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	106.8906	106.285	1.821	1.86
ZF	113.3031	113.097	2.581	4.01
ZN	117.9688	117.310	3.259	6.60
2y	99.750	99.2400	1.876	1.93
5y	99.147	99.0470	2.682	4.56
10y	99.859	99.2750	3.515	8.23

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM08	97.595	2.405	70	0.191	JUN	
EDAU08	97.715	2.285	161	0.440	SEP	White
EDAZ08	97.635	2.365	252	0.690	DEC	Pack
EDAH09	97.555	2.445	343	0.939	MAR	
EDAM09	97.345	2.655	434	1.188	JUN	
EDAU09	97.115	2.885	525	1.438	SEP	Red Pack
EDAZ09	96.860	3.140	616	1.687	DEC	
EDAH10	96.665	3.335	707	1.936	MAR	
EDAM10	96.460	3.540	798	2.186	JUN	
EDAU10	96.285	3.715	889	2.435	SEP	Green
EDAZ10	96.130	3.870	980	2.684	DEC	Pack
EDAH11	96.010	3.990	1071	2.934	MAR	
EDAM11	95.900	4.100	1162	3.183	JUN	
EDAU11	#VALUE!	#VALUE!	1260	3.451	SEP	Blue Pack
EDAZ11	#VALUE!	#VALUE!	1351	3.701	DEC	
EDAH12	#VALUE!	#VALUE!	1442	3.950	MAR	
EDAM12	95.625	4.375	1533	4.199	JUN	
EDAU12	95.535	4.465	1624	4.449	SEP	Gold Pack
EDAZ12	95.435	4.565	1715	4.698	DEC	
EDAH13	95.375	4.625	1806	4.947	MAR	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	2.422	-4.750	9762.500
Red Pack	3.069	-5.500	9699.625
Green Pack	2.412	-5.000	9763.500
Blue Pack		-1.500	9579.625
Gold Pack		0.000	9547.375

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.

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

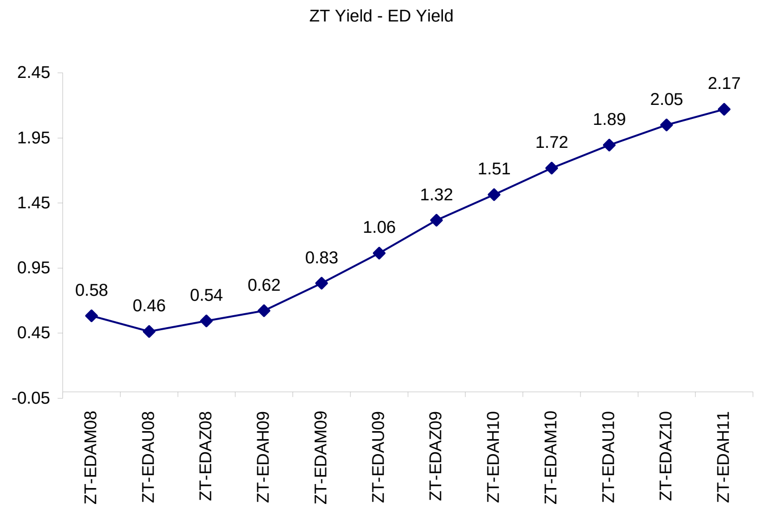
Correlations (Important)

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.

Dirty TED: ZT vs Eurodollar Contracts

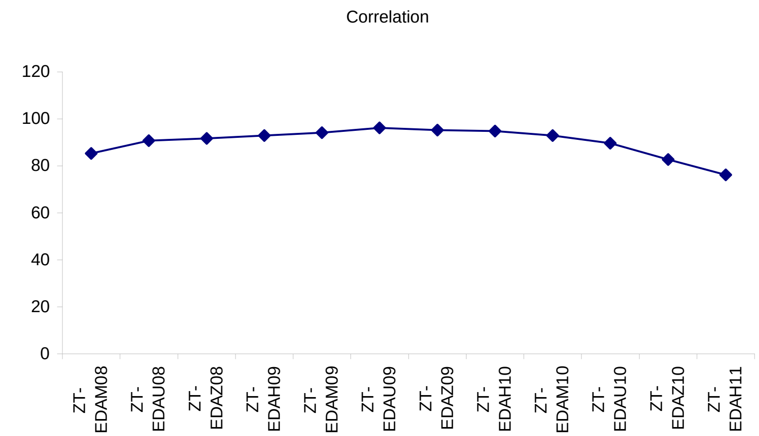
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	9.296	0.58	ZT-EDAM08	85.311
EDAU08	9.176	0.46	ZT-EDAU08	90.780
EDAZ08	9.256	0.54	ZT-EDAZ08	91.726
EDAH09	9.336	0.62	ZT-EDAH09	92.888
EDAM09	9.546	0.83	ZT-EDAM09	94.215
EDAU09	9.776	1.06	ZT-EDAU09	96.257
EDAZ09	10.031	1.32	ZT-EDAZ09	95.193
EDAH10	10.226	1.51	ZT-EDAH10	94.827
EDAM10	10.431	1.72	ZT-EDAM10	92.906
EDAU10	10.606	1.89	ZT-EDAU10	89.678
EDAZ10	10.761	2.05	ZT-EDAZ10	82.708
EDAH11	10.881	2.17	ZT-EDAH11	76.243

