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 32.00	Last Yield*	MDuration
ZT	108.8813	108.2820	0.748	1.80
ZF	118.3031	118.0970	1.563	1.56
ZN	122.9531	122.3050	1.754	6.19
2y	99.8656	99.2770	0.942	1.97
5y	99.4375	99.1400	1.867	4.76
10y	107.8281	107.2650	2.824	8.17

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAH09	98.910	1.090	45	0.123	MAR	
EDAM09	98.895	1.105	136	0.372	JUN	White Pack
EDAU09	98.790	1.210	227	0.621	SEP	
EDAZ09	98.585	1.415	318	0.871	DEC	
EDAH10	98.400	1.600	409	1.120	MAR	
EDAM10	98.135	1.865	500	1.369	JUN	Red Pack
EDAU10	97.880	2.120	591	1.619	SEP	
EDAZ10	97.610	2.390	682	1.868	DEC	
EDAH11	97.415	2.585	773	2.117	MAR	
EDAM11	97.220	2.780	864	2.366	JUN	Green Pack
EDAU11	97.060	2.940	962	2.635	SEP	
EDAZ11	96.930	3.070	1053	2.884	DEC	
EDAH12	96.765	3.235	1144	3.134	MAR	
EDAM12	96.800	3.200	1235	3.383	JUN	Blue Pack
EDAU12	96.640	3.360	1326	3.632	SEP	
EDAZ12	96.635	3.365	1417	3.882	DEC	
EDAH13	96.595	3.405	1508	4.131	MAR	
EDAM13	96.545	3.455	1599	4.380	JUN	Gold Pack
EDZU13	96.510	3.490	1690	4.629	SEP	
EDZZ13	96.400	3.600	1781	4.879	DEC	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.225	0.000	9879.500
Red Pack	2.032	-0.125	9800.625
Green Pack	2.904	-1.625	9715.625
Blue Pack		-1.500	9677.000
Gold Pack		-2.500	9651.250

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

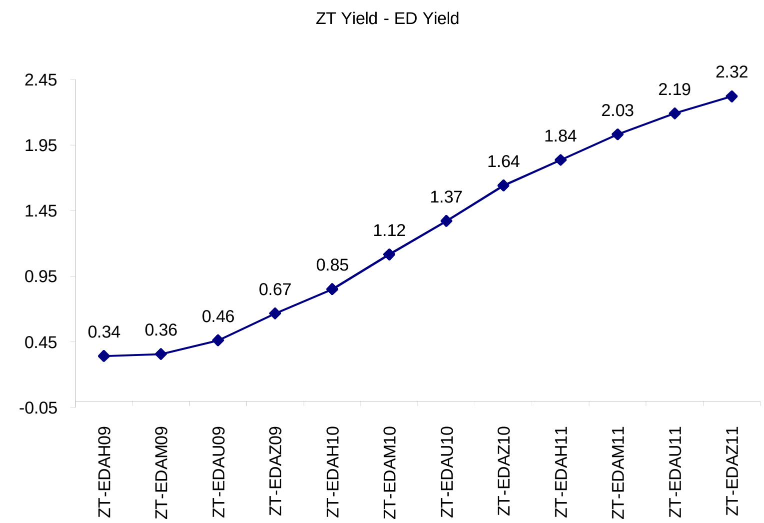
Correlations (Important)

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

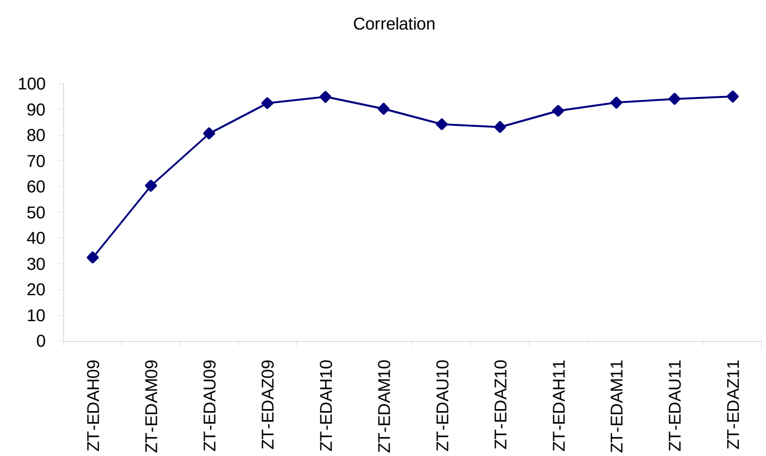
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	9.971	0.34	ZT-EDAH09	32.471
EDAM09	9.986	0.36	ZT-EDAM09	60.357
EDAU09	10.091	0.46	ZT-EDAU09	80.625
EDAZ09	10.296	0.67	ZT-EDAZ09	92.409
EDAH10	10.481	0.85	ZT-EDAH10	94.865
EDAM10	10.746	1.12	ZT-EDAM10	90.194
EDAU10	11.001	1.37	ZT-EDAU10	84.211
EDAZ10	11.271	1.64	ZT-EDAZ10	83.127
EDAH11	11.466	1.84	ZT-EDAH11	89.425
EDAM11	11.661	2.03	ZT-EDAM11	92.577
EDAU11	11.821	2.19	ZT-EDAU11	94.061
EDAZ11	11.951	2.32	ZT-EDAZ11	94.996

