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	108.4750	108.1520	0.939	1.941
ZF	117.0531	117.0170	1.776	1.776
ZN	121.6406	121.2050	2.415	6.013
2y	99.8594	99.2750	0.939	1.951
5y	99.9531	99.3050	1.885	4.724
10y	98.8906	98.2850	2.885	8.614

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH09	98.5875	1.412	7	0.0185	MAR	White Pack
EDAM09	98.4900	1.510	98	0.2678	JUN	
EDAU09	98.4400	1.560	189	0.5171	SEP	
EDAZ09	98.3200	1.680	280	0.7665	DEC	
EDAH10	98.2650	1.735	371	1.0158	MAR	Red Pack
EDAM10	98.0950	1.905	462	1.2651	JUN	
EDAU10	97.9050	2.095	553	1.5144	SEP	
EDAZ10	97.6850	2.315	644	1.7637	DEC	
EDAH11	97.5100	2.490	735	2.0130	MAR	Green Pack
EDAM11	97.3000	2.700	826	2.2624	JUN	
EDAU11	97.1100	2.890	924	2.5308	SEP	
EDAZ11	96.9300	3.070	1,015	2.7802	DEC	
EDAH12	96.8300	3.170	1,106	3.0295	MAR	Blue Pack
EDAM12	96.7200	3.280	1,197	3.2788	JUN	
EDAU12	96.6350	3.365	1,288	3.5281	SEP	
EDAZ12	96.5450	3.455	1,379	3.7774	DEC	
EDAH13	96.4900	3.510	1,470	4.0267	MAR	Gold Pack
EDAM13	96.4400	3.560	1,561	4.2761	JUN	
EDZU13	96.3600	3.640	1,652	4.5254	SEP	
EDZZ13	96.2950	3.705	1,743	4.7747	DEC	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.568	-8.188	9845.94
Red Pack	2.051	-8.125	9798.75
Green Pack	2.846	-6.000	9721.25
Blue Pack		0.000	9673.25
Gold Pack		0.000	9643.13

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:

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

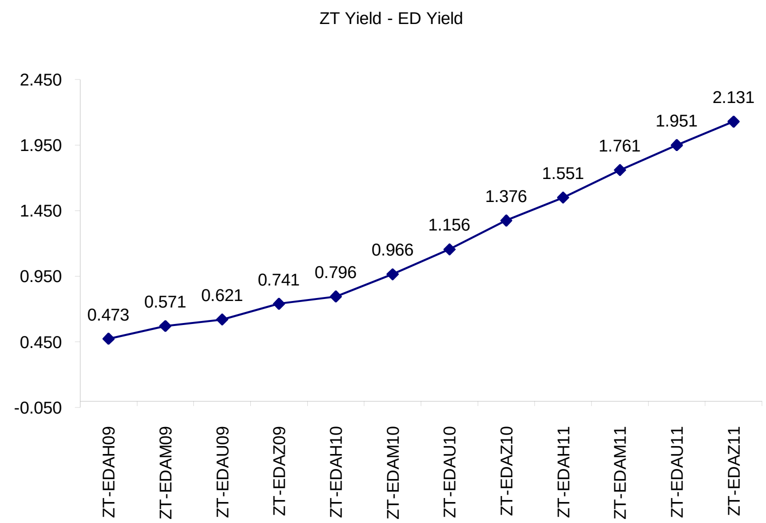
Correlations (Important)

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

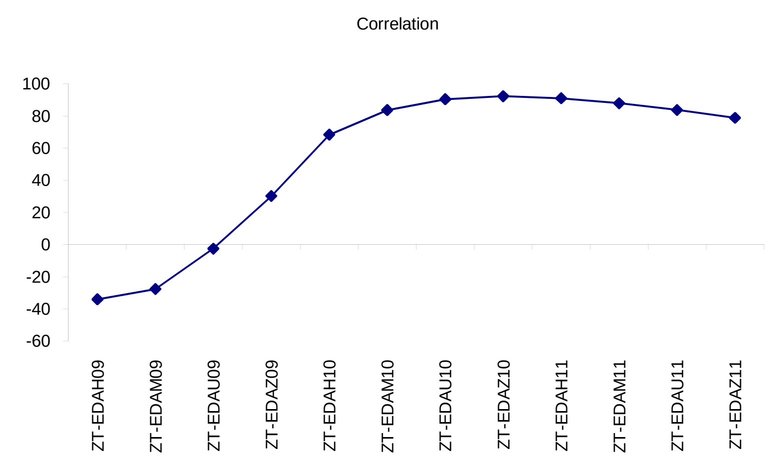
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	9.89	0.473	ZT-EDAH09	-34
EDAM09	9.99	0.571	ZT-EDAM09	-28
EDAU09	10.04	0.621	ZT-EDAU09	-3
EDAZ09	10.16	0.741	ZT-EDAZ09	30
EDAH10	10.21	0.796	ZT-EDAH10	68
EDAM10	10.38	0.966	ZT-EDAM10	84
EDAU10	10.57	1.156	ZT-EDAU10	90
EDAZ10	10.79	1.376	ZT-EDAZ10	92
EDAH11	10.97	1.551	ZT-EDAH11	91
EDAM11	11.18	1.761	ZT-EDAM11	88
EDAU11	11.37	1.951	ZT-EDAU11	84
EDAZ11	11.55	2.131	ZT-EDAZ11	79

