The Morning Email: TERM TEDS & Dirty TEDS

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

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.1313	108.0420	1.070	1.914
ZF	114.7094	114.2270	2.359	4.187
ZN	116.1250	116.0400	3.143	5.817
2y	100.0469	100.0150	1.101	1.967
5y	100.2875	100.0920	2.564	4.655
10y	96.5469	96.1750	3.543	8.358

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.3450	0.655	75	0.2048	SEP	White Pack
EDAZ09	99.1250	0.875	166	0.4542	DEC	
EDAH10	98.8600	1.140	257	0.7035	MAR	
EDAM10	98.4800	1.520	348	0.9528	JUN	
EDAU10	98.1000	1.900	439	1.2021	SEP	Red Pack
EDAZ10	97.7000	2.300	530	1.4514	DEC	
EDAH11	97.3550	2.645	621	1.7007	MAR	
EDAM11	97.0100	2.990	712	1.9500	JUN	
EDAU11	96.7150	3.285	810	2.2185	SEP	Green Pack
EDAZ11	96.4350	3.565	901	2.4679	DEC	
EDAH12	96.2250	3.775	992	2.7172	MAR	
EDAM12	96.0400	3.960	1,083	2.9665	JUN	
EDAU12	95.9050	4.095	1,174	3.2158	SEP	Blue Pack
EDAZ12	95.7500	4.250	1,265	3.4651	DEC	
EDAH13	95.6700	4.330	1,356	3.7144	MAR	
EDAM13	95.5550	4.445	1,447	3.9637	JUN	
EDAU13	95.4700	4.530	1,538	4.2131	SEP	Gold Pack
EDAZ13	95.3900	4.610	1,629	4.4624	DEC	
EDAH14	95.3100	4.690	1,720	4.7117	MAR	
EDAM14	95.2450	4.755	1,811	4.9610	JUN	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.065	2.625	9895.25
Red Pack	2.509	0.375	9754.13
Green Pack	3.731	-1.250	9635.38
Blue Pack		-1.000	9572.25
Gold Pack		0.000	9536.13

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:

Jan-00 Regression
Jan-00 Engineered
Jan-00 Strip with and without Stubs
Jan-00 Convexity Bias
Jan-00 Weighted
Jan-00 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

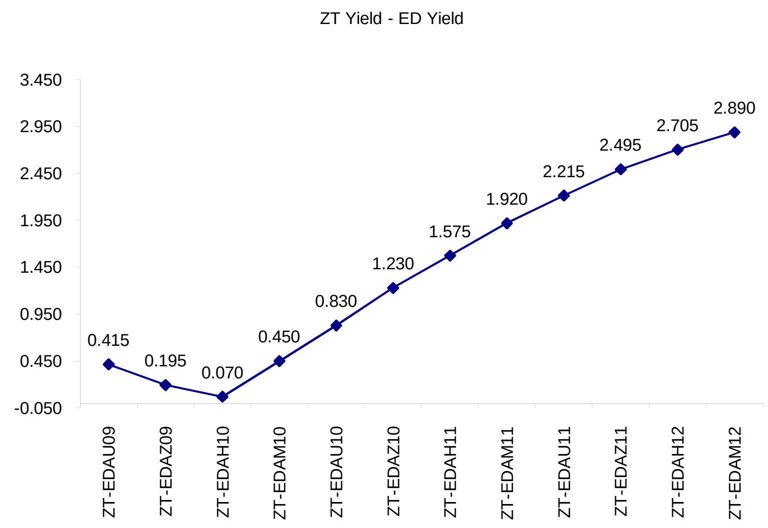
Correlations (Important)

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

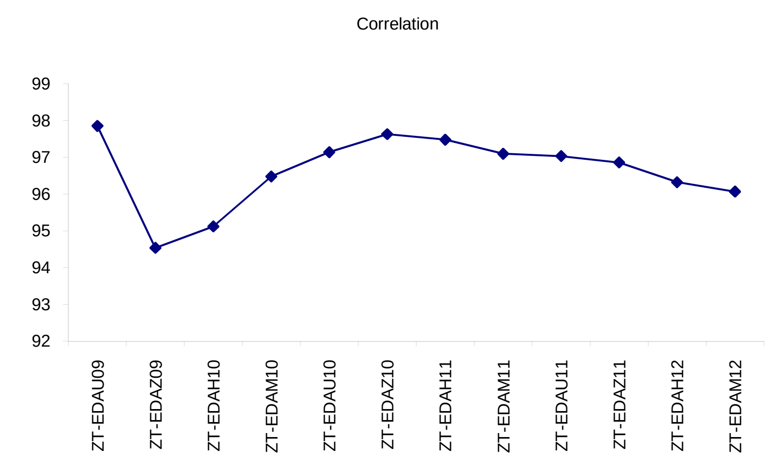
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.79	0.415	ZT-EDAU09	98
EDAZ09	9.01	0.195	ZT-EDAZ09	95
EDAH10	9.27	0.070	ZT-EDAH10	95
EDAM10	9.65	0.450	ZT-EDAM10	96
EDAU10	10.03	0.830	ZT-EDAU10	97
EDAZ10	10.43	1.230	ZT-EDAZ10	98
EDAH11	10.78	1.575	ZT-EDAH11	97
EDAM11	11.12	1.920	ZT-EDAM11	97
EDAU11	11.42	2.215	ZT-EDAU11	97
EDAZ11	11.70	2.495	ZT-EDAZ11	97
EDAH12	11.91	2.705	ZT-EDAH12	96
EDAM12	12.09	2.890	ZT-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	ZT Duration	Spread Duration	
EDAU09	0.2048	1.9138	1.7089	ZT-EDAU09
EDAZ09	0.4542	1.9138	1.4596	ZT-EDAZ09
EDAH10	0.7035	1.9138	1.2103	ZT-EDAH10
EDAM10	0.9528	1.9138	0.9610	ZT-EDAM10
EDAU10	1.2021	1.9138	0.7117	ZT-EDAU10
EDAZ10	1.4514	1.9138	0.4624	ZT-EDAZ10
EDAH11	1.7007	1.9138	0.2130	ZT-EDAH11
EDAM11	1.9500	1.9138	-0.0363	ZT-EDAM11
EDAU11	2.2185	1.9138	-0.3048	ZT-EDAU11
EDAZ11	2.4679	1.9138	-0.5541	ZT-EDAZ11
EDAH12	2.7172	1.9138	-0.8034	ZT-EDAH12
EDAM12	2.9665	1.9138	-1.0527	ZT-EDAM12

