

## **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	Last	Last	
	Decimal	€ 32.00	Yield*	MDuration
ZT	108.6719	108.2150	0.852	1.902
ZF	117.8125	117.2600	1.636	1.636
ZN	122.4219	122.1350	2.459	5.963
2y	99.9750	99.3120	0.891	1.954
5y	99.6406	99.2050	1.828	4.741
10y	98.9375	98.3000	2.873	8.534

Eurodollars (ED)						
	Last	Last Imp	Days til	Fraction	Month	
	Price	Yield	Expr.	of year		
EDAM09	98.9250	1.075	68	0.1856	JUN	
EDAU09	98.8800	1.120	159	0.4350	SEP	White Pack
EDAZ09	98.6800	1.320	250	0.6843	DEC	
EDAH10	98.5800	1.420	341	0.9336	MAR	
EDAM10	98.3900	1.610	432	1.1829	JUN	
EDAU10	98.2100	1.790	523	1.4322	SEP	Red Pack
EDAZ10	97.9950	2.005	614	1.6815	DEC	
EDAH11	97.8250	2.175	705	1.9308	MAR	
EDAM11	97.6100	2.390	796	2.1802	JUN	
EDAU11	97.4000	2.600	894	2.4487	SEP	Green Pack
EDAZ11	97.1900	2.810	985	2.6980	DEC	
EDAH12	97.0250	2.975	1,076	2.9473	MAR	
EDAM12	96.8700	3.130	1,167	3.1966	JUN	
EDAU12	96.7600	3.240	1,258	3.4459	SEP	Blue Pack
EDAZ12	96.6100	3.390	1,349	3.6952	DEC	
EDAH13	96.5700	3.430	1,440	3.9445	MAR	
EDAM13	96.4800	3.520	1,531	4.1939	JUN	
EDAU13	96.3600	3.640	1,622	4.4432	SEP	Gold Pack
EDAZ13	96.2450	3.755	1,713	4.6925	DEC	
EDAH14	96.2000	3.800	1,804	4.9418	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	1.255	3.625	9876.63	
Red Pack	1.931	4.500	9810.50	Pack Prices
Green Pack	2.750	4.750	9730.63	
Blue Pack	3.371	4.125	9670.25	
Gold Pack		1.250	9632.00	

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:**

- 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)**

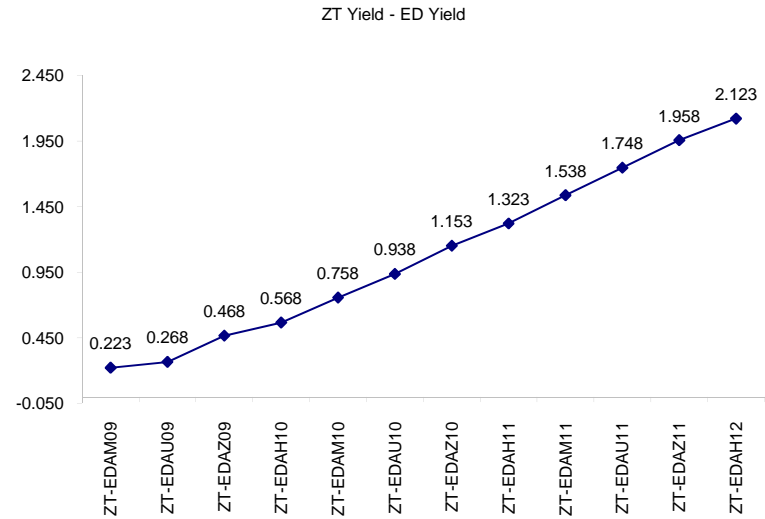
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based on yield than price.

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.75	0.223	ZT-EDAM09	1
EDAU09	9.79	0.268	ZT-EDAU09	72
EDAZ09	9.99	0.468	ZT-EDAZ09	96
EDAH10	10.09	0.568	ZT-EDAH10	97
EDAM10	10.28	0.758	ZT-EDAM10	96
EDAU10	10.46	0.938	ZT-EDAU10	96
EDAZ10	10.68	1.153	ZT-EDAZ10	96
EDAH11	10.85	1.323	ZT-EDAH11	95
EDAM11	11.06	1.538	ZT-EDAM11	95
EDAU11	11.27	1.748	ZT-EDAU11	95
EDAZ11	11.48	1.958	ZT-EDAZ11	95
EDAH12	11.65	2.123	ZT-EDAH12	93

Price = Outright Decimal Price - Euro Contract Price

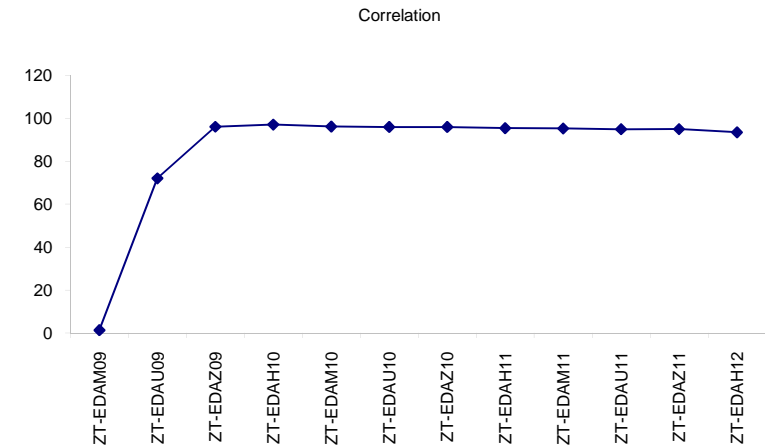
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



