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 32	Last Yield*	MDuration
ZT	107.9750	107.3120	1.156	1.887
ZF	114.0219	114.0070	2.483	4.203
ZN	115.4219	115.1350	3.252	5.829
2y	99.9531	99.3050	1.149	1.975
5y	98.0000	98.0000	2.682	4.624
10y	95.7188	95.2300	3.640	8.365

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU09	99.2800	0.720	82	0.2240	SEP	White Pack
EDAZ09	99.0600	0.940	173	0.4733	DEC	
EDAH10	98.7950	1.205	264	0.7226	MAR	
EDAM10	98.4250	1.575	355	0.9720	JUN	
EDAU10	98.0400	1.960	446	1.2213	SEP	Red Pack
EDAZ10	97.6200	2.380	537	1.4706	DEC	
EDAH11	97.2500	2.750	628	1.7199	MAR	
EDAM11	96.8800	3.120	719	1.9692	JUN	
EDAU11	96.5550	3.445	817	2.2377	SEP	Green Pack
EDAZ11	96.2450	3.755	908	2.4870	DEC	
EDAH12	96.0250	3.975	999	2.7363	MAR	
EDAM12	95.8300	4.170	1,090	2.9857	JUN	
EDAU12	95.6600	4.340	1,181	3.2350	SEP	Blue Pack
EDAZ12	95.5000	4.500	1,272	3.4843	DEC	
EDAH13	95.4200	4.580	1,363	3.7336	MAR	
EDAM13	95.3300	4.670	1,454	3.9829	JUN	
EDAU13	95.2000	4.800	1,545	4.2322	SEP	Gold Pack
EDAZ13	95.1000	4.900	1,636	4.4815	DEC	
EDAH14	95.0550	4.945	1,727	4.7309	MAR	
EDAM14	94.9950	5.005	1,818	4.9802	JUN	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	1.129	0.375	9889.00
Red Pack	2.605	1.000	9744.75
Green Pack	3.927	0.375	9616.38
Blue Pack	4.638	-0.250	9547.75
Gold Pack		0.000	9509.50

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)

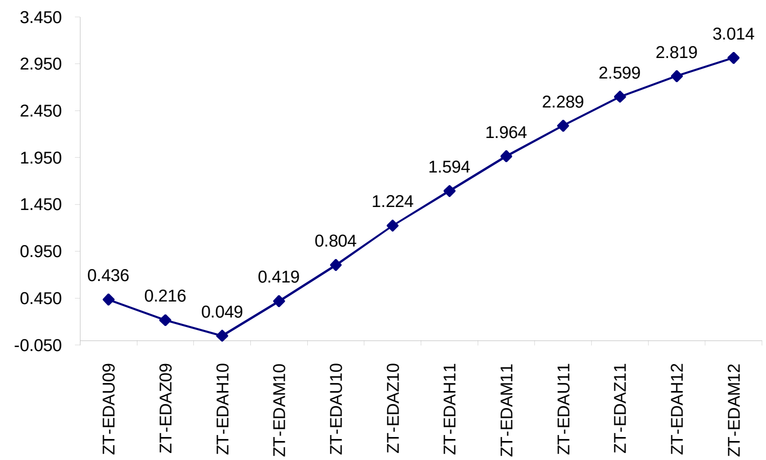
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based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

Dirty TED: ZT vs Eurodollar Contracts

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	8.69	0.436	ZT-EDAU09	45
EDAZ09	8.91	0.216	ZT-EDAZ09	92
EDAH10	9.18	0.049	ZT-EDAH10	97
EDAM10	9.55	0.419	ZT-EDAM10	99
EDAU10	9.93	0.804	ZT-EDAU10	98
EDAZ10	10.36	1.224	ZT-EDAZ10	94
EDAH11	10.73	1.594	ZT-EDAH11	89
EDAM11	11.10	1.964	ZT-EDAM11	86
EDAU11	11.42	2.289	ZT-EDAU11	83
EDAZ11	11.73	2.599	ZT-EDAZ11	82
EDAH12	11.95	2.819	ZT-EDAH12	80
EDAM12	12.15	3.014	ZT-EDAM12	79

