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	105.4438	105.142	2.693	1.93
ZF	110.3188	110.102	3.296	4.06
ZN	113.6094	113.195	3.893	6.47
2y	100.350	100.1120	2.686	1.93
5y	99.866	99.2770	3.403	4.56
10y	98.656	98.2100	4.039	8.08

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	96.975	3.025	80	0.219	SEP	
EDAZ08	96.725	3.275	171	0.468	DEC	White Pack
EDAH09	96.570	3.430	262	0.717	MAR	
EDAM09	96.370	3.630	353	0.966	JUN	
EDAU09	96.130	3.870	444	1.216	SEP	
EDAZ09	95.850	4.150	535	1.465	DEC	Red Pack
EDAH10	95.655	4.345	626	1.714	MAR	
EDAM10	95.485	4.515	717	1.964	JUN	
EDAU10	95.355	4.645	808	2.213	SEP	
EDAZ10	95.240	4.760	899	2.462	DEC	Green Pack
EDAH11	95.185	4.815	990	2.712	MAR	
EDAM11	95.140	4.860	1081	2.961	JUN	
EDAU11	95.095	4.905	1179	3.229	SEP	
EDAZ11	95.035	4.965	1270	3.479	DEC	Blue Pack
EDAH12	95.020	4.980	1361	3.728	MAR	
EDAM12	94.980	5.020	1452	3.977	JUN	
EDAU12	94.955	5.045	1543	4.227	SEP	
EDAZ12	94.910	5.090	1634	4.476	DEC	Gold Pack
EDAH13	94.910	5.090	1725	4.725	MAR	
EDAM13	94.850	5.150	1816	4.975	JUN	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	3.415	-4.750	9666.000
Red Pack	4.324	-5.875	9578.000
Green Pack	4.895	-3.875	9523.000
Blue Pack	5.100	-2.000	9503.250
Gold Pack	5.231	-0.250	9490.625

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

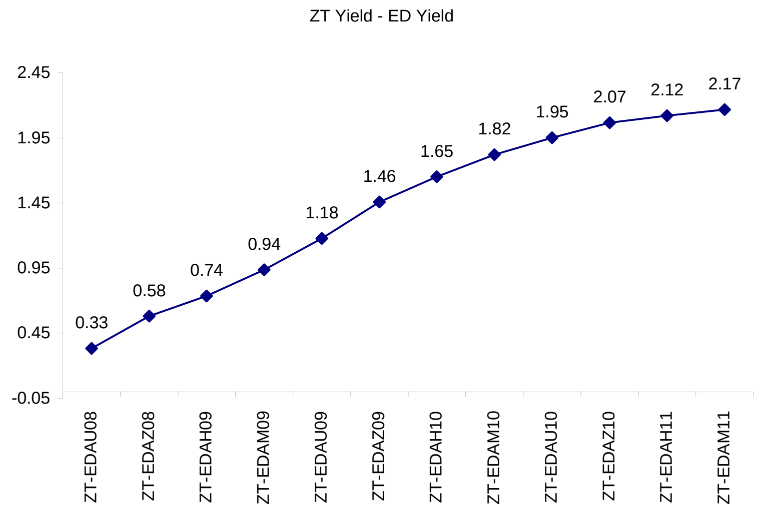
Correlations (Important)

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

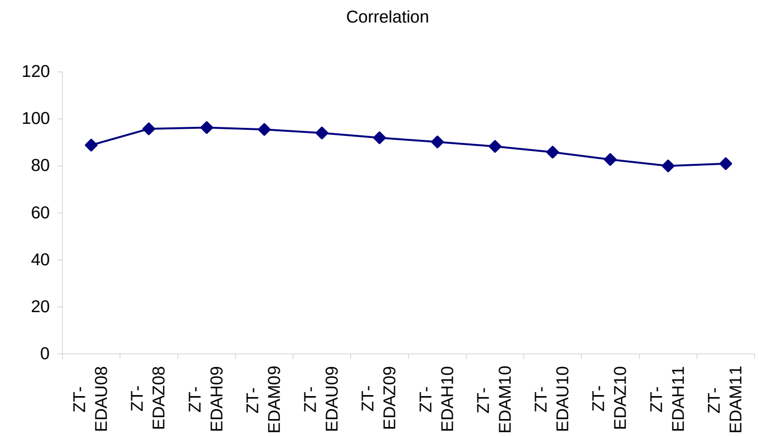
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.469	0.33	ZT-EDAU08	88.893
EDAZ08	8.719	0.58	ZT-EDAZ08	95.719
EDAH09	8.874	0.74	ZT-EDAH09	96.372
EDAM09	9.074	0.94	ZT-EDAM09	95.481
EDAU09	9.314	1.18	ZT-EDAU09	94.062
EDAZ09	9.594	1.46	ZT-EDAZ09	92.037
EDAH10	9.789	1.65	ZT-EDAH10	90.229
EDAM10	9.959	1.82	ZT-EDAM10	88.362
EDAU10	10.089	1.95	ZT-EDAU10	85.848
EDAZ10	10.204	2.07	ZT-EDAZ10	82.689
EDAH11	10.259	2.12	ZT-EDAH11	80.062
EDAM11	10.304	2.17	ZT-EDAM11	80.977