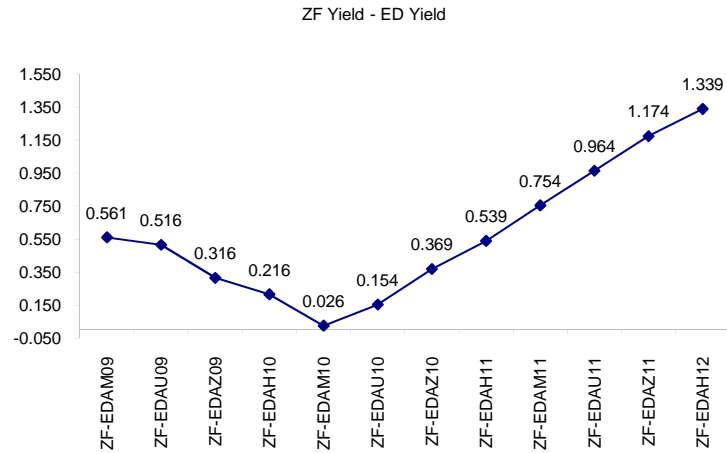
	ED Duration as Fraction of year			ZT Duration	Spread Duration	
EDAM09	0.1856	1.9016	1.7160	ZT-EDAM09		
EDAU09	0.4350	1.9016	1.4667	ZT-EDAU09		
EDAZ09	0.6843	1.9016	1.2174	ZT-EDAZ09		
EDAH10	0.9336	1.9016	0.9680	ZT-EDAH10		
EDAM10	1.1829	1.9016	0.7187	ZT-EDAM10		
EDAU10	1.4322	1.9016	0.4694	ZT-EDAU10		
EDAZ10	1.6815	1.9016	0.2201	ZT-EDAZ10		
EDAH11	1.9308	1.9016	-0.0292	ZT-EDAH11		
EDAM11	2.1802	1.9016	-0.2785	ZT-EDAM11		
EDAU11	2.4487	1.9016	-0.5470	ZT-EDAU11		
EDAZ11	2.6980	1.9016	-0.7963	ZT-EDAZ11		
EDAH12	2.9473	1.9016	-1.0457	ZT-EDAH12		

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



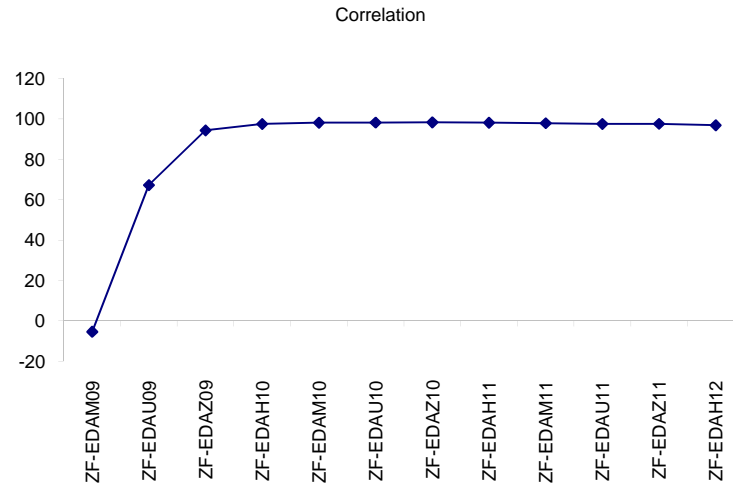
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	18.89	0.561	ZF-EDAM09	-5
EDAU09	18.93	0.516	ZF-EDAU09	67
EDAZ09	19.13	0.316	ZF-EDAZ09	94
EDAH10	19.23	0.216	ZF-EDAH10	98
EDAM10	19.42	0.026	ZF-EDAM10	98
EDAU10	19.60	0.154	ZF-EDAU10	98
EDAZ10	19.82	0.369	ZF-EDAZ10	98
EDAH11	19.99	0.539	ZF-EDAH11	98
EDAM11	20.20	0.754	ZF-EDAM11	98
EDAU11	20.41	0.964	ZF-EDAU11	98
EDAZ11	20.62	1.174	ZF-EDAZ11	98
EDAH12	20.79	1.339	ZF-EDAH12	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	
EDAM09	0.1856	1.6356	1.4500	1.4500	ZF-EDAM09
EDAU09	0.4350	1.6356	1.2007	1.2007	ZF-EDAU09
EDAZ09	0.6843	1.6356	0.9514	0.9514	ZF-EDAZ09
EDAH10	0.9336	1.6356	0.7021	0.7021	ZF-EDAH10
EDAM10	1.1829	1.6356	0.4527	0.4527	ZF-EDAM10
EDAU10	1.4322	1.6356	0.2034	0.2034	ZF-EDAU10
EDAZ10	1.6815	1.6356	-0.0459	-0.0459	ZF-EDAZ10
EDAH11	1.9308	1.6356	-0.2952	-0.2952	ZF-EDAH11
EDAM11	2.1802	1.6356	-0.5445	-0.5445	ZF-EDAM11
EDAU11	2.4487	1.6356	-0.8130	-0.8130	ZF-EDAU11
EDAZ11	2.6980	1.6356	-1.0623	-1.0623	ZF-EDAZ11
EDAH12	2.9473	1.6356	-1.3116	-1.3116	ZF-EDAH12

