The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

Pg 1 Quotes

Pg 2 Dirty TED: ZT vs Eurodollar Contracts

Pg 3 Dirty TED: ZF vs Eurodollar Contracts

Pg 4 Dirty TED: ZN vs Eurodollar Contracts

Pg 5 TERM TED: 2y vs Eurodollar Contracts

Pg 6 TERM TED: 5y vs Eurodollar Contracts

Pg 7 TERM TED: 10y vs Eurodollar Contracts

Pg 8 Dirty TED Curve

Pg 9 TED Curve

Pg 10 2y Basis TED Curve

Pg 11 5y Basis TED Curve

Pg 12 10y Basis TED Curve

Pg 13 Packs

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

Quotes

Treasury Futures and Cash

	Last Decimal	Last 32	Last Yield*	MDuration
ZT	108.5781	108.1850	0.903	1.888
ZF	117.5688	117.1820	1.664	4.086
ZN	122.4844	122.1550	2.543	5.946
2y	99.8813	99.2820	0.932	1.940
5y	99.4531	99.1450	1.866	4.726
10y	98.7500	98.2400	2.897	8.518

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	98.9250	1.075	63	0.1720	JUN	White Pack
EDAU09	98.8850	1.115	154	0.4213	SEP	
EDAZ09	98.6800	1.320	245	0.6706	DEC	
EDAH10	98.5750	1.425	336	0.9199	MAR	
EDAM10	98.3850	1.615	427	1.1692	JUN	Red Pack
EDAU10	98.1950	1.805	518	1.4185	SEP	
EDAZ10	97.9750	2.025	609	1.6679	DEC	
EDAH11	97.8050	2.195	700	1.9172	MAR	
EDAM11	97.5850	2.415	791	2.1665	JUN	Green Pack
EDAU11	97.3750	2.625	889	2.4350	SEP	
EDAZ11	97.1400	2.860	980	2.6843	DEC	
EDAH12	96.9900	3.010	1,071	2.9336	MAR	
EDAM12	96.8400	3.160	1,162	3.1829	JUN	Blue Pack
EDAU12	96.7000	3.300	1,253	3.4322	SEP	
EDAZ12	96.5750	3.425	1,344	3.6816	DEC	
EDAH13	96.5100	3.490	1,435	3.9309	MAR	
EDAM13	96.4300	3.570	1,526	4.1802	JUN	Gold Pack
EDAU13	96.3500	3.650	1,617	4.4295	SEP	
EDAZ13	96.2550	3.745	1,708	4.6788	DEC	
EDAH14	96.2100	3.790	1,799	4.9281	MAR	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.255	1.375	9876.63
Red Pack	1.946	1.500	9809.00
Green Pack	2.784	2.000	9727.25
Blue Pack		0.250	9666.38
Gold Pack		0.000	9632.50

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)

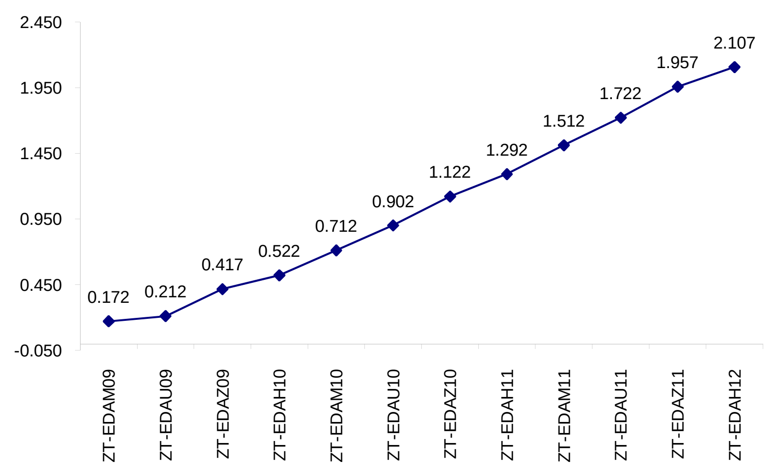
Correlations for the US Cash Treasuries are done on a YIELD basis.
Therefore, you'll see negative values. The reason for this is due to
the new issues. Every new issue takes too long to 'catch up' because
the correlation formula looks back 10days. So, it's much easier
to formulate the correlations based on yield than price.

Dirty TED: ZT vs Eurodollar Contracts

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.65	0.172	ZT-EDAM09	-22
EDAU09	9.69	0.212	ZT-EDAU09	69
EDAZ09	9.90	0.417	ZT-EDAZ09	89
EDAH10	10.00	0.522	ZT-EDAH10	93
EDAM10	10.19	0.712	ZT-EDAM10	95
EDAU10	10.38	0.902	ZT-EDAU10	96
EDAZ10	10.60	1.122	ZT-EDAZ10	96
EDAH11	10.77	1.292	ZT-EDAH11	97
EDAM11	10.99	1.512	ZT-EDAM11	97
EDAU11	11.20	1.722	ZT-EDAU11	97
EDAZ11	11.44	1.957	ZT-EDAZ11	97
EDAH12	11.59	2.107	ZT-EDAH12	96