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	
EDAH09	0.0185	1.9415	1.9230	ZT-EDAH09
EDAM09	0.2678	1.9415	1.6736	ZT-EDAM09
EDAU09	0.5171	1.9415	1.4243	ZT-EDAU09
EDAZ09	0.7665	1.9415	1.1750	ZT-EDAZ09
EDAH10	1.0158	1.9415	0.9257	ZT-EDAH10
EDAM10	1.2651	1.9415	0.6764	ZT-EDAM10
EDAU10	1.5144	1.9415	0.4271	ZT-EDAU10
EDAZ10	1.7637	1.9415	0.1777	ZT-EDAZ10
EDAH11	2.0130	1.9415	-0.0716	ZT-EDAH11
EDAM11	2.2624	1.9415	-0.3209	ZT-EDAM11
EDAU11	2.5308	1.9415	-0.5894	ZT-EDAU11
EDAZ11	2.7802	1.9415	-0.8387	ZT-EDAZ11

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

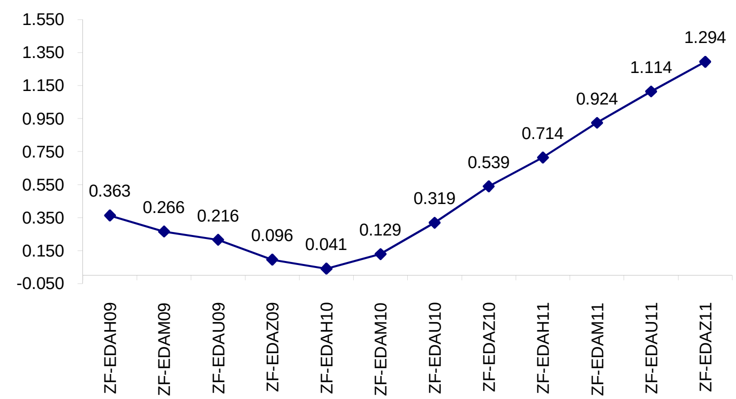


Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	18.47	0.363	ZF-EDAH09	-32
EDAM09	18.56	0.266	ZF-EDAM09	-26
EDAU09	18.61	0.216	ZF-EDAU09	-1
EDAZ09	18.73	0.096	ZF-EDAZ09	32
EDAH10	18.79	0.041	ZF-EDAH10	70
EDAM10	18.96	0.129	ZF-EDAM10	86
EDAU10	19.15	0.319	ZF-EDAU10	93
EDAZ10	19.37	0.539	ZF-EDAZ10	95
EDAH11	19.54	0.714	ZF-EDAH11	95
EDAM11	19.75	0.924	ZF-EDAM11	93
EDAU11	19.94	1.114	ZF-EDAU11	90
EDAZ11	20.12	1.294	ZF-EDAZ11	85

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

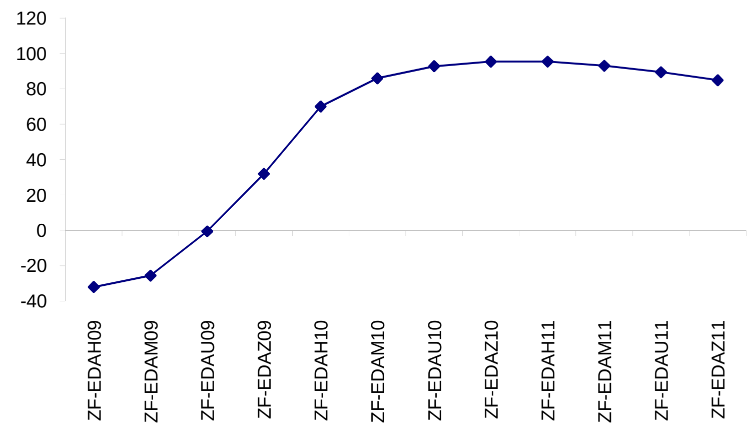
ZF Yield - ED Yield



	ED Duration as Fraction of year	ZF Duration	Spread Duration	
EDAH09	0.0185	1.7757	1.7572	ZF-EDAH09
EDAM09	0.2678	1.7757	1.5079	ZF-EDAM09
EDAU09	0.5171	1.7757	1.2585	ZF-EDAU09
EDAZ09	0.7665	1.7757	1.0092	ZF-EDAZ09
EDAH10	1.0158	1.7757	0.7599	ZF-EDAH10
EDAM10	1.2651	1.7757	0.5106	ZF-EDAM10
EDAU10	1.5144	1.7757	0.2613	ZF-EDAU10
EDAZ10	1.7637	1.7757	0.0120	ZF-EDAZ10
EDAH11	2.0130	1.7757	-0.2374	ZF-EDAH11
EDAM11	2.2624	1.7757	-0.4867	ZF-EDAM11
EDAU11	2.5308	1.7757	-0.7552	ZF-EDAU11
EDAZ11	2.7802	1.7757	-1.0045	ZF-EDAZ11

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

Correlation



	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	23.05	1.003	ZN-EDAH09	-52
EDAM09	23.15	0.905	ZN-EDAM09	-49
EDAU09	23.20	0.855	ZN-EDAU09	-28
EDAZ09	23.32	0.735	ZN-EDAZ09	4
EDAH10	23.38	0.680	ZN-EDAH10	45
EDAM10	23.55	0.510	ZN-EDAM10	66
EDAU10	23.74	0.320	ZN-EDAU10	77
EDAZ10	23.96	0.100	ZN-EDAZ10	84
EDAH11	24.13	0.075	ZN-EDAH11	88
EDAM11	24.34	0.285	ZN-EDAM11	90
EDAU11	24.53	0.475	ZN-EDAU11	92
EDAZ11	24.71	0.655	ZN-EDAZ11	92

