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	105.8438	105.270	2.515	1.91
ZF	111.1781	111.057	3.140	4.04
ZN	115.0000	115.000	3.656	6.47
2y	100.688	100.2200	2.512	1.91
5y	100.703	100.2250	3.218	4.54
10y	99.750	99.2400	3.903	8.07

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.075	2.925	68	0.186	SEP	
EDAZ08	96.920	3.080	159	0.435	DEC	White
EDAH09	96.855	3.145	250	0.684	MAR	Pack
EDAM09	96.665	3.335	341	0.934	JUN	
EDAU09	96.395	3.605	432	1.183	SEP	
EDAZ09	96.085	3.915	523	1.432	DEC	Red
EDAH10	95.855	4.145	614	1.682	MAR	Pack
EDAM10	95.665	4.335	705	1.931	JUN	
EDAU10	95.530	4.470	796	2.180	SEP	
EDAZ10	95.420	4.580	887	2.429	DEC	Green
EDAH11	95.375	4.625	978	2.679	MAR	Pack
EDAM11	95.325	4.675	1069	2.928	JUN	
EDAU11	95.345	4.655	1167	3.197	SEP	
EDAZ11	95.280	4.720	1258	3.446	DEC	Blue Pack
EDAH12	95.255	4.745	1349	3.695	MAR	
EDAM12	95.225	4.775	1440	3.945	JUN	
EDAU12	95.175	4.825	1531	4.194	SEP	
EDAZ12	95.070	4.930	1622	4.443	DEC	Gold Pack
EDAH13	95.075	4.925	1713	4.692	MAR	
EDAM13	95.015	4.985	1804	4.942	JUN	

	Last Yield	Net Yield	Last Price
White Pack	3.190	-5.375	9687.875
Red Pack	4.097	-5.875	9600.000
Green Pack	4.705	-3.500	9541.250
Blue Pack	4.847	4.500	9527.625
Gold Pack	5.047	4.250	9508.375

Pack Prices

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

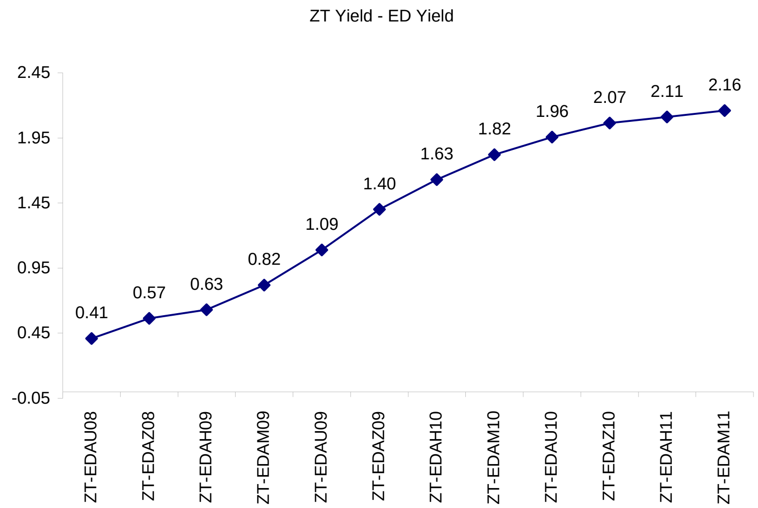
Correlations (Important)

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

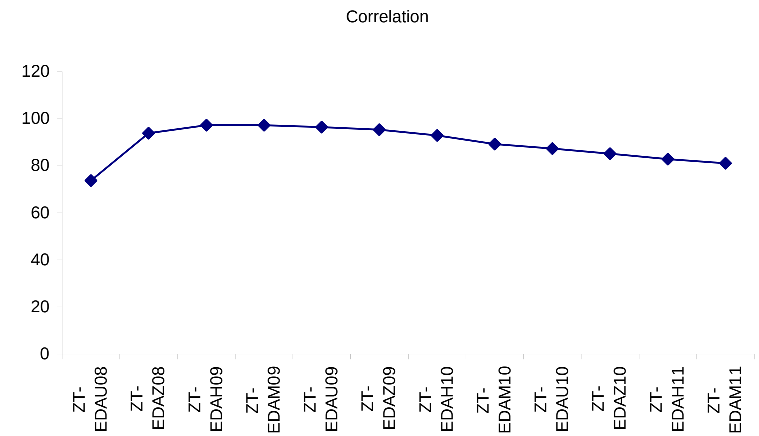
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.769	0.41	ZT-EDAU08	73.702
EDAZ08	8.924	0.57	ZT-EDAZ08	93.931
EDAH09	8.989	0.63	ZT-EDAH09	97.318
EDAM09	9.179	0.82	ZT-EDAM09	97.267
EDAU09	9.449	1.09	ZT-EDAU09	96.522
EDAZ09	9.759	1.40	ZT-EDAZ09	95.326
EDAH10	9.989	1.63	ZT-EDAH10	92.906
EDAM10	10.179	1.82	ZT-EDAM10	89.192
EDAU10	10.314	1.96	ZT-EDAU10	87.379
EDAZ10	10.424	2.07	ZT-EDAZ10	85.196
EDAH11	10.469	2.11	ZT-EDAH11	82.921
EDAM11	10.519	2.16	ZT-EDAM11	81.086

