The Morning Email: TERM TEDS & Dirty TEDS

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Want something added? Let me know: jgoulding@ghco.com

Quotes

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.7094	108.2270	0.875	1.828
ZF	117.0688	117.0220	1.826	4.023
ZN	120.7969	120.2550	2.697	5.872
2y	99.8656	99.2770	0.939	1.961
5y	99.2563	99.0820	2.031	4.731
10y	96.5313	96.1700	3.161	8.430

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.0650	0.935	41	0.1117	JUN	White Pack
EDAU09	99.0000	1.000	132	0.3610	SEP	
EDAZ09	98.7750	1.225	223	0.6103	DEC	
EDAH10	98.6300	1.370	314	0.8596	MAR	
EDAM10	98.3750	1.625	405	1.1089	JUN	Red Pack
EDAU10	98.1200	1.880	496	1.3583	SEP	
EDAZ10	97.8150	2.185	587	1.6076	DEC	
EDAH11	97.5700	2.430	678	1.8569	MAR	
EDAM11	97.3050	2.695	769	2.1062	JUN	Green Pack
EDAU11	97.0650	2.935	867	2.3747	SEP	
EDAZ11	96.8400	3.160	958	2.6240	DEC	
EDAH12	96.7000	3.300	1,049	2.8733	MAR	
EDAM12	96.5600	3.440	1,140	3.1226	JUN	Blue Pack
EDAU12	96.4550	3.545	1,231	3.3720	SEP	
EDAZ12	96.3150	3.685	1,322	3.6213	DEC	
EDAH13	96.2750	3.725	1,413	3.8706	MAR	
EDAM13	96.1950	3.805	1,504	4.1199	JUN	Gold Pack
EDAU13	96.1200	3.880	1,595	4.3692	SEP	
EDAZ13	96.0200	3.980	1,686	4.6185	DEC	
EDAH14	95.9750	4.025	1,777	4.8678	MAR	

	Last Yield	Net Yield	Last Price	
White Pack	1.152	0.625	9886.75	Pack Prices
Red Pack	2.069	-1.125	9797.00	
Green Pack	3.088	-1.000	9697.75	
Blue Pack		0.000	9639.88	
Gold Pack		0.000	9606.75	

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

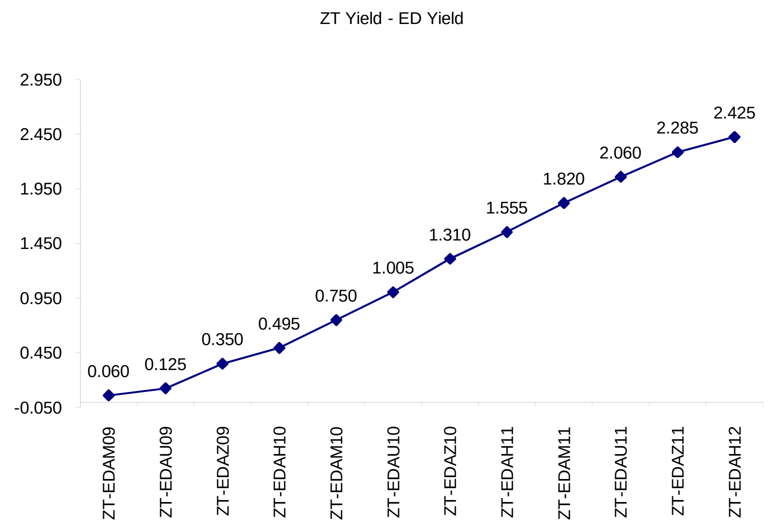
Correlations (Important)

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.

Dirty TED: ZT vs Eurodollar Contracts

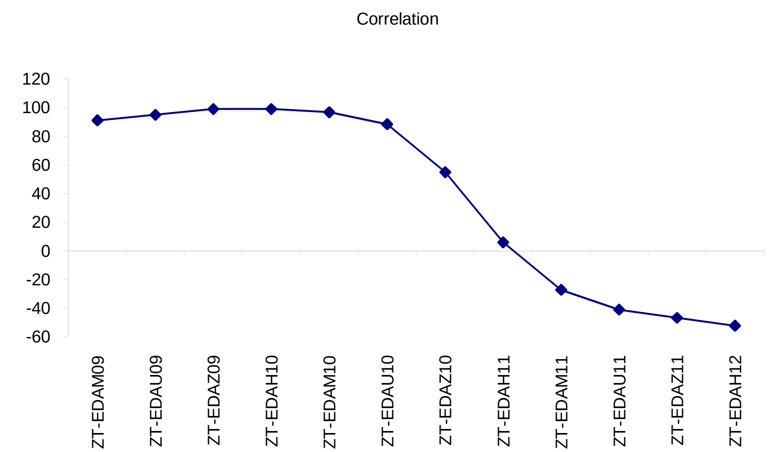
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.64	0.060	ZT-EDAM09	91
EDAU09	9.71	0.125	ZT-EDAU09	95
EDAZ09	9.93	0.350	ZT-EDAZ09	99
EDAH10	10.08	0.495	ZT-EDAH10	99
EDAM10	10.33	0.750	ZT-EDAM10	97
EDAU10	10.59	1.005	ZT-EDAU10	88
EDAZ10	10.89	1.310	ZT-EDAZ10	55
EDAH11	11.14	1.555	ZT-EDAH11	6
EDAM11	11.40	1.820	ZT-EDAM11	-27
EDAU11	11.64	2.060	ZT-EDAU11	-41
EDAZ11	11.87	2.285	ZT-EDAZ11	-47
EDAH12	12.01	2.425	ZT-EDAH12	-52