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	0.123	1.80	1.68	ZT-EDAH09
EDAM09	0.372	1.80	1.43	ZT-EDAM09
EDAU09	0.621	1.80	1.18	ZT-EDAU09
EDAZ09	0.871	1.80	0.93	ZT-EDAZ09
EDAH10	1.120	1.80	0.68	ZT-EDAH10
EDAM10	1.369	1.80	0.43	ZT-EDAM10
EDAU10	1.619	1.80	0.18	ZT-EDAU10
EDAZ10	1.868	1.80	(0.07)	ZT-EDAZ10
EDAH11	2.117	1.80	(0.32)	ZT-EDAH11
EDAM11	2.366	1.80	(0.57)	ZT-EDAM11
EDAU11	2.635	1.80	(0.84)	ZT-EDAU11
EDAZ11	2.884	1.80	(1.09)	ZT-EDAZ11

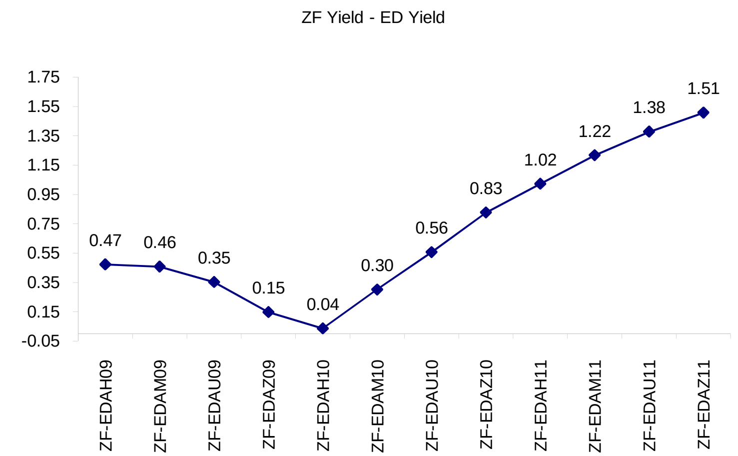
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

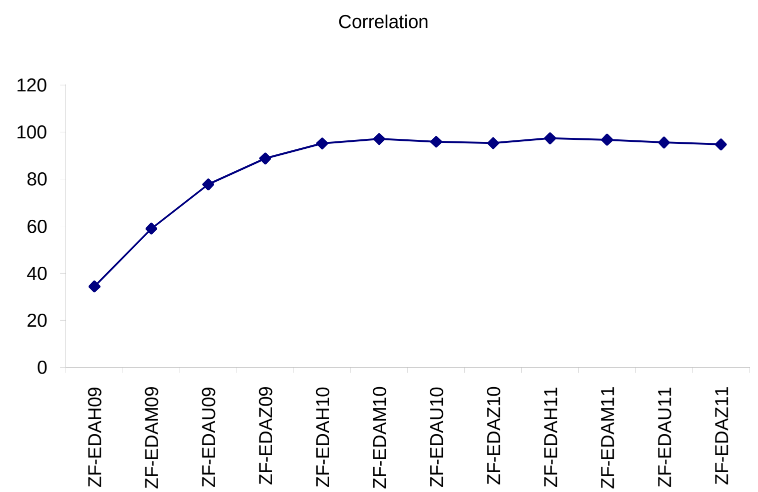
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	19.393	0.47	ZF-EDAH09	34.379
EDAM09	19.408	0.46	ZF-EDAM09	58.993
EDAU09	19.513	0.35	ZF-EDAU09	77.794
EDAZ09	19.718	0.15	ZF-EDAZ09	88.856
EDAH10	19.903	0.04	ZF-EDAH10	95.245
EDAM10	20.168	0.30	ZF-EDAM10	97.129
EDAU10	20.423	0.56	ZF-EDAU10	95.929
EDAZ10	20.693	0.83	ZF-EDAZ10	95.306
EDAH11	20.888	1.02	ZF-EDAH11	97.410
EDAM11	21.083	1.22	ZF-EDAM11	96.785
EDAU11	21.243	1.38	ZF-EDAU11	95.604
EDAZ11	21.373	1.51	ZF-EDAZ11	94.793

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	
EDAH09	0.123	1.56	1.44	ZF-EDAH09
EDAM09	0.372	1.56	1.19	ZF-EDAM09
EDAU09	0.621	1.56	0.94	ZF-EDAU09
EDAZ09	0.871	1.56	0.69	ZF-EDAZ09
EDAH10	1.120	1.56	0.44	ZF-EDAH10
EDAM10	1.369	1.56	0.19	ZF-EDAM10
EDAU10	1.619	1.56	(0.06)	ZF-EDAU10
EDAZ10	1.868	1.56	(0.30)	ZF-EDAZ10
EDAH11	2.117	1.56	(0.55)	ZF-EDAH11
EDAM11	2.366	1.56	(0.80)	ZF-EDAM11
EDAU11	2.635	1.56	(1.07)	ZF-EDAU11
EDAZ11	2.884	1.56	(1.32)	ZF-EDAZ11