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

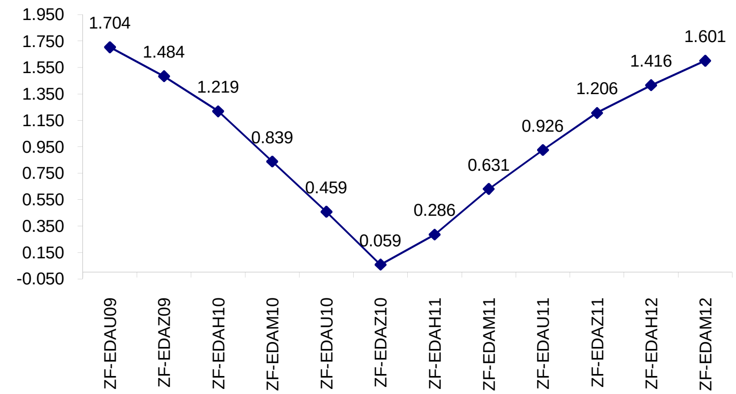


Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	15.36	1.704	ZF-EDAU09	97
EDAZ09	15.58	1.484	ZF-EDAZ09	92
EDAH10	15.85	1.219	ZF-EDAH10	93
EDAM10	16.23	0.839	ZF-EDAM10	95
EDAU10	16.61	0.459	ZF-EDAU10	96
EDAZ10	17.01	0.059	ZF-EDAZ10	98
EDAH11	17.35	0.286	ZF-EDAH11	99
EDAM11	17.70	0.631	ZF-EDAM11	99
EDAU11	17.99	0.926	ZF-EDAU11	99
EDAZ11	18.27	1.206	ZF-EDAZ11	99
EDAH12	18.48	1.416	ZF-EDAH12	99
EDAM12	18.67	1.601	ZF-EDAM12	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

ZF Yield - ED Yield



	ED Duration as Fraction of year	ZF Duration	Spread Duration	
EDAU09	0.2048	4.1874	3.9825	ZF-EDAU09
EDAZ09	0.4542	4.1874	3.7332	ZF-EDAZ09
EDAH10	0.7035	4.1874	3.4839	ZF-EDAH10
EDAM10	0.9528	4.1874	3.2346	ZF-EDAM10
EDAU10	1.2021	4.1874	2.9853	ZF-EDAU10
EDAZ10	1.4514	4.1874	2.7359	ZF-EDAZ10
EDAH11	1.7007	4.1874	2.4866	ZF-EDAH11
EDAM11	1.9500	4.1874	2.2373	ZF-EDAM11
EDAU11	2.2185	4.1874	1.9688	ZF-EDAU11
EDAZ11	2.4679	4.1874	1.7195	ZF-EDAZ11
EDAH12	2.7172	4.1874	1.4702	ZF-EDAH12
EDAM12	2.9665	4.1874	1.2209	ZF-EDAM12

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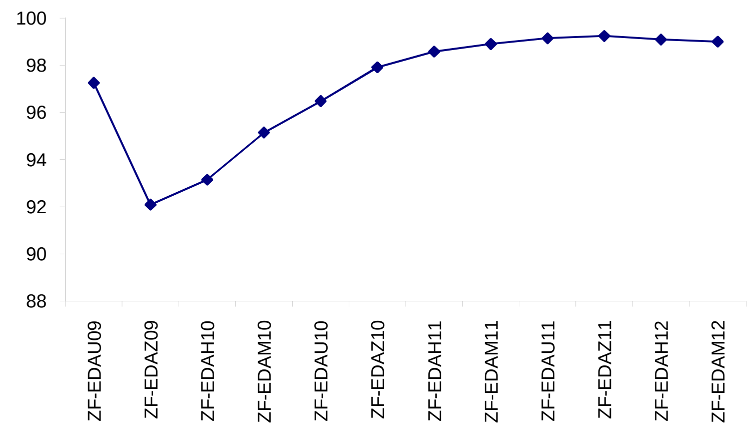
Correlation



Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	16.78	2.488	ZN-EDAU09	98
EDAZ09	17.00	2.268	ZN-EDAZ09	94
EDAH10	17.27	2.003	ZN-EDAH10	96
EDAM10	17.65	1.623	ZN-EDAM10	97
EDAU10	18.03	1.243	ZN-EDAU10	98
EDAZ10	18.43	0.843	ZN-EDAZ10	99
EDAH11	18.77	0.498	ZN-EDAH11	99
EDAM11	19.12	0.153	ZN-EDAM11	99
EDAU11	19.41	0.142	ZN-EDAU11	98
EDAZ11	19.69	0.422	ZN-EDAZ11	98
EDAH12	19.90	0.632	ZN-EDAH12	98
EDAM12	20.09	0.817	ZN-EDAM12	97

