

The Morning Email: TERM TEDS & Dirty TEDS

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Want something added? Let me know: 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	105.7875	105.252	2.471	1.76
ZF	111.2344	111.075	3.146	3.89
ZN	114.5781	114.185	3.761	5.84
2y	99.225	99.0720	2.524	1.90
5y	99.569	99.1820	3.213	4.49
10y	99.391	99.1250	3.944	8.08

Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month
EDAM08	97.195	2.805	33	0.090	JUN
EDAU08	97.065	2.935	124	0.339	SEP White
EDAZ08	96.815	3.185	215	0.588	DEC Pack
EDAH09	96.670	3.330	306	0.838	MAR
EDAM09	96.500	3.500	397	1.087	JUN
EDAU09	96.320	3.680	488	1.336	SEP Red Pack
EDAZ09	96.135	3.865	579	1.586	DEC
EDAH10	96.005	3.995	670	1.835	MAR
EDAM10	95.870	4.130	761	2.084	JUN
EDAU10	95.745	4.255	852	2.334	SEP Green
EDAZ10	95.635	4.365	943	2.583	DEC Pack
EDAH11	95.555	4.445	1034	2.832	MAR
EDAM11	95.435	4.565	1125	3.082	JUN
EDAU11	95.385	4.615	1223	3.350	SEP Blue Pack
EDAZ11	95.280	4.720	1314	3.599	DEC
EDAH12	95.230	4.770	1405	3.849	MAR
EDAM12	95.205	4.795	1496	4.098	JUN
EDAU12	95.155	4.845	1587	4.347	SEP Gold Pack
EDAZ12	95.085	4.915	1678	4.597	DEC
EDAH13	95.060	4.940	1769	4.846	MAR

	Last Yield	Net Yield	Last Price	
White Pack	3.130	-8.375	9693.625	Pack Prices
Red Pack	3.848	-9.875	9624.000	
Green Pack	4.406	-7.250	9570.125	
Blue Pack	4.788	-7.875	9533.250	
Gold Pack		-2.750	9513.000	

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.

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.

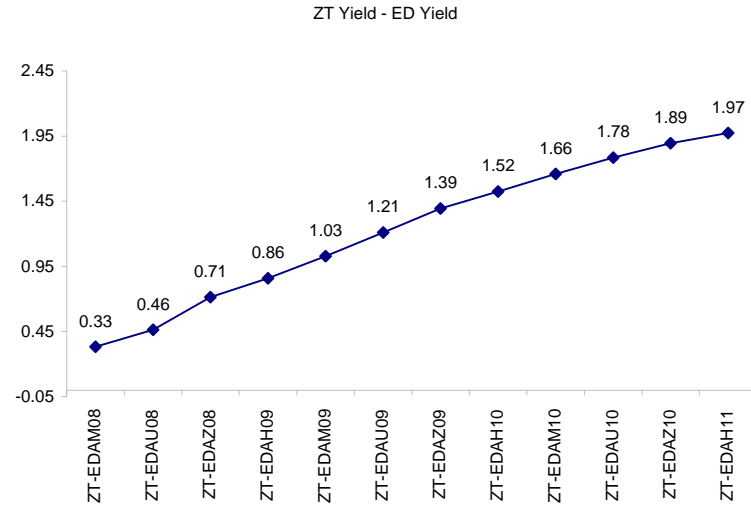
jgoulding@ghco.com

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.

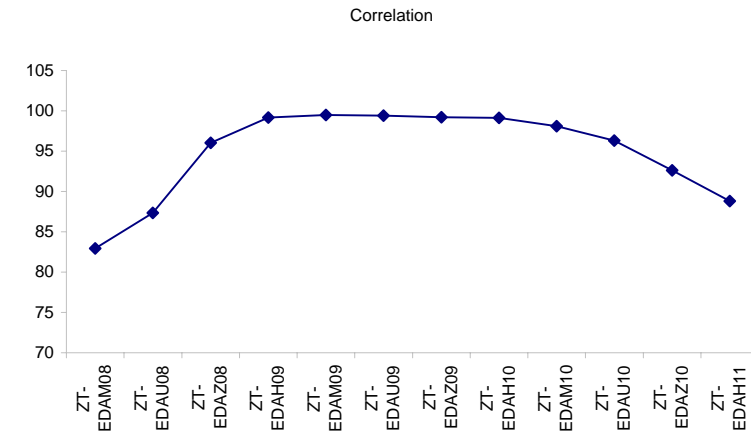
ZT				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	8.592	0.33	ZT-EDAM08	82.918
EDAU08	8.722	0.46	ZT-EDAU08	87.326
EDAZ08	8.972	0.71	ZT-EDAZ08	96.015
EDAH09	9.117	0.86	ZT-EDAH09	99.147
EDAM09	9.287	1.03	ZT-EDAM09	99.481
EDAU09	9.467	1.21	ZT-EDAU09	99.421
EDAZ09	9.652	1.39	ZT-EDAZ09	99.209
EDAH10	9.782	1.52	ZT-EDAH10	99.108
EDAM10	9.917	1.66	ZT-EDAM10	98.106
EDAU10	10.043	1.78	ZT-EDAU10	96.320
EDAZ10	10.153	1.89	ZT-EDAZ10	92.633
EDAH11	10.233	1.97	ZT-EDAH11	88.813