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	
EDAU08	0.219	1.93	1.71	ZT-EDAU08
EDAZ08	0.468	1.93	1.46	ZT-EDAZ08
EDAH09	0.717	1.93	1.21	ZT-EDAH09
EDAM09	0.966	1.93	0.97	ZT-EDAM09
EDAU09	1.216	1.93	0.72	ZT-EDAU09
EDAZ09	1.465	1.93	0.47	ZT-EDAZ09
EDAH10	1.714	1.93	0.22	ZT-EDAH10
EDAM10	1.964	1.93	(0.03)	ZT-EDAM10
EDAU10	2.213	1.93	(0.28)	ZT-EDAU10
EDAZ10	2.462	1.93	(0.53)	ZT-EDAZ10
EDAH11	2.712	1.93	(0.78)	ZT-EDAH11
EDAM11	2.961	1.93	(1.03)	ZT-EDAM11

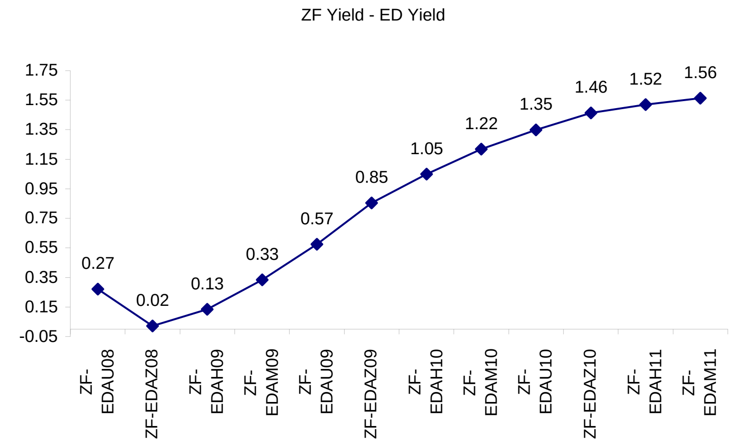
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF Spread Price	ZF Spread Yield	ZF Spread Name	Correlation* (percent)
EDAU08	13.344	0.27	ZF-EDAU08	93.218
EDAZ08	13.594	0.02	ZF-EDAZ08	97.498
EDAH09	13.749	0.13	ZF-EDAH09	97.420
EDAM09	13.949	0.33	ZF-EDAM09	96.449
EDAU09	14.189	0.57	ZF-EDAU09	95.329
EDAZ09	14.469	0.85	ZF-EDAZ09	94.069
EDAH10	14.664	1.05	ZF-EDAH10	93.140
EDAM10	14.834	1.22	ZF-EDAM10	92.393
EDAU10	14.964	1.35	ZF-EDAU10	91.143
EDAZ10	15.079	1.46	ZF-EDAZ10	89.332
EDAH11	15.134	1.52	ZF-EDAH11	87.667
EDAM11	15.179	1.56	ZF-EDAM11	89.006

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	
EDAU08	0.219	4.06	3.85	ZF-EDAU08
EDAZ08	0.468	4.06	3.60	ZF-EDAZ08
EDAH09	0.717	4.06	3.35	ZF-EDAH09
EDAM09	0.966	4.06	3.10	ZF-EDAM09
EDAU09	1.216	4.06	2.85	ZF-EDAU09
EDAZ09	1.465	4.06	2.60	ZF-EDAZ09
EDAH10	1.714	4.06	2.35	ZF-EDAH10
EDAM10	1.964	4.06	2.10	ZF-EDAM10
EDAU10	2.213	4.06	1.85	ZF-EDAU10
EDAZ10	2.462	4.06	1.60	ZF-EDAZ10
EDAH11	2.712	4.06	1.35	ZF-EDAH11
EDAM11	2.961	4.06	1.10	ZF-EDAM11

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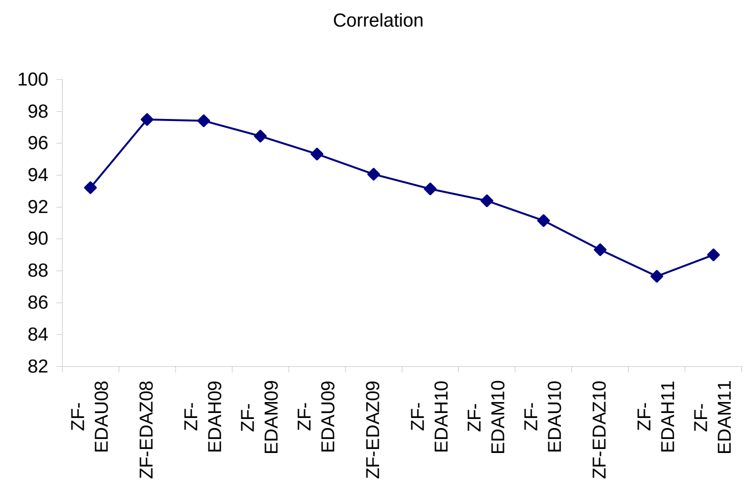

Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	16.634	0.87	ZN-EDAU08	93.968
EDAZ08	16.884	0.62	ZN-EDAZ08	97.306
EDAH09	17.039	0.46	ZN-EDAH09	96.570
EDAM09	17.239	0.26	ZN-EDAM09	95.263
EDAU09	17.479	0.02	ZN-EDAU09	94.092
EDAZ09	17.759	0.26	ZN-EDAZ09	92.979
EDAH10	17.954	0.45	ZN-EDAH10	93.140
EDAM10	18.124	0.62	ZN-EDAM10	92.393
EDAU10	18.254	0.75	ZN-EDAU10	91.143
EDAZ10	18.369	0.87	ZN-EDAZ10	89.332
EDAH11	18.424	0.92	ZN-EDAH11	87.667
EDAM11	18.469	0.97	ZN-EDAM11	89.006