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

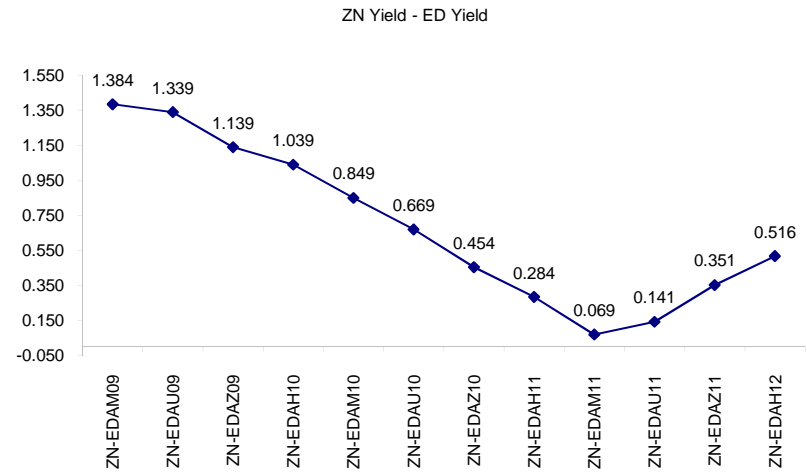


	ZN			Correlation*
	Spread Price	Spread Yield	Spread Name	(percent)
EDAM09	23.50	1.384	ZN-EDAM09	-22
EDAU09	23.54	1.339	ZN-EDAU09	55
EDAZ09	23.74	1.139	ZN-EDAZ09	91
EDAH10	23.84	1.039	ZN-EDAH10	96
EDAM10	24.03	0.849	ZN-EDAM10	97
EDAU10	24.21	0.669	ZN-EDAU10	97
EDAZ10	24.43	0.454	ZN-EDAZ10	97
EDAH11	24.60	0.284	ZN-EDAH11	97
EDAM11	24.81	0.069	ZN-EDAM11	97
EDAU11	25.02	0.141	ZN-EDAU11	97
EDAZ11	25.23	0.351	ZN-EDAZ11	97
EDAH12	25.40	0.516	ZN-EDAH12	97

Price = Outright Decimal Price - Euro Contract Price

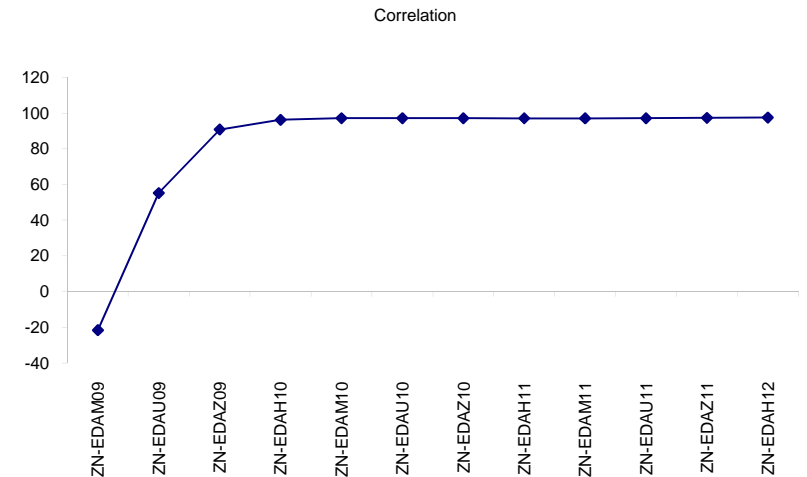
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



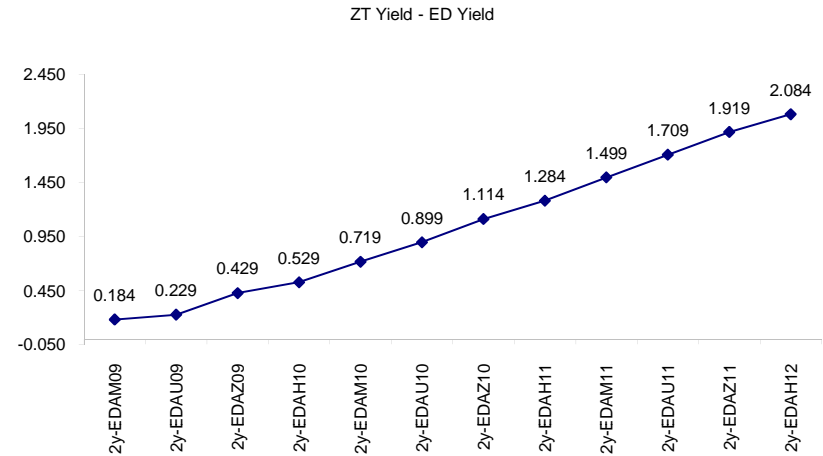
	ED Duration as Fraction of year			ZN Duration	Spread Duration
EDAM09	0.1856	5.9625	5.7769	ZN-EDAM09	
EDAU09	0.4350	5.9625	5.5276	ZN-EDAU09	
EDAZ09	0.6843	5.9625	5.2783	ZN-EDAZ09	
EDAH10	0.9336	5.9625	5.0290	ZN-EDAH10	
EDAM10	1.1829	5.9625	4.7796	ZN-EDAM10	
EDAU10	1.4322	5.9625	4.5303	ZN-EDAU10	
EDAZ10	1.6815	5.9625	4.2810	ZN-EDAZ10	
EDAH11	1.9308	5.9625	4.0317	ZN-EDAH11	
EDAM11	2.1802	5.9625	3.7824	ZN-EDAM11	
EDAU11	2.4487	5.9625	3.5139	ZN-EDAU11	
EDAZ11	2.6980	5.9625	3.2646	ZN-EDAZ11	
EDAH12	2.9473	5.9625	3.0153	ZN-EDAH12	