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	0.1117	1.8279	1.7163	ZT-EDAM09
EDAU09	0.3610	1.8279	1.4670	ZT-EDAU09
EDAZ09	0.6103	1.8279	1.2176	ZT-EDAZ09
EDAH10	0.8596	1.8279	0.9683	ZT-EDAH10
EDAM10	1.1089	1.8279	0.7190	ZT-EDAM10
EDAU10	1.3583	1.8279	0.4697	ZT-EDAU10
EDAZ10	1.6076	1.8279	0.2204	ZT-EDAZ10
EDAH11	1.8569	1.8279	-0.0289	ZT-EDAH11
EDAM11	2.1062	1.8279	-0.2783	ZT-EDAM11
EDAU11	2.3747	1.8279	-0.5467	ZT-EDAU11
EDAZ11	2.6240	1.8279	-0.7961	ZT-EDAZ11
EDAH12	2.8733	1.8279	-1.0454	ZT-EDAH12

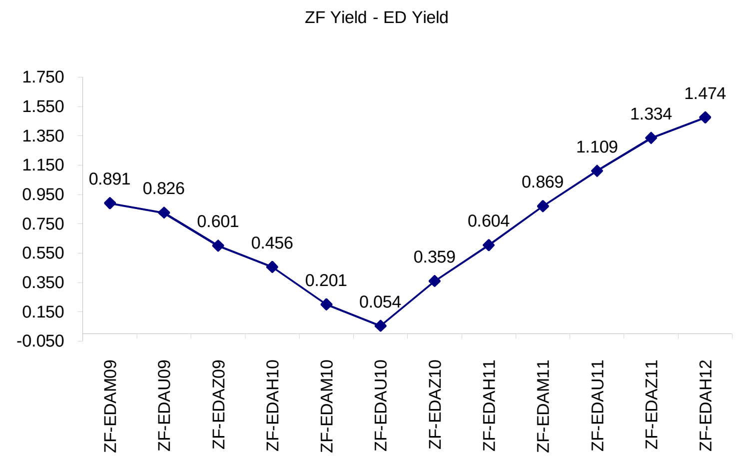
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

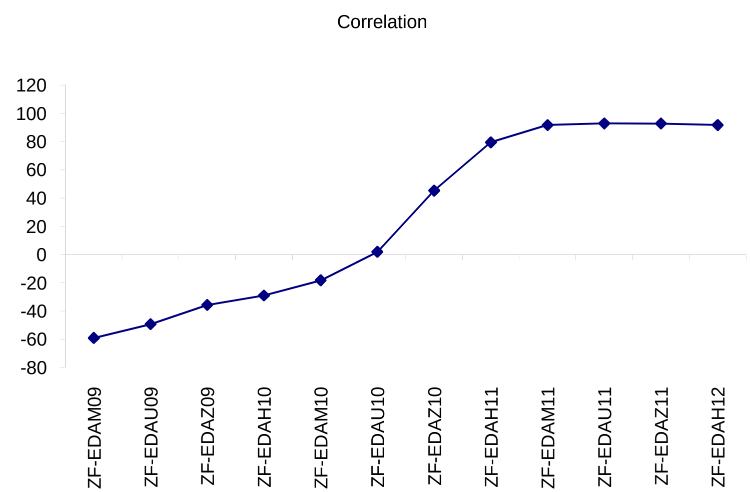
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	18.00	0.891	ZF-EDAM09	-59
EDAU09	18.07	0.826	ZF-EDAU09	-49
EDAZ09	18.29	0.601	ZF-EDAZ09	-35
EDAH10	18.44	0.456	ZF-EDAH10	-29
EDAM10	18.69	0.201	ZF-EDAM10	-18
EDAU10	18.95	0.054	ZF-EDAU10	2
EDAZ10	19.25	0.359	ZF-EDAZ10	45
EDAH11	19.50	0.604	ZF-EDAH11	80
EDAM11	19.76	0.869	ZF-EDAM11	92
EDAU11	20.00	1.109	ZF-EDAU11	93
EDAZ11	20.23	1.334	ZF-EDAZ11	93
EDAH12	20.37	1.474	ZF-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	ZF Duration	Spread Duration	
EDAM09	0.1117	4.0228	3.9111	ZF-EDAM09
EDAU09	0.3610	4.0228	3.6618	ZF-EDAU09
EDAZ09	0.6103	4.0228	3.4125	ZF-EDAZ09
EDAH10	0.8596	4.0228	3.1631	ZF-EDAH10
EDAM10	1.1089	4.0228	2.9138	ZF-EDAM10
EDAU10	1.3583	4.0228	2.6645	ZF-EDAU10
EDAZ10	1.6076	4.0228	2.4152	ZF-EDAZ10
EDAH11	1.8569	4.0228	2.1659	ZF-EDAH11
EDAM11	2.1062	4.0228	1.9166	ZF-EDAM11
EDAU11	2.3747	4.0228	1.6481	ZF-EDAU11
EDAZ11	2.6240	4.0228	1.3988	ZF-EDAZ11
EDAH12	2.8733	4.0228	1.1494	ZF-EDAH12