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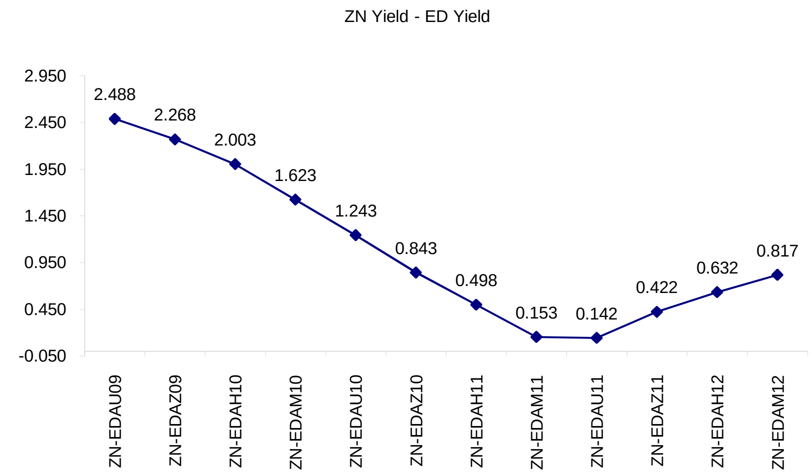
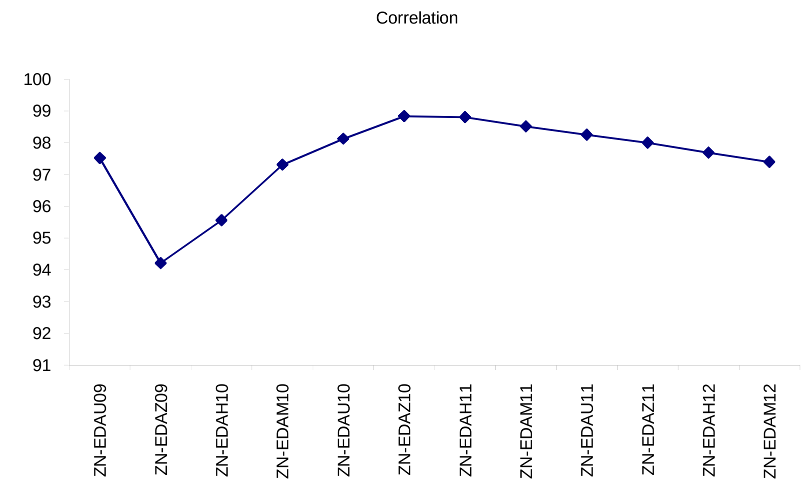


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAU09	0.2048	5.8172	5.6124	ZN-EDAU09
EDAZ09	0.4542	5.8172	5.3631	ZN-EDAZ09
EDAH10	0.7035	5.8172	5.1137	ZN-EDAH10
EDAM10	0.9528	5.8172	4.8644	ZN-EDAM10
EDAU10	1.2021	5.8172	4.6151	ZN-EDAU10
EDAZ10	1.4514	5.8172	4.3658	ZN-EDAZ10
EDAH11	1.7007	5.8172	4.1165	ZN-EDAH11
EDAM11	1.9500	5.8172	3.8672	ZN-EDAM11
EDAU11	2.2185	5.8172	3.5987	ZN-EDAU11
EDAZ11	2.4679	5.8172	3.3494	ZN-EDAZ11
EDAH12	2.7172	5.8172	3.1000	ZN-EDAH12
EDAM12	2.9665	5.8172	2.8507	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	0.70	0.446	2y-EDAU09	-80
EDAZ09	0.92	0.226	2y-EDAZ09	-82
EDAH10	1.19	0.039	2y-EDAH10	-84
EDAM10	1.57	0.419	2y-EDAM10	-86
EDAU10	1.95	0.799	2y-EDAU10	-86
EDAZ10	2.35	1.199	2y-EDAZ10	-85
EDAH11	2.69	1.544	2y-EDAH11	-84
EDAM11	3.04	1.889	2y-EDAM11	-82
EDAU11	3.33	2.184	2y-EDAU11	-80
EDAZ11	3.61	2.464	2y-EDAZ11	-79
EDAH12	3.82	2.674	2y-EDAH12	-78
EDAM12	4.01	2.859	2y-EDAM12	-77