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	0.186	1.91	1.72	ZT-EDAU08
EDAZ08	0.435	1.91	1.47	ZT-EDAZ08
EDAH09	0.684	1.91	1.22	ZT-EDAH09
EDAM09	0.934	1.91	0.97	ZT-EDAM09
EDAU09	1.183	1.91	0.72	ZT-EDAU09
EDAZ09	1.432	1.91	0.47	ZT-EDAZ09
EDAH10	1.682	1.91	0.23	ZT-EDAH10
EDAM10	1.931	1.91	(0.02)	ZT-EDAM10
EDAU10	2.180	1.91	(0.27)	ZT-EDAU10
EDAZ10	2.429	1.91	(0.52)	ZT-EDAZ10
EDAH11	2.679	1.91	(0.77)	ZT-EDAH11
EDAM11	2.928	1.91	(1.02)	ZT-EDAM11

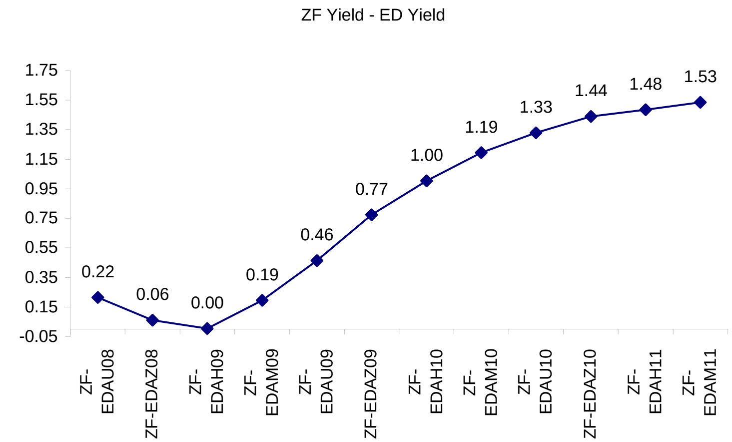
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF Spread Price	ZF Spread Yield	ZF Spread Name	Correlation* (percent)
EDAU08	14.103	0.22	ZF-EDAU08	73.005
EDAZ08	14.258	0.06	ZF-EDAZ08	95.168
EDAH09	14.323	0.00	ZF-EDAH09	98.516
EDAM09	14.513	0.19	ZF-EDAM09	98.799
EDAU09	14.783	0.46	ZF-EDAU09	98.320
EDAZ09	15.093	0.77	ZF-EDAZ09	97.954
EDAH10	15.323	1.00	ZF-EDAH10	96.677
EDAM10	15.513	1.19	ZF-EDAM10	93.998
EDAU10	15.648	1.33	ZF-EDAU10	92.729
EDAZ10	15.758	1.44	ZF-EDAZ10	91.447
EDAH11	15.803	1.48	ZF-EDAH11	89.862
EDAM11	15.853	1.53	ZF-EDAM11	88.717

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	0.186	4.04	3.86	ZF-EDAU08
EDAZ08	0.435	4.04	3.61	ZF-EDAZ08
EDAH09	0.684	4.04	3.36	ZF-EDAH09
EDAM09	0.934	4.04	3.11	ZF-EDAM09
EDAU09	1.183	4.04	2.86	ZF-EDAU09
EDAZ09	1.432	4.04	2.61	ZF-EDAZ09
EDAH10	1.682	4.04	2.36	ZF-EDAH10
EDAM10	1.931	4.04	2.11	ZF-EDAM10
EDAU10	2.180	4.04	1.86	ZF-EDAU10
EDAZ10	2.429	4.04	1.61	ZF-EDAZ10
EDAH11	2.679	4.04	1.36	ZF-EDAH11
EDAM11	2.928	4.04	1.11	ZF-EDAM11

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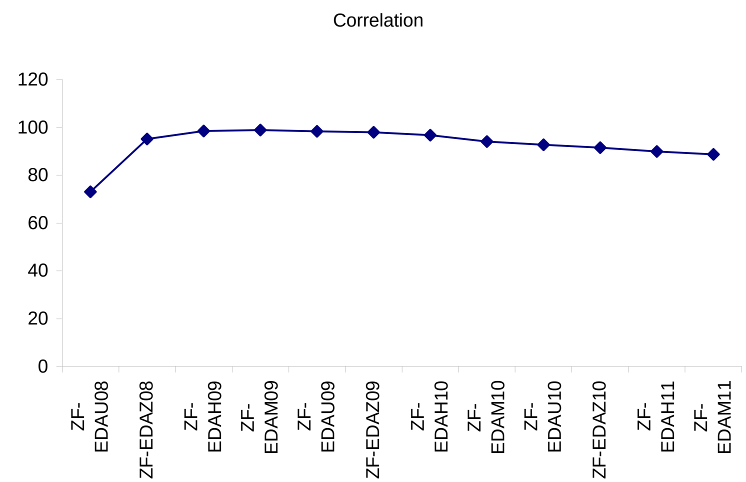

Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAU08	17.925	0.73	ZN-EDAU08	69.970
EDAZ08	18.080	0.58	ZN-EDAZ08	95.428
EDAH09	18.145	0.51	ZN-EDAH09	98.253
EDAM09	18.335	0.32	ZN-EDAM09	98.389
EDAU09	18.605	0.05	ZN-EDAU09	97.831
EDAZ09	18.915	0.26	ZN-EDAZ09	97.654
EDAH10	19.145	0.49	ZN-EDAH10	96.677
EDAM10	19.335	0.68	ZN-EDAM10	93.998
EDAU10	19.470	0.81	ZN-EDAU10	92.729
EDAZ10	19.580	0.92	ZN-EDAZ10	91.447
EDAH11	19.625	0.97	ZN-EDAH11	89.862
EDAM11	19.675	1.02	ZN-EDAM11	88.717