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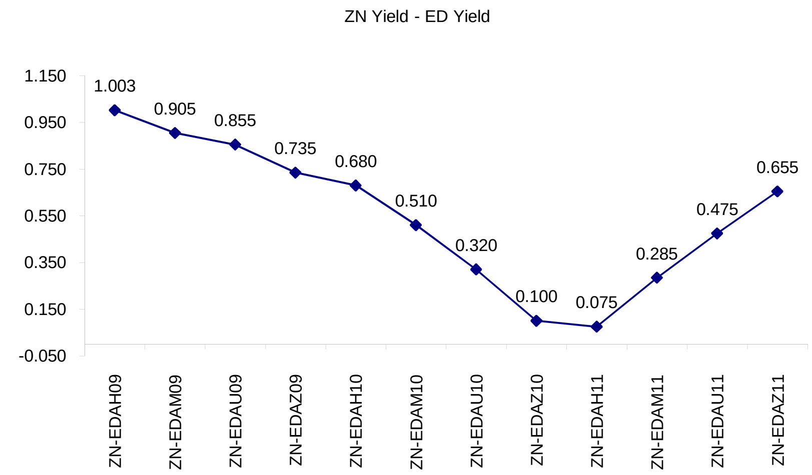
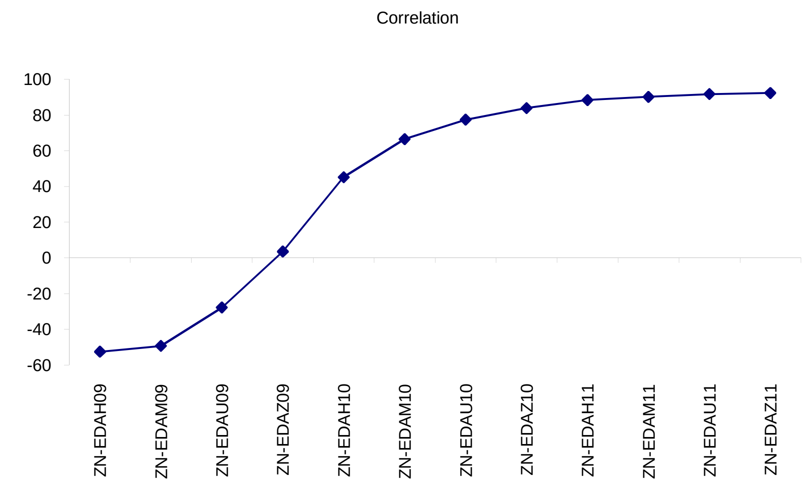


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAH09	0.0185	6.0127	5.9942	ZN-EDAH09
EDAM09	0.2678	6.0127	5.7449	ZN-EDAM09
EDAU09	0.5171	6.0127	5.4956	ZN-EDAU09
EDAZ09	0.7665	6.0127	5.2462	ZN-EDAZ09
EDAH10	1.0158	6.0127	4.9969	ZN-EDAH10
EDAM10	1.2651	6.0127	4.7476	ZN-EDAM10
EDAU10	1.5144	6.0127	4.4983	ZN-EDAU10
EDAZ10	1.7637	6.0127	4.2490	ZN-EDAZ10
EDAH11	2.0130	6.0127	3.9997	ZN-EDAH11
EDAM11	2.2624	6.0127	3.7503	ZN-EDAM11
EDAU11	2.5308	6.0127	3.4819	ZN-EDAU11
EDAZ11	2.7802	6.0127	3.2325	ZN-EDAZ11

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



	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.27	0.473	2y-EDAH09	15
EDAM09	1.37	0.571	2y-EDAM09	7
EDAU09	1.42	0.621	2y-EDAU09	-16
EDAZ09	1.54	0.741	2y-EDAZ09	-47
EDAH10	1.59	0.796	2y-EDAH10	-78
EDAM10	1.76	0.966	2y-EDAM10	-88
EDAU10	1.95	1.156	2y-EDAU10	-90
EDAZ10	2.17	1.376	2y-EDAZ10	-89
EDAH11	2.35	1.551	2y-EDAH11	-84
EDAM11	2.56	1.761	2y-EDAM11	-78
EDAU11	2.75	1.951	2y-EDAU11	-70
EDAZ11	2.93	2.131	2y-EDAZ11	-62

