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	107.7656	107.2450	1.247	1.906
ZF	113.8031	113.2570	2.506	4.221
ZN	115.0625	115.0200	3.283	5.846
2y	99.3594	99.1150	1.205	1.926
5y	97.9281	97.2970	2.696	4.642
10y	95.5313	95.1700	3.665	8.381

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.2500	0.750	89	0.2432	SEP	
EDAZ09	98.9350	1.065	180	0.4925	DEC	White Pack
EDAH10	98.6450	1.355	271	0.7418	MAR	
EDAM10	98.2800	1.720	362	0.9911	JUN	
EDAU10	97.9200	2.080	453	1.2405	SEP	
EDAZ10	97.5400	2.460	544	1.4898	DEC	Red Pack
EDAH11	97.2150	2.785	635	1.7391	MAR	
EDAM11	96.8750	3.125	726	1.9884	JUN	
EDAU11	96.5650	3.435	824	2.2569	SEP	
EDAZ11	96.2750	3.725	915	2.5062	DEC	Green Pack
EDAH12	96.0800	3.920	1,006	2.7555	MAR	
EDAM12	95.8900	4.110	1,097	3.0048	JUN	
EDAU12	95.6850	4.315	1,188	3.2542	SEP	
EDAZ12	95.5600	4.440	1,279	3.5035	DEC	Blue Pack
EDAH13	95.5250	4.475	1,370	3.7528	MAR	
EDAM13	95.4150	4.585	1,461	4.0021	JUN	
EDAU13	95.3250	4.675	1,552	4.2514	SEP	
EDAZ13	95.2400	4.760	1,643	4.5007	DEC	Gold Pack
EDAH14	95.1500	4.850	1,734	4.7500	MAR	
EDAM14	95.0850	4.915	1,825	4.9994	JUN	

	Last Yield	Net Yield	Last Price
White Pack	1.244	0.375	9877.75
Red Pack	2.667	1.500	9738.75
Green Pack	3.887	0.750	9620.25
Blue Pack		-1.250	9552.50
Gold Pack		0.000	9517.25

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

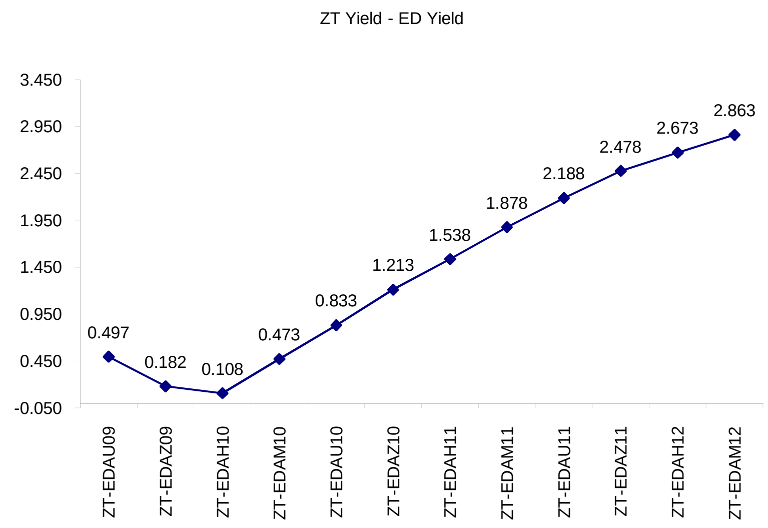
Correlations (Important)

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

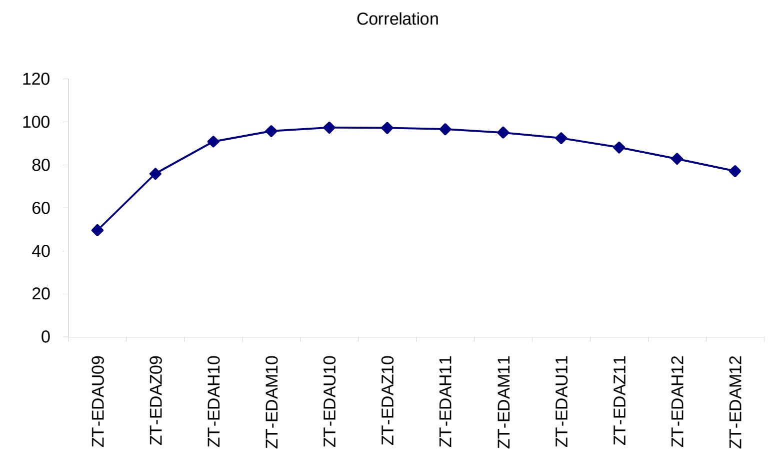
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.52	0.497	ZT-EDAU09	50
EDAZ09	8.83	0.182	ZT-EDAZ09	76
EDAH10	9.12	0.108	ZT-EDAH10	91
EDAM10	9.49	0.473	ZT-EDAM10	96
EDAU10	9.85	0.833	ZT-EDAU10	97
EDAZ10	10.23	1.213	ZT-EDAZ10	97
EDAH11	10.55	1.538	ZT-EDAH11	97
EDAM11	10.89	1.878	ZT-EDAM11	95
EDAU11	11.20	2.188	ZT-EDAU11	92
EDAZ11	11.49	2.478	ZT-EDAZ11	88
EDAH12	11.69	2.673	ZT-EDAH12	83
EDAM12	11.88	2.863	ZT-EDAM12	77