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	
EDAM08	0.191	1.86	1.67	ZT-EDAM08
EDAU08	0.440	1.86	1.42	ZT-EDAU08
EDAZ08	0.690	1.86	1.17	ZT-EDAZ08
EDAH09	0.939	1.86	0.92	ZT-EDAH09
EDAM09	1.188	1.86	0.67	ZT-EDAM09
EDAU09	1.438	1.86	0.42	ZT-EDAU09
EDAZ09	1.687	1.86	0.17	ZT-EDAZ09
EDAH10	1.936	1.86	(0.08)	ZT-EDAH10
EDAM10	2.186	1.86	(0.32)	ZT-EDAM10
EDAU10	2.435	1.86	(0.57)	ZT-EDAU10
EDAZ10	2.684	1.86	(0.82)	ZT-EDAZ10
EDAH11	2.934	1.86	(1.07)	ZT-EDAH11

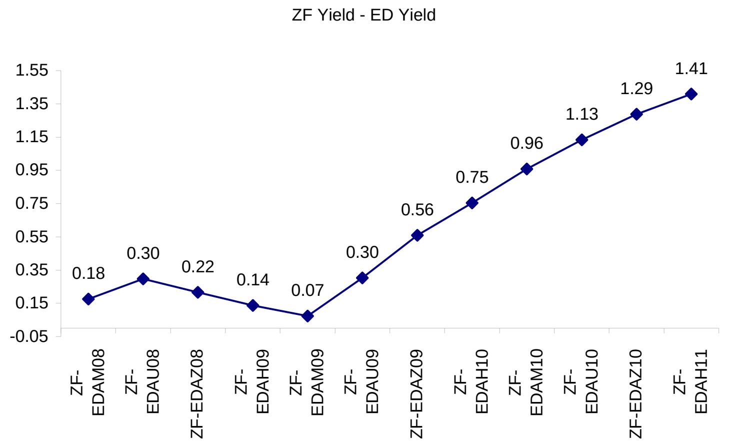
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

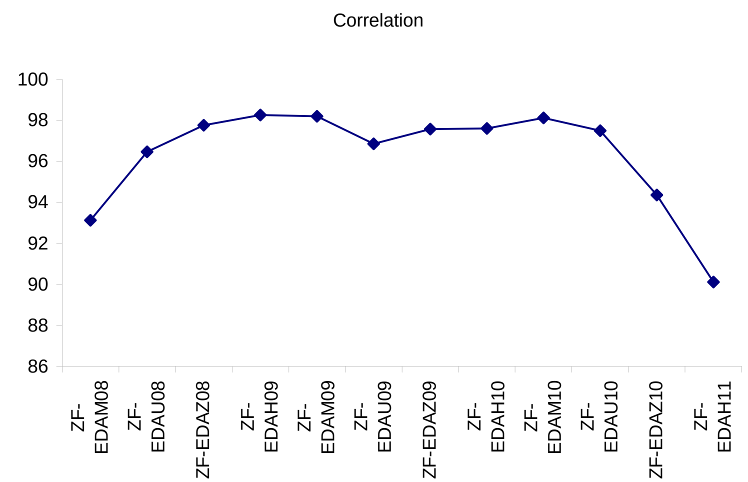
	ZF			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM08	15.708	0.18	ZF-EDAM08	93.135
EDAU08	15.588	0.30	ZF-EDAU08	96.465
EDAZ08	15.668	0.22	ZF-EDAZ08	97.772
EDAH09	15.748	0.14	ZF-EDAH09	98.272
EDAM09	15.958	0.07	ZF-EDAM09	98.211
EDAU09	16.188	0.30	ZF-EDAU09	96.862
EDAZ09	16.443	0.56	ZF-EDAZ09	97.575
EDAH10	16.638	0.75	ZF-EDAH10	97.610
EDAM10	16.843	0.96	ZF-EDAM10	98.123
EDAU10	17.018	1.13	ZF-EDAU10	97.509
EDAZ10	17.173	1.29	ZF-EDAZ10	94.368
EDAH11	17.293	1.41	ZF-EDAH11	90.120

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**	
EDAM08	0.191	4.01	3.82	ZF-EDAM08
EDAU08	0.440	4.01	3.57	ZF-EDAU08
EDAZ08	0.690	4.01	3.32	ZF-EDAZ08
EDAH09	0.939	4.01	3.07	ZF-EDAH09
EDAM09	1.188	4.01	2.82	ZF-EDAM09
EDAU09	1.438	4.01	2.57	ZF-EDAU09
EDAZ09	1.687	4.01	2.32	ZF-EDAZ09
EDAH10	1.936	4.01	2.07	ZF-EDAH10
EDAM10	2.186	4.01	1.82	ZF-EDAM10
EDAU10	2.435	4.01	1.57	ZF-EDAU10
EDAZ10	2.684	4.01	1.32	ZF-EDAZ10
EDAH11	2.934	4.01	1.07	ZF-EDAH11