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)
EDAH09	24.043	0.66	ZN-EDAH09	52.791
EDAM09	24.058	0.65	ZN-EDAM09	73.469
EDAU09	24.163	0.54	ZN-EDAU09	86.766
EDAZ09	24.368	0.34	ZN-EDAZ09	91.952
EDAH10	24.553	0.15	ZN-EDAH10	94.118
EDAM10	24.818	0.11	ZN-EDAM10	92.088
EDAU10	25.073	0.37	ZN-EDAU10	88.993
EDAZ10	25.343	0.64	ZN-EDAZ10	88.527
EDAH11	25.538	0.83	ZN-EDAH11	94.428
EDAM11	25.733	1.03	ZN-EDAM11	96.525
EDAU11	25.893	1.19	ZN-EDAU11	96.367
EDAZ11	26.023	1.32	ZN-EDAZ11	96.290

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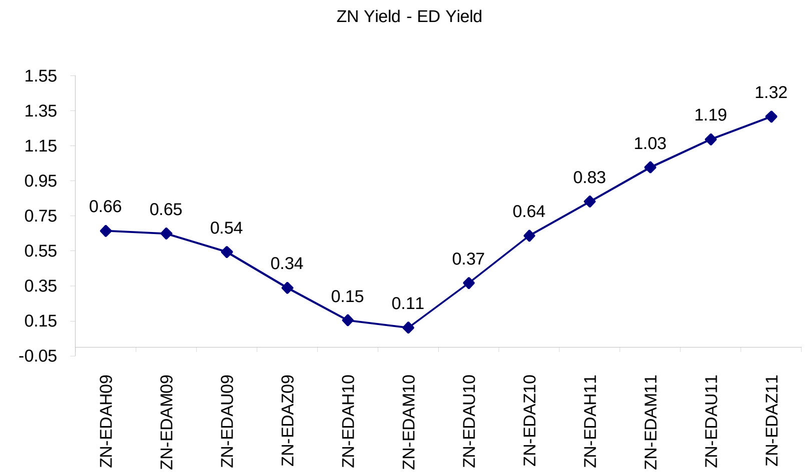
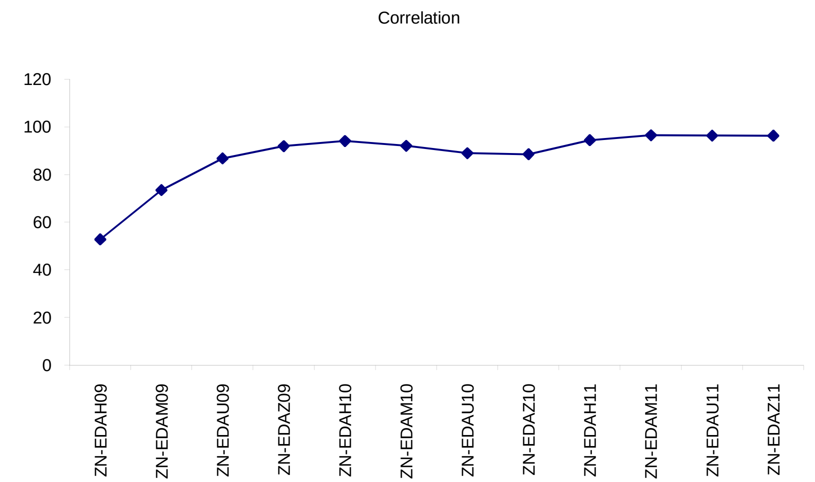


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAH09	0.123	6.19	6.07	ZN-EDAH09
EDAM09	0.372	6.19	5.82	ZN-EDAM09
EDAU09	0.621	6.19	5.57	ZN-EDAU09
EDAZ09	0.871	6.19	5.32	ZN-EDAZ09
EDAH10	1.120	6.19	5.07	ZN-EDAH10
EDAM10	1.369	6.19	4.82	ZN-EDAM10
EDAU10	1.619	6.19	4.57	ZN-EDAU10
EDAZ10	1.868	6.19	4.32	ZN-EDAZ10
EDAH11	2.117	6.19	4.07	ZN-EDAH11
EDAM11	2.366	6.19	3.82	ZN-EDAM11
EDAU11	2.635	6.19	3.55	ZN-EDAU11
EDAZ11	2.884	6.19	3.30	ZN-EDAZ11

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)
EDAH09	0.956	0.15	2y-EDAH09	-27.136
EDAM09	0.971	0.16	2y-EDAM09	-57.807
EDAU09	1.076	0.27	2y-EDAU09	-76.497
EDAZ09	1.281	0.47	2y-EDAZ09	-87.668
EDAH10	1.466	0.66	2y-EDAH10	-91.705
EDAM10	1.731	0.92	2y-EDAM10	-89.491
EDAU10	1.986	1.18	2y-EDAU10	-86.479
EDAZ10	2.256	1.45	2y-EDAZ10	-86.156
EDAH11	2.451	1.64	2y-EDAH11	-89.083
EDAM11	2.646	1.84	2y-EDAM11	-90.880
EDAU11	2.806	2.00	2y-EDAU11	-92.527
EDAZ11	2.936	2.13	2y-EDAZ11	-93.431