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	
EDAU09	0.2432	1.9057	1.6625	ZT-EDAU09
EDAZ09	0.4925	1.9057	1.4132	ZT-EDAZ09
EDAH10	0.7418	1.9057	1.1639	ZT-EDAH10
EDAM10	0.9911	1.9057	0.9146	ZT-EDAM10
EDAU10	1.2405	1.9057	0.6653	ZT-EDAU10
EDAZ10	1.4898	1.9057	0.4159	ZT-EDAZ10
EDAH11	1.7391	1.9057	0.1666	ZT-EDAH11
EDAM11	1.9884	1.9057	-0.0827	ZT-EDAM11
EDAU11	2.2569	1.9057	-0.3512	ZT-EDAU11
EDAZ11	2.5062	1.9057	-0.6005	ZT-EDAZ11
EDAH12	2.7555	1.9057	-0.8498	ZT-EDAH12
EDAM12	3.0048	1.9057	-1.0991	ZT-EDAM12

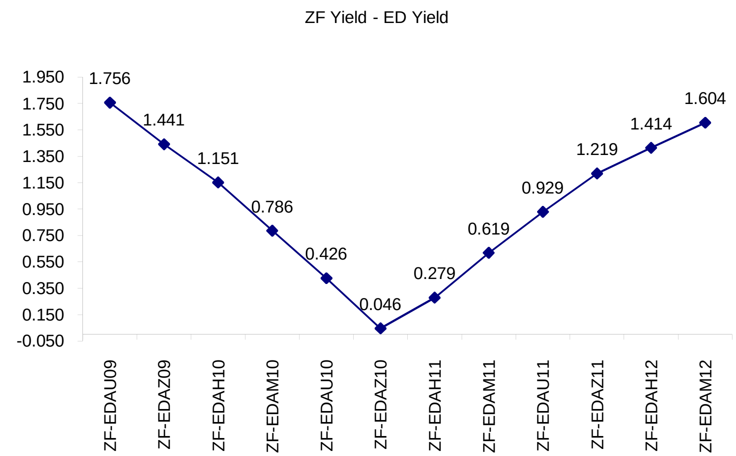
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

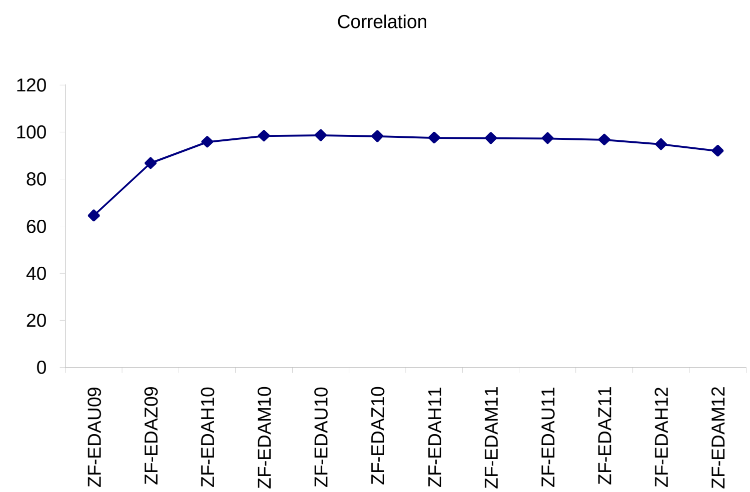
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	14.55	1.756	ZF-EDAU09	65
EDAZ09	14.87	1.441	ZF-EDAZ09	87
EDAH10	15.16	1.151	ZF-EDAH10	96
EDAM10	15.52	0.786	ZF-EDAM10	98
EDAU10	15.88	0.426	ZF-EDAU10	99
EDAZ10	16.26	0.046	ZF-EDAZ10	98
EDAH11	16.59	0.279	ZF-EDAH11	98
EDAM11	16.93	0.619	ZF-EDAM11	97
EDAU11	17.24	0.929	ZF-EDAU11	97
EDAZ11	17.53	1.219	ZF-EDAZ11	97
EDAH12	17.72	1.414	ZF-EDAH12	95
EDAM12	17.91	1.604	ZF-EDAM12	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	
EDAU09	0.2432	4.2214	3.9782	ZF-EDAU09
EDAZ09	0.4925	4.2214	3.7289	ZF-EDAZ09
EDAH10	0.7418	4.2214	3.4796	ZF-EDAH10
EDAM10	0.9911	4.2214	3.2303	ZF-EDAM10
EDAU10	1.2405	4.2214	2.9810	ZF-EDAU10
EDAZ10	1.4898	4.2214	2.7316	ZF-EDAZ10
EDAH11	1.7391	4.2214	2.4823	ZF-EDAH11
EDAM11	1.9884	4.2214	2.2330	ZF-EDAM11
EDAU11	2.2569	4.2214	1.9645	ZF-EDAU11
EDAZ11	2.5062	4.2214	1.7152	ZF-EDAZ11
EDAH12	2.7555	4.2214	1.4659	ZF-EDAH12
EDAM12	3.0048	4.2214	1.2166	ZF-EDAM12