Price = Outright Decimal Price - Euro Contract Price
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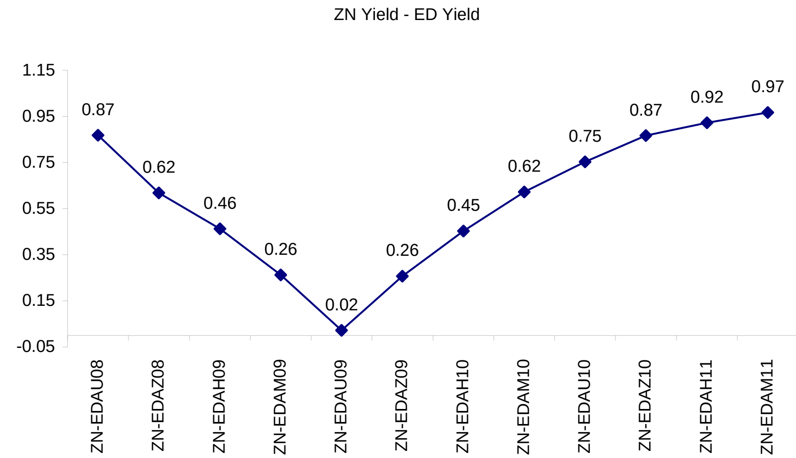
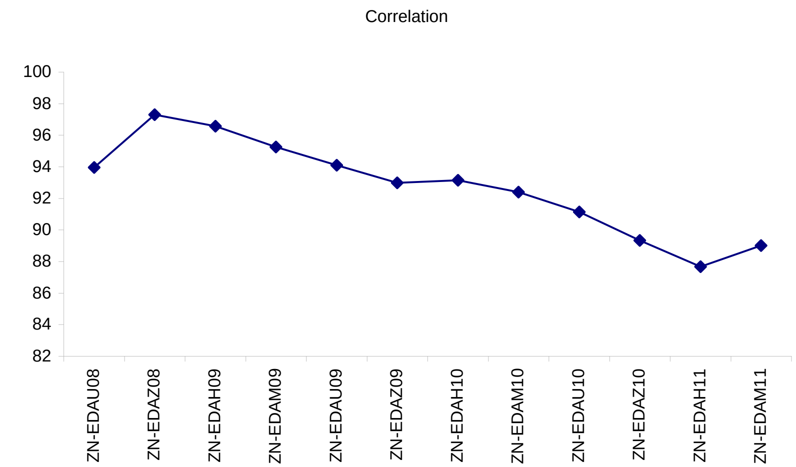


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAU08	0.219	6.47	6.26	ZN-EDAU08
EDAZ08	0.468	6.47	6.01	ZN-EDAZ08
EDAH09	0.717	6.47	5.76	ZN-EDAH09
EDAM09	0.966	6.47	5.51	ZN-EDAM09
EDAU09	1.216	6.47	5.26	ZN-EDAU09
EDAZ09	1.465	6.47	5.01	ZN-EDAZ09
EDAH10	1.714	6.47	4.76	ZN-EDAH10
EDAM10	1.964	6.47	4.51	ZN-EDAM10
EDAU10	2.213	6.47	4.26	ZN-EDAU10
EDAZ10	2.462	6.47	4.01	ZN-EDAZ10
EDAH11	2.712	6.47	3.76	ZN-EDAH11
EDAM11	2.961	6.47	3.51	ZN-EDAM11

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)
EDAU08	3.375	0.34	2y-EDAU08		-91.399
EDAZ08	3.625	0.59	2y-EDAZ08		-96.405
EDAH09	3.780	0.74	2y-EDAH09		-97.007
EDAM09	3.980	0.94	2y-EDAM09		-96.318
EDAU09	4.220	1.18	2y-EDAU09		-95.265
EDAZ09	4.500	1.46	2y-EDAZ09		-93.704
EDAH10	4.695	1.66	2y-EDAH10		-92.147
EDAM10	4.865	1.83	2y-EDAM10		-90.555
EDAU10	4.995	1.96	2y-EDAU10		-88.614
EDAZ10	5.110	2.07	2y-EDAZ10		-85.893
EDAH11	5.165	2.13	2y-EDAH11		-83.744
EDAM11	5.210	2.17	2y-EDAM11		-84.519