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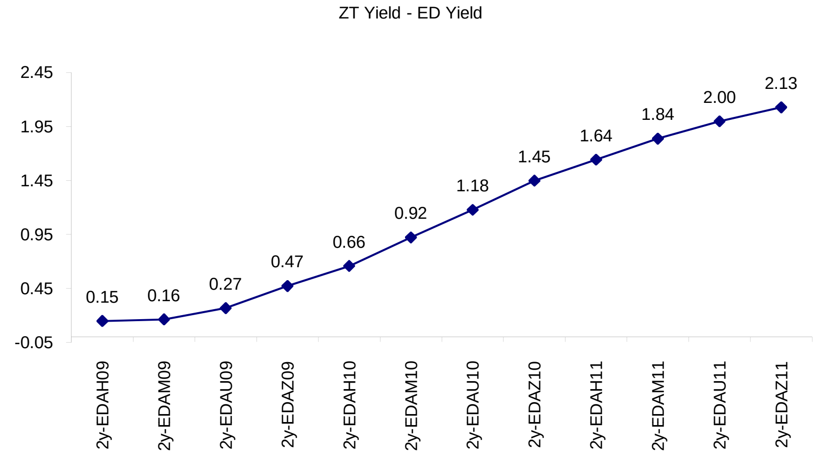
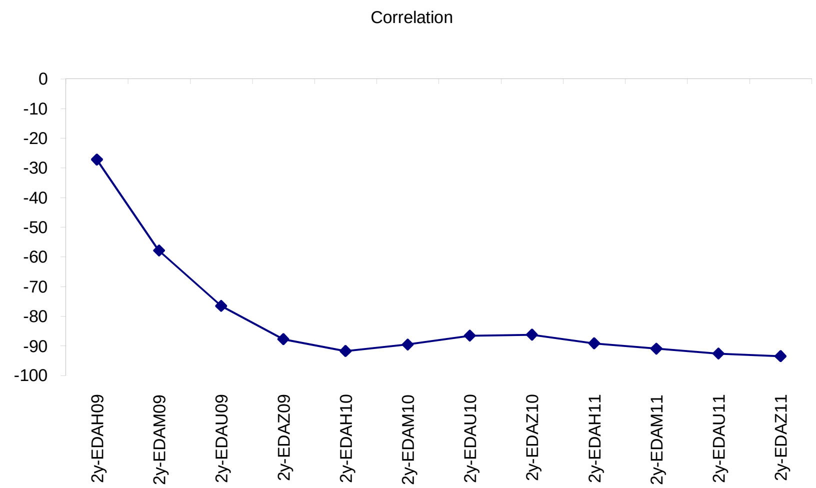


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAH09	0.123	1.97	1.85	2y-EDAH09
EDAM09	0.372	1.97	1.60	2y-EDAM09
EDAU09	0.621	1.97	1.35	2y-EDAU09
EDAZ09	0.871	1.97	1.10	2y-EDAZ09
EDAH10	1.120	1.97	0.85	2y-EDAH10
EDAM10	1.369	1.97	0.60	2y-EDAM10
EDAU10	1.619	1.97	0.35	2y-EDAU10
EDAZ10	1.868	1.97	0.10	2y-EDAZ10
EDAH11	2.117	1.97	(0.14)	2y-EDAH11
EDAM11	2.366	1.97	(0.39)	2y-EDAM11
EDAU11	2.635	1.97	(0.66)	2y-EDAU11
EDAZ11	2.884	1.97	(0.91)	2y-EDAZ11

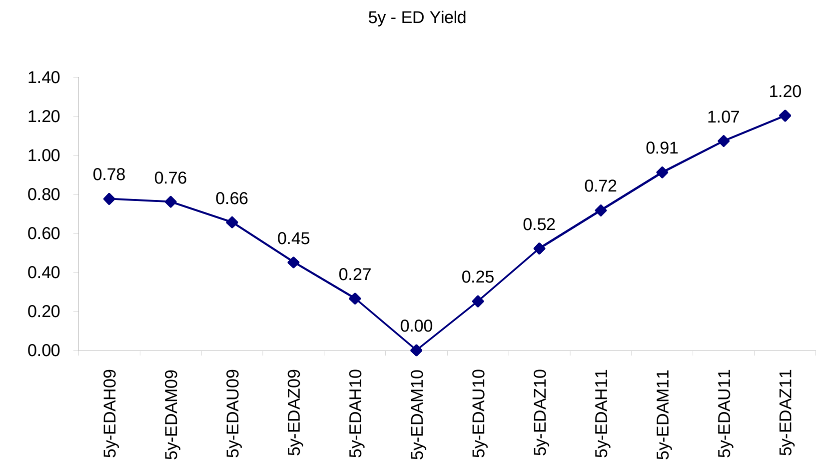
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