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

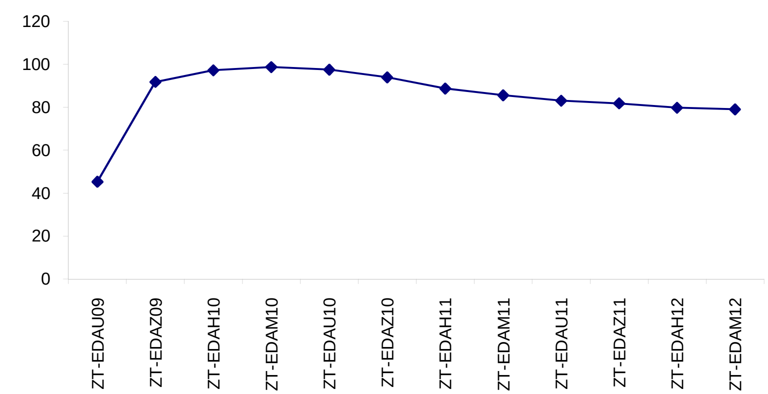
ZT Yield - ED Yield



	ED Duration as Fraction of year	ZT Duration	Spread Duration	
EDAU09	0.2240	1.8875	1.6635	ZT-EDAU09
EDAZ09	0.4733	1.8875	1.4142	ZT-EDAZ09
EDAH10	0.7226	1.8875	1.1649	ZT-EDAH10
EDAM10	0.9720	1.8875	0.9155	ZT-EDAM10
EDAU10	1.2213	1.8875	0.6662	ZT-EDAU10
EDAZ10	1.4706	1.8875	0.4169	ZT-EDAZ10
EDAH11	1.7199	1.8875	0.1676	ZT-EDAH11
EDAM11	1.9692	1.8875	-0.0817	ZT-EDAM11
EDAU11	2.2377	1.8875	-0.3502	ZT-EDAU11
EDAZ11	2.4870	1.8875	-0.5995	ZT-EDAZ11
EDAH12	2.7363	1.8875	-0.8488	ZT-EDAH12
EDAM12	2.9857	1.8875	-1.0982	ZT-EDAM12

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

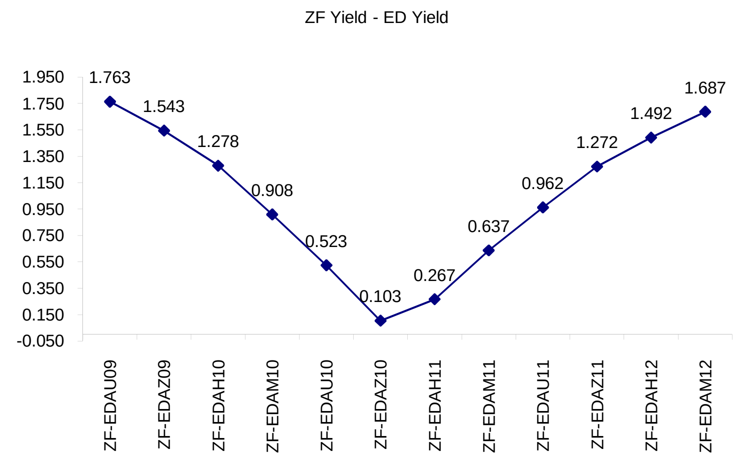
Correlation



Dirty TED: ZF vs Eurodollar Contracts

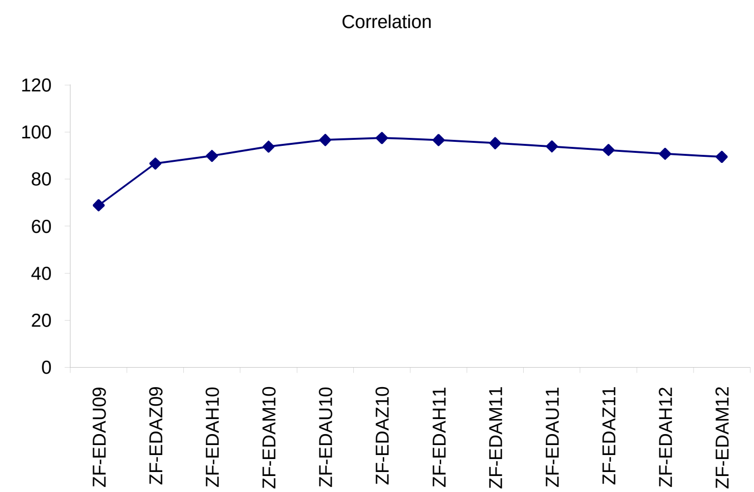
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	14.74	1.763	ZF-EDAU09	69
EDAZ09	14.96	1.543	ZF-EDAZ09	87
EDAH10	15.23	1.278	ZF-EDAH10	90
EDAM10	15.60	0.908	ZF-EDAM10	94
EDAU10	15.98	0.523	ZF-EDAU10	97
EDAZ10	16.40	0.103	ZF-EDAZ10	98
EDAH11	16.77	0.267	ZF-EDAH11	97
EDAM11	17.14	0.637	ZF-EDAM11	95
EDAU11	17.47	0.962	ZF-EDAU11	94
EDAZ11	17.78	1.272	ZF-EDAZ11	92
EDAH12	18.00	1.492	ZF-EDAH12	91
EDAM12	18.19	1.687	ZF-EDAM12	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	ZF Duration	Spread Duration	
EDAU09	0.2240	4.2031	3.9791	ZF-EDAU09
EDAZ09	0.4733	4.2031	3.7298	ZF-EDAZ09
EDAH10	0.7226	4.2031	3.4805	ZF-EDAH10
EDAM10	0.9720	4.2031	3.2311	ZF-EDAM10
EDAU10	1.2213	4.2031	2.9818	ZF-EDAU10
EDAZ10	1.4706	4.2031	2.7325	ZF-EDAZ10
EDAH11	1.7199	4.2031	2.4832	ZF-EDAH11
EDAM11	1.9692	4.2031	2.2339	ZF-EDAM11
EDAU11	2.2377	4.2031	1.9654	ZF-EDAU11
EDAZ11	2.4870	4.2031	1.7161	ZF-EDAZ11
EDAH12	2.7363	4.2031	1.4668	ZF-EDAH12
EDAM12	2.9857	4.2031	1.2174	ZF-EDAM12

