The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

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

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.7656	108.2450	0.876	1.790
ZF	116.8969	116.2870	1.919	3.983
ZN	120.4375	120.1400	2.706	5.960
2y	99.8969	99.2870	0.928	1.924
5y	98.8500	98.2720	2.123	4.690
10y	98.8750	98.2800	3.260	8.503

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.3275	0.672	27	0.0733	JUN	
EDAU09	99.2800	0.720	118	0.3226	SEP	White Pack
EDAZ09	99.0900	0.910	209	0.5719	DEC	
EDAH10	98.9450	1.055	300	0.8213	MAR	
EDAM10	98.6850	1.315	391	1.0706	JUN	
EDAU10	98.3950	1.605	482	1.3199	SEP	Red Pack
EDAZ10	98.0450	1.955	573	1.5692	DEC	
EDAH11	97.7450	2.255	664	1.8185	MAR	
EDAM11	97.4200	2.580	755	2.0678	JUN	
EDAU11	97.1350	2.865	853	2.3363	SEP	Green Pack
EDAZ11	96.8750	3.125	944	2.5856	DEC	
EDAH12	96.7150	3.285	1,035	2.8350	MAR	
EDAM12	96.5600	3.440	1,126	3.0843	JUN	
EDAU12	96.4350	3.565	1,217	3.3336	SEP	Blue Pack
EDAZ12	96.3100	3.690	1,308	3.5829	DEC	
EDAH13	96.2400	3.760	1,399	3.8322	MAR	
EDAM13	96.1450	3.855	1,490	4.0815	JUN	
EDAU13	96.0650	3.935	1,581	4.3308	SEP	Gold Pack
EDAZ13	95.9600	4.040	1,672	4.5802	DEC	
EDAH14	95.9100	4.090	1,763	4.8295	MAR	

	Last Yield	Net Yield	Last Price
White Pack	0.853	2.750	9916.06
Red Pack	1.816	-2.125	9821.75
Green Pack	3.028	-5.750	9703.63
Blue Pack	3.697	-5.250	9638.63
Gold Pack	4.076	-3.875	9602.00

Pack Prices

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

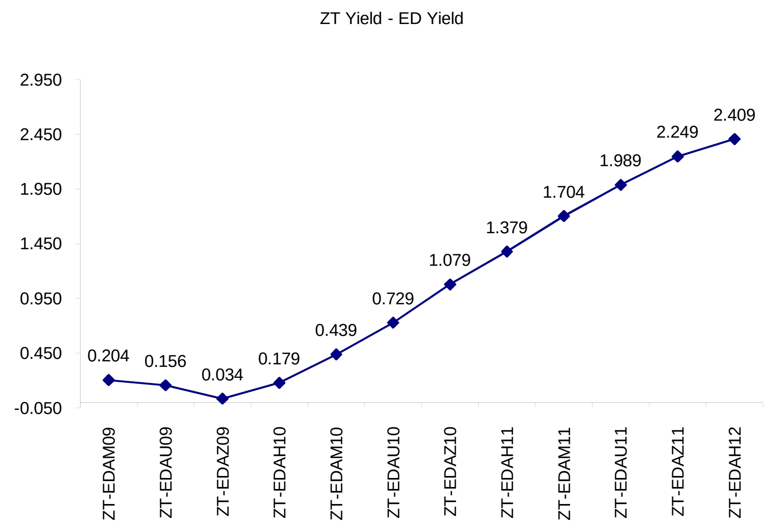
Correlations (Important)

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

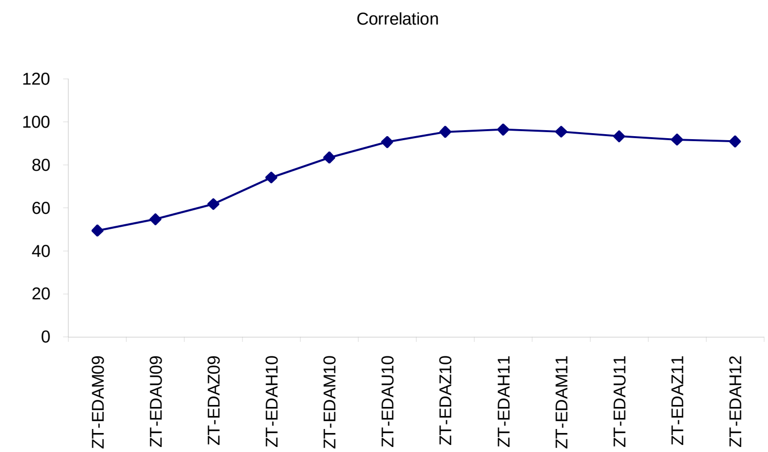
	ZT Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.44	0.204	ZT-EDAM09	49
EDAU09	9.49	0.156	ZT-EDAU09	55
EDAZ09	9.68	0.034	ZT-EDAZ09	62
EDAH10	9.82	0.179	ZT-EDAH10	74
EDAM10	10.08	0.439	ZT-EDAM10	83
EDAU10	10.37	0.729	ZT-EDAU10	91
EDAZ10	10.72	1.079	ZT-EDAZ10	95
EDAH11	11.02	1.379	ZT-EDAH11	96
EDAM11	11.35	1.704	ZT-EDAM11	95
EDAU11	11.63	1.989	ZT-EDAU11	93
EDAZ11	11.89	2.249	ZT-EDAZ11	92
EDAH12	12.05	2.409	ZT-EDAH12	91