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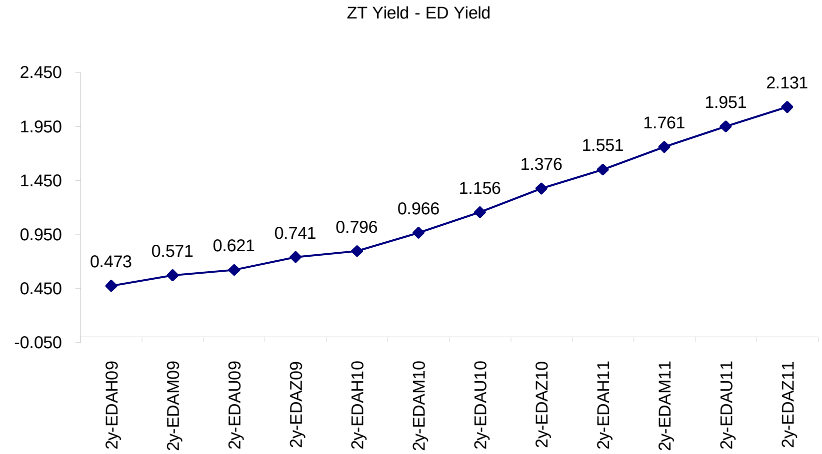
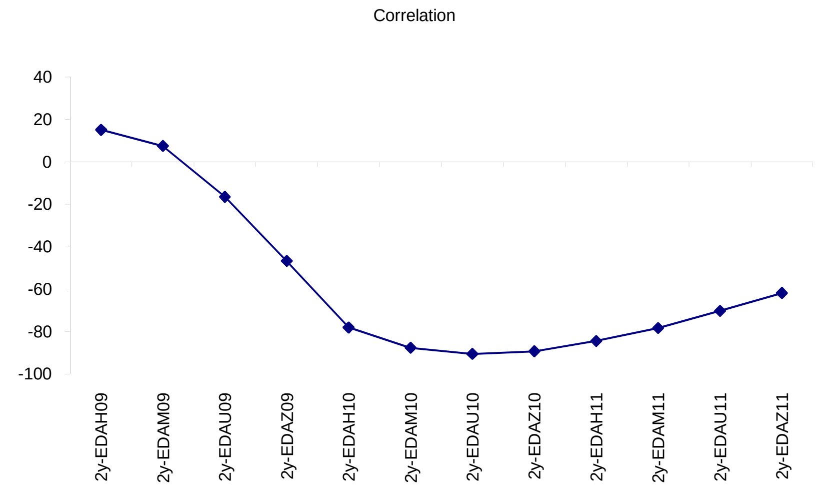


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAH09	0.0185	1.9506	1.9321	2y-EDAH09
EDAM09	0.2678	1.9506	1.6828	2y-EDAM09
EDAU09	0.5171	1.9506	1.4335	2y-EDAU09
EDAZ09	0.7665	1.9506	1.1842	2y-EDAZ09
EDAH10	1.0158	1.9506	0.9348	2y-EDAH10
EDAM10	1.2651	1.9506	0.6855	2y-EDAM10
EDAU10	1.5144	1.9506	0.4362	2y-EDAU10
EDAZ10	1.7637	1.9506	0.1869	2y-EDAZ10
EDAH11	2.0130	1.9506	-0.0624	2y-EDAH11
EDAM11	2.2624	1.9506	-0.3117	2y-EDAM11
EDAU11	2.5308	1.9506	-0.5802	2y-EDAU11
EDAZ11	2.7802	1.9506	-0.8295	2y-EDAZ11

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

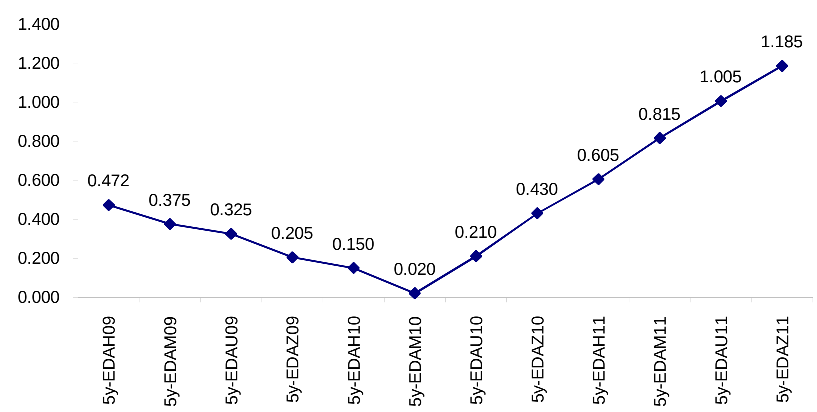


TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAH09	1.37	0.472	5y-EDAH09	19
EDAM09	1.46	0.375	5y-EDAM09	12
EDAU09	1.51	0.325	5y-EDAU09	-12
EDAZ09	1.63	0.205	5y-EDAZ09	-42
EDAH10	1.69	0.150	5y-EDAH10	-74
EDAM10	1.86	0.020	5y-EDAM10	-87
EDAU10	2.05	0.210	5y-EDAU10	-92
EDAZ10	2.27	0.430	5y-EDAZ10	-95
EDAH11	2.44	0.605	5y-EDAH11	-95
EDAM11	2.65	0.815	5y-EDAM11	-94
EDAU11	2.84	1.005	5y-EDAU11	-90
EDAZ11	3.02	1.185	5y-EDAZ11	-84