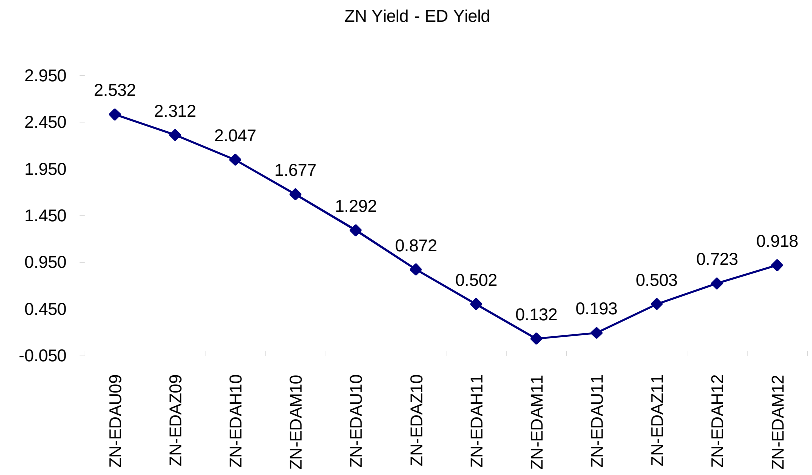
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

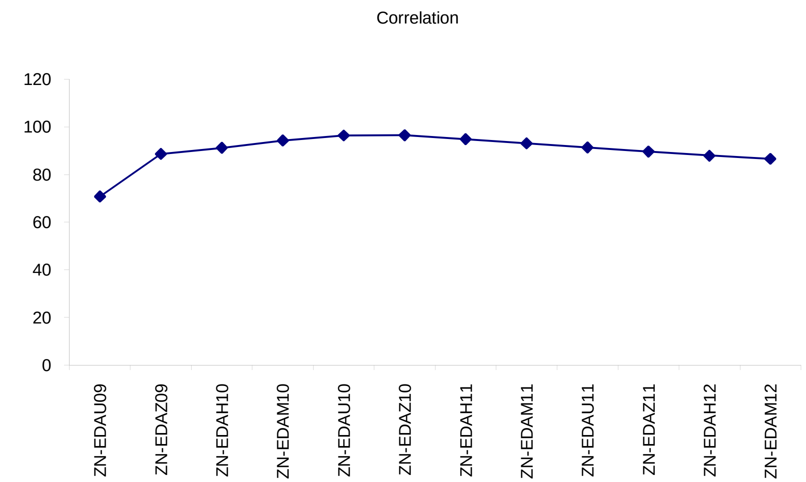
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	16.14	2.532	ZN-EDAU09	71
EDAZ09	16.36	2.312	ZN-EDAZ09	89
EDAH10	16.63	2.047	ZN-EDAH10	91
EDAM10	17.00	1.677	ZN-EDAM10	94
EDAU10	17.38	1.292	ZN-EDAU10	96
EDAZ10	17.80	0.872	ZN-EDAZ10	96
EDAH11	18.17	0.502	ZN-EDAH11	95
EDAM11	18.54	0.132	ZN-EDAM11	93
EDAU11	18.87	0.193	ZN-EDAU11	91
EDAZ11	19.18	0.503	ZN-EDAZ11	90
EDAH12	19.40	0.723	ZN-EDAH12	88
EDAM12	19.59	0.918	ZN-EDAM12	87

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	
EDAU09	0.2240	5.8291	5.6051	ZN-EDAU09
EDAZ09	0.4733	5.8291	5.3558	ZN-EDAZ09
EDAH10	0.7226	5.8291	5.1065	ZN-EDAH10
EDAM10	0.9720	5.8291	4.8572	ZN-EDAM10
EDAU10	1.2213	5.8291	4.6079	ZN-EDAU10
EDAZ10	1.4706	5.8291	4.3585	ZN-EDAZ10
EDAH11	1.7199	5.8291	4.1092	ZN-EDAH11
EDAM11	1.9692	5.8291	3.8599	ZN-EDAM11
EDAU11	2.2377	5.8291	3.5914	ZN-EDAU11
EDAZ11	2.4870	5.8291	3.3421	ZN-EDAZ11
EDAH12	2.7363	5.8291	3.0928	ZN-EDAH12
EDAM12	2.9857	5.8291	2.8435	ZN-EDAM12

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)
EDAU09	0.67	0.429	2y-EDAU09	-41
EDAZ09	0.89	0.209	2y-EDAZ09	-88
EDAH10	1.16	0.056	2y-EDAH10	-94
EDAM10	1.53	0.426	2y-EDAM10	-95
EDAU10	1.91	0.811	2y-EDAU10	-94
EDAZ10	2.33	1.231	2y-EDAZ10	-90
EDAH11	2.70	1.601	2y-EDAH11	-85
EDAM11	3.07	1.971	2y-EDAM11	-83
EDAU11	3.40	2.296	2y-EDAU11	-80
EDAZ11	3.71	2.606	2y-EDAZ11	-80
EDAH12	3.93	2.826	2y-EDAH12	-79
EDAM12	4.12	3.021	2y-EDAM12	-78