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	0.0733	1.7898	1.7165	ZT-EDAM09
EDAU09	0.3226	1.7898	1.4672	ZT-EDAU09
EDAZ09	0.5719	1.7898	1.2179	ZT-EDAZ09
EDAH10	0.8213	1.7898	0.9686	ZT-EDAH10
EDAM10	1.0706	1.7898	0.7193	ZT-EDAM10
EDAU10	1.3199	1.7898	0.4700	ZT-EDAU10
EDAZ10	1.5692	1.7898	0.2206	ZT-EDAZ10
EDAH11	1.8185	1.7898	-0.0287	ZT-EDAH11
EDAM11	2.0678	1.7898	-0.2780	ZT-EDAM11
EDAU11	2.3363	1.7898	-0.5465	ZT-EDAU11
EDAZ11	2.5856	1.7898	-0.7958	ZT-EDAZ11
EDAH12	2.8350	1.7898	-1.0451	ZT-EDAH12

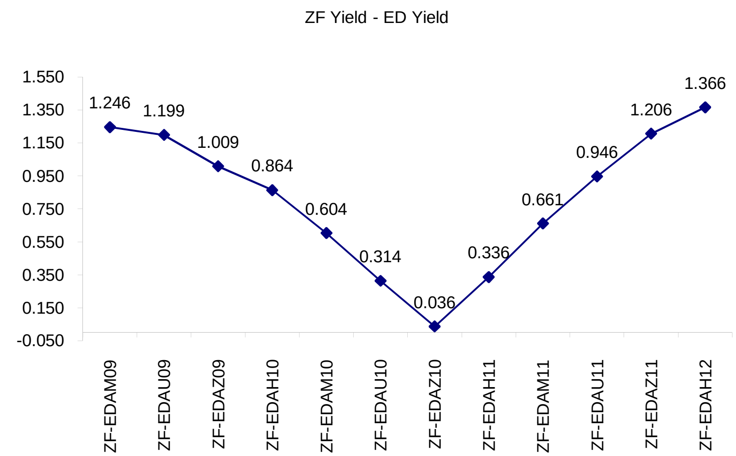
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

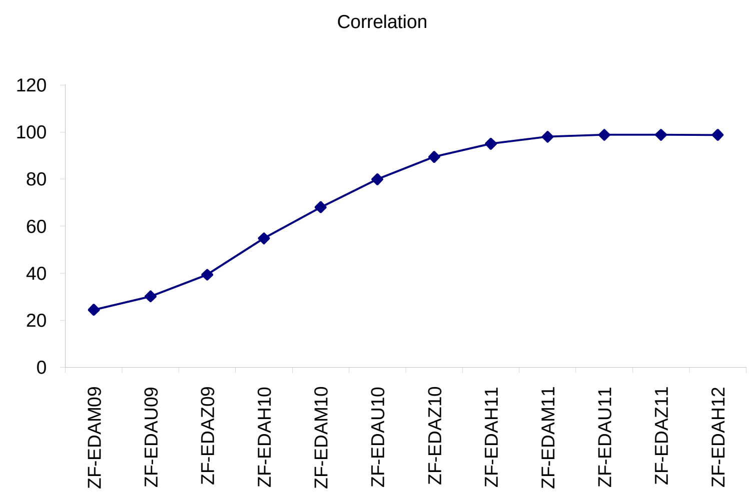
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	17.57	1.246	ZF-EDAM09	25
EDAU09	17.62	1.199	ZF-EDAU09	30
EDAZ09	17.81	1.009	ZF-EDAZ09	39
EDAH10	17.95	0.864	ZF-EDAH10	55
EDAM10	18.21	0.604	ZF-EDAM10	68
EDAU10	18.50	0.314	ZF-EDAU10	80
EDAZ10	18.85	0.036	ZF-EDAZ10	89
EDAH11	19.15	0.336	ZF-EDAH11	95
EDAM11	19.48	0.661	ZF-EDAM11	98
EDAU11	19.76	0.946	ZF-EDAU11	99
EDAZ11	20.02	1.206	ZF-EDAZ11	99
EDAH12	20.18	1.366	ZF-EDAH12	99

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	0.0733	3.9826	3.9093	ZF-EDAM09
EDAU09	0.3226	3.9826	3.6600	ZF-EDAU09
EDAZ09	0.5719	3.9826	3.4107	ZF-EDAZ09
EDAH10	0.8213	3.9826	3.1614	ZF-EDAH10
EDAM10	1.0706	3.9826	2.9120	ZF-EDAM10
EDAU10	1.3199	3.9826	2.6627	ZF-EDAU10
EDAZ10	1.5692	3.9826	2.4134	ZF-EDAZ10
EDAH11	1.8185	3.9826	2.1641	ZF-EDAH11
EDAM11	2.0678	3.9826	1.9148	ZF-EDAM11
EDAU11	2.3363	3.9826	1.6463	ZF-EDAU11
EDAZ11	2.5856	3.9826	1.3970	ZF-EDAZ11
EDAH12	2.8350	3.9826	1.1477	ZF-EDAH12