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

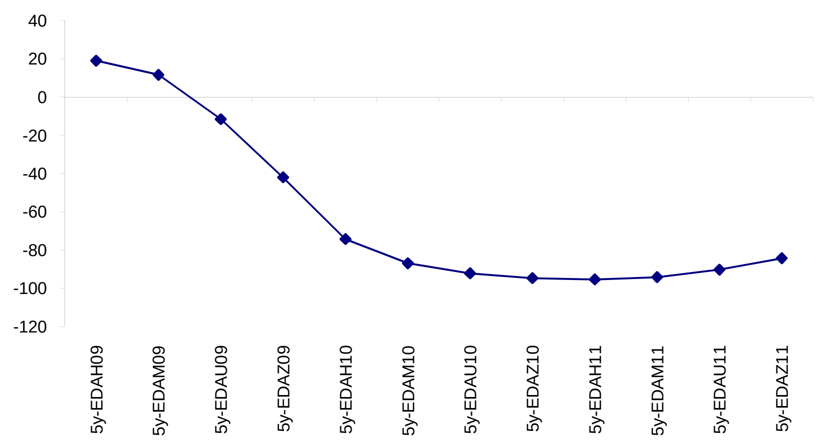
5y - ED Yield



	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAH09	0.0185	4.7244	4.7058	5y-EDAH09
EDAM09	0.2678	4.7244	4.4565	5y-EDAM09
EDAU09	0.5171	4.7244	4.2072	5y-EDAU09
EDAZ09	0.7665	4.7244	3.9579	5y-EDAZ09
EDAH10	1.0158	4.7244	3.7086	5y-EDAH10
EDAM10	1.2651	4.7244	3.4593	5y-EDAM10
EDAU10	1.5144	4.7244	3.2099	5y-EDAU10
EDAZ10	1.7637	4.7244	2.9606	5y-EDAZ10
EDAH11	2.0130	4.7244	2.7113	5y-EDAH11
EDAM11	2.2624	4.7244	2.4620	5y-EDAM11
EDAU11	2.5308	4.7244	2.1935	5y-EDAU11
EDAZ11	2.7802	4.7244	1.9442	5y-EDAZ11

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

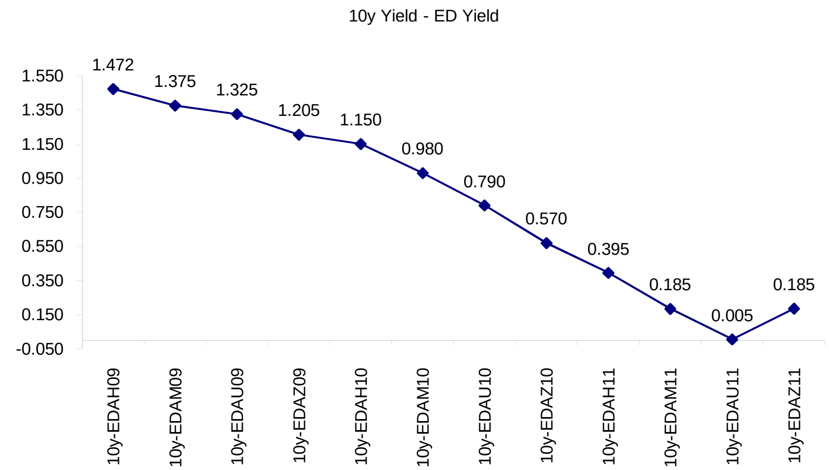
Correlation



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	1.37	1.472	10y-EDAH09	12
EDAM09	1.46	1.375	10y-EDAM09	10
EDAU09	1.51	1.325	10y-EDAU09	-4
EDAZ09	1.63	1.205	10y-EDAZ09	-26
EDAH10	1.69	1.150	10y-EDAH10	-50
EDAM10	1.86	0.980	10y-EDAM10	-63
EDAU10	2.05	0.790	10y-EDAU10	-69
EDAZ10	2.27	0.570	10y-EDAZ10	-76
EDAH11	2.44	0.395	10y-EDAH11	-84
EDAM11	2.65	0.185	10y-EDAM11	-90
EDAU11	2.84	0.005	10y-EDAU11	-93
EDAZ11	3.02	0.185	10y-EDAZ11	-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	
EDAH09	0.0185	8.6141	8.5956	10y-EDAH09
EDAM09	0.2678	8.6141	8.3463	10y-EDAM09
EDAU09	0.5171	8.6141	8.0970	10y-EDAU09
EDAZ09	0.7665	8.6141	7.8477	10y-EDAZ09
EDAH10	1.0158	8.6141	7.5984	10y-EDAH10
EDAM10	1.2651	8.6141	7.3490	10y-EDAM10
EDAU10	1.5144	8.6141	7.0997	10y-EDAU10
EDAZ10	1.7637	8.6141	6.8504	10y-EDAZ10
EDAH11	2.0130	8.6141	6.6011	10y-EDAH11
EDAM11	2.2624	8.6141	6.3518	10y-EDAM11
EDAU11	2.5308	8.6141	6.0833	10y-EDAU11
EDAZ11	2.7802	8.6141	5.8340	10y-EDAZ11

