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	108.6875	108.2200	0.840	1.885
ZF	118.0156	118.0050	1.614	4.085
ZN	123.0781	123.0250	2.392	5.951
2y	99.9844	99.3150	0.883	1.937
5y	99.7406	99.2370	1.800	4.725
10y	99.0938	99.0300	2.854	8.519

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	98.9400	1.060	62	0.1692	JUN	
EDAU09	98.9150	1.085	153	0.4185	SEP	White Pack
EDAZ09	98.7350	1.265	244	0.6678	DEC	
EDAH10	98.6350	1.365	335	0.9172	MAR	
EDAM10	98.4400	1.560	426	1.1665	JUN	
EDAU10	98.2600	1.740	517	1.4158	SEP	Red Pack
EDAZ10	98.0350	1.965	608	1.6651	DEC	
EDAH11	97.8650	2.135	699	1.9144	MAR	
EDAM11	97.6350	2.365	790	2.1637	JUN	
EDAU11	97.4200	2.580	888	2.4322	SEP	Green Pack
EDAZ11	97.1900	2.810	979	2.6815	DEC	
EDAH12	97.0450	2.955	1,070	2.9309	MAR	
EDAM12	96.9000	3.100	1,161	3.1802	JUN	
EDAU12	96.7850	3.215	1,252	3.4295	SEP	Blue Pack
EDAZ12	96.6500	3.350	1,343	3.6788	DEC	
EDAH13	96.5900	3.410	1,434	3.9281	MAR	
EDAM13	96.5050	3.495	1,525	4.1774	JUN	
EDAU13	96.4550	3.545	1,616	4.4268	SEP	Gold Pack
EDAZ13	96.3650	3.635	1,707	4.6761	DEC	
EDAH14	96.3250	3.675	1,798	4.9254	MAR	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.214	1.375	9880.63
Red Pack	1.885	-1.375	9815.00
Green Pack	2.733	-1.500	9732.25
Blue Pack		-0.750	9673.88
Gold Pack		0.750	9641.75

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

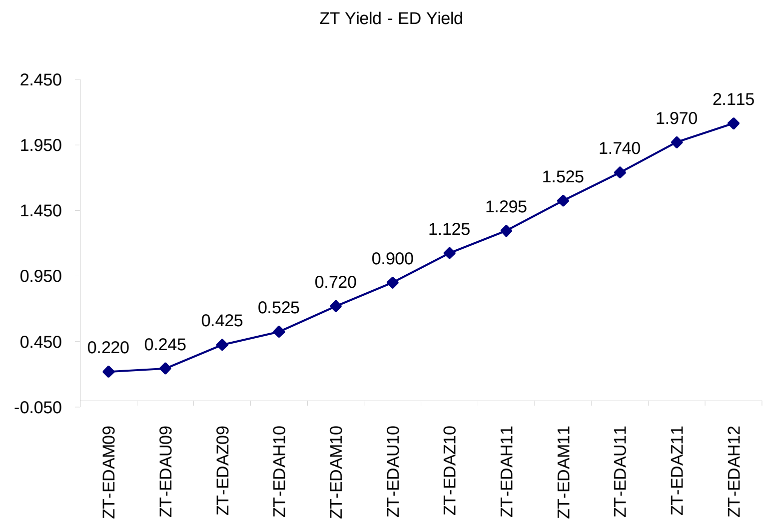
Correlations (Important)

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

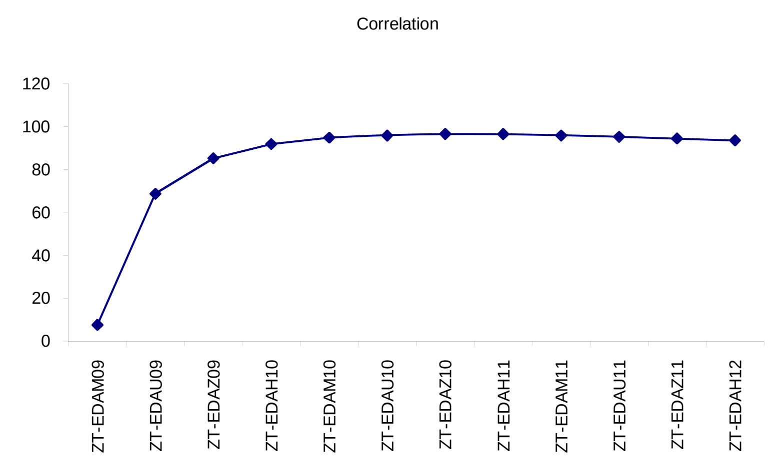
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.75	0.220	ZT-EDAM09	8
EDAU09	9.77	0.245	ZT-EDAU09	69
EDAZ09	9.95	0.425	ZT-EDAZ09	85
EDAH10	10.05	0.525	ZT-EDAH10	92
EDAM10	10.25	0.720	ZT-EDAM10	95
EDAU10	10.43	0.900	ZT-EDAU10	96
EDAZ10	10.65	1.125	ZT-EDAZ10	97
EDAH11	10.82	1.295	ZT-EDAH11	96
EDAM11	11.05	1.525	ZT-EDAM11	96
EDAU11	11.27	1.740	ZT-EDAU11	95
EDAZ11	11.50	1.970	ZT-EDAZ11	94
EDAH12	11.64	2.115	ZT-EDAH12	94