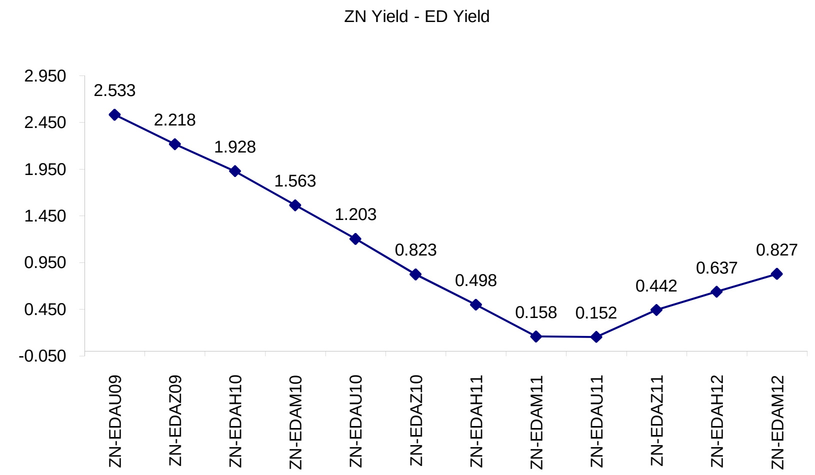
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

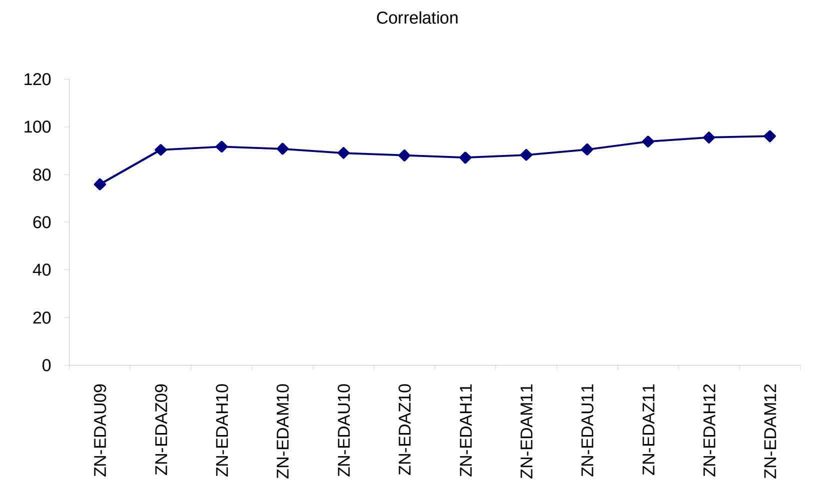
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	15.81	2.533	ZN-EDAU09	76
EDAZ09	16.13	2.218	ZN-EDAZ09	90
EDAH10	16.42	1.928	ZN-EDAH10	92
EDAM10	16.78	1.563	ZN-EDAM10	91
EDAU10	17.14	1.203	ZN-EDAU10	89
EDAZ10	17.52	0.823	ZN-EDAZ10	88
EDAH11	17.85	0.498	ZN-EDAH11	87
EDAM11	18.19	0.158	ZN-EDAM11	88
EDAU11	18.50	0.152	ZN-EDAU11	91
EDAZ11	18.79	0.442	ZN-EDAZ11	94
EDAH12	18.98	0.637	ZN-EDAH12	96
EDAM12	19.17	0.827	ZN-EDAM12	96

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	
EDAU09	0.2432	5.8459	5.6027	ZN-EDAU09
EDAZ09	0.4925	5.8459	5.3534	ZN-EDAZ09
EDAH10	0.7418	5.8459	5.1041	ZN-EDAH10
EDAM10	0.9911	5.8459	4.8548	ZN-EDAM10
EDAU10	1.2405	5.8459	4.6055	ZN-EDAU10
EDAZ10	1.4898	5.8459	4.3562	ZN-EDAZ10
EDAH11	1.7391	5.8459	4.1068	ZN-EDAH11
EDAM11	1.9884	5.8459	3.8575	ZN-EDAM11
EDAU11	2.2569	5.8459	3.5890	ZN-EDAU11
EDAZ11	2.5062	5.8459	3.3397	ZN-EDAZ11
EDAH12	2.7555	5.8459	3.0904	ZN-EDAH12
EDAM12	3.0048	5.8459	2.8411	ZN-EDAM12

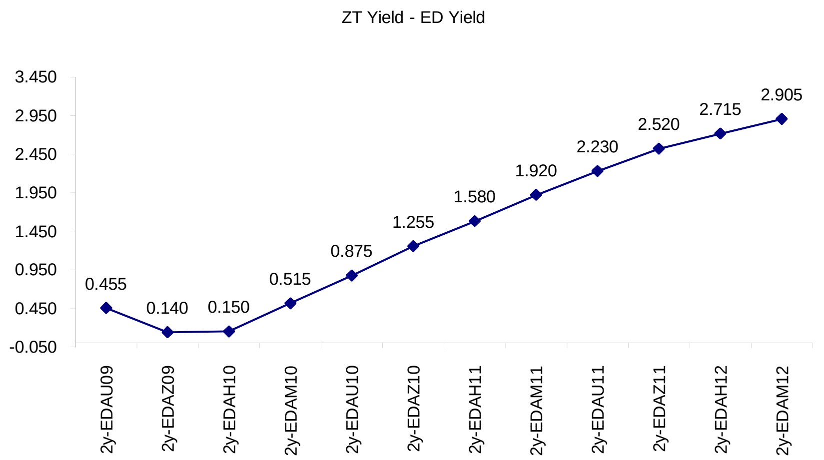
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