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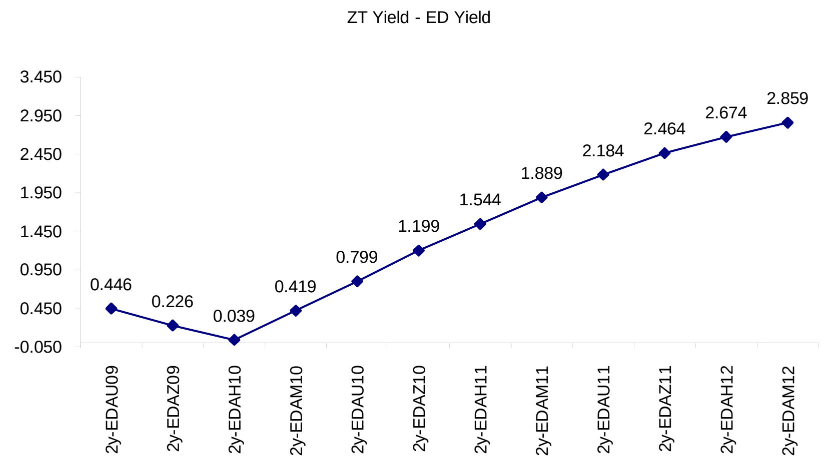
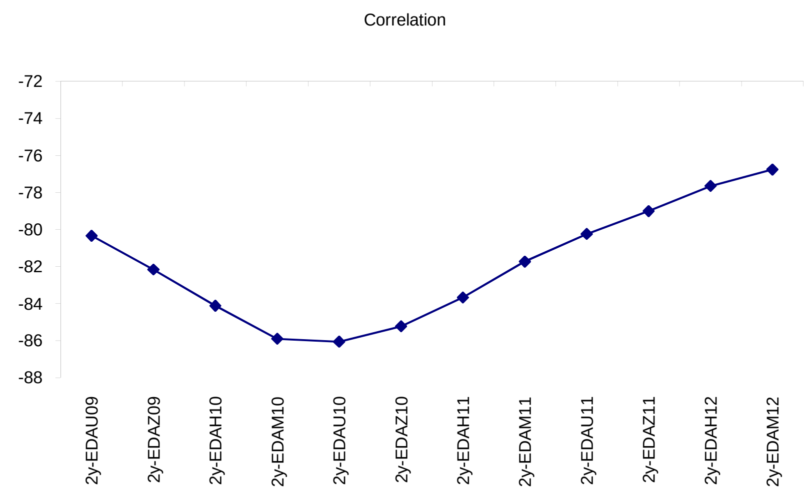


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU09	0.2048	1.9670	1.7622	2y-EDAU09
EDAZ09	0.4542	1.9670	1.5129	2y-EDAZ09
EDAH10	0.7035	1.9670	1.2636	2y-EDAH10
EDAM10	0.9528	1.9670	1.0142	2y-EDAM10
EDAU10	1.2021	1.9670	0.7649	2y-EDAU10
EDAZ10	1.4514	1.9670	0.5156	2y-EDAZ10
EDAH11	1.7007	1.9670	0.2663	2y-EDAH11
EDAM11	1.9500	1.9670	0.0170	2y-EDAM11
EDAU11	2.2185	1.9670	-0.2515	2y-EDAU11
EDAZ11	2.4679	1.9670	-0.5008	2y-EDAZ11
EDAH12	2.7172	1.9670	-0.7501	2y-EDAH12
EDAM12	2.9665	1.9670	-0.9995	2y-EDAM12

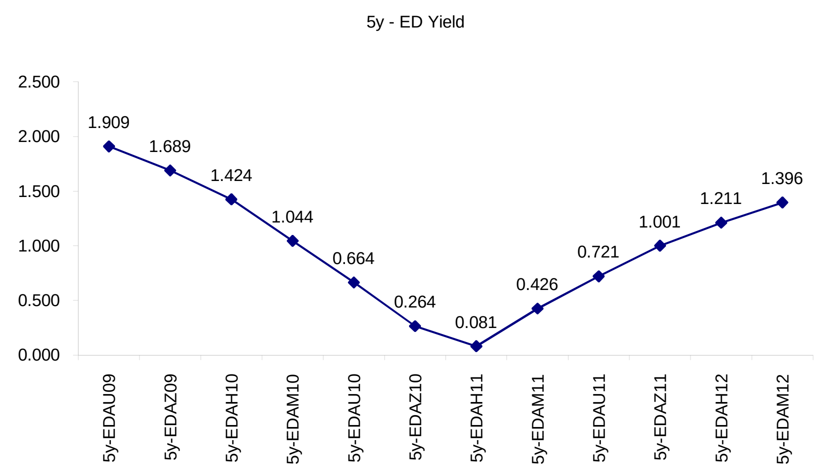
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