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	
EDAM08	0.090	1.76	1.67	ZT-EDAM08		
EDAU08	0.339	1.76	1.42	ZT-EDAU08		
EDAZ08	0.588	1.76	1.17	ZT-EDAZ08		
EDAH09	0.838	1.76	0.92	ZT-EDAH09		
EDAM09	1.087	1.76	0.67	ZT-EDAM09		
EDAU09	1.336	1.76	0.42	ZT-EDAU09		
EDAZ09	1.586	1.76	0.17	ZT-EDAZ09		
EDAH10	1.835	1.76	(0.08)	ZT-EDAH10		
EDAM10	2.084	1.76	(0.33)	ZT-EDAM10		
EDAU10	2.334	1.76	(0.58)	ZT-EDAU10		
EDAZ10	2.583	1.76	(0.83)	ZT-EDAZ10		
EDAH11	2.832	1.76	(1.08)	ZT-EDAH11		

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

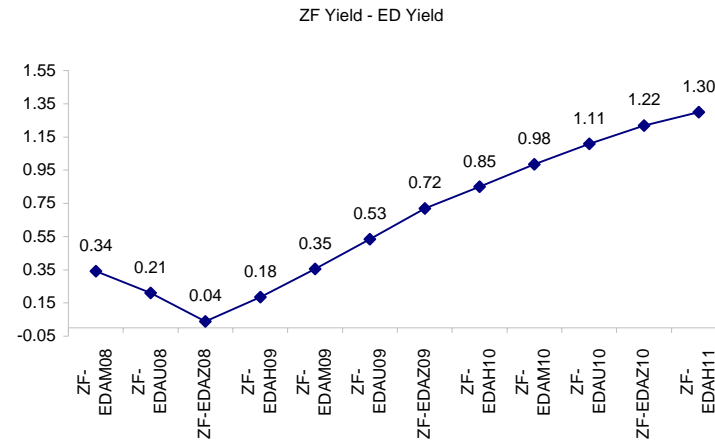


	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	14.039	0.34	ZF-EDAM08	63.599
EDAU08	14.169	0.21	ZF-EDAU08	70.342
EDAZ08	14.419	0.04	ZF-EDAZ08	83.882
EDAH09	14.564	0.18	ZF-EDAH09	92.066
EDAM09	14.734	0.35	ZF-EDAM09	95.736
EDAU09	14.914	0.53	ZF-EDAU09	96.167
EDAZ09	15.099	0.72	ZF-EDAZ09	96.655
EDAH10	15.229	0.85	ZF-EDAH10	96.773
EDAM10	15.364	0.98	ZF-EDAM10	97.632
EDAU10	15.489	1.11	ZF-EDAU10	97.285
EDAZ10	15.599	1.22	ZF-EDAZ10	96.643
EDAH11	15.679	1.30	ZF-EDAH11	92.810

Price = Outright Decimal Price - Euro Contract Price

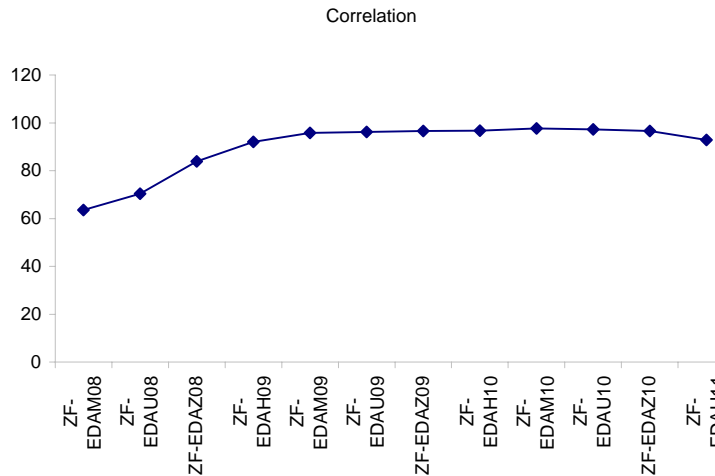
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



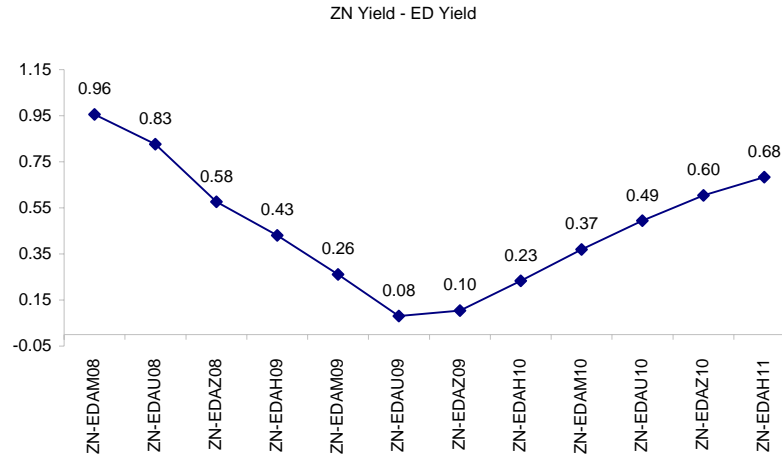
	ED Duration as Fraction of year			
	ZF Duration	Spread Duration		
EDAM08	0.090	3.89	3.80	ZF-EDAM08
EDAU08	0.339	3.89	3.55	ZF-EDAU08
EDAZ08	0.588	3.89	3.31	ZF-EDAZ08
EDAH09	0.838	3.89	3.06	ZF-EDAH09
EDAM09	1.087	3.89	2.81	ZF-EDAM09
EDAU09	1.336	3.89	2.56	ZF-EDAU09
EDAZ09	1.586	3.89	2.31	ZF-EDAZ09
EDAH10	1.835	3.89	2.06	ZF-EDAH10
EDAM10	2.084	3.89	1.81	ZF-EDAM10
EDAU10	2.334	3.89	1.56	ZF-EDAU10
EDAZ10	2.583	3.89	1.31	ZF-EDAZ10
EDAH11	2.832	3.89	1.06	ZF-EDAH11