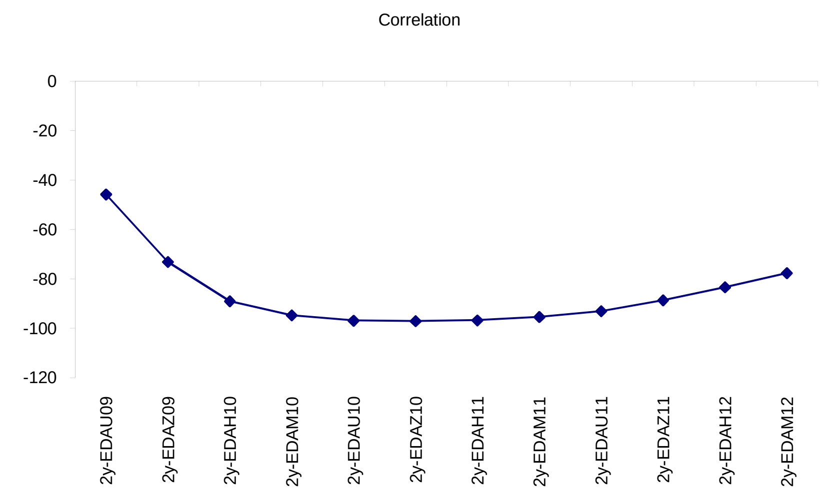
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.11	0.455	2y-EDAU09	-46
EDAZ09	0.42	0.140	2y-EDAZ09	-73
EDAH10	0.71	0.150	2y-EDAH10	-89
EDAM10	1.08	0.515	2y-EDAM10	-95
EDAU10	1.44	0.875	2y-EDAU10	-97
EDAZ10	1.82	1.255	2y-EDAZ10	-97
EDAH11	2.14	1.580	2y-EDAH11	-97
EDAM11	2.48	1.920	2y-EDAM11	-95
EDAU11	2.79	2.230	2y-EDAU11	-93
EDAZ11	3.08	2.520	2y-EDAZ11	-89
EDAH12	3.28	2.715	2y-EDAH12	-83
EDAM12	3.47	2.905	2y-EDAM12	-78

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	
EDAU09	0.2432	1.9257	1.6825	2y-EDAU09
EDAZ09	0.4925	1.9257	1.4332	2y-EDAZ09
EDAH10	0.7418	1.9257	1.1839	2y-EDAH10
EDAM10	0.9911	1.9257	0.9346	2y-EDAM10
EDAU10	1.2405	1.9257	0.6853	2y-EDAU10
EDAZ10	1.4898	1.9257	0.4360	2y-EDAZ10
EDAH11	1.7391	1.9257	0.1866	2y-EDAH11
EDAM11	1.9884	1.9257	-0.0627	2y-EDAM11
EDAU11	2.2569	1.9257	-0.3312	2y-EDAU11
EDAZ11	2.5062	1.9257	-0.5805	2y-EDAZ11
EDAH12	2.7555	1.9257	-0.8298	2y-EDAH12
EDAM12	3.0048	1.9257	-1.0791	2y-EDAM12

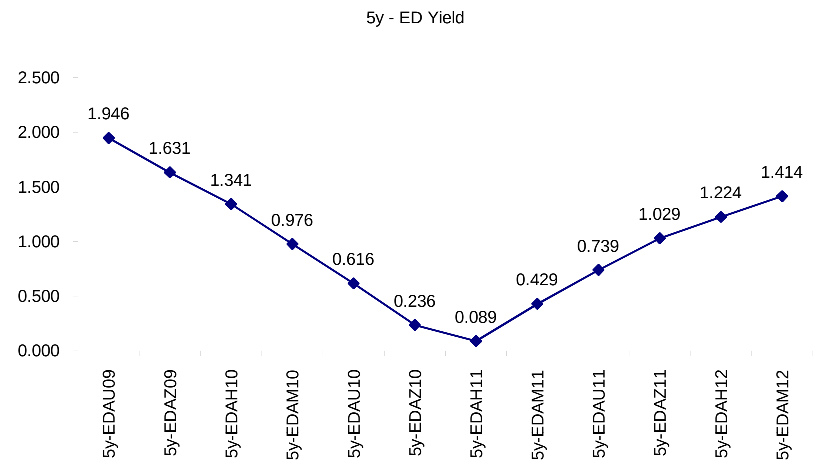
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