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

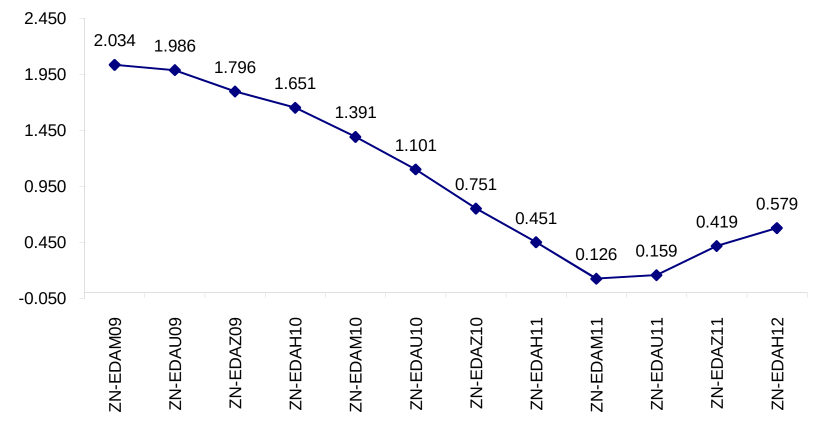


Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	21.11	2.034	ZN-EDAM09	6
EDAU09	21.16	1.986	ZN-EDAU09	11
EDAZ09	21.35	1.796	ZN-EDAZ09	20
EDAH10	21.49	1.651	ZN-EDAH10	37
EDAM10	21.75	1.391	ZN-EDAM10	52
EDAU10	22.04	1.101	ZN-EDAU10	66
EDAZ10	22.39	0.751	ZN-EDAZ10	79
EDAH11	22.69	0.451	ZN-EDAH11	87
EDAM11	23.02	0.126	ZN-EDAM11	93
EDAU11	23.30	0.159	ZN-EDAU11	96
EDAZ11	23.56	0.419	ZN-EDAZ11	97
EDAH12	23.72	0.579	ZN-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

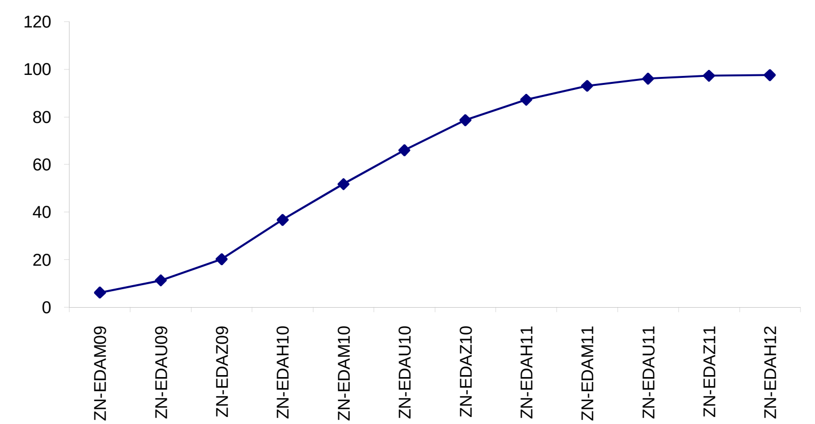
ZN Yield - ED Yield



	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM09	0.0733	5.9597	5.8864	ZN-EDAM09
EDAU09	0.3226	5.9597	5.6370	ZN-EDAU09
EDAZ09	0.5719	5.9597	5.3877	ZN-EDAZ09
EDAH10	0.8213	5.9597	5.1384	ZN-EDAH10
EDAM10	1.0706	5.9597	4.8891	ZN-EDAM10
EDAU10	1.3199	5.9597	4.6398	ZN-EDAU10
EDAZ10	1.5692	5.9597	4.3905	ZN-EDAZ10
EDAH11	1.8185	5.9597	4.1412	ZN-EDAH11
EDAM11	2.0678	5.9597	3.8918	ZN-EDAM11
EDAU11	2.3363	5.9597	3.6233	ZN-EDAU11
EDAZ11	2.5856	5.9597	3.3740	ZN-EDAZ11
EDAH12	2.8350	5.9597	3.1247	ZN-EDAH12

