

## 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	Last	Last	
	Decimal	€ 32.00	Yield*	MDuration
ZT	109.2406	109.0770	0.705	1.94
ZF	120.6469	120.2070	1.020	1.02
ZN	127.2813	127.0900	1.257	6.27
2y	100.3188	100.1020	0.705	1.94
5y	100.8281	100.2650	1.328	4.63
10y	113.9531	113.3050	2.165	8.29

Eurodollars (ED)						
	Last	Last Imp	Days til	Fraction	Month	
	Price	Yield	Expr.	of year		
EDAH09	99.025	0.975	60	0.164	MAR	
EDAM09	99.065	0.935	151	0.413	JUN	White Pack
EDAU09	99.000	1.000	242	0.662	SEP	
EDAZ09	98.840	1.160	333	0.912	DEC	
EDAH10	98.695	1.305	424	1.161	MAR	
EDAM10	98.450	1.550	515	1.410	JUN	Red Pack
EDAU10	98.225	1.775	606	1.660	SEP	
EDAZ10	98.005	1.995	697	1.909	DEC	
EDAH11	97.915	2.085	788	2.158	MAR	
EDAM11	97.820	2.180	879	2.408	JUN	Green Pack
EDAU11	97.725	2.275	977	2.676	SEP	
EDAZ11	97.625	2.375	1068	2.925	DEC	
EDAH12	97.605	2.395	1159	3.175	MAR	
EDAM12	97.575	2.425	1250	3.424	JUN	Blue Pack
EDAU12	97.560	2.440	1341	3.673	SEP	
EDAZ12	97.505	2.495	1432	3.923	DEC	
EDAH13	97.470	2.530	1523	4.172	MAR	
EDAM13	97.425	2.575	1614	4.421	JUN	Gold Pack
EDZU13	97.365	2.635	1705	4.671	SEP	
EDZZ13	97.250	2.750	1796	4.920	DEC	

	Last Yield	Net Yield	Last Price	
White Pack	1.034	-4.125	9898.250	Pack Prices
Red Pack	1.686	-1.750	9834.375	
Green Pack	2.272	-0.750	9777.125	
Blue Pack	2.488	0.750	9756.125	
Gold Pack		0.000	9737.625	

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.

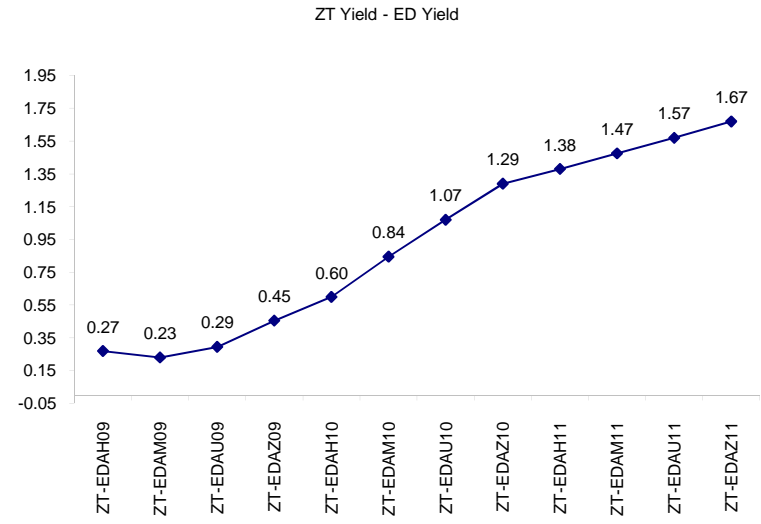
[jgoulding@ghco.com](mailto:jgoulding@ghco.com)

#### **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.

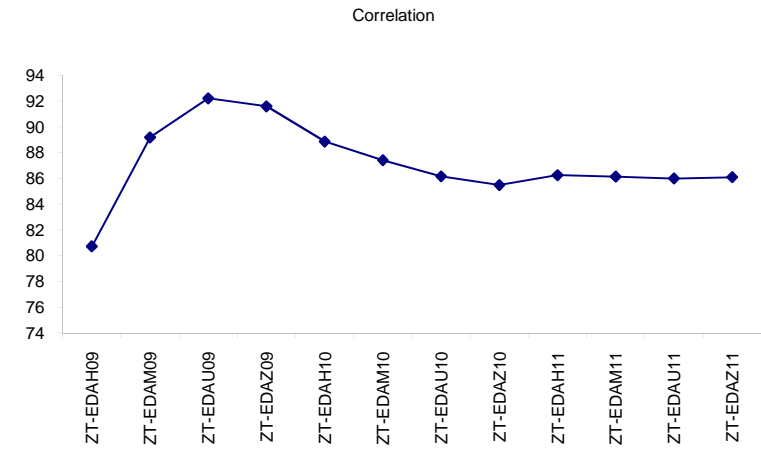
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	10.216	0.27	ZT-EDAH09	80.730
EDAM09	10.176	0.23	ZT-EDAM09	89.188
EDAU09	10.241	0.29	ZT-EDAU09	92.220
EDAZ09	10.401	0.45	ZT-EDAZ09	91.598
EDAH10	10.546	0.60	ZT-EDAH10	88.866
EDAM10	10.791	0.84	ZT-EDAM10	87.414
EDAU10	11.016	1.07	ZT-EDAU10	86.164
EDAZ10	11.236	1.29	ZT-EDAZ10	85.490
EDAH11	11.326	1.38	ZT-EDAH11	86.260
EDAM11	11.421	1.47	ZT-EDAM11	86.145
EDAU11	11.516	1.57	ZT-EDAU11	86.001
EDAZ11	11.616	1.67	ZT-EDAZ11	86.102