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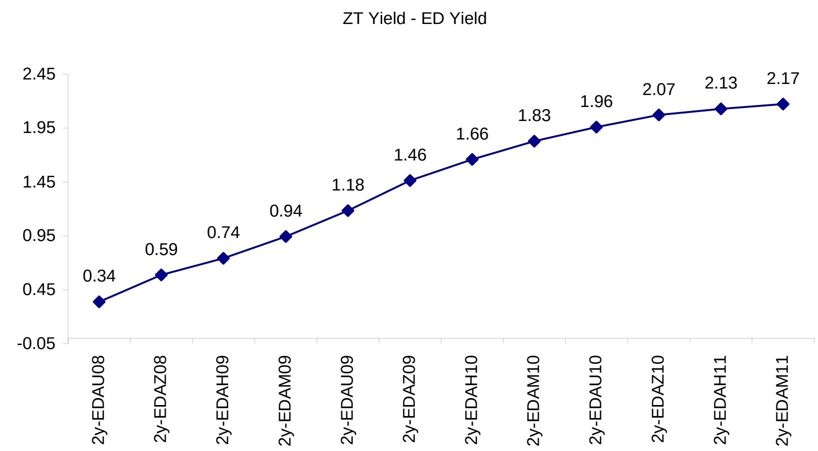
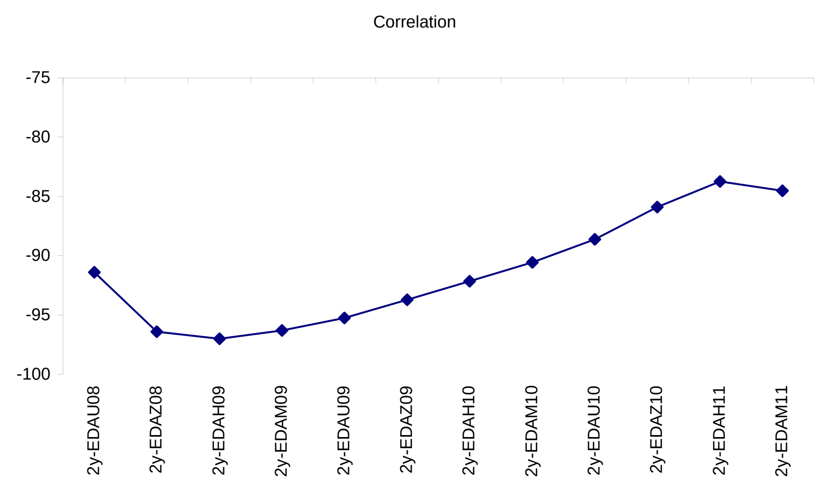


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU08	0.219	1.93	1.71	2y-EDAU08
EDAZ08	0.468	1.93	1.46	2y-EDAZ08
EDAH09	0.717	1.93	1.21	2y-EDAH09
EDAM09	0.966	1.93	0.97	2y-EDAM09
EDAU09	1.216	1.93	0.72	2y-EDAU09
EDAZ09	1.465	1.93	0.47	2y-EDAZ09
EDAH10	1.714	1.93	0.22	2y-EDAH10
EDAM10	1.964	1.93	(0.03)	2y-EDAM10
EDAU10	2.213	1.93	(0.28)	2y-EDAU10
EDAZ10	2.462	1.93	(0.53)	2y-EDAZ10
EDAH11	2.712	1.93	(0.78)	2y-EDAH11
EDAM11	2.961	1.93	(1.03)	2y-EDAM11

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)
EDAU08	2.891	0.38	5y-EDAU08	-94.813
EDAZ08	3.141	0.13	5y-EDAZ08	-98.100
EDAH09	3.296	0.03	5y-EDAH09	-98.032
EDAM09	3.496	0.23	5y-EDAM09	-97.221
EDAU09	3.736	0.47	5y-EDAU09	-96.386
EDAZ09	4.016	0.75	5y-EDAZ09	-95.384
EDAH10	4.211	0.94	5y-EDAH10	-94.484
EDAM10	4.381	1.11	5y-EDAM10	-93.679
EDAU10	4.511	1.24	5y-EDAU10	-92.562
EDAZ10	4.626	1.36	5y-EDAZ10	-90.670
EDAH11	4.681	1.41	5y-EDAH11	-89.092
EDAM11	4.726	1.46	5y-EDAM11	-90.035

Price = Outright Decimal Price - Euro Contract Price
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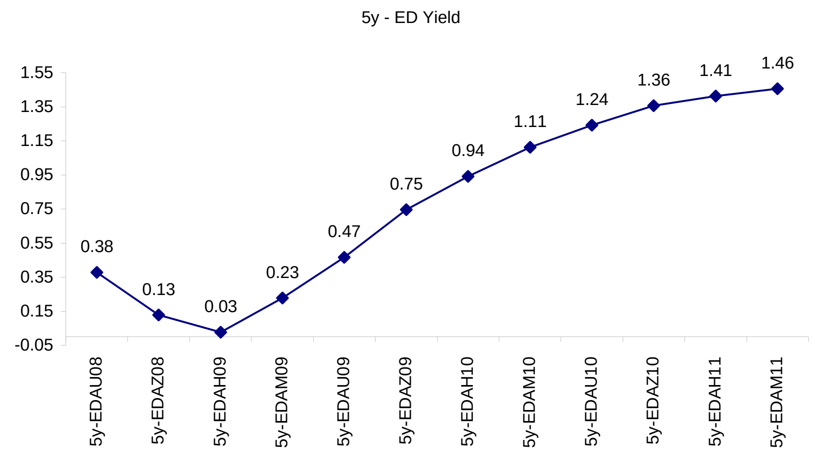
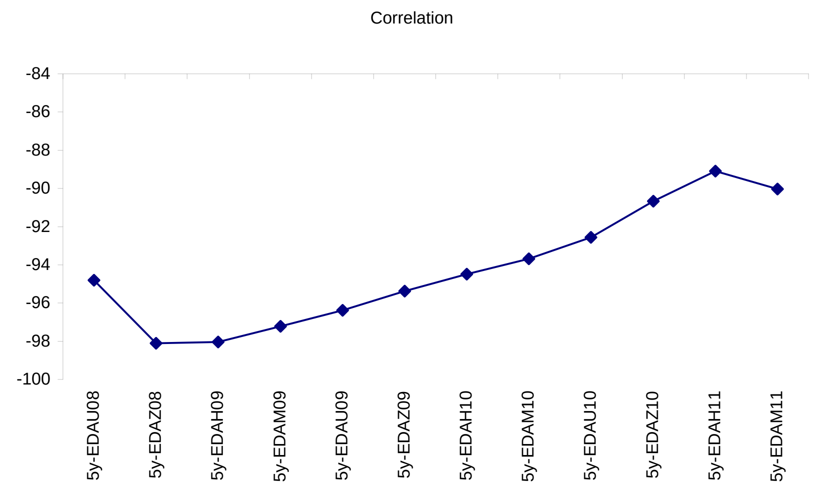