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	
EDAM09	0.1692	1.8854	1.7162	ZT-EDAM09
EDAU09	0.4185	1.8854	1.4669	ZT-EDAU09
EDAZ09	0.6678	1.8854	1.2176	ZT-EDAZ09
EDAH10	0.9172	1.8854	0.9683	ZT-EDAH10
EDAM10	1.1665	1.8854	0.7189	ZT-EDAM10
EDAU10	1.4158	1.8854	0.4696	ZT-EDAU10
EDAZ10	1.6651	1.8854	0.2203	ZT-EDAZ10
EDAH11	1.9144	1.8854	-0.0290	ZT-EDAH11
EDAM11	2.1637	1.8854	-0.2783	ZT-EDAM11
EDAU11	2.4322	1.8854	-0.5468	ZT-EDAU11
EDAZ11	2.6815	1.8854	-0.7961	ZT-EDAZ11
EDAH12	2.9309	1.8854	-1.0454	ZT-EDAH12

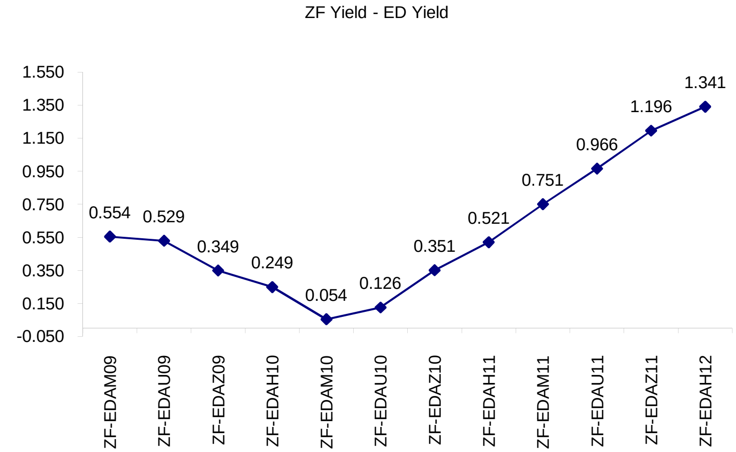
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	19.08	0.554	ZF-EDAM09	9
EDAU09	19.10	0.529	ZF-EDAU09	70
EDAZ09	19.28	0.349	ZF-EDAZ09	86
EDAH10	19.38	0.249	ZF-EDAH10	94
EDAM10	19.58	0.054	ZF-EDAM10	98
EDAU10	19.76	0.126	ZF-EDAU10	99
EDAZ10	19.98	0.351	ZF-EDAZ10	99
EDAH11	20.15	0.521	ZF-EDAH11	99
EDAM11	20.38	0.751	ZF-EDAM11	99
EDAU11	20.60	0.966	ZF-EDAU11	98
EDAZ11	20.83	1.196	ZF-EDAZ11	97
EDAH12	20.97	1.341	ZF-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	ZF Duration	Spread Duration	
EDAM09	0.1692	4.0850	3.9158	ZF-EDAM09
EDAU09	0.4185	4.0850	3.6664	ZF-EDAU09
EDAZ09	0.6678	4.0850	3.4171	ZF-EDAZ09
EDAH10	0.9172	4.0850	3.1678	ZF-EDAH10
EDAM10	1.1665	4.0850	2.9185	ZF-EDAM10
EDAU10	1.4158	4.0850	2.6692	ZF-EDAU10
EDAZ10	1.6651	4.0850	2.4199	ZF-EDAZ10
EDAH11	1.9144	4.0850	2.1705	ZF-EDAH11
EDAM11	2.1637	4.0850	1.9212	ZF-EDAM11
EDAU11	2.4322	4.0850	1.6527	ZF-EDAU11
EDAZ11	2.6815	4.0850	1.4034	ZF-EDAZ11
EDAH12	2.9309	4.0850	1.1541	ZF-EDAH12

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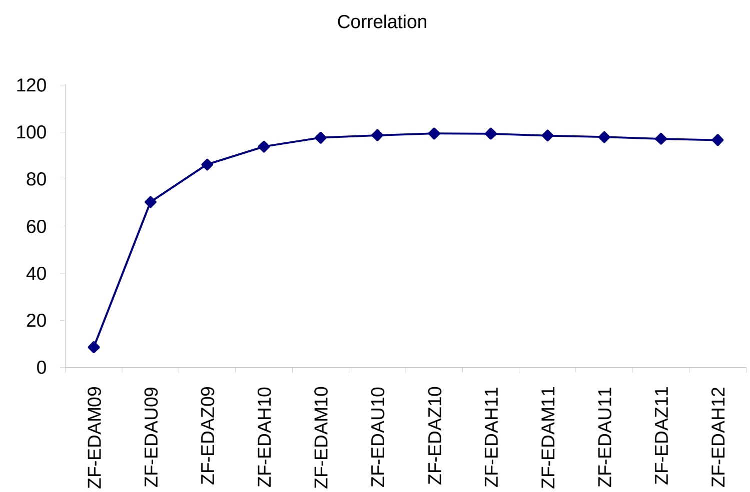
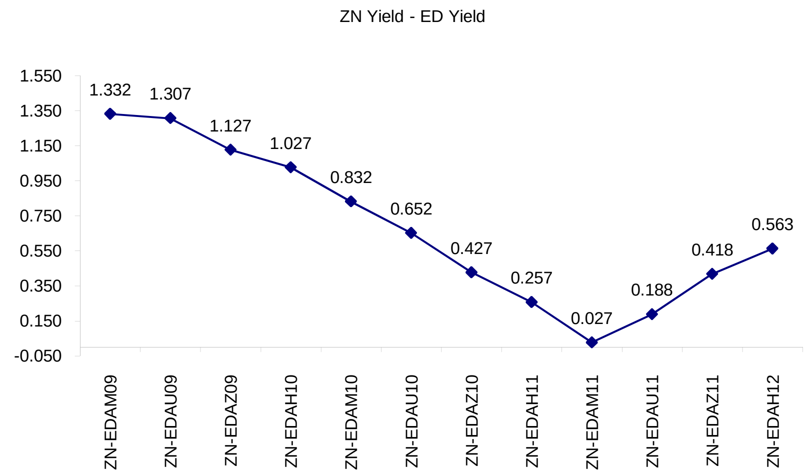