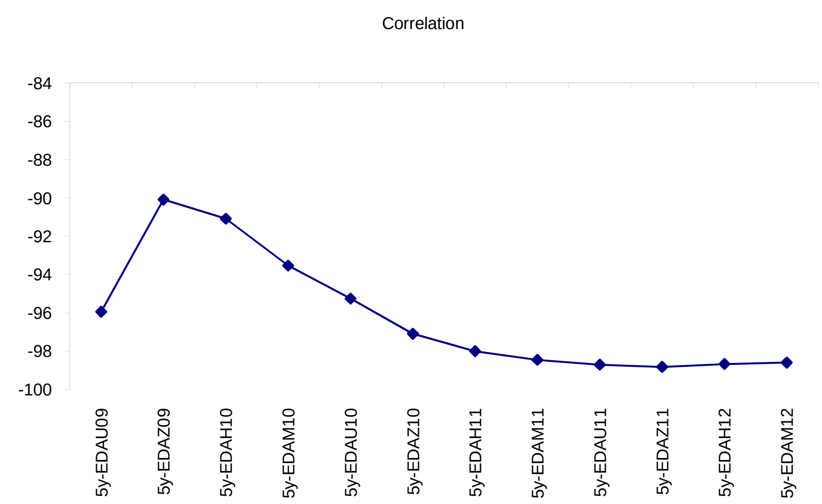
	5y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAU09	0.94	1.909	5y-EDAU09	-96
EDAZ09	1.16	1.689	5y-EDAZ09	-90
EDAH10	1.43	1.424	5y-EDAH10	-91
EDAM10	1.81	1.044	5y-EDAM10	-94
EDAU10	2.19	0.664	5y-EDAU10	-95
EDAZ10	2.59	0.264	5y-EDAZ10	-97
EDAH11	2.93	0.081	5y-EDAH11	-98
EDAM11	3.28	0.426	5y-EDAM11	-98
EDAU11	3.57	0.721	5y-EDAU11	-99
EDAZ11	3.85	1.001	5y-EDAZ11	-99
EDAH12	4.06	1.211	5y-EDAH12	-99
EDAM12	4.25	1.396	5y-EDAM12	-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	**5Y Duration**	**Spread Duration**	
EDAU09	0.2048	4.6545	4.4497	5y-EDAU09
EDAZ09	0.4542	4.6545	4.2004	5y-EDAZ09
EDAH10	0.7035	4.6545	3.9511	5y-EDAH10
EDAM10	0.9528	4.6545	3.7018	5y-EDAM10
EDAU10	1.2021	4.6545	3.4524	5y-EDAU10
EDAZ10	1.4514	4.6545	3.2031	5y-EDAZ10
EDAH11	1.7007	4.6545	2.9538	5y-EDAH11
EDAM11	1.9500	4.6545	2.7045	5y-EDAM11
EDAU11	2.2185	4.6545	2.4360	5y-EDAU11
EDAZ11	2.4679	4.6545	2.1867	5y-EDAZ11
EDAH12	2.7172	4.6545	1.9374	5y-EDAH12
EDAM12	2.9665	4.6545	1.6881	5y-EDAM12

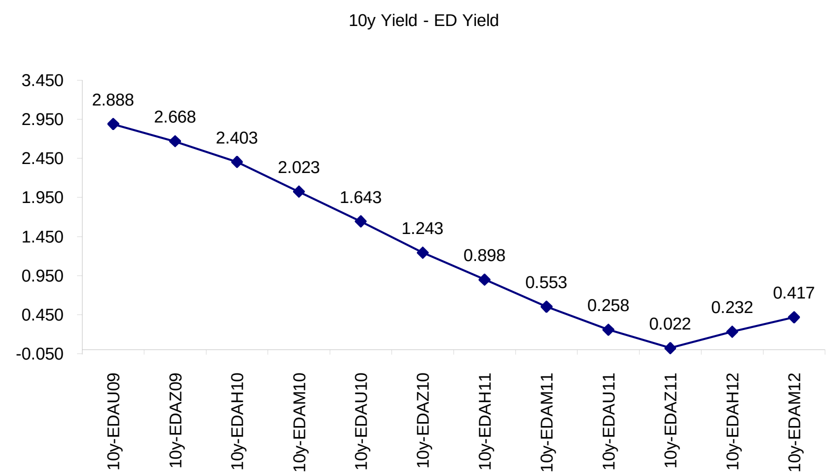
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.94	2.888	10y-EDAU09	-97
EDAZ09	1.16	2.668	10y-EDAZ09	-92
EDAH10	1.43	2.403	10y-EDAH10	-93
EDAM10	1.81	2.023	10y-EDAM10	-95
EDAU10	2.19	1.643	10y-EDAU10	-96
EDAZ10	2.59	1.243	10y-EDAZ10	-97
EDAH11	2.93	0.898	10y-EDAH11	-98
EDAM11	3.28	0.553	10y-EDAM11	-98
EDAU11	3.57	0.258	10y-EDAU11	-98
EDAZ11	3.85	0.022	10y-EDAZ11	-98
EDAH12	4.06	0.232	10y-EDAH12	-97
EDAM12	4.25	0.417	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	0.2048	8.3575	8.1527	10y-EDAU09
EDAZ09	0.4542	8.3575	7.9034	10y-EDAZ09
EDAH10	0.7035	8.3575	7.6541	10y-EDAH10
EDAM10	0.9528	8.3575	7.4047	10y-EDAM10
EDAU10	1.2021	8.3575	7.1554	10y-EDAU10
EDAZ10	1.4514	8.3575	6.9061	10y-EDAZ10
EDAH11	1.7007	8.3575	6.6568	10y-EDAH11
EDAM11	1.9500	8.3575	6.4075	10y-EDAM11
EDAU11	2.2185	8.3575	6.1390	10y-EDAU11
EDAZ11	2.4679	8.3575	5.8897	10y-EDAZ11
EDAH12	2.7172	8.3575	5.6404	10y-EDAH12
EDAM12	2.9665	8.3575	5.3910	10y-EDAM12

