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	108.6563	108.2100	0.901	1.822
ZF	116.7250	116.2320	1.902	4.015
ZN	120.5000	120.1600	2.683	5.864
2y	99.7813	99.2500	0.983	1.956
5y	98.8813	98.2820	2.113	4.723
10y	99.0000	99.0000	3.239	8.406

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.1250	0.875	39	0.1062	JUN	
EDAU09	99.0650	0.935	130	0.3555	SEP	White Pack
EDAZ09	98.8550	1.145	221	0.6048	DEC	
EDAH10	98.7150	1.285	312	0.8541	MAR	
EDAM10	98.4600	1.540	403	1.1035	JUN	
EDAU10	98.1950	1.805	494	1.3528	SEP	Red Pack
EDAZ10	97.8800	2.120	585	1.6021	DEC	
EDAH11	97.6200	2.380	676	1.8514	MAR	
EDAM11	97.3300	2.670	767	2.1007	JUN	
EDAU11	97.0800	2.920	865	2.3692	SEP	Green Pack
EDAZ11	96.8400	3.160	956	2.6185	DEC	
EDAH12	96.6850	3.315	1,047	2.8678	MAR	
EDAM12	96.5350	3.465	1,138	3.1172	JUN	
EDAU12	96.4200	3.580	1,229	3.3665	SEP	Blue Pack
EDAZ12	96.2900	3.710	1,320	3.6158	DEC	
EDAH13	96.2300	3.770	1,411	3.8651	MAR	
EDAM13	96.1450	3.855	1,502	4.1144	JUN	
EDAU13	96.0700	3.930	1,593	4.3637	SEP	Gold Pack
EDAZ13	95.9700	4.030	1,684	4.6130	DEC	
EDAH14	95.9250	4.075	1,775	4.8624	MAR	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.078	-0.875	9894.00
Red Pack	1.999	-6.625	9803.88
Green Pack	3.082	-10.500	9698.38
Blue Pack	3.715	-10.375	9636.88
Gold Pack	4.068	-10.000	9602.75

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)

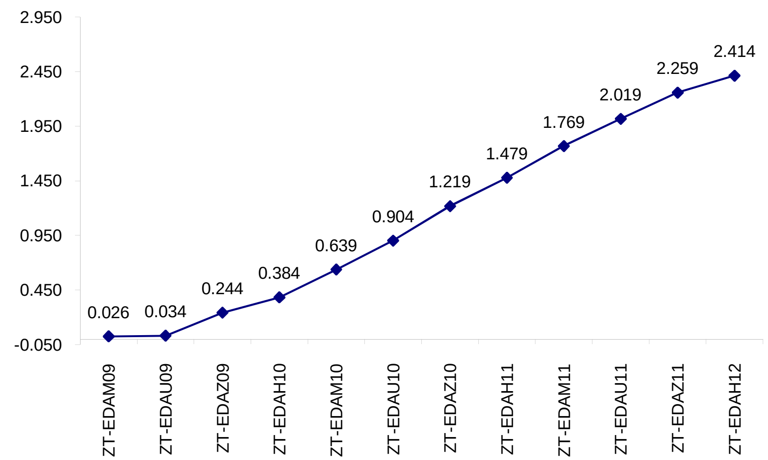
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based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

Dirty TED: ZT vs Eurodollar Contracts

	ZT			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM09	9.53	0.026	ZT-EDAM09	29
EDAU09	9.59	0.034	ZT-EDAU09	37
EDAZ09	9.80	0.244	ZT-EDAZ09	47
EDAH10	9.94	0.384	ZT-EDAH10	57
EDAM10	10.20	0.639	ZT-EDAM10	61
EDAU10	10.46	0.904	ZT-EDAU10	63
EDAZ10	10.78	1.219	ZT-EDAZ10	53
EDAH11	11.04	1.479	ZT-EDAH11	35
EDAM11	11.33	1.769	ZT-EDAM11	14
EDAU11	11.58	2.019	ZT-EDAU11	3
EDAZ11	11.82	2.259	ZT-EDAZ11	-5
EDAH12	11.97	2.414	ZT-EDAH12	-12

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
*Correlation = ED Correlation to Treasury Future over 10 days

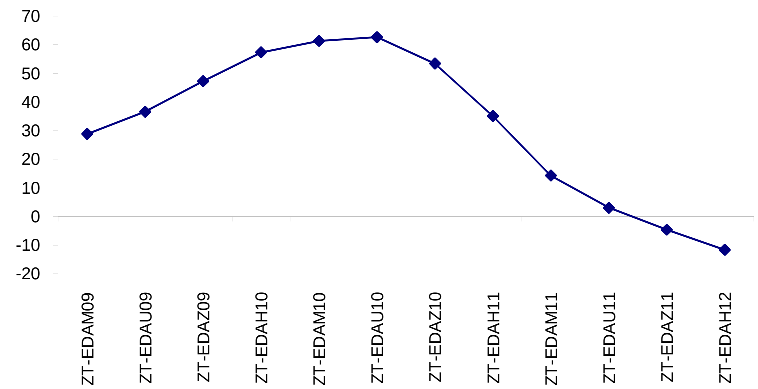
ZT Yield - ED Yield



	ED Duration as Fraction of year	**ZT Duration**	**Spread Duration**	
EDAM09	0.1062	1.8222	1.7161	ZT-EDAM09
EDAU09	0.3555	1.8222	1.4667	ZT-EDAU09
EDAZ09	0.6048	1.8222	1.2174	ZT-EDAZ09
EDAH10	0.8541	1.8222	0.9681	ZT-EDAH10
EDAM10	1.1035	1.8222	0.7188	ZT-EDAM10
EDAU10	1.3528	1.8222	0.4695	ZT-EDAU10
EDAZ10	1.6021	1.8222	0.2202	ZT-EDAZ10
EDAH11	1.8514	1.8222	-0.0292	ZT-EDAH11
EDAM11	2.1007	1.8222	-0.2785	ZT-EDAM11
EDAU11	2.3692	1.8222	-0.5470	ZT-EDAU11
EDAZ11	2.6185	1.8222	-0.7963	ZT-EDAZ11
EDAH12	2.8678	1.8222	-1.0456	ZT-EDAH12