Dirty TED: ZN vs Eurodollar Contracts

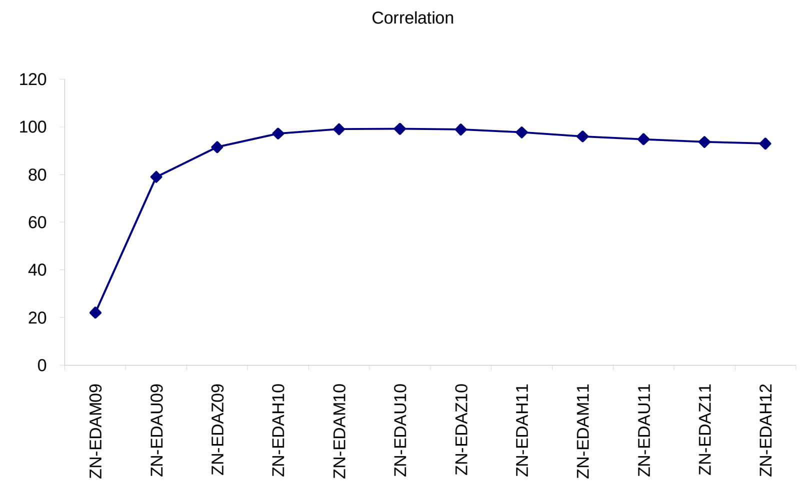
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	24.14	1.332	ZN-EDAM09	22
EDAU09	24.16	1.307	ZN-EDAU09	79
EDAZ09	24.34	1.127	ZN-EDAZ09	92
EDAH10	24.44	1.027	ZN-EDAH10	97
EDAM10	24.64	0.832	ZN-EDAM10	99
EDAU10	24.82	0.652	ZN-EDAU10	99
EDAZ10	25.04	0.427	ZN-EDAZ10	99
EDAH11	25.21	0.257	ZN-EDAH11	98
EDAM11	25.44	0.027	ZN-EDAM11	96
EDAU11	25.66	0.188	ZN-EDAU11	95
EDAZ11	25.89	0.418	ZN-EDAZ11	94
EDAH12	26.03	0.563	ZN-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



	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM09	0.1692	5.9509	5.7817	ZN-EDAM09
EDAU09	0.4185	5.9509	5.5324	ZN-EDAU09
EDAZ09	0.6678	5.9509	5.2831	ZN-EDAZ09
EDAH10	0.9172	5.9509	5.0338	ZN-EDAH10
EDAM10	1.1665	5.9509	4.7844	ZN-EDAM10
EDAU10	1.4158	5.9509	4.5351	ZN-EDAU10
EDAZ10	1.6651	5.9509	4.2858	ZN-EDAZ10
EDAH11	1.9144	5.9509	4.0365	ZN-EDAH11
EDAM11	2.1637	5.9509	3.7872	ZN-EDAM11
EDAU11	2.4322	5.9509	3.5187	ZN-EDAU11
EDAZ11	2.6815	5.9509	3.2694	ZN-EDAZ11
EDAH12	2.9309	5.9509	3.0201	ZN-EDAH12

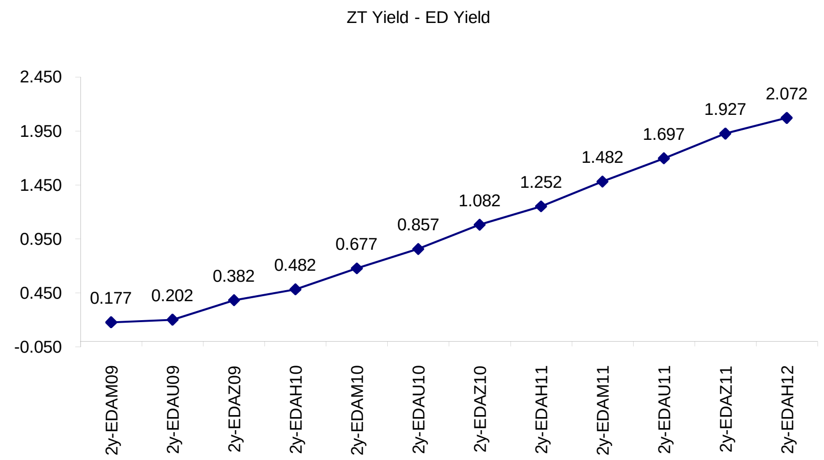
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

