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	108.6000	108.1920	0.928	1.814
ZF	116.3813	116.1220	1.986	4.005
ZN	119.9219	119.2950	2.750	5.851
2y	99.7406	99.2370	1.004	1.947
5y	98.5000	98.1600	2.194	4.713
10y	98.2031	98.0650	3.336	8.386

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM09	99.1500	0.850	38	0.1035	JUN	
EDAU09	99.0950	0.905	129	0.3528	SEP	White
EDAZ09	98.8750	1.125	220	0.6021	DEC	Pack
EDAH10	98.7150	1.285	311	0.8514	MAR	
EDAM10	98.4350	1.565	402	1.1007	JUN	
EDAU10	98.1500	1.850	493	1.3501	SEP	Red
EDAZ10	97.8100	2.190	584	1.5994	DEC	Pack
EDAH11	97.5250	2.475	675	1.8487	MAR	
EDAM11	97.2200	2.780	766	2.0980	JUN	
EDAU11	96.9550	3.045	864	2.3665	SEP	Green
EDAZ11	96.7050	3.295	955	2.6158	DEC	Pack
EDAH12	96.5550	3.445	1,046	2.8651	MAR	
EDAM12	96.4100	3.590	1,137	3.1144	JUN	
EDAU12	96.2900	3.710	1,228	3.3637	SEP	Blue Pack
EDAZ12	96.1650	3.835	1,319	3.6131	DEC	
EDAH13	96.1050	3.895	1,410	3.8624	MAR	
EDAM13	96.0000	4.000	1,501	4.1117	JUN	
EDAU13	95.9350	4.065	1,592	4.3610	SEP	Gold Pack
EDAZ13	95.8350	4.165	1,683	4.6103	DEC	
EDAH14	95.7900	4.210	1,774	4.8596	MAR	

	Last Yield	Net Yield	Last Price
White Pack	1.059	-1.000	9895.88
Red Pack	2.059	-6.250	9798.00
Green Pack	3.210	-9.250	9685.88
Blue Pack	3.846	-6.750	9624.25
Gold Pack	4.210	-5.750	9589.00

Pack Prices

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

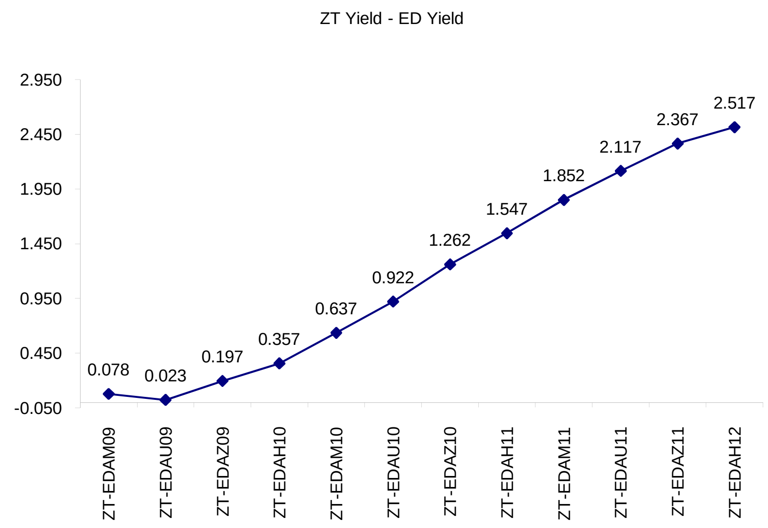
Correlations (Important)