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

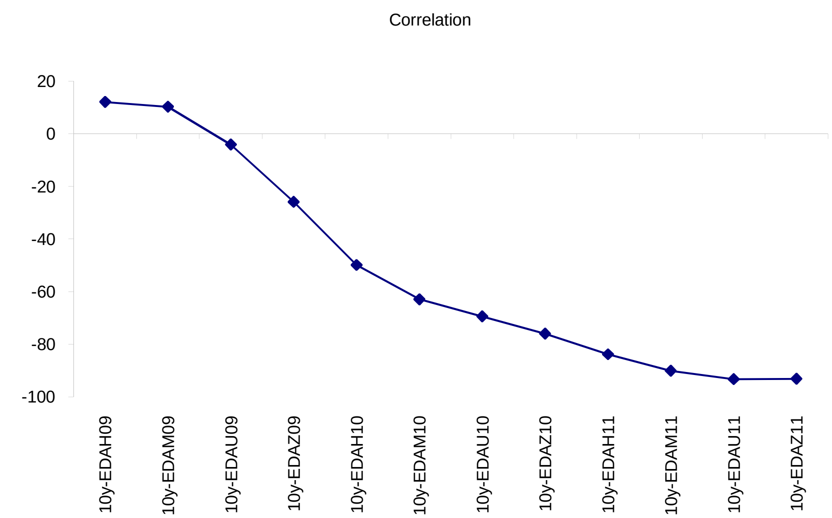
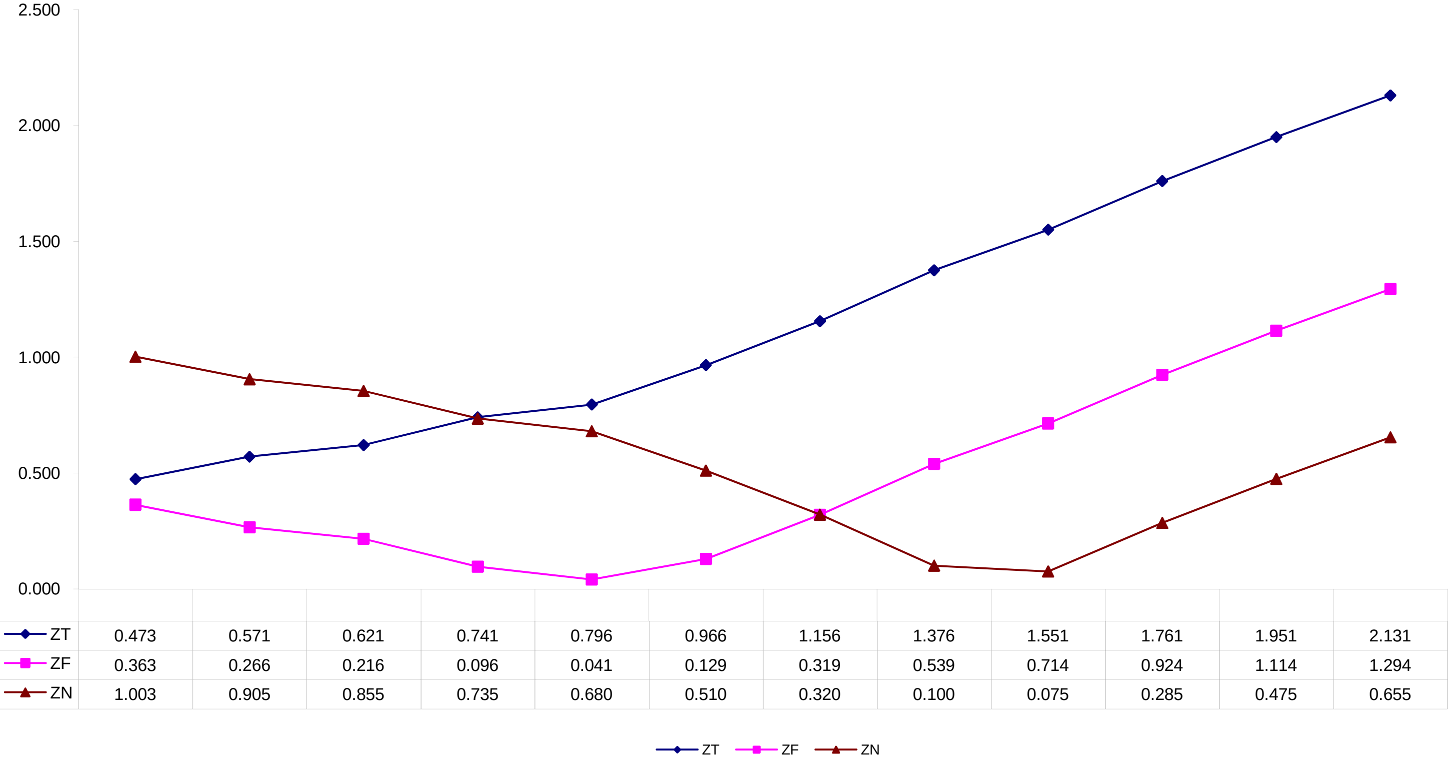
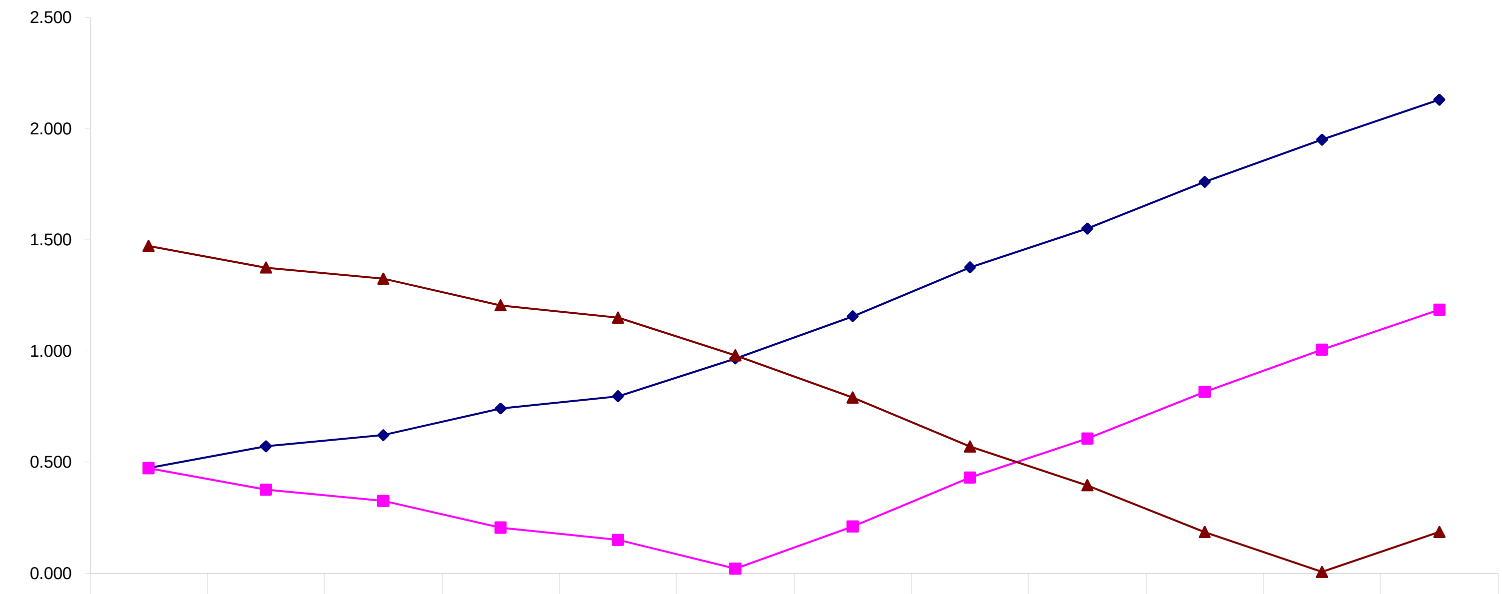