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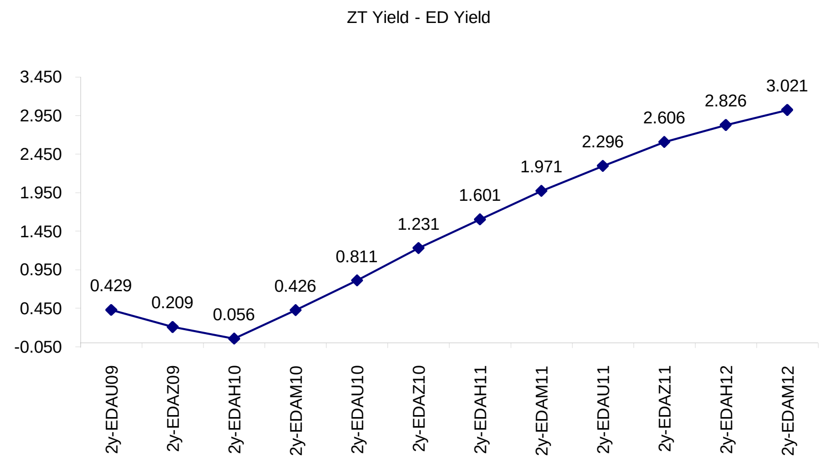
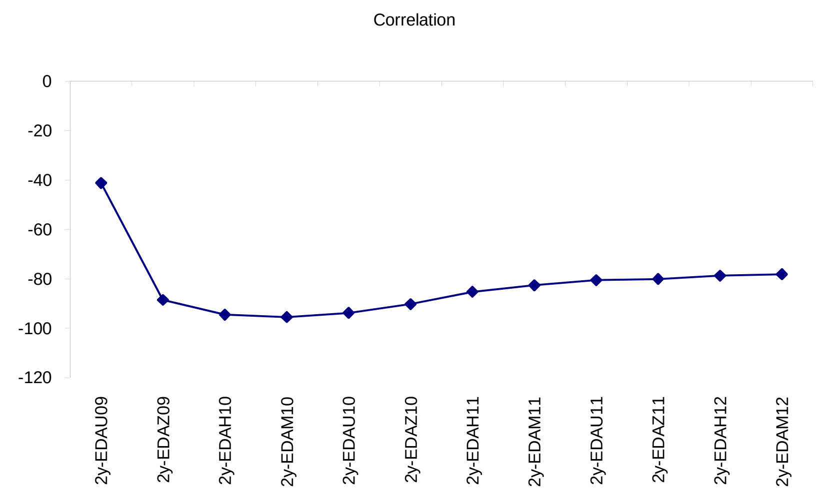


	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU09	0.2240	1.9747	1.7506	2y-EDAU09
EDAZ09	0.4733	1.9747	1.5013	2y-EDAZ09
EDAH10	0.7226	1.9747	1.2520	2y-EDAH10
EDAM10	0.9720	1.9747	1.0027	2y-EDAM10
EDAU10	1.2213	1.9747	0.7534	2y-EDAU10
EDAZ10	1.4706	1.9747	0.5041	2y-EDAZ10
EDAH11	1.7199	1.9747	0.2547	2y-EDAH11
EDAM11	1.9692	1.9747	0.0054	2y-EDAM11
EDAU11	2.2377	1.9747	-0.2631	2y-EDAU11
EDAZ11	2.4870	1.9747	-0.5124	2y-EDAZ11
EDAH12	2.7363	1.9747	-0.7617	2y-EDAH12
EDAM12	2.9857	1.9747	-1.0110	2y-EDAM12

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

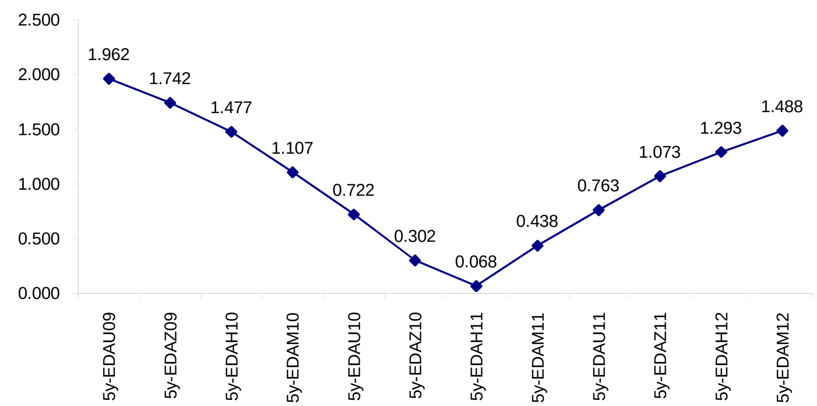


TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	-1.28	1.962	5y-EDAU09	-68
EDAZ09	-1.06	1.742	5y-EDAZ09	-79
EDAH10	-0.80	1.477	5y-EDAH10	-83
EDAM10	-0.42	1.107	5y-EDAM10	-88
EDAU10	-0.04	0.722	5y-EDAU10	-93
EDAZ10	0.38	0.302	5y-EDAZ10	-96
EDAH11	0.75	0.068	5y-EDAH11	-97
EDAM11	1.12	0.438	5y-EDAM11	-97
EDAU11	1.44	0.763	5y-EDAU11	-96
EDAZ11	1.76	1.073	5y-EDAZ11	-95
EDAH12	1.97	1.293	5y-EDAH12	-94
EDAM12	2.17	1.488	5y-EDAM12	-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

