The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

Want something added? Let me know: jgoulding@ghco.com

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Quotes

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	107.0781	107.025	1.738	1.85
ZF	113.5688	113.182	2.549	3.99
ZN	117.6250	117.200	3.330	5.95
2y	99.875	99.2800	1.816	1.92
5y	99.328	99.1050	2.642	4.63
10y	99.906	99.2900	3.509	8.22

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM08	97.485	2.515	66	0.180	JUN	
EDAU08	97.675	2.325	157	0.430	SEP	White
EDAZ08	97.590	2.410	248	0.679	DEC	Pack
EDAH09	97.575	2.425	339	0.928	MAR	
EDAM09	97.445	2.555	430	1.177	JUN	
EDAU09	97.265	2.735	521	1.427	SEP	Red Pack
EDAZ09	97.030	2.970	612	1.676	DEC	
EDAH10	96.850	3.150	703	1.925	MAR	
EDAM10	96.615	3.385	794	2.175	JUN	
EDAU10	96.420	3.580	885	2.424	SEP	Green
EDAZ10	96.225	3.775	976	2.673	DEC	Pack
EDAH11	96.060	3.940	1067	2.923	MAR	
EDAM11	95.915	4.085	1158	3.172	JUN	
EDAU11	95.825	4.175	1256	3.440	SEP	Blue Pack
EDAZ11	95.705	4.295	1347	3.690	DEC	
EDAH12	95.590	4.410	1438	3.939	MAR	
EDAM12	95.505	4.495	1529	4.188	JUN	
EDAU12	95.410	4.590	1620	4.438	SEP	Gold Pack
EDAZ12	95.270	4.730	1711	4.687	DEC	
EDAH13	95.285	4.715	1802	4.936	MAR	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	2.467	0.250	9758.125
Red Pack	2.914	1.625	9714.625
Green Pack	3.756	0.750	9633.000
Blue Pack	4.362	-0.875	9574.375
Gold Pack		0.250	9537.125

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

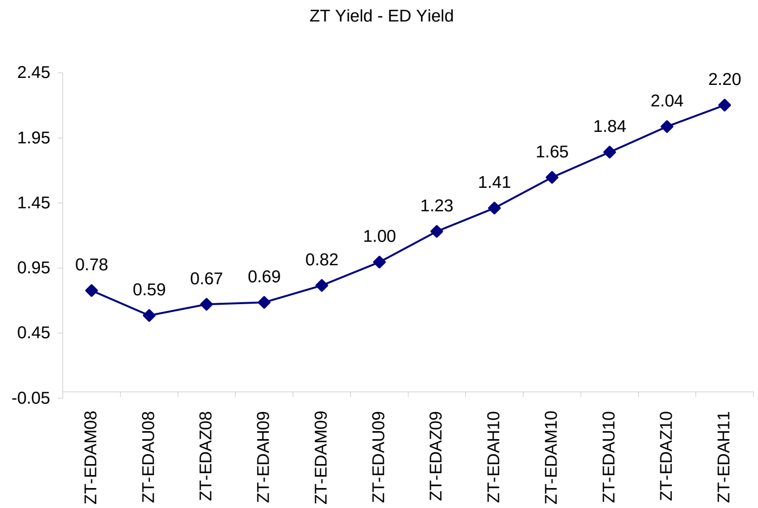
Correlations (Important)

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

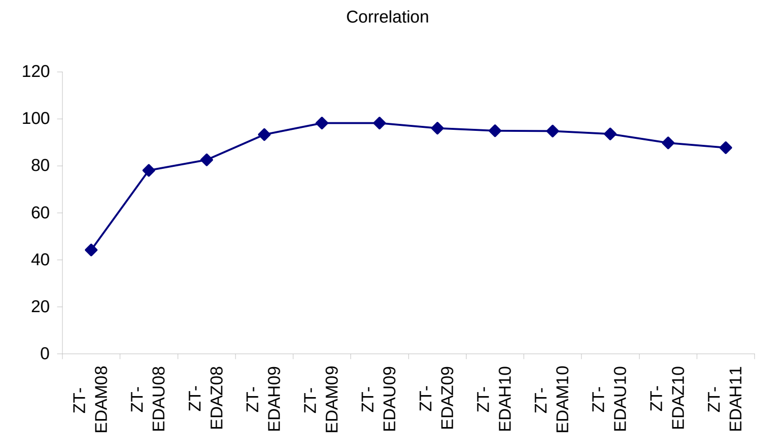
	ZT Spread Price	ZT Spread Yield	Spread Name	Correlation* (percent)
EDAM08	9.593	0.78	ZT-EDAM08	44.161
EDAU08	9.403	0.59	ZT-EDAU08	78.134
EDAZ08	9.488	0.67	ZT-EDAZ08	82.552
EDAH09	9.503	0.69	ZT-EDAH09	93.280
EDAM09	9.633	0.82	ZT-EDAM09	98.228
EDAU09	9.813	1.00	ZT-EDAU09	98.268
EDAZ09	10.048	1.23	ZT-EDAZ09	96.052
EDAH10	10.228	1.41	ZT-EDAH10	95.021
EDAM10	10.463	1.65	ZT-EDAM10	94.764
EDAU10	10.658	1.84	ZT-EDAU10	93.601
EDAZ10	10.853	2.04	ZT-EDAZ10	89.740
EDAH11	11.018	2.20	ZT-EDAH11	87.715