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

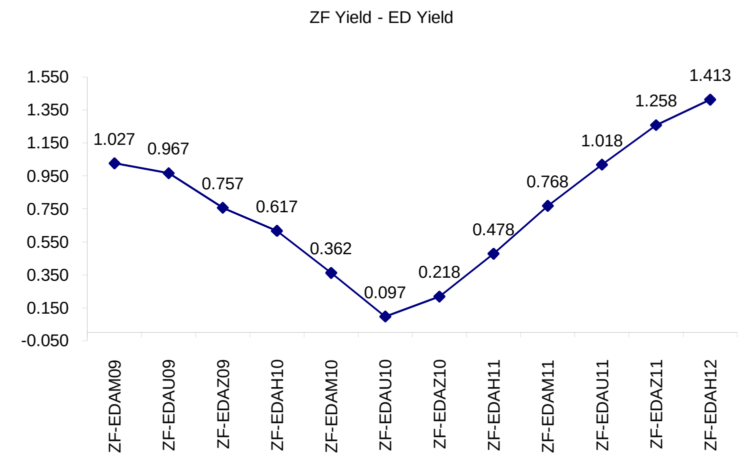
Correlation



Dirty TED: ZF vs Eurodollar Contracts

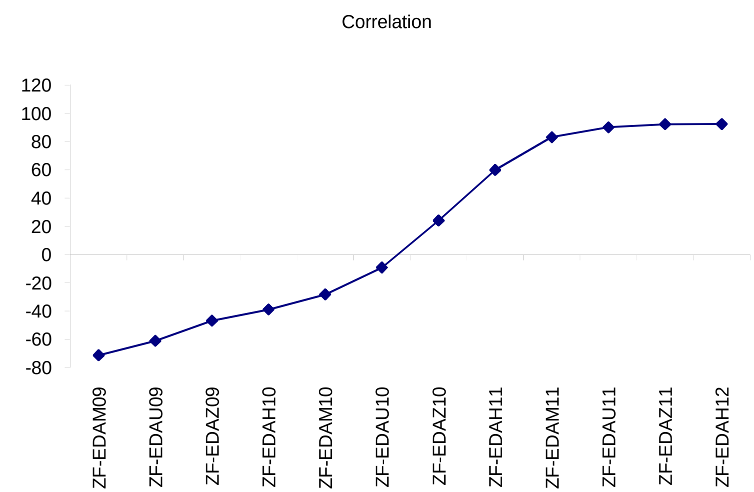
	ZF			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM09	17.60	1.027	ZF-EDAM09	-71
EDAU09	17.66	0.967	ZF-EDAU09	-61
EDAZ09	17.87	0.757	ZF-EDAZ09	-47
EDAH10	18.01	0.617	ZF-EDAH10	-39
EDAM10	18.27	0.362	ZF-EDAM10	-28
EDAU10	18.53	0.097	ZF-EDAU10	-9
EDAZ10	18.85	0.218	ZF-EDAZ10	24
EDAH11	19.11	0.478	ZF-EDAH11	60
EDAM11	19.40	0.768	ZF-EDAM11	83
EDAU11	19.65	1.018	ZF-EDAU11	90
EDAZ11	19.89	1.258	ZF-EDAZ11	92
EDAH12	20.04	1.413	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	0.1062	4.0154	3.9092	ZF-EDAM09
EDAU09	0.3555	4.0154	3.6599	ZF-EDAU09
EDAZ09	0.6048	4.0154	3.4105	ZF-EDAZ09
EDAH10	0.8541	4.0154	3.1612	ZF-EDAH10
EDAM10	1.1035	4.0154	2.9119	ZF-EDAM10
EDAU10	1.3528	4.0154	2.6626	ZF-EDAU10
EDAZ10	1.6021	4.0154	2.4133	ZF-EDAZ10
EDAH11	1.8514	4.0154	2.1640	ZF-EDAH11
EDAM11	2.1007	4.0154	1.9146	ZF-EDAM11
EDAU11	2.3692	4.0154	1.6462	ZF-EDAU11
EDAZ11	2.6185	4.0154	1.3968	ZF-EDAZ11
EDAH12	2.8678	4.0154	1.1475	ZF-EDAH12