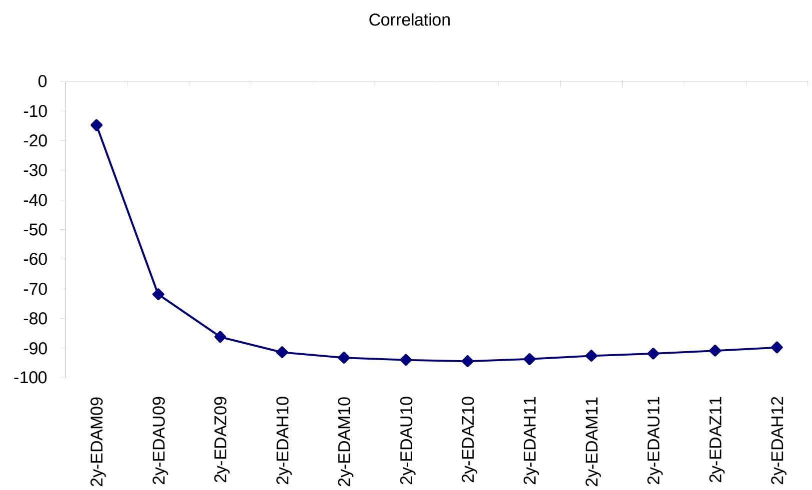
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	1.04	0.177	2y-EDAM09	-15
EDAU09	1.07	0.202	2y-EDAU09	-72
EDAZ09	1.25	0.382	2y-EDAZ09	-86
EDAH10	1.35	0.482	2y-EDAH10	-91
EDAM10	1.54	0.677	2y-EDAM10	-93
EDAU10	1.72	0.857	2y-EDAU10	-94
EDAZ10	1.95	1.082	2y-EDAZ10	-94
EDAH11	2.12	1.252	2y-EDAH11	-94
EDAM11	2.35	1.482	2y-EDAM11	-93
EDAU11	2.56	1.697	2y-EDAU11	-92
EDAZ11	2.79	1.927	2y-EDAZ11	-91
EDAH12	2.94	2.072	2y-EDAH12	-90

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	2Y Duration	Spread Duration	
EDAM09	0.1692	1.9374	1.7682	2y-EDAM09
EDAU09	0.4185	1.9374	1.5189	2y-EDAU09
EDAZ09	0.6678	1.9374	1.2696	2y-EDAZ09
EDAH10	0.9172	1.9374	1.0203	2y-EDAH10
EDAM10	1.1665	1.9374	0.7710	2y-EDAM10
EDAU10	1.4158	1.9374	0.5216	2y-EDAU10
EDAZ10	1.6651	1.9374	0.2723	2y-EDAZ10
EDAH11	1.9144	1.9374	0.0230	2y-EDAH11
EDAM11	2.1637	1.9374	-0.2263	2y-EDAM11
EDAU11	2.4322	1.9374	-0.4948	2y-EDAU11
EDAZ11	2.6815	1.9374	-0.7441	2y-EDAZ11
EDAH12	2.9309	1.9374	-0.9934	2y-EDAH12

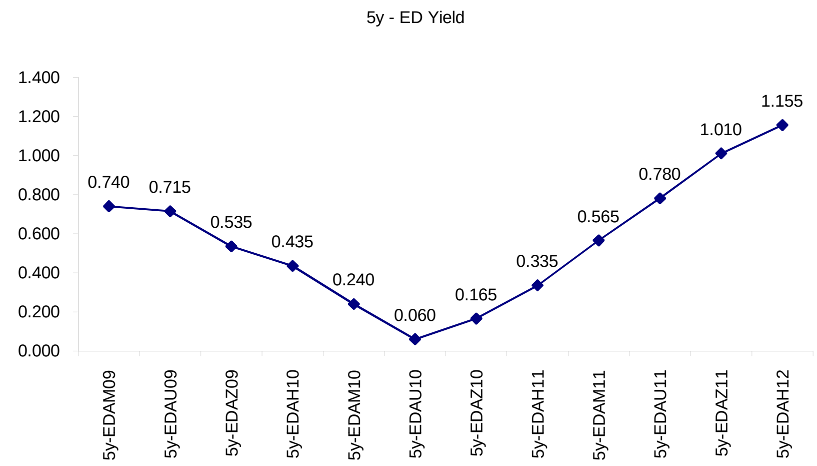
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 5y vs Eurodollar Contracts