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



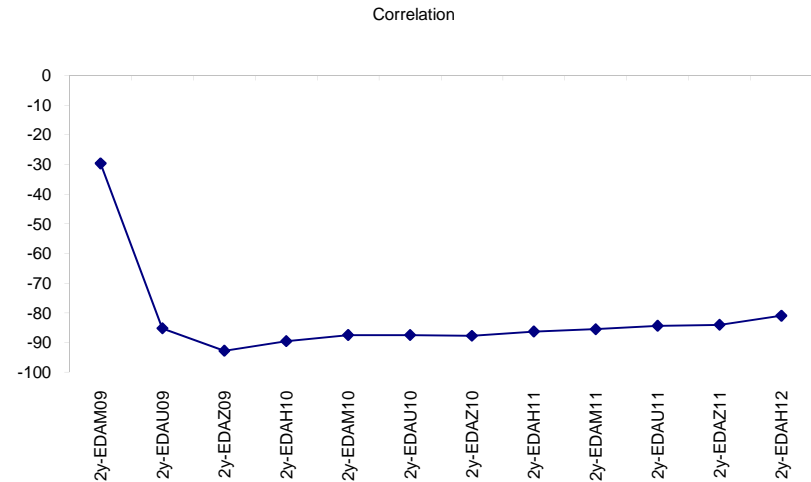
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	1.05	0.184	2y-EDAM09	-30
EDAU09	1.10	0.229	2y-EDAU09	-85
EDAZ09	1.29	0.429	2y-EDAZ09	-93
EDAH10	1.40	0.529	2y-EDAH10	-90
EDAM10	1.58	0.719	2y-EDAM10	-87
EDAU10	1.76	0.899	2y-EDAU10	-87
EDAZ10	1.98	1.114	2y-EDAZ10	-88
EDAH11	2.15	1.284	2y-EDAH11	-86
EDAM11	2.36	1.499	2y-EDAM11	-86
EDAU11	2.57	1.709	2y-EDAU11	-84
EDAZ11	2.79	1.919	2y-EDAZ11	-84
EDAH12	2.95	2.084	2y-EDAH12	-81

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		
EDAM09	0.1856	1.9537	1.7680	2y-EDAM09
EDAU09	0.4350	1.9537	1.5187	2y-EDAU09
EDAZ09	0.6843	1.9537	1.2694	2y-EDAZ09
EDAH10	0.9336	1.9537	1.0201	2y-EDAH10
EDAM10	1.1829	1.9537	0.7708	2y-EDAM10
EDAU10	1.4322	1.9537	0.5215	2y-EDAU10
EDAZ10	1.6815	1.9537	0.2721	2y-EDAZ10
EDAH11	1.9308	1.9537	0.0228	2y-EDAH11
EDAM11	2.1802	1.9537	-0.2265	2y-EDAM11
EDAU11	2.4487	1.9537	-0.4950	2y-EDAU11
EDAZ11	2.6980	1.9537	-0.7443	2y-EDAZ11
EDAH12	2.9473	1.9537	-0.9936	2y-EDAH12

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

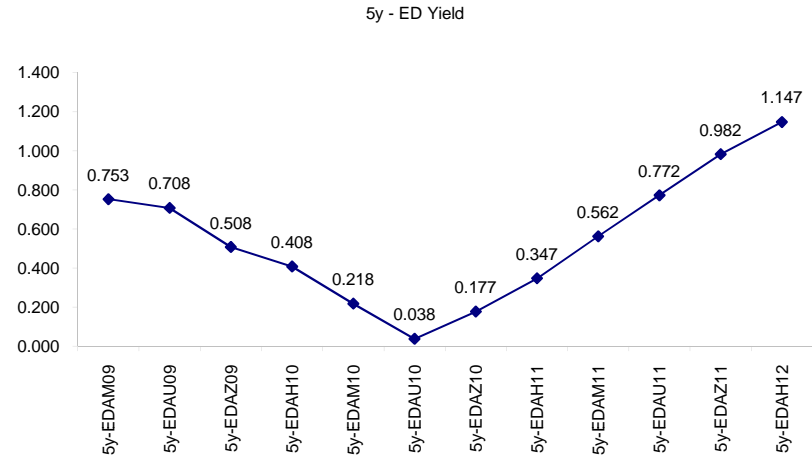


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.72	0.753	5y-EDAM09	-13
EDAU09	0.76	0.708	5y-EDAU09	-77
EDAZ09	0.96	0.508	5y-EDAZ09	-93
EDAH10	1.06	0.408	5y-EDAH10	-93
EDAM10	1.25	0.218	5y-EDAM10	-94
EDAU10	1.43	0.038	5y-EDAU10	-95
EDAZ10	1.65	0.177	5y-EDAZ10	-95
EDAH11	1.82	0.347	5y-EDAH11	-95
EDAM11	2.03	0.562	5y-EDAM11	-94
EDAU11	2.24	0.772	5y-EDAU11	-94
EDAZ11	2.45	0.982	5y-EDAZ11	-93
EDAH12	2.62	1.147	5y-EDAH12	-92