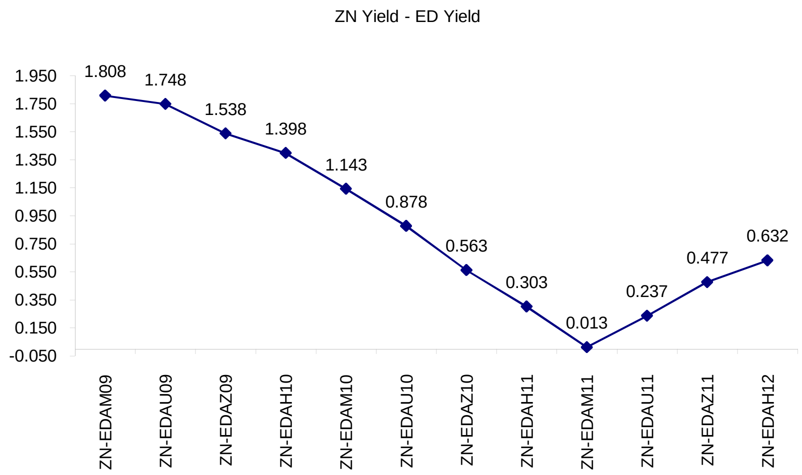
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

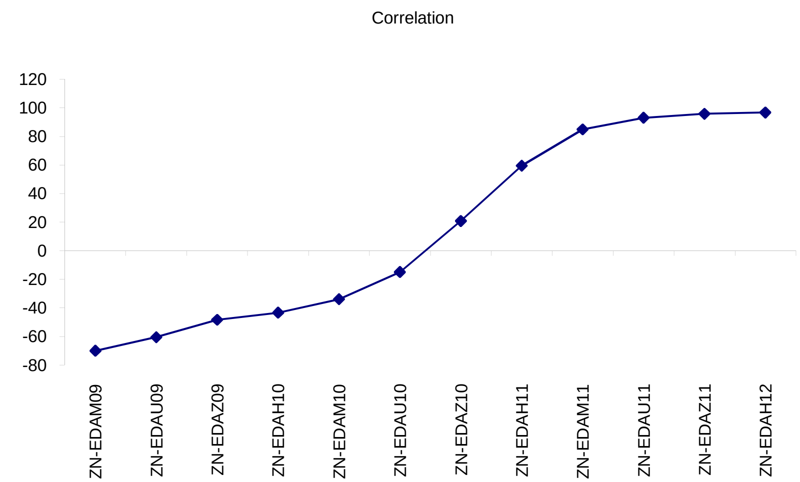
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	21.38	1.808	ZN-EDAM09	-70
EDAU09	21.44	1.748	ZN-EDAU09	-61
EDAZ09	21.65	1.538	ZN-EDAZ09	-48
EDAH10	21.79	1.398	ZN-EDAH10	-43
EDAM10	22.04	1.143	ZN-EDAM10	-34
EDAU10	22.31	0.878	ZN-EDAU10	-15
EDAZ10	22.62	0.563	ZN-EDAZ10	21
EDAH11	22.88	0.303	ZN-EDAH11	60
EDAM11	23.17	0.013	ZN-EDAM11	85
EDAU11	23.42	0.237	ZN-EDAU11	93
EDAZ11	23.66	0.477	ZN-EDAZ11	96
EDAH12	23.82	0.632	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	0.1062	5.8640	5.7578	ZN-EDAM09
EDAU09	0.3555	5.8640	5.5085	ZN-EDAU09
EDAZ09	0.6048	5.8640	5.2591	ZN-EDAZ09
EDAH10	0.8541	5.8640	5.0098	ZN-EDAH10
EDAM10	1.1035	5.8640	4.7605	ZN-EDAM10
EDAU10	1.3528	5.8640	4.5112	ZN-EDAU10
EDAZ10	1.6021	5.8640	4.2619	ZN-EDAZ10
EDAH11	1.8514	5.8640	4.0126	ZN-EDAH11
EDAM11	2.1007	5.8640	3.7633	ZN-EDAM11
EDAU11	2.3692	5.8640	3.4948	ZN-EDAU11
EDAZ11	2.6185	5.8640	3.2454	ZN-EDAZ11
EDAH12	2.8678	5.8640	2.9961	ZN-EDAH12

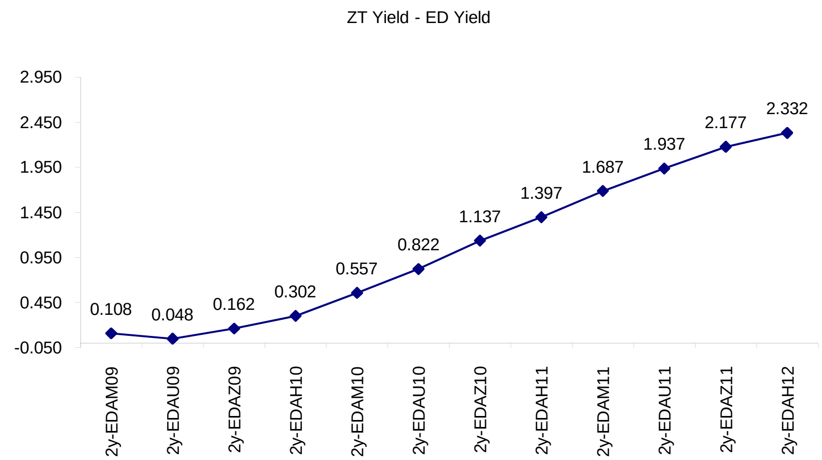
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