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

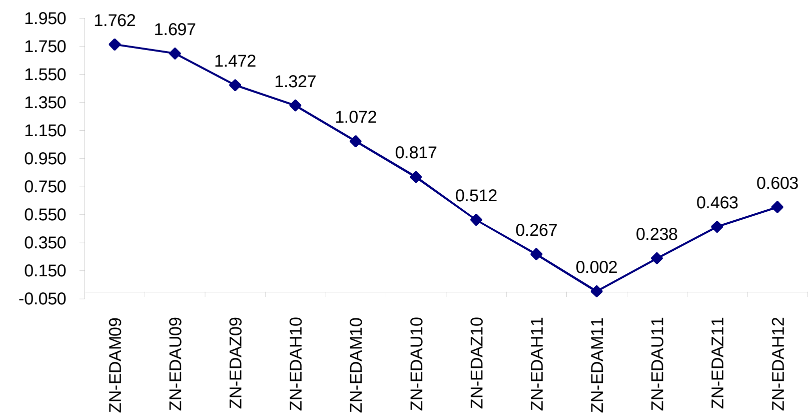


Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	21.73	1.762	ZN-EDAM09	-78
EDAU09	21.80	1.697	ZN-EDAU09	-70
EDAZ09	22.02	1.472	ZN-EDAZ09	-59
EDAH10	22.17	1.327	ZN-EDAH10	-53
EDAM10	22.42	1.072	ZN-EDAM10	-43
EDAU10	22.68	0.817	ZN-EDAU10	-23
EDAZ10	22.98	0.512	ZN-EDAZ10	26
EDAH11	23.23	0.267	ZN-EDAH11	70
EDAM11	23.49	0.002	ZN-EDAM11	90
EDAU11	23.73	0.238	ZN-EDAU11	95
EDAZ11	23.96	0.463	ZN-EDAZ11	96
EDAH12	24.10	0.603	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

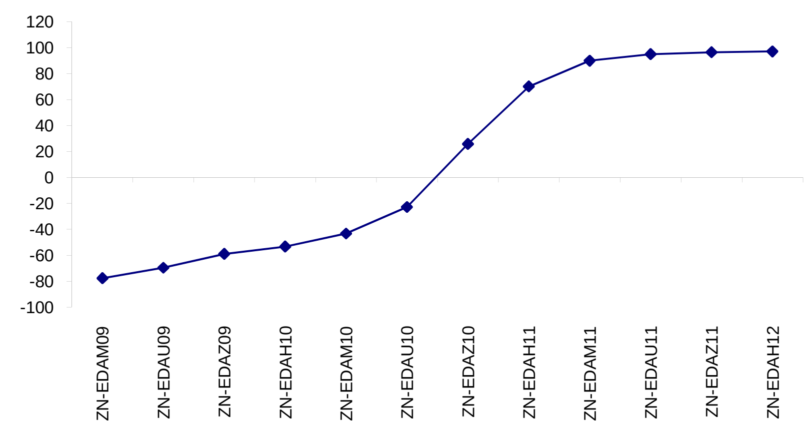
ZN Yield - ED Yield



	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM09	0.1117	5.8725	5.7608	ZN-EDAM09
EDAU09	0.3610	5.8725	5.5115	ZN-EDAU09
EDAZ09	0.6103	5.8725	5.2622	ZN-EDAZ09
EDAH10	0.8596	5.8725	5.0129	ZN-EDAH10
EDAM10	1.1089	5.8725	4.7635	ZN-EDAM10
EDAU10	1.3583	5.8725	4.5142	ZN-EDAU10
EDAZ10	1.6076	5.8725	4.2649	ZN-EDAZ10
EDAH11	1.8569	5.8725	4.0156	ZN-EDAH11
EDAM11	2.1062	5.8725	3.7663	ZN-EDAM11
EDAU11	2.3747	5.8725	3.4978	ZN-EDAU11
EDAZ11	2.6240	5.8725	3.2485	ZN-EDAZ11
EDAH12	2.8733	5.8725	2.9992	ZN-EDAH12

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

Correlation



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.80	0.004	2y-EDAM09	-35
EDAU09	0.87	0.061	2y-EDAU09	-42
EDAZ09	1.09	0.286	2y-EDAZ09	-55
EDAH10	1.24	0.431	2y-EDAH10	-59
EDAM10	1.49	0.686	2y-EDAM10	-63
EDAU10	1.75	0.941	2y-EDAU10	-64
EDAZ10	2.05	1.246	2y-EDAZ10	-56
EDAH11	2.30	1.491	2y-EDAH11	-37
EDAM11	2.56	1.756	2y-EDAM11	-20
EDAU11	2.80	1.996	2y-EDAU11	-10
EDAZ11	3.03	2.221	2y-EDAZ11	-6
EDAH12	3.17	2.361	2y-EDAH12	-2

