The Morning Email: TERM TEDS & Dirty TEDS

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

Treasury Futures and Cash

	Last Decimal	Last Feb-00	Last Yield*	MDuration
ZT	108.4063	108.1300	0.978	1.861
ZF	115.4844	115.1550	2.223	4.137
ZN	116.7500	116.2400	3.086	5.767
2y	100.2813	100.0900	0.974	1.914
5y	100.7344	100.2350	2.464	4.605
10y	95.9219	95.2950	3.620	8.295

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.4650	0.535	55	0.1500	SEP	White Pack
EDAZ09	99.2600	0.740	146	0.3993	DEC	
EDAH10	99.0200	0.980	237	0.6487	MAR	
EDAM10	98.6550	1.345	328	0.8980	JUN	
EDAU10	98.2650	1.735	419	1.1473	SEP	Red Pack
EDAZ10	97.8550	2.145	510	1.3966	DEC	
EDAH11	97.4850	2.515	601	1.6459	MAR	
EDAM11	97.1150	2.885	692	1.8952	JUN	
EDAU11	96.7850	3.215	790	2.1637	SEP	Green Pack
EDAZ11	96.4750	3.525	881	2.4130	DEC	
EDAH12	96.2550	3.745	972	2.6624	MAR	
EDAM12	96.0450	3.955	1,063	2.9117	JUN	
EDAU12	95.8850	4.115	1,154	3.1610	SEP	Blue Pack
EDAZ12	95.7250	4.275	1,245	3.4103	DEC	
EDAH13	95.6250	4.375	1,336	3.6596	MAR	
EDAM13	95.5150	4.485	1,427	3.9089	JUN	
EDAU13	95.3900	4.610	1,518	4.1583	SEP	Gold Pack
EDAZ13	95.2750	4.725	1,609	4.4076	DEC	
EDAH14	95.1900	4.810	1,700	4.6569	MAR	
EDAM14	95.1100	4.890	1,791	4.9062	JUN	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	0.915	0.125	9910.00
Red Pack	2.366	-0.375	9768.00
Green Pack	3.694	-2.750	9639.00
Blue Pack		-1.875	9569.13
Gold Pack		-1.125	9525.63

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

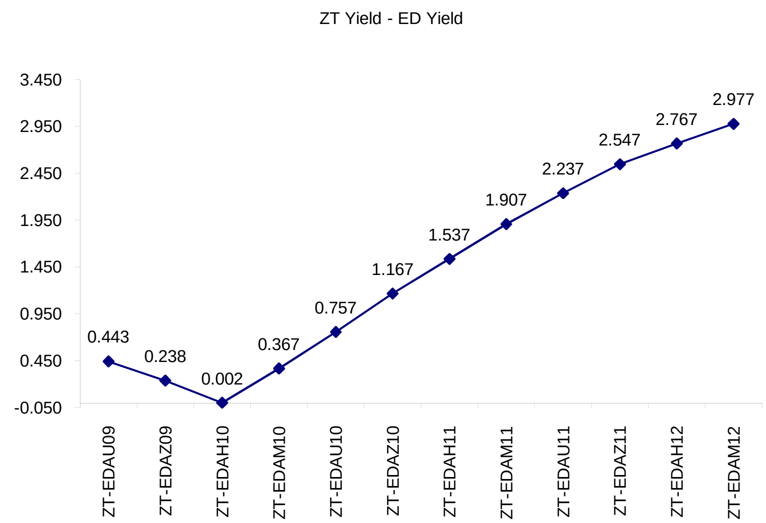
Correlations (Important)

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

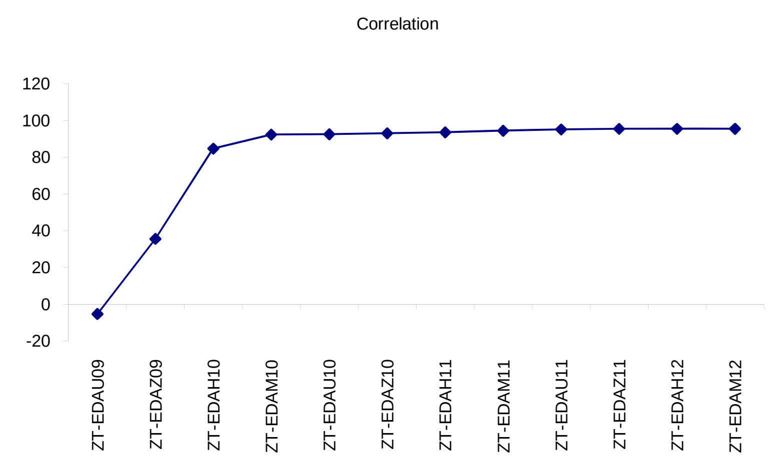
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.94	0.443	ZT-EDAU09	-5
EDAZ09	9.15	0.238	ZT-EDAZ09	36
EDAH10	9.39	0.002	ZT-EDAH10	85
EDAM10	9.75	0.367	ZT-EDAM10	92
EDAU10	10.14	0.757	ZT-EDAU10	93
EDAZ10	10.55	1.167	ZT-EDAZ10	93
EDAH11	10.92	1.537	ZT-EDAH11	94
EDAM11	11.29	1.907	ZT-EDAM11	94
EDAU11	11.62	2.237	ZT-EDAU11	95
EDAZ11	11.93	2.547	ZT-EDAZ11	95
EDAH12	12.15	2.767	ZT-EDAH12	96
EDAM12	12.36	2.977	ZT-EDAM12	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	ZT Duration	Spread Duration	
EDAU09	0.1500	1.8606	1.7106	ZT-EDAU09
EDAZ09	0.3993	1.8606	1.4613	ZT-EDAZ09
EDAH10	0.6487	1.8606	1.2120	ZT-EDAH10
EDAM10	0.8980	1.8606	0.9627	ZT-EDAM10
EDAU10	1.1473	1.8606	0.7133	ZT-EDAU10
EDAZ10	1.3966	1.8606	0.4640	ZT-EDAZ10
EDAH11	1.6459	1.8606	0.2147	ZT-EDAH11
EDAM11	1.8952	1.8606	-0.0346	ZT-EDAM11
EDAU11	2.1637	1.8606	-0.3031	ZT-EDAU11
EDAZ11	2.4130	1.8606	-0.5524	ZT-EDAZ11
EDAH12	2.6624	1.8606	-0.8017	ZT-EDAH12
EDAM12	2.9117	1.8606	-1.0510	ZT-EDAM12