Price = Outright Decimal Price - Euro Contract Price

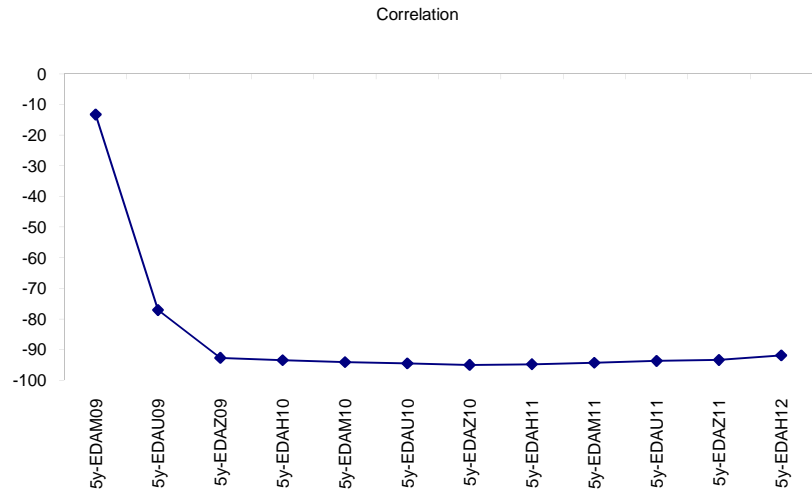
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year		5Y Duration	Spread Duration	
EDAM09	0.1856	4.7409	4.5553	5y-EDAM09	
EDAU09	0.4350	4.7409	4.3060	5y-EDAU09	
EDAZ09	0.6843	4.7409	4.0567	5y-EDAZ09	
EDAH10	0.9336	4.7409	3.8073	5y-EDAH10	
EDAM10	1.1829	4.7409	3.5580	5y-EDAM10	
EDAU10	1.4322	4.7409	3.3087	5y-EDAU10	
EDAZ10	1.6815	4.7409	3.0594	5y-EDAZ10	
EDAH11	1.9308	4.7409	2.8101	5y-EDAH11	
EDAM11	2.1802	4.7409	2.5608	5y-EDAM11	
EDAU11	2.4487	4.7409	2.2923	5y-EDAU11	
EDAZ11	2.6980	4.7409	2.0430	5y-EDAZ11	
EDAH12	2.9473	4.7409	1.7936	5y-EDAH12	

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

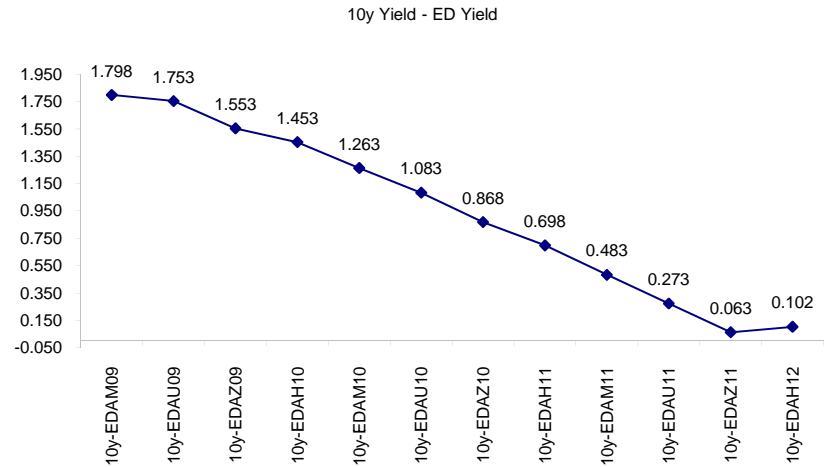


10y				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.72	1.798	10y-EDAM09	18
EDAU09	0.76	1.753	10y-EDAU09	-58
EDAZ09	0.96	1.553	10y-EDAZ09	-91
EDAH10	1.06	1.453	10y-EDAH10	-96
EDAM10	1.25	1.263	10y-EDAM10	-97
EDAU10	1.43	1.083	10y-EDAU10	-97
EDAZ10	1.65	0.868	10y-EDAZ10	-98
EDAH11	1.82	0.698	10y-EDAH11	-98
EDAM11	2.03	0.483	10y-EDAM11	-98
EDAU11	2.24	0.273	10y-EDAU11	-98
EDAZ11	2.45	0.063	10y-EDAZ11	-98
EDAH12	2.62	0.102	10y-EDAH12	-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	
EDAM09	0.1856	8.5337	8.3481	10y-EDAM09		
EDAU09	0.4350	8.5337	8.0988	10y-EDAU09		
EDAZ09	0.6843	8.5337	7.8494	10y-EDAZ09		
EDAH10	0.9336	8.5337	7.6001	10y-EDAH10		
EDAM10	1.1829	8.5337	7.3508	10y-EDAM10		
EDAU10	1.4322	8.5337	7.1015	10y-EDAU10		
EDAZ10	1.6815	8.5337	6.8522	10y-EDAZ10		
EDAH11	1.9308	8.5337	6.6029	10y-EDAH11		
EDAM11	2.1802	8.5337	6.3535	10y-EDAM11		
EDAU11	2.4487	8.5337	6.0851	10y-EDAU11		
EDAZ11	2.6980	8.5337	5.8357	10y-EDAZ11		
EDAH12	2.9473	8.5337	5.5864	10y-EDAH12		