	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.219	4.56	4.35	5y-EDAU08
EDAZ08	0.468	4.56	4.10	5y-EDAZ08
EDAH09	0.717	4.56	3.85	5y-EDAH09
EDAM09	0.966	4.56	3.60	5y-EDAM09
EDAU09	1.216	4.56	3.35	5y-EDAU09
EDAZ09	1.465	4.56	3.10	5y-EDAZ09
EDAH10	1.714	4.56	2.85	5y-EDAH10
EDAM10	1.964	4.56	2.60	5y-EDAM10
EDAU10	2.213	4.56	2.35	5y-EDAU10
EDAZ10	2.462	4.56	2.10	5y-EDAZ10
EDAH11	2.712	4.56	1.85	5y-EDAH11
EDAM11	2.961	4.56	1.60	5y-EDAM11

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



	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	2.891	1.01	10y-EDAU08	-95.060
EDAZ08	3.141	0.76	10y-EDAZ08	-97.449
EDAH09	3.296	0.61	10y-EDAH09	-96.192
EDAM09	3.496	0.41	10y-EDAM09	-94.529
EDAU09	3.736	0.17	10y-EDAU09	-93.213
EDAZ09	4.016	0.11	10y-EDAZ09	-91.970
EDAH10	4.211	0.31	10y-EDAH10	-91.107
EDAM10	4.381	0.48	10y-EDAM10	-90.670
EDAU10	4.511	0.61	10y-EDAU10	-89.813
EDAZ10	4.626	0.72	10y-EDAZ10	-88.037
EDAH11	4.681	0.78	10y-EDAH11	-86.541
EDAM11	4.726	0.82	10y-EDAM11	-87.405

Price = Outright Decimal Price - Euro Contract Price
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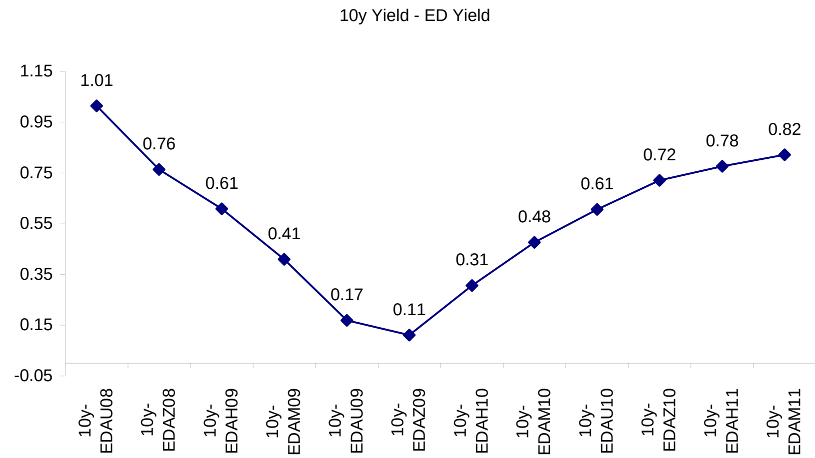
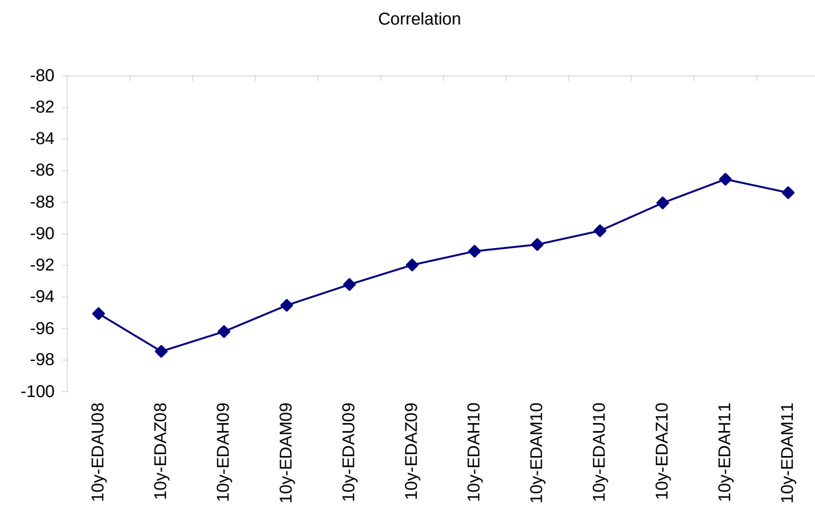