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

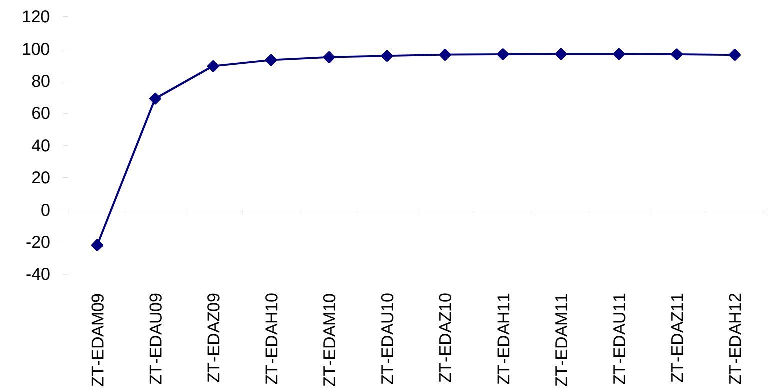
ZT Yield - ED Yield



	ED Duration as Fraction of year	ZT Duration	Spread Duration	
EDAM09	0.1720	1.8875	1.7155	ZT-EDAM09
EDAU09	0.4213	1.8875	1.4662	ZT-EDAU09
EDAZ09	0.6706	1.8875	1.2169	ZT-EDAZ09
EDAH10	0.9199	1.8875	0.9676	ZT-EDAH10
EDAM10	1.1692	1.8875	0.7183	ZT-EDAM10
EDAU10	1.4185	1.8875	0.4690	ZT-EDAU10
EDAZ10	1.6679	1.8875	0.2197	ZT-EDAZ10
EDAH11	1.9172	1.8875	-0.0297	ZT-EDAH11
EDAM11	2.1665	1.8875	-0.2790	ZT-EDAM11
EDAU11	2.4350	1.8875	-0.5475	ZT-EDAU11
EDAZ11	2.6843	1.8875	-0.7968	ZT-EDAZ11
EDAH12	2.9336	1.8875	-1.0461	ZT-EDAH12

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

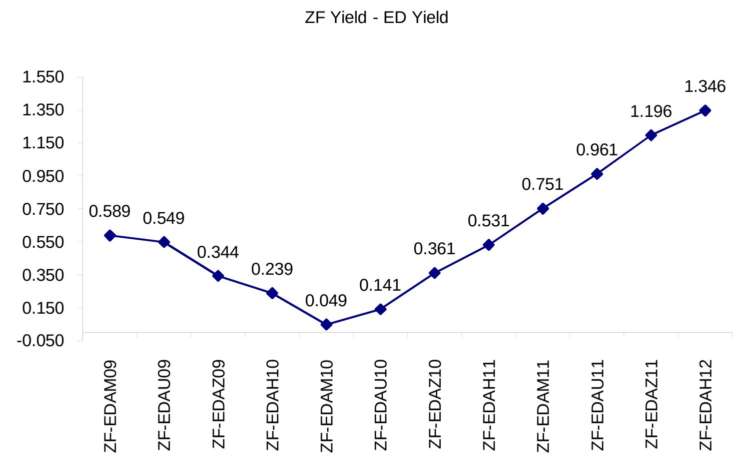
Correlation



Dirty TED: ZF vs Eurodollar Contracts

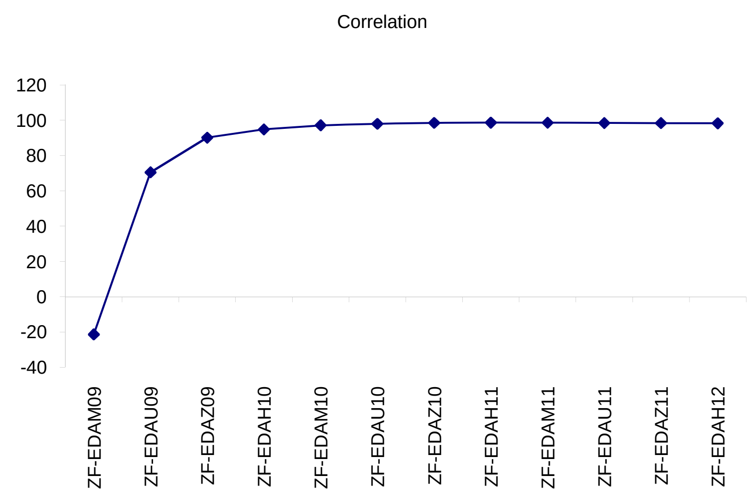
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	18.64	0.589	ZF-EDAM09	-21
EDAU09	18.68	0.549	ZF-EDAU09	71
EDAZ09	18.89	0.344	ZF-EDAZ09	90
EDAH10	18.99	0.239	ZF-EDAH10	95
EDAM10	19.18	0.049	ZF-EDAM10	97
EDAU10	19.37	0.141	ZF-EDAU10	98
EDAZ10	19.59	0.361	ZF-EDAZ10	99
EDAH11	19.76	0.531	ZF-EDAH11	99
EDAM11	19.98	0.751	ZF-EDAM11	99
EDAU11	20.19	0.961	ZF-EDAU11	98
EDAZ11	20.43	1.196	ZF-EDAZ11	98
EDAH12	20.58	1.346	ZF-EDAH12	98

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	
EDAM09	0.1720	4.0863	3.9144	ZF-EDAM09
EDAU09	0.4213	4.0863	3.6651	ZF-EDAU09
EDAZ09	0.6706	4.0863	3.4158	ZF-EDAZ09
EDAH10	0.9199	4.0863	3.1664	ZF-EDAH10
EDAM10	1.1692	4.0863	2.9171	ZF-EDAM10
EDAU10	1.4185	4.0863	2.6678	ZF-EDAU10
EDAZ10	1.6679	4.0863	2.4185	ZF-EDAZ10
EDAH11	1.9172	4.0863	2.1692	ZF-EDAH11
EDAM11	2.1665	4.0863	1.9199	ZF-EDAM11
EDAU11	2.4350	4.0863	1.6514	ZF-EDAU11
EDAZ11	2.6843	4.0863	1.4021	ZF-EDAZ11
EDAH12	2.9336	4.0863	1.1527	ZF-EDAH12