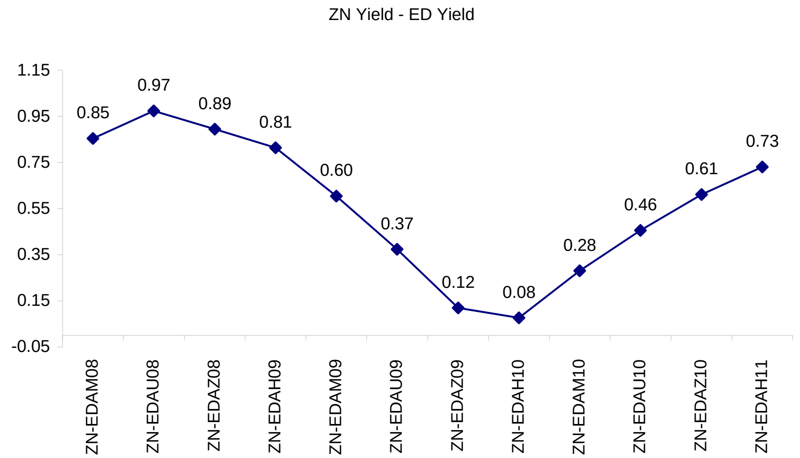
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

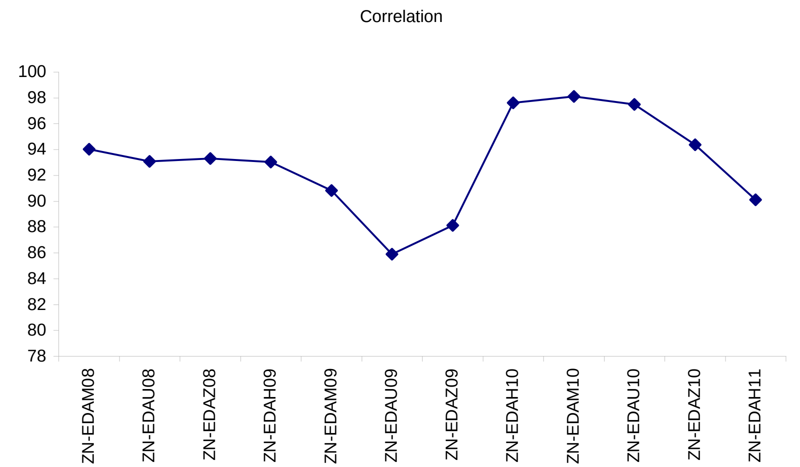
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	20.374	0.85	ZN-EDAM08	94.022
EDAU08	20.254	0.97	ZN-EDAU08	93.099
EDAZ08	20.334	0.89	ZN-EDAZ08	93.309
EDAH09	20.414	0.81	ZN-EDAH09	93.049
EDAM09	20.624	0.60	ZN-EDAM09	90.832
EDAU09	20.854	0.37	ZN-EDAU09	85.910
EDAZ09	21.109	0.12	ZN-EDAZ09	88.138
EDAH10	21.304	0.08	ZN-EDAH10	97.610
EDAM10	21.509	0.28	ZN-EDAM10	98.123
EDAU10	21.684	0.46	ZN-EDAU10	97.509
EDAZ10	21.839	0.61	ZN-EDAZ10	94.368
EDAH11	21.959	0.73	ZN-EDAH11	90.120

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	ZN Duration	Spread Duration	
EDAM08	0.191	6.60	6.41	ZN-EDAM08
EDAU08	0.440	6.60	6.16	ZN-EDAU08
EDAZ08	0.690	6.60	5.91	ZN-EDAZ08
EDAH09	0.939	6.60	5.66	ZN-EDAH09
EDAM09	1.188	6.60	5.41	ZN-EDAM09
EDAU09	1.438	6.60	5.16	ZN-EDAU09
EDAZ09	1.687	6.60	4.91	ZN-EDAZ09
EDAH10	1.936	6.60	4.66	ZN-EDAH10
EDAM10	2.186	6.60	4.42	ZN-EDAM10
EDAU10	2.435	6.60	4.17	ZN-EDAU10
EDAZ10	2.684	6.60	3.92	ZN-EDAZ10
EDAH11	2.934	6.60	3.67	ZN-EDAH11

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)
EDAM08	2.155	0.53	2y-EDAM08	-92.582
EDAU08	2.035	0.41	2y-EDAU08	-92.658
EDAZ08	2.115	0.49	2y-EDAZ08	-92.582
EDAH09	2.195	0.57	2y-EDAH09	-94.381
EDAM09	2.405	0.78	2y-EDAM09	-94.512
EDAU09	2.635	1.01	2y-EDAU09	-93.709
EDAZ09	2.890	1.26	2y-EDAZ09	-93.627
EDAH10	3.085	1.46	2y-EDAH10	-93.417
EDAM10	3.290	1.66	2y-EDAM10	-93.675
EDAU10	3.465	1.84	2y-EDAU10	-90.720
EDAZ10	3.620	1.99	2y-EDAZ10	-83.532
EDAH11	3.740	2.11	2y-EDAH11	-75.916