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	
EDAH09	0.164	1.94	1.77	ZT-EDAH09		
EDAM09	0.413	1.94	1.52	ZT-EDAM09		
EDAU09	0.662	1.94	1.27	ZT-EDAU09		
EDAZ09	0.912	1.94	1.02	ZT-EDAZ09		
EDAH10	1.161	1.94	0.78	ZT-EDAH10		
EDAM10	1.410	1.94	0.53	ZT-EDAM10		
EDAU10	1.660	1.94	0.28	ZT-EDAU10		
EDAZ10	1.909	1.94	0.03	ZT-EDAZ10		
EDAH11	2.158	1.94	(0.22)	ZT-EDAH11		
EDAM11	2.408	1.94	(0.47)	ZT-EDAM11		
EDAU11	2.676	1.94	(0.74)	ZT-EDAU11		
EDAZ11	2.925	1.94	(0.99)	ZT-EDAZ11		

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

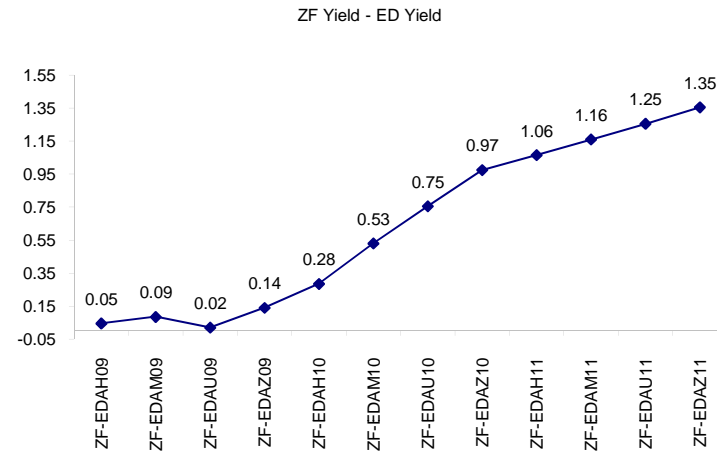


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	21.622	0.05	ZF-EDAH09	78.900
EDAM09	21.582	0.09	ZF-EDAM09	87.343
EDAU09	21.647	0.02	ZF-EDAU09	91.529
EDAZ09	21.807	0.14	ZF-EDAZ09	92.742
EDAH10	21.952	0.28	ZF-EDAH10	91.900
EDAM10	22.197	0.53	ZF-EDAM10	92.677
EDAU10	22.422	0.75	ZF-EDAU10	93.570
EDAZ10	22.642	0.97	ZF-EDAZ10	94.989
EDAH11	22.732	1.06	ZF-EDAH11	96.523
EDAM11	22.827	1.16	ZF-EDAM11	97.422
EDAU11	22.922	1.25	ZF-EDAU11	97.737
EDAZ11	23.022	1.35	ZF-EDAZ11	97.951

Price = Outright Decimal Price - Euro Contract Price

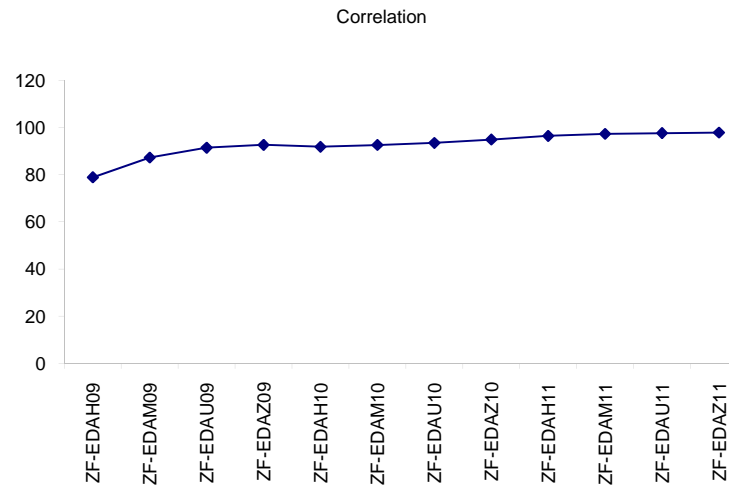
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		ZF Duration	Spread Duration	
EDAH09	0.164	1.02	0.86	ZF-EDAH09	
EDAM09	0.413	1.02	0.61	ZF-EDAM09	
EDAU09	0.662	1.02	0.36	ZF-EDAU09	
EDAZ09	0.912	1.02	0.11	ZF-EDAZ09	
EDAH10	1.161	1.02	(0.14)	ZF-EDAH10	
EDAM10	1.410	1.02	(0.39)	ZF-EDAM10	
EDAU10	1.660	1.02	(0.64)	ZF-EDAU10	
EDAZ10	1.909	1.02	(0.89)	ZF-EDAZ10	
EDAH11	2.158	1.02	(1.14)	ZF-EDAH11	
EDAM11	2.408	1.02	(1.39)	ZF-EDAM11	
EDAU11	2.676	1.02	(1.66)	ZF-EDAU11	
EDAZ11	2.925	1.02	(1.91)	ZF-EDAZ11	