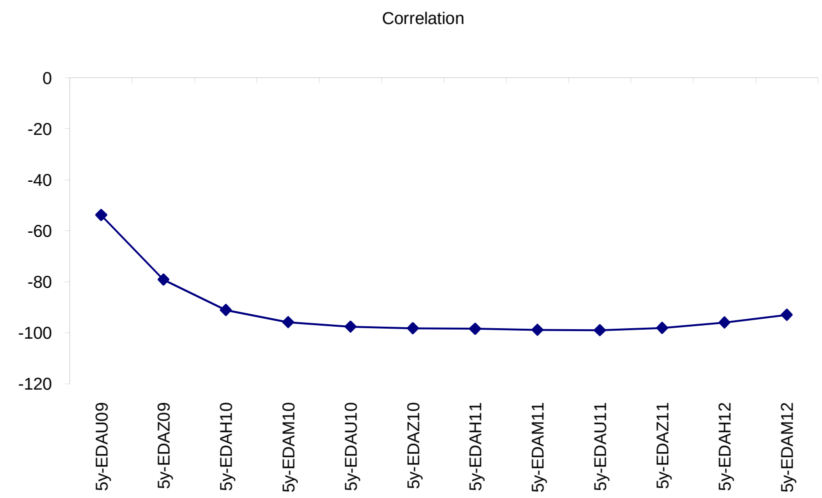
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	-1.32	1.946	5y-EDAU09	-54
EDAZ09	-1.01	1.631	5y-EDAZ09	-79
EDAH10	-0.72	1.341	5y-EDAH10	-91
EDAM10	-0.35	0.976	5y-EDAM10	-96
EDAU10	0.01	0.616	5y-EDAU10	-98
EDAZ10	0.39	0.236	5y-EDAZ10	-98
EDAH11	0.71	0.089	5y-EDAH11	-98
EDAM11	1.05	0.429	5y-EDAM11	-99
EDAU11	1.36	0.739	5y-EDAU11	-99
EDAZ11	1.65	1.029	5y-EDAZ11	-98
EDAH12	1.85	1.224	5y-EDAH12	-96
EDAM12	2.04	1.414	5y-EDAM12	-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



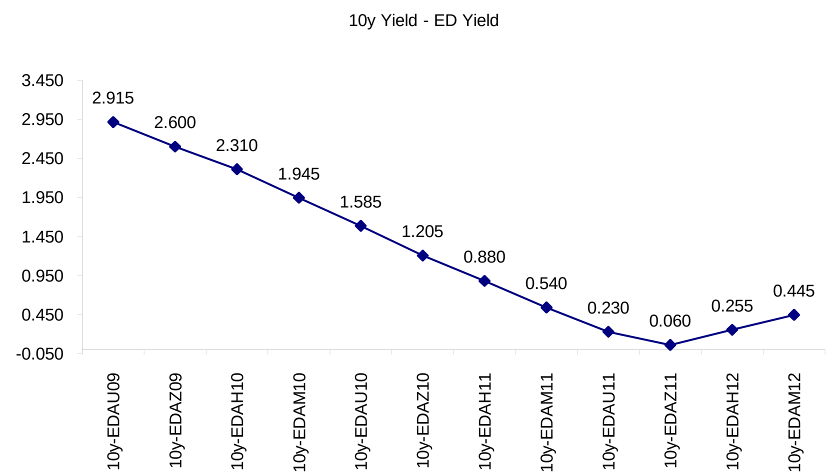
	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU09	0.2432	4.6422	4.3990	5y-EDAU09
EDAZ09	0.4925	4.6422	4.1497	5y-EDAZ09
EDAH10	0.7418	4.6422	3.9004	5y-EDAH10
EDAM10	0.9911	4.6422	3.6511	5y-EDAM10
EDAU10	1.2405	4.6422	3.4017	5y-EDAU10
EDAZ10	1.4898	4.6422	3.1524	5y-EDAZ10
EDAH11	1.7391	4.6422	2.9031	5y-EDAH11
EDAM11	1.9884	4.6422	2.6538	5y-EDAM11
EDAU11	2.2569	4.6422	2.3853	5y-EDAU11
EDAZ11	2.5062	4.6422	2.1360	5y-EDAZ11
EDAH12	2.7555	4.6422	1.8867	5y-EDAH12
EDAM12	3.0048	4.6422	1.6374	5y-EDAM12

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



	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAU09	-1.32	2.915	10y-EDAU09	-50
EDAZ09	-1.01	2.600	10y-EDAZ09	-69
EDAH10	-0.72	2.310	10y-EDAH10	-76
EDAM10	-0.35	1.945	10y-EDAM10	-80
EDAU10	0.01	1.585	10y-EDAU10	-81
EDAZ10	0.39	1.205	10y-EDAZ10	-83
EDAH11	0.71	0.880	10y-EDAH11	-84
EDAM11	1.05	0.540	10y-EDAM11	-87
EDAU11	1.36	0.230	10y-EDAU11	-91
EDAZ11	1.65	0.060	10y-EDAZ11	-94
EDAH12	1.85	0.255	10y-EDAH12	-96
EDAM12	2.04	0.445	10y-EDAM12	-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	**10Y Duration**	**Spread Duration**	
EDAU09	0.2432	8.3808	8.1376	10y-EDAU09
EDAZ09	0.4925	8.3808	7.8882	10y-EDAZ09
EDAH10	0.7418	8.3808	7.6389	10y-EDAH10
EDAM10	0.9911	8.3808	7.3896	10y-EDAM10
EDAU10	1.2405	8.3808	7.1403	10y-EDAU10
EDAZ10	1.4898	8.3808	6.8910	10y-EDAZ10
EDAH11	1.7391	8.3808	6.6417	10y-EDAH11
EDAM11	1.9884	8.3808	6.3924	10y-EDAM11
EDAU11	2.2569	8.3808	6.1239	10y-EDAU11
EDAZ11	2.5062	8.3808	5.8746	10y-EDAZ11
EDAH12	2.7555	8.3808	5.6252	10y-EDAH12
EDAM12	3.0048	8.3808	5.3759	10y-EDAM12