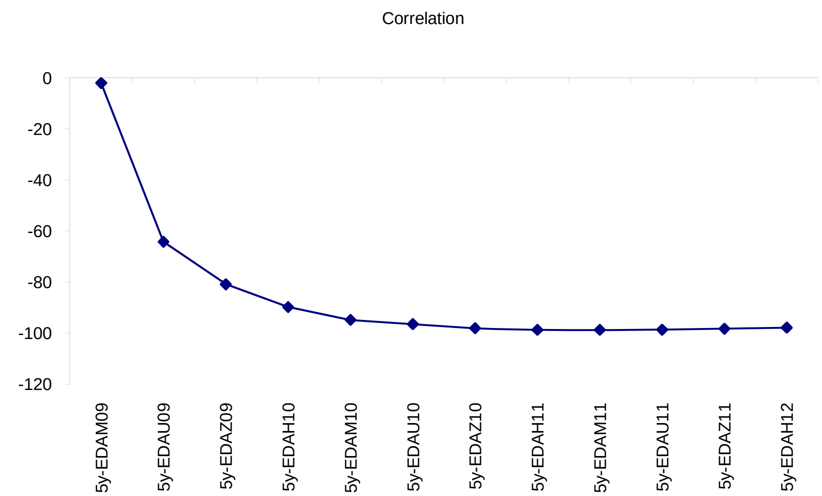
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.80	0.740	5y-EDAM09	-2
EDAU09	0.83	0.715	5y-EDAU09	-64
EDAZ09	1.01	0.535	5y-EDAZ09	-81
EDAH10	1.11	0.435	5y-EDAH10	-90
EDAM10	1.30	0.240	5y-EDAM10	-95
EDAU10	1.48	0.060	5y-EDAU10	-96
EDAZ10	1.71	0.165	5y-EDAZ10	-98
EDAH11	1.88	0.335	5y-EDAH11	-99
EDAM11	2.11	0.565	5y-EDAM11	-99
EDAU11	2.32	0.780	5y-EDAU11	-99
EDAZ11	2.55	1.010	5y-EDAZ11	-98
EDAH12	2.70	1.155	5y-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	5Y Duration	Spread Duration	
EDAM09	0.1692	4.7255	4.5563	5y-EDAM09
EDAU09	0.4185	4.7255	4.3070	5y-EDAU09
EDAZ09	0.6678	4.7255	4.0576	5y-EDAZ09
EDAH10	0.9172	4.7255	3.8083	5y-EDAH10
EDAM10	1.1665	4.7255	3.5590	5y-EDAM10
EDAU10	1.4158	4.7255	3.3097	5y-EDAU10
EDAZ10	1.6651	4.7255	3.0604	5y-EDAZ10
EDAH11	1.9144	4.7255	2.8111	5y-EDAH11
EDAM11	2.1637	4.7255	2.5618	5y-EDAM11
EDAU11	2.4322	4.7255	2.2933	5y-EDAU11
EDAZ11	2.6815	4.7255	2.0439	5y-EDAZ11
EDAH12	2.9309	4.7255	1.7946	5y-EDAH12

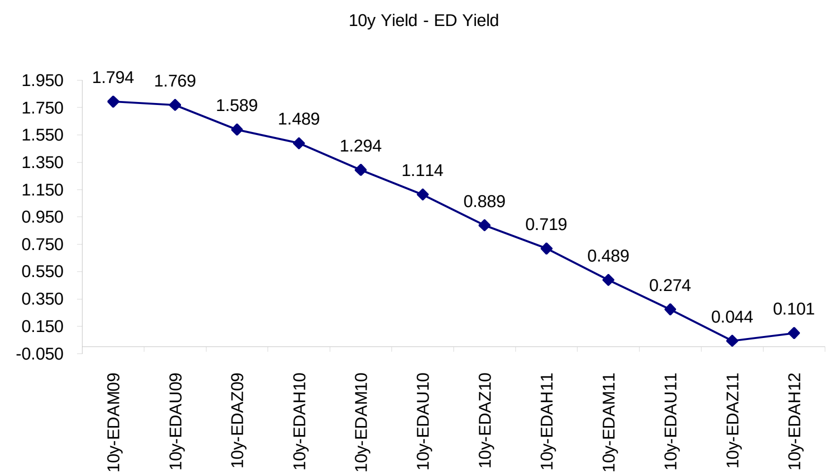
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	0.80	1.794	10y-EDAM09	6
EDAU09	0.83	1.769	10y-EDAU09	-57
EDAZ09	1.01	1.589	10y-EDAZ09	-75
EDAH10	1.11	1.489	10y-EDAH10	-85
EDAM10	1.30	1.294	10y-EDAM10	-92
EDAU10	1.48	1.114	10y-EDAU10	-94
EDAZ10	1.71	0.889	10y-EDAZ10	-96
EDAH11	1.88	0.719	10y-EDAH11	-98
EDAM11	2.11	0.489	10y-EDAM11	-99
EDAU11	2.32	0.274	10y-EDAU11	-99
EDAZ11	2.55	0.044	10y-EDAZ11	-99
EDAH12	2.70	0.101	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



	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAM09	0.1692	8.5193	8.3501	10y-EDAM09
EDAU09	0.4185	8.5193	8.1008	10y-EDAU09
EDAZ09	0.6678	8.5193	7.8514	10y-EDAZ09
EDAH10	0.9172	8.5193	7.6021	10y-EDAH10
EDAM10	1.1665	8.5193	7.3528	10y-EDAM10
EDAU10	1.4158	8.5193	7.1035	10y-EDAU10
EDAZ10	1.6651	8.5193	6.8542	10y-EDAZ10
EDAH11	1.9144	8.5193	6.6049	10y-EDAH11
EDAM11	2.1637	8.5193	6.3556	10y-EDAM11
EDAU11	2.4322	8.5193	6.0871	10y-EDAU11
EDAZ11	2.6815	8.5193	5.8377	10y-EDAZ11
EDAH12	2.9309	8.5193	5.5884	10y-EDAH12