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

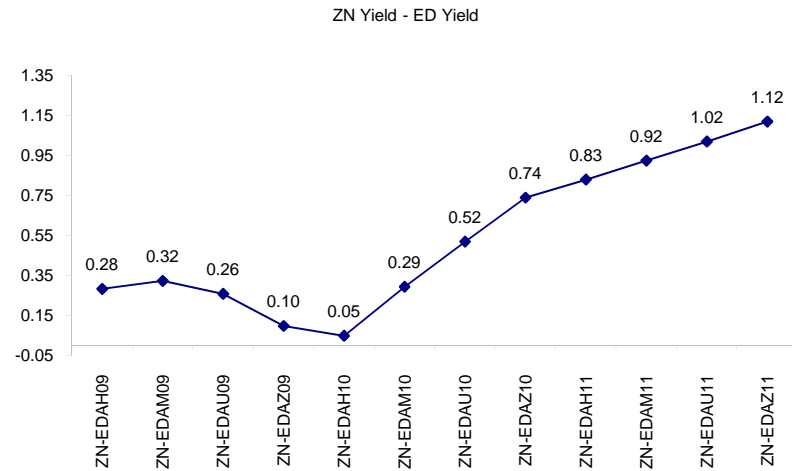


ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	28.256	0.28	ZN-EDAH09	73.198
EDAM09	28.216	0.32	ZN-EDAM09	80.266
EDAU09	28.281	0.26	ZN-EDAU09	84.224
EDAZ09	28.441	0.10	ZN-EDAZ09	85.826
EDAH10	28.586	0.05	ZN-EDAH10	85.144
EDAM10	28.831	0.29	ZN-EDAM10	86.615
EDAU10	29.056	0.52	ZN-EDAU10	88.479
EDAZ10	29.276	0.74	ZN-EDAZ10	91.330
EDAH11	29.366	0.83	ZN-EDAH11	93.719
EDAM11	29.461	0.92	ZN-EDAM11	95.613
EDAU11	29.556	1.02	ZN-EDAU11	96.269
EDAZ11	29.656	1.12	ZN-EDAZ11	96.732

Price = Outright Decimal Price - Euro Contract Price

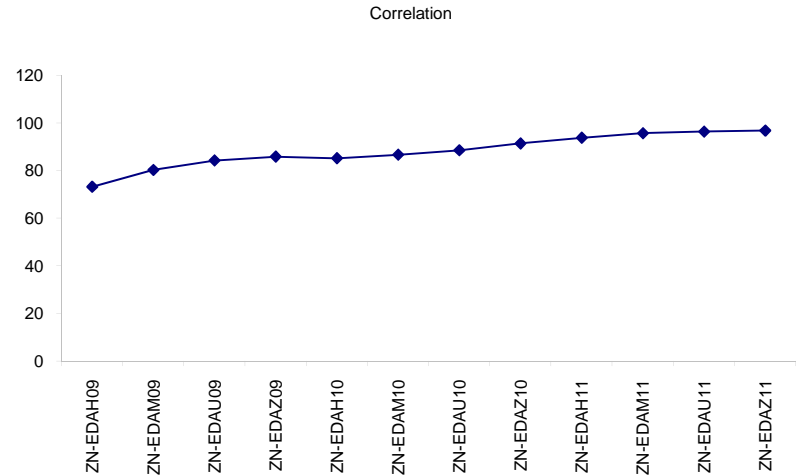
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



ED Duration as Fraction of year				ZN Duration	Spread Duration	
EDAH09	0.164	6.27	6.11	ZN-EDAH09		
EDAM09	0.413	6.27	5.86	ZN-EDAM09		
EDAU09	0.662	6.27	5.61	ZN-EDAU09		
EDAZ09	0.912	6.27	5.36	ZN-EDAZ09		
EDAH10	1.161	6.27	5.11	ZN-EDAH10		
EDAM10	1.410	6.27	4.86	ZN-EDAM10		
EDAU10	1.660	6.27	4.61	ZN-EDAU10		
EDAZ10	1.909	6.27	4.36	ZN-EDAZ10		
EDAH11	2.158	6.27	4.11	ZN-EDAH11		
EDAM11	2.408	6.27	3.86	ZN-EDAM11		
EDAU11	2.676	6.27	3.59	ZN-EDAU11		
EDAZ11	2.925	6.27	3.34	ZN-EDAZ11		

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



	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.294	0.27	2y-EDAH09	-54.917
EDAM09	1.254	0.23	2y-EDAM09	-64.197
EDAU09	1.319	0.29	2y-EDAU09	-69.329
EDAZ09	1.479	0.45	2y-EDAZ09	-69.574
EDAH10	1.624	0.60	2y-EDAH10	-66.605
EDAM10	1.869	0.84	2y-EDAM10	-66.962
EDAU10	2.094	1.07	2y-EDAU10	-68.368
EDAZ10	2.314	1.29	2y-EDAZ10	-70.533
EDAH11	2.404	1.38	2y-EDAH11	-73.094
EDAM11	2.499	1.47	2y-EDAM11	-74.493
EDAU11	2.594	1.57	2y-EDAU11	-73.577
EDAZ11	2.694	1.67	2y-EDAZ11	-73.151