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
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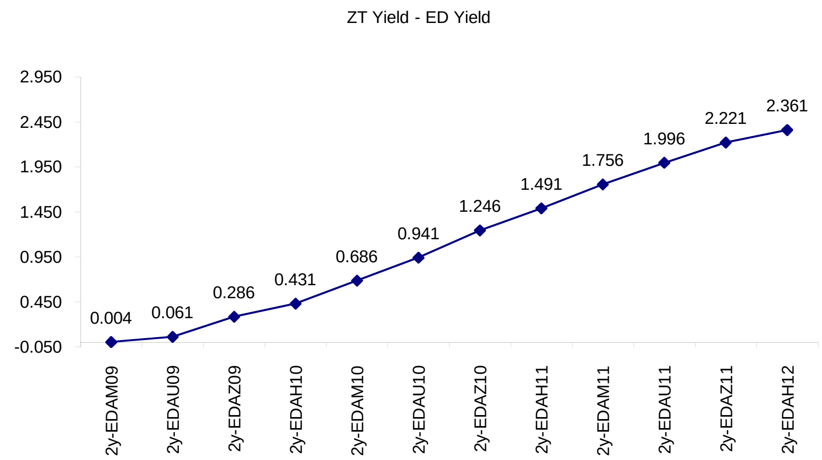
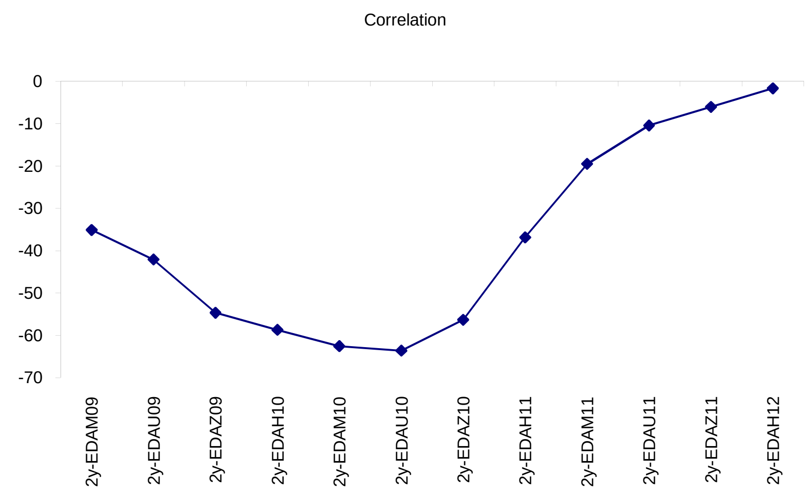


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM09	0.1117	1.9614	1.8498	2y-EDAM09
EDAU09	0.3610	1.9614	1.6005	2y-EDAU09
EDAZ09	0.6103	1.9614	1.3511	2y-EDAZ09
EDAH10	0.8596	1.9614	1.1018	2y-EDAH10
EDAM10	1.1089	1.9614	0.8525	2y-EDAM10
EDAU10	1.3583	1.9614	0.6032	2y-EDAU10
EDAZ10	1.6076	1.9614	0.3539	2y-EDAZ10
EDAH11	1.8569	1.9614	0.1046	2y-EDAH11
EDAM11	2.1062	1.9614	-0.1448	2y-EDAM11
EDAU11	2.3747	1.9614	-0.4132	2y-EDAU11
EDAZ11	2.6240	1.9614	-0.6626	2y-EDAZ11
EDAH12	2.8733	1.9614	-0.9119	2y-EDAH12

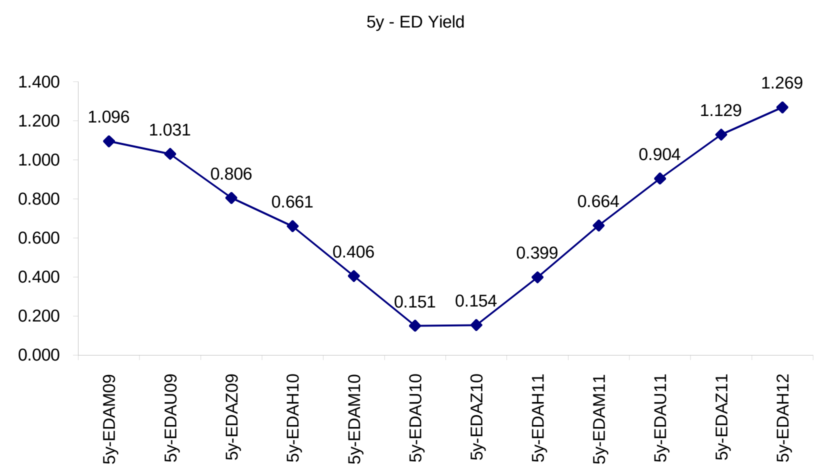
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