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

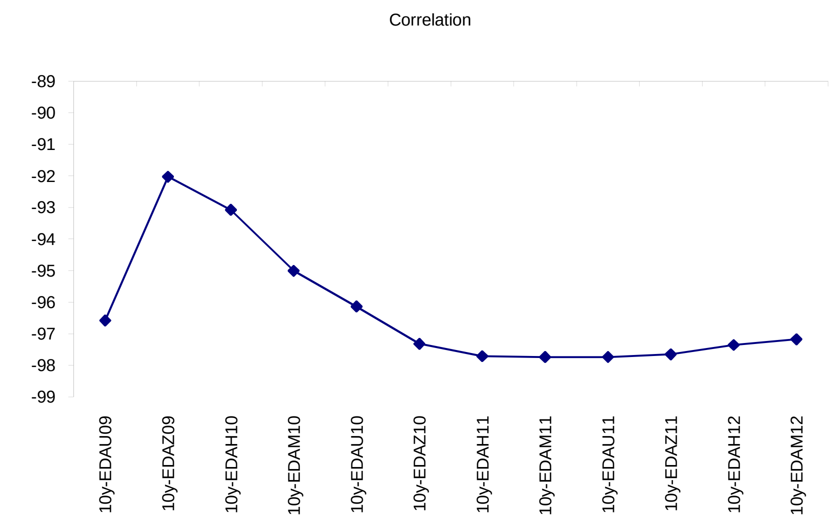
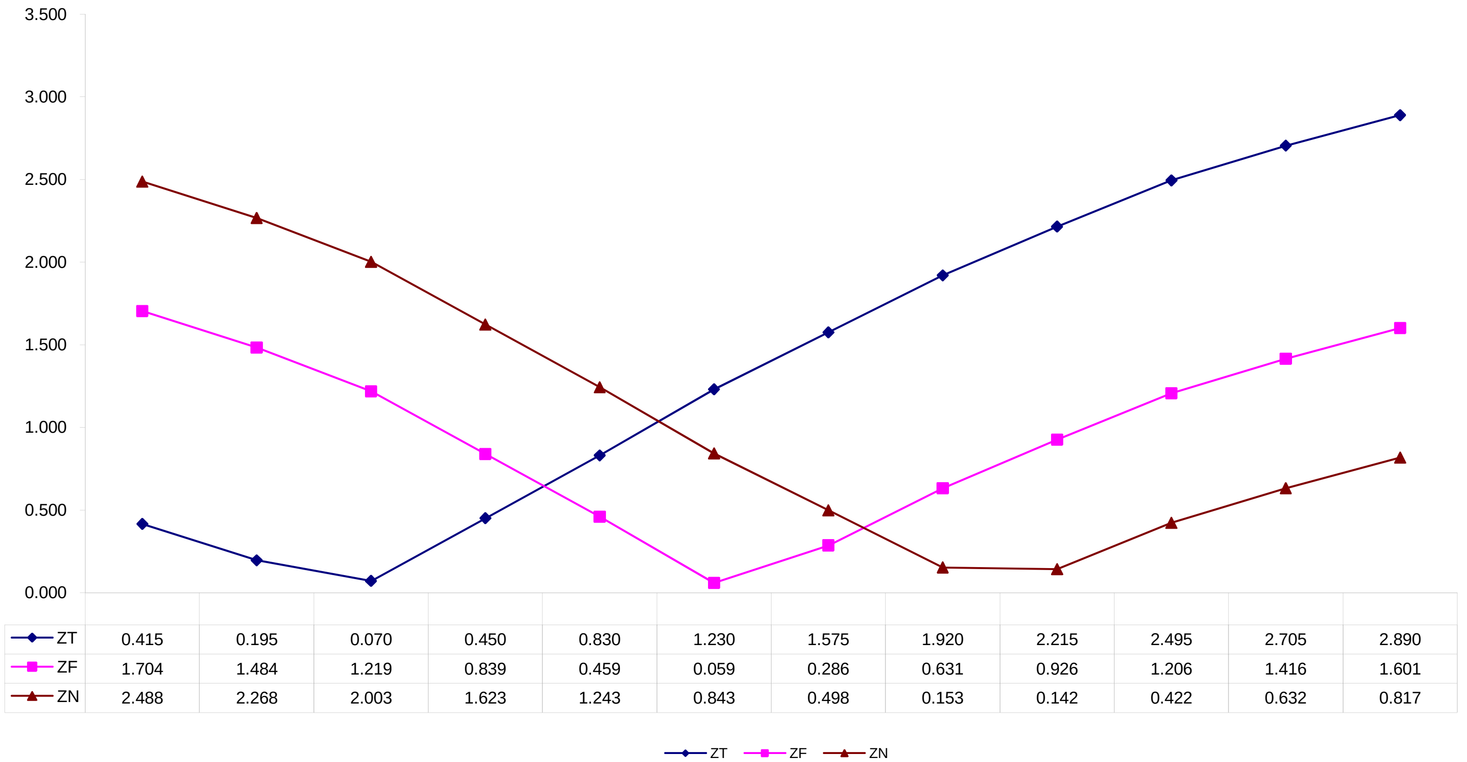
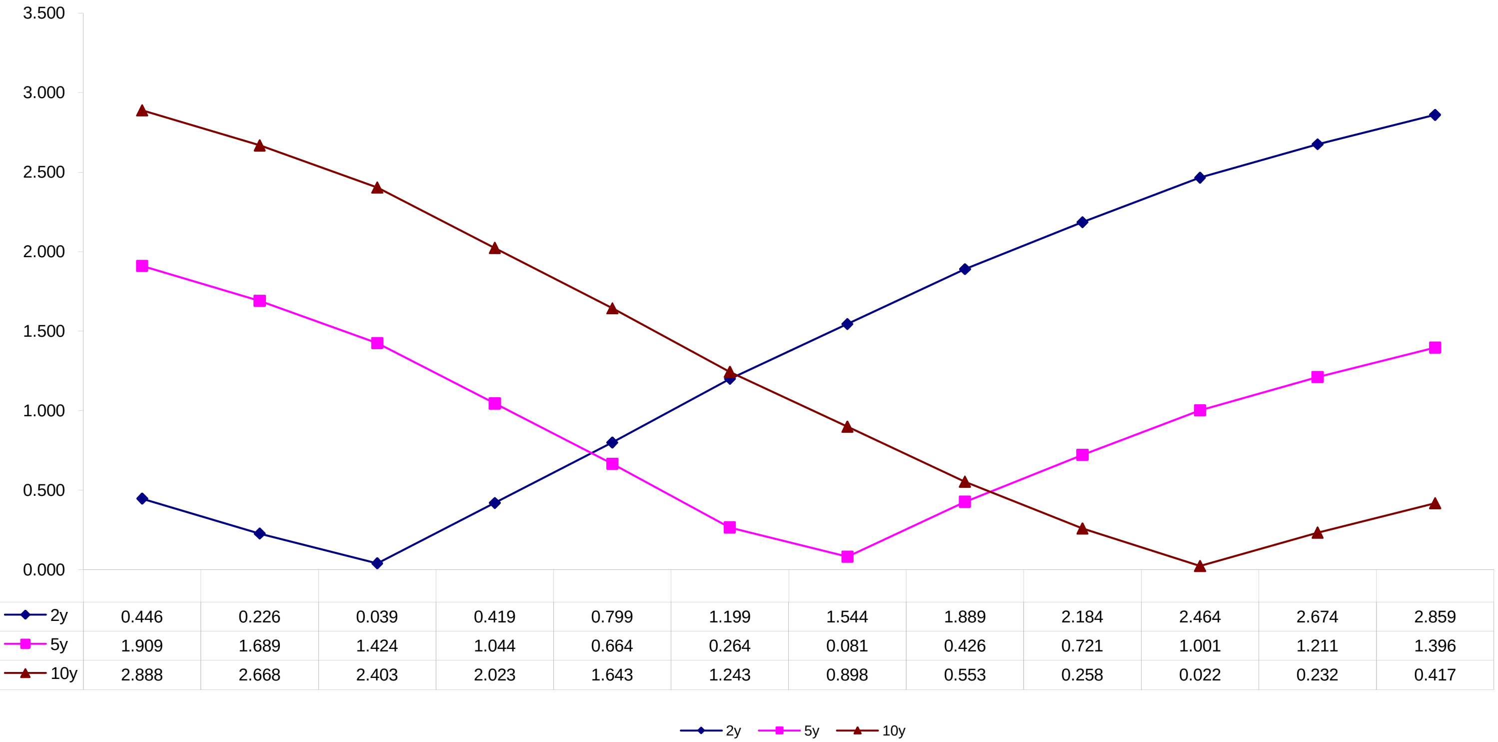