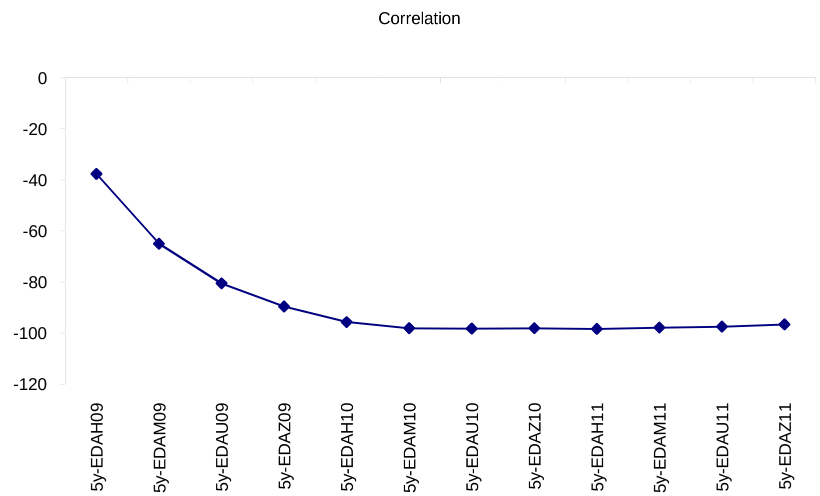
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	0.528	0.78	5y-EDAH09	-37.586
EDAM09	0.543	0.76	5y-EDAM09	-64.983
EDAU09	0.647	0.66	5y-EDAU09	-80.479
EDAZ09	0.852	0.45	5y-EDAZ09	-89.599
EDAH10	1.037	0.27	5y-EDAH10	-95.667
EDAM10	1.302	0.00	5y-EDAM10	-98.062
EDAU10	1.558	0.25	5y-EDAU10	-98.245
EDAZ10	1.828	0.52	5y-EDAZ10	-98.092
EDAH11	2.022	0.72	5y-EDAH11	-98.375
EDAM11	2.218	0.91	5y-EDAM11	-97.828
EDAU11	2.378	1.07	5y-EDAU11	-97.449
EDAZ11	2.507	1.20	5y-EDAZ11	-96.630

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	
EDAH09	0.123	4.76	4.64	5y-EDAH09
EDAM09	0.372	4.76	4.39	5y-EDAM09
EDAU09	0.621	4.76	4.14	5y-EDAU09
EDAZ09	0.871	4.76	3.89	5y-EDAZ09
EDAH10	1.120	4.76	3.64	5y-EDAH10
EDAM10	1.369	4.76	3.39	5y-EDAM10
EDAU10	1.619	4.76	3.14	5y-EDAU10
EDAZ10	1.868	4.76	2.89	5y-EDAZ10
EDAH11	2.117	4.76	2.64	5y-EDAH11
EDAM11	2.366	4.76	2.39	5y-EDAM11
EDAU11	2.635	4.76	2.12	5y-EDAU11
EDAZ11	2.884	4.76	1.87	5y-EDAZ11

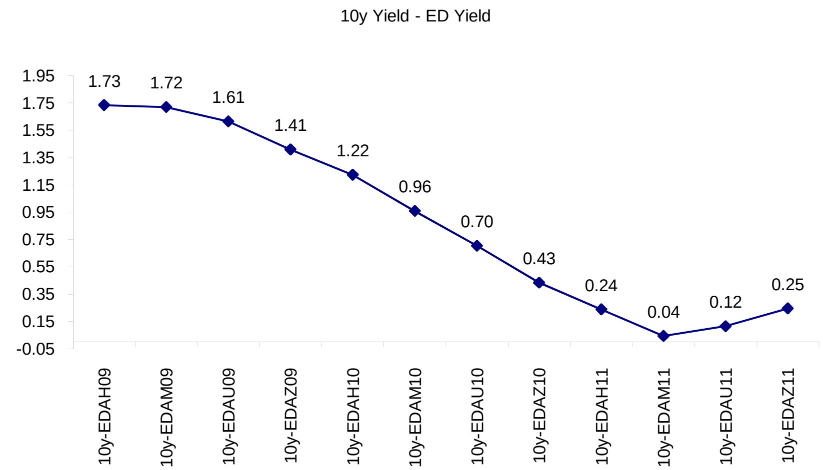
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAH09	0.528	1.73	10y-EDAH09	-49.169
EDAM09	0.543	1.72	10y-EDAM09	-73.914
EDAU09	0.647	1.61	10y-EDAU09	-86.434
EDAZ09	0.852	1.41	10y-EDAZ09	-92.328
EDAH10	1.037	1.22	10y-EDAH10	-96.389
EDAM10	1.302	0.96	10y-EDAM10	-97.049
EDAU10	1.558	0.70	10y-EDAU10	-96.375
EDAZ10	1.828	0.43	10y-EDAZ10	-96.671
EDAH11	2.022	0.24	10y-EDAH11	-98.799
EDAM11	2.218	0.04	10y-EDAM11	-99.457
EDAU11	2.378	0.12	10y-EDAU11	-99.317
EDAZ11	2.507	0.25	10y-EDAZ11	-99.014

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	0.123	8.17	8.05	10y-EDAH09
EDAM09	0.372	8.17	7.80	10y-EDAM09
EDAU09	0.621	8.17	7.55	10y-EDAU09
EDAZ09	0.871	8.17	7.30	10y-EDAZ09
EDAH10	1.120	8.17	7.05	10y-EDAH10
EDAM10	1.369	8.17	6.80	10y-EDAM10
EDAU10	1.619	8.17	6.55	10y-EDAU10
EDAZ10	1.868	8.17	6.30	10y-EDAZ10
EDAH11	2.117	8.17	6.05	10y-EDAH11
EDAM11	2.366	8.17	5.80	10y-EDAM11
EDAU11	2.635	8.17	5.53	10y-EDAU11
EDAZ11	2.884	8.17	5.28	10y-EDAZ11