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



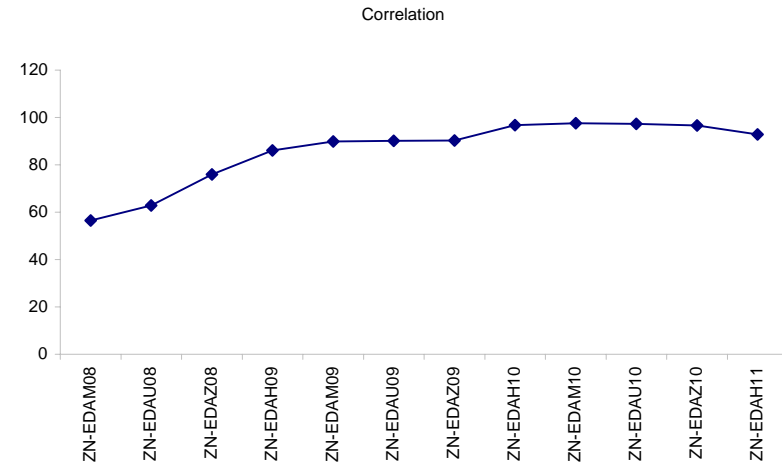
ZN				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	17.383	0.96	ZN-EDAM08	56.544
EDAU08	17.513	0.83	ZN-EDAU08	62.889
EDAZ08	17.763	0.58	ZN-EDAZ08	75.913
EDAH09	17.908	0.43	ZN-EDAH09	86.041
EDAM09	18.078	0.26	ZN-EDAM09	89.825
EDAU09	18.258	0.08	ZN-EDAU09	90.073
EDAZ09	18.443	0.10	ZN-EDAZ09	90.254
EDAH10	18.573	0.23	ZN-EDAH10	96.773
EDAM10	18.708	0.37	ZN-EDAM10	97.632
EDAU10	18.833	0.49	ZN-EDAU10	97.285
EDAZ10	18.943	0.60	ZN-EDAZ10	96.643
EDAH11	19.023	0.68	ZN-EDAH11	92.810

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	
EDAM08	0.090	5.84	5.75	ZN-EDAM08
EDAU08	0.339	5.84	5.50	ZN-EDAU08
EDAZ08	0.588	5.84	5.25	ZN-EDAZ08
EDAH09	0.838	5.84	5.00	ZN-EDAH09
EDAM09	1.087	5.84	4.75	ZN-EDAM09
EDAU09	1.336	5.84	4.50	ZN-EDAU09
EDAZ09	1.586	5.84	4.25	ZN-EDAZ09
EDAH10	1.835	5.84	4.00	ZN-EDAH10
EDAM10	2.084	5.84	3.75	ZN-EDAM10
EDAU10	2.334	5.84	3.50	ZN-EDAU10
EDAZ10	2.583	5.84	3.26	ZN-EDAZ10
EDAH11	2.832	5.84	3.01	ZN-EDAH11

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

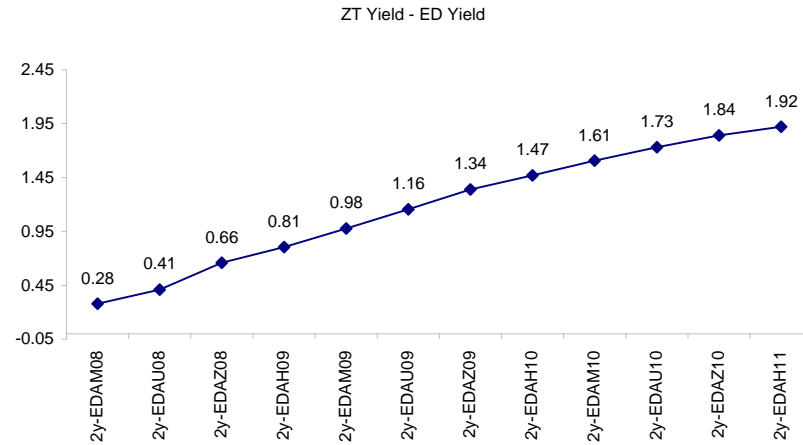


	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.030	0.28	2y-EDAM08	-78.302
EDAU08	2.160	0.41	2y-EDAU08	-82.375
EDAZ08	2.410	0.66	2y-EDAZ08	-92.784
EDAH09	2.555	0.81	2y-EDAH09	-96.550
EDAM09	2.725	0.98	2y-EDAM09	-97.575
EDAU09	2.905	1.16	2y-EDAU09	-97.518
EDAZ09	3.090	1.34	2y-EDAZ09	-97.546
EDAH10	3.220	1.47	2y-EDAH10	-96.858
EDAM10	3.355	1.61	2y-EDAM10	-95.413
EDAU10	3.480	1.73	2y-EDAU10	-92.820
EDAZ10	3.590	1.84	2y-EDAZ10	-88.528
EDAH11	3.670	1.92	2y-EDAH11	-83.458