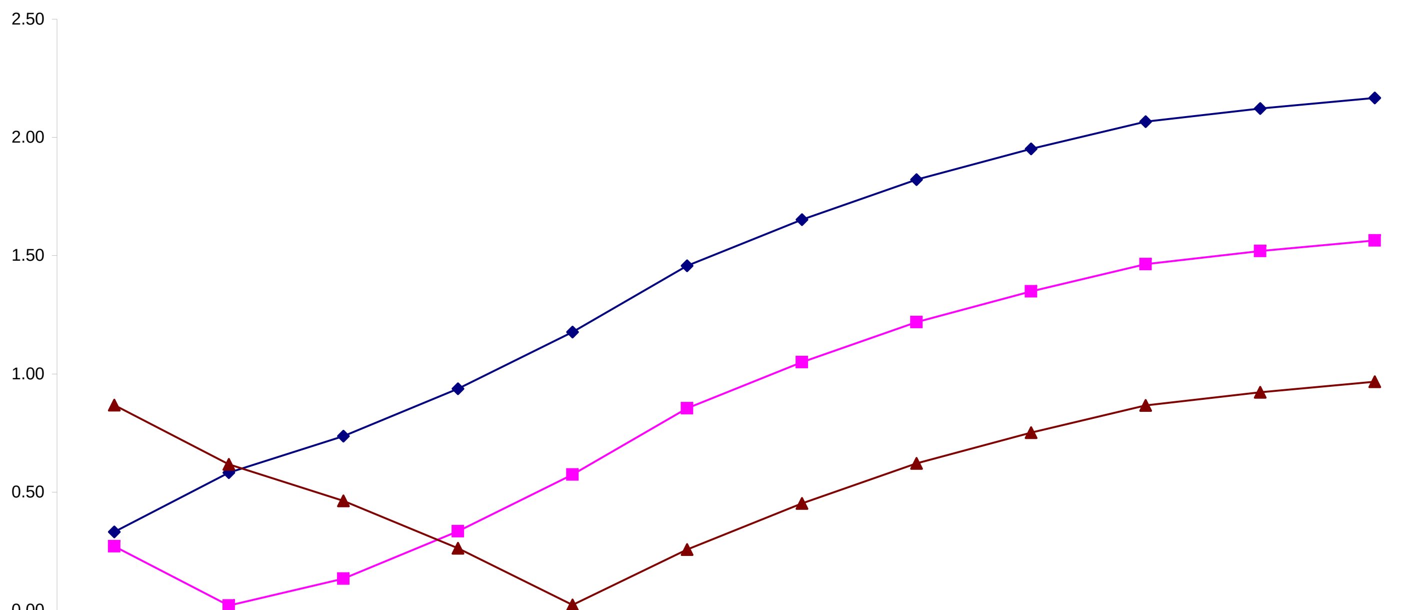
	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.219	8.08	7.86	10y-EDAU08
EDAZ08	0.468	8.08	7.62	10y-EDAZ08
EDAH09	0.717	8.08	7.37	10y-EDAH09
EDAM09	0.966	8.08	7.12	10y-EDAM09
EDAU09	1.216	8.08	6.87	10y-EDAU09
EDAZ09	1.465	8.08	6.62	10y-EDAZ09
EDAH10	1.714	8.08	6.37	10y-EDAH10
EDAM10	1.964	8.08	6.12	10y-EDAM10
EDAU10	2.213	8.08	5.87	10y-EDAU10
EDAZ10	2.462	8.08	5.62	10y-EDAZ10
EDAH11	2.712	8.08	5.37	10y-EDAH11
EDAM11	2.961	8.08	5.12	10y-EDAM11

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



Dirty TED Curve

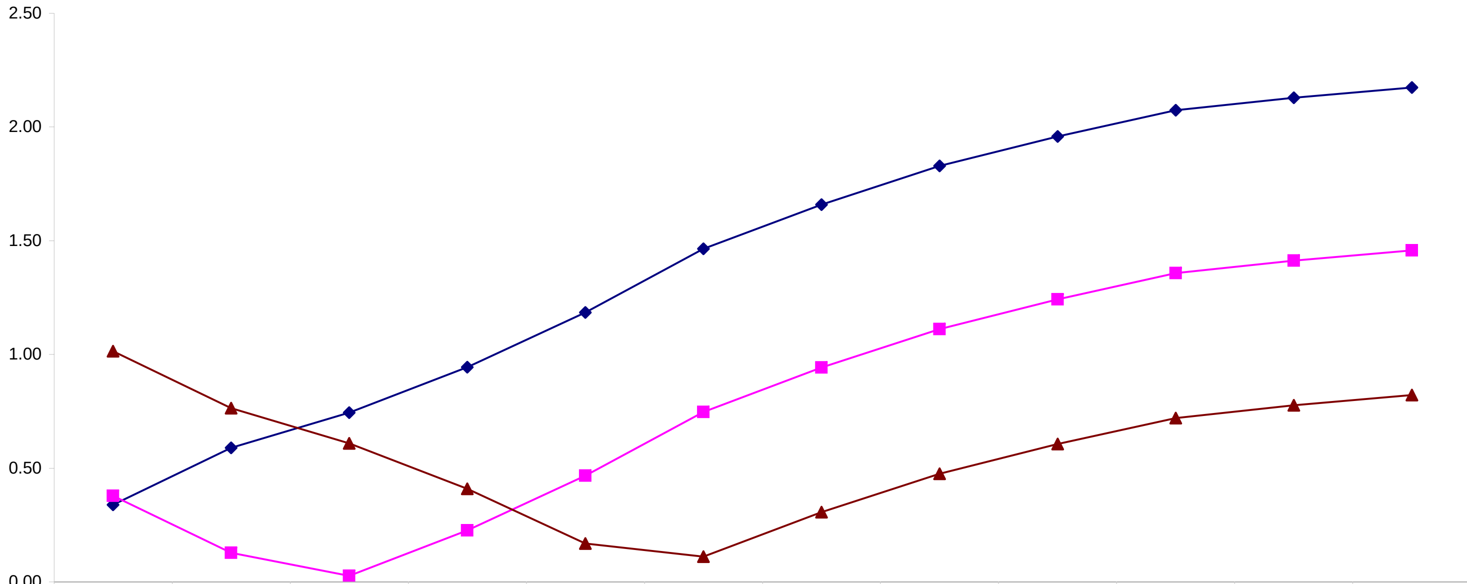
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
ZT	0.33	0.58	0.74	0.94	1.18	1.46	1.65	1.82	1.95	2.07	2.12	2.17
ZF	0.27	0.02	0.13	0.33	0.57	0.85	1.05	1.22	1.35	1.46	1.52	1.56
ZN	0.87	0.62	0.46	0.26	0.02	0.26	0.45	0.62	0.75	0.87	0.92	0.97