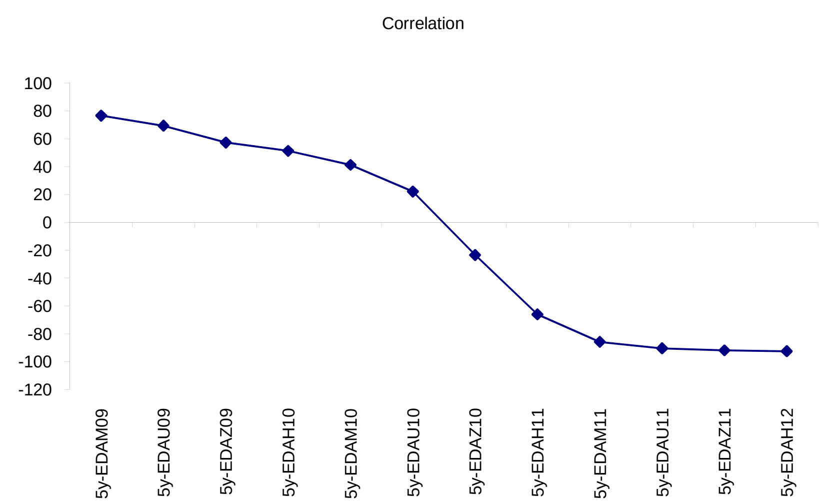
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.19	1.096	5y-EDAM09	77
EDAU09	0.26	1.031	5y-EDAU09	69
EDAZ09	0.48	0.806	5y-EDAZ09	57
EDAH10	0.63	0.661	5y-EDAH10	51
EDAM10	0.88	0.406	5y-EDAM10	41
EDAU10	1.14	0.151	5y-EDAU10	22
EDAZ10	1.44	0.154	5y-EDAZ10	-23
EDAH11	1.69	0.399	5y-EDAH11	-66
EDAM11	1.95	0.664	5y-EDAM11	-86
EDAU11	2.19	0.904	5y-EDAU11	-90
EDAZ11	2.42	1.129	5y-EDAZ11	-92
EDAH12	2.56	1.269	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	0.1117	4.7308	4.6192	5y-EDAM09
EDAU09	0.3610	4.7308	4.3698	5y-EDAU09
EDAZ09	0.6103	4.7308	4.1205	5y-EDAZ09
EDAH10	0.8596	4.7308	3.8712	5y-EDAH10
EDAM10	1.1089	4.7308	3.6219	5y-EDAM10
EDAU10	1.3583	4.7308	3.3726	5y-EDAU10
EDAZ10	1.6076	4.7308	3.1233	5y-EDAZ10
EDAH11	1.8569	4.7308	2.8739	5y-EDAH11
EDAM11	2.1062	4.7308	2.6246	5y-EDAM11
EDAU11	2.3747	4.7308	2.3561	5y-EDAU11
EDAZ11	2.6240	4.7308	2.1068	5y-EDAZ11
EDAH12	2.8733	4.7308	1.8575	5y-EDAH12

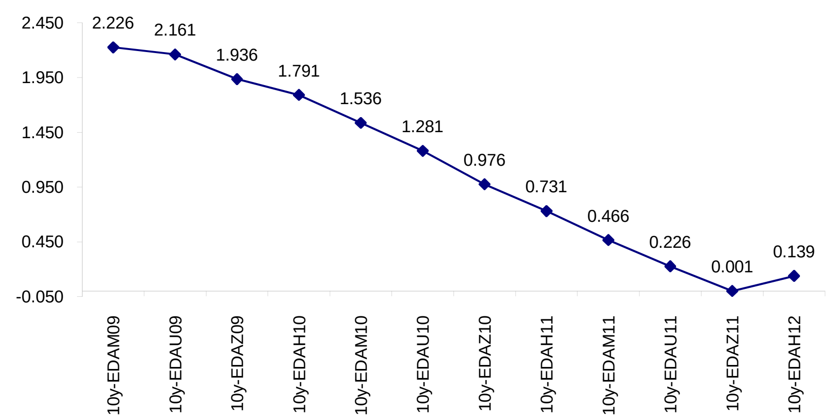
The farther away from 0 the spread duration is the riskier the trade.



	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.19	2.226	10y-EDAM09	83
EDAU09	0.26	2.161	10y-EDAU09	76
EDAZ09	0.48	1.936	10y-EDAZ09	66
EDAH10	0.63	1.791	10y-EDAH10	61
EDAM10	0.88	1.536	10y-EDAM10	52
EDAU10	1.14	1.281	10y-EDAU10	32
EDAZ10	1.44	0.976	10y-EDAZ10	-17
EDAH11	1.69	0.731	10y-EDAH11	-64
EDAM11	1.95	0.466	10y-EDAM11	-87
EDAU11	2.19	0.226	10y-EDAU11	-93
EDAZ11	2.42	0.001	10y-EDAZ11	-95
EDAH12	2.56	0.139	10y-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

10y Yield - ED Yield



	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAM09	0.1117	8.4298	8.3181	10y-EDAM09
EDAU09	0.3610	8.4298	8.0688	10y-EDAU09
EDAZ09	0.6103	8.4298	7.8195	10y-EDAZ09
EDAH10	0.8596	8.4298	7.5701	10y-EDAH10
EDAM10	1.1089	8.4298	7.3208	10y-EDAM10
EDAU10	1.3583	8.4298	7.0715	10y-EDAU10
EDAZ10	1.6076	8.4298	6.8222	10y-EDAZ10
EDAH11	1.8569	8.4298	6.5729	10y-EDAH11
EDAM11	2.1062	8.4298	6.3236	10y-EDAM11
EDAU11	2.3747	8.4298	6.0551	10y-EDAU11
EDAZ11	2.6240	8.4298	5.8058	10y-EDAZ11
EDAH12	2.8733	8.4298	5.5564	10y-EDAH12