Price = Outright Decimal Price - Euro Contract Price

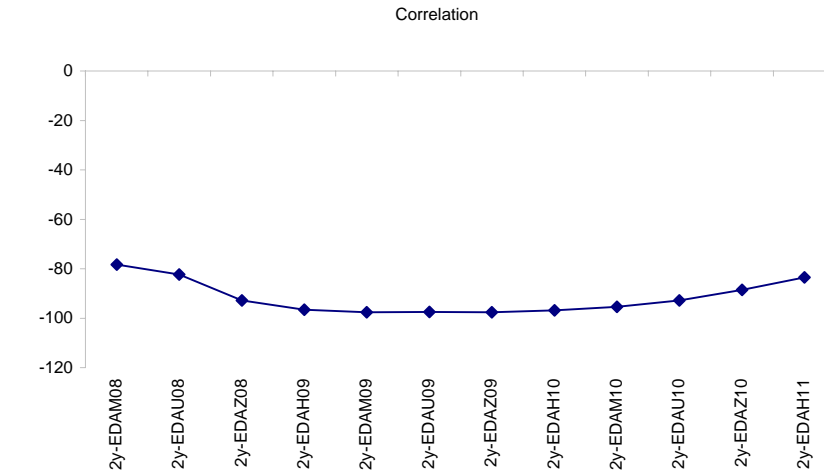
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

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



	ED Duration as Fraction of year			2Y Duration	Spread Duration	
EDAM08	0.090	1.90	1.81	2y-EDAM08		
EDAU08	0.339	1.90	1.56	2y-EDAU08		
EDAZ08	0.588	1.90	1.32	2y-EDAZ08		
EDAH09	0.838	1.90	1.07	2y-EDAH09		
EDAM09	1.087	1.90	0.82	2y-EDAM09		
EDAU09	1.336	1.90	0.57	2y-EDAU09		
EDAZ09	1.586	1.90	0.32	2y-EDAZ09		
EDAH10	1.835	1.90	0.07	2y-EDAH10		
EDAM10	2.084	1.90	(0.18)	2y-EDAM10		
EDAU10	2.334	1.90	(0.43)	2y-EDAU10		
EDAZ10	2.583	1.90	(0.68)	2y-EDAZ10		
EDAH11	2.832	1.90	(0.93)	2y-EDAH11		

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

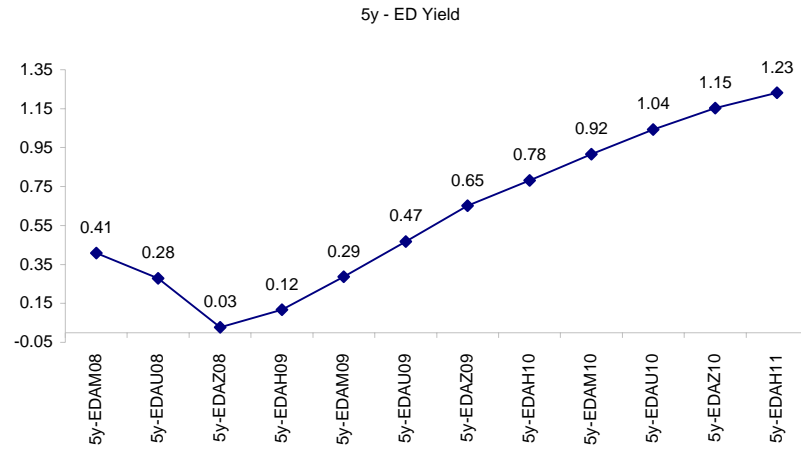


	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.374	0.41	5y-EDAM08	-63.871
EDAU08	2.504	0.28	5y-EDAU08	-69.665
EDAZ08	2.754	0.03	5y-EDAZ08	-63.871
EDAH09	2.899	0.12	5y-EDAH09	-91.687
EDAM09	3.069	0.29	5y-EDAM09	-95.065
EDAU09	3.249	0.47	5y-EDAU09	-95.180
EDAZ09	3.434	0.65	5y-EDAZ09	-95.631
EDAH10	3.564	0.78	5y-EDAH10	-95.497
EDAM10	3.699	0.92	5y-EDAM10	-95.970
EDAU10	3.824	1.04	5y-EDAU10	-95.138
EDAZ10	3.934	1.15	5y-EDAZ10	-93.845
EDAH11	4.014	1.23	5y-EDAH11	-89.602

Price = Outright Decimal Price - Euro Contract Price

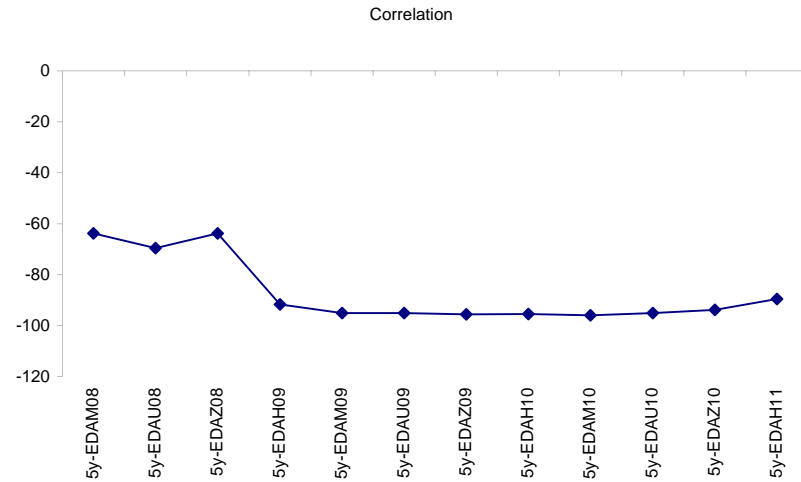
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	5Y Duration	Spread Duration	
EDAM08	0.090	4.49	4.40	5y-EDAM08
EDAU08	0.339	4.49	4.15	5y-EDAU08
EDAZ08	0.588	4.49	3.90	5y-EDAZ08
EDAH09	0.838	4.49	3.65	5y-EDAH09
EDAM09	1.087	4.49	3.40	5y-EDAM09
EDAU09	1.336	4.49	3.15	5y-EDAU09
EDAZ09	1.586	4.49	2.90	5y-EDAZ09
EDAH10	1.835	4.49	2.65	5y-EDAH10
EDAM10	2.084	4.49	2.40	5y-EDAM10
EDAU10	2.334	4.49	2.15	5y-EDAU10
EDAZ10	2.583	4.49	1.90	5y-EDAZ10
EDAH11	2.832	4.49	1.66	5y-EDAH11