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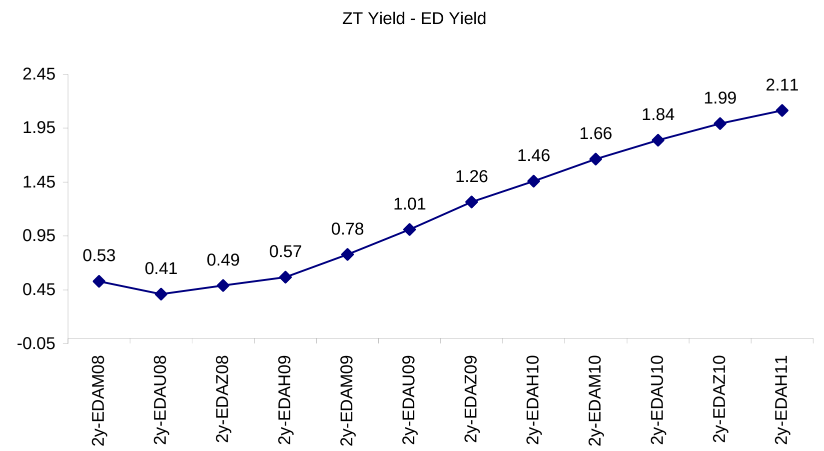
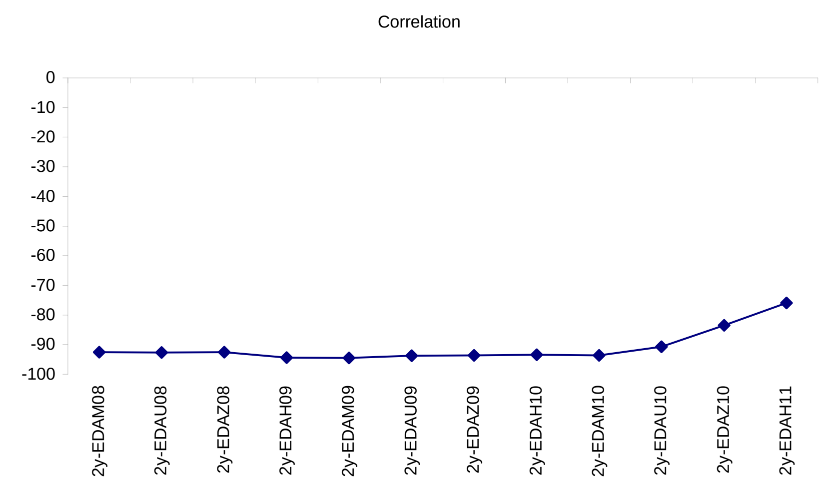


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM08	0.191	1.93	1.74	2y-EDAM08
EDAU08	0.440	1.93	1.49	2y-EDAU08
EDAZ08	0.690	1.93	1.24	2y-EDAZ08
EDAH09	0.939	1.93	1.00	2y-EDAH09
EDAM09	1.188	1.93	0.75	2y-EDAM09
EDAU09	1.438	1.93	0.50	2y-EDAU09
EDAZ09	1.687	1.93	0.25	2y-EDAZ09
EDAH10	1.936	1.93	(0.00)	2y-EDAH10
EDAM10	2.186	1.93	(0.25)	2y-EDAM10
EDAU10	2.435	1.93	(0.50)	2y-EDAU10
EDAZ10	2.684	1.93	(0.75)	2y-EDAZ10
EDAH11	2.934	1.93	(1.00)	2y-EDAH11

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

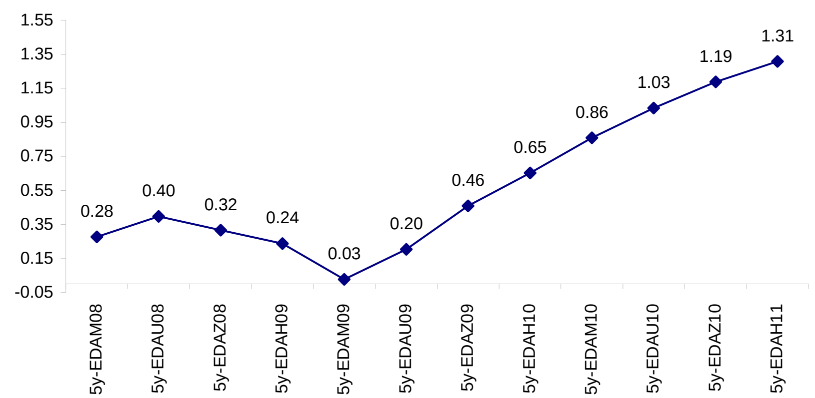


TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM08	1.552	0.28	5y-EDAM08	-95.135
EDAU08	1.432	0.40	5y-EDAU08	-95.961
EDAZ08	1.512	0.32	5y-EDAZ08	-95.135
EDAH09	1.592	0.24	5y-EDAH09	-97.305
EDAM09	1.802	0.03	5y-EDAM09	-97.043
EDAU09	2.032	0.20	5y-EDAU09	-95.225
EDAZ09	2.287	0.46	5y-EDAZ09	-95.950
EDAH10	2.482	0.65	5y-EDAH10	-95.935
EDAM10	2.687	0.86	5y-EDAM10	-96.707
EDAU10	2.862	1.03	5y-EDAU10	-95.159
EDAZ10	3.017	1.19	5y-EDAZ10	-90.451
EDAH11	3.137	1.31	5y-EDAH11	-84.598