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



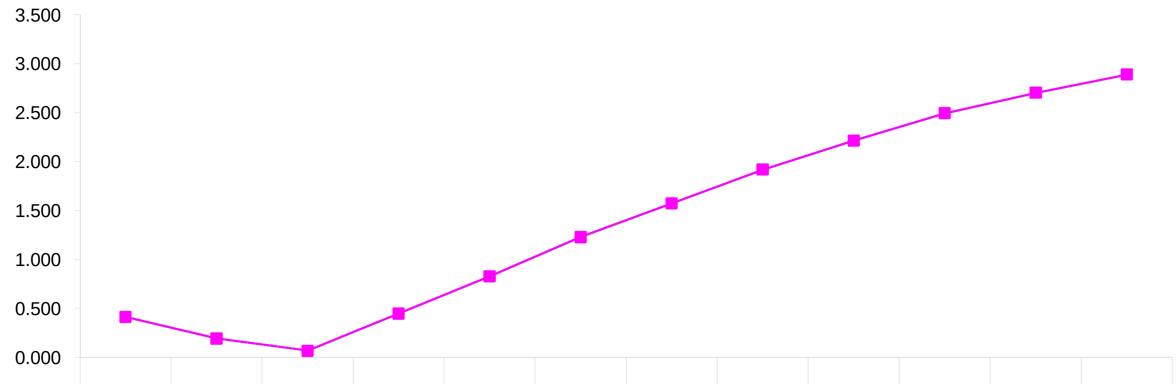
ZT	0.415	0.195	0.070	0.450	0.830	1.230	1.575	1.920	2.215	2.495	2.705	2.890
ZF	1.704	1.484	1.219	0.839	0.459	0.059	0.286	0.631	0.926	1.206	1.416	1.601
ZN	2.488	2.268	2.003	1.623	1.243	0.843	0.498	0.153	0.142	0.422	0.632	0.817

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.