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

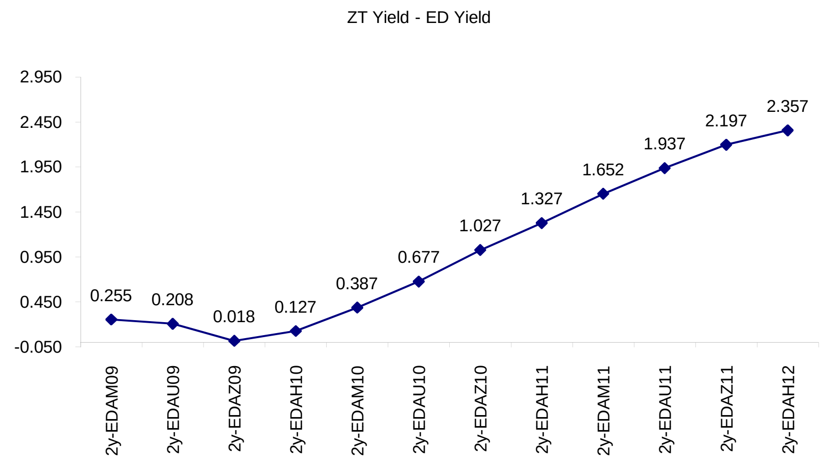
Correlation



TERM TED: 2y vs Eurodollar Contracts

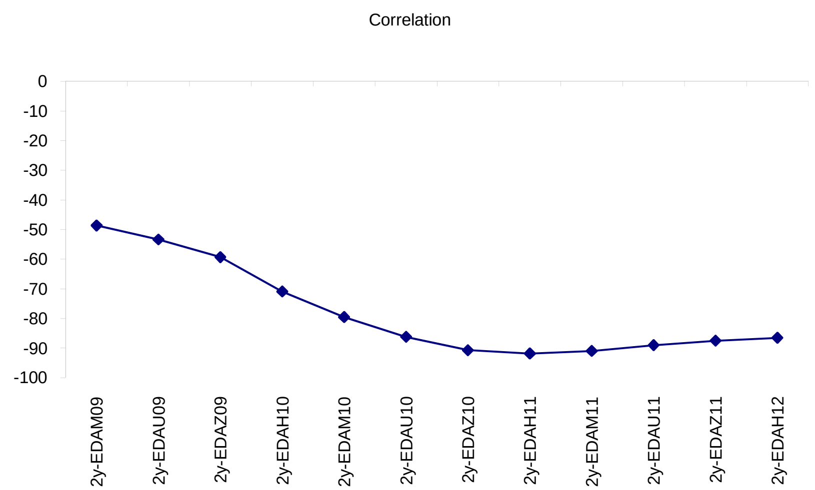
	2y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM09	0.57	0.255	2y-EDAM09	-49
EDAU09	0.62	0.208	2y-EDAU09	-53
EDAZ09	0.81	0.018	2y-EDAZ09	-59
EDAH10	0.95	0.127	2y-EDAH10	-71
EDAM10	1.21	0.387	2y-EDAM10	-80
EDAU10	1.50	0.677	2y-EDAU10	-86
EDAZ10	1.85	1.027	2y-EDAZ10	-91
EDAH11	2.15	1.327	2y-EDAH11	-92
EDAM11	2.48	1.652	2y-EDAM11	-91
EDAU11	2.76	1.937	2y-EDAU11	-89
EDAZ11	3.02	2.197	2y-EDAZ11	-88
EDAH12	3.18	2.357	2y-EDAH12	-87

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**	
EDAM09	0.0733	1.9237	1.8504	2y-EDAM09
EDAU09	0.3226	1.9237	1.6011	2y-EDAU09
EDAZ09	0.5719	1.9237	1.3517	2y-EDAZ09
EDAH10	0.8213	1.9237	1.1024	2y-EDAH10
EDAM10	1.0706	1.9237	0.8531	2y-EDAM10
EDAU10	1.3199	1.9237	0.6038	2y-EDAU10
EDAZ10	1.5692	1.9237	0.3545	2y-EDAZ10
EDAH11	1.8185	1.9237	0.1052	2y-EDAH11
EDAM11	2.0678	1.9237	-0.1441	2y-EDAM11
EDAU11	2.3363	1.9237	-0.4126	2y-EDAU11
EDAZ11	2.5856	1.9237	-0.6620	2y-EDAZ11
EDAH12	2.8350	1.9237	-0.9113	2y-EDAH12

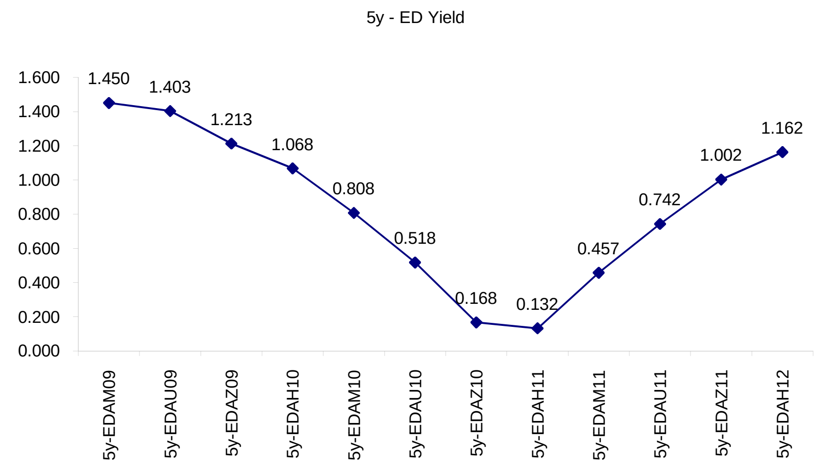
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