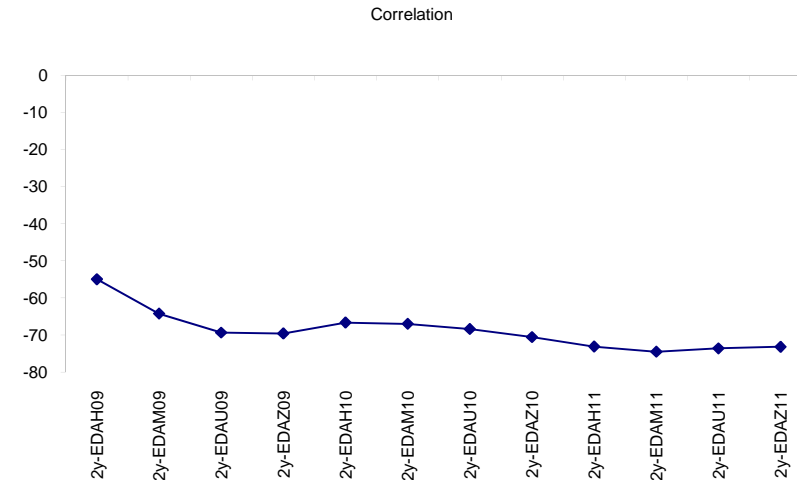
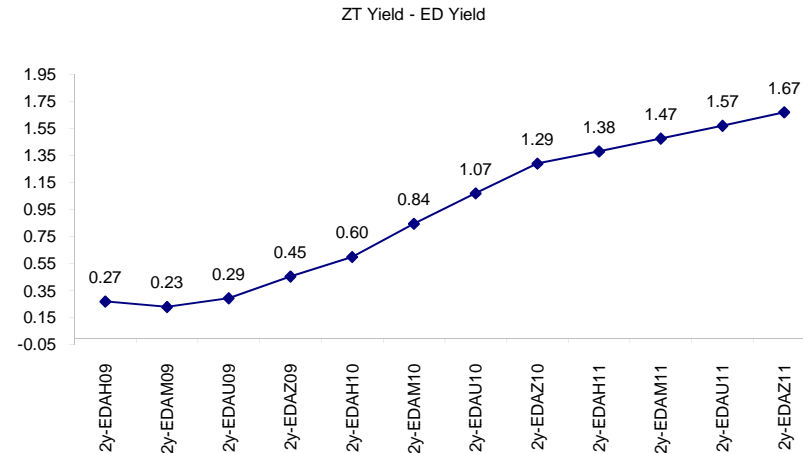
Price = Outright Decimal Price - Euro Contract Price

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

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

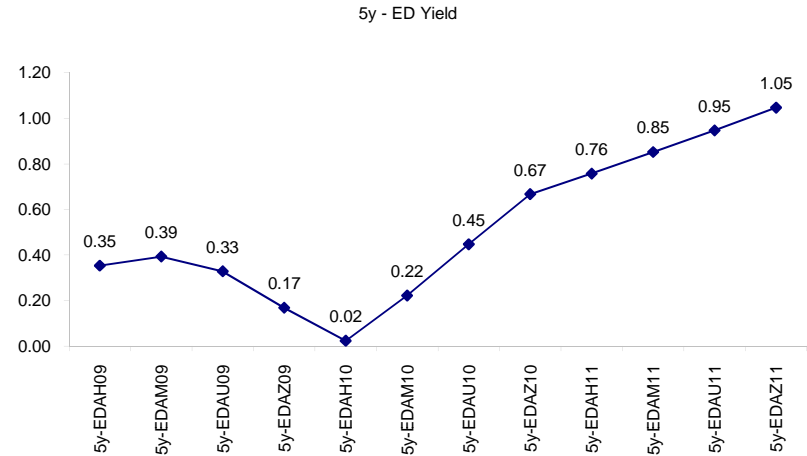
	ED Duration as Fraction of year		2Y Duration	Spread Duration	
EDAH09	0.164	1.94	1.77	2y-EDAH09	
EDAM09	0.413	1.94	1.52	2y-EDAM09	
EDAU09	0.662	1.94	1.27	2y-EDAU09	
EDAZ09	0.912	1.94	1.02	2y-EDAZ09	
EDAH10	1.161	1.94	0.78	2y-EDAH10	
EDAM10	1.410	1.94	0.53	2y-EDAM10	
EDAU10	1.660	1.94	0.28	2y-EDAU10	
EDAZ10	1.909	1.94	0.03	2y-EDAZ10	
EDAH11	2.158	1.94	(0.22)	2y-EDAH11	
EDAM11	2.408	1.94	(0.47)	2y-EDAM11	
EDAU11	2.676	1.94	(0.74)	2y-EDAU11	
EDAZ11	2.925	1.94	(0.99)	2y-EDAZ11	