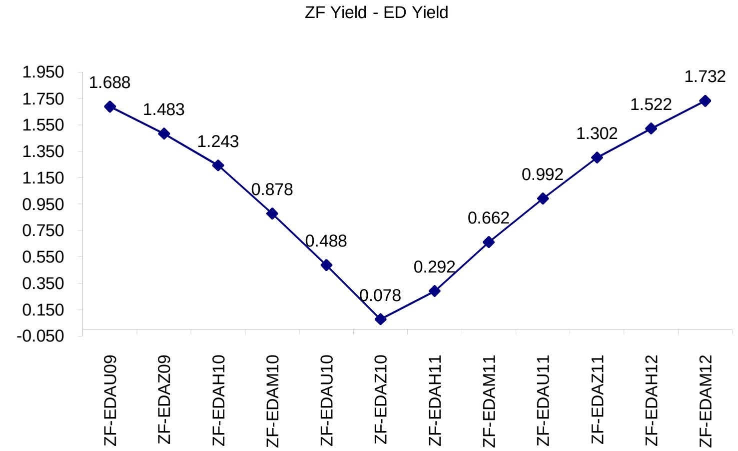
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	16.02	1.688	ZF-EDAU09	-11
EDAZ09	16.22	1.483	ZF-EDAZ09	32
EDAH10	16.46	1.243	ZF-EDAH10	85
EDAM10	16.83	0.878	ZF-EDAM10	95
EDAU10	17.22	0.488	ZF-EDAU10	96
EDAZ10	17.63	0.078	ZF-EDAZ10	96
EDAH11	18.00	0.292	ZF-EDAH11	97
EDAM11	18.37	0.662	ZF-EDAM11	97
EDAU11	18.70	0.992	ZF-EDAU11	98
EDAZ11	19.01	1.302	ZF-EDAZ11	98
EDAH12	19.23	1.522	ZF-EDAH12	98
EDAM12	19.44	1.732	ZF-EDAM12	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	
EDAU09	0.1500	4.1367	3.9867	ZF-EDAU09
EDAZ09	0.3993	4.1367	3.7374	ZF-EDAZ09
EDAH10	0.6487	4.1367	3.4881	ZF-EDAH10
EDAM10	0.8980	4.1367	3.2388	ZF-EDAM10
EDAU10	1.1473	4.1367	2.9895	ZF-EDAU10
EDAZ10	1.3966	4.1367	2.7401	ZF-EDAZ10
EDAH11	1.6459	4.1367	2.4908	ZF-EDAH11
EDAM11	1.8952	4.1367	2.2415	ZF-EDAM11
EDAU11	2.1637	4.1367	1.9730	ZF-EDAU11
EDAZ11	2.4130	4.1367	1.7237	ZF-EDAZ11
EDAH12	2.6624	4.1367	1.4744	ZF-EDAH12
EDAM12	2.9117	4.1367	1.2251	ZF-EDAM12

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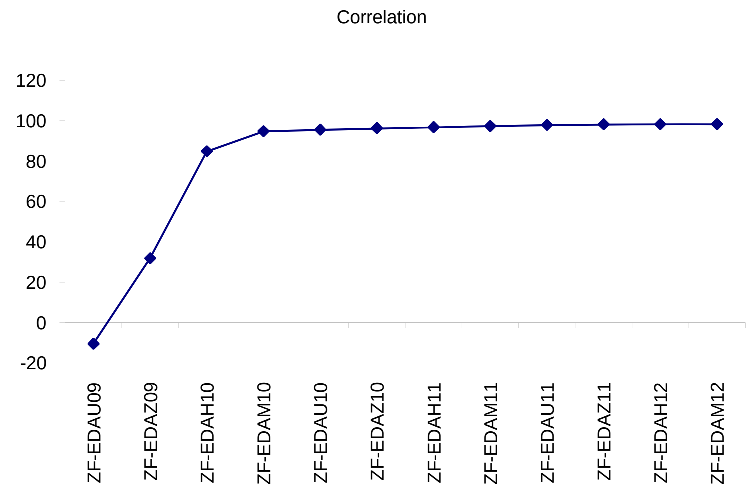

Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	17.29	2.551	ZN-EDAU09	-19
EDAZ09	17.49	2.346	ZN-EDAZ09	23
EDAH10	17.73	2.106	ZN-EDAH10	81
EDAM10	18.10	1.741	ZN-EDAM10	95
EDAU10	18.49	1.351	ZN-EDAU10	97
EDAZ10	18.90	0.941	ZN-EDAZ10	97
EDAH11	19.27	0.571	ZN-EDAH11	98
EDAM11	19.64	0.201	ZN-EDAM11	98
EDAU11	19.97	0.129	ZN-EDAU11	99
EDAZ11	20.28	0.439	ZN-EDAZ11	99
EDAH12	20.50	0.659	ZN-EDAH12	99
EDAM12	20.71	0.869	ZN-EDAM12	99

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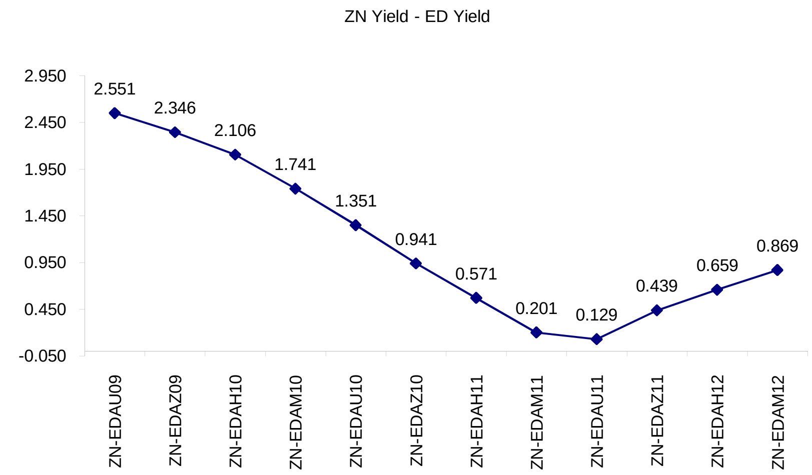

	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAU09	0.1500	5.7672	5.6172	ZN-EDAU09
EDAZ09	0.3993	5.7672	5.3679	ZN-EDAZ09
EDAH10	0.6487	5.7672	5.1186	ZN-EDAH10
EDAM10	0.8980	5.7672	4.8693	ZN-EDAM10
EDAU10	1.1473	5.7672	4.6199	ZN-EDAU10
EDAZ10	1.3966	5.7672	4.3706	ZN-EDAZ10
EDAH11	1.6459	5.7672	4.1213	ZN-EDAH11
EDAM11	1.8952	5.7672	3.8720	ZN-EDAM11
EDAU11	2.1637	5.7672	3.6035	ZN-EDAU11
EDAZ11	2.4130	5.7672	3.3542	ZN-EDAZ11
EDAH12	2.6624	5.7672	3.1049	ZN-EDAH12
EDAM12	2.9117	5.7672	2.8556	ZN-EDAM12

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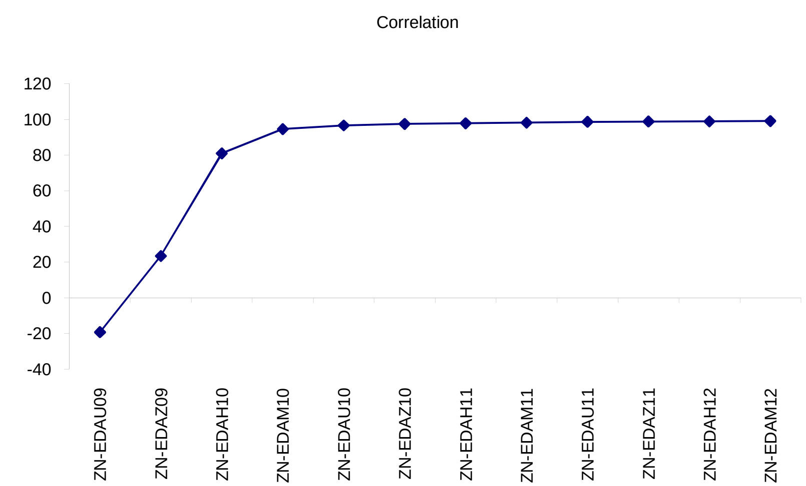

TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	0.82	0.439	2y-EDAU09	9
EDAZ09	1.02	0.234	2y-EDAZ09	-33
EDAH10	1.26	0.006	2y-EDAH10	-85
EDAM10	1.63	0.371	2y-EDAM10	-94
EDAU10	2.02	0.761	2y-EDAU10	-95
EDAZ10	2.43	1.171	2y-EDAZ10	-95
EDAH11	2.80	1.541	2y-EDAH11	-95
EDAM11	3.17	1.911	2y-EDAM11	-96
EDAU11	3.50	2.241	2y-EDAU11	-96
EDAZ11	3.81	2.551	2y-EDAZ11	-96
EDAH12	4.03	2.771	2y-EDAH12	-96
EDAM12	4.24	2.981	2y-EDAM12	-96