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

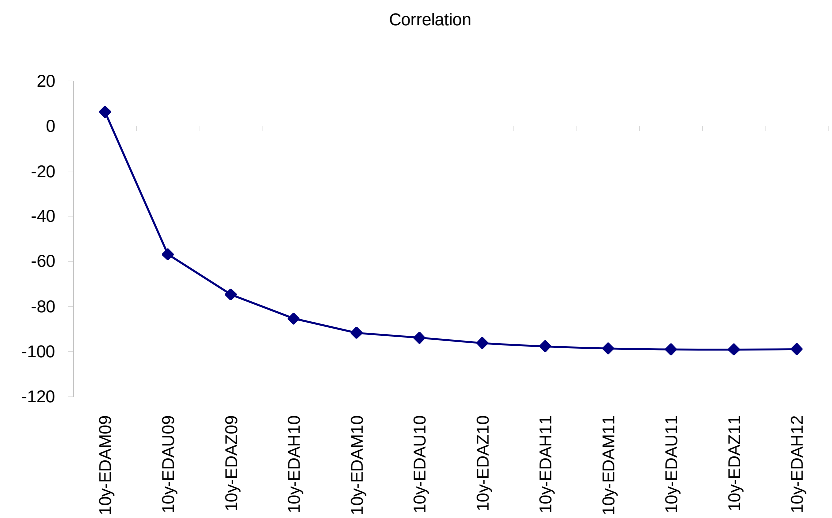
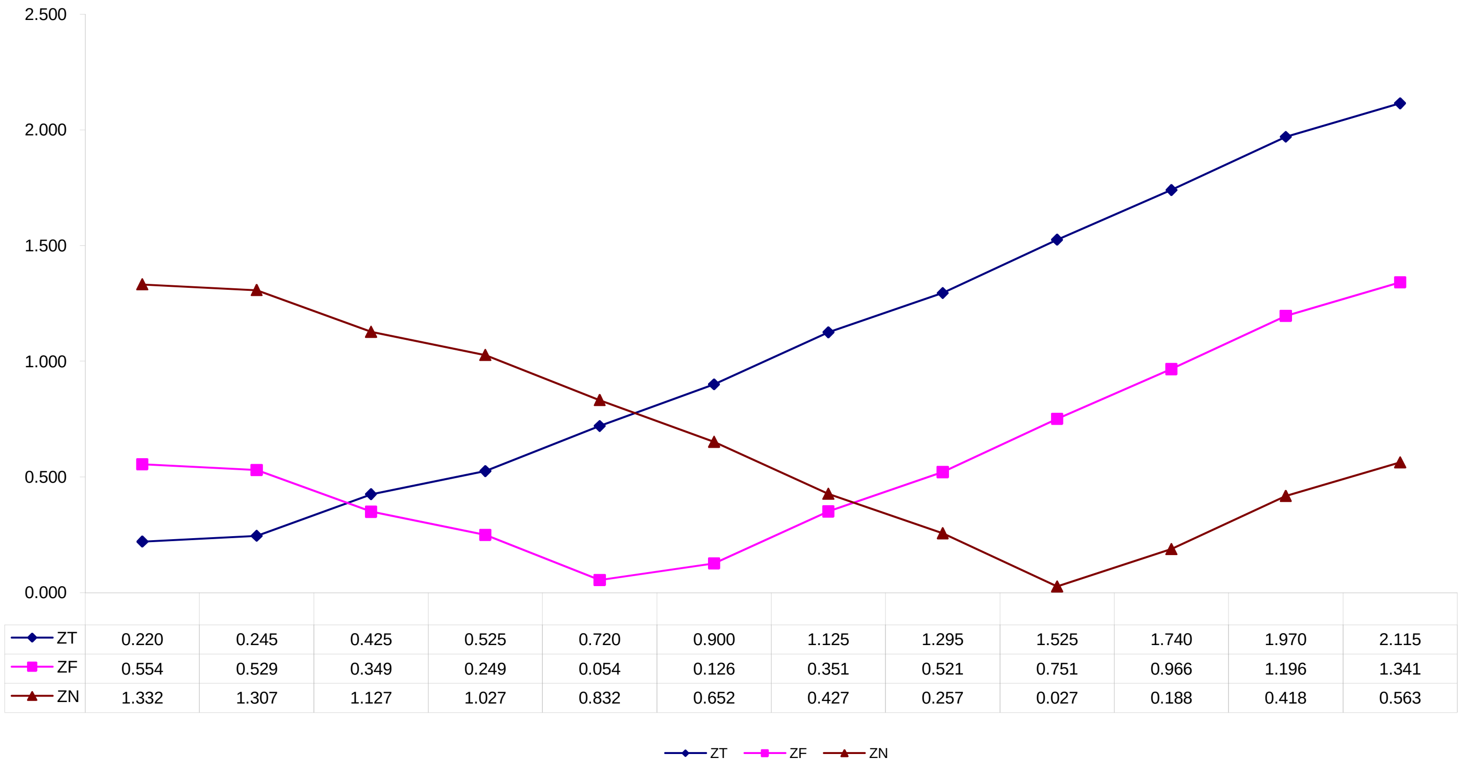
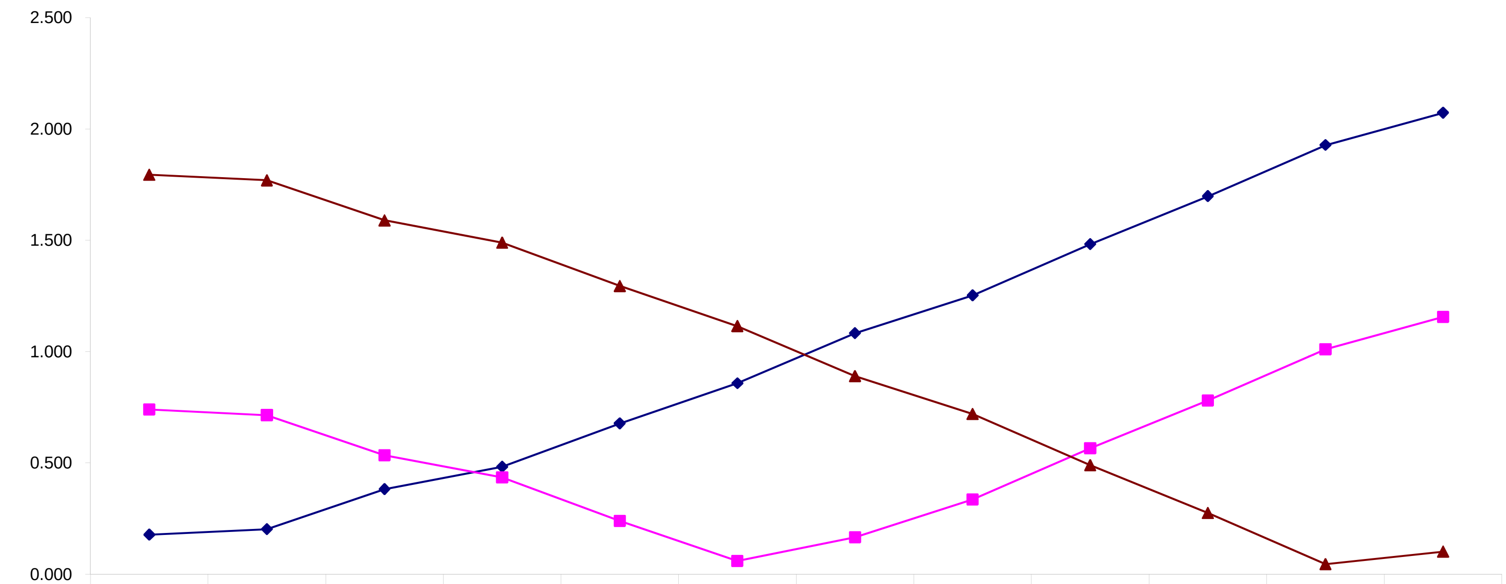