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



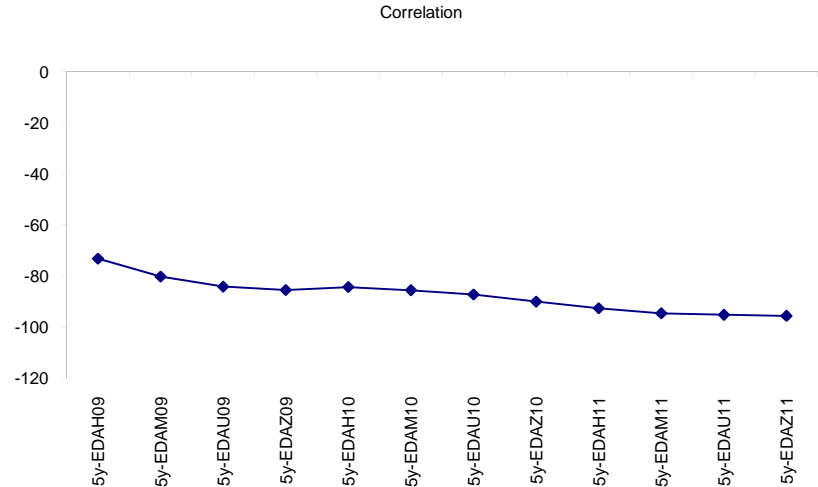
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.803	0.35	5y-EDAH09	-73.115
EDAM09	1.763	0.39	5y-EDAM09	-80.143
EDAU09	1.828	0.33	5y-EDAU09	-84.101
EDAZ09	1.988	0.17	5y-EDAZ09	-85.424
EDAH10	2.133	0.02	5y-EDAH10	-84.253
EDAM10	2.378	0.22	5y-EDAM10	-85.500
EDAU10	2.603	0.45	5y-EDAU10	-87.192
EDAZ10	2.823	0.67	5y-EDAZ10	-89.990
EDAH11	2.913	0.76	5y-EDAH11	-92.600
EDAM11	3.008	0.85	5y-EDAM11	-94.595
EDAU11	3.103	0.95	5y-EDAU11	-95.159
EDAZ11	3.203	1.05	5y-EDAZ11	-95.606

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	
EDAH09	0.164		4.63	4.47	5y-EDAH09
EDAM09	0.413		4.63	4.22	5y-EDAM09
EDAU09	0.662		4.63	3.97	5y-EDAU09
EDAZ09	0.912		4.63	3.72	5y-EDAZ09
EDAH10	1.161		4.63	3.47	5y-EDAH10
EDAM10	1.410		4.63	3.22	5y-EDAM10
EDAU10	1.660		4.63	2.97	5y-EDAU10
EDAZ10	1.909		4.63	2.72	5y-EDAZ10
EDAH11	2.158		4.63	2.47	5y-EDAH11
EDAM11	2.408		4.63	2.22	5y-EDAM11
EDAU11	2.676		4.63	1.95	5y-EDAU11
EDAZ11	2.925		4.63	1.70	5y-EDAZ11

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

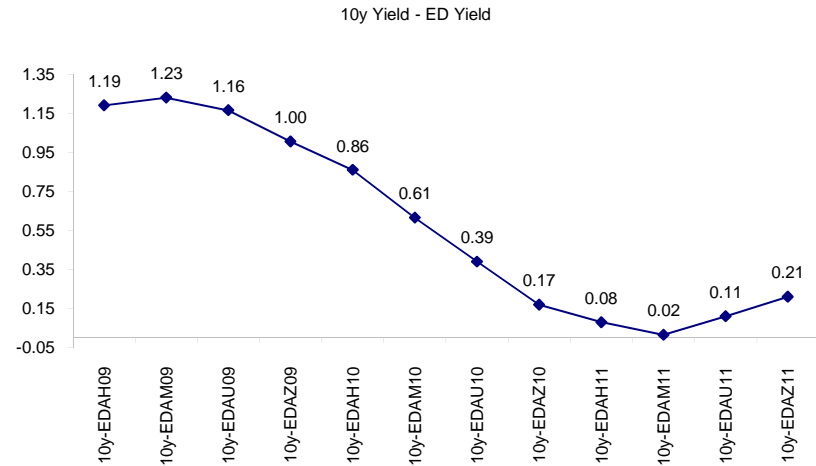


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.803	1.19	10y-EDAH09	-46.006
EDAM09	1.763	1.23	10y-EDAM09	-51.395
EDAU09	1.828	1.16	10y-EDAU09	-55.778
EDAZ09	1.988	1.00	10y-EDAZ09	-57.841
EDAH10	2.133	0.86	10y-EDAH10	-56.624
EDAM10	2.378	0.61	10y-EDAM10	-59.412
EDAU10	2.603	0.39	10y-EDAU10	-63.555
EDAZ10	2.823	0.17	10y-EDAZ10	-69.500
EDAH11	2.913	0.08	10y-EDAH11	-74.201
EDAM11	3.008	0.02	10y-EDAM11	-78.252
EDAU11	3.103	0.11	10y-EDAU11	-78.872
EDAZ11	3.203	0.21	10y-EDAZ11	-79.386

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		
EDAH09	0.164	8.29	8.13	10y-EDAH09
EDAM09	0.413	8.29	7.88	10y-EDAM09
EDAU09	0.662	8.29	7.63	10y-EDAU09
EDAZ09	0.912	8.29	7.38	10y-EDAZ09
EDAH10	1.161	8.29	7.13	10y-EDAH10
EDAM10	1.410	8.29	6.88	10y-EDAM10
EDAU10	1.660	8.29	6.63	10y-EDAU10
EDAZ10	1.909	8.29	6.38	10y-EDAZ10
EDAH11	2.158	8.29	6.13	10y-EDAH11
EDAM11	2.408	8.29	5.88	10y-EDAM11
EDAU11	2.676	8.29	5.61	10y-EDAU11
EDAZ11	2.925	8.29	5.37	10y-EDAZ11