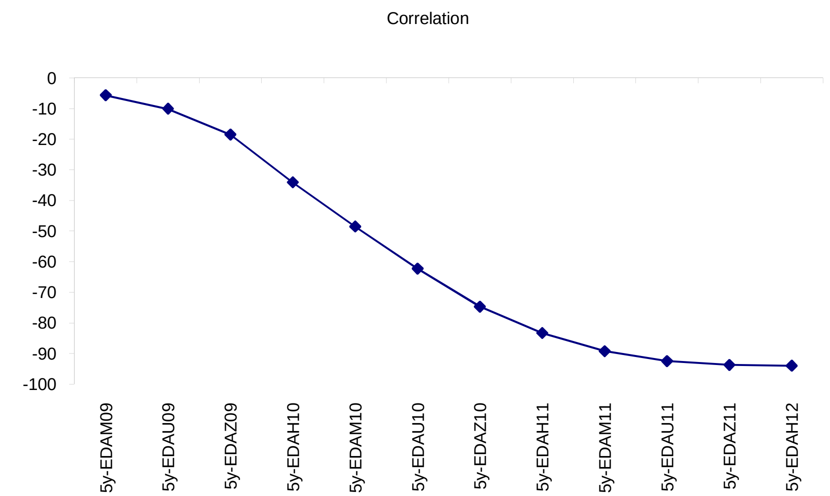
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.48	1.450	5y-EDAM09	-6
EDAU09	-0.43	1.403	5y-EDAU09	-10
EDAZ09	-0.24	1.213	5y-EDAZ09	-18
EDAH10	-0.09	1.068	5y-EDAH10	-34
EDAM10	0.17	0.808	5y-EDAM10	-49
EDAU10	0.46	0.518	5y-EDAU10	-62
EDAZ10	0.81	0.168	5y-EDAZ10	-75
EDAH11	1.11	0.132	5y-EDAH11	-83
EDAM11	1.43	0.457	5y-EDAM11	-89
EDAU11	1.72	0.742	5y-EDAU11	-92
EDAZ11	1.98	1.002	5y-EDAZ11	-94
EDAH12	2.14	1.162	5y-EDAH12	-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	5Y Duration	Spread Duration	
EDAM09	0.0733	4.6905	4.6172	5y-EDAM09
EDAU09	0.3226	4.6905	4.3679	5y-EDAU09
EDAZ09	0.5719	4.6905	4.1185	5y-EDAZ09
EDAH10	0.8213	4.6905	3.8692	5y-EDAH10
EDAM10	1.0706	4.6905	3.6199	5y-EDAM10
EDAU10	1.3199	4.6905	3.3706	5y-EDAU10
EDAZ10	1.5692	4.6905	3.1213	5y-EDAZ10
EDAH11	1.8185	4.6905	2.8720	5y-EDAH11
EDAM11	2.0678	4.6905	2.6227	5y-EDAM11
EDAU11	2.3363	4.6905	2.3542	5y-EDAU11
EDAZ11	2.5856	4.6905	2.1048	5y-EDAZ11
EDAH12	2.8350	4.6905	1.8555	5y-EDAH12

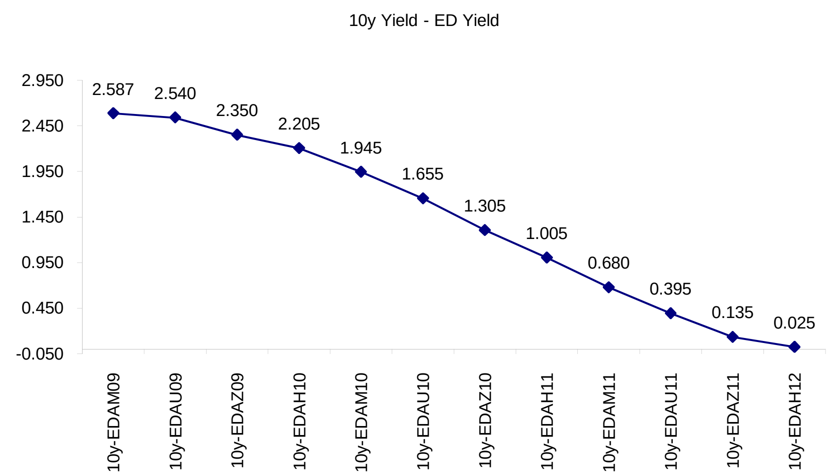
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.48	2.587	10y-EDAM09	-6
EDAU09	-0.43	2.540	10y-EDAU09	-10
EDAZ09	-0.24	2.350	10y-EDAZ09	-20
EDAH10	-0.09	2.205	10y-EDAH10	-36
EDAM10	0.17	1.945	10y-EDAM10	-50
EDAU10	0.46	1.655	10y-EDAU10	-63
EDAZ10	0.81	1.305	10y-EDAZ10	-74
EDAH11	1.11	1.005	10y-EDAH11	-83
EDAM11	1.43	0.680	10y-EDAM11	-88
EDAU11	1.72	0.395	10y-EDAU11	-91
EDAZ11	1.98	0.135	10y-EDAZ11	-93
EDAH12	2.14	0.025	10y-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	10Y Duration	Spread Duration	
EDAM09	0.0733	8.5033	8.4300	10y-EDAM09
EDAU09	0.3226	8.5033	8.1807	10y-EDAU09
EDAZ09	0.5719	8.5033	7.9314	10y-EDAZ09
EDAH10	0.8213	8.5033	7.6820	10y-EDAH10
EDAM10	1.0706	8.5033	7.4327	10y-EDAM10
EDAU10	1.3199	8.5033	7.1834	10y-EDAU10
EDAZ10	1.5692	8.5033	6.9341	10y-EDAZ10
EDAH11	1.8185	8.5033	6.6848	10y-EDAH11
EDAM11	2.0678	8.5033	6.4355	10y-EDAM11
EDAU11	2.3363	8.5033	6.1670	10y-EDAU11
EDAZ11	2.5856	8.5033	5.9177	10y-EDAZ11
EDAH12	2.8350	8.5033	5.6683	10y-EDAH12