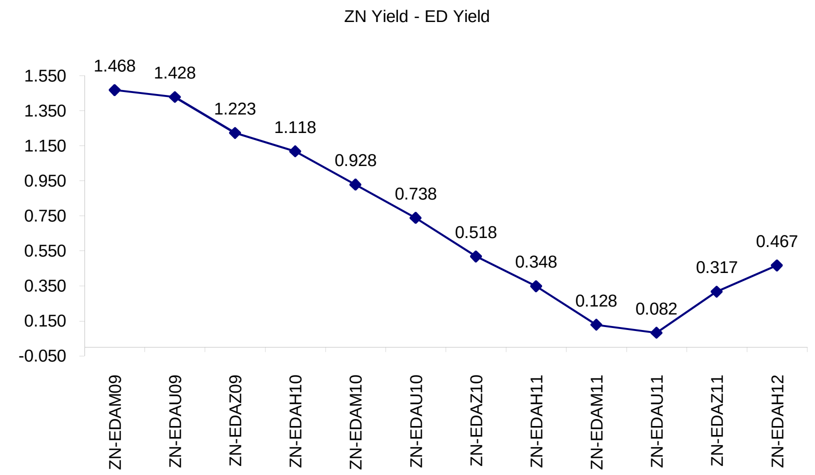
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

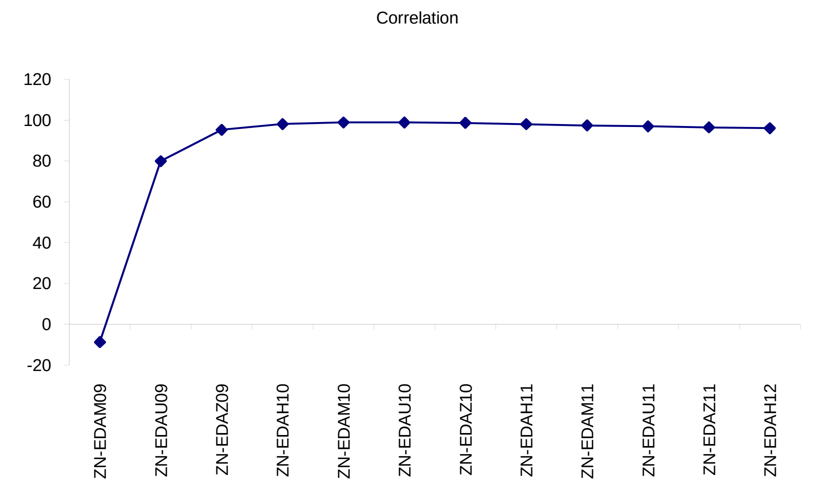
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	23.56	1.468	ZN-EDAM09	-9
EDAU09	23.60	1.428	ZN-EDAU09	80
EDAZ09	23.80	1.223	ZN-EDAZ09	95
EDAH10	23.91	1.118	ZN-EDAH10	98
EDAM10	24.10	0.928	ZN-EDAM10	99
EDAU10	24.29	0.738	ZN-EDAU10	99
EDAZ10	24.51	0.518	ZN-EDAZ10	99
EDAH11	24.68	0.348	ZN-EDAH11	98
EDAM11	24.90	0.128	ZN-EDAM11	97
EDAU11	25.11	0.082	ZN-EDAU11	97
EDAZ11	25.34	0.317	ZN-EDAZ11	96
EDAH12	25.49	0.467	ZN-EDAH12	96

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	
EDAM09	0.1720	5.9465	5.7745	ZN-EDAM09
EDAU09	0.4213	5.9465	5.5252	ZN-EDAU09
EDAZ09	0.6706	5.9465	5.2759	ZN-EDAZ09
EDAH10	0.9199	5.9465	5.0265	ZN-EDAH10
EDAM10	1.1692	5.9465	4.7772	ZN-EDAM10
EDAU10	1.4185	5.9465	4.5279	ZN-EDAU10
EDAZ10	1.6679	5.9465	4.2786	ZN-EDAZ10
EDAH11	1.9172	5.9465	4.0293	ZN-EDAH11
EDAM11	2.1665	5.9465	3.7800	ZN-EDAM11
EDAU11	2.4350	5.9465	3.5115	ZN-EDAU11
EDAZ11	2.6843	5.9465	3.2622	ZN-EDAZ11
EDAH12	2.9336	5.9465	3.0128	ZN-EDAH12

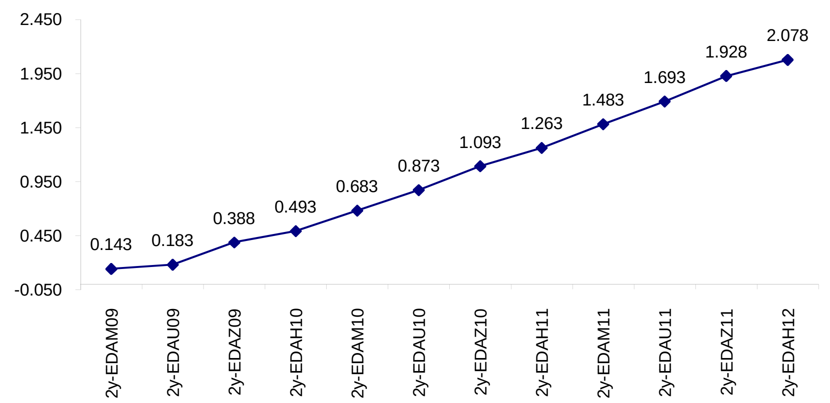
The farther away from 0 the spread duration is the riskier the trade.