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

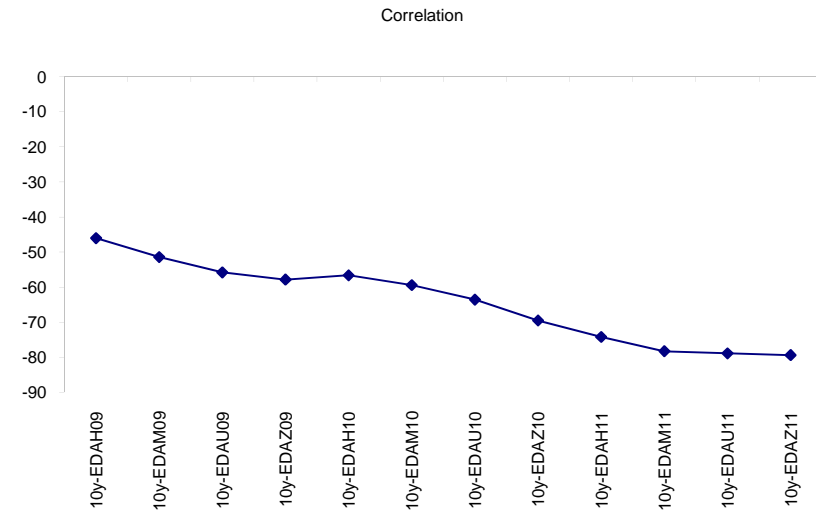


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