Price = Outright Decimal Price - Euro Contract Price
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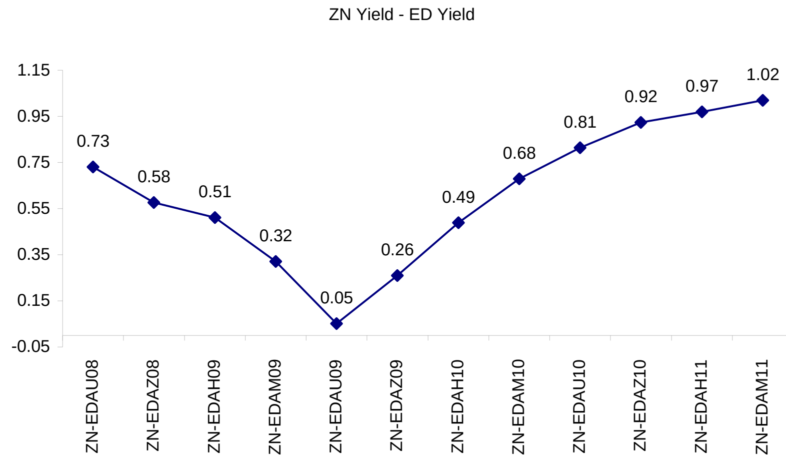
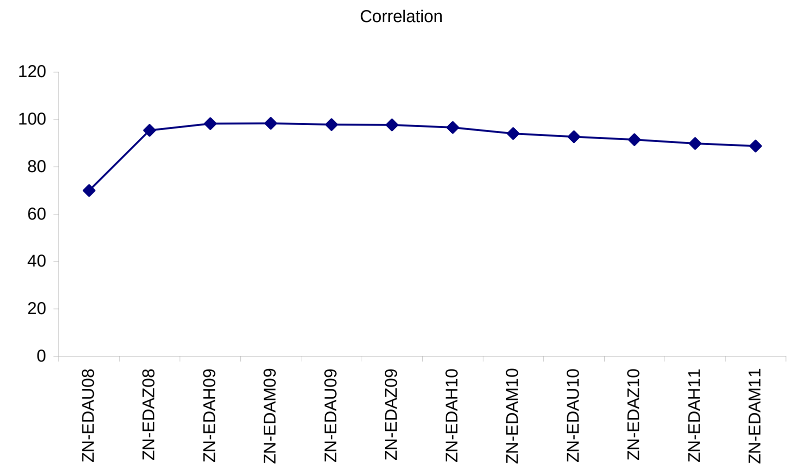


	ED Duration as Fraction of year	**ZN Duration**	**Spread Duration**	
EDAU08	0.186	6.47	6.28	ZN-EDAU08
EDAZ08	0.435	6.47	6.03	ZN-EDAZ08
EDAH09	0.684	6.47	5.78	ZN-EDAH09
EDAM09	0.934	6.47	5.53	ZN-EDAM09
EDAU09	1.183	6.47	5.28	ZN-EDAU09
EDAZ09	1.432	6.47	5.03	ZN-EDAZ09
EDAH10	1.682	6.47	4.79	ZN-EDAH10
EDAM10	1.931	6.47	4.54	ZN-EDAM10
EDAU10	2.180	6.47	4.29	ZN-EDAU10
EDAZ10	2.429	6.47	4.04	ZN-EDAZ10
EDAH11	2.679	6.47	3.79	ZN-EDAH11
EDAM11	2.928	6.47	3.54	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	3.613	0.41	2y-EDAU08	-87.561
EDAZ08	3.768	0.57	2y-EDAZ08	-97.621
EDAH09	3.833	0.63	2y-EDAH09	-98.160
EDAM09	4.022	0.82	2y-EDAM09	-97.320
EDAU09	4.293	1.09	2y-EDAU09	-96.572
EDAZ09	4.602	1.40	2y-EDAZ09	-95.690
EDAH10	4.833	1.63	2y-EDAH10	-93.947
EDAM10	5.022	1.82	2y-EDAM10	-91.479
EDAU10	5.158	1.96	2y-EDAU10	-89.946
EDAZ10	5.268	2.07	2y-EDAZ10	-87.876
EDAH11	5.313	2.11	2y-EDAH11	-85.629
EDAM11	5.363	2.16	2y-EDAM11	-84.112