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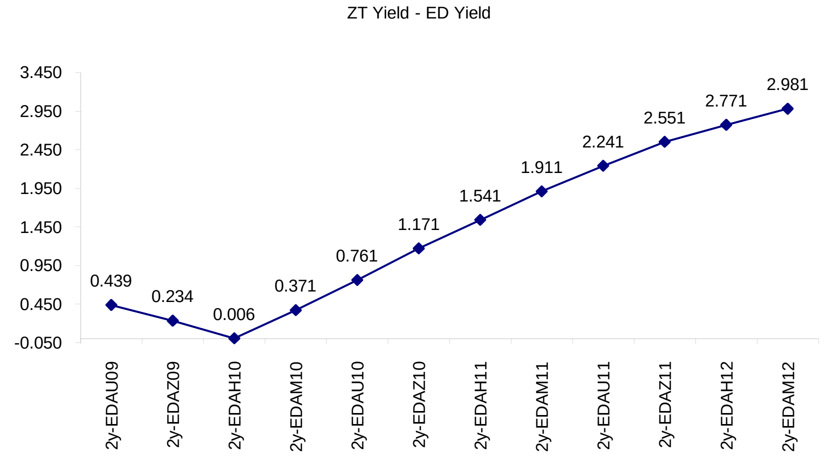

	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU09	0.1500	1.9142	1.7642	2y-EDAU09
EDAZ09	0.3993	1.9142	1.5149	2y-EDAZ09
EDAH10	0.6487	1.9142	1.2655	2y-EDAH10
EDAM10	0.8980	1.9142	1.0162	2y-EDAM10
EDAU10	1.1473	1.9142	0.7669	2y-EDAU10
EDAZ10	1.3966	1.9142	0.5176	2y-EDAZ10
EDAH11	1.6459	1.9142	0.2683	2y-EDAH11
EDAM11	1.8952	1.9142	0.0190	2y-EDAM11
EDAU11	2.1637	1.9142	-0.2495	2y-EDAU11
EDAZ11	2.4130	1.9142	-0.4988	2y-EDAZ11
EDAH12	2.6624	1.9142	-0.7482	2y-EDAH12
EDAM12	2.9117	1.9142	-0.9975	2y-EDAM12

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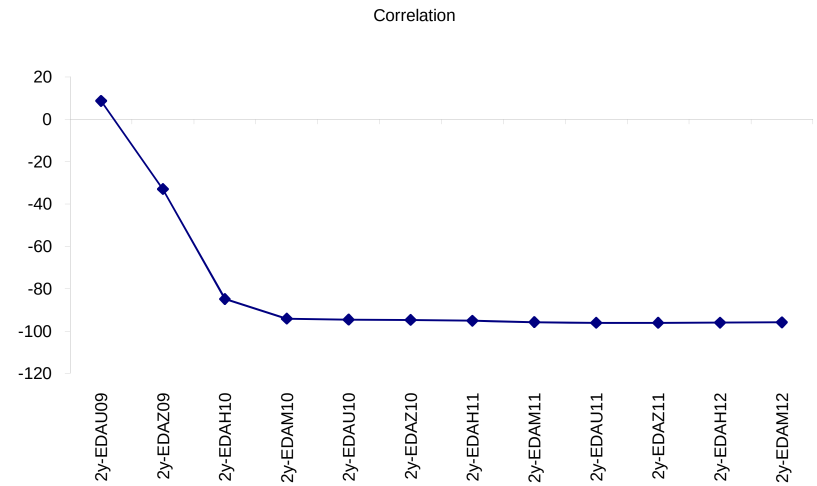
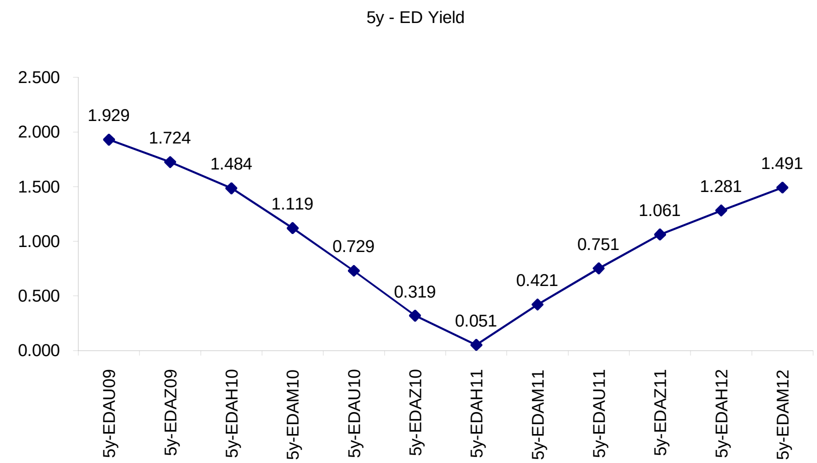