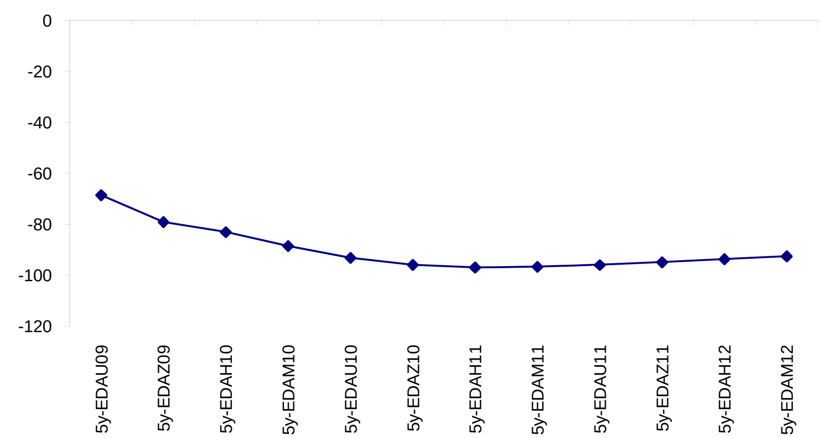
5y - ED Yield



	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU09	0.2240	4.6240	4.4000	5y-EDAU09
EDAZ09	0.4733	4.6240	4.1507	5y-EDAZ09
EDAH10	0.7226	4.6240	3.9014	5y-EDAH10
EDAM10	0.9720	4.6240	3.6521	5y-EDAM10
EDAU10	1.2213	4.6240	3.4028	5y-EDAU10
EDAZ10	1.4706	4.6240	3.1534	5y-EDAZ10
EDAH11	1.7199	4.6240	2.9041	5y-EDAH11
EDAM11	1.9692	4.6240	2.6548	5y-EDAM11
EDAU11	2.2377	4.6240	2.3863	5y-EDAU11
EDAZ11	2.4870	4.6240	2.1370	5y-EDAZ11
EDAH12	2.7363	4.6240	1.8877	5y-EDAH12
EDAM12	2.9857	4.6240	1.6384	5y-EDAM12

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

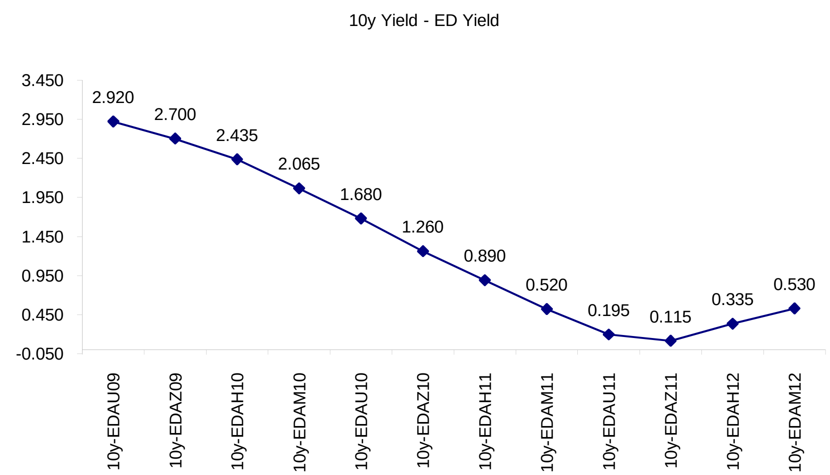
Correlation



TERM TED: 10y vs Eurodollar Contracts

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU09	-1.28	2.920	10y-EDAU09	-67
EDAZ09	-1.06	2.700	10y-EDAZ09	-86
EDAH10	-0.80	2.435	10y-EDAH10	-89
EDAM10	-0.42	2.065	10y-EDAM10	-92
EDAU10	-0.04	1.680	10y-EDAU10	-95
EDAZ10	0.38	1.260	10y-EDAZ10	-95
EDAH11	0.75	0.890	10y-EDAH11	-94
EDAM11	1.12	0.520	10y-EDAM11	-93
EDAU11	1.44	0.195	10y-EDAU11	-91
EDAZ11	1.76	0.115	10y-EDAZ11	-90
EDAH12	1.97	0.335	10y-EDAH12	-88
EDAM12	2.17	0.530	10y-EDAM12	-87

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	0.2240	8.3649	8.1409	10y-EDAU09
EDAZ09	0.4733	8.3649	7.8915	10y-EDAZ09
EDAH10	0.7226	8.3649	7.6422	10y-EDAH10
EDAM10	0.9720	8.3649	7.3929	10y-EDAM10
EDAU10	1.2213	8.3649	7.1436	10y-EDAU10
EDAZ10	1.4706	8.3649	6.8943	10y-EDAZ10
EDAH11	1.7199	8.3649	6.6450	10y-EDAH11
EDAM11	1.9692	8.3649	6.3956	10y-EDAM11
EDAU11	2.2377	8.3649	6.1272	10y-EDAU11
EDAZ11	2.4870	8.3649	5.8778	10y-EDAZ11
EDAH12	2.7363	8.3649	5.6285	10y-EDAH12
EDAM12	2.9857	8.3649	5.3792	10y-EDAM12