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

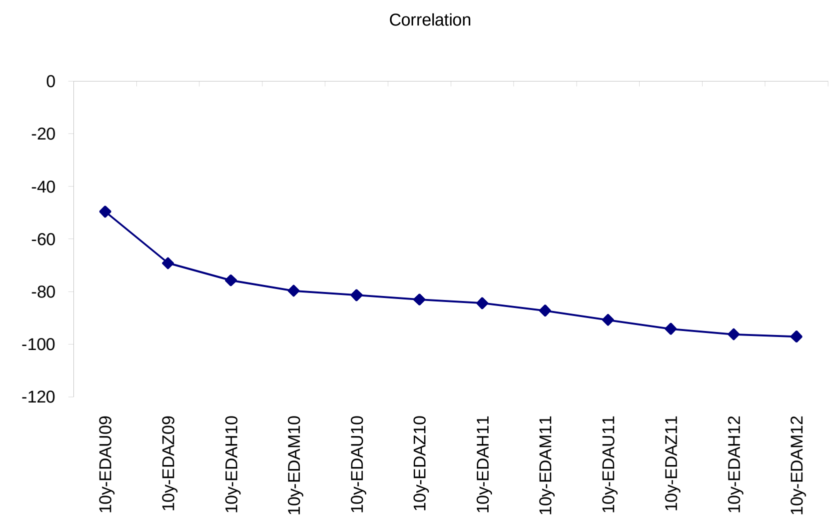
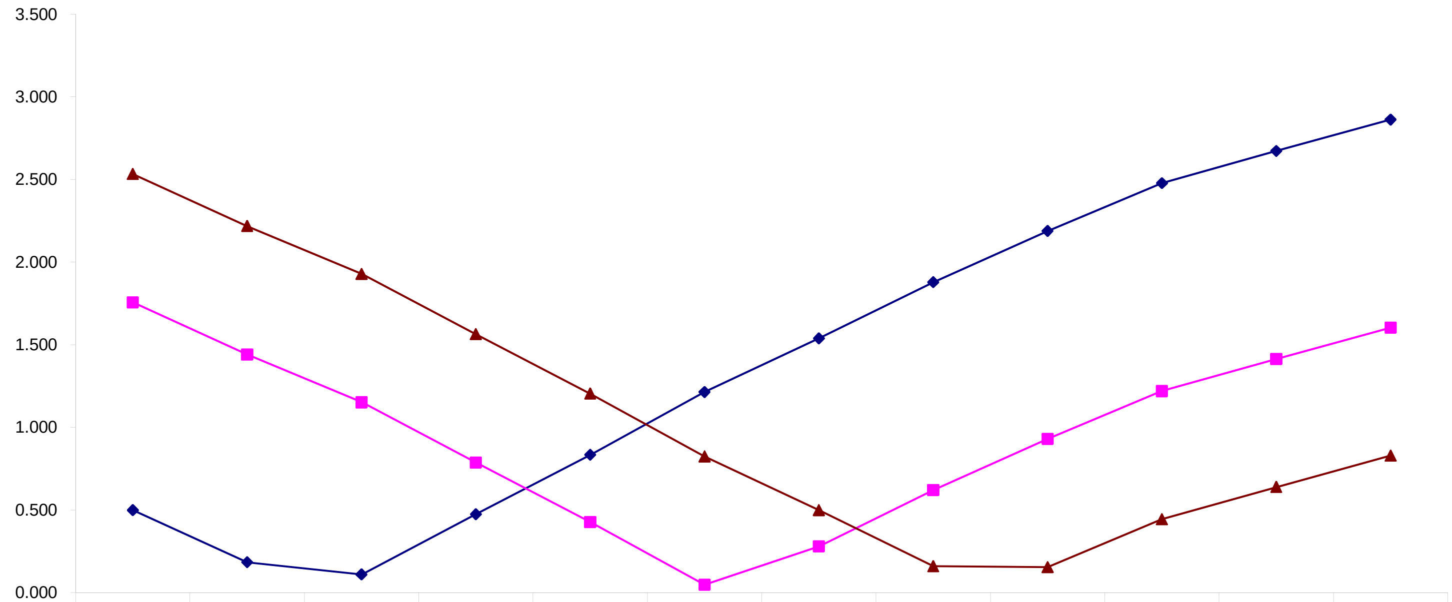