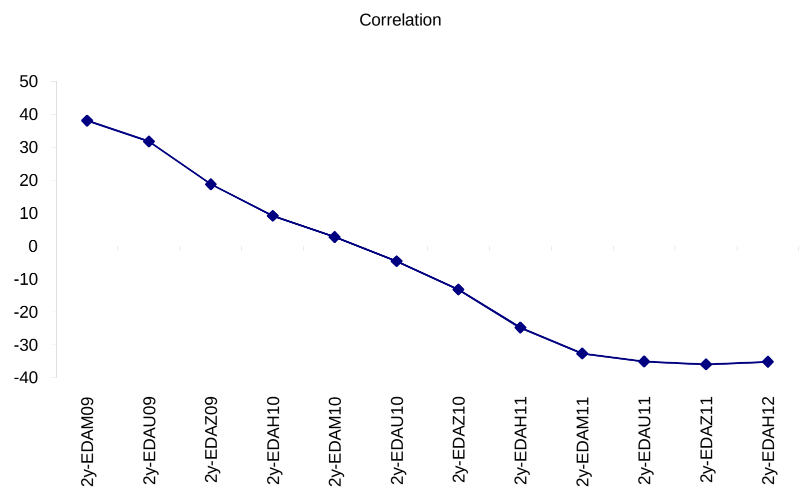
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.66	0.108	2y-EDAM09	38
EDAU09	0.72	0.048	2y-EDAU09	32
EDAZ09	0.93	0.162	2y-EDAZ09	19
EDAH10	1.07	0.302	2y-EDAH10	9
EDAM10	1.32	0.557	2y-EDAM10	3
EDAU10	1.59	0.822	2y-EDAU10	-5
EDAZ10	1.90	1.137	2y-EDAZ10	-13
EDAH11	2.16	1.397	2y-EDAH11	-25
EDAM11	2.45	1.687	2y-EDAM11	-33
EDAU11	2.70	1.937	2y-EDAU11	-35
EDAZ11	2.94	2.177	2y-EDAZ11	-36
EDAH12	3.10	2.332	2y-EDAH12	-35

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	0.1062	1.9556	1.8494	2y-EDAM09
EDAU09	0.3555	1.9556	1.6001	2y-EDAU09
EDAZ09	0.6048	1.9556	1.3508	2y-EDAZ09
EDAH10	0.8541	1.9556	1.1015	2y-EDAH10
EDAM10	1.1035	1.9556	0.8521	2y-EDAM10
EDAU10	1.3528	1.9556	0.6028	2y-EDAU10
EDAZ10	1.6021	1.9556	0.3535	2y-EDAZ10
EDAH11	1.8514	1.9556	0.1042	2y-EDAH11
EDAM11	2.1007	1.9556	-0.1451	2y-EDAM11
EDAU11	2.3692	1.9556	-0.4136	2y-EDAU11
EDAZ11	2.6185	1.9556	-0.6629	2y-EDAZ11
EDAH12	2.8678	1.9556	-0.9122	2y-EDAH12

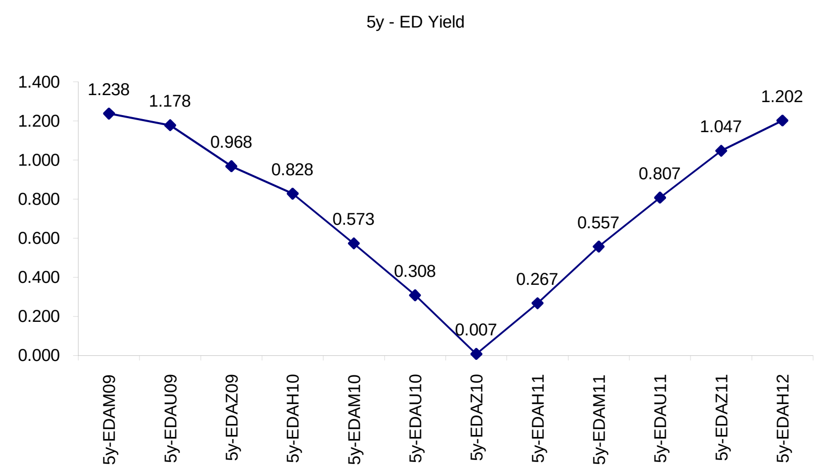
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

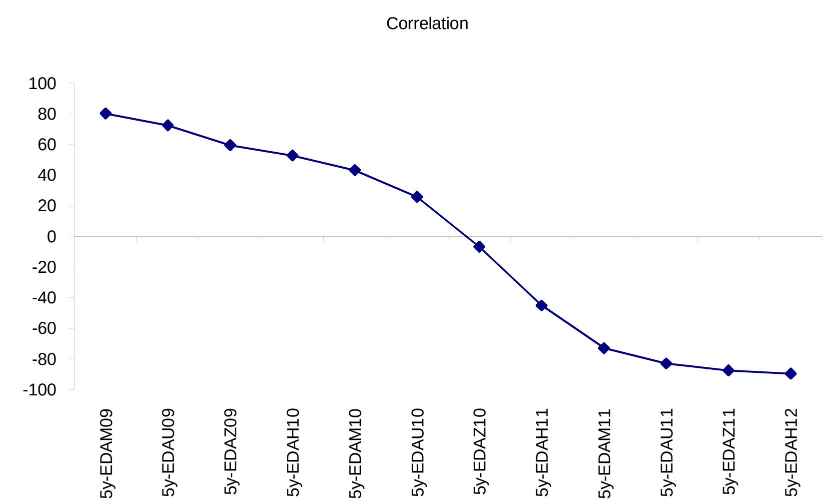
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.24	1.238	5y-EDAM09	80
EDAU09	-0.18	1.178	5y-EDAU09	72
EDAZ09	0.03	0.968	5y-EDAZ09	60
EDAH10	0.17	0.828	5y-EDAH10	53
EDAM10	0.42	0.573	5y-EDAM10	43
EDAU10	0.69	0.308	5y-EDAU10	26
EDAZ10	1.00	0.007	5y-EDAZ10	-7
EDAH11	1.26	0.267	5y-EDAH11	-45
EDAM11	1.55	0.557	5y-EDAM11	-73
EDAU11	1.80	0.807	5y-EDAU11	-83
EDAZ11	2.04	1.047	5y-EDAZ11	-88
EDAH12	2.20	1.202	5y-EDAH12	-90