Price = Outright Decimal Price - Euro Contract Price
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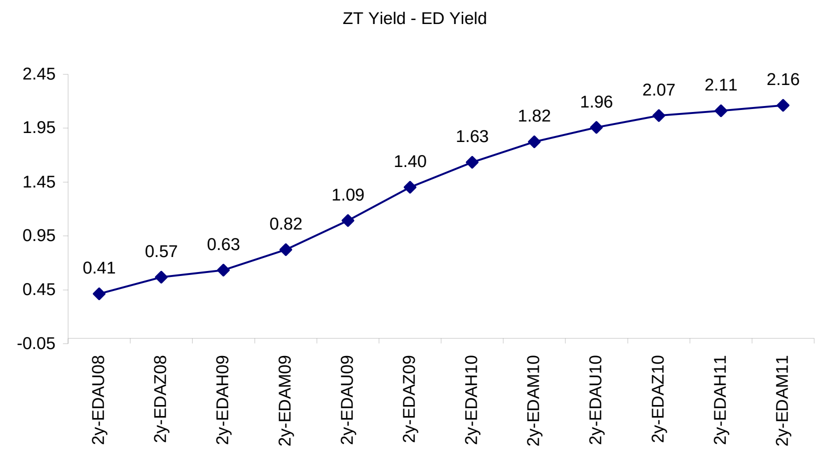
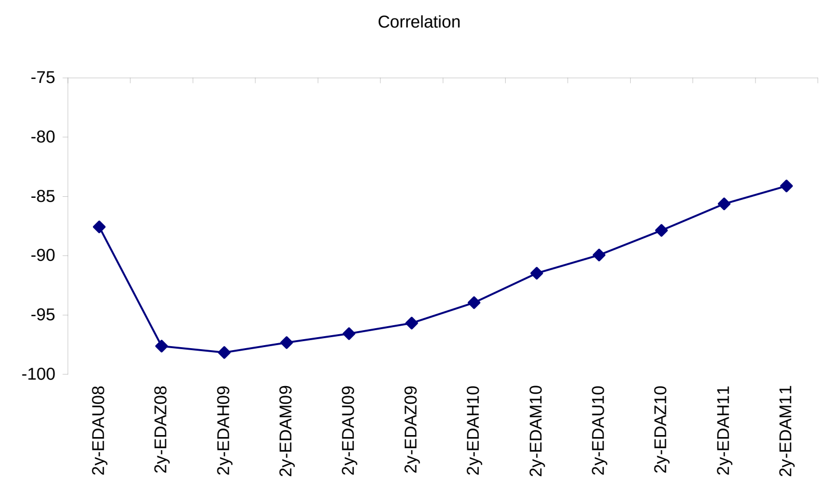


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU08	0.186	1.91	1.72	2y-EDAU08
EDAZ08	0.435	1.91	1.47	2y-EDAZ08
EDAH09	0.684	1.91	1.22	2y-EDAH09
EDAM09	0.934	1.91	0.97	2y-EDAM09
EDAU09	1.183	1.91	0.72	2y-EDAU09
EDAZ09	1.432	1.91	0.47	2y-EDAZ09
EDAH10	1.682	1.91	0.23	2y-EDAH10
EDAM10	1.931	1.91	(0.02)	2y-EDAM10
EDAU10	2.180	1.91	(0.27)	2y-EDAU10
EDAZ10	2.429	1.91	(0.52)	2y-EDAZ10
EDAH11	2.679	1.91	(0.77)	2y-EDAH11
EDAM11	2.928	1.91	(1.02)	2y-EDAM11

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



	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.628	0.29	5y-EDAU08	-89.691
EDAZ08	3.783	0.14	5y-EDAZ08	-99.040
EDAH09	3.848	0.07	5y-EDAH09	-99.558
EDAM09	4.038	0.12	5y-EDAM09	-98.896
EDAU09	4.308	0.39	5y-EDAU09	-98.327
EDAZ09	4.618	0.70	5y-EDAZ09	-97.962
EDAH10	4.848	0.93	5y-EDAH10	-97.009
EDAM10	5.038	1.12	5y-EDAM10	-95.267
EDAU10	5.173	1.25	5y-EDAU10	-94.226
EDAZ10	5.283	1.36	5y-EDAZ10	-92.977
EDAH11	5.328	1.41	5y-EDAH11	-91.285
EDAM11	5.378	1.46	5y-EDAM11	-90.125

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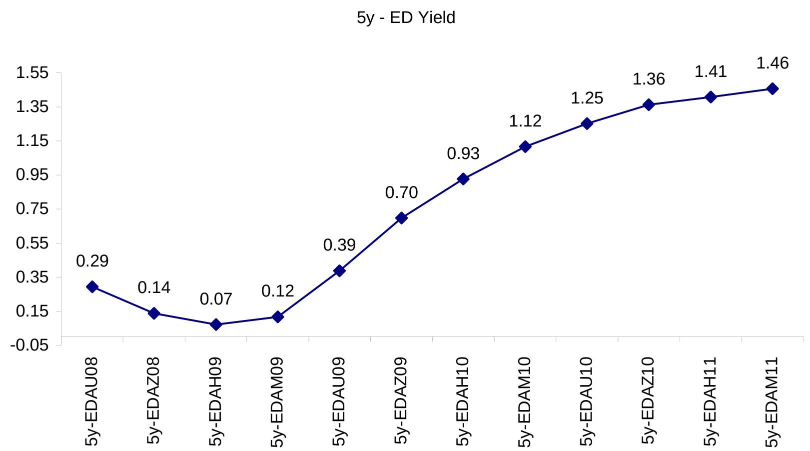
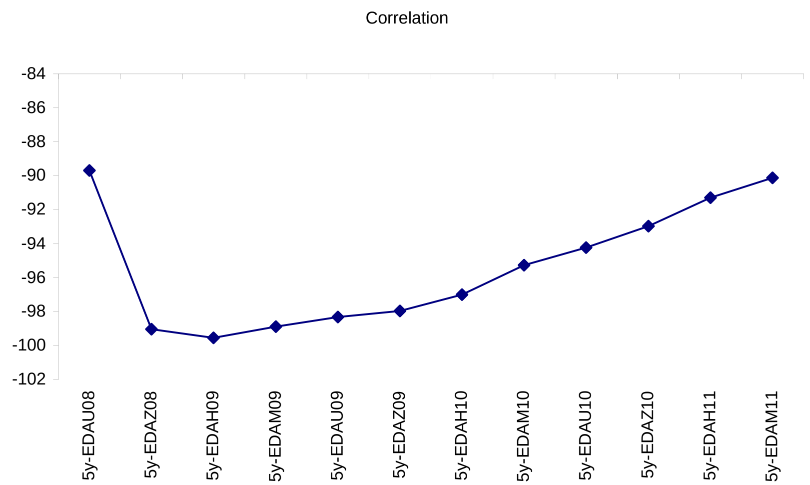