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

Correlation

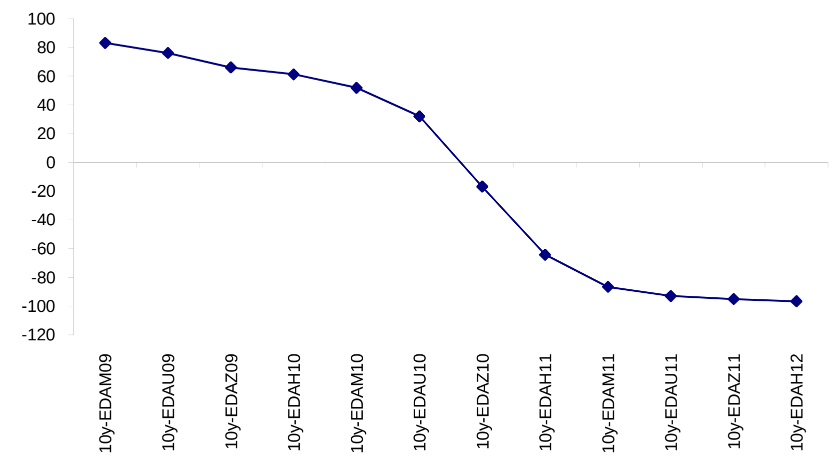
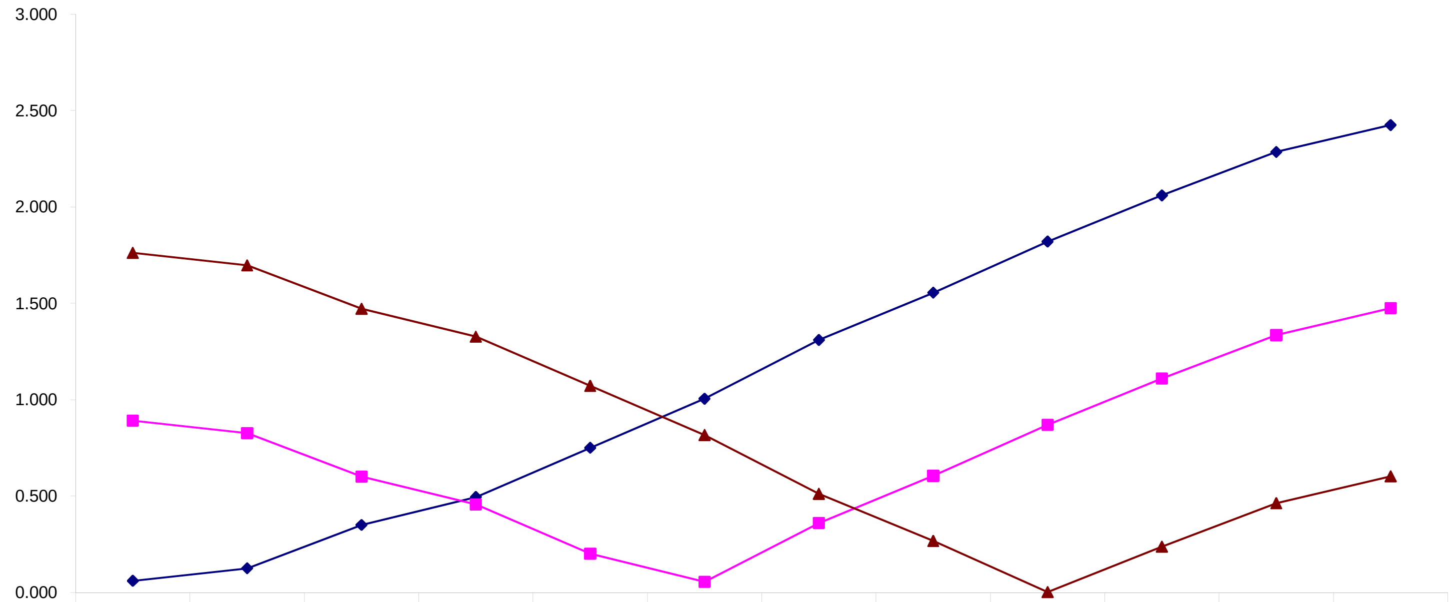