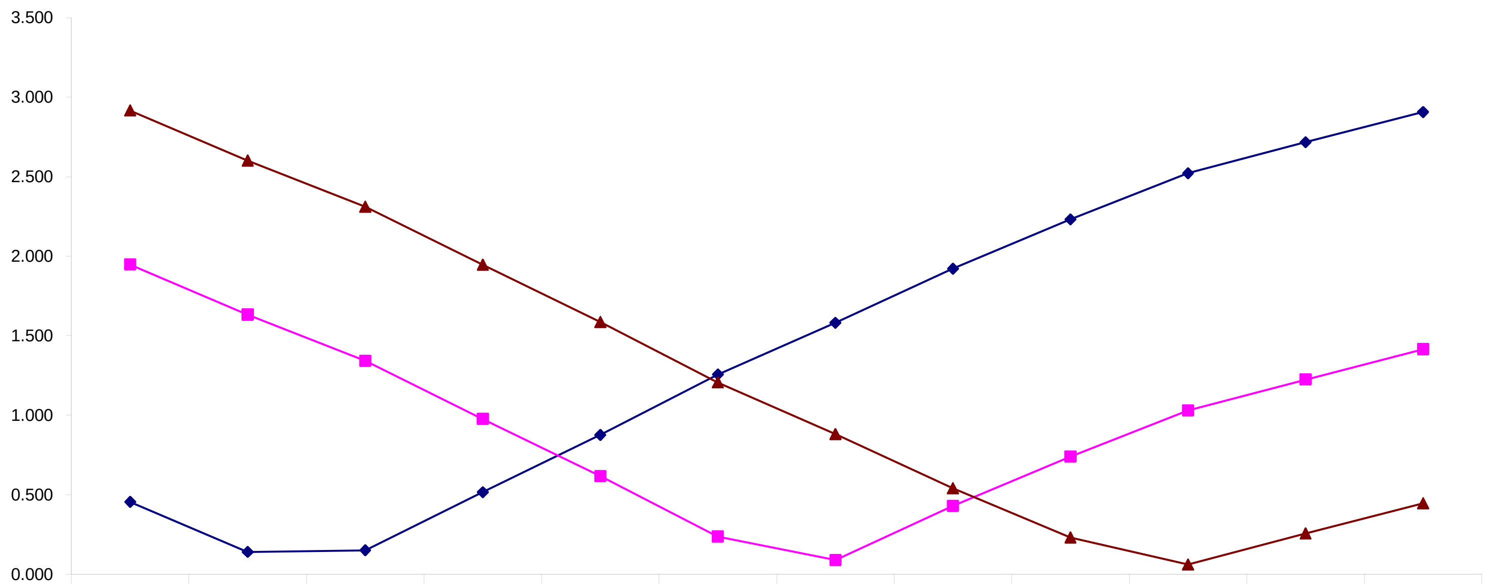
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.497	0.182	0.108	0.473	0.833	1.213	1.538	1.878	2.188	2.478	2.673	2.863
ZF	1.756	1.441	1.151	0.786	0.426	0.046	0.279	0.619	0.929	1.219	1.414	1.604
ZN	2.533	2.218	1.928	1.563	1.203	0.823	0.498	0.158	0.152	0.442	0.637	0.827

ZT ZF ZN

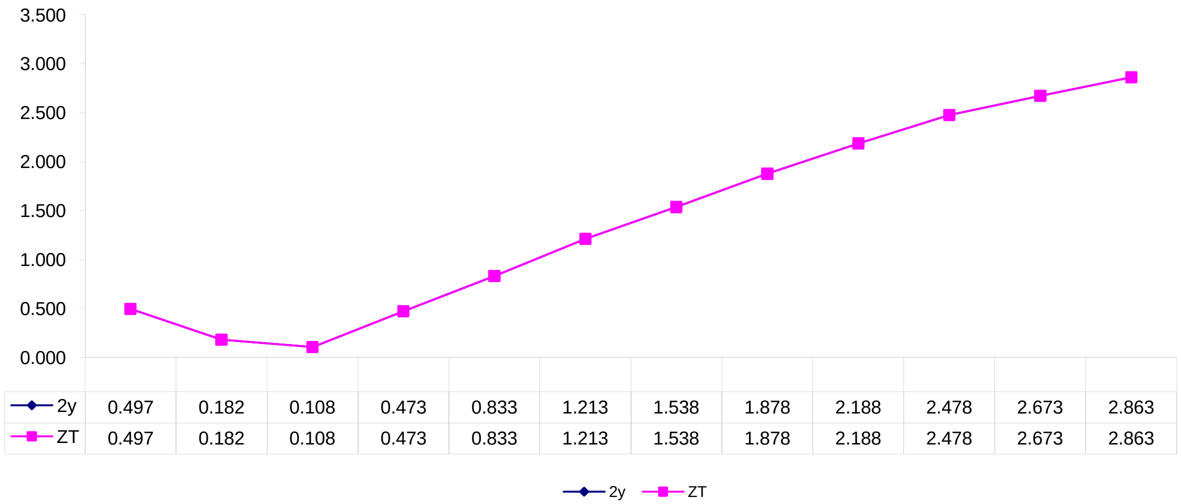
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