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

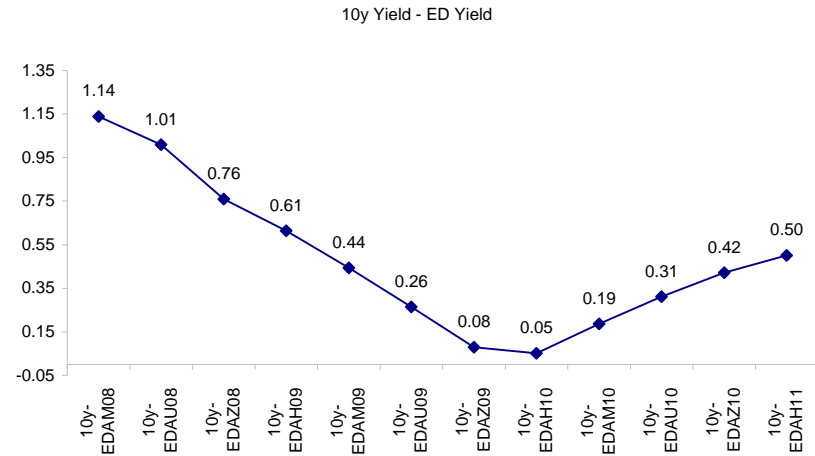


	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	2.374	1.14	10y-EDAM08	-64.398
EDAU08	2.504	1.01	10y-EDAU08	-68.539
EDAZ08	2.754	0.76	10y-EDAZ08	-64.398
EDAH09	2.899	0.61	10y-EDAH09	-85.169
EDAM09	3.069	0.44	10y-EDAM09	-85.856
EDAU09	3.249	0.26	10y-EDAU09	-85.034
EDAZ09	3.434	0.08	10y-EDAZ09	-84.466
EDAH10	3.564	0.05	10y-EDAH10	-86.535
EDAM10	3.699	0.19	10y-EDAM10	-89.334
EDAU10	3.824	0.31	10y-EDAU10	-92.288
EDAZ10	3.934	0.42	10y-EDAZ10	-94.551
EDAH11	4.014	0.50	10y-EDAH11	-96.128

Price = Outright Decimal Price - Euro Contract Price

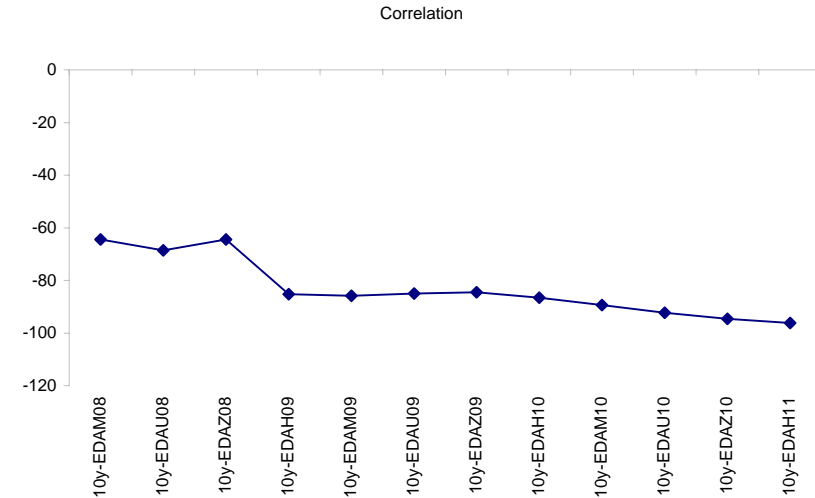
Yield = ABS (Proxy Yield - Implied Euro Contract yield)

*Correlation = ED Correlation to Treasury Future over 10 days



	ED Duration as Fraction of year			
	Fraction of year	10Y Duration	Spread Duration	
EDAM08	0.090	8.08	7.99	10y-EDAM08
EDAU08	0.339	8.08	7.74	10y-EDAU08
EDAZ08	0.588	8.08	7.49	10y-EDAZ08
EDAH09	0.838	8.08	7.24	10y-EDAH09
EDAM09	1.087	8.08	7.00	10y-EDAM09
EDAU09	1.336	8.08	6.75	10y-EDAU09
EDAZ09	1.586	8.08	6.50	10y-EDAZ09
EDAH10	1.835	8.08	6.25	10y-EDAH10
EDAM10	2.084	8.08	6.00	10y-EDAM10
EDAU10	2.334	8.08	5.75	10y-EDAU10
EDAZ10	2.583	8.08	5.50	10y-EDAZ10
EDAH11	2.832	8.08	5.25	10y-EDAH11

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



Dirty TED Curve

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.