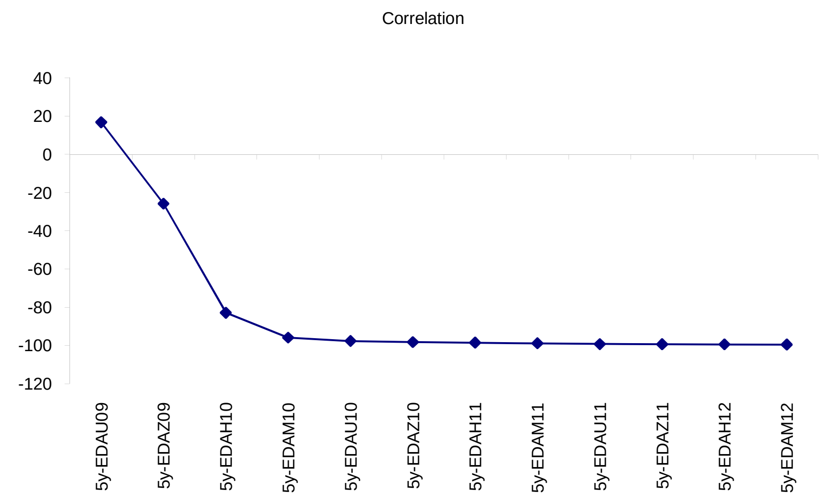
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.27	1.929	5y-EDAU09	17
EDAZ09	1.47	1.724	5y-EDAZ09	-26
EDAH10	1.71	1.484	5y-EDAH10	-83
EDAM10	2.08	1.119	5y-EDAM10	-96
EDAU10	2.47	0.729	5y-EDAU10	-98
EDAZ10	2.88	0.319	5y-EDAZ10	-98
EDAH11	3.25	0.051	5y-EDAH11	-98
EDAM11	3.62	0.421	5y-EDAM11	-99
EDAU11	3.95	0.751	5y-EDAU11	-99
EDAZ11	4.26	1.061	5y-EDAZ11	-99
EDAH12	4.48	1.281	5y-EDAH12	-99
EDAM12	4.69	1.491	5y-EDAM12	-100

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	
EDAU09	0.1500	4.6049	4.4549	5y-EDAU09
EDAZ09	0.3993	4.6049	4.2056	5y-EDAZ09
EDAH10	0.6487	4.6049	3.9563	5y-EDAH10
EDAM10	0.8980	4.6049	3.7070	5y-EDAM10
EDAU10	1.1473	4.6049	3.4576	5y-EDAU10
EDAZ10	1.3966	4.6049	3.2083	5y-EDAZ10
EDAH11	1.6459	4.6049	2.9590	5y-EDAH11
EDAM11	1.8952	4.6049	2.7097	5y-EDAM11
EDAU11	2.1637	4.6049	2.4412	5y-EDAU11
EDAZ11	2.4130	4.6049	2.1919	5y-EDAZ11
EDAH12	2.6624	4.6049	1.9426	5y-EDAH12
EDAM12	2.9117	4.6049	1.6933	5y-EDAM12

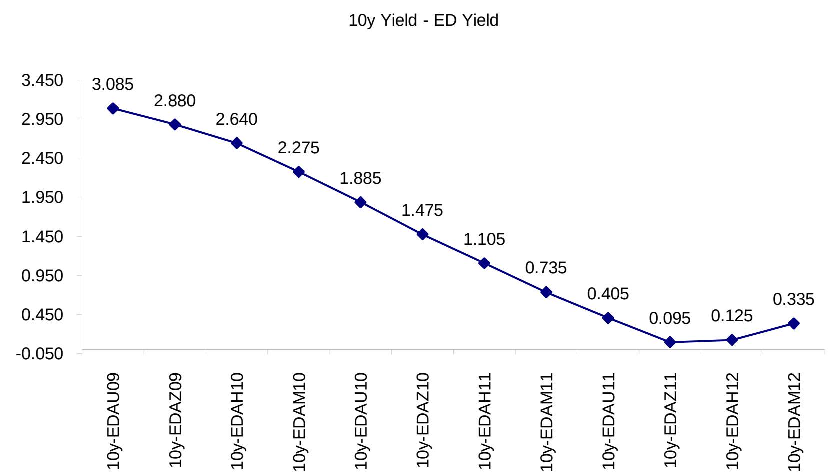
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	1.27	3.085	10y-EDAU09	22
EDAZ09	1.47	2.880	10y-EDAZ09	-19
EDAH10	1.71	2.640	10y-EDAH10	-79
EDAM10	2.08	2.275	10y-EDAM10	-95
EDAU10	2.47	1.885	10y-EDAU10	-97
EDAZ10	2.88	1.475	10y-EDAZ10	-98
EDAH11	3.25	1.105	10y-EDAH11	-98
EDAM11	3.62	0.735	10y-EDAM11	-98
EDAU11	3.95	0.405	10y-EDAU11	-99
EDAZ11	4.26	0.095	10y-EDAZ11	-99
EDAH12	4.48	0.125	10y-EDAH12	-99
EDAM12	4.69	0.335	10y-EDAM12	-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	
EDAU09	0.1500	8.2950	8.1450	10y-EDAU09
EDAZ09	0.3993	8.2950	7.8957	10y-EDAZ09
EDAH10	0.6487	8.2950	7.6464	10y-EDAH10
EDAM10	0.8980	8.2950	7.3970	10y-EDAM10
EDAU10	1.1473	8.2950	7.1477	10y-EDAU10
EDAZ10	1.3966	8.2950	6.8984	10y-EDAZ10
EDAH11	1.6459	8.2950	6.6491	10y-EDAH11
EDAM11	1.8952	8.2950	6.3998	10y-EDAM11
EDAU11	2.1637	8.2950	6.1313	10y-EDAU11
EDAZ11	2.4130	8.2950	5.8820	10y-EDAZ11
EDAH12	2.6624	8.2950	5.6327	10y-EDAH12
EDAM12	2.9117	8.2950	5.3834	10y-EDAM12