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	0.180	1.85	1.67	ZT-EDAM08
EDAU08	0.430	1.85	1.42	ZT-EDAU08
EDAZ08	0.679	1.85	1.17	ZT-EDAZ08
EDAH09	0.928	1.85	0.92	ZT-EDAH09
EDAM09	1.177	1.85	0.67	ZT-EDAM09
EDAU09	1.427	1.85	0.42	ZT-EDAU09
EDAZ09	1.676	1.85	0.17	ZT-EDAZ09
EDAH10	1.925	1.85	(0.08)	ZT-EDAH10
EDAM10	2.175	1.85	(0.33)	ZT-EDAM10
EDAU10	2.424	1.85	(0.58)	ZT-EDAU10
EDAZ10	2.673	1.85	(0.83)	ZT-EDAZ10
EDAH11	2.923	1.85	(1.08)	ZT-EDAH11

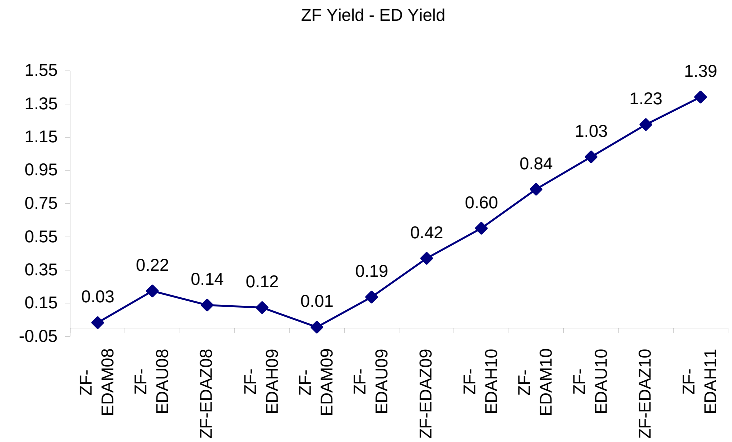
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

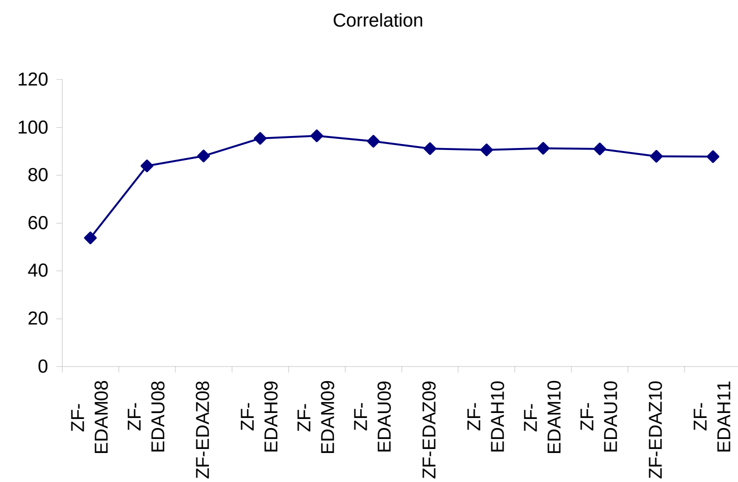
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM08	16.084	0.03	ZF-EDAM08	53.720
EDAU08	15.894	0.22	ZF-EDAU08	83.887
EDAZ08	15.979	0.14	ZF-EDAZ08	88.085
EDAH09	15.994	0.12	ZF-EDAH09	95.392
EDAM09	16.124	0.01	ZF-EDAM09	96.464
EDAU09	16.304	0.19	ZF-EDAU09	94.137
EDAZ09	16.539	0.42	ZF-EDAZ09	91.047
EDAH10	16.719	0.60	ZF-EDAH10	90.568
EDAM10	16.954	0.84	ZF-EDAM10	91.257
EDAU10	17.149	1.03	ZF-EDAU10	90.905
EDAZ10	17.344	1.23	ZF-EDAZ10	87.902
EDAH11	17.509	1.39	ZF-EDAH11	87.782

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	0.180	3.99	3.81	ZF-EDAM08
EDAU08	0.430	3.99	3.56	ZF-EDAU08
EDAZ08	0.679	3.99	3.31	ZF-EDAZ08
EDAH09	0.928	3.99	3.06	ZF-EDAH09
EDAM09	1.177	3.99	2.82	ZF-EDAM09
EDAU09	1.427	3.99	2.57	ZF-EDAU09
EDAZ09	1.676	3.99	2.32	ZF-EDAZ09
EDAH10	1.925	3.99	2.07	ZF-EDAH10
EDAM10	2.175	3.99	1.82	ZF-EDAM10
EDAU10	2.424	3.99	1.57	ZF-EDAU10
EDAZ10	2.673	3.99	1.32	ZF-EDAZ10
EDAH11	2.923	3.99	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	20.140	0.82	ZN-EDAM08	79.043
EDAU08	19.950	1.01	ZN-EDAU08	93.693
EDAZ08	20.035	0.92	ZN-EDAZ08	96.089
EDAH09	20.050	0.91	ZN-EDAH09	93.202
EDAM09	20.180	0.78	ZN-EDAM09	83.776
EDAU09	20.360	0.60	ZN-EDAU09	75.437
EDAZ09	20.595	0.36	ZN-EDAZ09	69.695
EDAH10	20.775	0.18	ZN-EDAH10	90.568
EDAM10	21.010	0.05	ZN-EDAM10	91.257
EDAU10	21.205	0.25	ZN-EDAU10	90.905
EDAZ10	21.400	0.44	ZN-EDAZ10	87.902
EDAH11	21.565	0.61	ZN-EDAH11	87.782