	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.96	0.143	2y-EDAM09	14
EDAU09	1.00	0.183	2y-EDAU09	-72
EDAZ09	1.20	0.388	2y-EDAZ09	-89
EDAH10	1.31	0.493	2y-EDAH10	-92
EDAM10	1.50	0.683	2y-EDAM10	-93
EDAU10	1.69	0.873	2y-EDAU10	-94
EDAZ10	1.91	1.093	2y-EDAZ10	-94
EDAH11	2.08	1.263	2y-EDAH11	-94
EDAM11	2.30	1.483	2y-EDAM11	-94
EDAU11	2.51	1.693	2y-EDAU11	-94
EDAZ11	2.74	1.928	2y-EDAZ11	-93
EDAH12	2.89	2.078	2y-EDAH12	-93

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

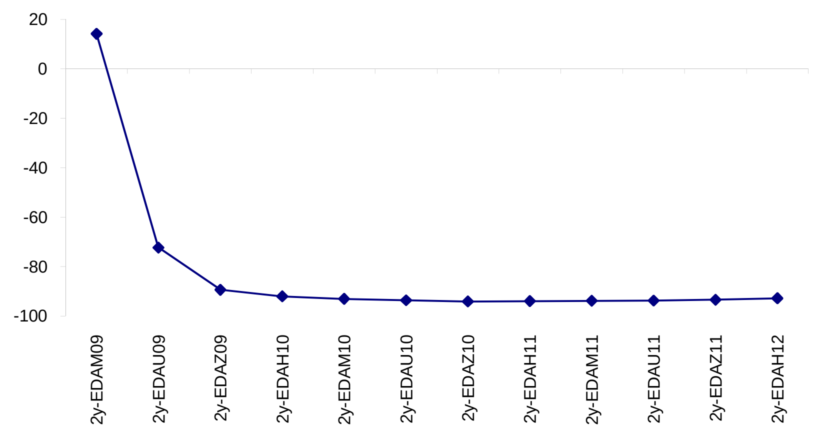
ZT Yield - ED Yield



	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM09	0.1720	1.9397	1.7678	2y-EDAM09
EDAU09	0.4213	1.9397	1.5184	2y-EDAU09
EDAZ09	0.6706	1.9397	1.2691	2y-EDAZ09
EDAH10	0.9199	1.9397	1.0198	2y-EDAH10
EDAM10	1.1692	1.9397	0.7705	2y-EDAM10
EDAU10	1.4185	1.9397	0.5212	2y-EDAU10
EDAZ10	1.6679	1.9397	0.2719	2y-EDAZ10
EDAH11	1.9172	1.9397	0.0225	2y-EDAH11
EDAM11	2.1665	1.9397	-0.2268	2y-EDAM11
EDAU11	2.4350	1.9397	-0.4953	2y-EDAU11
EDAZ11	2.6843	1.9397	-0.7446	2y-EDAZ11
EDAH12	2.9336	1.9397	-0.9939	2y-EDAH12

