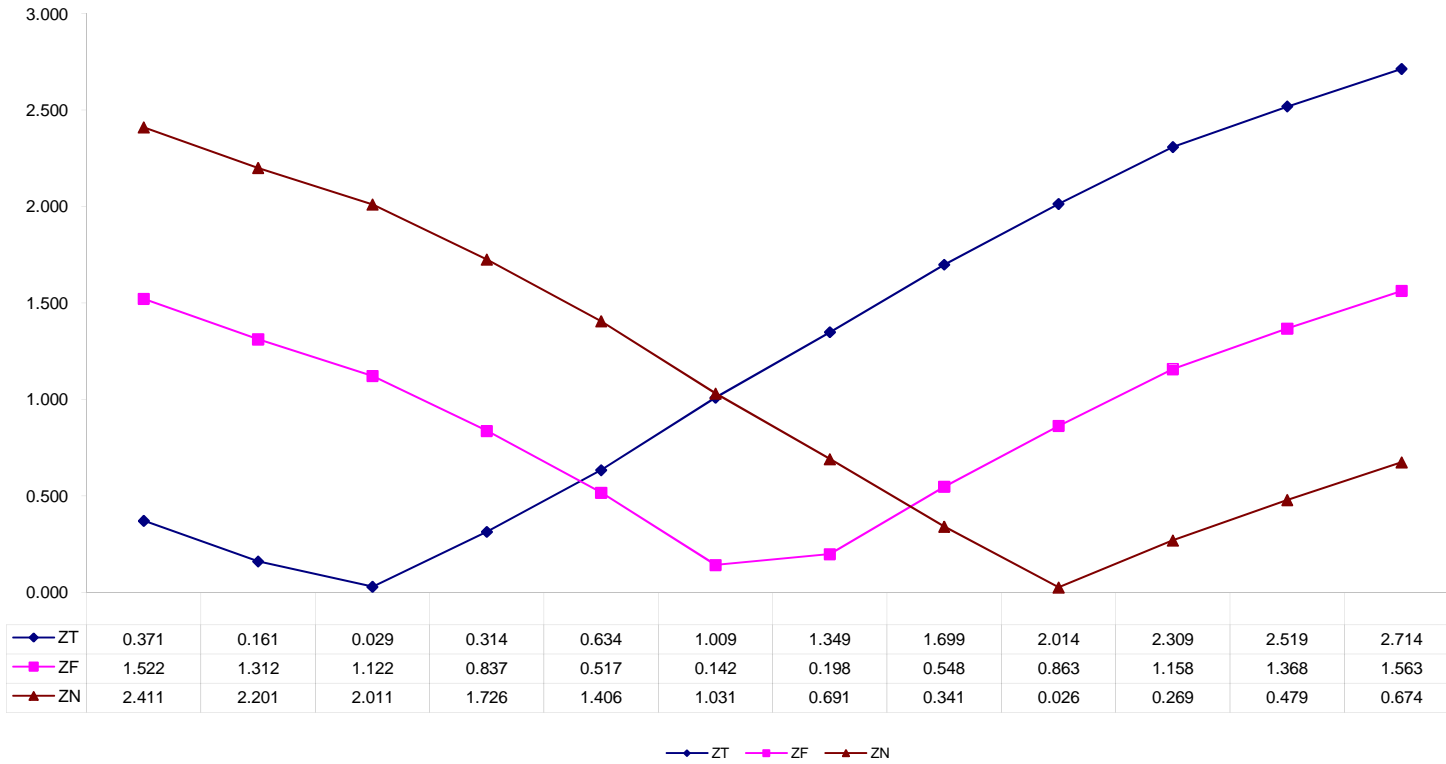
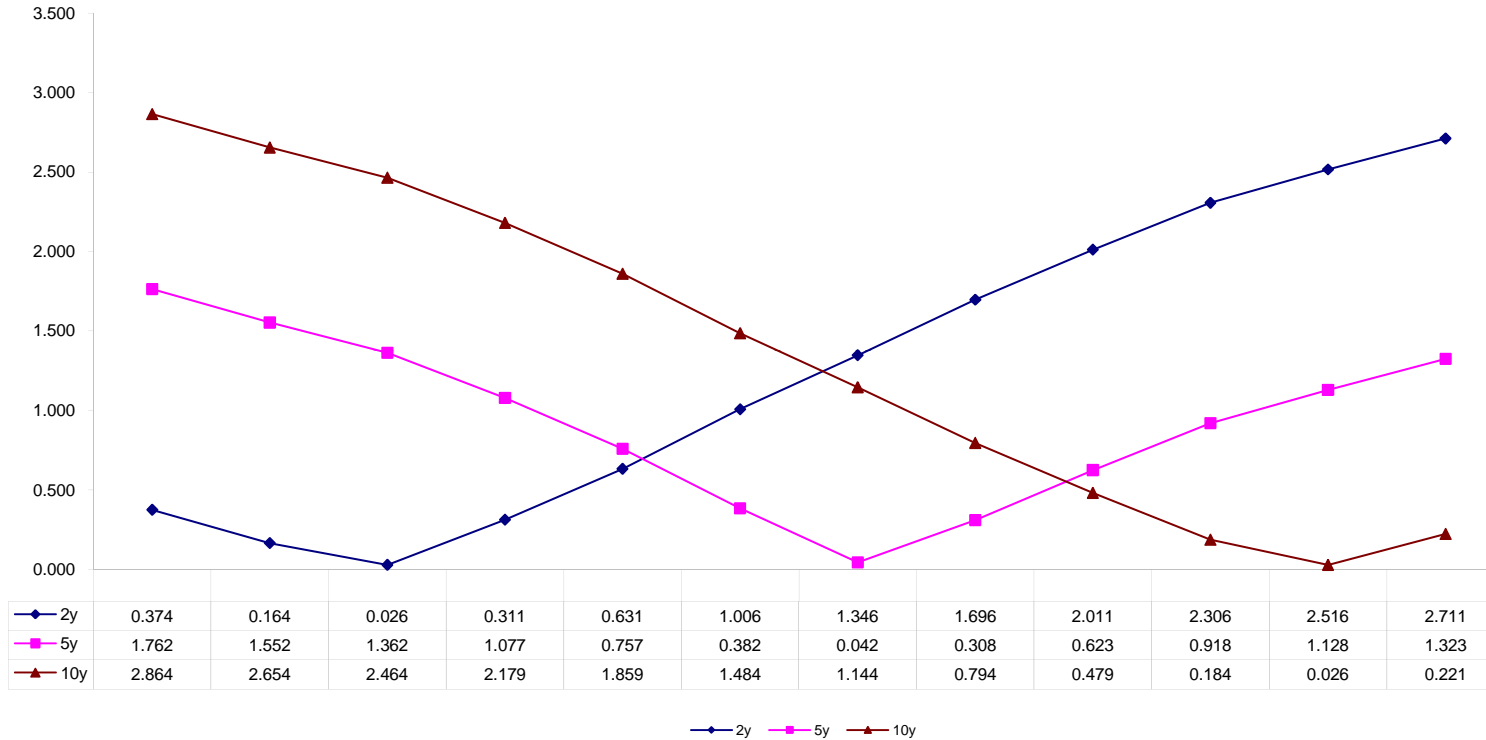
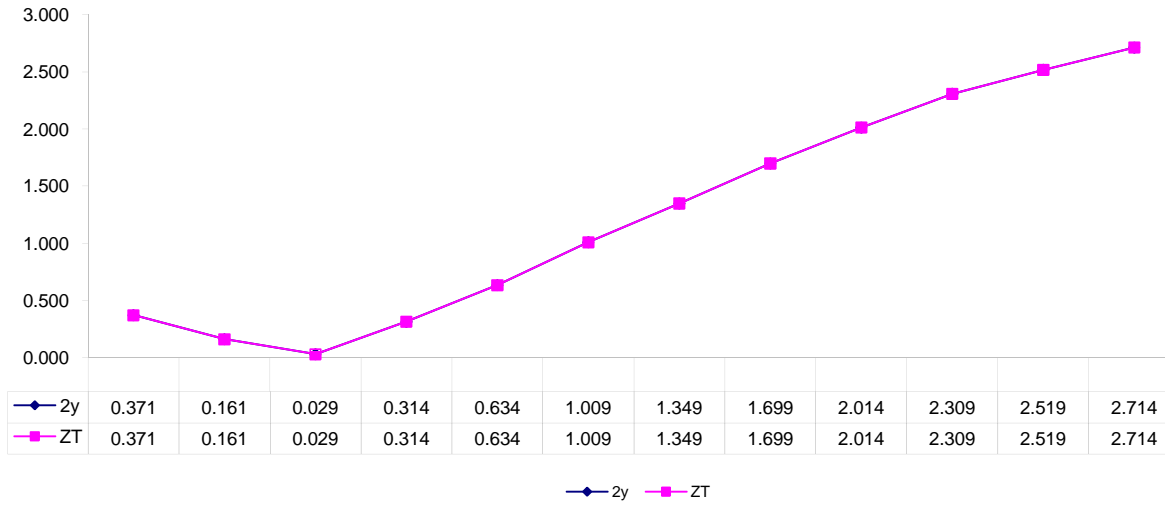