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

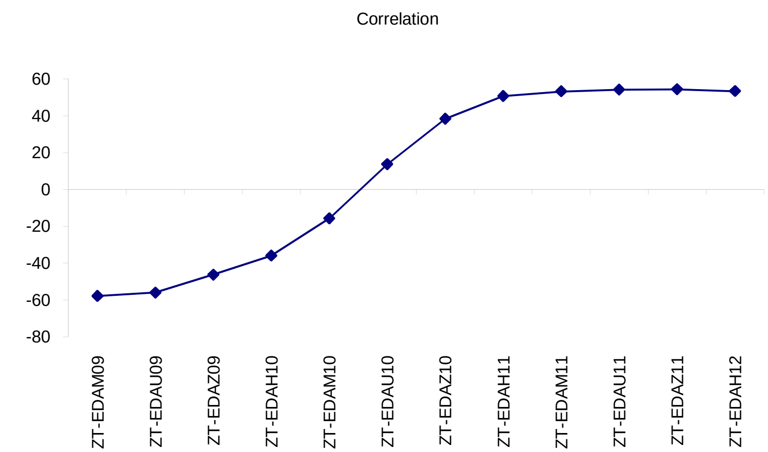
	ZT Spread Price	ZT Spread Yield	Spread Name	Correlation* (percent)
EDAM09	9.45	0.078	ZT-EDAM09	-58
EDAU09	9.51	0.023	ZT-EDAU09	-56
EDAZ09	9.73	0.197	ZT-EDAZ09	-46
EDAH10	9.89	0.357	ZT-EDAH10	-36
EDAM10	10.17	0.637	ZT-EDAM10	-16
EDAU10	10.45	0.922	ZT-EDAU10	14
EDAZ10	10.79	1.262	ZT-EDAZ10	38
EDAH11	11.08	1.547	ZT-EDAH11	51
EDAM11	11.38	1.852	ZT-EDAM11	53
EDAU11	11.65	2.117	ZT-EDAU11	54
EDAZ11	11.90	2.367	ZT-EDAZ11	54
EDAH12	12.05	2.517	ZT-EDAH12	53

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	0.1035	1.8138	1.7103	ZT-EDAM09
EDAU09	0.3528	1.8138	1.4610	ZT-EDAU09
EDAZ09	0.6021	1.8138	1.2117	ZT-EDAZ09
EDAH10	0.8514	1.8138	0.9624	ZT-EDAH10
EDAM10	1.1007	1.8138	0.7131	ZT-EDAM10
EDAU10	1.3501	1.8138	0.4638	ZT-EDAU10
EDAZ10	1.5994	1.8138	0.2145	ZT-EDAZ10
EDAH11	1.8487	1.8138	-0.0349	ZT-EDAH11
EDAM11	2.0980	1.8138	-0.2842	ZT-EDAM11
EDAU11	2.3665	1.8138	-0.5527	ZT-EDAU11
EDAZ11	2.6158	1.8138	-0.8020	ZT-EDAZ11
EDAH12	2.8651	1.8138	-1.0513	ZT-EDAH12

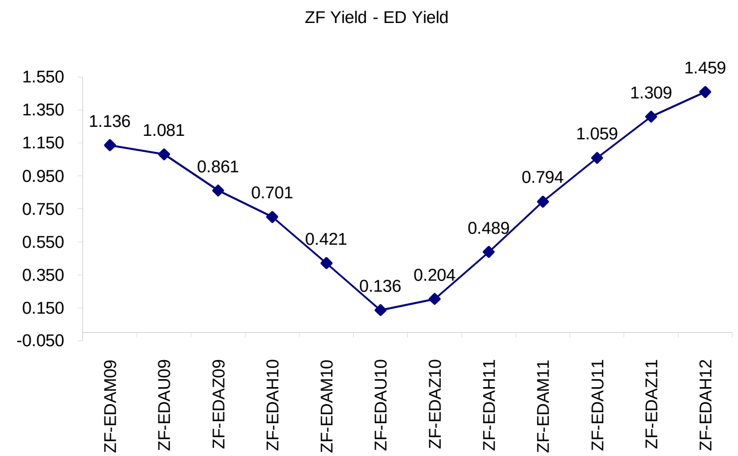
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	17.23	1.136	ZF-EDAM09	-87
EDAU09	17.29	1.081	ZF-EDAU09	-81
EDAZ09	17.51	0.861	ZF-EDAZ09	-70
EDAH10	17.67	0.701	ZF-EDAH10	-61
EDAM10	17.95	0.421	ZF-EDAM10	-35
EDAU10	18.23	0.136	ZF-EDAU10	13
EDAZ10	18.57	0.204	ZF-EDAZ10	63
EDAH11	18.86	0.489	ZF-EDAH11	85
EDAM11	19.16	0.794	ZF-EDAM11	92
EDAU11	19.43	1.059	ZF-EDAU11	95
EDAZ11	19.68	1.309	ZF-EDAZ11	96
EDAH12	19.83	1.459	ZF-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	ZF Duration	Spread Duration	
EDAM09	0.1035	4.0051	3.9016	ZF-EDAM09
EDAU09	0.3528	4.0051	3.6523	ZF-EDAU09
EDAZ09	0.6021	4.0051	3.4029	ZF-EDAZ09
EDAH10	0.8514	4.0051	3.1536	ZF-EDAH10
EDAM10	1.1007	4.0051	2.9043	ZF-EDAM10
EDAU10	1.3501	4.0051	2.6550	ZF-EDAU10
EDAZ10	1.5994	4.0051	2.4057	ZF-EDAZ10
EDAH11	1.8487	4.0051	2.1564	ZF-EDAH11
EDAM11	2.0980	4.0051	1.9071	ZF-EDAM11
EDAU11	2.3665	4.0051	1.6386	ZF-EDAU11
EDAZ11	2.6158	4.0051	1.3892	ZF-EDAZ11
EDAH12	2.8651	4.0051	1.1399	ZF-EDAH12