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

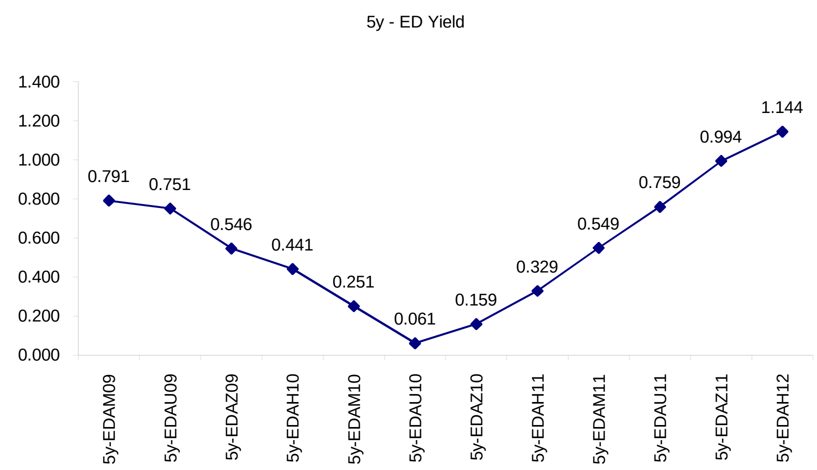
Correlation



TERM TED: 5y vs Eurodollar Contracts

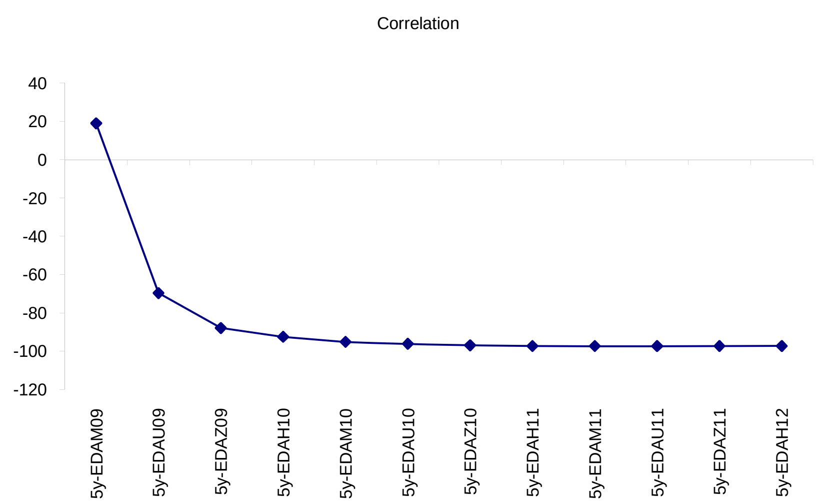
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.53	0.791	5y-EDAM09	19
EDAU09	0.57	0.751	5y-EDAU09	-70
EDAZ09	0.77	0.546	5y-EDAZ09	-88
EDAH10	0.88	0.441	5y-EDAH10	-92
EDAM10	1.07	0.251	5y-EDAM10	-95
EDAU10	1.26	0.061	5y-EDAU10	-96
EDAZ10	1.48	0.159	5y-EDAZ10	-97
EDAH11	1.65	0.329	5y-EDAH11	-97
EDAM11	1.87	0.549	5y-EDAM11	-97
EDAU11	2.08	0.759	5y-EDAU11	-97
EDAZ11	2.31	0.994	5y-EDAZ11	-97
EDAH12	2.46	1.144	5y-EDAH12	-97

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	
EDAM09	0.1720	4.7263	4.5543	5y-EDAM09
EDAU09	0.4213	4.7263	4.3050	5y-EDAU09
EDAZ09	0.6706	4.7263	4.0557	5y-EDAZ09
EDAH10	0.9199	4.7263	3.8064	5y-EDAH10
EDAM10	1.1692	4.7263	3.5571	5y-EDAM10
EDAU10	1.4185	4.7263	3.3077	5y-EDAU10
EDAZ10	1.6679	4.7263	3.0584	5y-EDAZ10
EDAH11	1.9172	4.7263	2.8091	5y-EDAH11
EDAM11	2.1665	4.7263	2.5598	5y-EDAM11
EDAU11	2.4350	4.7263	2.2913	5y-EDAU11
EDAZ11	2.6843	4.7263	2.0420	5y-EDAZ11
EDAH12	2.9336	4.7263	1.7927	5y-EDAH12

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

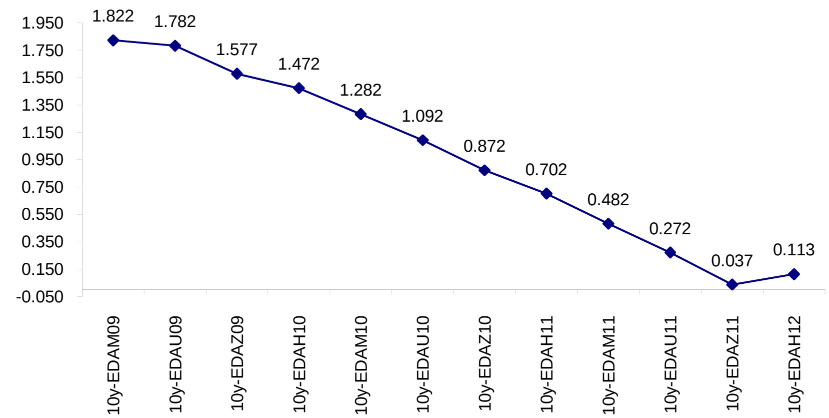


TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.53	1.822	10y-EDAM09	22
EDAU09	0.57	1.782	10y-EDAU09	-69
EDAZ09	0.77	1.577	10y-EDAZ09	-89
EDAH10	0.88	1.472	10y-EDAH10	-94
EDAM10	1.07	1.282	10y-EDAM10	-97
EDAU10	1.26	1.092	10y-EDAU10	-98
EDAZ10	1.48	0.872	10y-EDAZ10	-98
EDAH11	1.65	0.702	10y-EDAH11	-99
EDAM11	1.87	0.482	10y-EDAM11	-99
EDAU11	2.08	0.272	10y-EDAU11	-99
EDAZ11	2.31	0.037	10y-EDAZ11	-99
EDAH12	2.46	0.113	10y-EDAH12	-99

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	
EDAM09	0.1720	8.5175	8.3456	10y-EDAM09
EDAU09	0.4213	8.5175	8.0963	10y-EDAU09
EDAZ09	0.6706	8.5175	7.8469	10y-EDAZ09
EDAH10	0.9199	8.5175	7.5976	10y-EDAH10
EDAM10	1.1692	8.5175	7.3483	10y-EDAM10
EDAU10	1.4185	8.5175	7.0990	10y-EDAU10
EDAZ10	1.6679	8.5175	6.8497	10y-EDAZ10
EDAH11	1.9172	8.5175	6.6004	10y-EDAH11
EDAM11	2.1665	8.5175	6.3511	10y-EDAM11
EDAU11	2.4350	8.5175	6.0826	10y-EDAU11
EDAZ11	2.6843	8.5175	5.8332	10y-EDAZ11
EDAH12	2.9336	8.5175	5.5839	10y-EDAH12