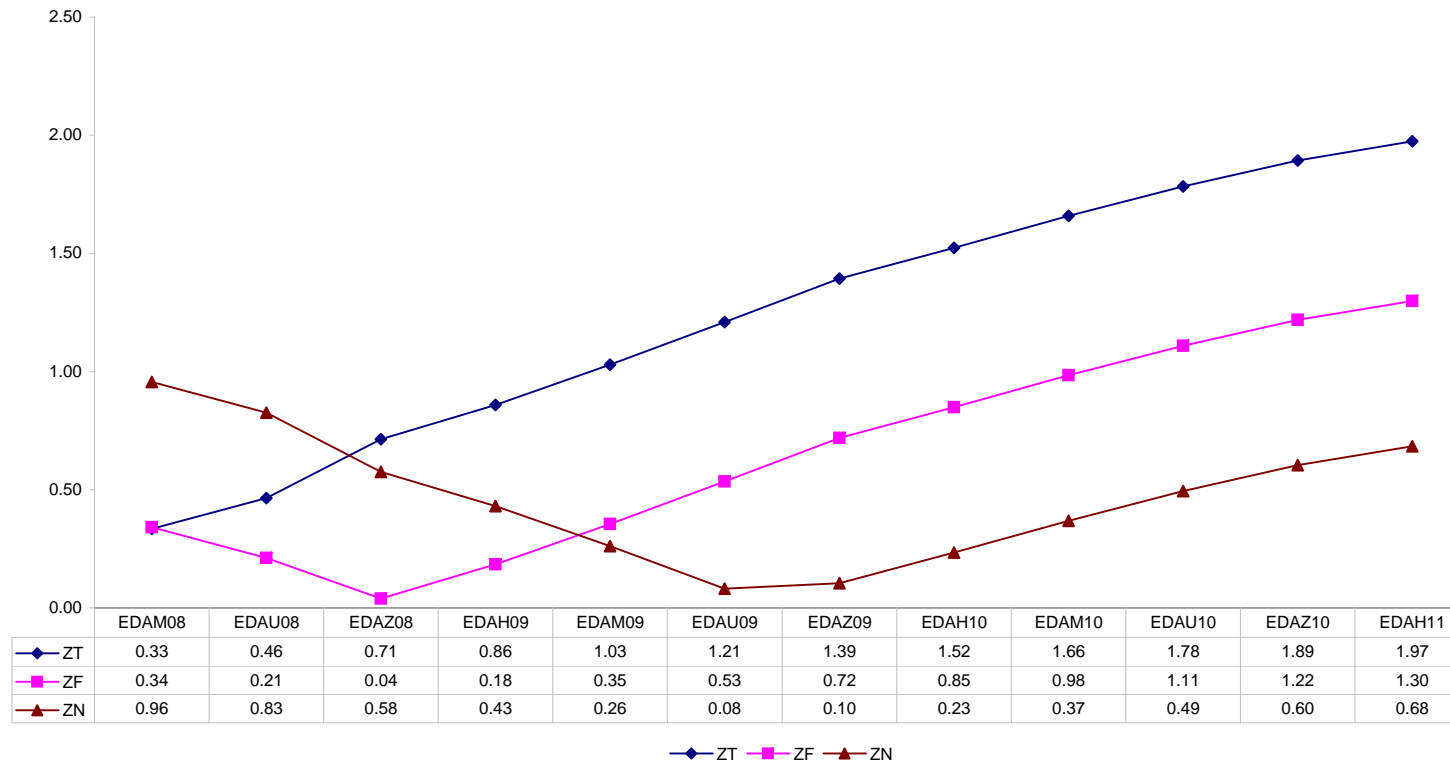
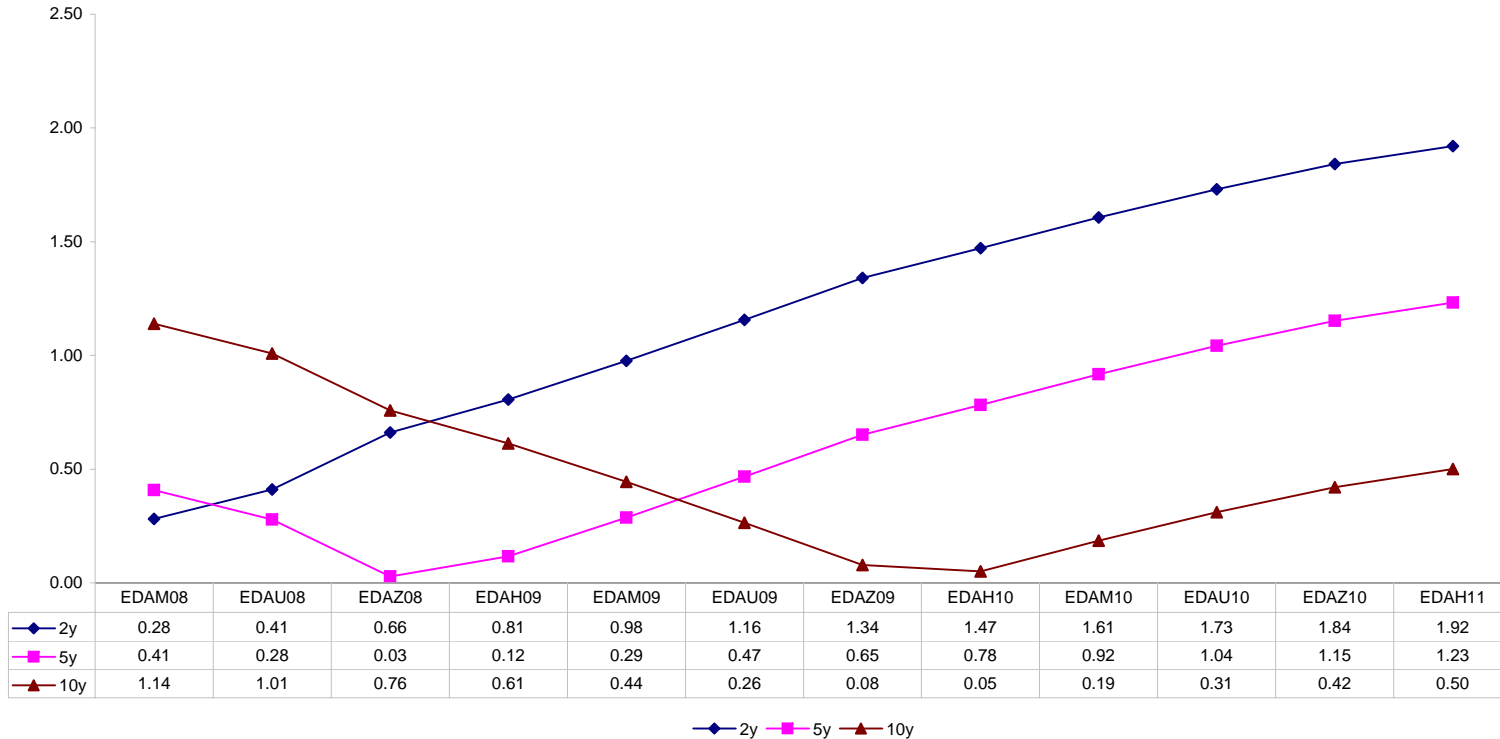
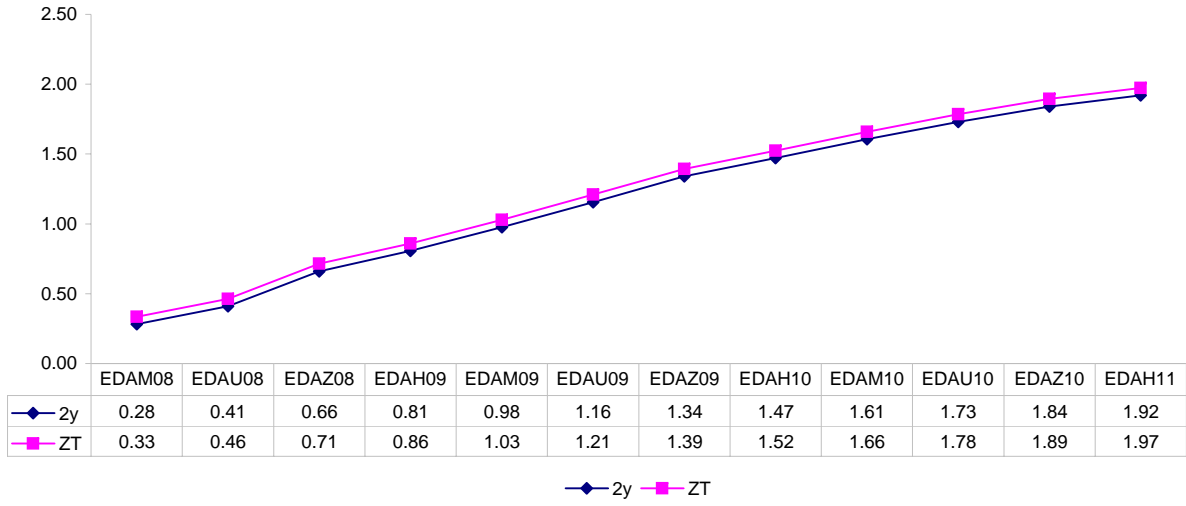