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

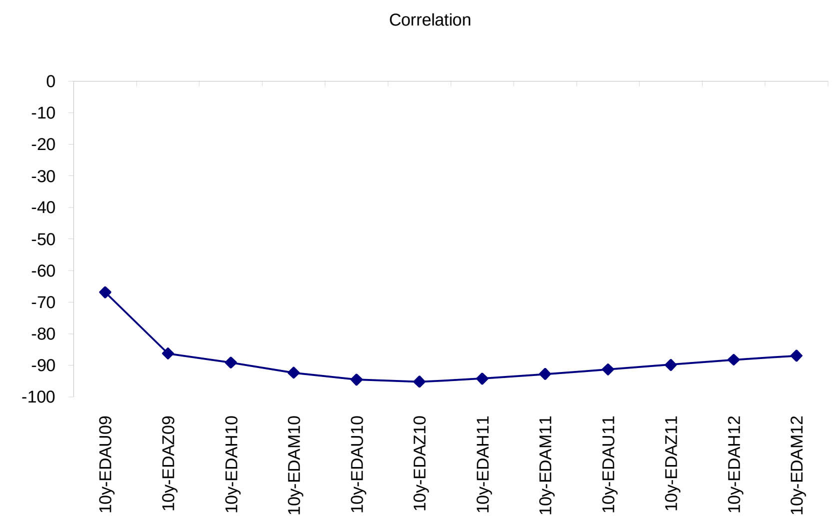
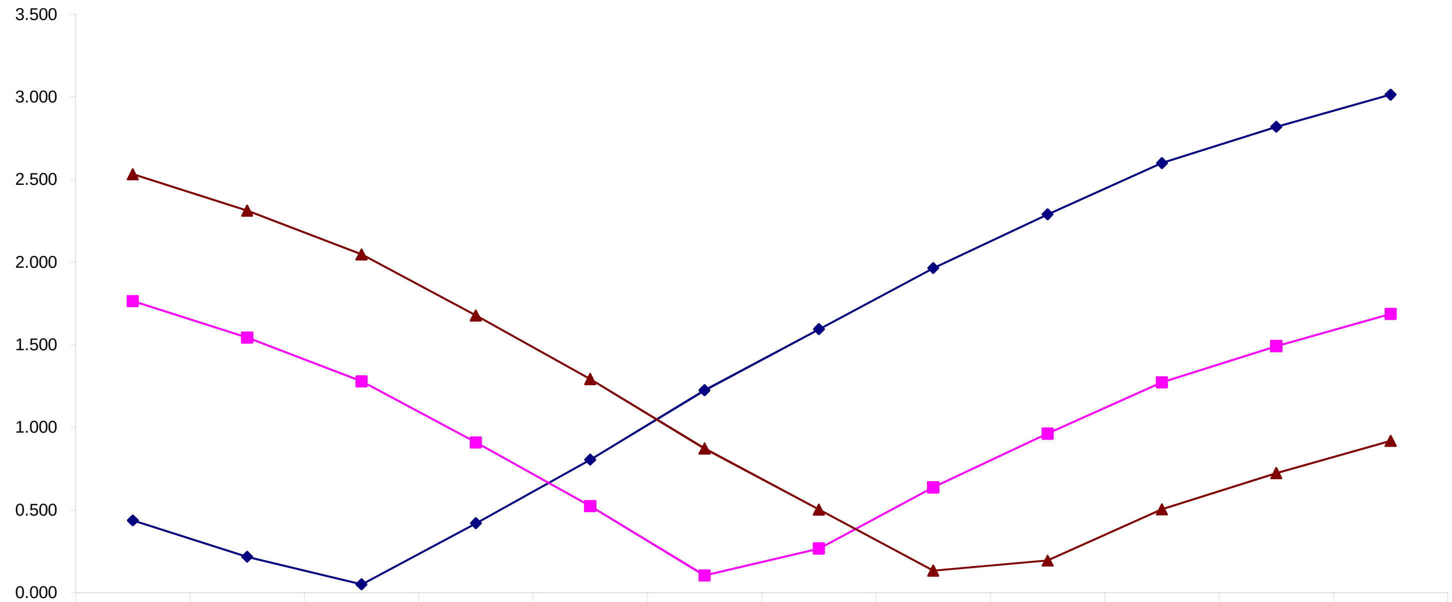