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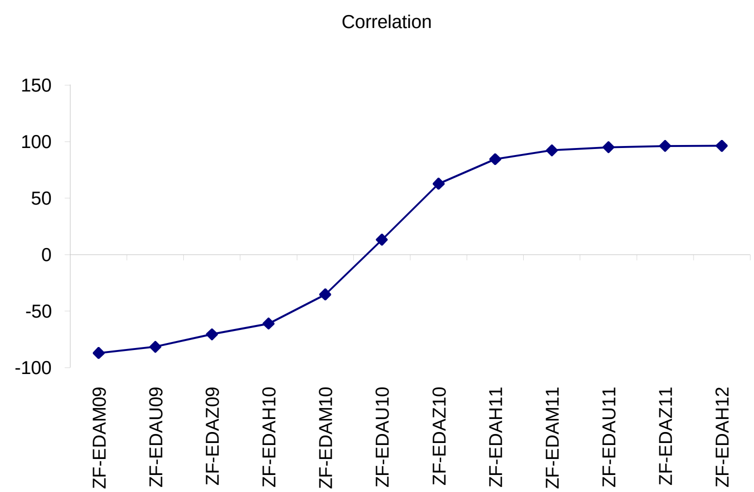

Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	20.77	1.900	ZN-EDAM09	-82
EDAU09	20.83	1.845	ZN-EDAU09	-76
EDAZ09	21.05	1.625	ZN-EDAZ09	-65
EDAH10	21.21	1.465	ZN-EDAH10	-56
EDAM10	21.49	1.185	ZN-EDAM10	-32
EDAU10	21.77	0.900	ZN-EDAU10	17
EDAZ10	22.11	0.560	ZN-EDAZ10	66
EDAH11	22.40	0.275	ZN-EDAH11	87
EDAM11	22.70	0.030	ZN-EDAM11	94
EDAU11	22.97	0.295	ZN-EDAU11	97
EDAZ11	23.22	0.545	ZN-EDAZ11	98
EDAH12	23.37	0.695	ZN-EDAH12	98