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

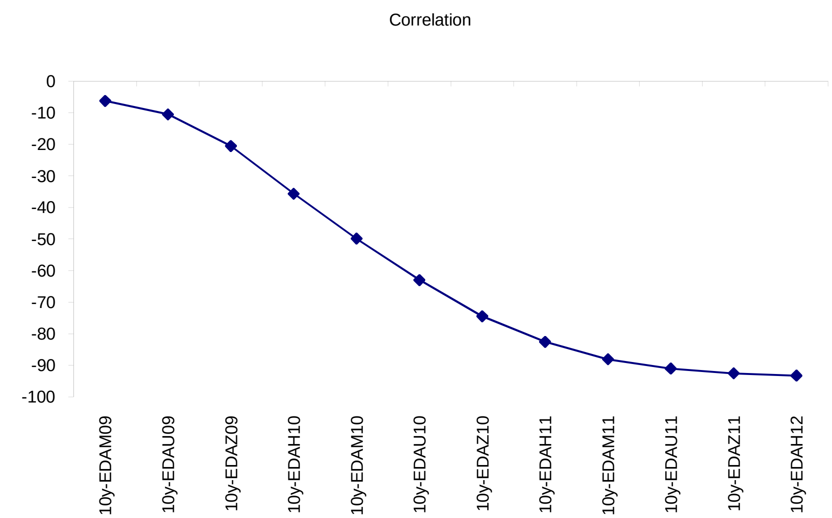
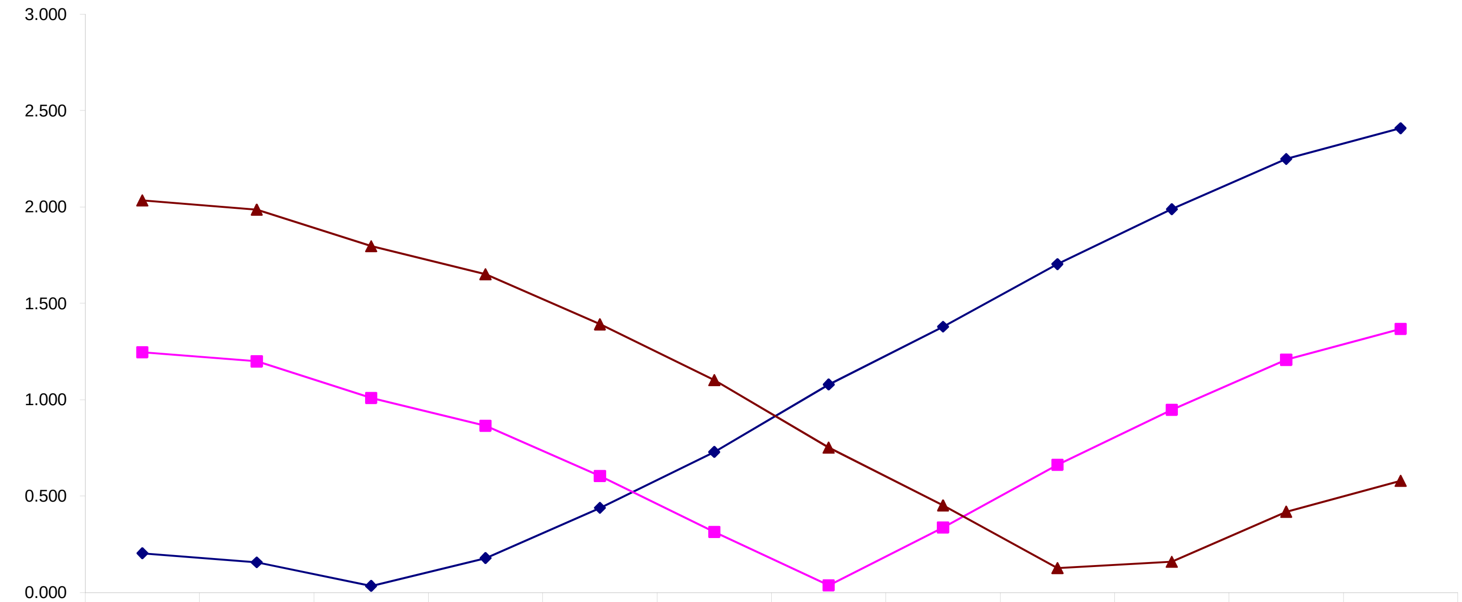
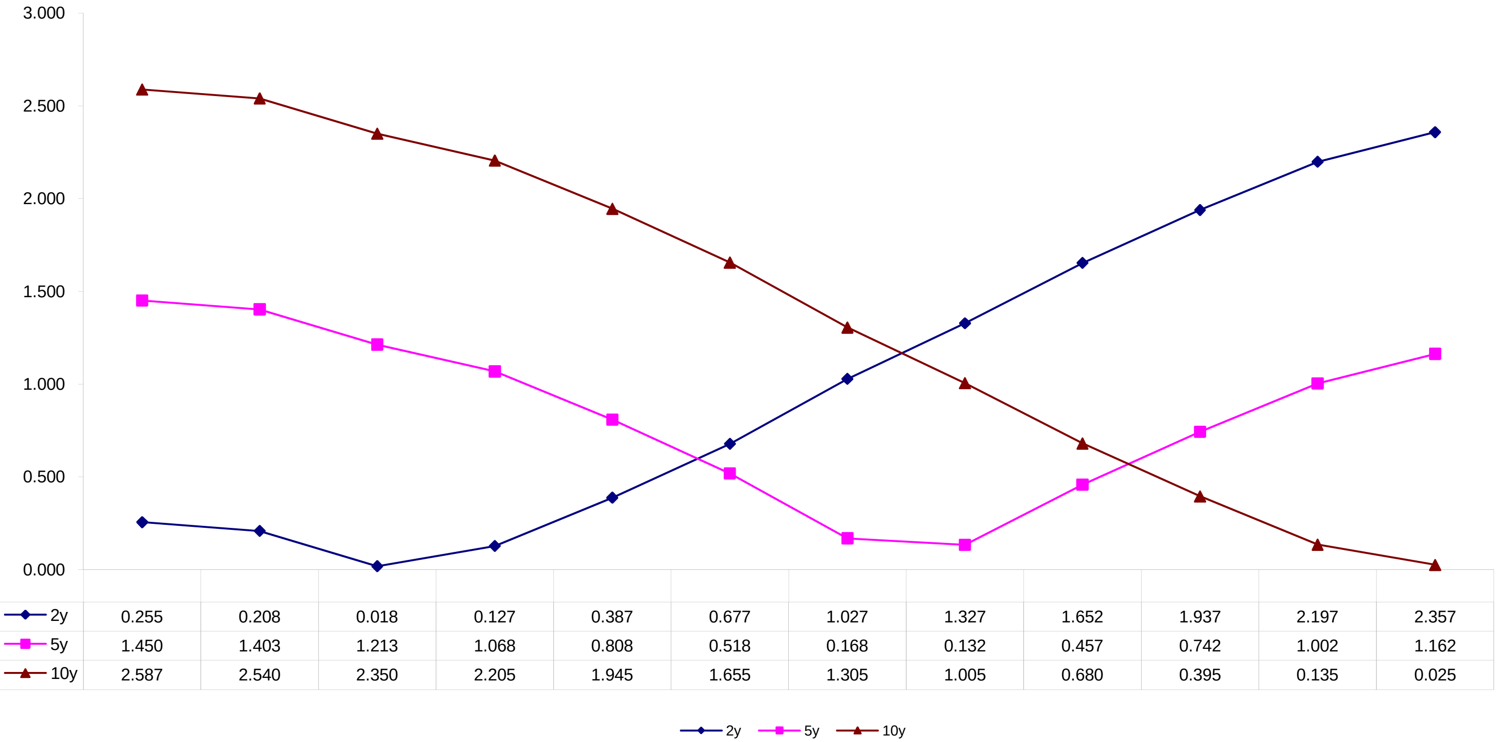