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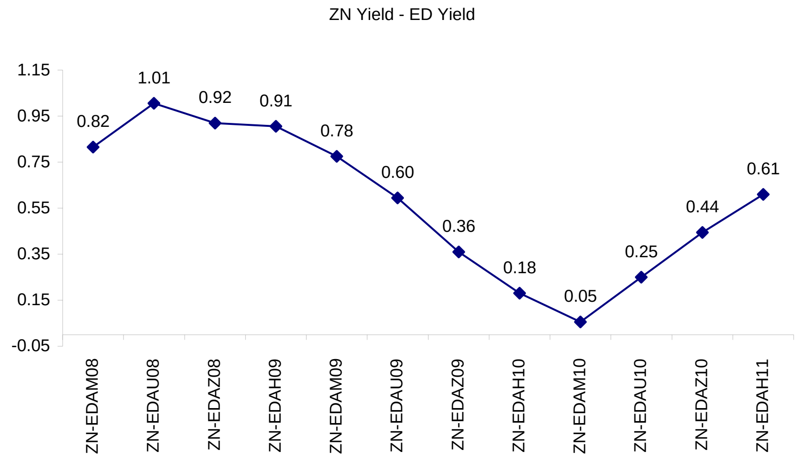
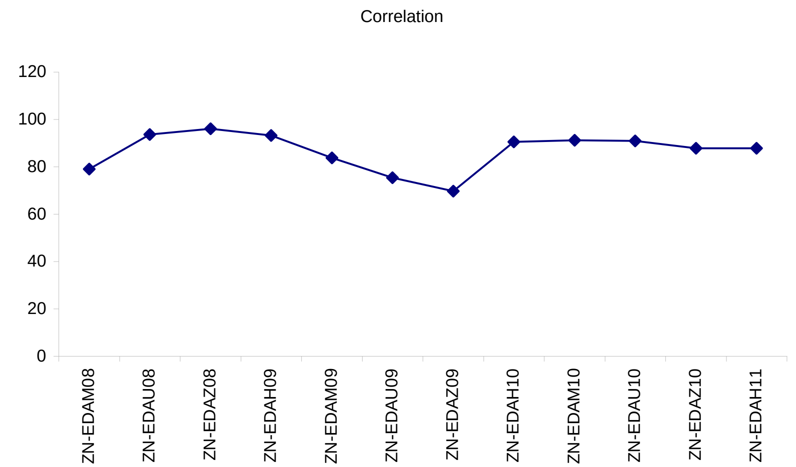


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM08	0.180	5.95	5.77	ZN-EDAM08
EDAU08	0.430	5.95	5.52	ZN-EDAU08
EDAZ08	0.679	5.95	5.27	ZN-EDAZ08
EDAH09	0.928	5.95	5.02	ZN-EDAH09
EDAM09	1.177	5.95	4.77	ZN-EDAM09
EDAU09	1.427	5.95	4.52	ZN-EDAU09
EDAZ09	1.676	5.95	4.28	ZN-EDAZ09
EDAH10	1.925	5.95	4.03	ZN-EDAH10
EDAM10	2.175	5.95	3.78	ZN-EDAM10
EDAU10	2.424	5.95	3.53	ZN-EDAU10
EDAZ10	2.673	5.95	3.28	ZN-EDAZ10
EDAH11	2.923	5.95	3.03	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	2.390	0.70	2y-EDAM08	-70.034
EDAU08	2.200	0.51	2y-EDAU08	-92.735
EDAZ08	2.285	0.59	2y-EDAZ08	-70.034
EDAH09	2.300	0.61	2y-EDAH09	-98.123
EDAM09	2.430	0.74	2y-EDAM09	-93.335
EDAU09	2.610	0.92	2y-EDAU09	-89.391
EDAZ09	2.845	1.15	2y-EDAZ09	-83.202
EDAH10	3.025	1.33	2y-EDAH10	-82.102
EDAM10	3.260	1.57	2y-EDAM10	-82.999
EDAU10	3.455	1.76	2y-EDAU10	-82.204
EDAZ10	3.650	1.96	2y-EDAZ10	-77.467
EDAH11	3.815	2.12	2y-EDAH11	-77.622