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

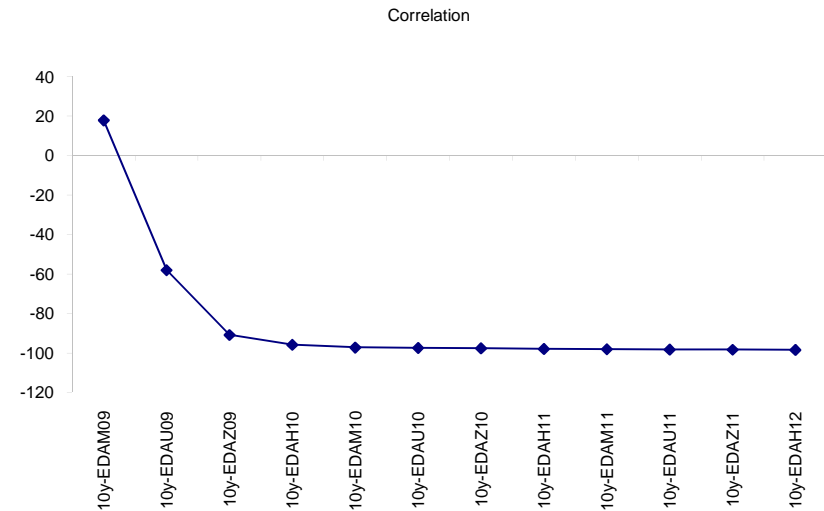


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