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



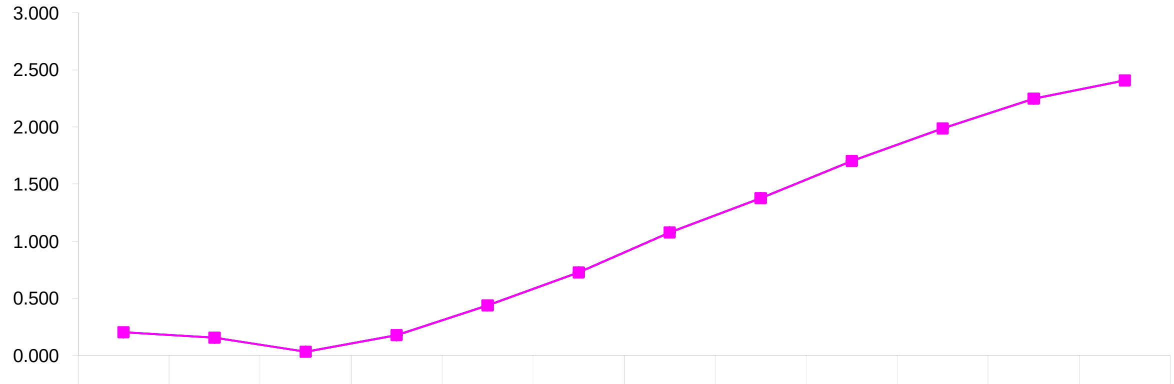
ZT	0.204	0.156	0.034	0.179	0.439	0.729	1.079	1.379	1.704	1.989	2.249	2.409
ZF	1.246	1.199	1.009	0.864	0.604	0.314	0.036	0.336	0.661	0.946	1.206	1.366
ZN	2.034	1.986	1.796	1.651	1.391	1.101	0.751	0.451	0.126	0.159	0.419	0.579

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.