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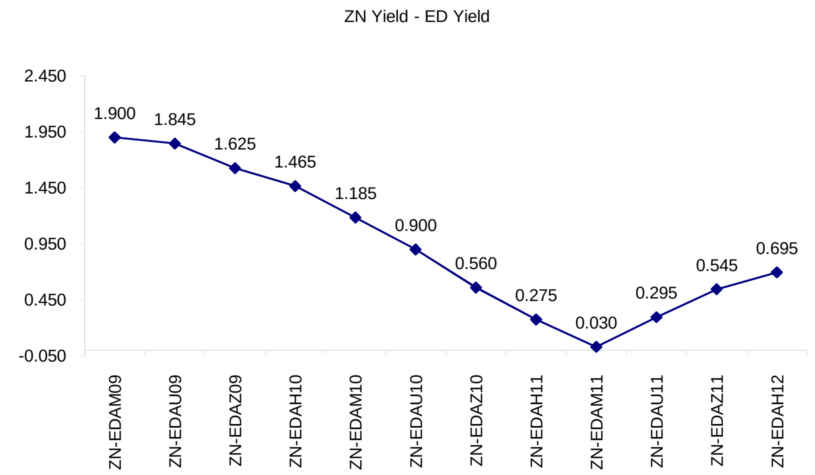
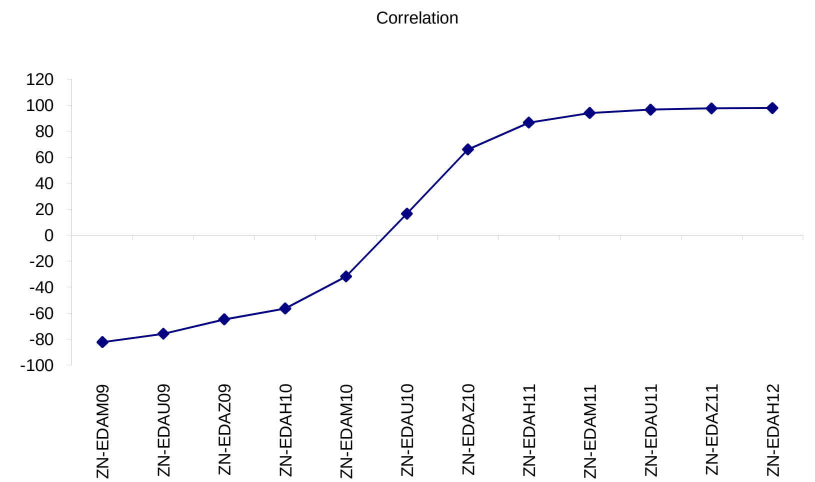


	ED Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM09	0.1035	5.8511	5.7477	ZN-EDAM09
EDAU09	0.3528	5.8511	5.4984	ZN-EDAU09
EDAZ09	0.6021	5.8511	5.2490	ZN-EDAZ09
EDAH10	0.8514	5.8511	4.9997	ZN-EDAH10
EDAM10	1.1007	5.8511	4.7504	ZN-EDAM10
EDAU10	1.3501	5.8511	4.5011	ZN-EDAU10
EDAZ10	1.5994	5.8511	4.2518	ZN-EDAZ10
EDAH11	1.8487	5.8511	4.0025	ZN-EDAH11
EDAM11	2.0980	5.8511	3.7532	ZN-EDAM11
EDAU11	2.3665	5.8511	3.4847	ZN-EDAU11
EDAZ11	2.6158	5.8511	3.2353	ZN-EDAZ11
EDAH12	2.8651	5.8511	2.9860	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	0.59	0.154	2y-EDAM09	74
EDAU09	0.65	0.099	2y-EDAU09	73
EDAZ09	0.87	0.121	2y-EDAZ09	63
EDAH10	1.03	0.281	2y-EDAH10	56
EDAM10	1.31	0.561	2y-EDAM10	38
EDAU10	1.59	0.846	2y-EDAU10	7
EDAZ10	1.93	1.186	2y-EDAZ10	-28
EDAH11	2.22	1.471	2y-EDAH11	-49
EDAM11	2.52	1.776	2y-EDAM11	-57
EDAU11	2.79	2.041	2y-EDAU11	-61
EDAZ11	3.04	2.291	2y-EDAZ11	-63
EDAH12	3.19	2.441	2y-EDAH12	-64

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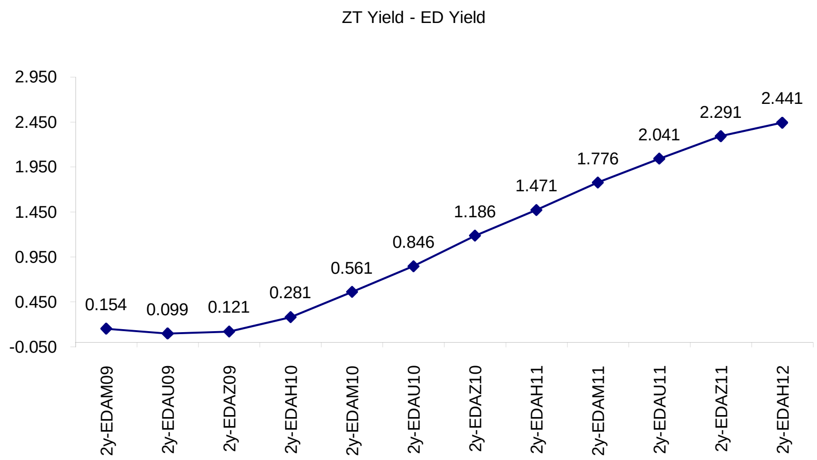