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

Correlation

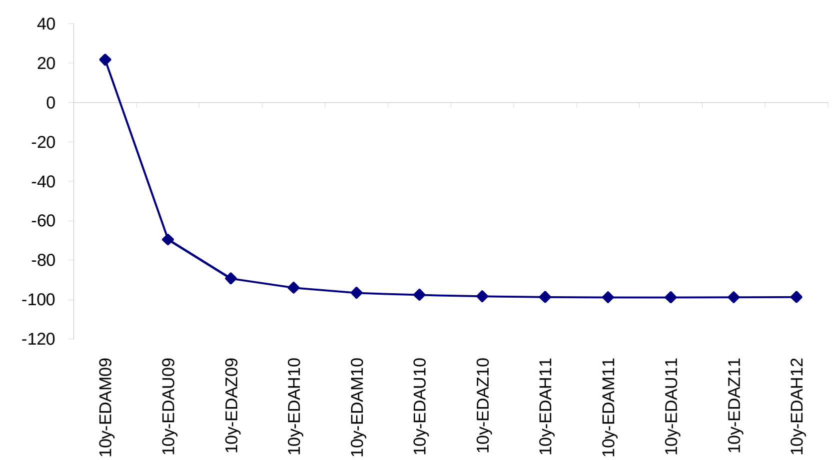
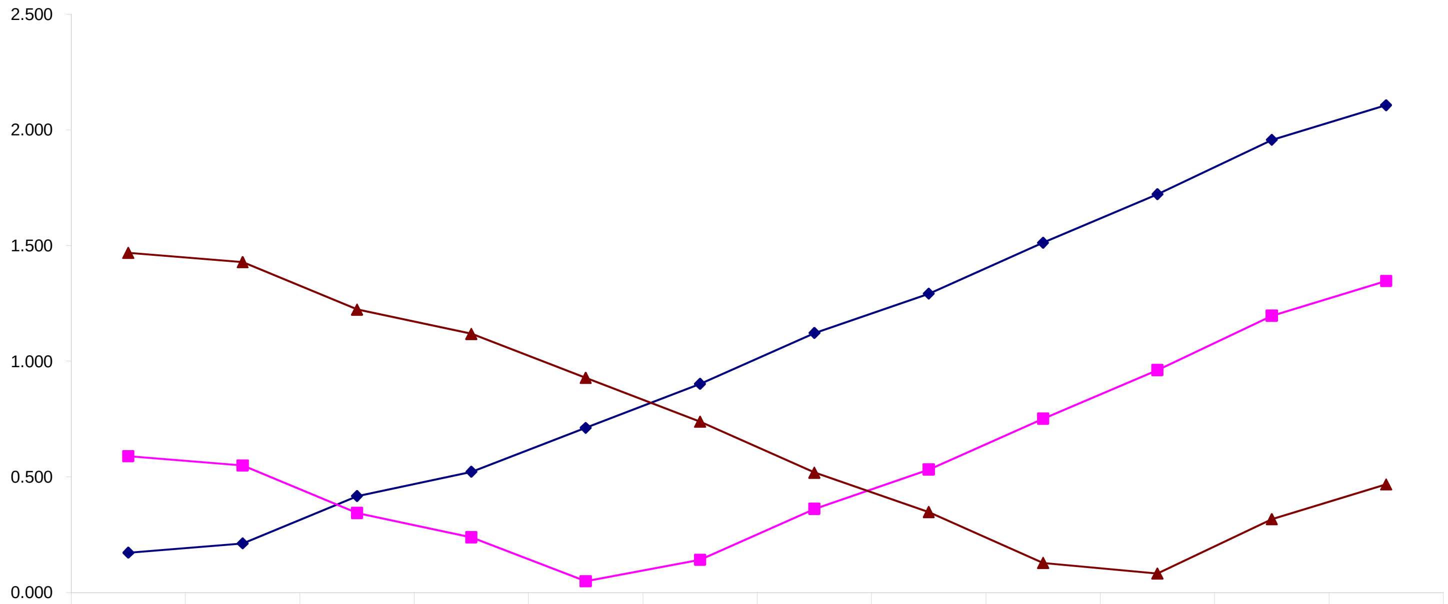


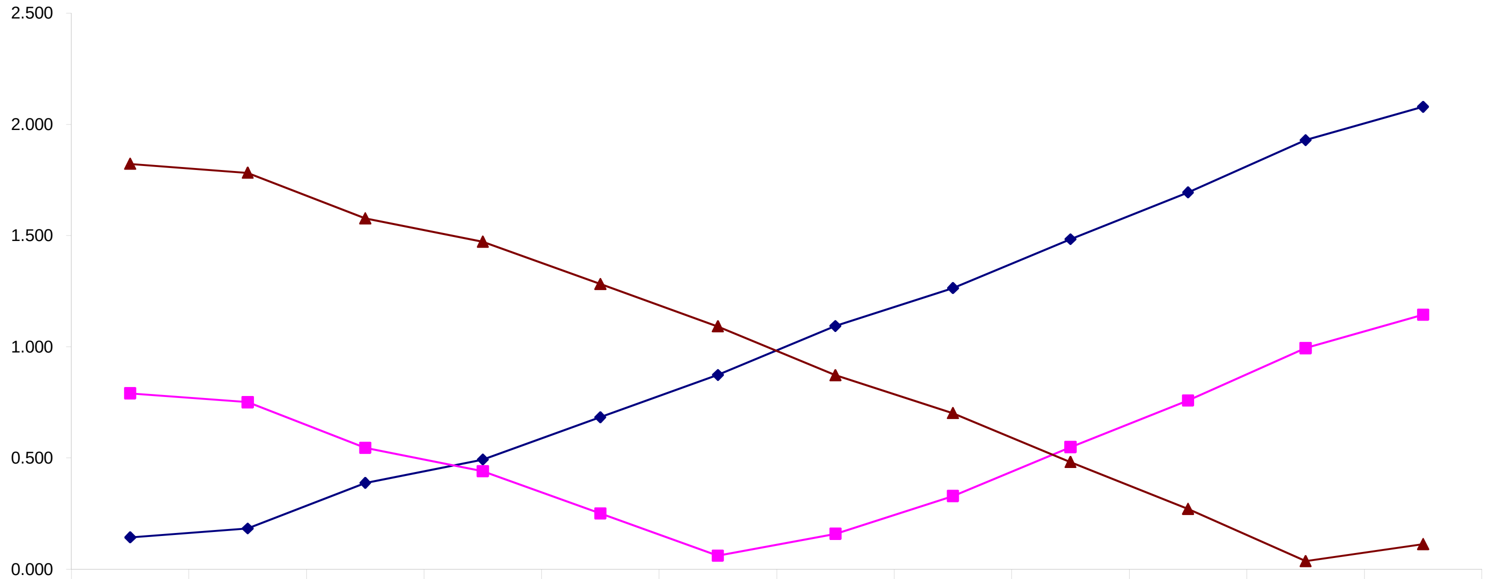
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.172	0.212	0.417	0.522	0.712	0.902	1.122	1.292	1.512	1.722	1.957	2.107
ZF	0.589	0.549	0.344	0.239	0.049	0.141	0.361	0.531	0.751	0.961	1.196	1.346
ZN	1.468	1.428	1.223	1.118	0.928	0.738	0.518	0.348	0.128	0.082	0.317	0.467