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.473	0.571	0.621	0.741	0.796	0.966	1.156	1.376	1.551	1.761	1.951	2.131
ZF	0.363	0.266	0.216	0.096	0.041	0.129	0.319	0.539	0.714	0.924	1.114	1.294
ZN	1.003	0.905	0.855	0.735	0.680	0.510	0.320	0.100	0.075	0.285	0.475	0.655

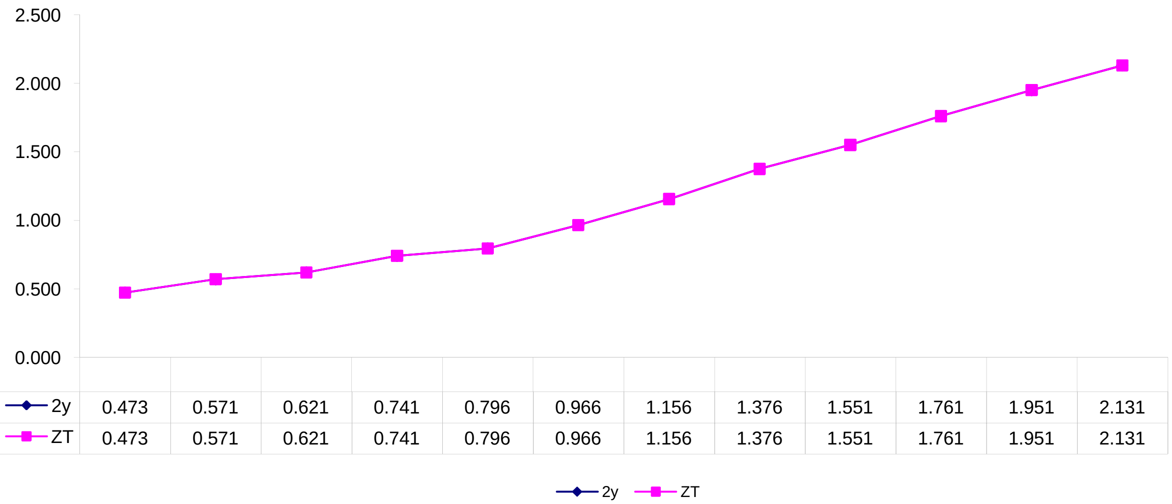
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



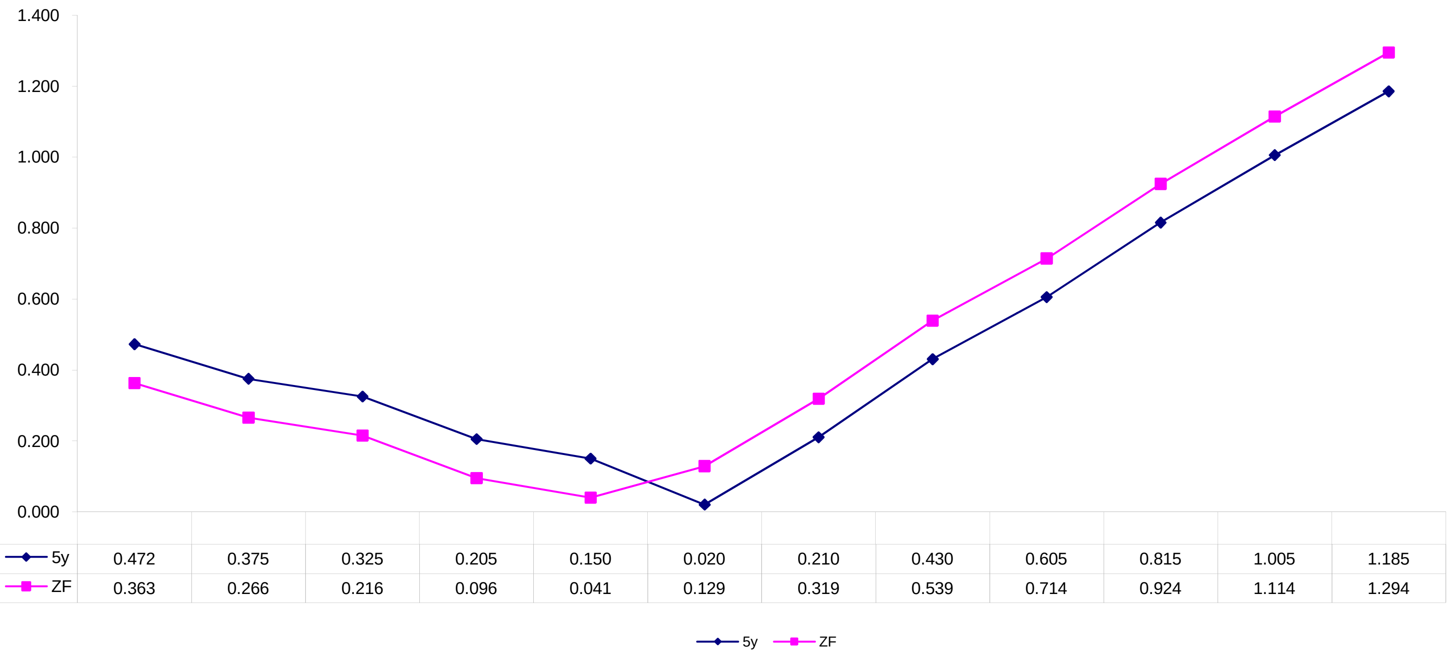
2y	0.473	0.571	0.621	0.741	0.796	0.966	1.156	1.376	1.551	1.761	1.951	2.131
5y	0.472	0.375	0.325	0.205	0.150	0.020	0.210	0.430	0.605	0.815	1.005	1.185
10y	1.472	1.375	1.325	1.205	1.150	0.980	0.790	0.570	0.395	0.185	0.005	0.185