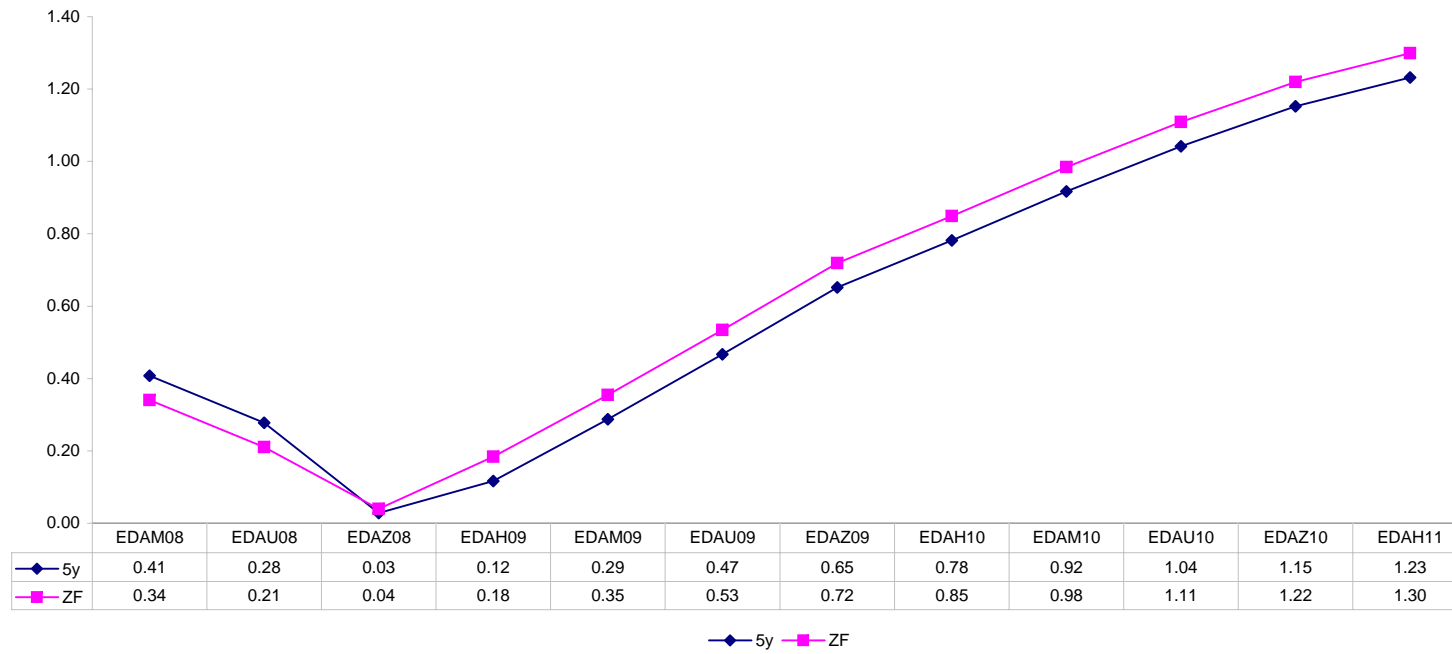
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