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

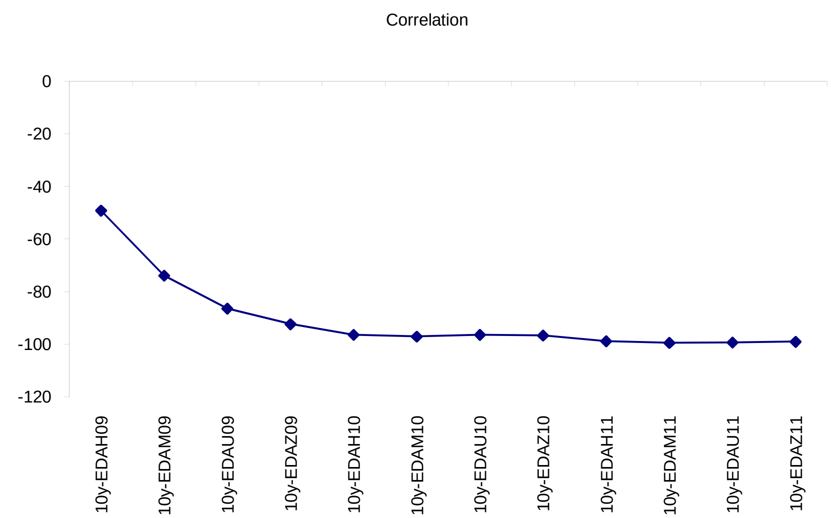
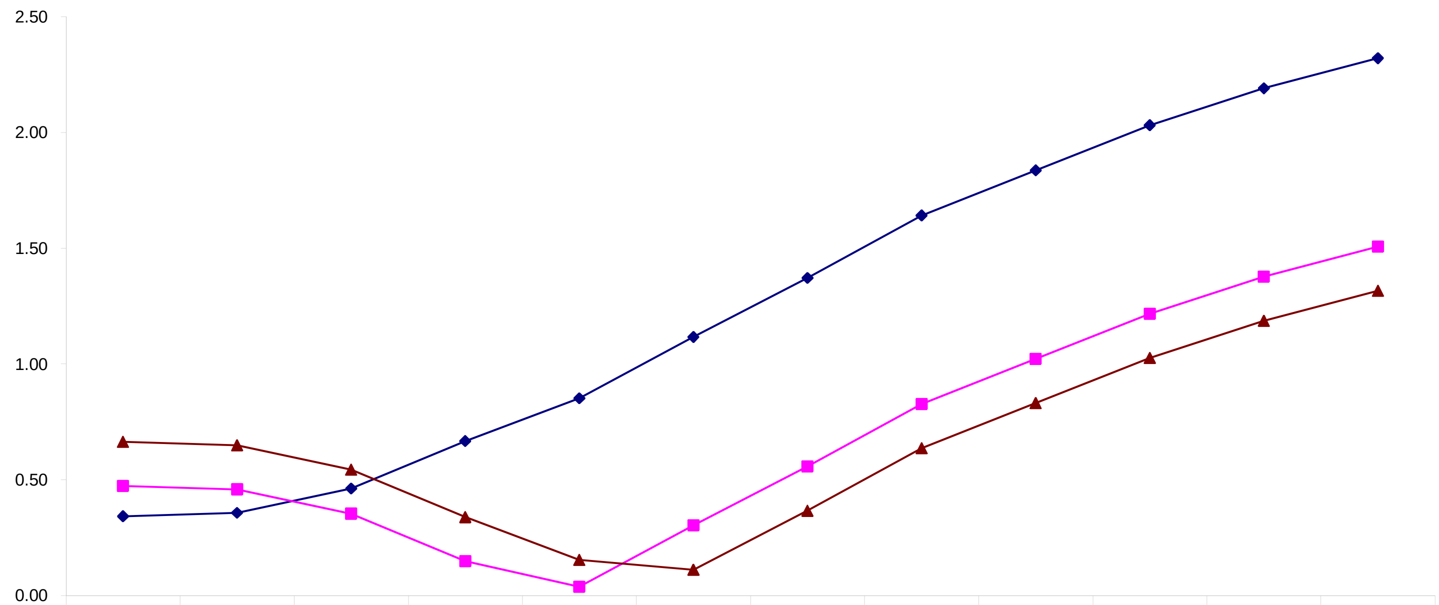