ZT ZF ZN

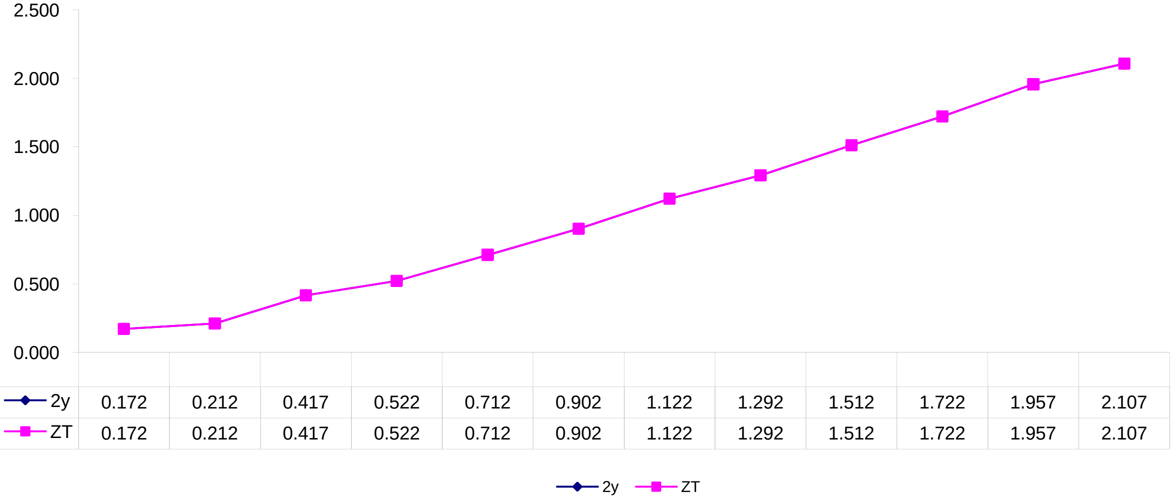
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y	0.143	0.183	0.388	0.493	0.683	0.873	1.093	1.263	1.483	1.693	1.928	2.078
5y	0.791	0.751	0.546	0.441	0.251	0.061	0.159	0.329	0.549	0.759	0.994	1.144
10y	1.822	1.782	1.577	1.472	1.282	1.092	0.872	0.702	0.482	0.272	0.037	0.113