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

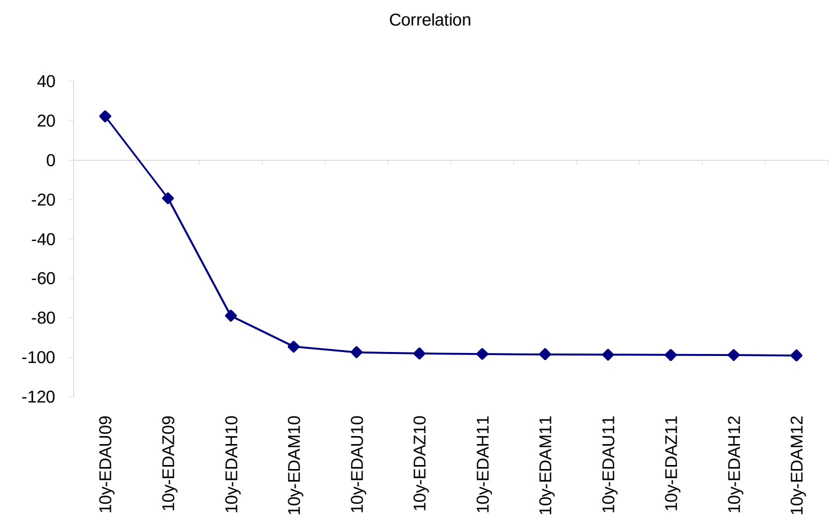
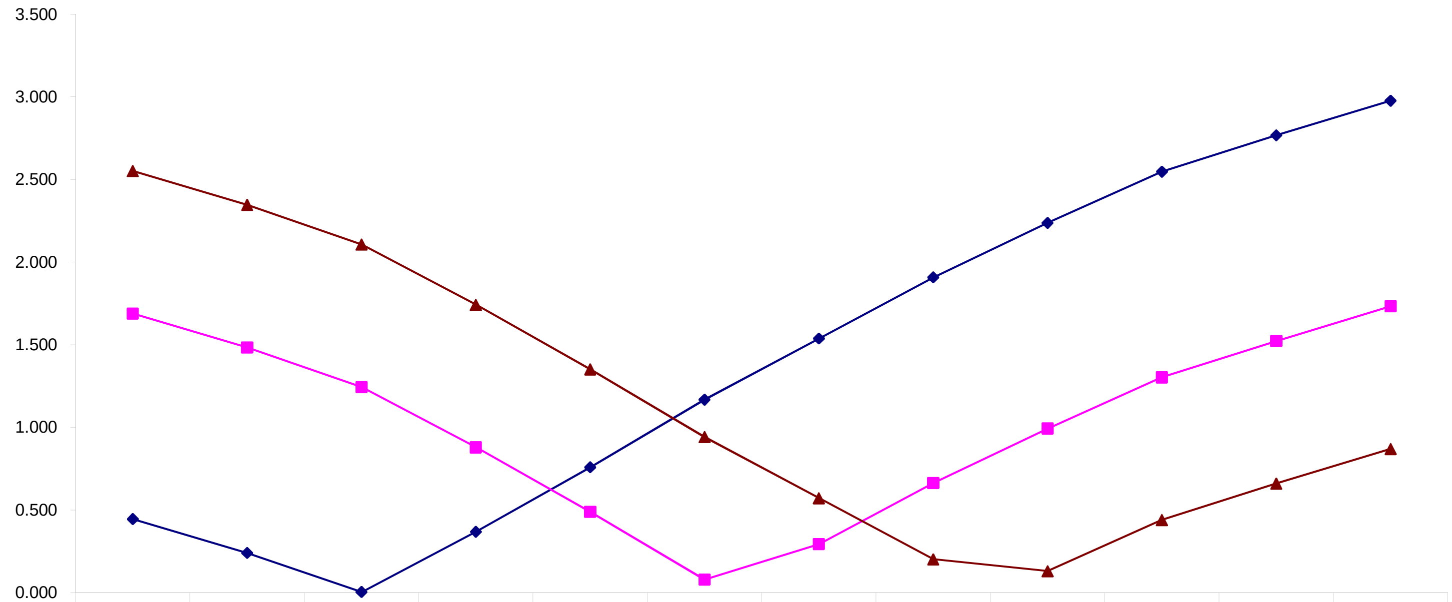