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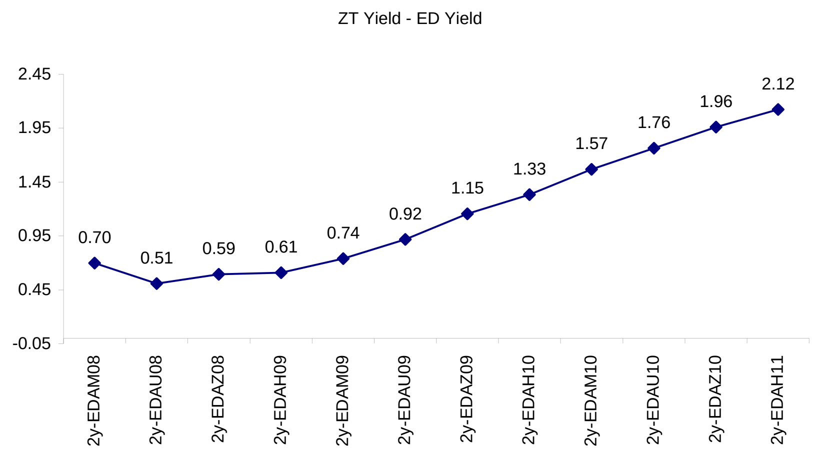
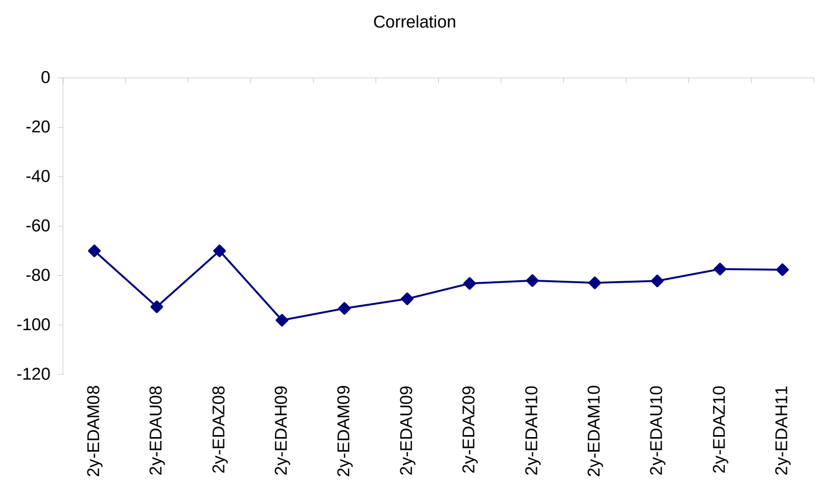


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM08	0.180	1.92	1.74	2y-EDAM08
EDAU08	0.430	1.92	1.49	2y-EDAU08
EDAZ08	0.679	1.92	1.24	2y-EDAZ08
EDAH09	0.928	1.92	0.99	2y-EDAH09
EDAM09	1.177	1.92	0.74	2y-EDAM09
EDAU09	1.427	1.92	0.49	2y-EDAU09
EDAZ09	1.676	1.92	0.24	2y-EDAZ09
EDAH10	1.925	1.92	(0.01)	2y-EDAH10
EDAM10	2.175	1.92	(0.26)	2y-EDAM10
EDAU10	2.424	1.92	(0.51)	2y-EDAU10
EDAZ10	2.673	1.92	(0.75)	2y-EDAZ10
EDAH11	2.923	1.92	(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	1.843	0.13	5y-EDAM08	-72.784
EDAU08	1.653	0.32	5y-EDAU08	-94.234
EDAZ08	1.738	0.23	5y-EDAZ08	-72.784
EDAH09	1.753	0.22	5y-EDAH09	-98.318
EDAM09	1.883	0.09	5y-EDAM09	-92.856
EDAU09	2.063	0.09	5y-EDAU09	-87.739
EDAZ09	2.298	0.33	5y-EDAZ09	-82.152
EDAH10	2.478	0.51	5y-EDAH10	-81.640
EDAM10	2.713	0.74	5y-EDAM10	-83.167
EDAU10	2.908	0.94	5y-EDAU10	-83.274
EDAZ10	3.103	1.13	5y-EDAZ10	-80.132
EDAH11	3.268	1.30	5y-EDAH11	-81.608

Price = Outright Decimal Price - Euro Contract Price
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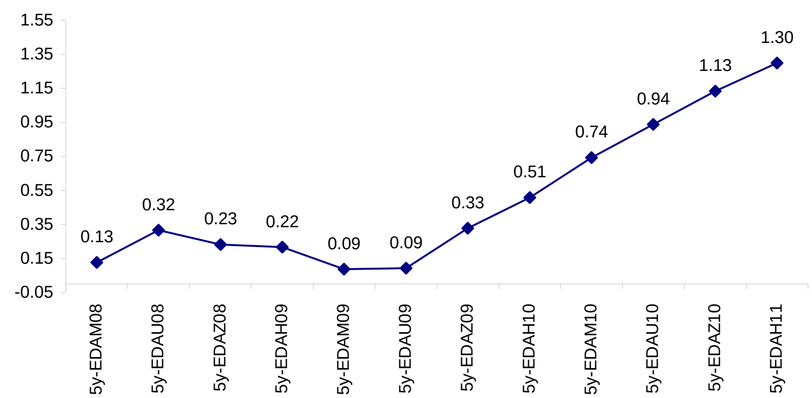
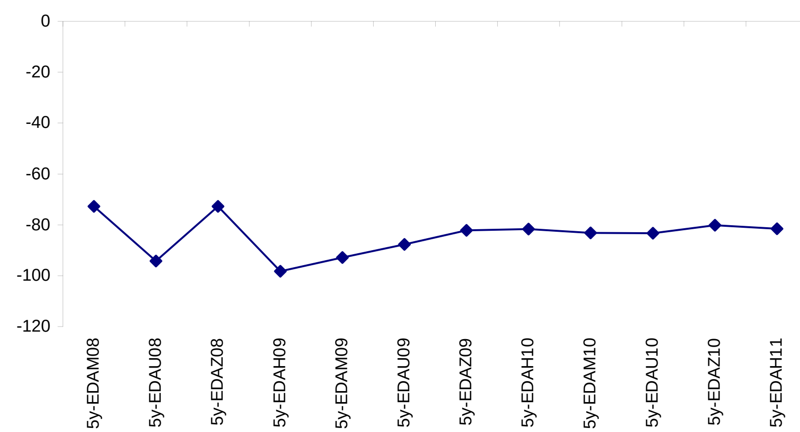
5y - ED Yield