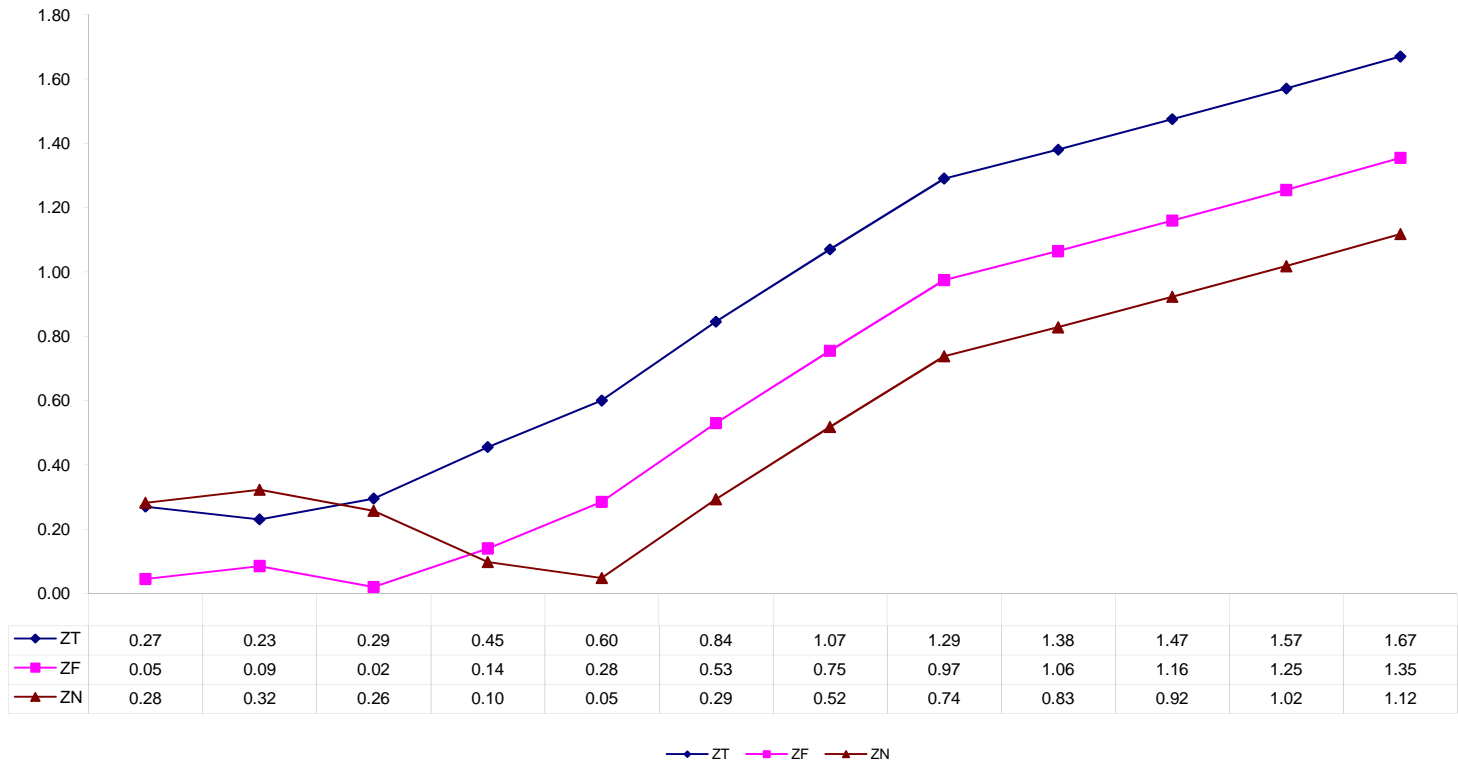
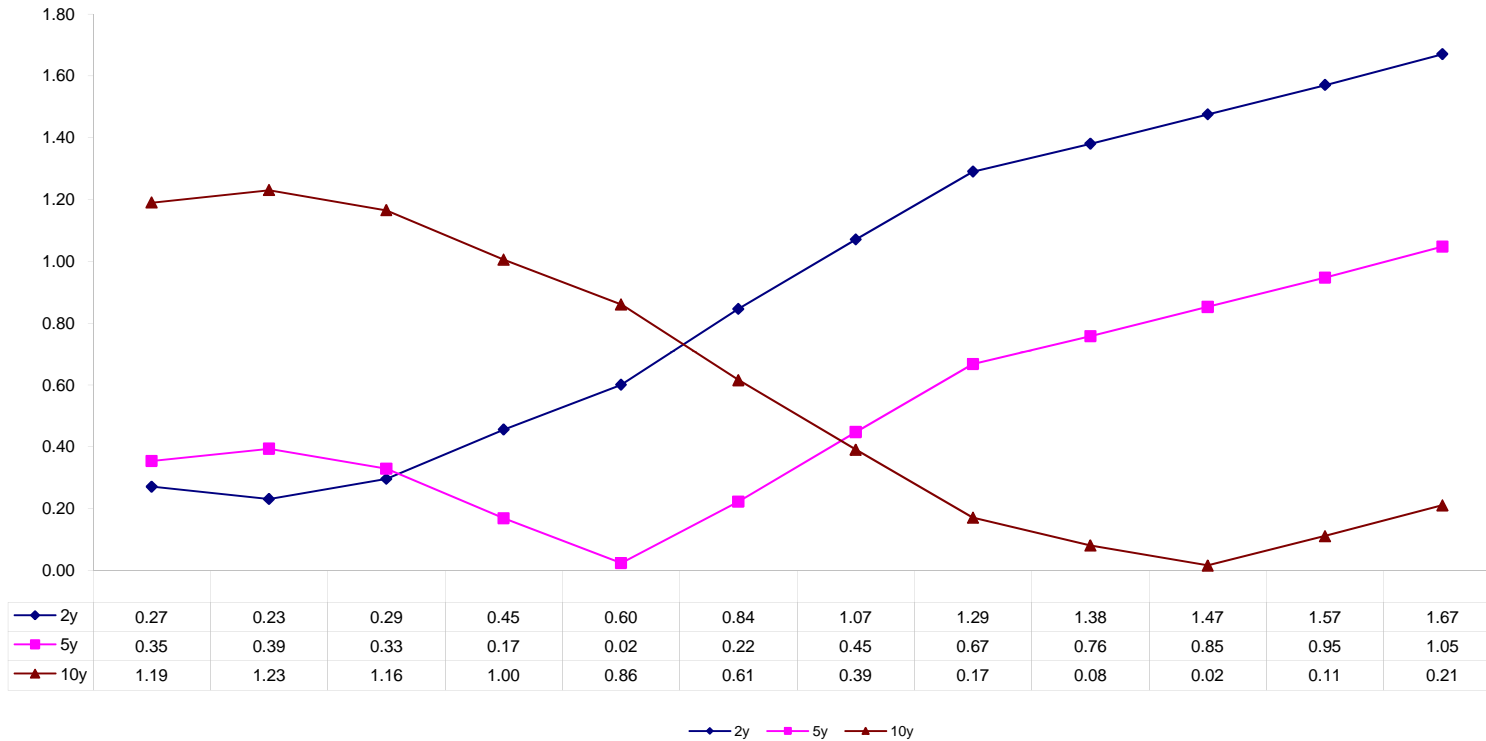
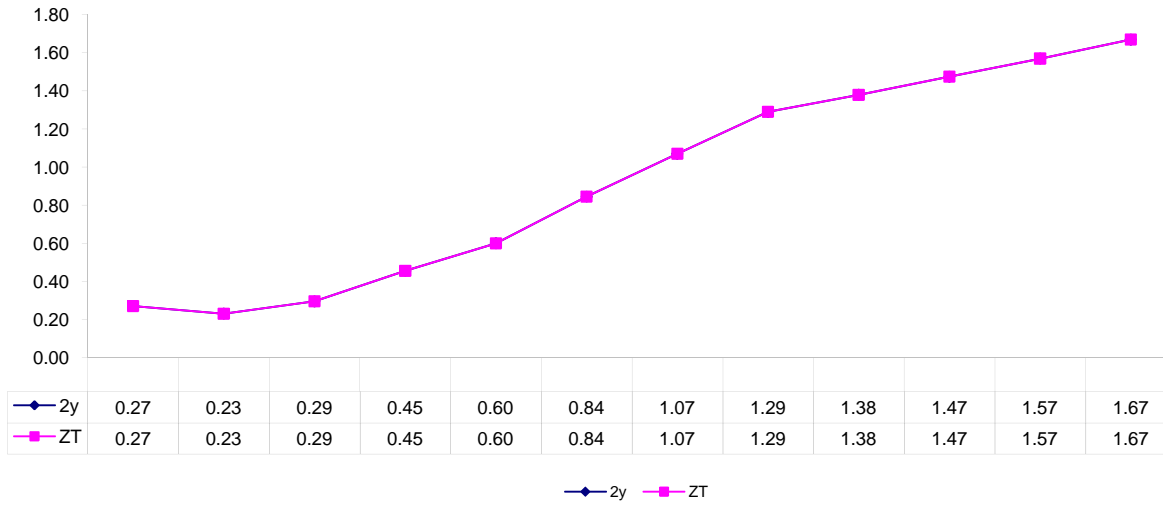
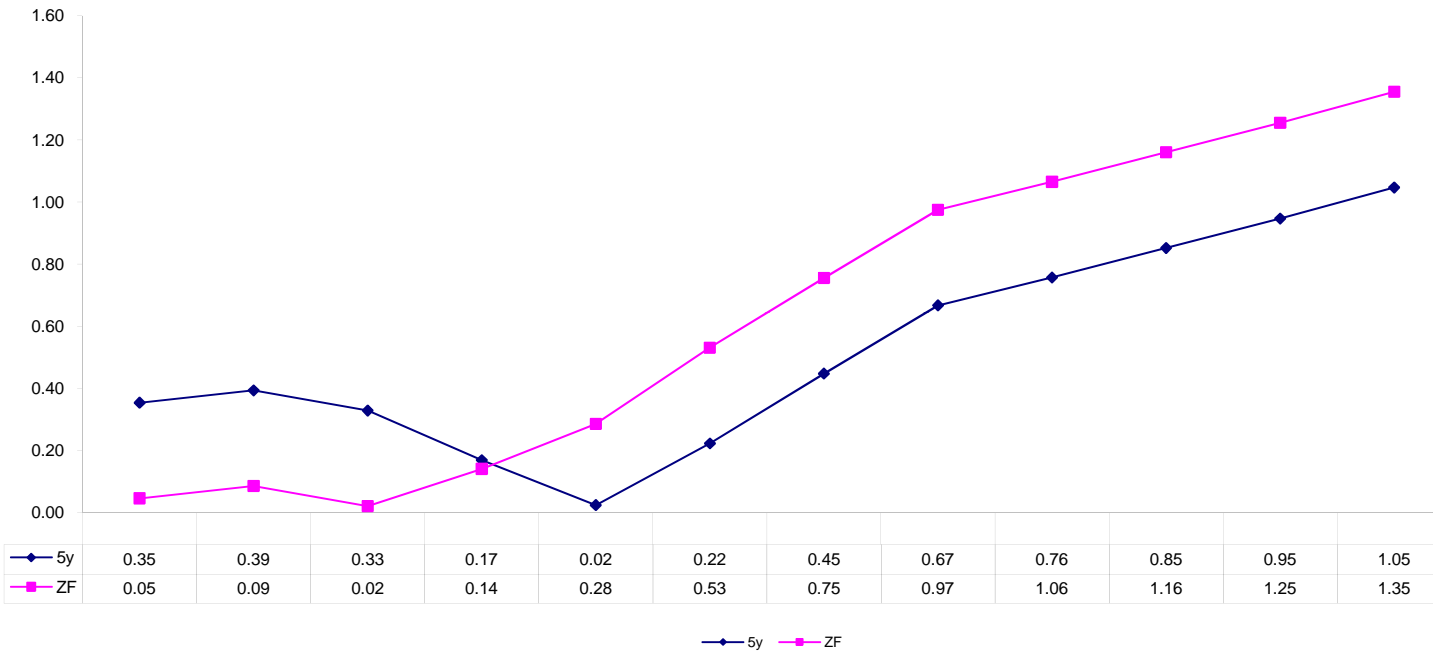