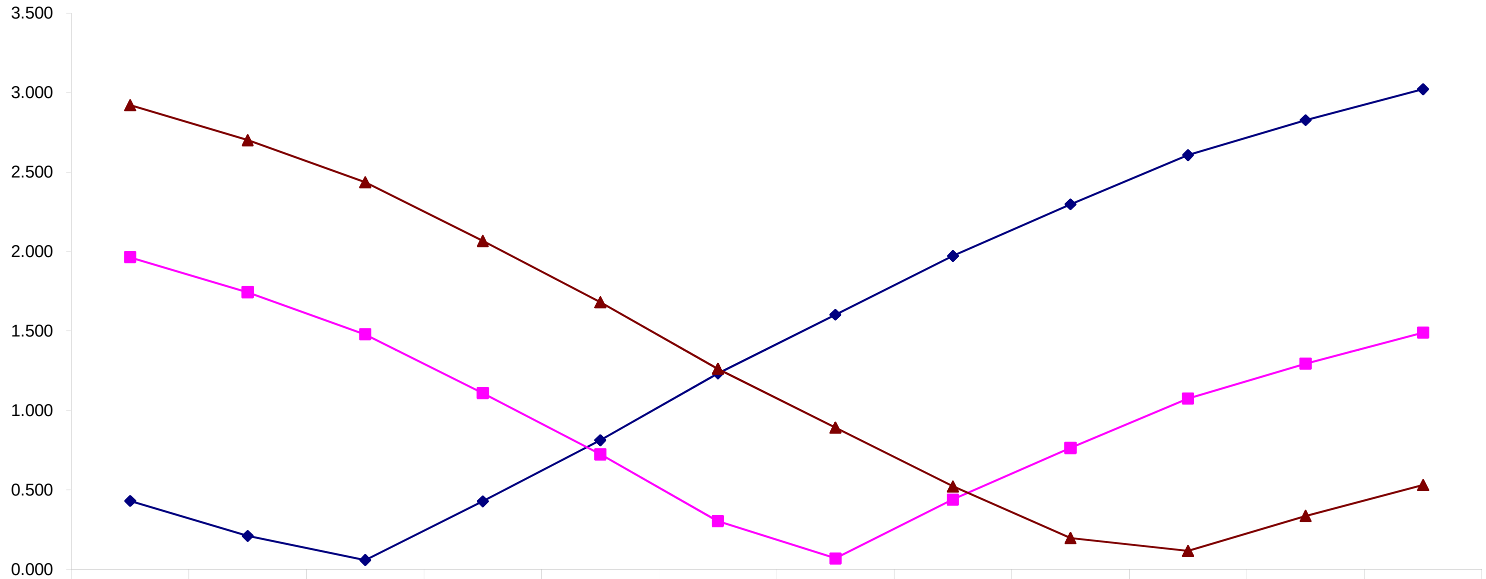
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.436	0.216	0.049	0.419	0.804	1.224	1.594	1.964	2.289	2.599	2.819	3.014
ZF	1.763	1.543	1.278	0.908	0.523	0.103	0.267	0.637	0.962	1.272	1.492	1.687
ZN	2.532	2.312	2.047	1.677	1.292	0.872	0.502	0.132	0.193	0.503	0.723	0.918

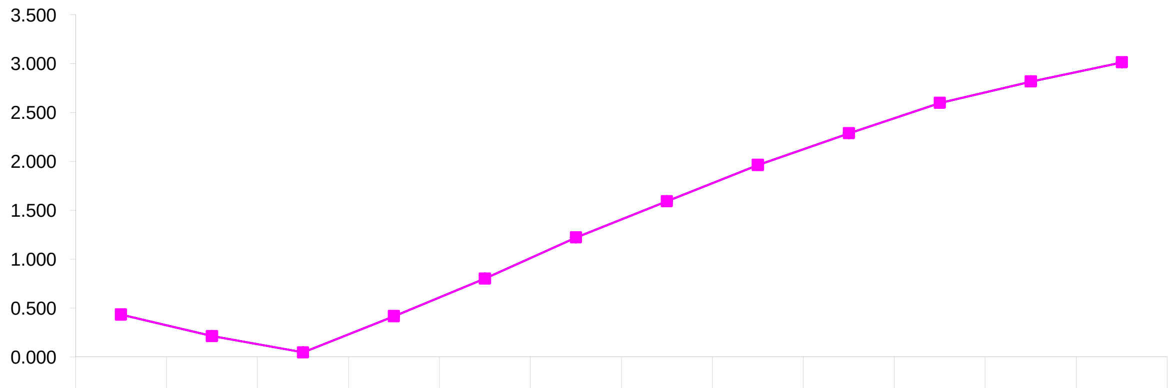
ZT ZF ZN

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	0.429	0.209	0.056	0.426	0.811	1.231	1.601	1.971	2.296	2.606	2.826	3.021
5y	1.962	1.742	1.477	1.107	0.722	0.302	0.068	0.438	0.763	1.073	1.293	1.488
10y	2.920	2.700	2.435	2.065	1.680	1.260	0.890	0.520	0.195	0.115	0.335	0.530