	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.186	4.54	4.36	5y-EDAU08
EDAZ08	0.435	4.54	4.11	5y-EDAZ08
EDAH09	0.684	4.54	3.86	5y-EDAH09
EDAM09	0.934	4.54	3.61	5y-EDAM09
EDAU09	1.183	4.54	3.36	5y-EDAU09
EDAZ09	1.432	4.54	3.11	5y-EDAZ09
EDAH10	1.682	4.54	2.86	5y-EDAH10
EDAM10	1.931	4.54	2.61	5y-EDAM10
EDAU10	2.180	4.54	2.36	5y-EDAU10
EDAZ10	2.429	4.54	2.11	5y-EDAZ10
EDAH11	2.679	4.54	1.87	5y-EDAH11
EDAM11	2.928	4.54	1.62	5y-EDAM11

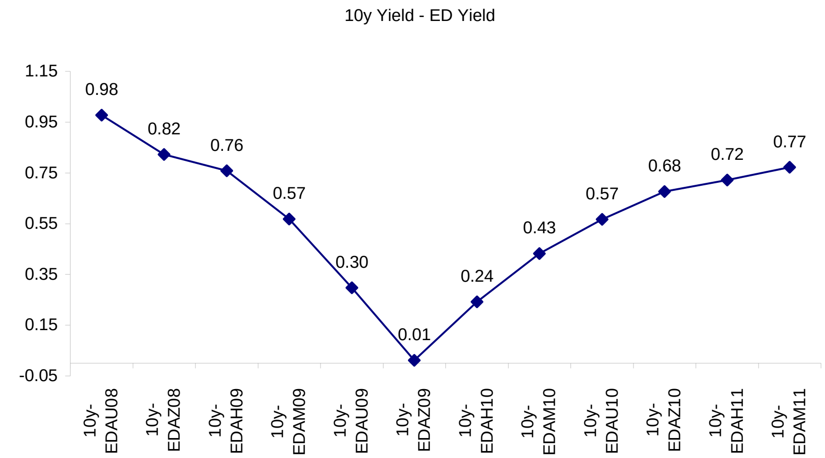
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

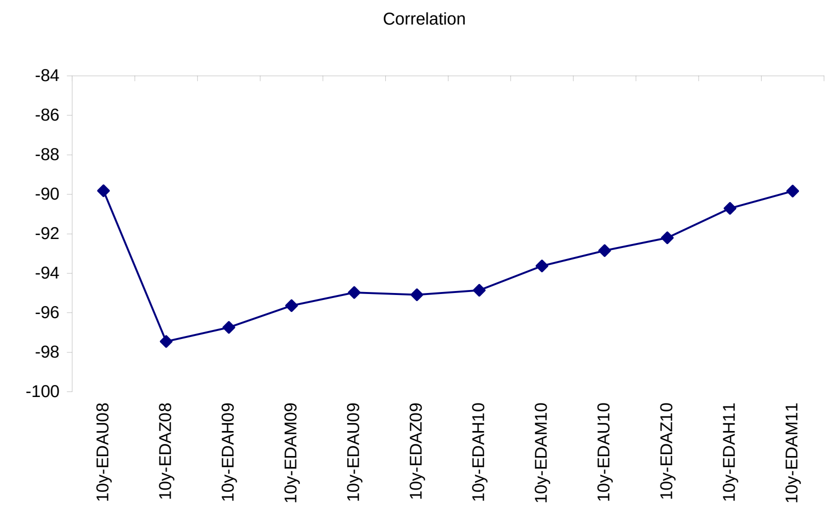
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.628	0.98	10y-EDAU08	-89.816
EDAZ08	3.783	0.82	10y-EDAZ08	-97.453
EDAH09	3.848	0.76	10y-EDAH09	-96.738
EDAM09	4.038	0.57	10y-EDAM09	-95.639
EDAU09	4.308	0.30	10y-EDAU09	-94.976
EDAZ09	4.618	0.01	10y-EDAZ09	-95.088
EDAH10	4.848	0.24	10y-EDAH10	-94.853
EDAM10	5.038	0.43	10y-EDAM10	-93.624
EDAU10	5.173	0.57	10y-EDAU10	-92.846
EDAZ10	5.283	0.68	10y-EDAZ10	-92.200
EDAH11	5.328	0.72	10y-EDAH11	-90.706
EDAM11	5.378	0.77	10y-EDAM11	-89.839