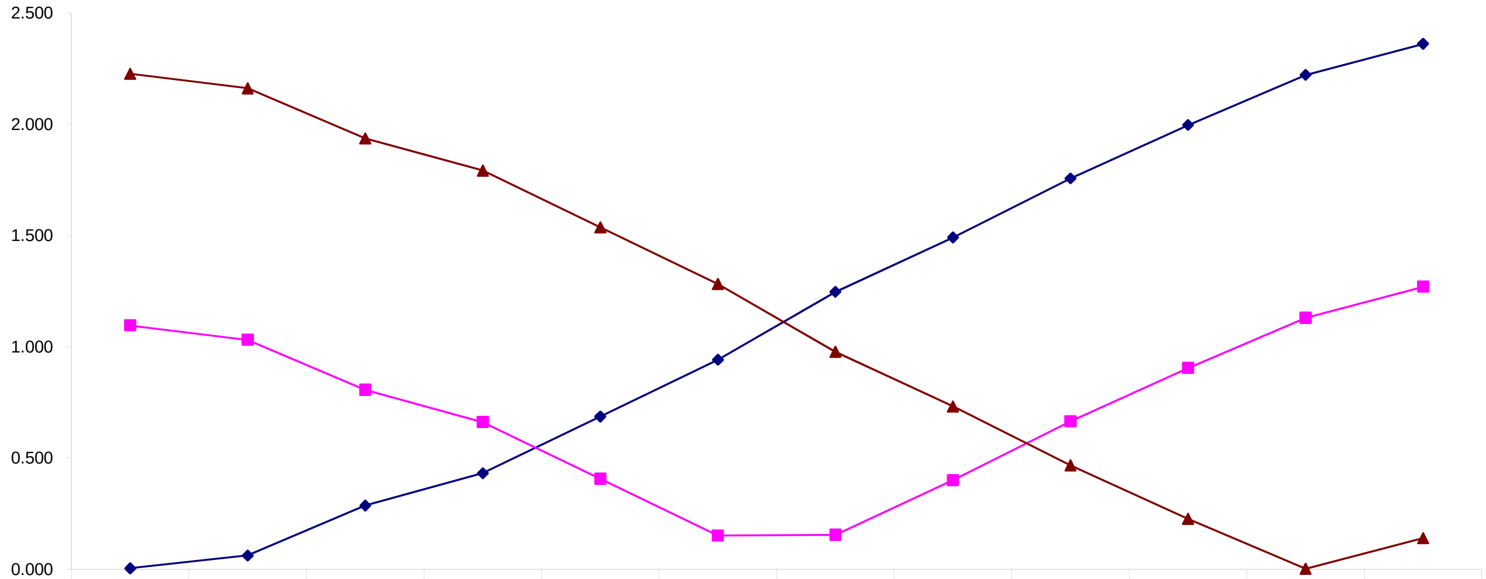
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.060	0.125	0.350	0.495	0.750	1.005	1.310	1.555	1.820	2.060	2.285	2.425
ZF	0.891	0.826	0.601	0.456	0.201	0.054	0.359	0.604	0.869	1.109	1.334	1.474
ZN	1.762	1.697	1.472	1.327	1.072	0.817	0.512	0.267	0.002	0.238	0.463	0.603

ZT ZF ZN

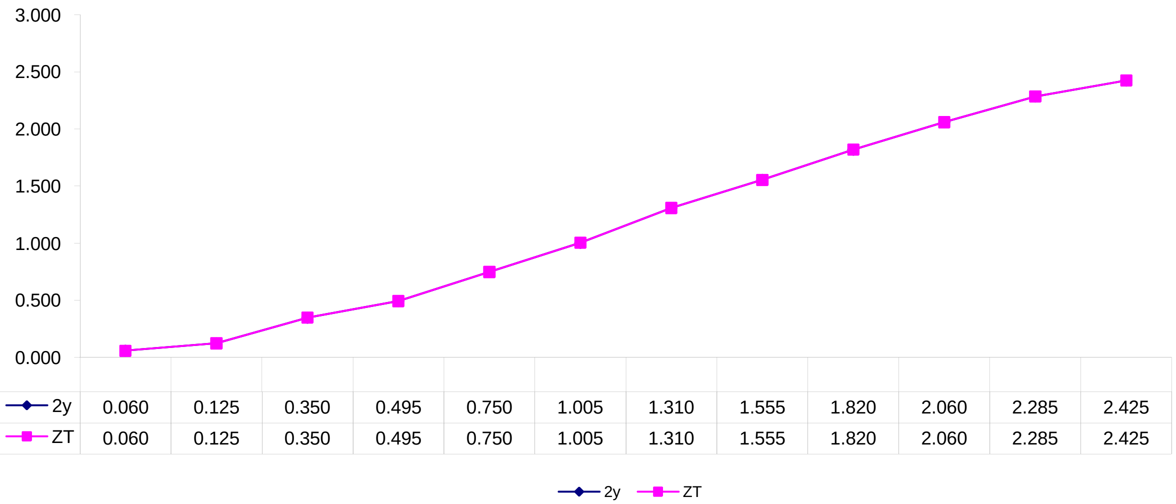
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



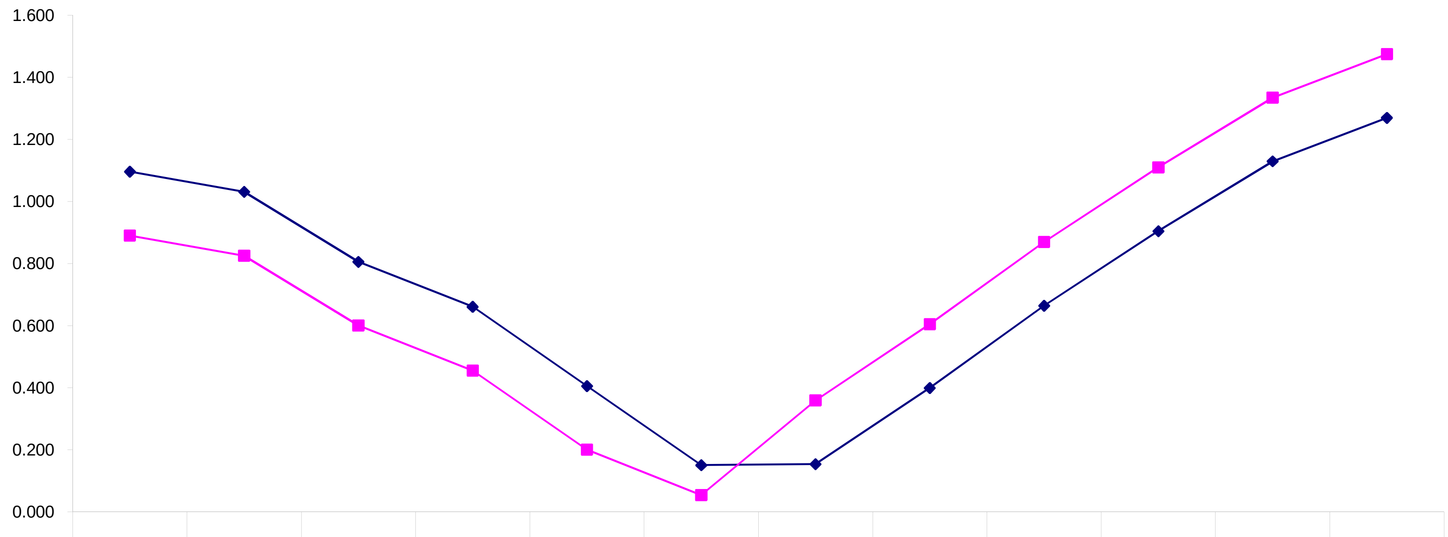
2y	0.004	0.061	0.286	0.431	0.686	0.941	1.246	1.491	1.756	1.996	2.221	2.361
5y	1.096	1.031	0.806	0.661	0.406	0.151	0.154	0.399	0.664	0.904	1.129	1.269
10y	2.226	2.161	1.936	1.791	1.536	1.281	0.976	0.731	0.466	0.226	0.001	0.139