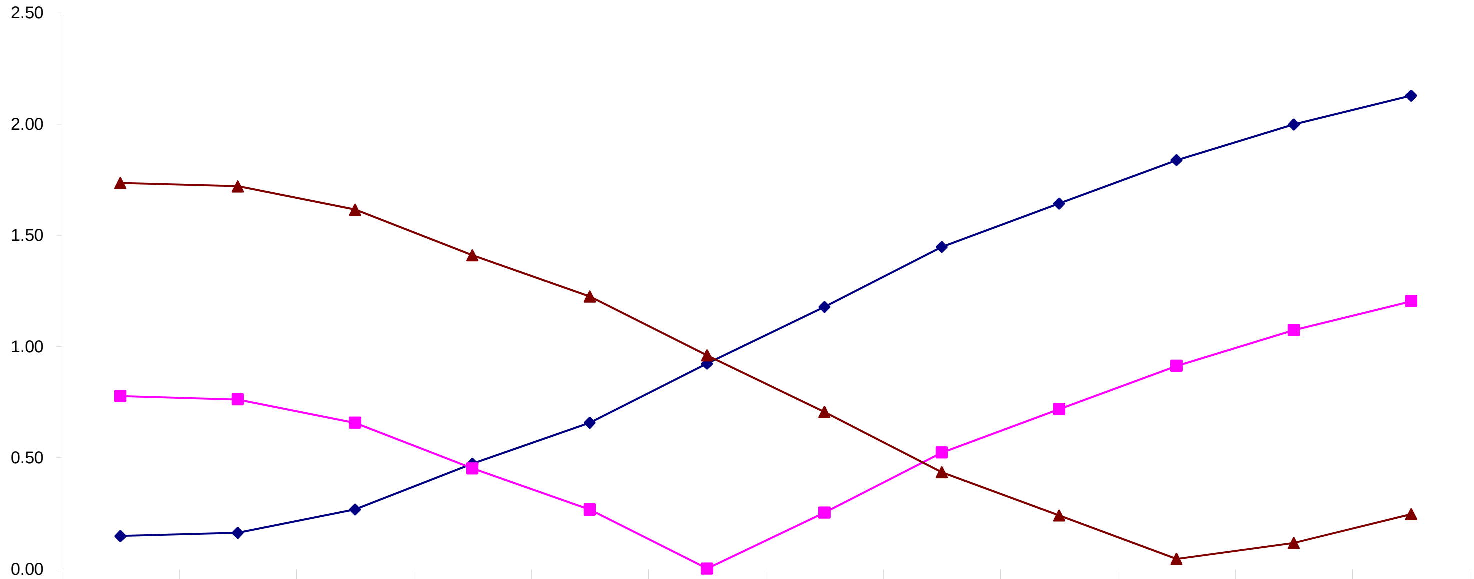
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.34	0.36	0.46	0.67	0.85	1.12	1.37	1.64	1.84	2.03	2.19	2.32
ZF	0.47	0.46	0.35	0.15	0.04	0.30	0.56	0.83	1.02	1.22	1.38	1.51
ZN	0.66	0.65	0.54	0.34	0.15	0.11	0.37	0.64	0.83	1.03	1.19	1.32

ZT ZF ZN

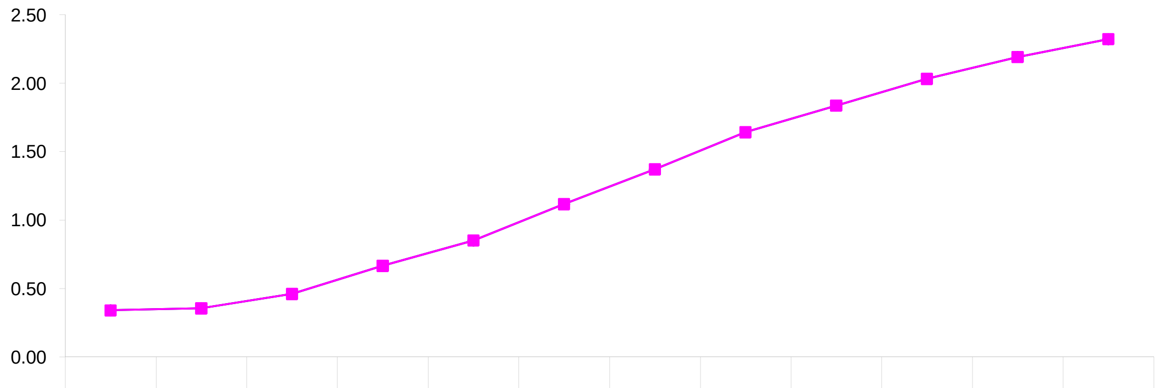
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y	0.15	0.16	0.27	0.47	0.66	0.92	1.18	1.45	1.64	1.84	2.00	2.13
5y	0.78	0.76	0.66	0.45	0.27	0.00	0.25	0.52	0.72	0.91	1.07	1.20
10y	1.73	1.72	1.61	1.41	1.22	0.96	0.70	0.43	0.24	0.04	0.12	0.25