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

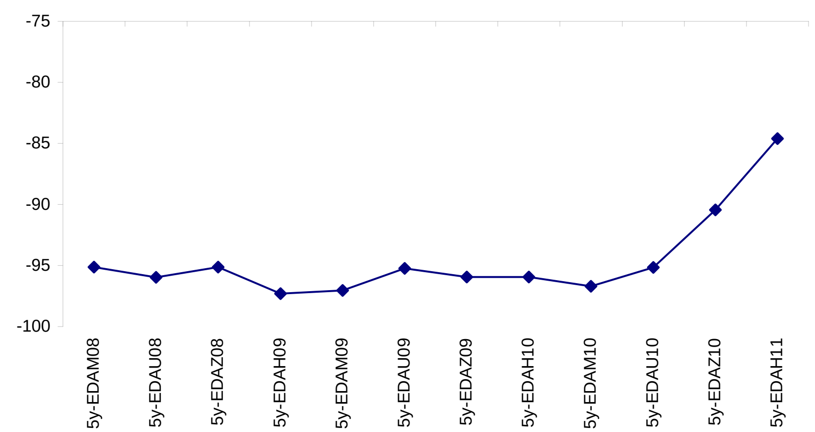
5y - ED Yield



	ED Duration as Fraction of year	**5Y Duration**	**Spread Duration**	
EDAM08	0.191	4.56	4.37	5y-EDAM08
EDAU08	0.440	4.56	4.12	5y-EDAU08
EDAZ08	0.690	4.56	3.87	5y-EDAZ08
EDAH09	0.939	4.56	3.62	5y-EDAH09
EDAM09	1.188	4.56	3.37	5y-EDAM09
EDAU09	1.438	4.56	3.12	5y-EDAU09
EDAZ09	1.687	4.56	2.88	5y-EDAZ09
EDAH10	1.936	4.56	2.63	5y-EDAH10
EDAM10	2.186	4.56	2.38	5y-EDAM10
EDAU10	2.435	4.56	2.13	5y-EDAU10
EDAZ10	2.684	4.56	1.88	5y-EDAZ10
EDAH11	2.934	4.56	1.63	5y-EDAH11

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

Correlation

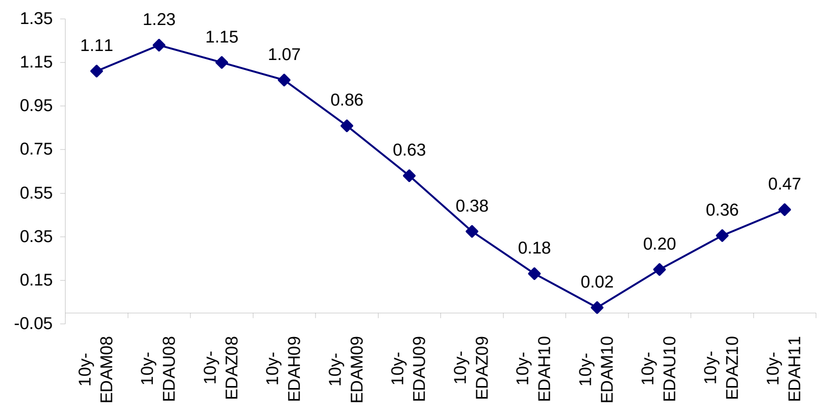


TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	1.552	1.11	10y-EDAM08	-84.854
EDAU08	1.432	1.23	10y-EDAU08	-86.937
EDAZ08	1.512	1.15	10y-EDAZ08	-84.854
EDAH09	1.592	1.07	10y-EDAH09	-88.193
EDAM09	1.802	0.86	10y-EDAM09	-87.510
EDAU09	2.032	0.63	10y-EDAU09	-83.871
EDAZ09	2.287	0.38	10y-EDAZ09	-86.698
EDAH10	2.482	0.18	10y-EDAH10	-87.262
EDAM10	2.687	0.02	10y-EDAM10	-89.382
EDAU10	2.862	0.20	10y-EDAU10	-91.727
EDAZ10	3.017	0.36	10y-EDAZ10	-94.211
EDAH11	3.137	0.47	10y-EDAH11	-93.944

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

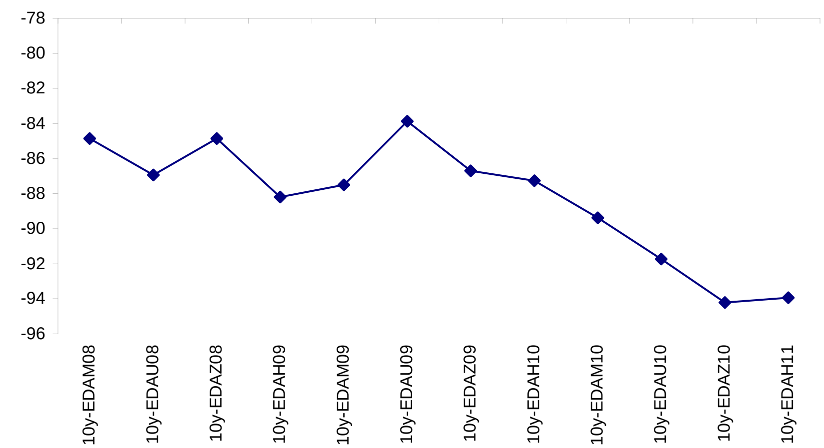
10y Yield - ED Yield



	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAM08	0.191	8.23	8.04	10y-EDAM08
EDAU08	0.440	8.23	7.79	10y-EDAU08
EDAZ08	0.690	8.23	7.54	10y-EDAZ08
EDAH09	0.939	8.23	7.29	10y-EDAH09
EDAM09	1.188	8.23	7.04	10y-EDAM09
EDAU09	1.438	8.23	6.79	10y-EDAU09
EDAZ09	1.687	8.23	6.54	10y-EDAZ09
EDAH10	1.936	8.23	6.30	10y-EDAH10
EDAM10	2.186	8.23	6.05	10y-EDAM10
EDAU10	2.435	8.23	5.80	10y-EDAU10
EDAZ10	2.684	8.23	5.55	10y-EDAZ10
EDAH11	2.934	8.23	5.30	10y-EDAH11