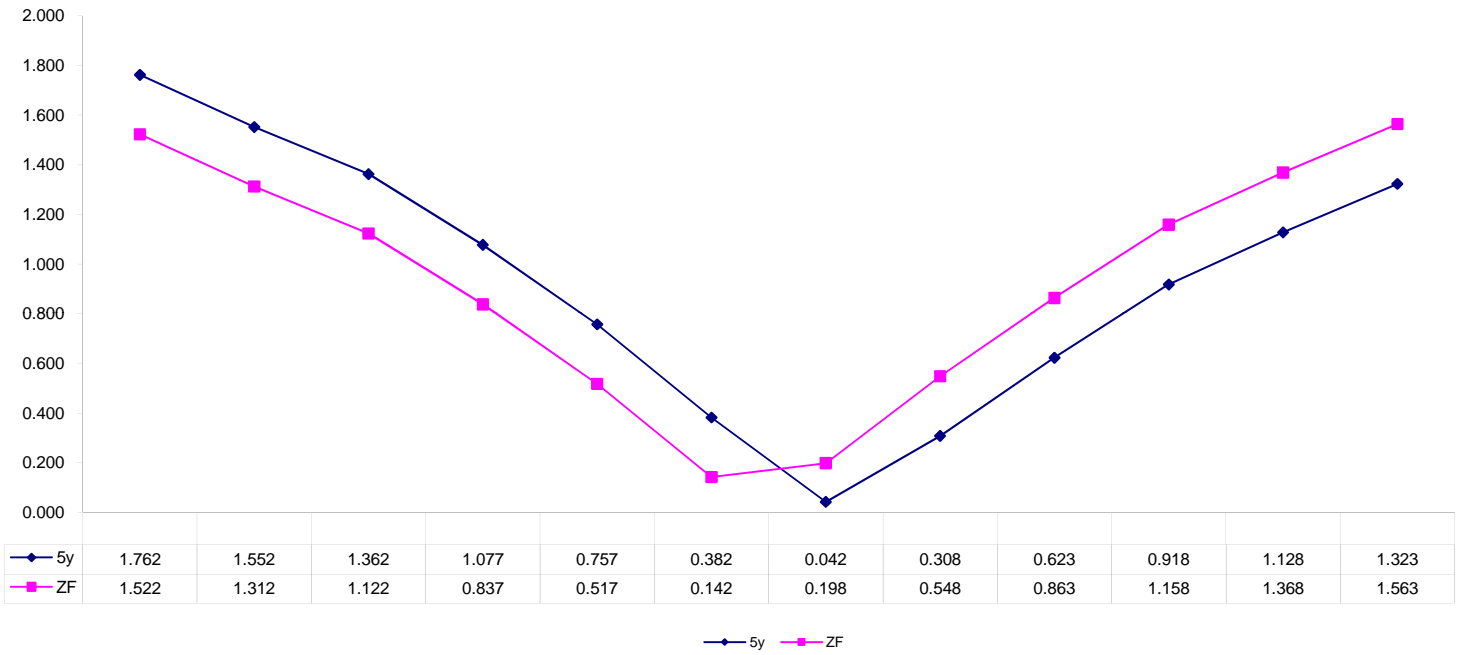


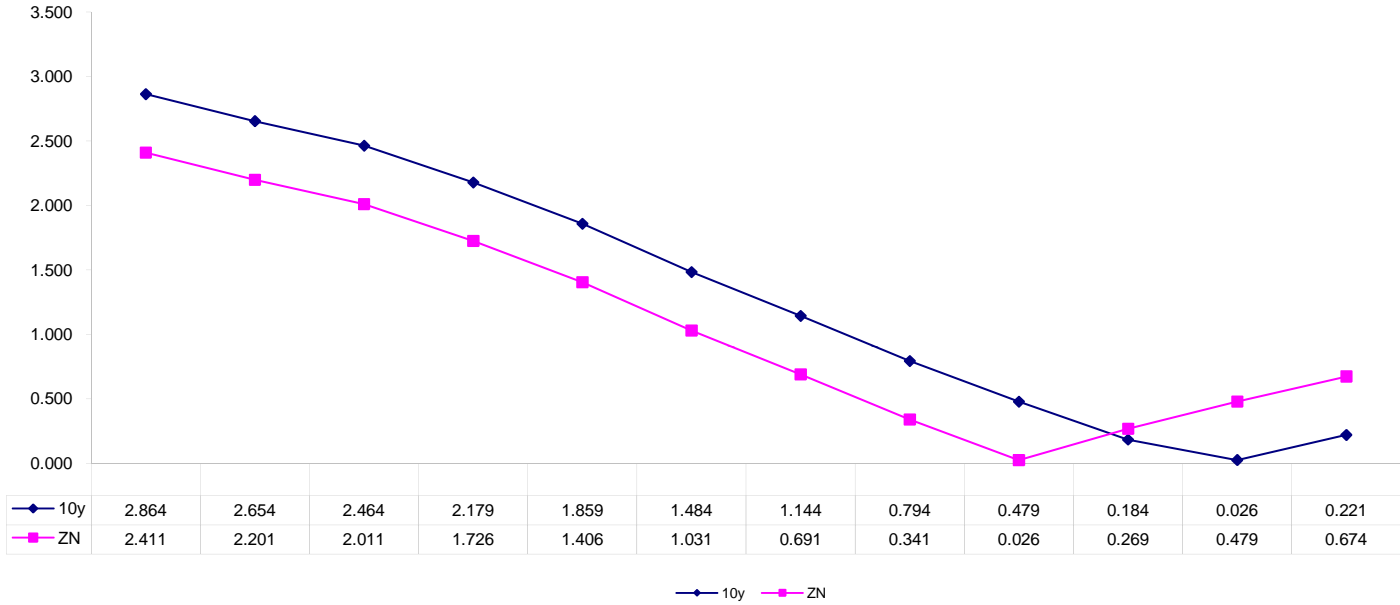
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	0.913	1.875	9910.1250
Red Pack	2.160	3.500	9788.1250
Green Pack	3.410	4.250	9666.5000
Blue Pack	4.125	4.125	9595.2500
Gold Pack	4.614	4.750	9550.0000