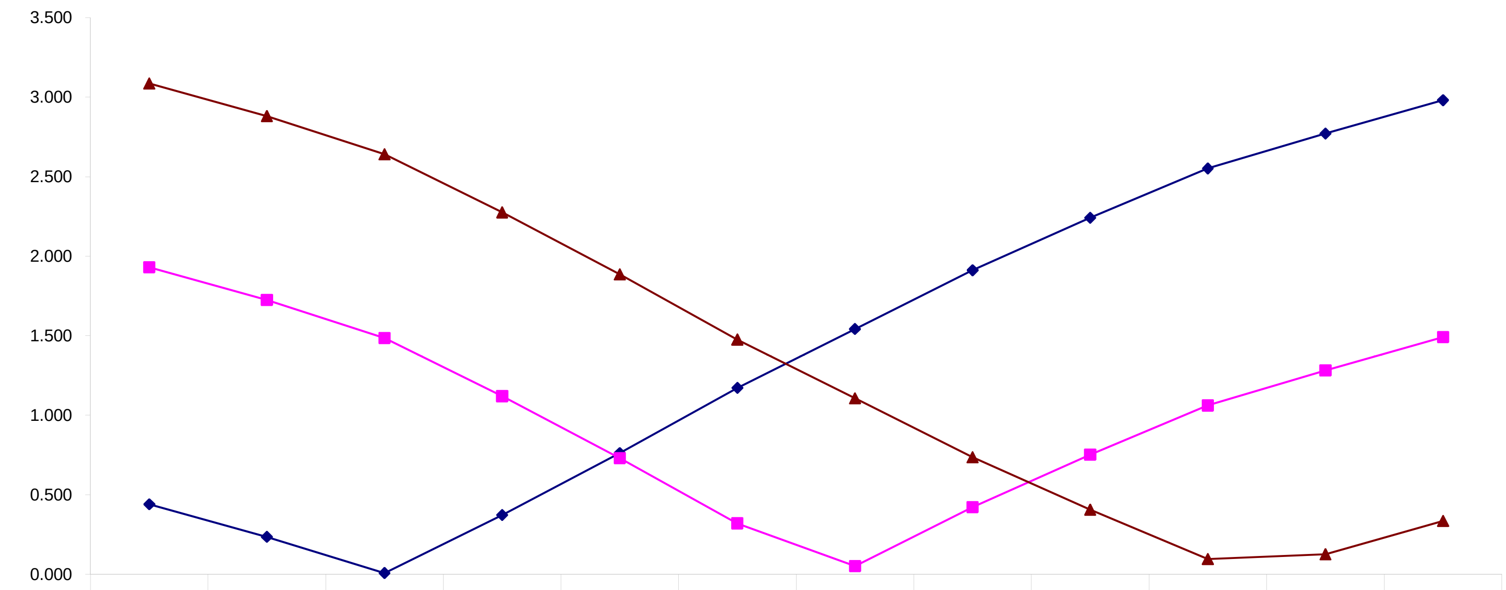
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.443	0.238	0.002	0.367	0.757	1.167	1.537	1.907	2.237	2.547	2.767	2.977
ZF	1.688	1.483	1.243	0.878	0.488	0.078	0.292	0.662	0.992	1.302	1.522	1.732
ZN	2.551	2.346	2.106	1.741	1.351	0.941	0.571	0.201	0.129	0.439	0.659	0.869

ZT ZF ZN

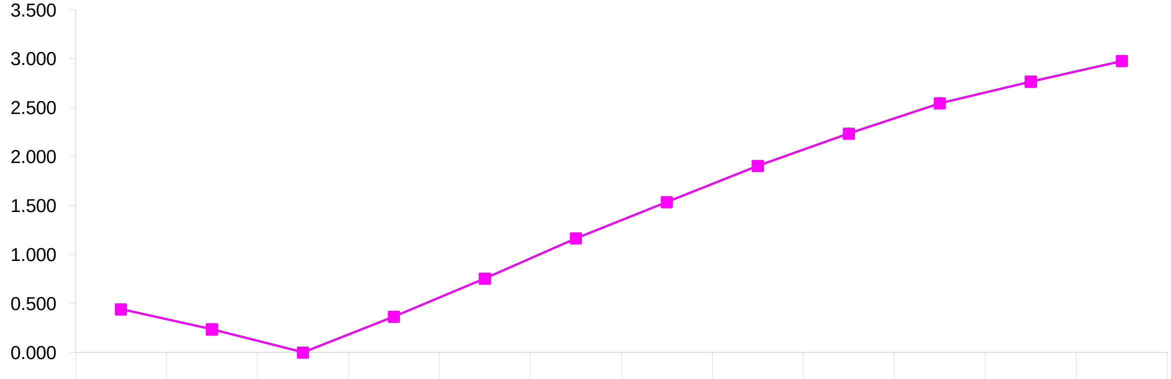
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



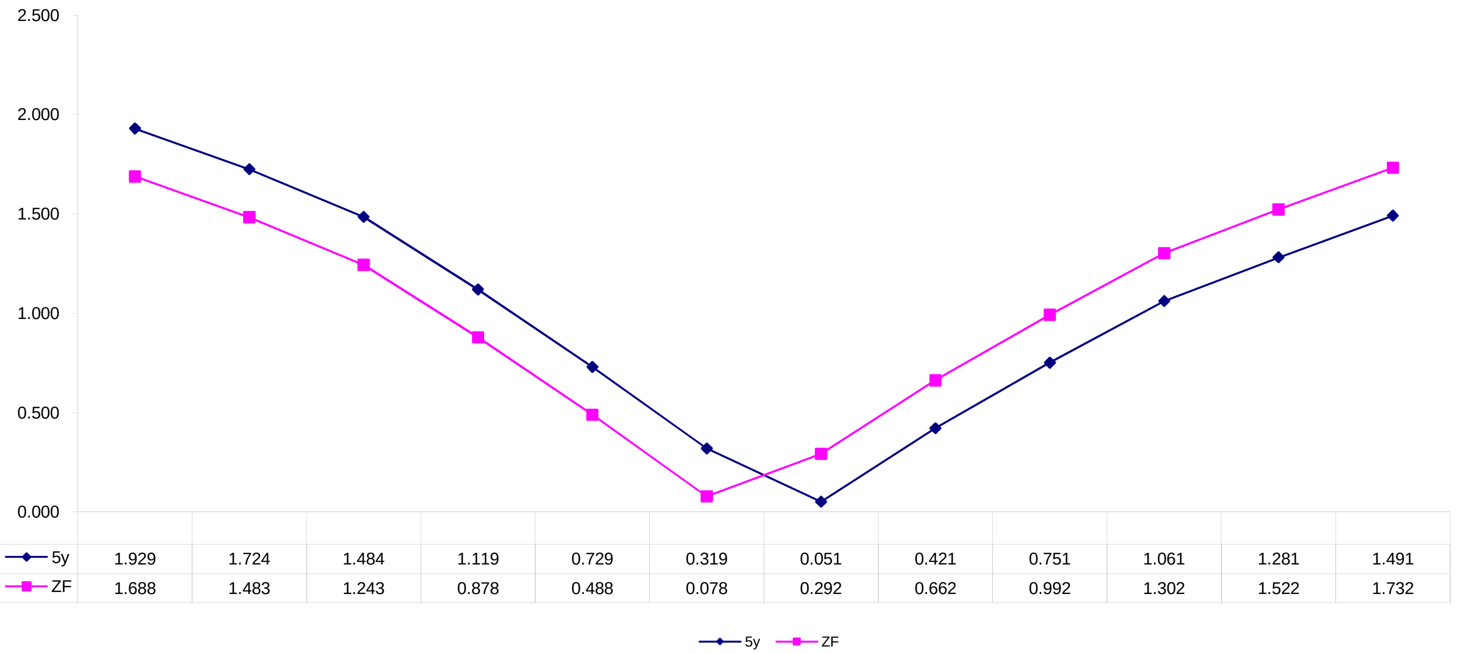
2y	0.439	0.234	0.006	0.371	0.761	1.171	1.541	1.911	2.241	2.551	2.771	2.981
5y	1.929	1.724	1.484	1.119	0.729	0.319	0.051	0.421	0.751	1.061	1.281	1.491
10y	3.085	2.880	2.640	2.275	1.885	1.475	1.105	0.735	0.405	0.095	0.125	0.335