2y 5y 10y

2y Basis TED Curve

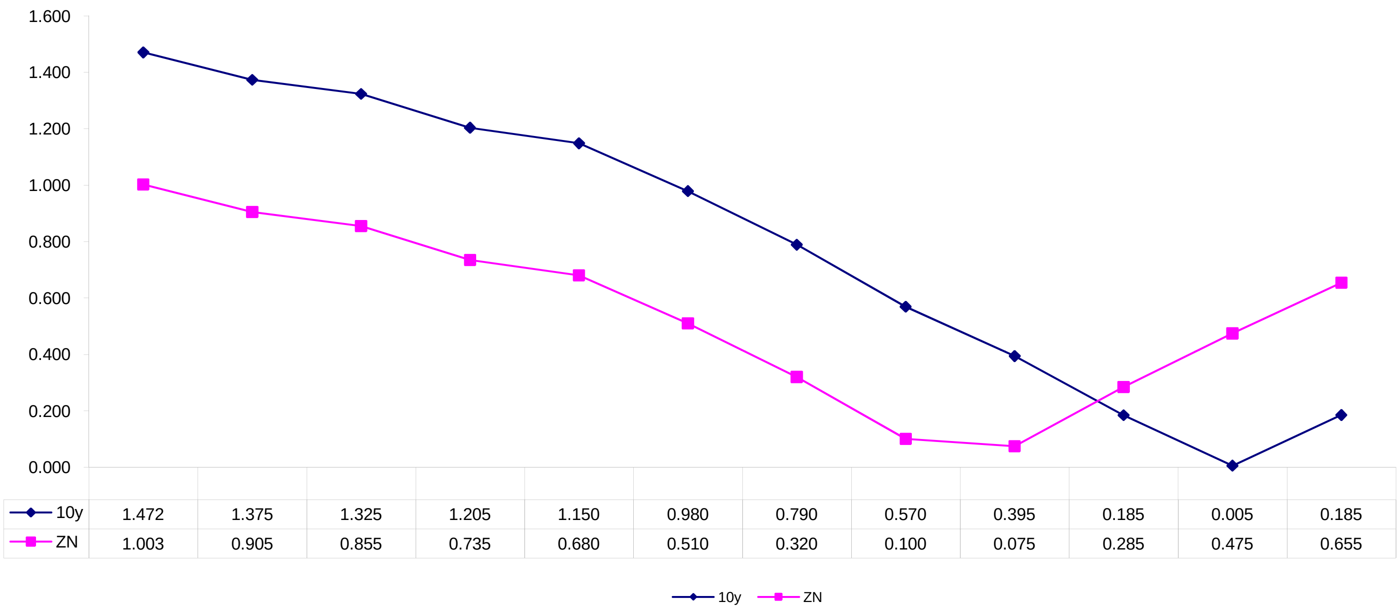


2y	0.473	0.571	0.621	0.741	0.796	0.966	1.156	1.376	1.551	1.761	1.951	2.131
ZT	0.473	0.571	0.621	0.741	0.796	0.966	1.156	1.376	1.551	1.761	1.951	2.131



5y	0.472	0.375	0.325	0.205	0.150	0.020	0.210	0.430	0.605	0.815	1.005	1.185
ZF	0.363	0.266	0.216	0.096	0.041	0.129	0.319	0.539	0.714	0.924	1.114	1.294

10y Basis TED Curve



10y	1.472	1.375	1.325	1.205	1.150	0.980	0.790	0.570	0.395	0.185	0.005	0.185
ZN	1.003	0.905	0.855	0.735	0.680	0.510	0.320	0.100	0.075	0.285	0.475	0.655

	Last Yield	Net Last Yield	Last Price
White Pack	1.5680859	-8.1875	9845.9375
Red Pack	2.0508896	-8.125	9798.75
Green Pack	2.8461693	-6	9721.25
Blue Pack		0	9673.25
Gold Pack		0	9643.125