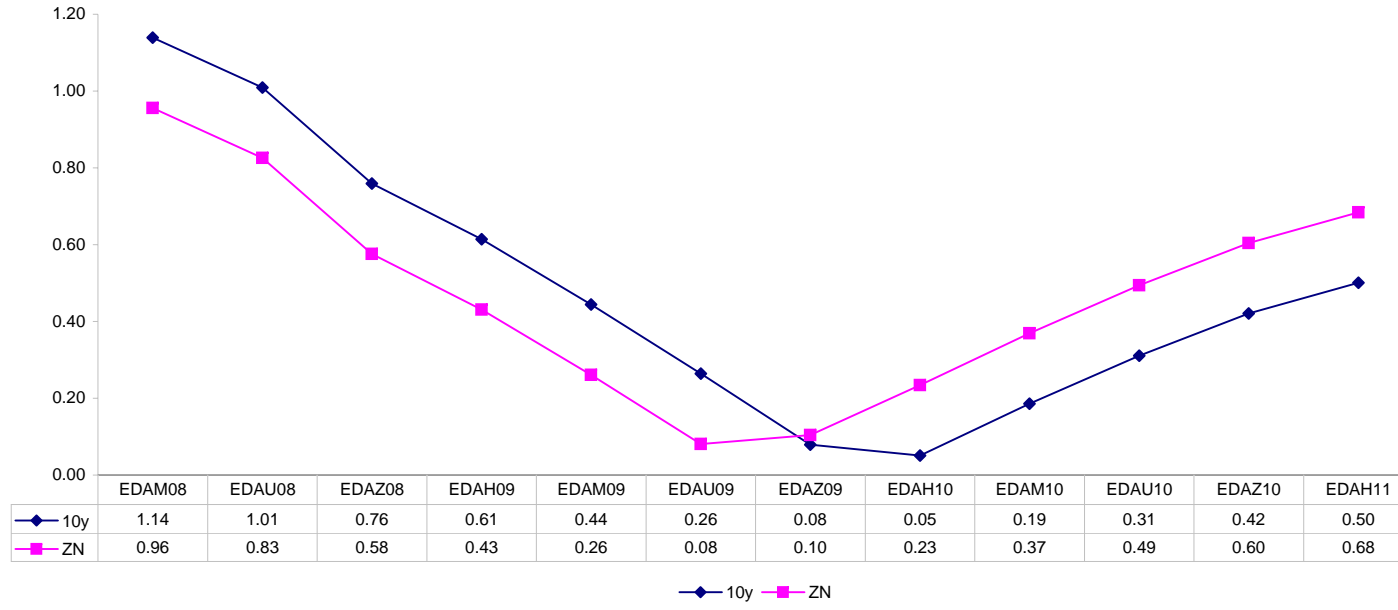
2y Basis TED Curve



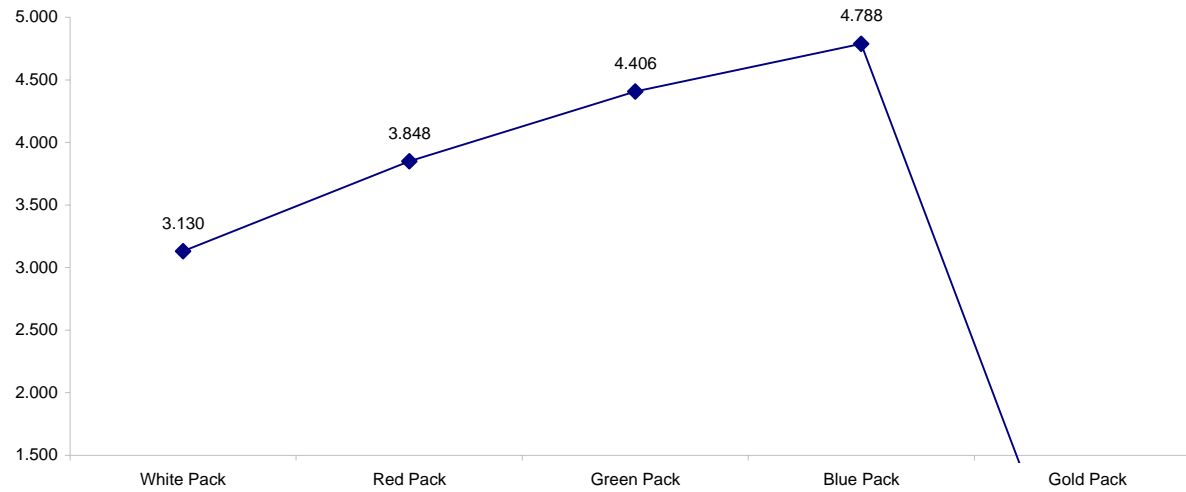
5y Basis TED Curve



10y Basis TED Curve



	Last Yield	Net Last Yield	Last Price
White Pack	3.130	-8.375	9693.625
Red Pack	3.848	-9.875	9624.000
Green Pack	4.406	-7.250	9570.125
Blue Pack	4.788	-7.875	9533.250
Gold Pack		-2.750	9513.000



2y, 5y, 10y Basis Curves vs ED