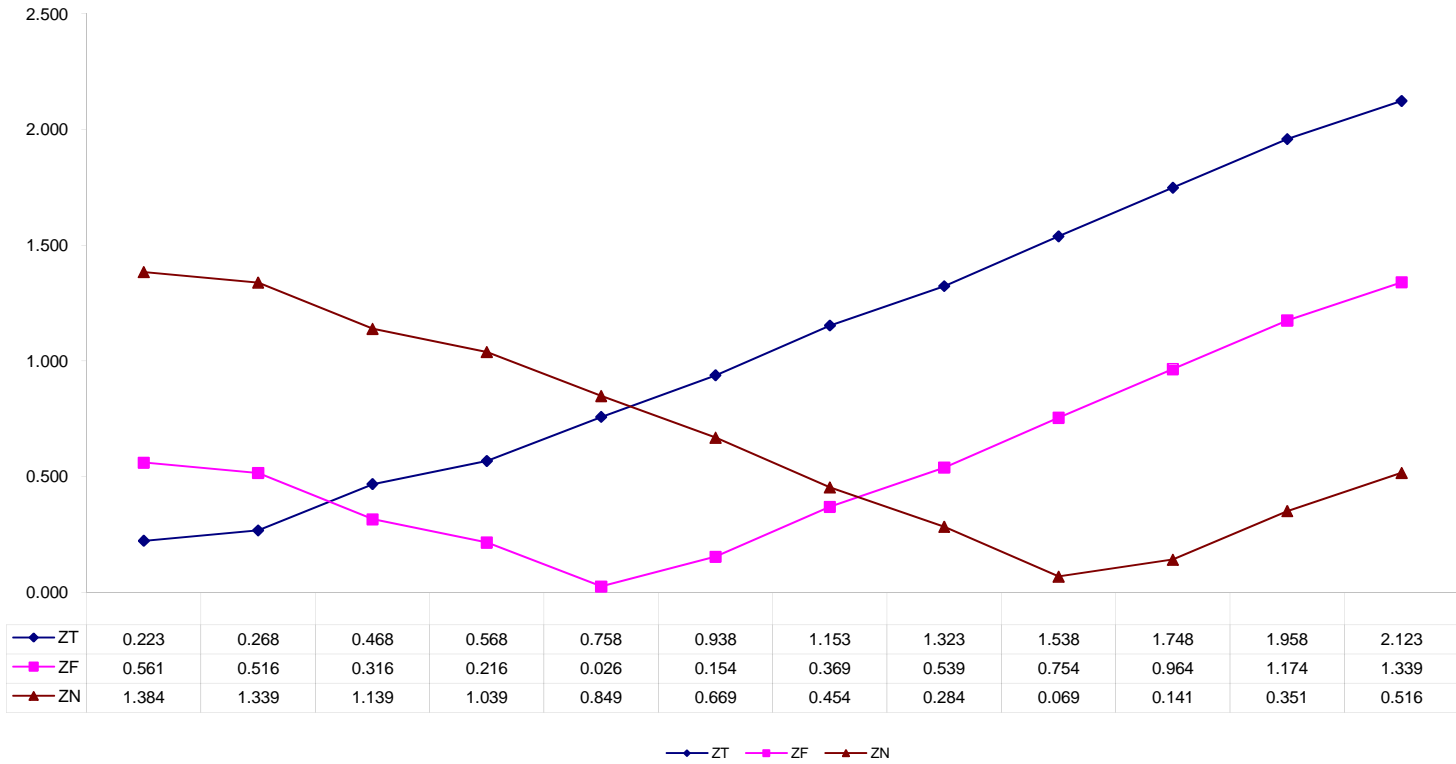
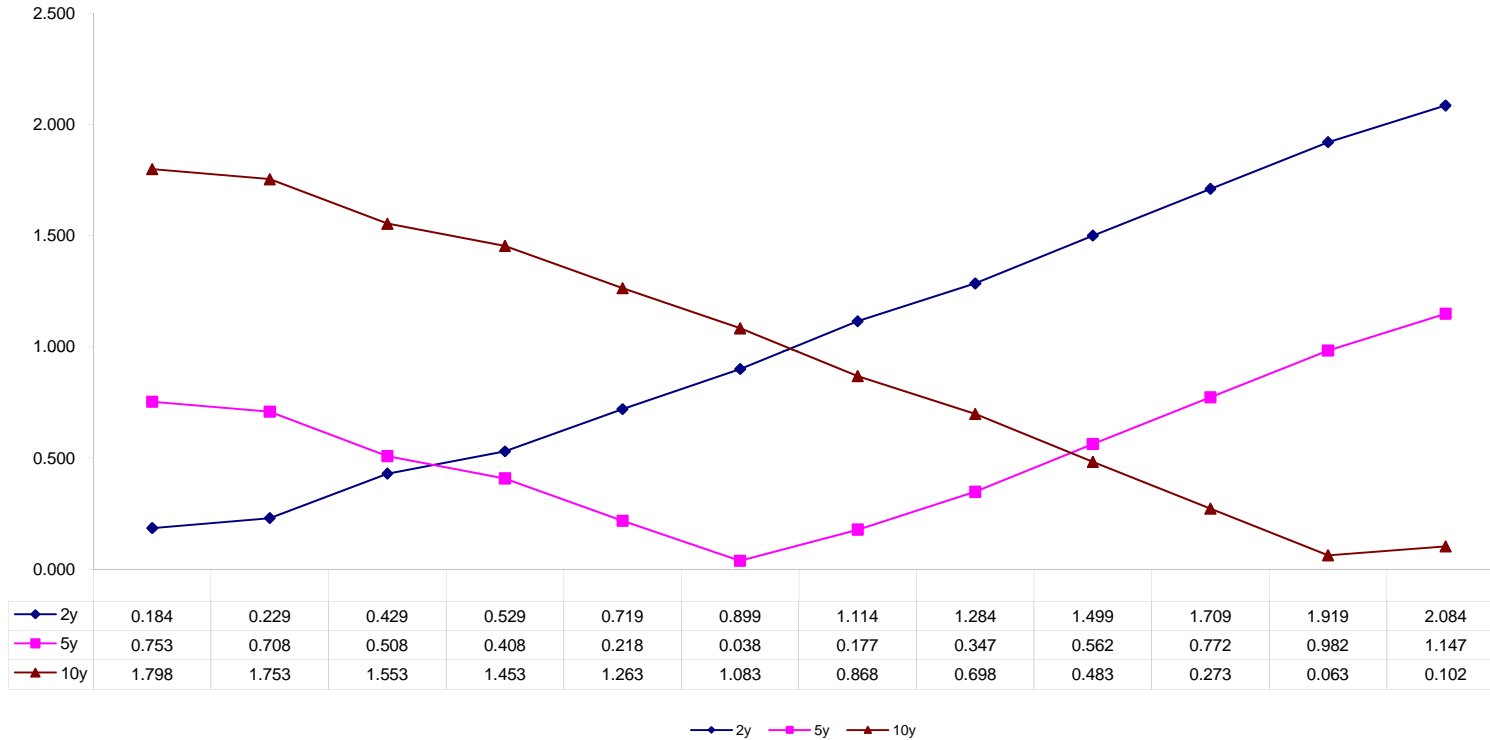
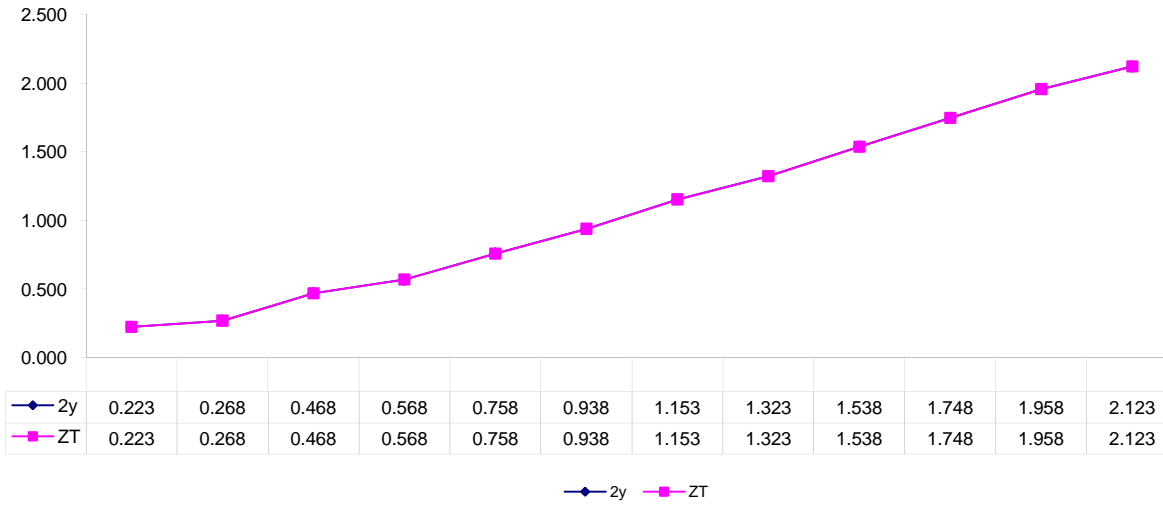
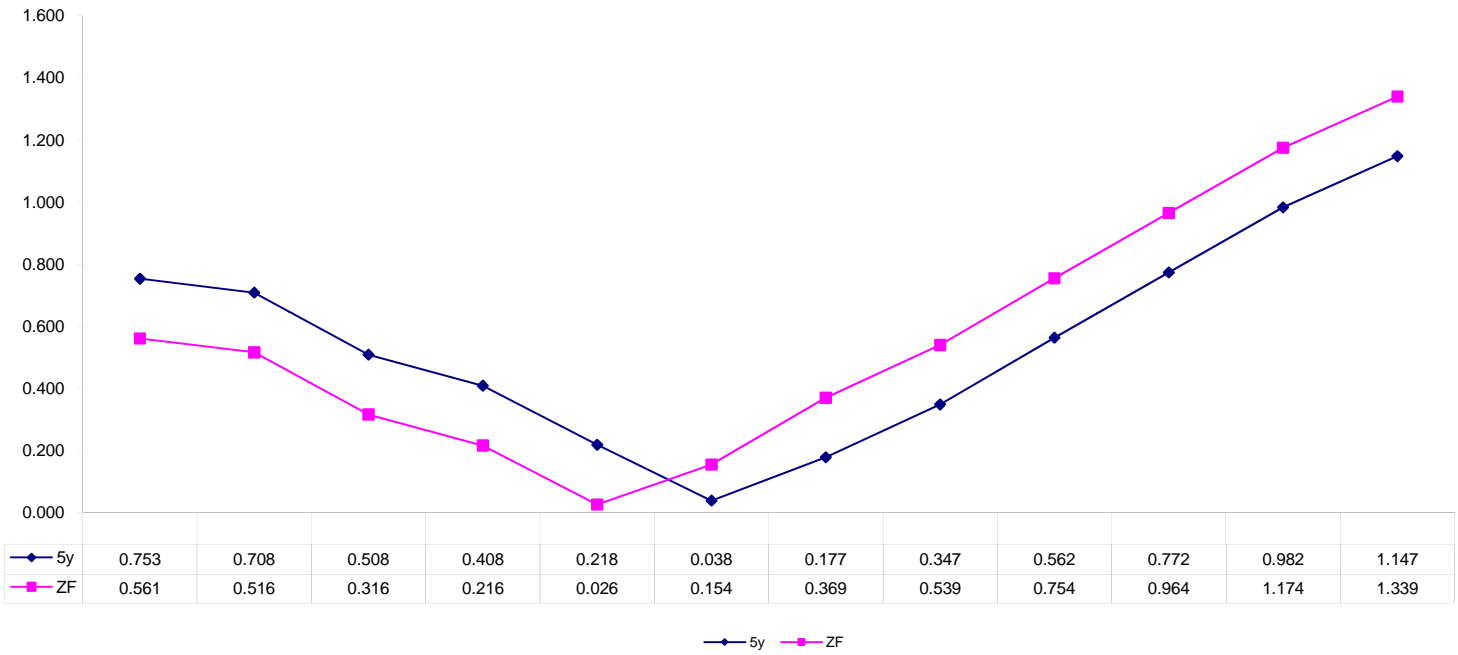