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.220	0.245	0.425	0.525	0.720	0.900	1.125	1.295	1.525	1.740	1.970	2.115
ZF	0.554	0.529	0.349	0.249	0.054	0.126	0.351	0.521	0.751	0.966	1.196	1.341
ZN	1.332	1.307	1.127	1.027	0.832	0.652	0.427	0.257	0.027	0.188	0.418	0.563

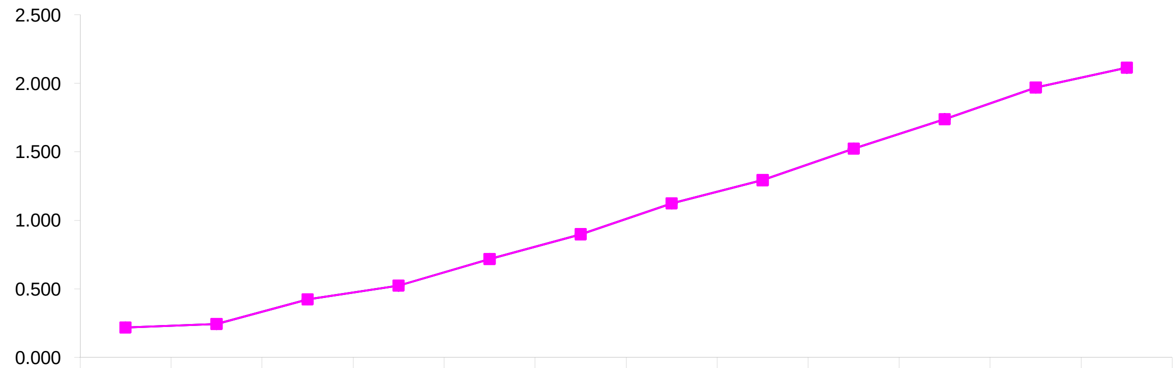
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



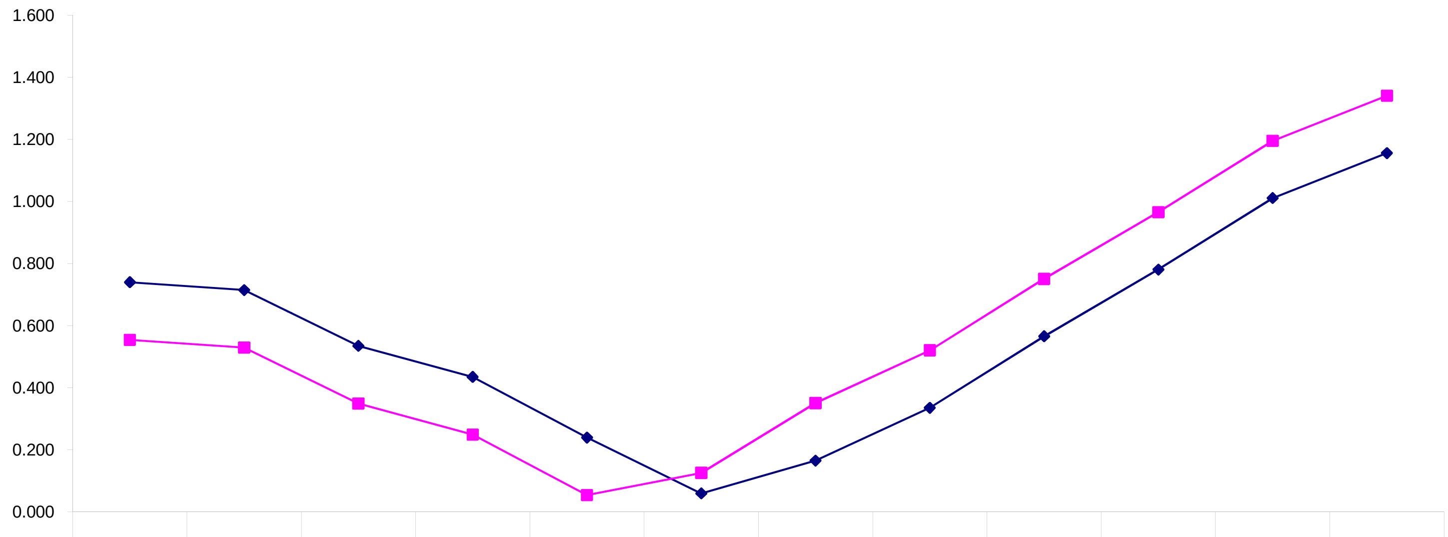
2y	0.177	0.202	0.382	0.482	0.677	0.857	1.082	1.252	1.482	1.697	1.927	2.072
5y	0.740	0.715	0.535	0.435	0.240	0.060	0.165	0.335	0.565	0.780	1.010	1.155
10y	1.794	1.769	1.589	1.489	1.294	1.114	0.889	0.719	0.489	0.274	0.044	0.101