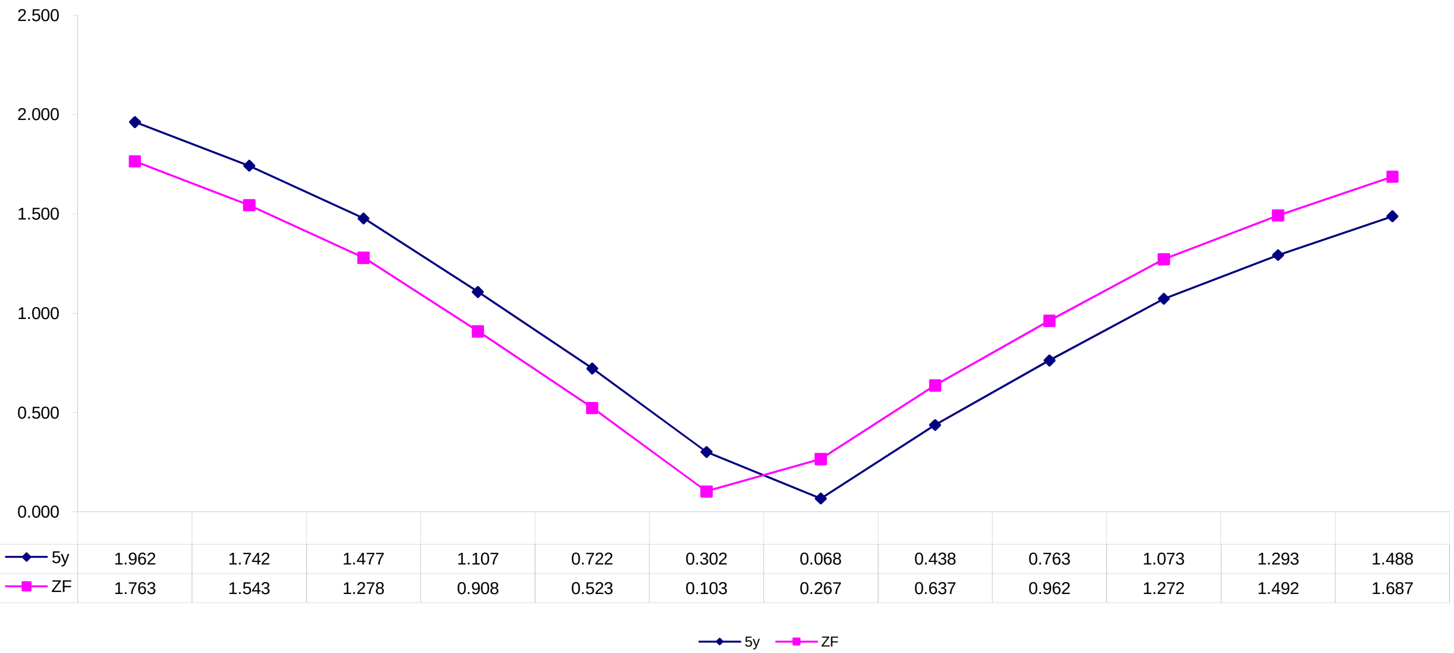
2y Basis TED Curve



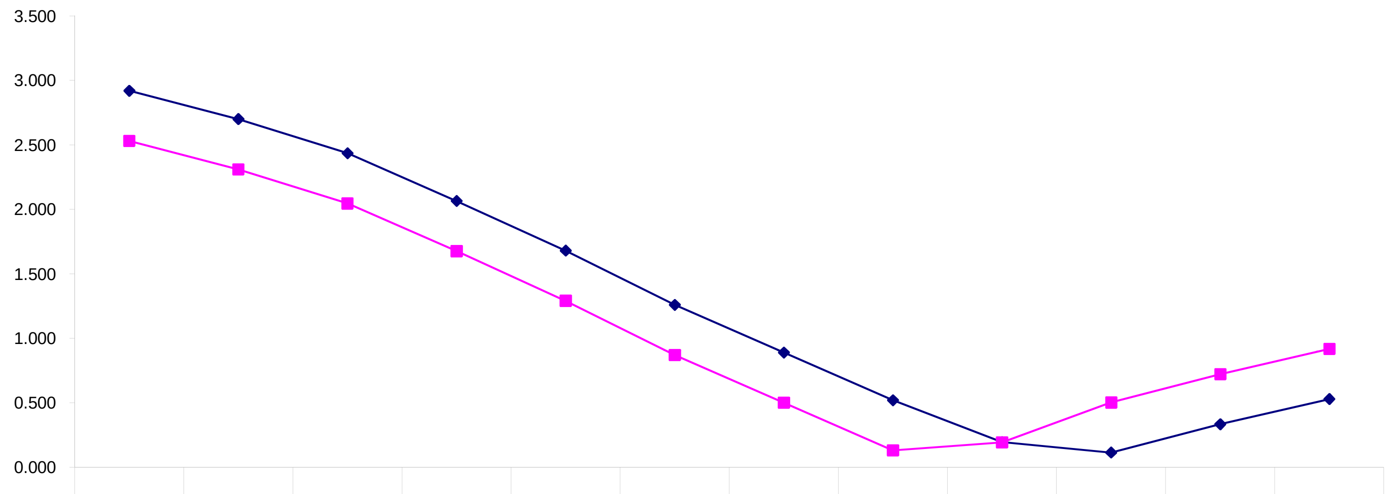
2y	0.436	0.216	0.049	0.419	0.804	1.224	1.594	1.964	2.289	2.599	2.819	3.014
ZT	0.436	0.216	0.049	0.419	0.804	1.224	1.594	1.964	2.289	2.599	2.819	3.014

2y ZT

5y Basis TED Curve



5y	1.962	1.742	1.477	1.107	0.722	0.302	0.068	0.438	0.763	1.073	1.293	1.488
ZF	1.763	1.543	1.278	0.908	0.523	0.103	0.267	0.637	0.962	1.272	1.492	1.687



10y	2.920	2.700	2.435	2.065	1.680	1.260	0.890	0.520	0.195	0.115	0.335	0.530
ZN	2.532	2.312	2.047	1.677	1.292	0.872	0.502	0.132	0.193	0.503	0.723	0.918

	Last Yield	Net Last Yield	Last Price
White Pack	1.129	0.375	9889.0000
Red Pack	2.605	1.000	9744.7500
Green Pack	3.927	0.375	9616.3750
Blue Pack	4.638	-0.250	9547.7500
Gold Pack		0.000	9509.5000