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



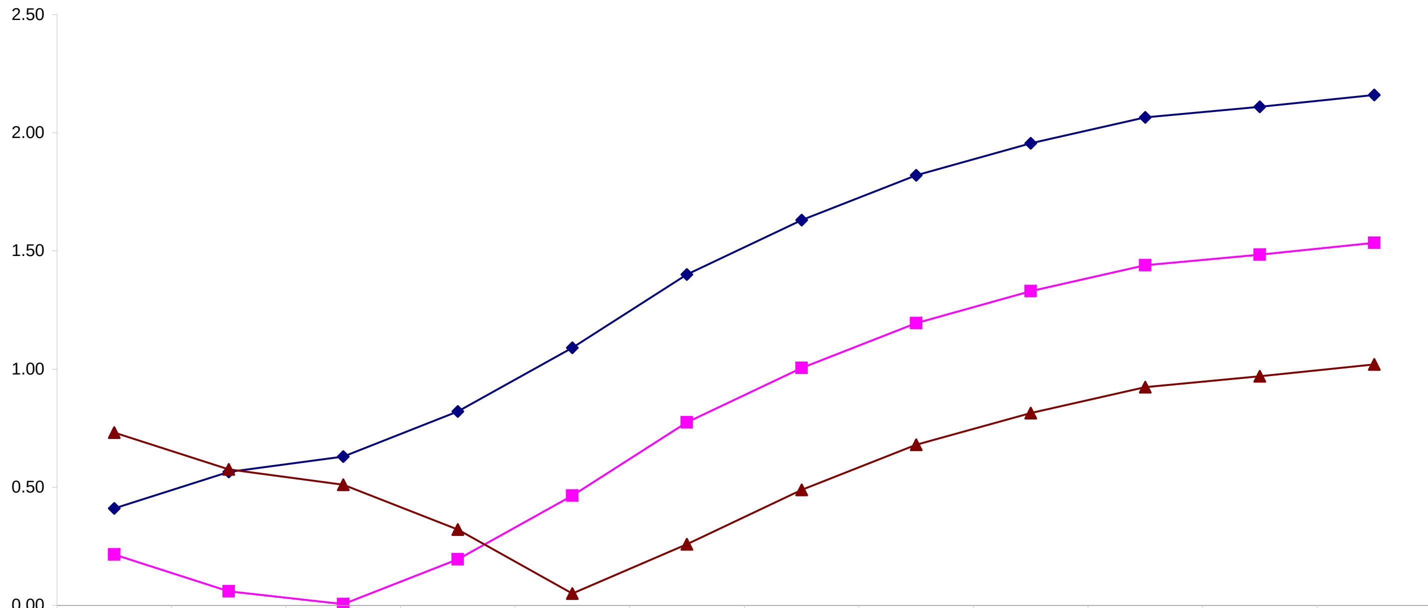
	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.186	8.07	7.89	10y-EDAU08
EDAZ08	0.435	8.07	7.64	10y-EDAZ08
EDAH09	0.684	8.07	7.39	10y-EDAH09
EDAM09	0.934	8.07	7.14	10y-EDAM09
EDAU09	1.183	8.07	6.89	10y-EDAU09
EDAZ09	1.432	8.07	6.64	10y-EDAZ09
EDAH10	1.682	8.07	6.39	10y-EDAH10
EDAM10	1.931	8.07	6.14	10y-EDAM10
EDAU10	2.180	8.07	5.89	10y-EDAU10
EDAZ10	2.429	8.07	5.64	10y-EDAZ10
EDAH11	2.679	8.07	5.39	10y-EDAH11
EDAM11	2.928	8.07	5.14	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.

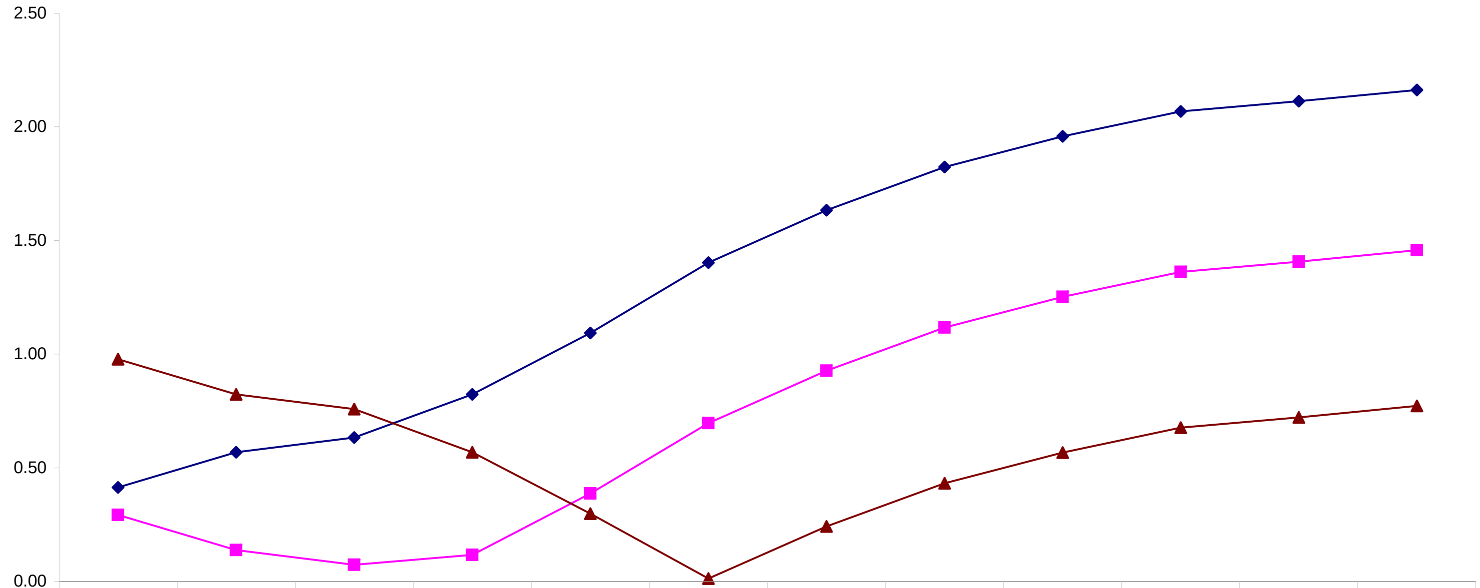


	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
ZT	0.41	0.57	0.63	0.82	1.09	1.40	1.63	1.82	1.96	2.07	2.11	2.16
ZF	0.22	0.06	0.00	0.19	0.46	0.77	1.00	1.19	1.33	1.44	1.48	1.53
ZN	0.73	0.58	0.51	0.32	0.05	0.26	0.49	0.68	0.81	0.92	0.97	1.02