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	0.1062	4.7230	4.6168	5y-EDAM09
EDAU09	0.3555	4.7230	4.3675	5y-EDAU09
EDAZ09	0.6048	4.7230	4.1182	5y-EDAZ09
EDAH10	0.8541	4.7230	3.8689	5y-EDAH10
EDAM10	1.1035	4.7230	3.6196	5y-EDAM10
EDAU10	1.3528	4.7230	3.3703	5y-EDAU10
EDAZ10	1.6021	4.7230	3.1210	5y-EDAZ10
EDAH11	1.8514	4.7230	2.8716	5y-EDAH11
EDAM11	2.1007	4.7230	2.6223	5y-EDAM11
EDAU11	2.3692	4.7230	2.3538	5y-EDAU11
EDAZ11	2.6185	4.7230	2.1045	5y-EDAZ11
EDAH12	2.8678	4.7230	1.8552	5y-EDAH12

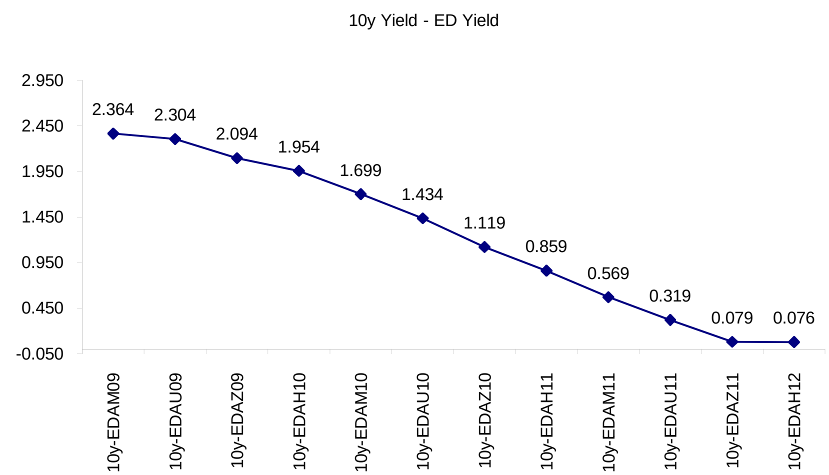
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.24	2.364	10y-EDAM09	82
EDAU09	-0.18	2.304	10y-EDAU09	74
EDAZ09	0.03	2.094	10y-EDAZ09	63
EDAH10	0.17	1.954	10y-EDAH10	59
EDAM10	0.42	1.699	10y-EDAM10	50
EDAU10	0.69	1.434	10y-EDAU10	32
EDAZ10	1.00	1.119	10y-EDAZ10	-4
EDAH11	1.26	0.859	10y-EDAH11	-46
EDAM11	1.55	0.569	10y-EDAM11	-76
EDAU11	1.80	0.319	10y-EDAU11	-87
EDAZ11	2.04	0.079	10y-EDAZ11	-92
EDAH12	2.20	0.076	10y-EDAH12	-95

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	0.1062	8.4057	8.2995	10y-EDAM09
EDAU09	0.3555	8.4057	8.0502	10y-EDAU09
EDAZ09	0.6048	8.4057	7.8009	10y-EDAZ09
EDAH10	0.8541	8.4057	7.5516	10y-EDAH10
EDAM10	1.1035	8.4057	7.3023	10y-EDAM10
EDAU10	1.3528	8.4057	7.0529	10y-EDAU10
EDAZ10	1.6021	8.4057	6.8036	10y-EDAZ10
EDAH11	1.8514	8.4057	6.5543	10y-EDAH11
EDAM11	2.1007	8.4057	6.3050	10y-EDAM11
EDAU11	2.3692	8.4057	6.0365	10y-EDAU11
EDAZ11	2.6185	8.4057	5.7872	10y-EDAZ11
EDAH12	2.8678	8.4057	5.5379	10y-EDAH12