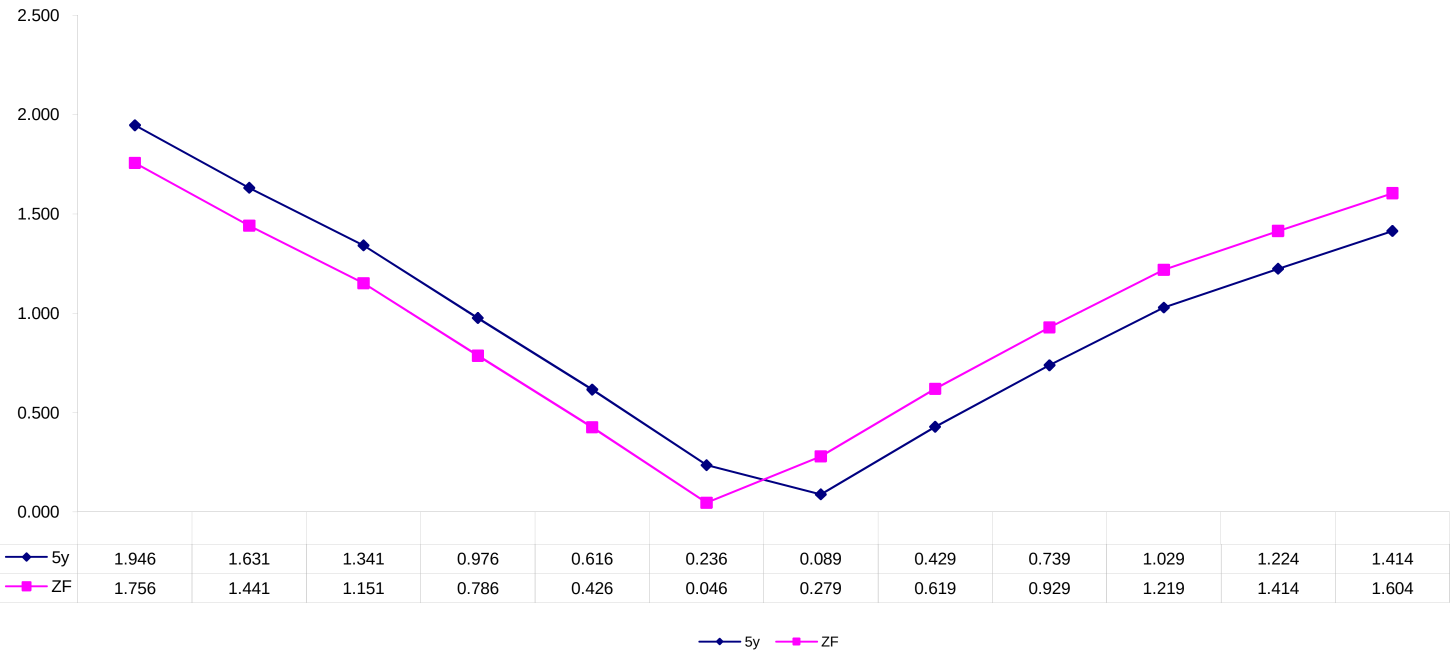
2y	0.455	0.140	0.150	0.515	0.875	1.255	1.580	1.920	2.230	2.520	2.715	2.905
5y	1.946	1.631	1.341	0.976	0.616	0.236	0.089	0.429	0.739	1.029	1.224	1.414
10y	2.915	2.600	2.310	1.945	1.585	1.205	0.880	0.540	0.230	0.060	0.255	0.445

2y 5y 10y

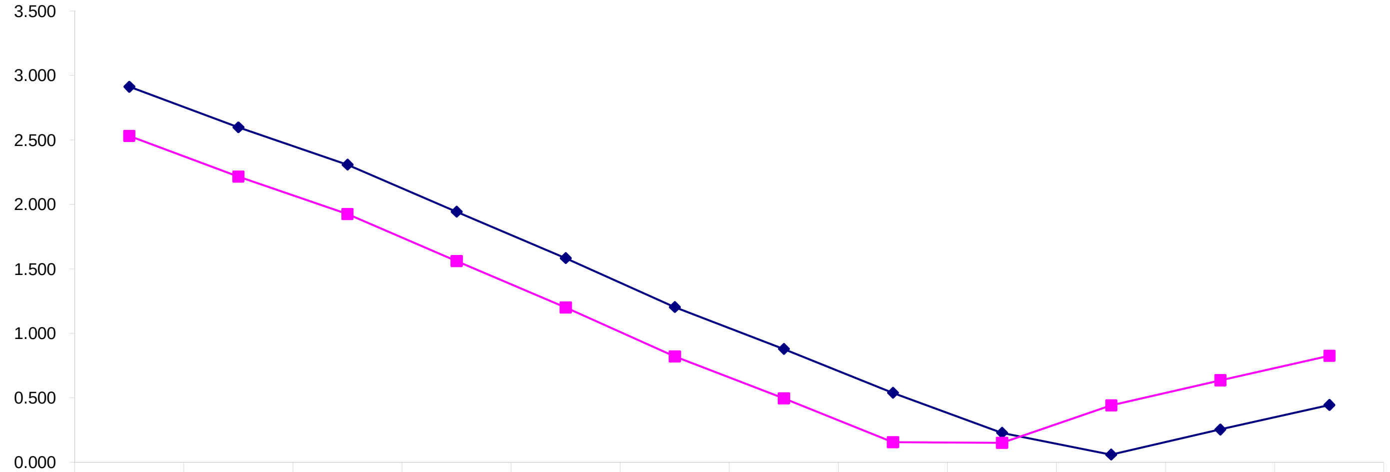
2y Basis TED Curve



2y	0.497	0.182	0.108	0.473	0.833	1.213	1.538	1.878	2.188	2.478	2.673	2.863
ZT	0.497	0.182	0.108	0.473	0.833	1.213	1.538	1.878	2.188	2.478	2.673	2.863



5y	1.946	1.631	1.341	0.976	0.616	0.236	0.089	0.429	0.739	1.029	1.224	1.414
ZF	1.756	1.441	1.151	0.786	0.426	0.046	0.279	0.619	0.929	1.219	1.414	1.604



10y	2.915	2.600	2.310	1.945	1.585	1.205	0.880	0.540	0.230	0.060	0.255	0.445
ZN	2.533	2.218	1.928	1.563	1.203	0.823	0.498	0.158	0.152	0.442	0.637	0.827

	Last Yield	Net Last Yield	Last Price
White Pack	1.244	0.375	9877.7500
Red Pack	2.667	1.500	9738.7500
Green Pack	3.887	0.750	9620.2500
Blue Pack		-1.250	9552.5000
Gold Pack		0.000	9517.2500