2y 5y 10y

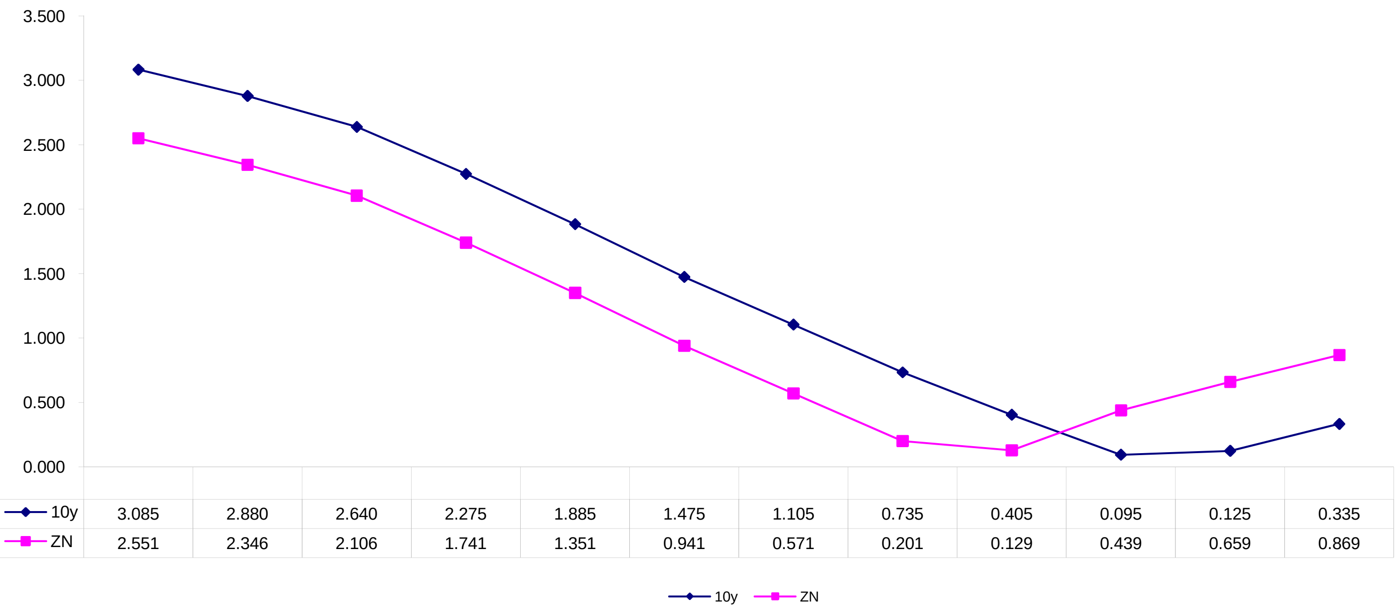
2y Basis TED Curve



2y	0.443	0.238	0.002	0.367	0.757	1.167	1.537	1.907	2.237	2.547	2.767	2.977
ZT	0.443	0.238	0.002	0.367	0.757	1.167	1.537	1.907	2.237	2.547	2.767	2.977



5y	1.929	1.724	1.484	1.119	0.729	0.319	0.051	0.421	0.751	1.061	1.281	1.491
ZF	1.688	1.483	1.243	0.878	0.488	0.078	0.292	0.662	0.992	1.302	1.522	1.732



10y	3.085	2.880	2.640	2.275	1.885	1.475	1.105	0.735	0.405	0.095	0.125	0.335
ZN	2.551	2.346	2.106	1.741	1.351	0.941	0.571	0.201	0.129	0.439	0.659	0.869

	Last Yield	Net Last Yield	Last Price
White Pack	0.915	0.125	9910.0000
Red Pack	2.366	-0.375	9768.0000
Green Pack	3.694	-2.750	9639.0000
Blue Pack		-1.875	9569.1250
Gold Pack		-1.125	9525.6250