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

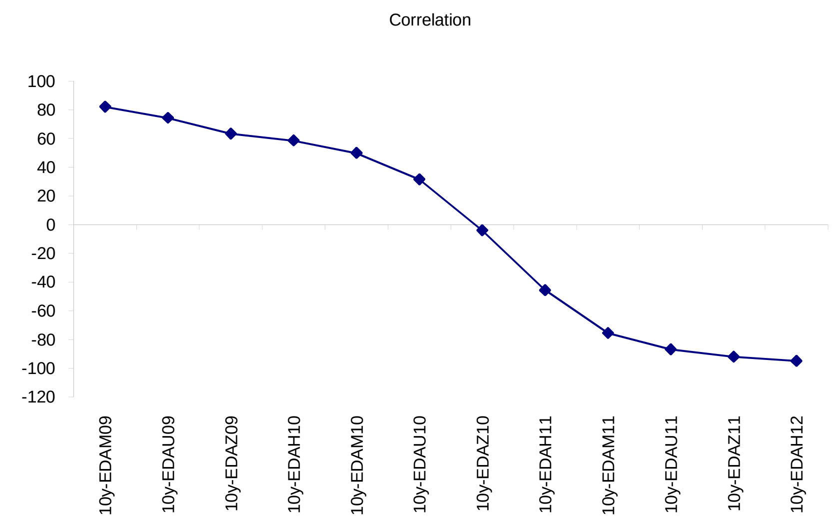
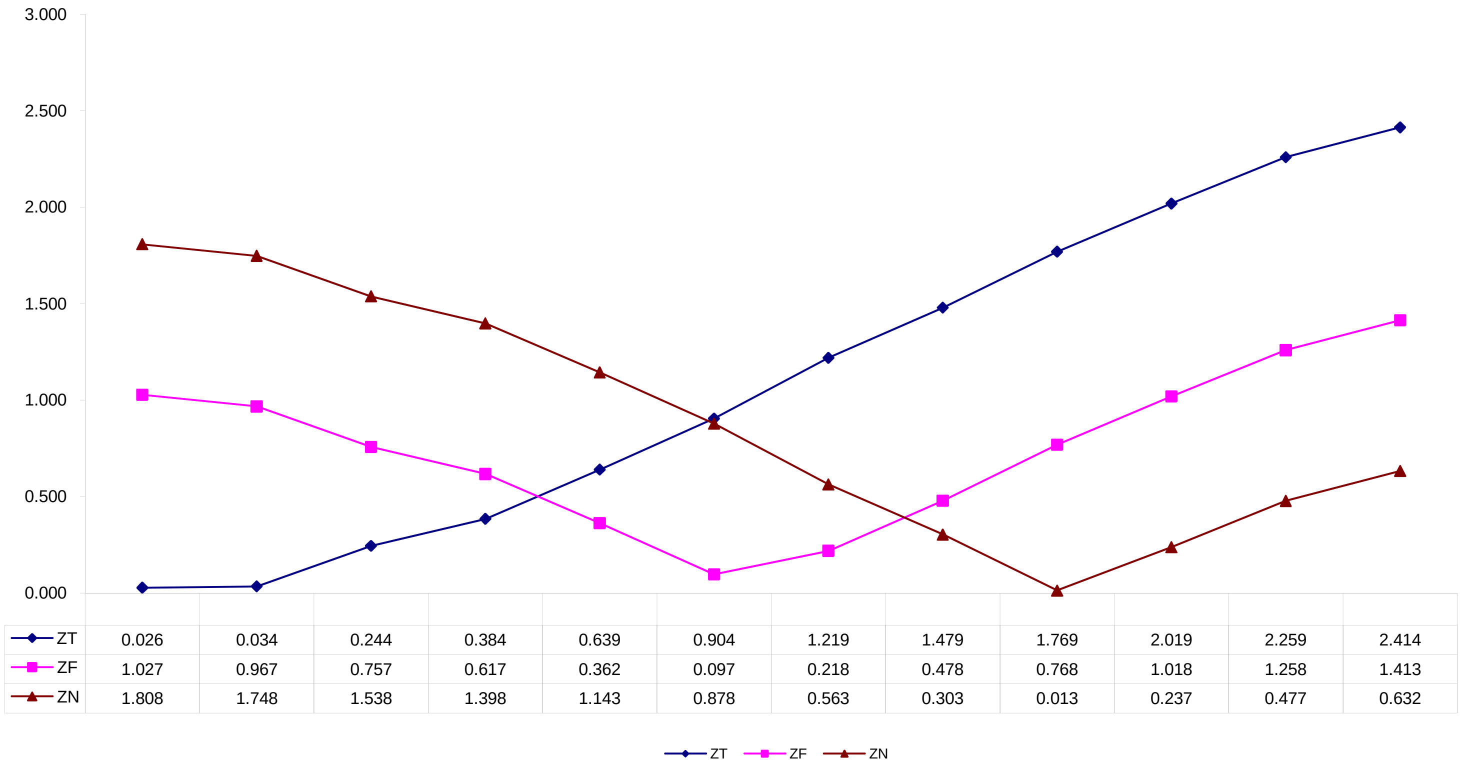
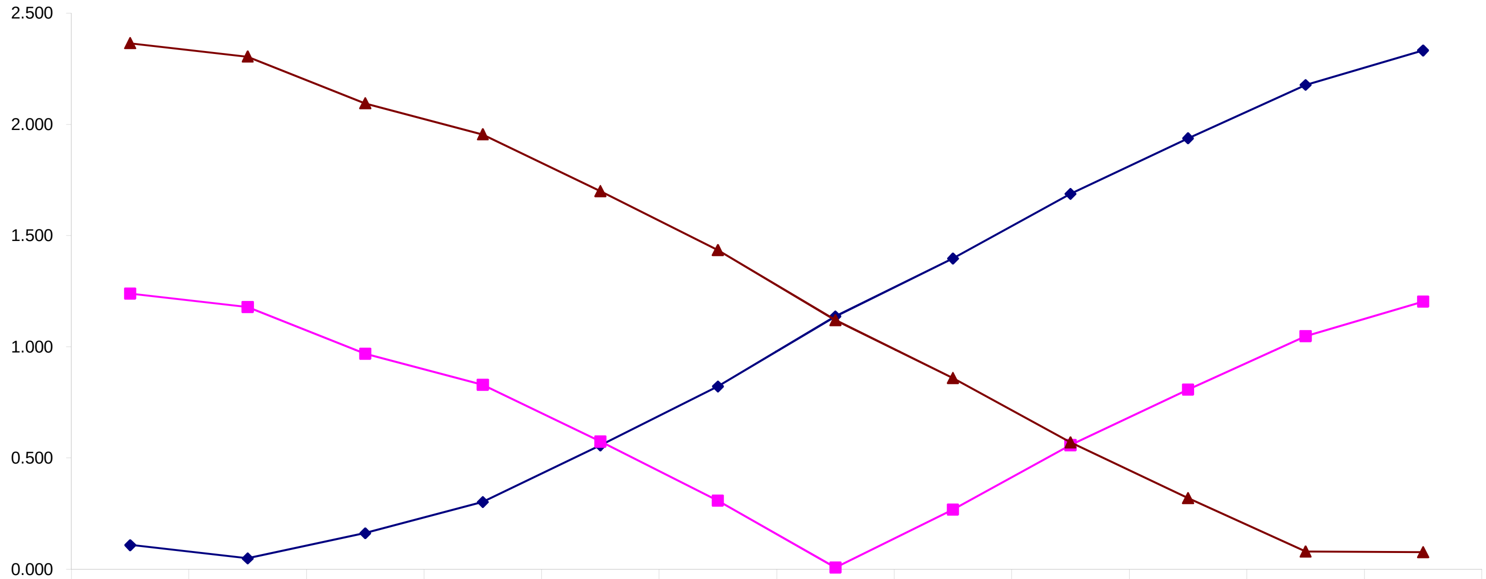