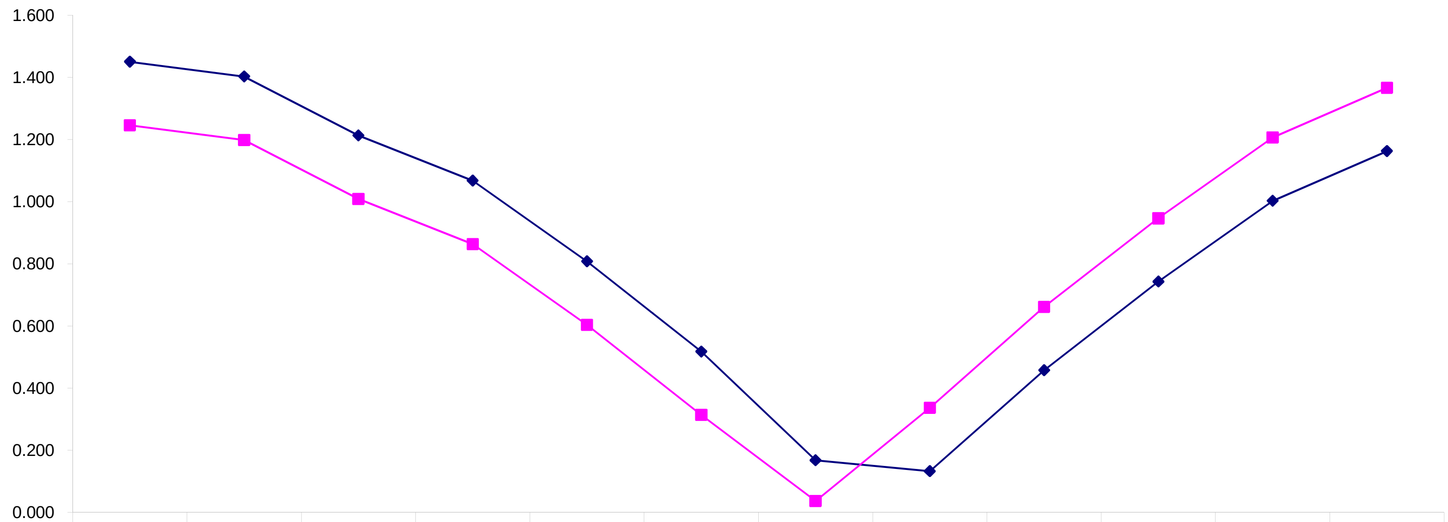
2y	0.255	0.208	0.018	0.127	0.387	0.677	1.027	1.327	1.652	1.937	2.197	2.357
5y	1.450	1.403	1.213	1.068	0.808	0.518	0.168	0.132	0.457	0.742	1.002	1.162
10y	2.587	2.540	2.350	2.205	1.945	1.655	1.305	1.005	0.680	0.395	0.135	0.025

2y Basis TED Curve



2y	0.204	0.156	0.034	0.179	0.439	0.729	1.079	1.379	1.704	1.989	2.249	2.409
ZT	0.204	0.156	0.034	0.179	0.439	0.729	1.079	1.379	1.704	1.989	2.249	2.409

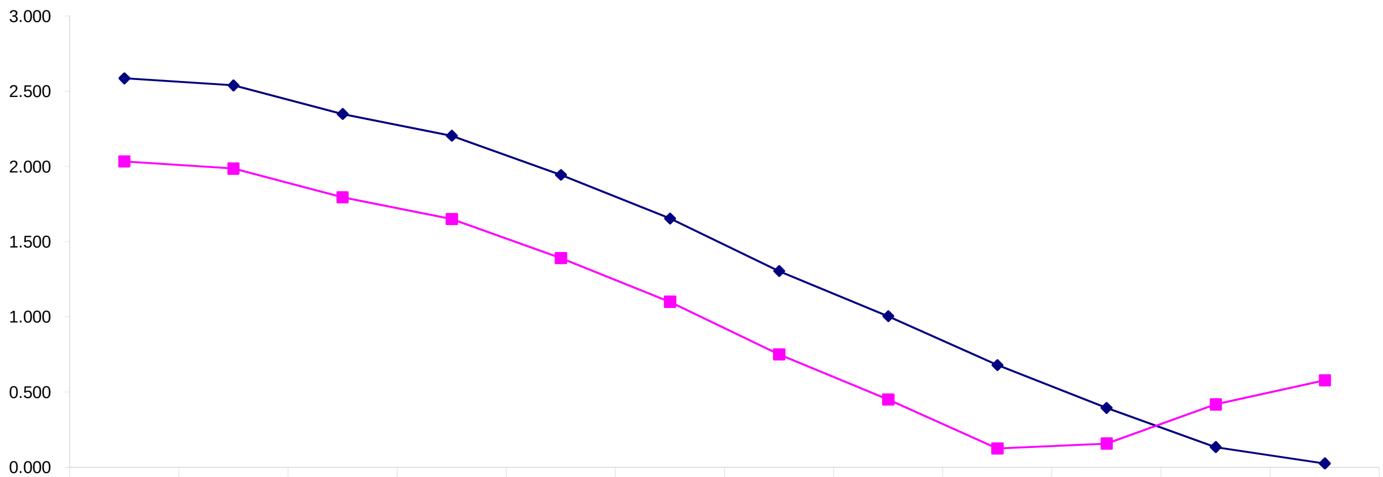
2y ZT



5y	1.450	1.403	1.213	1.068	0.808	0.518	0.168	0.132	0.457	0.742	1.002	1.162
ZF	1.246	1.199	1.009	0.864	0.604	0.314	0.036	0.336	0.661	0.946	1.206	1.366

5y ZF

10y Basis TED Curve



10y	2.587	2.540	2.350	2.205	1.945	1.655	1.305	1.005	0.680	0.395	0.135	0.025
ZN	2.034	1.986	1.796	1.651	1.391	1.101	0.751	0.451	0.126	0.159	0.419	0.579

10y ZN

	Last Yield	Net Last Yield	Last Price
White Pack	0.853	2.750	9916.0625
Red Pack	1.816	-2.125	9821.7500
Green Pack	3.028	-5.750	9703.6250
Blue Pack	3.697	-5.250	9638.6250
Gold Pack	4.076	-3.875	9602.0000