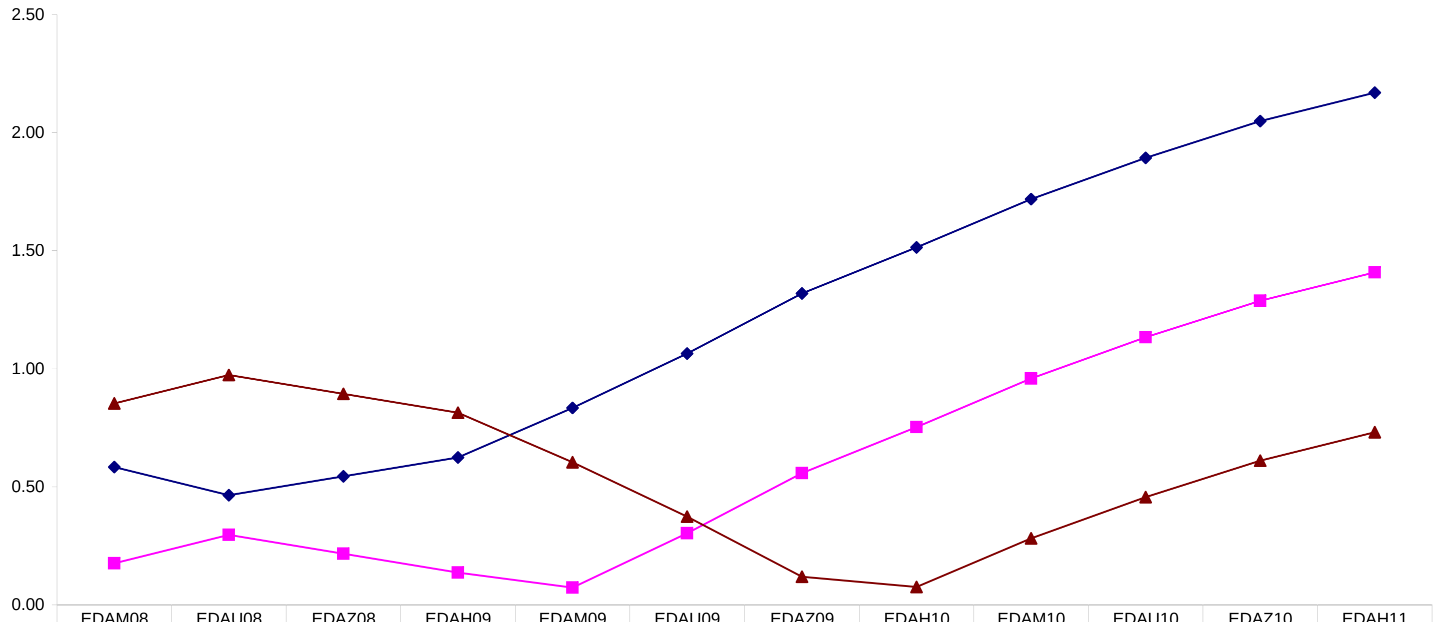
The farther away from 0 the spread duration is the riskier the trade.

Correlation



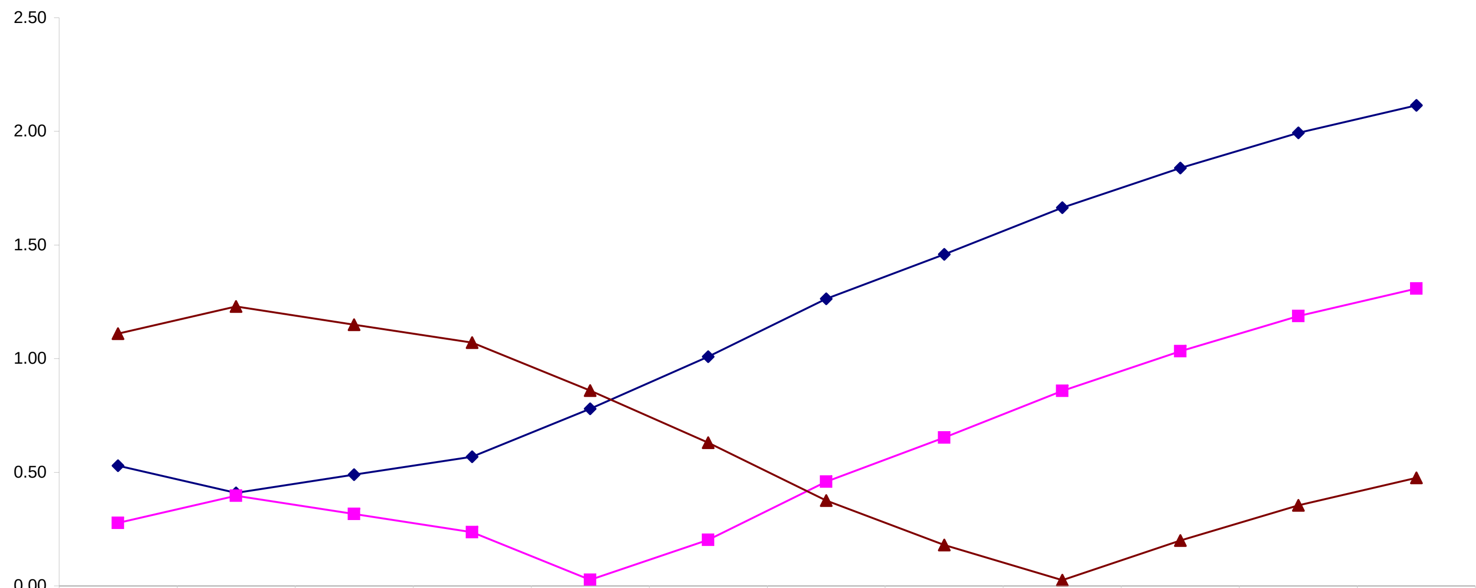
Dirty TED Curve

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.