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.026	0.034	0.244	0.384	0.639	0.904	1.219	1.479	1.769	2.019	2.259	2.414
ZF	1.027	0.967	0.757	0.617	0.362	0.097	0.218	0.478	0.768	1.018	1.258	1.413
ZN	1.808	1.748	1.538	1.398	1.143	0.878	0.563	0.303	0.013	0.237	0.477	0.632

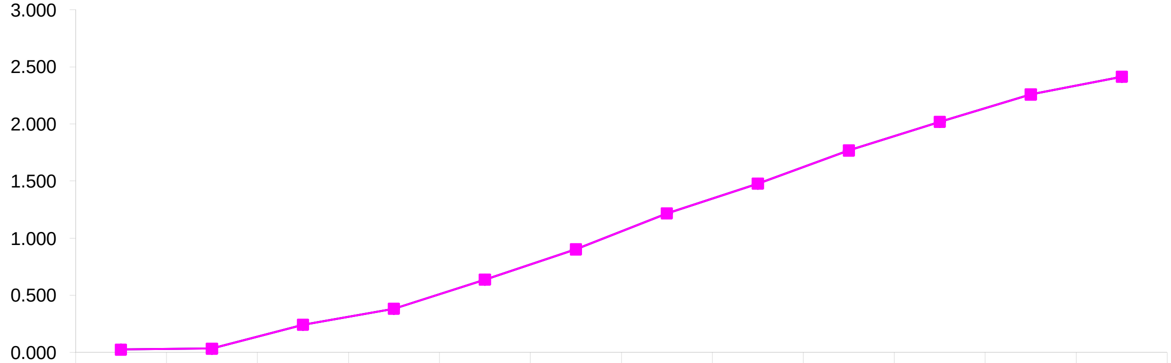
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



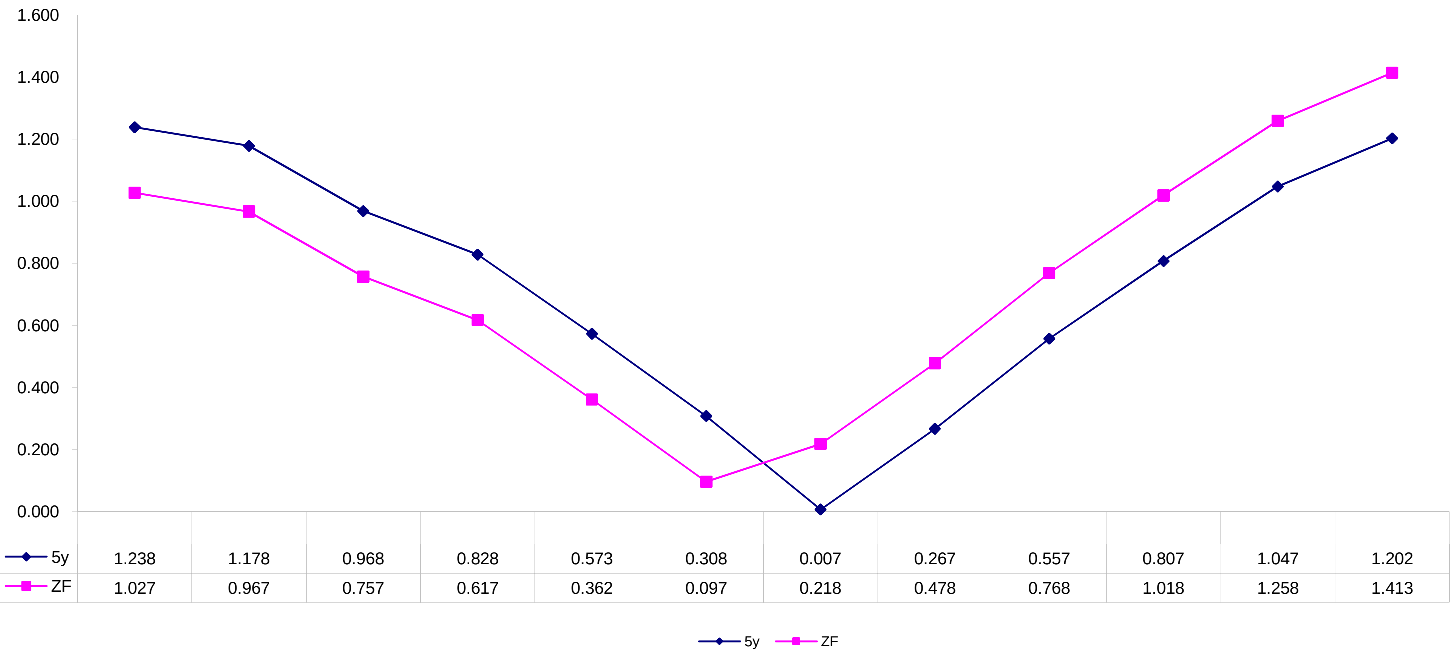
2y	0.108	0.048	0.162	0.302	0.557	0.822	1.137	1.397	1.687	1.937	2.177	2.332
5y	1.238	1.178	0.968	0.828	0.573	0.308	0.007	0.267	0.557	0.807	1.047	1.202
10y	2.364	2.304	2.094	1.954	1.699	1.434	1.119	0.859	0.569	0.319	0.079	0.076