	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAM08	0.180	4.63	4.45	5y-EDAM08
EDAU08	0.430	4.63	4.20	5y-EDAU08
EDAZ08	0.679	4.63	3.95	5y-EDAZ08
EDAH09	0.928	4.63	3.70	5y-EDAH09
EDAM09	1.177	4.63	3.45	5y-EDAM09
EDAU09	1.427	4.63	3.20	5y-EDAU09
EDAZ09	1.676	4.63	2.95	5y-EDAZ09
EDAH10	1.925	4.63	2.71	5y-EDAH10
EDAM10	2.175	4.63	2.46	5y-EDAM10
EDAU10	2.424	4.63	2.21	5y-EDAU10
EDAZ10	2.673	4.63	1.96	5y-EDAZ10
EDAH11	2.923	4.63	1.71	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	1.843	0.99	10y-EDAM08	-63.591
EDAU08	1.653	1.18	10y-EDAU08	-84.516
EDAZ08	1.738	1.10	10y-EDAZ08	-63.591
EDAH09	1.753	1.08	10y-EDAH09	-89.849
EDAM09	1.883	0.95	10y-EDAM09	-87.820
EDAU09	2.063	0.77	10y-EDAU09	-81.903
EDAZ09	2.298	0.54	10y-EDAZ09	-80.154
EDAH10	2.478	0.36	10y-EDAH10	-80.580
EDAM10	2.713	0.12	10y-EDAM10	-83.029
EDAU10	2.908	0.07	10y-EDAU10	-85.038
EDAZ10	3.103	0.27	10y-EDAZ10	-86.787
EDAH11	3.268	0.43	10y-EDAH11	-90.609

Price = Outright Decimal Price - Euro Contract Price
Yield = ABS (Proxy Yield - Implied Euro Contract yield)
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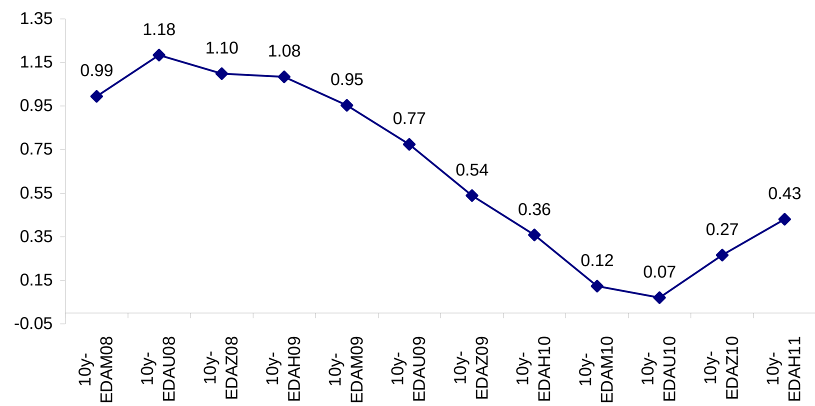
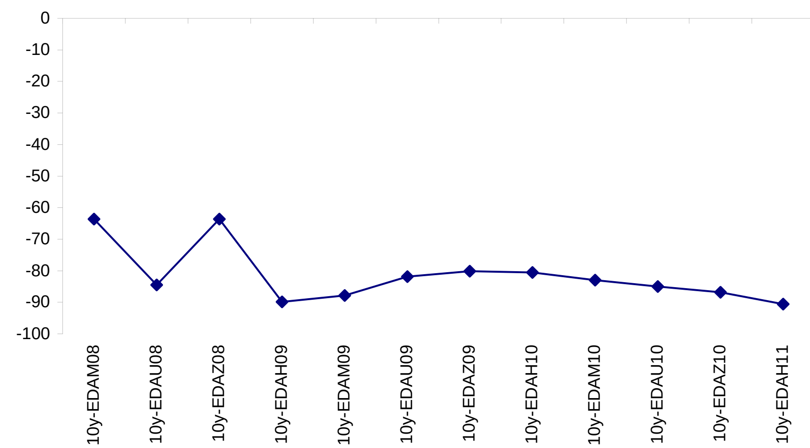
10y Yield - ED Yield



	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAM08	0.180	8.22	8.04	10y-EDAM08
EDAU08	0.430	8.22	7.79	10y-EDAU08
EDAZ08	0.679	8.22	7.54	10y-EDAZ08
EDAH09	0.928	8.22	7.29	10y-EDAH09
EDAM09	1.177	8.22	7.04	10y-EDAM09
EDAU09	1.427	8.22	6.79	10y-EDAU09
EDAZ09	1.676	8.22	6.54	10y-EDAZ09
EDAH10	1.925	8.22	6.29	10y-EDAH10
EDAM10	2.175	8.22	6.04	10y-EDAM10
EDAU10	2.424	8.22	5.79	10y-EDAU10
EDAZ10	2.673	8.22	5.54	10y-EDAZ10
EDAH11	2.923	8.22	5.29	10y-EDAH11