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
ZT	0.58	0.46	0.54	0.62	0.83	1.06	1.32	1.51	1.72	1.89	2.05	2.17
ZF	0.18	0.30	0.22	0.14	0.07	0.30	0.56	0.75	0.96	1.13	1.29	1.41
ZN	0.85	0.97	0.89	0.81	0.60	0.37	0.12	0.08	0.28	0.46	0.61	0.73

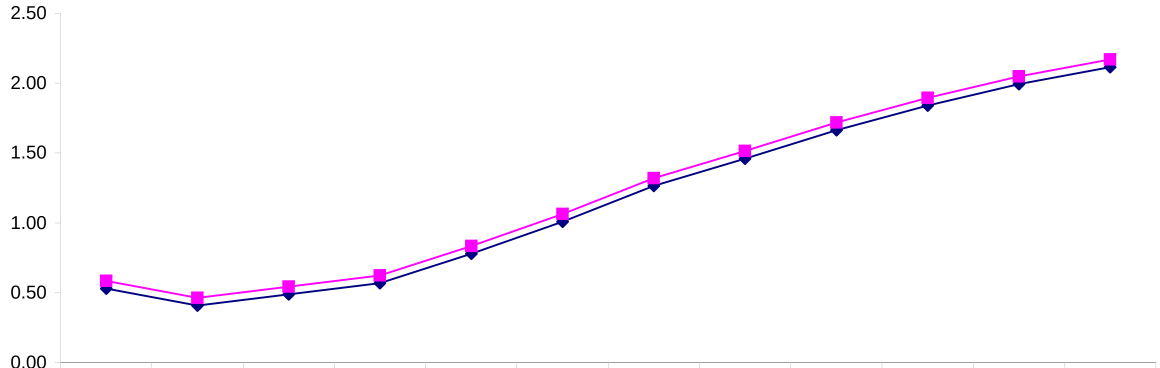
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
2y	0.53	0.41	0.49	0.57	0.78	1.01	1.26	1.46	1.66	1.84	1.99	2.11
5y	0.28	0.40	0.32	0.24	0.03	0.20	0.46	0.65	0.86	1.03	1.19	1.31
10y	1.11	1.23	1.15	1.07	0.86	0.63	0.38	0.18	0.02	0.20	0.36	0.47

2y 5y 10y

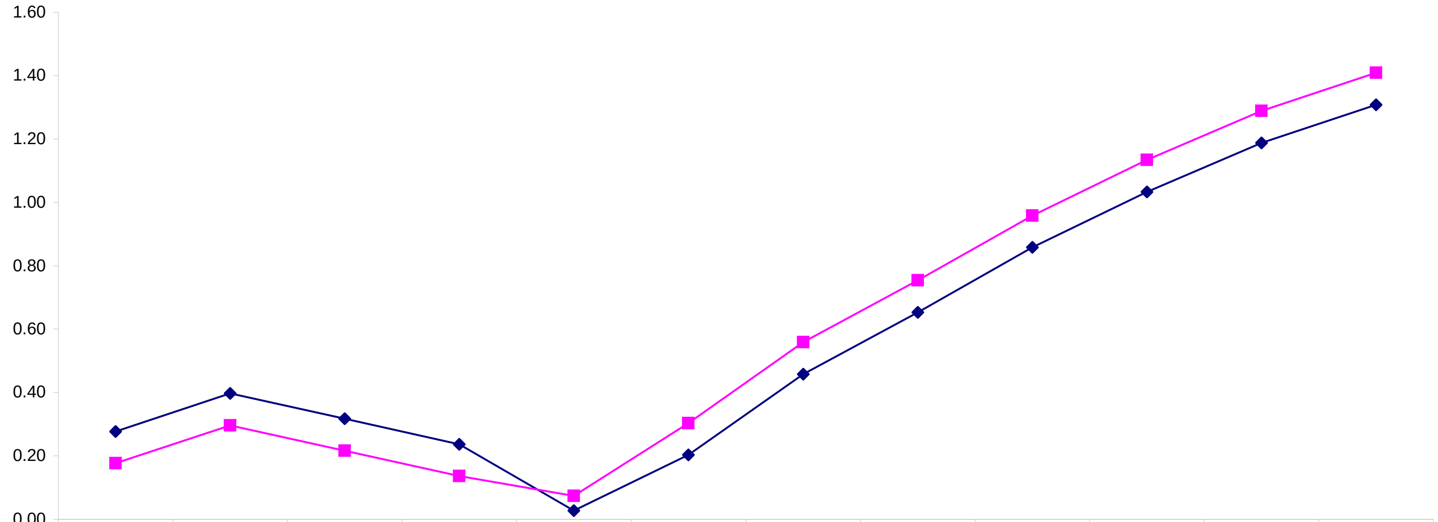
2y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
2y	0.53	0.41	0.49	0.57	0.78	1.01	1.26	1.46	1.66	1.84	1.99	2.11
ZT	0.58	0.46	0.54	0.62	0.83	1.06	1.32	1.51	1.72	1.89	2.05	2.17