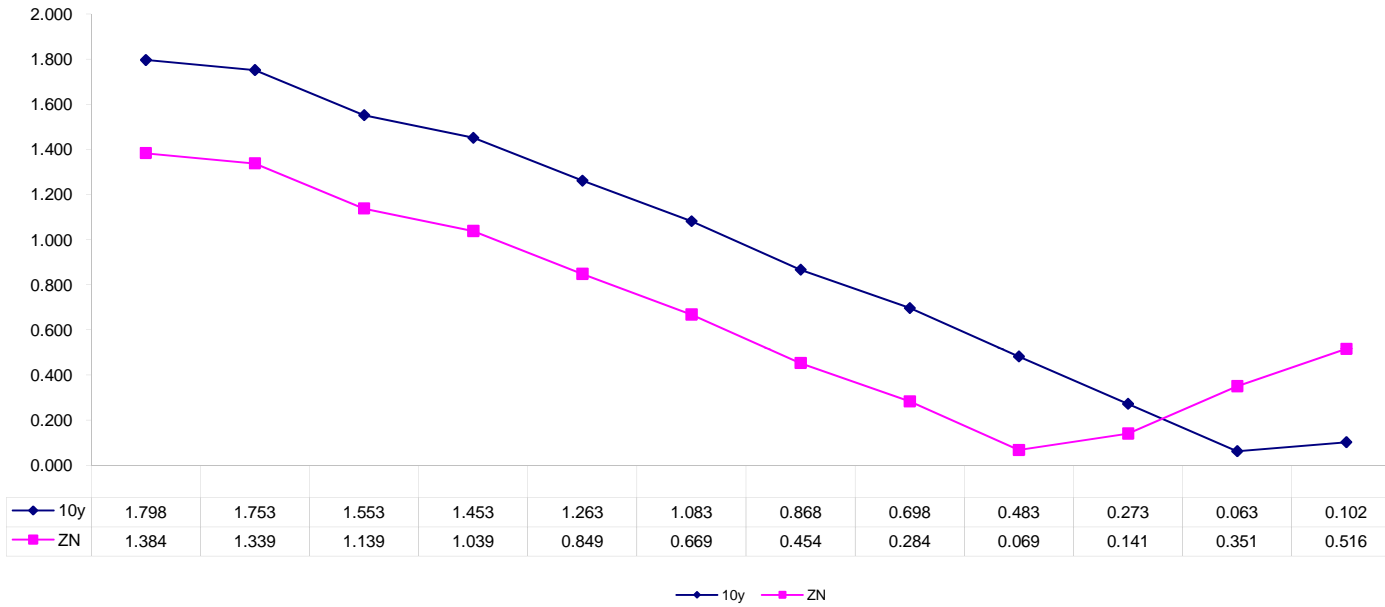
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve







	Last Yield	Net Last Yield	Last Price
White Pack	1.255	3.625	9876.6250
Red Pack	1.931	4.500	9810.5000
Green Pack	2.750	4.750	9730.6250
Blue Pack	3.371	4.125	9670.2500
Gold Pack		1.250	9632.0000