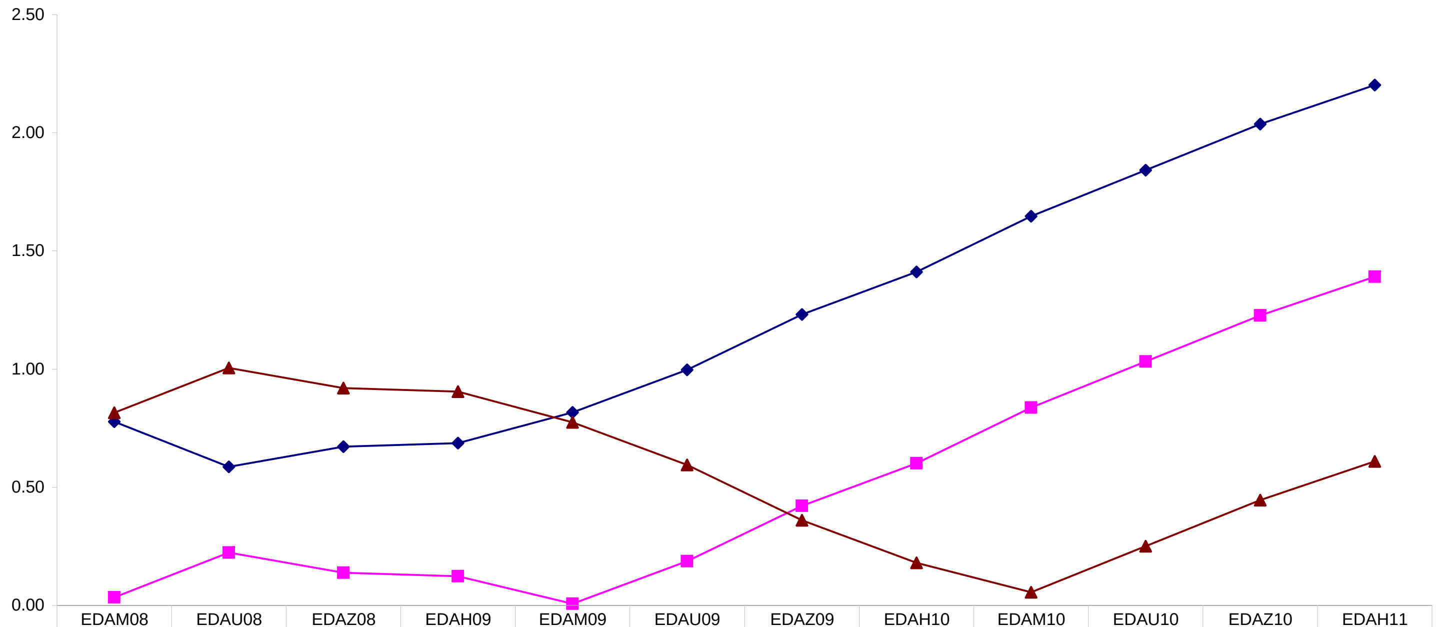
The farther away from 0 the spread duration is the riskier the trade.

Correlation



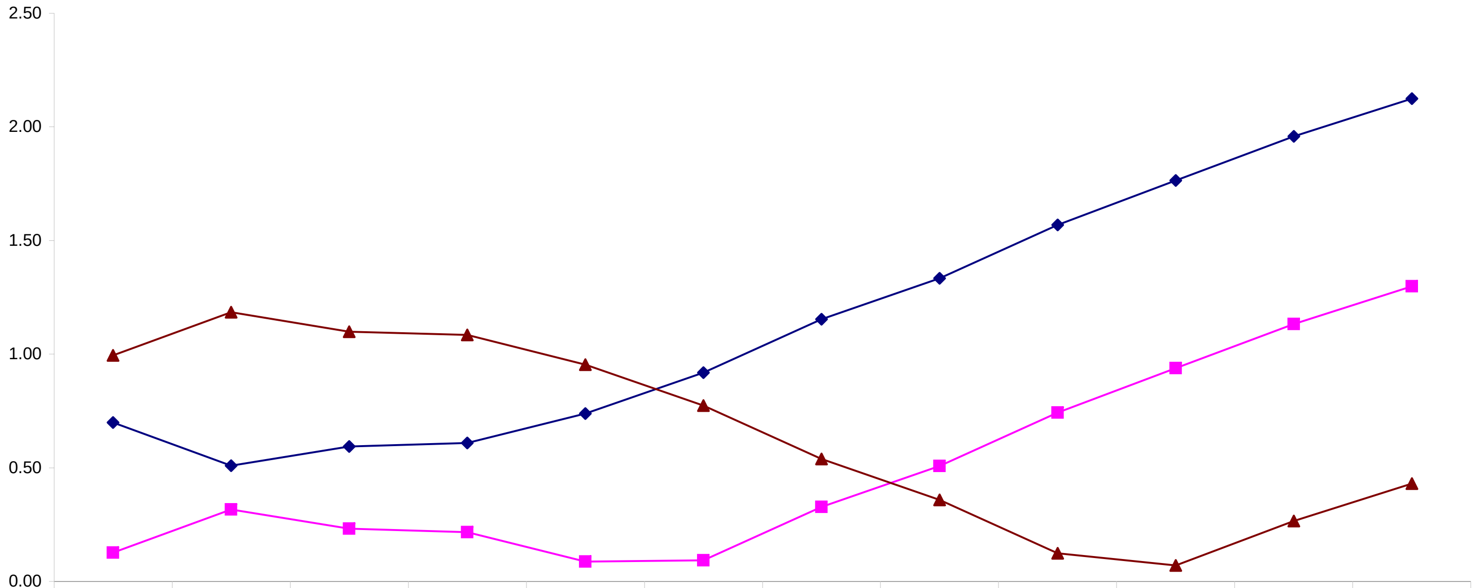
Dirty TED Curve

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	0.78	0.59	0.67	0.69	0.82	1.00	1.23	1.41	1.65	1.84	2.04	2.20
ZF	0.03	0.22	0.14	0.12	0.01	0.19	0.42	0.60	0.84	1.03	1.23	1.39
ZN	0.82	1.01	0.92	0.91	0.78	0.60	0.36	0.18	0.05	0.25	0.44	0.61