2y 5y 10y

2y Basis TED Curve

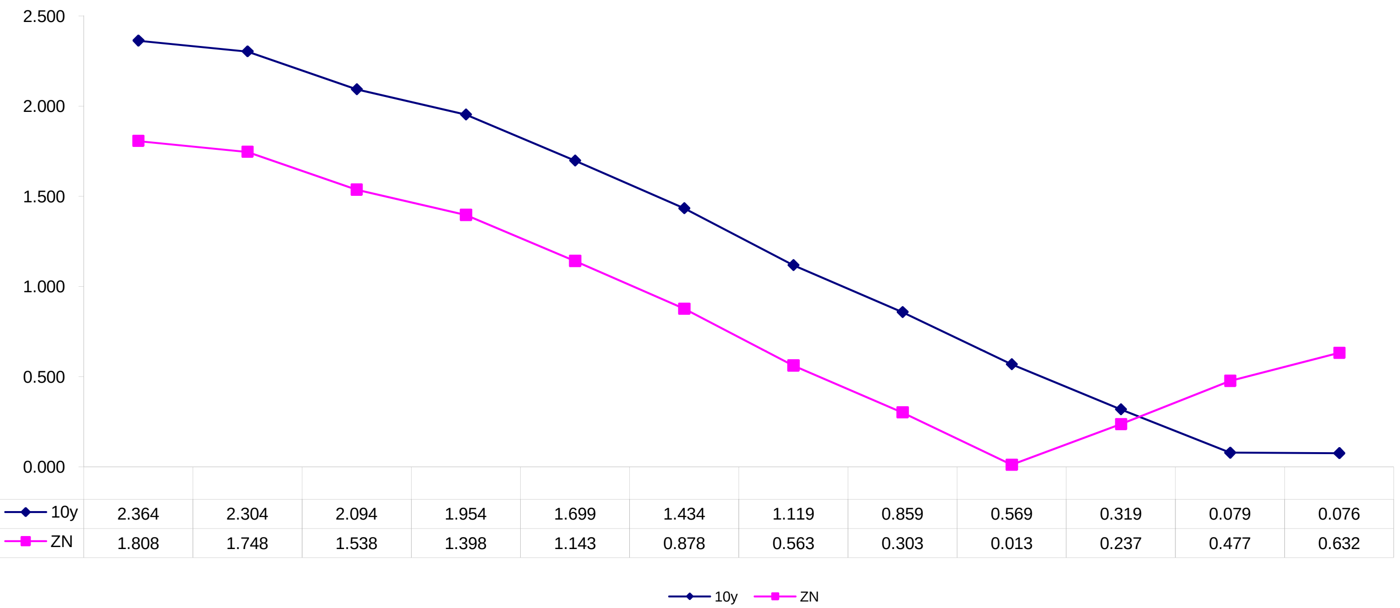


2y	0.026	0.034	0.244	0.384	0.639	0.904	1.219	1.479	1.769	2.019	2.259	2.414
ZT	0.026	0.034	0.244	0.384	0.639	0.904	1.219	1.479	1.769	2.019	2.259	2.414



5y	1.238	1.178	0.968	0.828	0.573	0.308	0.007	0.267	0.557	0.807	1.047	1.202
ZF	1.027	0.967	0.757	0.617	0.362	0.097	0.218	0.478	0.768	1.018	1.258	1.413

10y Basis TED Curve



10y	2.364	2.304	2.094	1.954	1.699	1.434	1.119	0.859	0.569	0.319	0.079	0.076
ZN	1.808	1.748	1.538	1.398	1.143	0.878	0.563	0.303	0.013	0.237	0.477	0.632

	Last Yield	Net Last Yield	Last Price
White Pack	1.078	-0.875	9894.0000
Red Pack	1.999	-6.625	9803.8750
Green Pack	3.082	-10.500	9698.3750
Blue Pack	3.715	-10.375	9636.8750
Gold Pack	4.068	-10.000	9602.7500