2y 5y 10y

2y Basis TED Curve



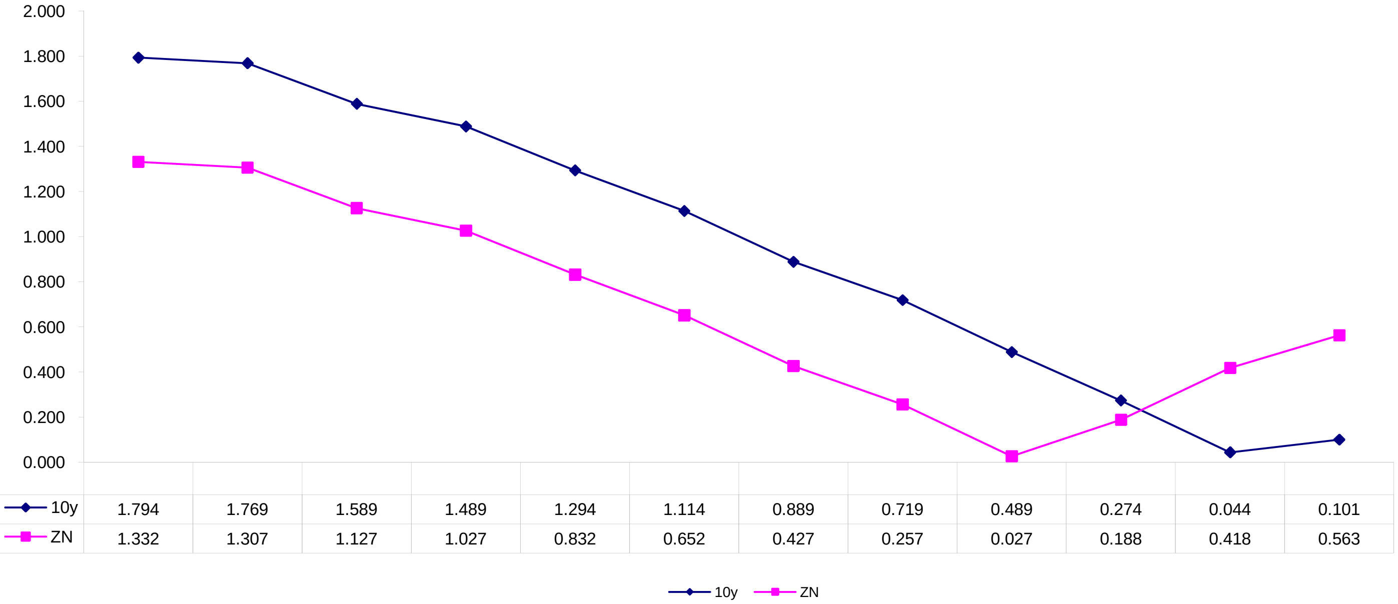
2y	0.220	0.245	0.425	0.525	0.720	0.900	1.125	1.295	1.525	1.740	1.970	2.115
ZT	0.220	0.245	0.425	0.525	0.720	0.900	1.125	1.295	1.525	1.740	1.970	2.115



5y	0.740	0.715	0.535	0.435	0.240	0.060	0.165	0.335	0.565	0.780	1.010	1.155
ZF	0.554	0.529	0.349	0.249	0.054	0.126	0.351	0.521	0.751	0.966	1.196	1.341

5y ZF

10y Basis TED Curve



10y	1.794	1.769	1.589	1.489	1.294	1.114	0.889	0.719	0.489	0.274	0.044	0.101
ZN	1.332	1.307	1.127	1.027	0.832	0.652	0.427	0.257	0.027	0.188	0.418	0.563

	Last Yield	Net Last Yield	Last Price
White Pack	1.214	1.375	9880.6250
Red Pack	1.885	-1.375	9815.0000
Green Pack	2.733	-1.500	9732.2500
Blue Pack		-0.750	9673.8750
Gold Pack		0.750	9641.7500