ZT ZF ZN

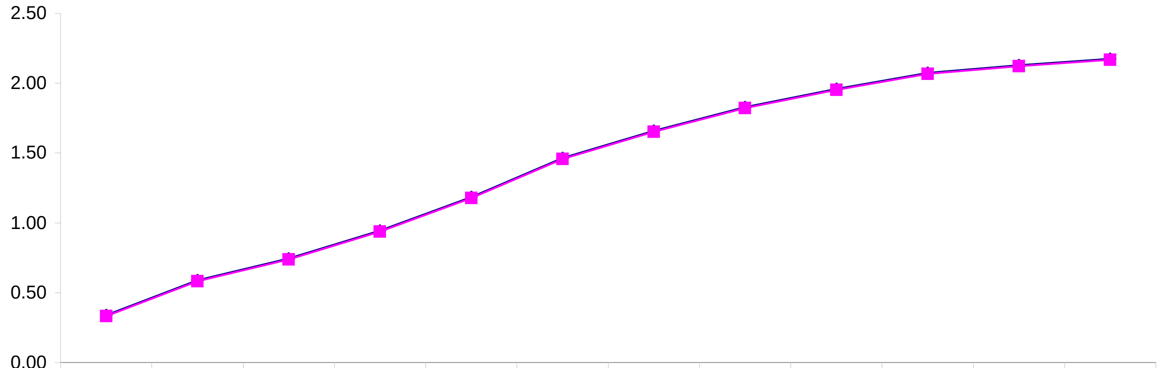
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.34	0.59	0.74	0.94	1.18	1.46	1.66	1.83	1.96	2.07	2.13	2.17
5y	0.38	0.13	0.03	0.23	0.47	0.75	0.94	1.11	1.24	1.36	1.41	1.46
10y	1.01	0.76	0.61	0.41	0.17	0.11	0.31	0.48	0.61	0.72	0.78	0.82