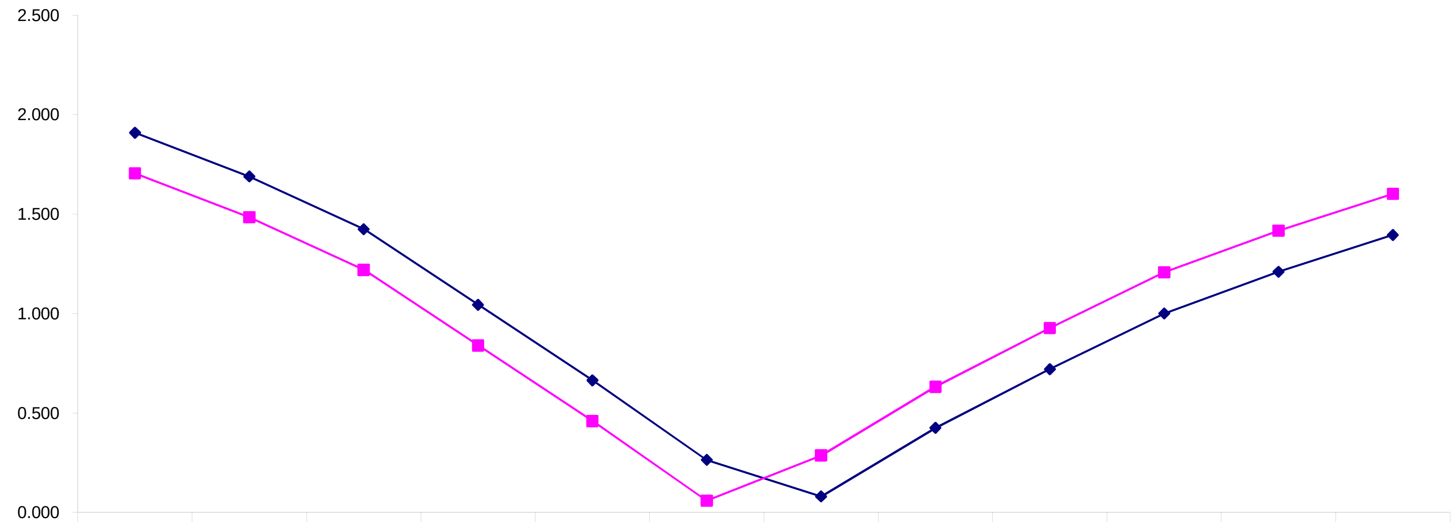
2y	0.446	0.226	0.039	0.419	0.799	1.199	1.544	1.889	2.184	2.464	2.674	2.859
5y	1.909	1.689	1.424	1.044	0.664	0.264	0.081	0.426	0.721	1.001	1.211	1.396
10y	2.888	2.668	2.403	2.023	1.643	1.243	0.898	0.553	0.258	0.022	0.232	0.417

2y Basis TED Curve

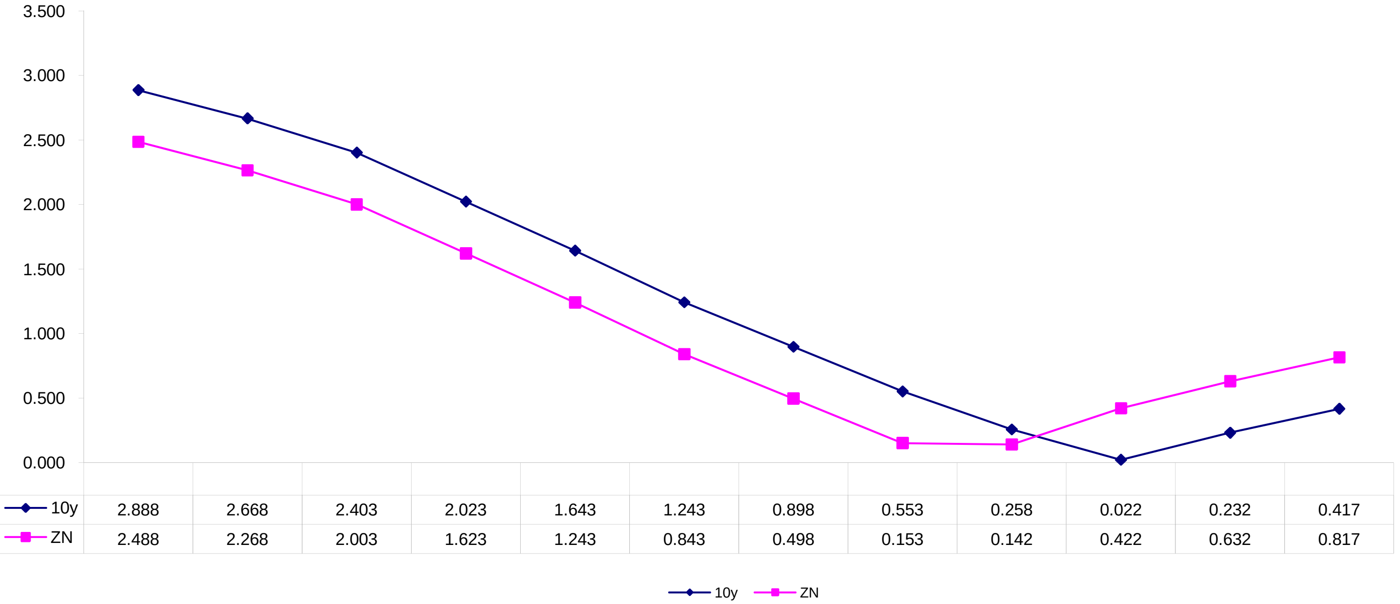


2y	0.415	0.195	0.070	0.450	0.830	1.230	1.575	1.920	2.215	2.495	2.705	2.890
ZT	0.415	0.195	0.070	0.450	0.830	1.230	1.575	1.920	2.215	2.495	2.705	2.890

2y ZT



5y	1.909	1.689	1.424	1.044	0.664	0.264	0.081	0.426	0.721	1.001	1.211	1.396
ZF	1.704	1.484	1.219	0.839	0.459	0.059	0.286	0.631	0.926	1.206	1.416	1.601



10y	2.888	2.668	2.403	2.023	1.643	1.243	0.898	0.553	0.258	0.022	0.232	0.417
ZN	2.488	2.268	2.003	1.623	1.243	0.843	0.498	0.153	0.142	0.422	0.632	0.817

	Last Yield	Net Last Yield	Last Price
White Pack	1.065	2.625	9895.2500
Red Pack	2.509	0.375	9754.1250
Green Pack	3.731	-1.250	9635.3750
Blue Pack		-1.000	9572.2500
Gold Pack		0.000	9536.1250