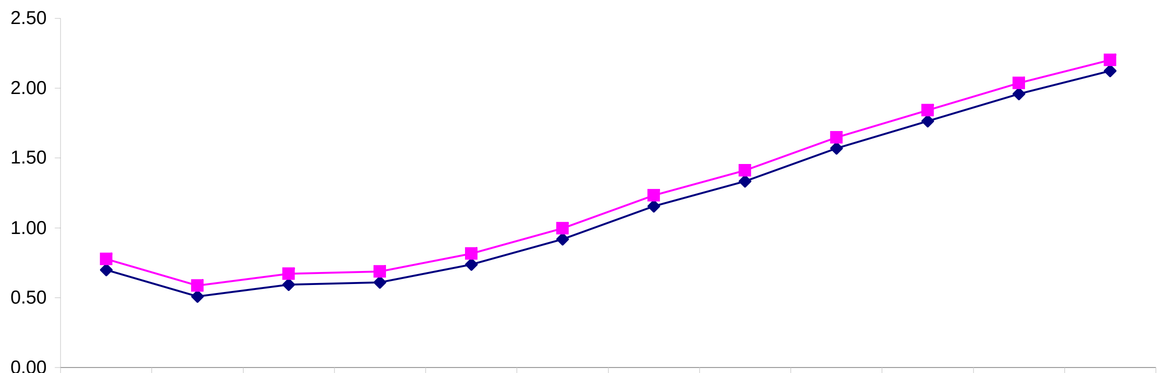
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
2y	0.70	0.51	0.59	0.61	0.74	0.92	1.15	1.33	1.57	1.76	1.96	2.12
5y	0.13	0.32	0.23	0.22	0.09	0.09	0.33	0.51	0.74	0.94	1.13	1.30
10y	0.99	1.18	1.10	1.08	0.95	0.77	0.54	0.36	0.12	0.07	0.27	0.43

2y 5y 10y

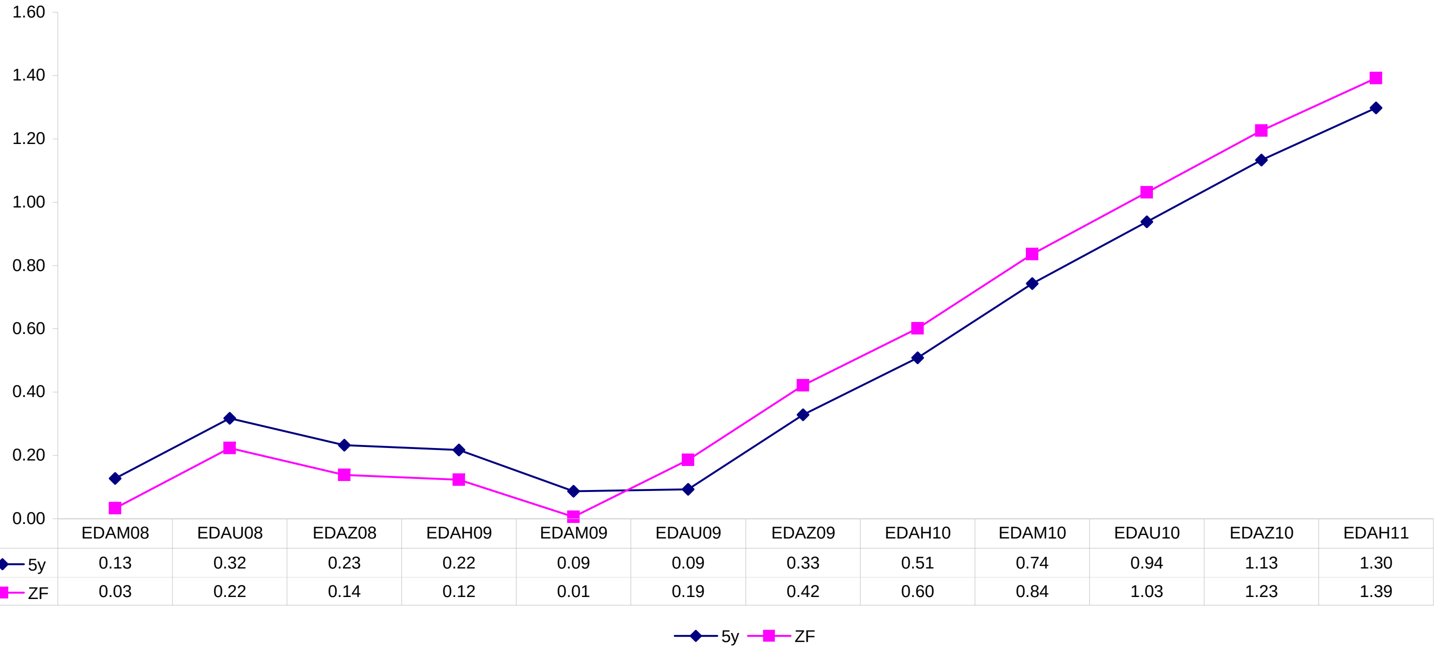
2y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
2y	0.70	0.51	0.59	0.61	0.74	0.92	1.15	1.33	1.57	1.76	1.96	2.12
ZT	0.78	0.59	0.67	0.69	0.82	1.00	1.23	1.41	1.65	1.84	2.04	2.20