ZT ZF ZN

TED Curve

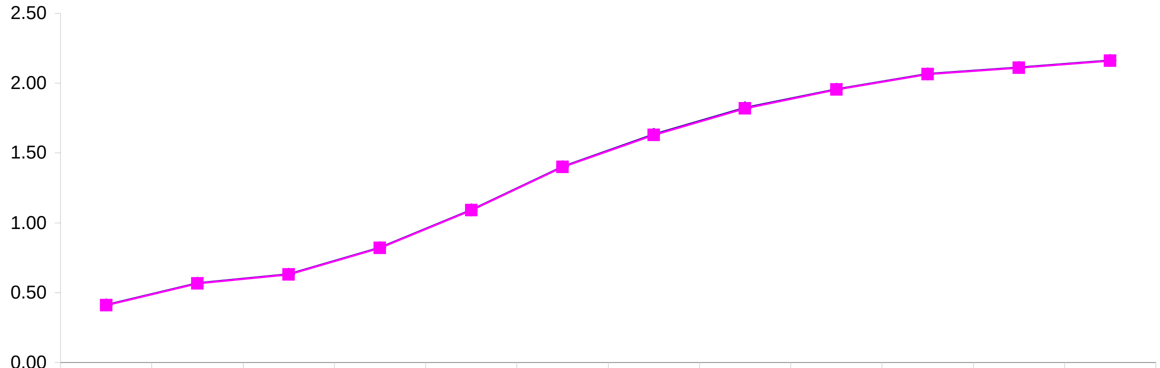
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.41	0.57	0.63	0.82	1.09	1.40	1.63	1.82	1.96	2.07	2.11	2.16
5y	0.29	0.14	0.07	0.12	0.39	0.70	0.93	1.12	1.25	1.36	1.41	1.46
10y	0.98	0.82	0.76	0.57	0.30	0.01	0.24	0.43	0.57	0.68	0.72	0.77

2y 5y 10y

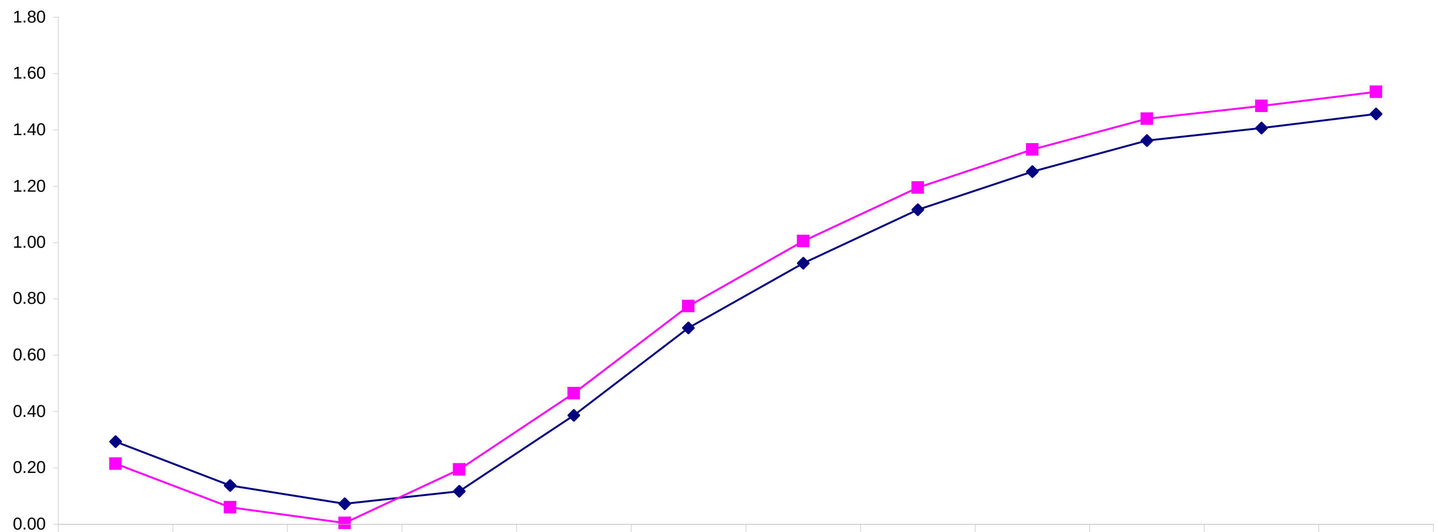
2y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.41	0.57	0.63	0.82	1.09	1.40	1.63	1.82	1.96	2.07	2.11	2.16
ZT	0.41	0.57	0.63	0.82	1.09	1.40	1.63	1.82	1.96	2.07	2.11	2.16