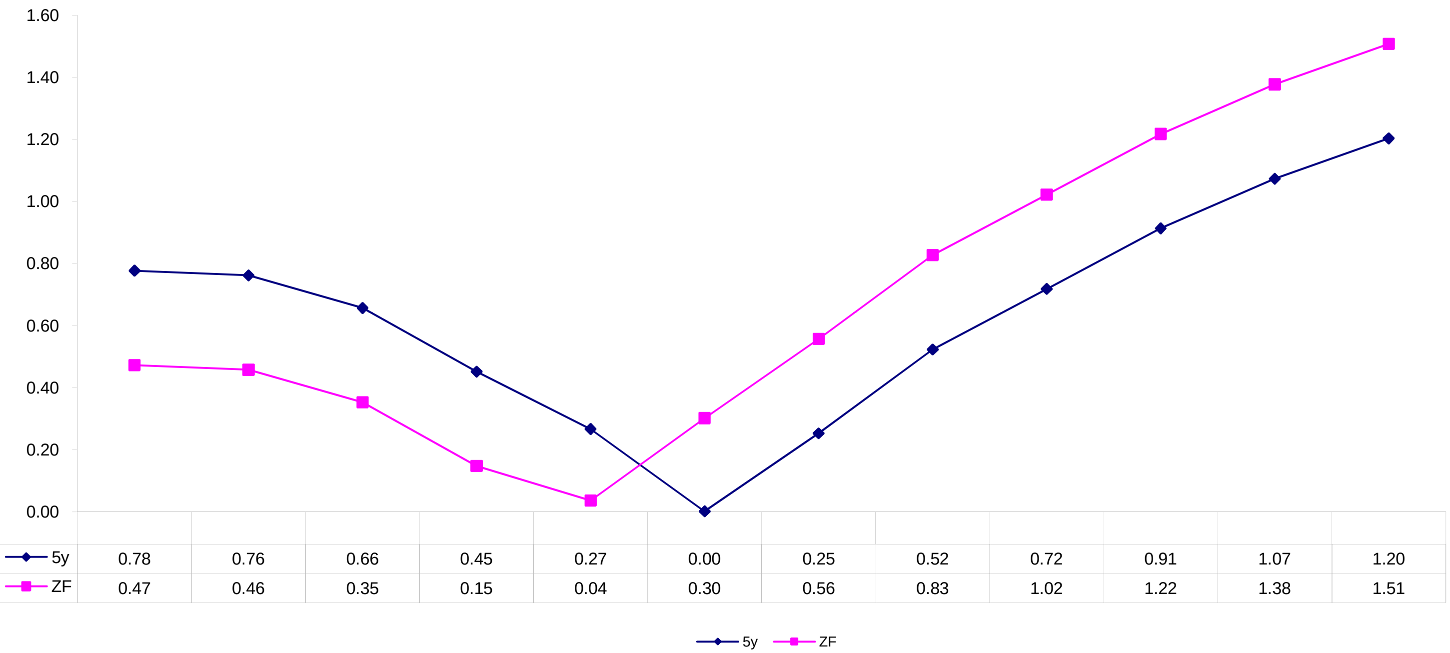
2y 5y 10y

2y Basis TED Curve

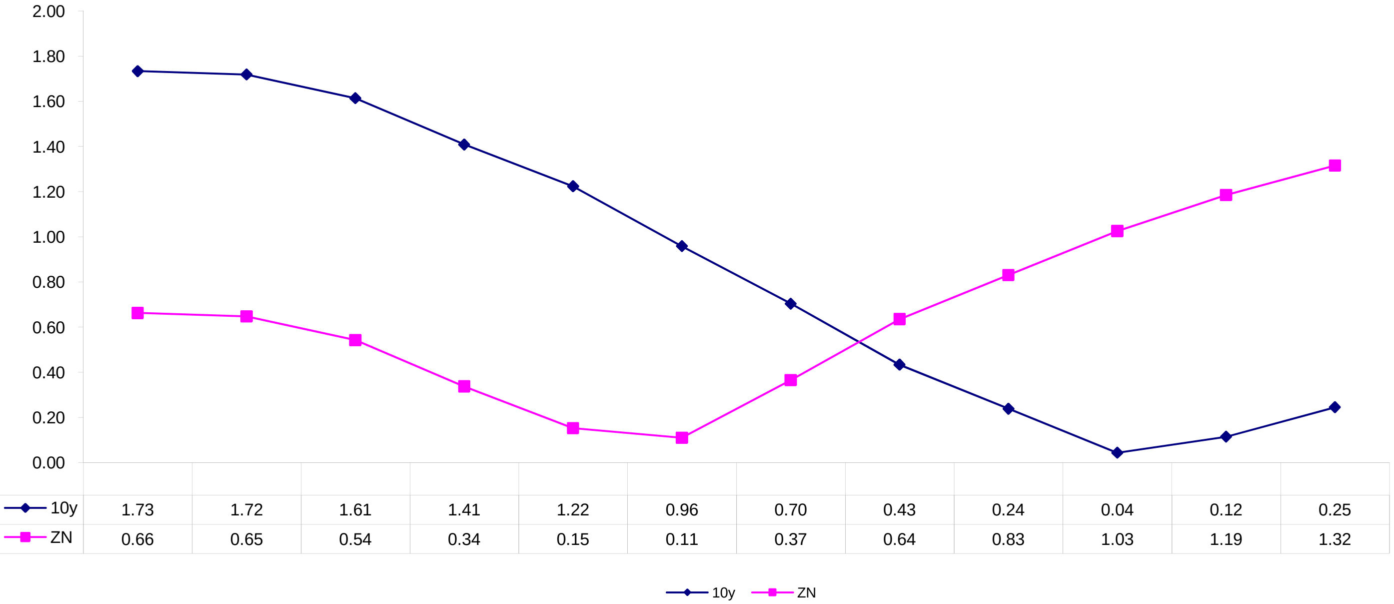


2y	0.34	0.36	0.46	0.67	0.85	1.12	1.37	1.64	1.84	2.03	2.19	2.32
ZT	0.34	0.36	0.46	0.67	0.85	1.12	1.37	1.64	1.84	2.03	2.19	2.32

2y ZT



5y	0.78	0.76	0.66	0.45	0.27	0.00	0.25	0.52	0.72	0.91	1.07	1.20
ZF	0.47	0.46	0.35	0.15	0.04	0.30	0.56	0.83	1.02	1.22	1.38	1.51



10y	1.73	1.72	1.61	1.41	1.22	0.96	0.70	0.43	0.24	0.04	0.12	0.25
ZN	0.66	0.65	0.54	0.34	0.15	0.11	0.37	0.64	0.83	1.03	1.19	1.32

	Last Yield	Net Last Yield	Last Price
White Pack	1.225	0.000	9879.500
Red Pack	2.032	-0.125	9800.625
Green Pack	2.904	-1.625	9715.625
Blue Pack		-1.500	9677.000
Gold Pack		-2.500	9651.250