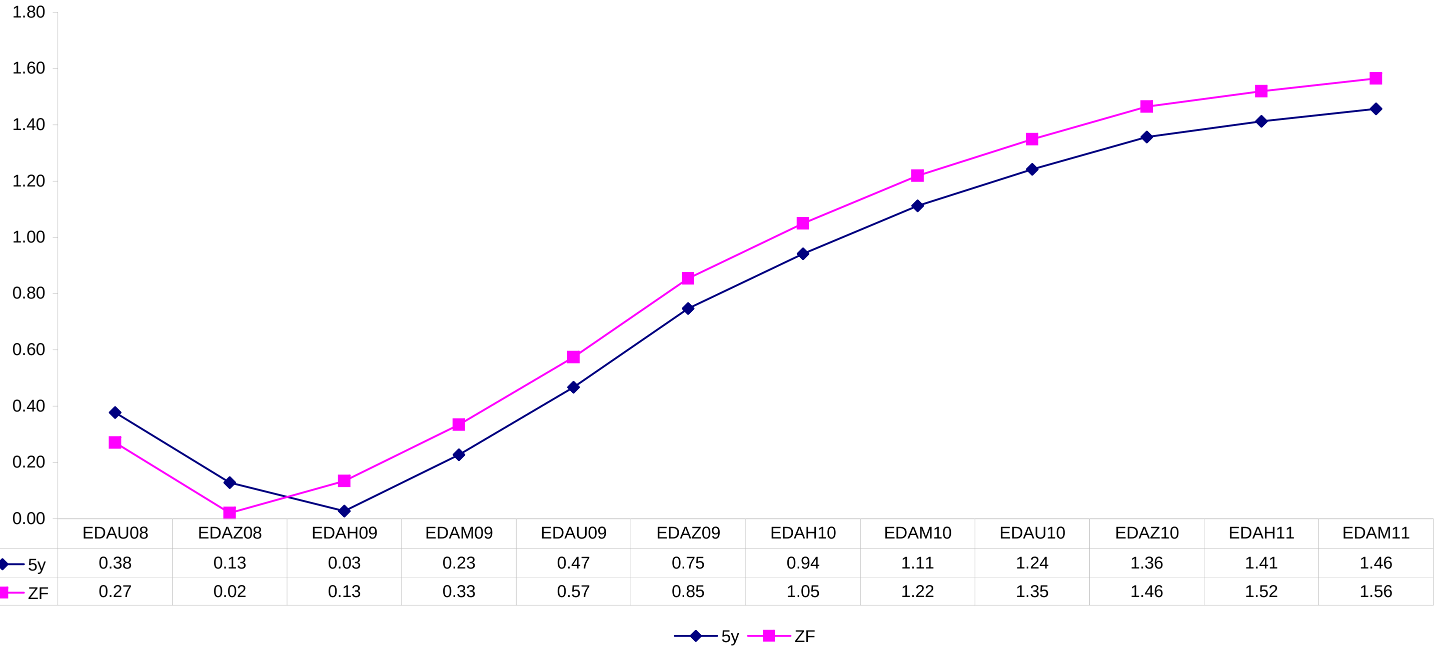
2y 5y 10y

2y Basis TED Curve



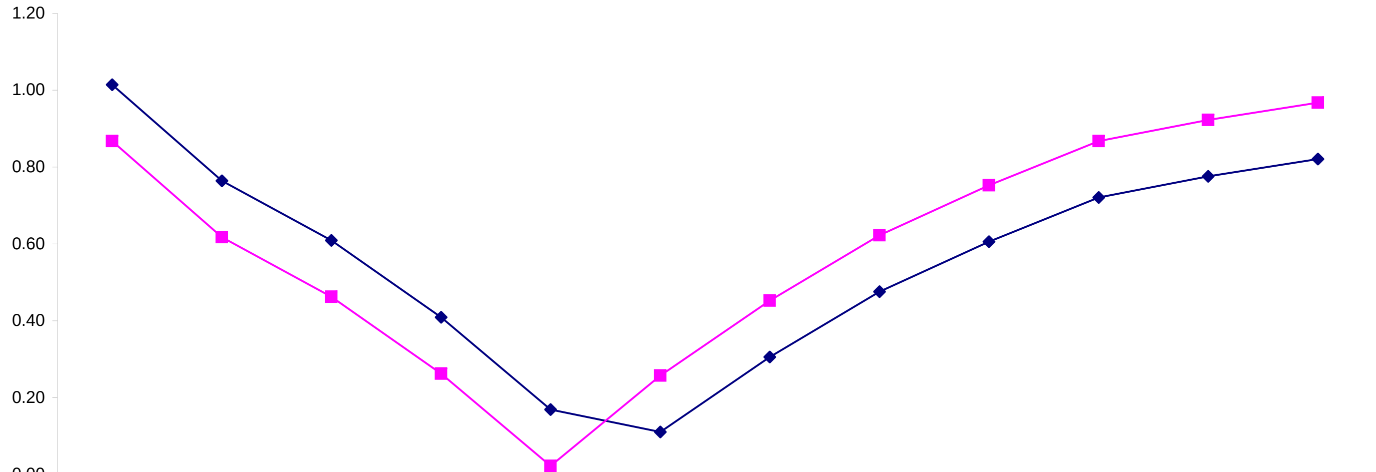
	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.34	0.59	0.74	0.94	1.18	1.46	1.66	1.83	1.96	2.07	2.13	2.17
ZT	0.33	0.58	0.74	0.94	1.18	1.46	1.65	1.82	1.95	2.07	2.12	2.17

5y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
5y	0.38	0.13	0.03	0.23	0.47	0.75	0.94	1.11	1.24	1.36	1.41	1.46
ZF	0.27	0.02	0.13	0.33	0.57	0.85	1.05	1.22	1.35	1.46	1.52	1.56

10y Basis TED Curve

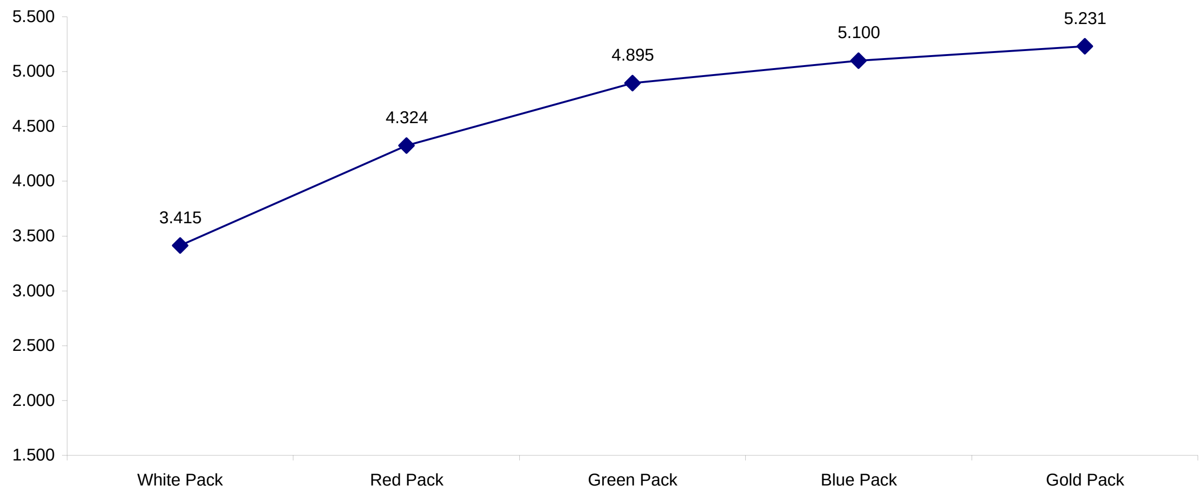


	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
10y	1.01	0.76	0.61	0.41	0.17	0.11	0.31	0.48	0.61	0.72	0.78	0.82
ZN	0.87	0.62	0.46	0.26	0.02	0.26	0.45	0.62	0.75	0.87	0.92	0.97

10y ZN

Packs

	Last Yield	Net Last Yield	Last Price
White Pack	3.415	-4.750	9666.000
Red Pack	4.324	-5.875	9578.000
Green Pack	4.895	-3.875	9523.000
Blue Pack	5.100	-2.000	9503.250
Gold Pack	5.231	-0.250	9490.625



2y, 5y, 10y Basis Curves vs ED