2y ZT

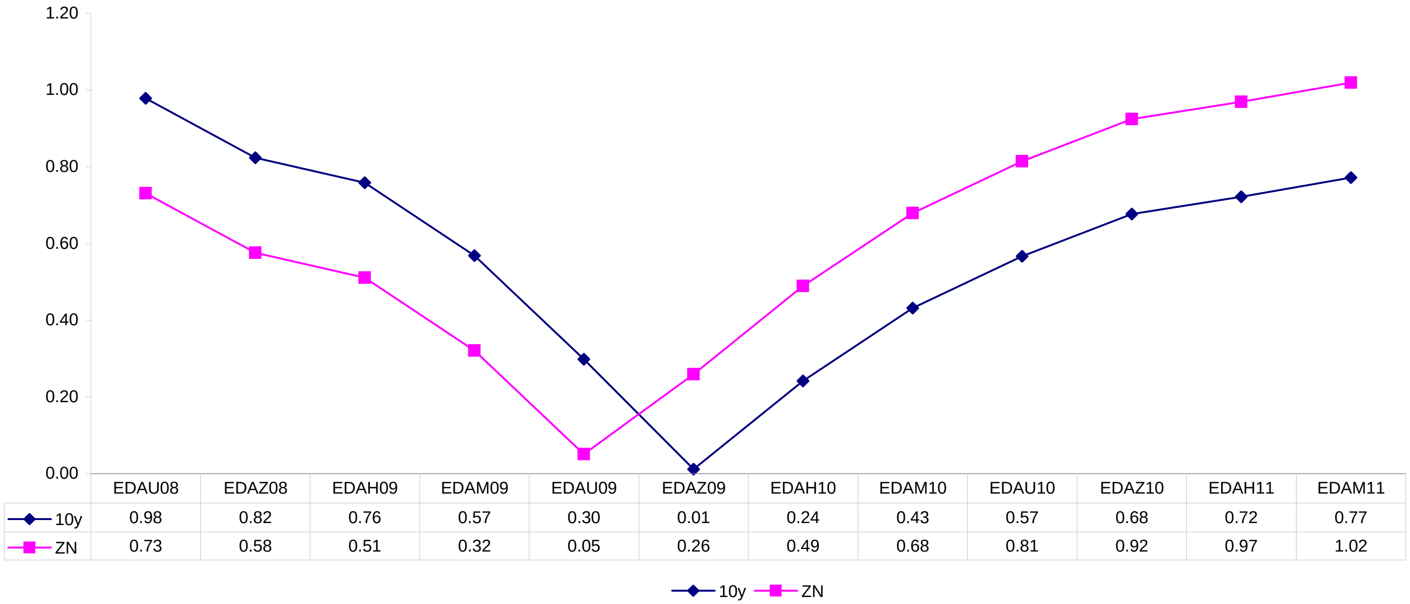
5y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
5y	0.29	0.14	0.07	0.12	0.39	0.70	0.93	1.12	1.25	1.36	1.41	1.46
ZF	0.22	0.06	0.00	0.19	0.46	0.77	1.00	1.19	1.33	1.44	1.48	1.53

5y ZF

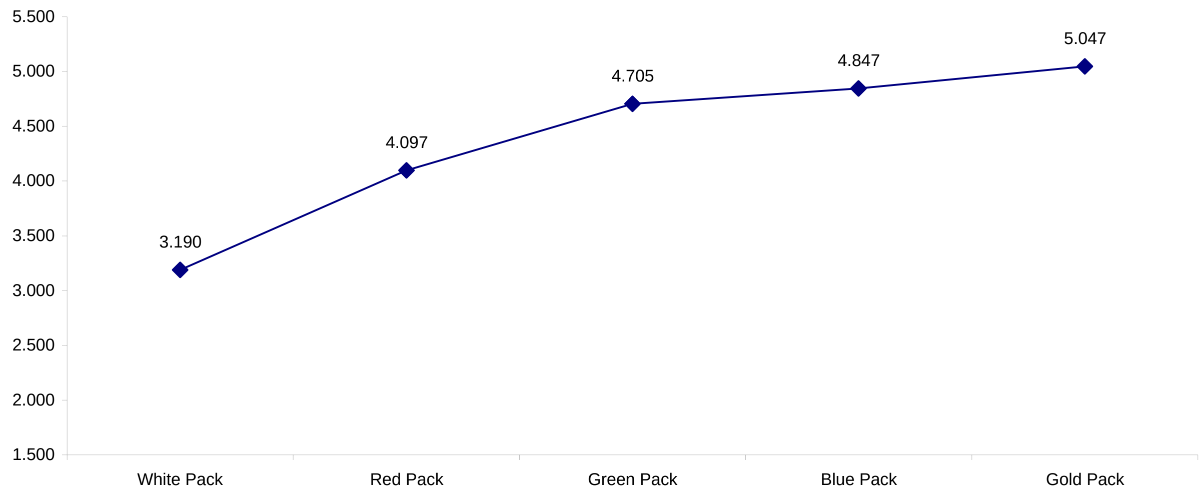
10y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
10y	0.98	0.82	0.76	0.57	0.30	0.01	0.24	0.43	0.57	0.68	0.72	0.77
ZN	0.73	0.58	0.51	0.32	0.05	0.26	0.49	0.68	0.81	0.92	0.97	1.02

Packs

	Last Yield	Net Last Yield	Last Price
White Pack	3.190	-5.375	9687.875
Red Pack	4.097	-5.875	9600.000
Green Pack	4.705	-3.500	9541.250
Blue Pack	4.847	4.500	9527.625
Gold Pack	5.047	4.250	9508.375



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