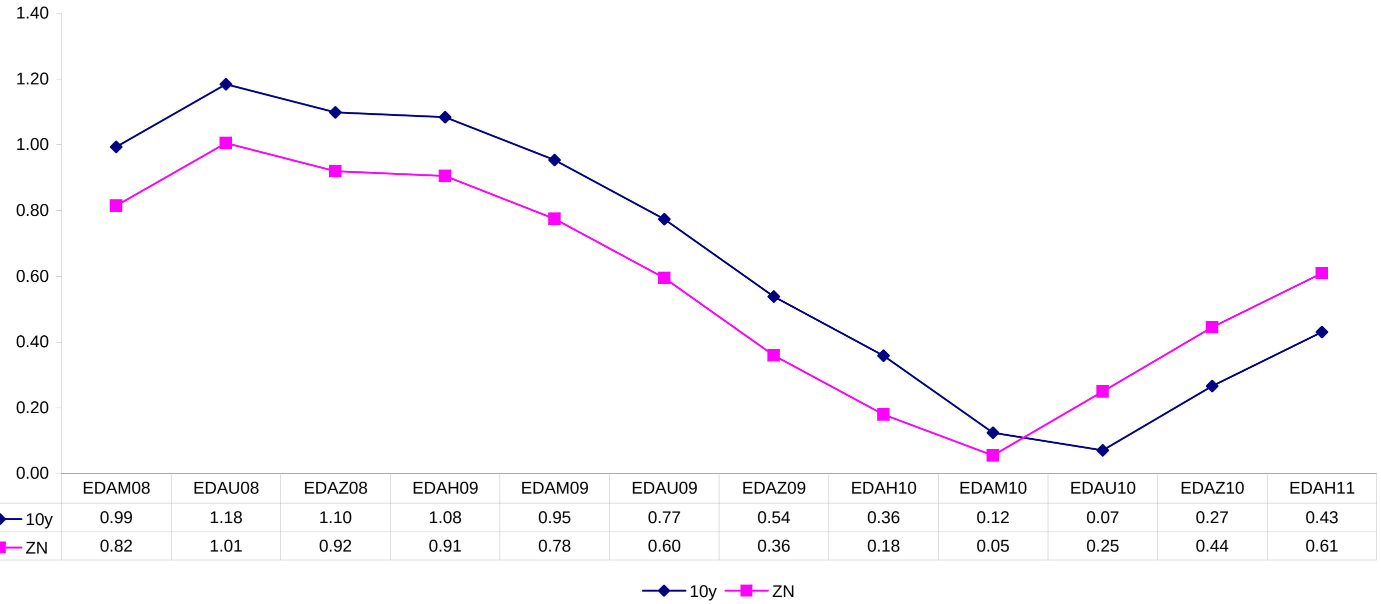
2y ZT

5y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
5y	0.13	0.32	0.23	0.22	0.09	0.09	0.33	0.51	0.74	0.94	1.13	1.30
ZF	0.03	0.22	0.14	0.12	0.01	0.19	0.42	0.60	0.84	1.03	1.23	1.39

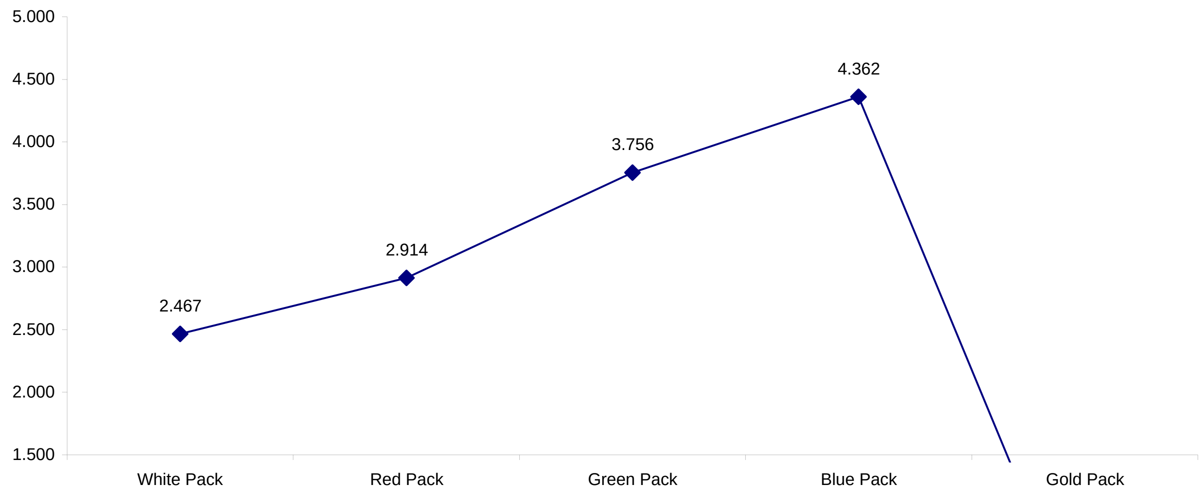
10y Basis TED Curve



	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11
10y	0.99	1.18	1.10	1.08	0.95	0.77	0.54	0.36	0.12	0.07	0.27	0.43
ZN	0.82	1.01	0.92	0.91	0.78	0.60	0.36	0.18	0.05	0.25	0.44	0.61

Packs

	Last Yield	Net Last Yield	Last Price
White Pack	2.467	0.250	9758.125
Red Pack	2.914	1.625	9714.625
Green Pack	3.756	0.750	9633.000
Blue Pack	4.362	-0.875	9574.375
Gold Pack		0.250	9537.125



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