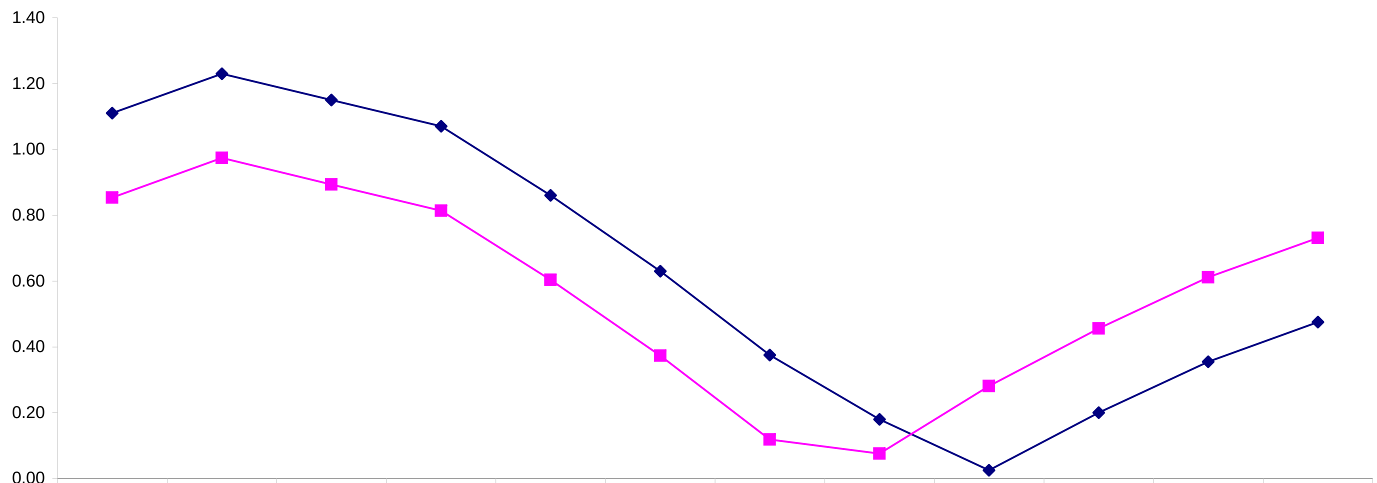
2y ZT

5y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
5y	0.28	0.40	0.32	0.24	0.03	0.20	0.46	0.65	0.86	1.03	1.19	1.31
ZF	0.18	0.30	0.22	0.14	0.07	0.30	0.56	0.75	0.96	1.13	1.29	1.41

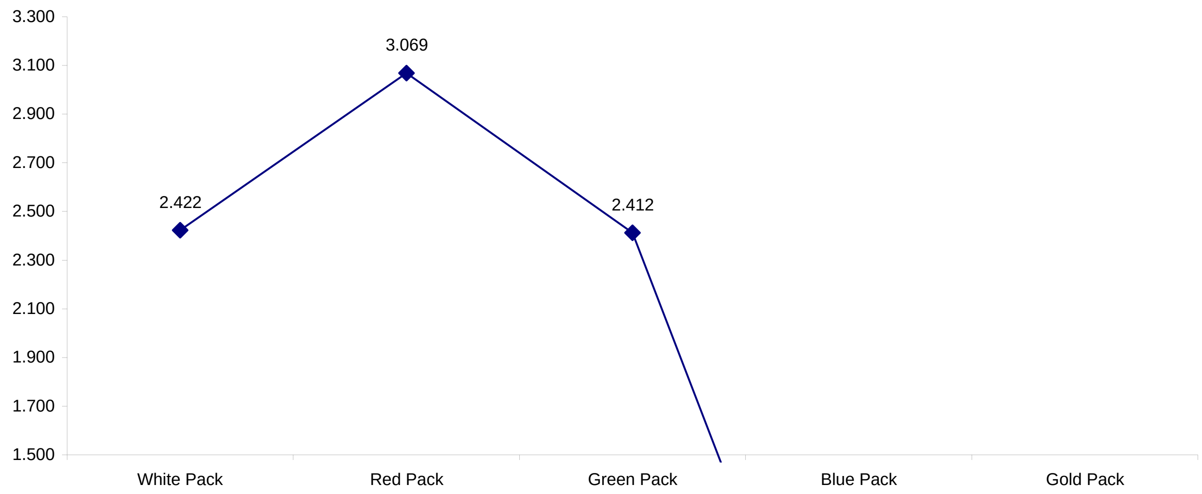
10y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
10y	1.11	1.23	1.15	1.07	0.86	0.63	0.38	0.18	0.02	0.20	0.36	0.47
ZN	0.85	0.97	0.89	0.81	0.60	0.37	0.12	0.08	0.28	0.46	0.61	0.73

10y ZN

	Last Yield	Net Last Yield	Last Price
White Pack	2.422	-4.750	9762.500
Red Pack	3.069	-5.500	9699.625
Green Pack	2.412	-5.000	9763.500
Blue Pack		-1.500	9579.625
Gold Pack		0.000	9547.375



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