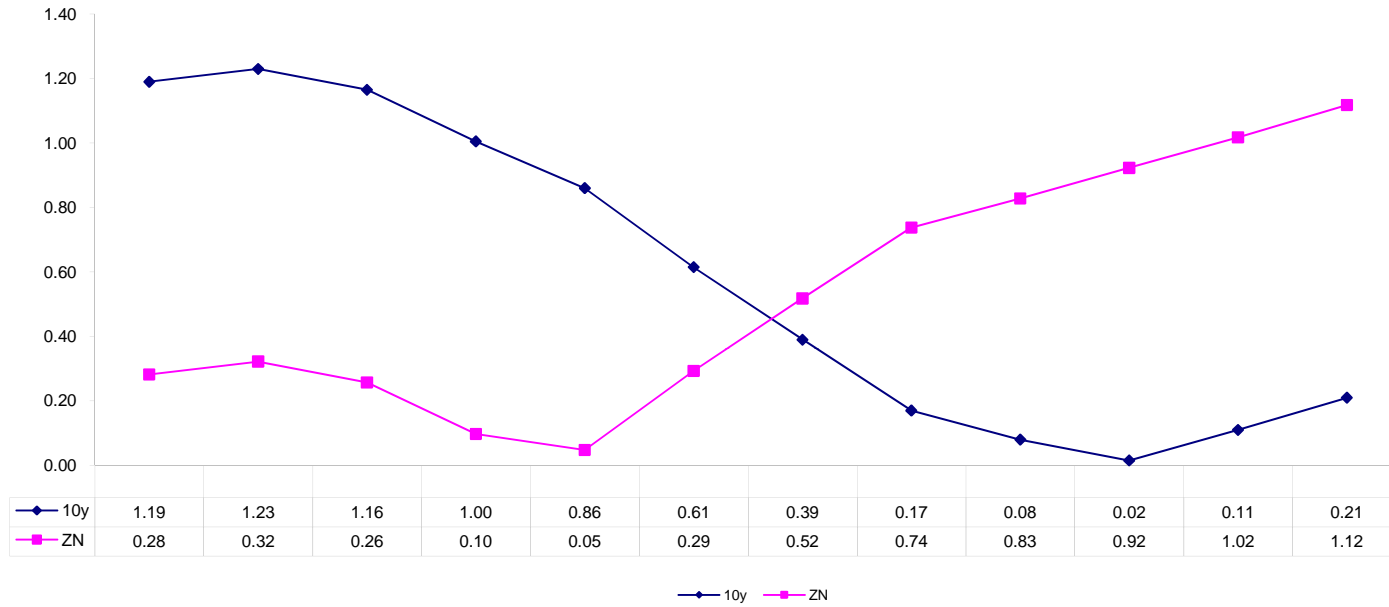
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	1.034	-4.125	9898.250
Red Pack	1.686	-1.750	9834.375
Green Pack	2.272	-0.750	9777.125
Blue Pack	2.488	0.750	9756.125
Gold Pack		0.000	9737.625