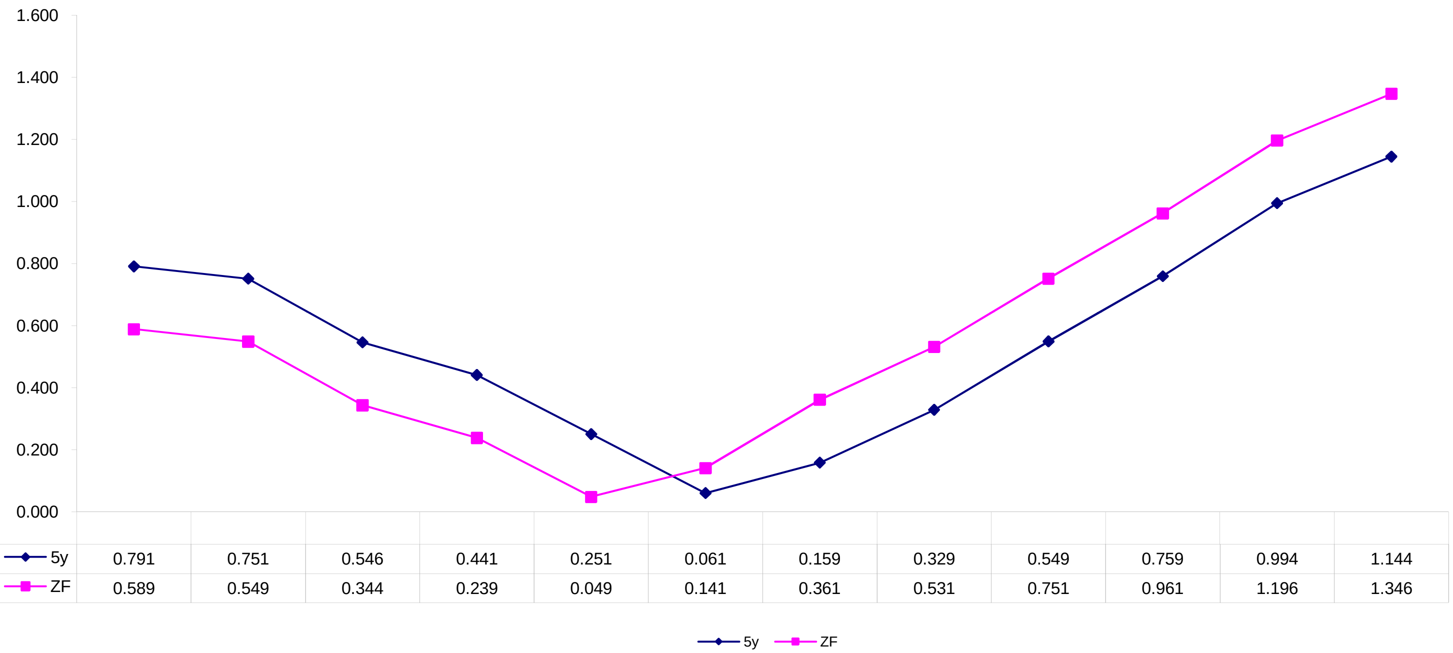
2y 5y 10y

2y Basis TED Curve



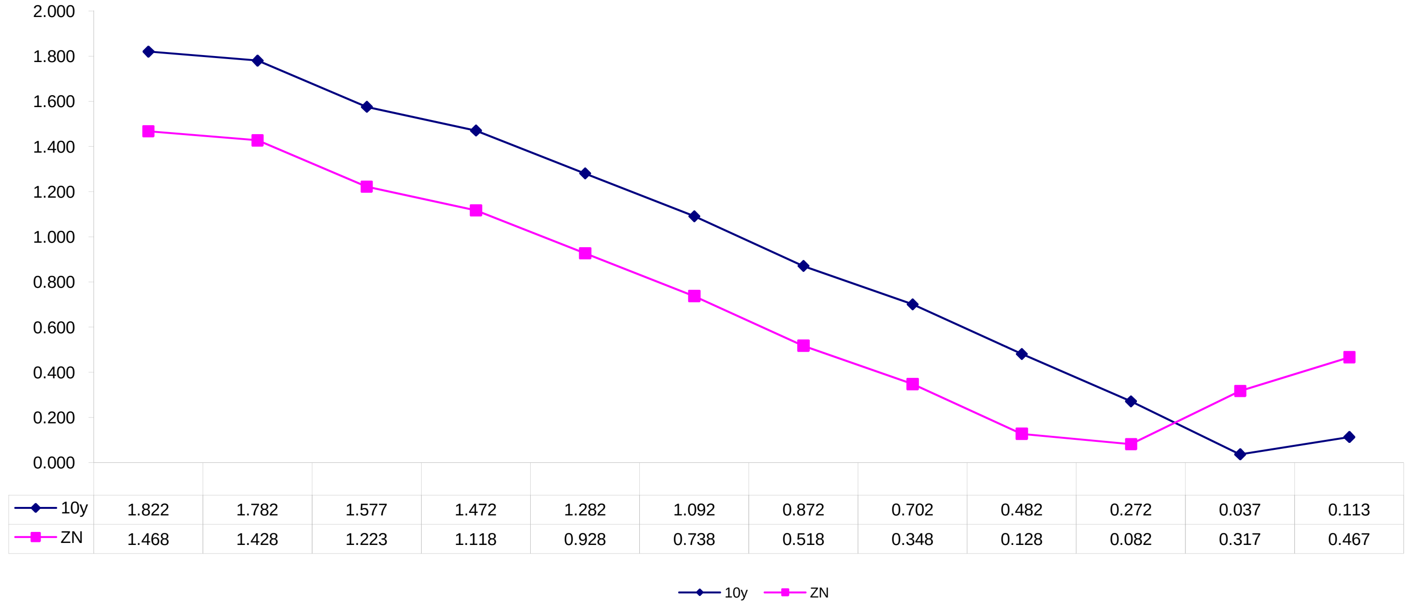
2y	0.172	0.212	0.417	0.522	0.712	0.902	1.122	1.292	1.512	1.722	1.957	2.107
ZT	0.172	0.212	0.417	0.522	0.712	0.902	1.122	1.292	1.512	1.722	1.957	2.107

5y Basis TED Curve



5y	0.791	0.751	0.546	0.441	0.251	0.061	0.159	0.329	0.549	0.759	0.994	1.144
ZF	0.589	0.549	0.344	0.239	0.049	0.141	0.361	0.531	0.751	0.961	1.196	1.346

10y Basis TED Curve



10y	1.822	1.782	1.577	1.472	1.282	1.092	0.872	0.702	0.482	0.272	0.037	0.113
ZN	1.468	1.428	1.223	1.118	0.928	0.738	0.518	0.348	0.128	0.082	0.317	0.467

	Last Yield	Net Last Yield	Last Price
White Pack	1.255	1.375	9876.6250
Red Pack	1.946	1.500	9809.0000
Green Pack	2.784	2.000	9727.2500
Blue Pack		0.250	9666.3750
Gold Pack		0.000	9632.5000