2y 5y 10y

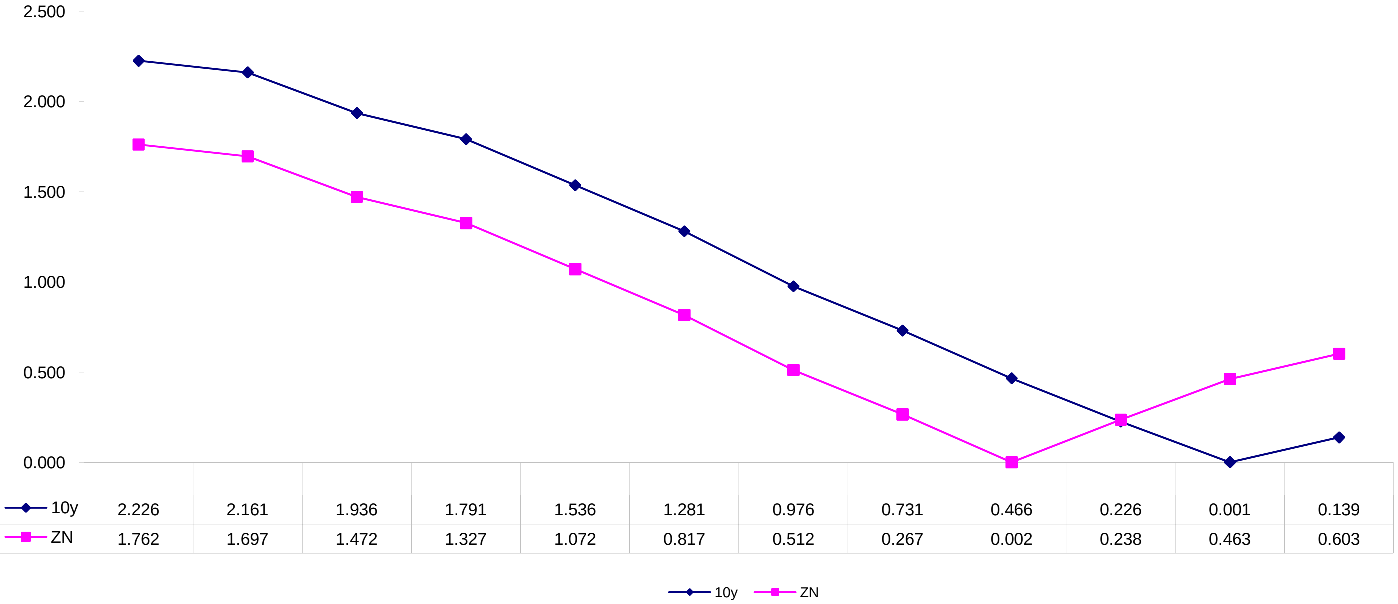
2y Basis TED Curve



2y	0.060	0.125	0.350	0.495	0.750	1.005	1.310	1.555	1.820	2.060	2.285	2.425
ZT	0.060	0.125	0.350	0.495	0.750	1.005	1.310	1.555	1.820	2.060	2.285	2.425



5y	1.096	1.031	0.806	0.661	0.406	0.151	0.154	0.399	0.664	0.904	1.129	1.269
ZF	0.891	0.826	0.601	0.456	0.201	0.054	0.359	0.604	0.869	1.109	1.334	1.474



10y	2.226	2.161	1.936	1.791	1.536	1.281	0.976	0.731	0.466	0.226	0.001	0.139
ZN	1.762	1.697	1.472	1.327	1.072	0.817	0.512	0.267	0.002	0.238	0.463	0.603

	Last Yield	Net Last Yield	Last Price
White Pack	1.152	0.625	9886.7500
Red Pack	2.069	-1.125	9797.0000
Green Pack	3.088	-1.000	9697.7500
Blue Pack		0.000	9639.8750
Gold Pack		0.000	9606.7500