	ED Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM09	0.1035	1.9473	1.8438	2y-EDAM09
EDAU09	0.3528	1.9473	1.5945	2y-EDAU09
EDAZ09	0.6021	1.9473	1.3452	2y-EDAZ09
EDAH10	0.8514	1.9473	1.0959	2y-EDAH10
EDAM10	1.1007	1.9473	0.8466	2y-EDAM10
EDAU10	1.3501	1.9473	0.5972	2y-EDAU10
EDAZ10	1.5994	1.9473	0.3479	2y-EDAZ10
EDAH11	1.8487	1.9473	0.0986	2y-EDAH11
EDAM11	2.0980	1.9473	-0.1507	2y-EDAM11
EDAU11	2.3665	1.9473	-0.4192	2y-EDAU11
EDAZ11	2.6158	1.9473	-0.6685	2y-EDAZ11
EDAH12	2.8651	1.9473	-0.9178	2y-EDAH12

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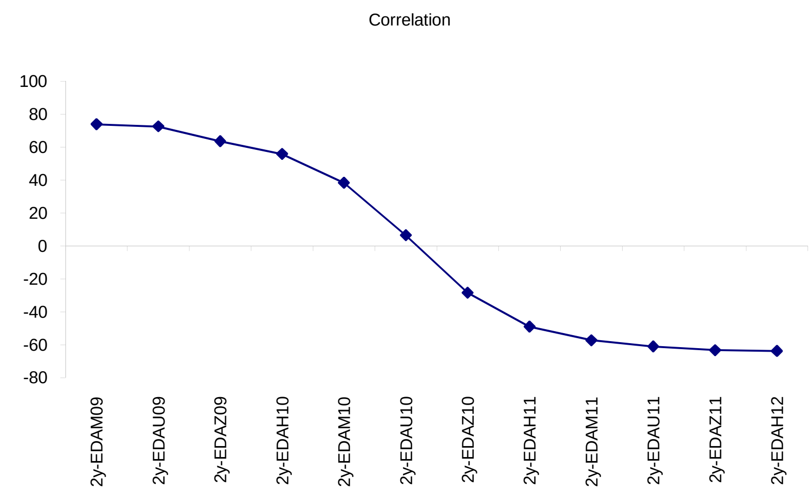
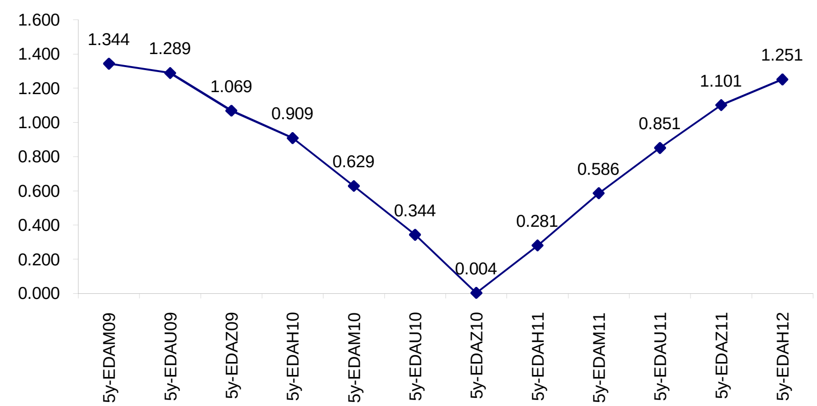


TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.65	1.344	5y-EDAM09	90
EDAU09	-0.60	1.289	5y-EDAU09	86
EDAZ09	-0.38	1.069	5y-EDAZ09	76
EDAH10	-0.22	0.909	5y-EDAH10	67
EDAM10	0.06	0.629	5y-EDAM10	43
EDAU10	0.35	0.344	5y-EDAU10	-4
EDAZ10	0.69	0.004	5y-EDAZ10	-54
EDAH11	0.97	0.281	5y-EDAH11	-78
EDAM11	1.28	0.586	5y-EDAM11	-87
EDAU11	1.54	0.851	5y-EDAU11	-90
EDAZ11	1.79	1.101	5y-EDAZ11	-92
EDAH12	1.94	1.251	5y-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

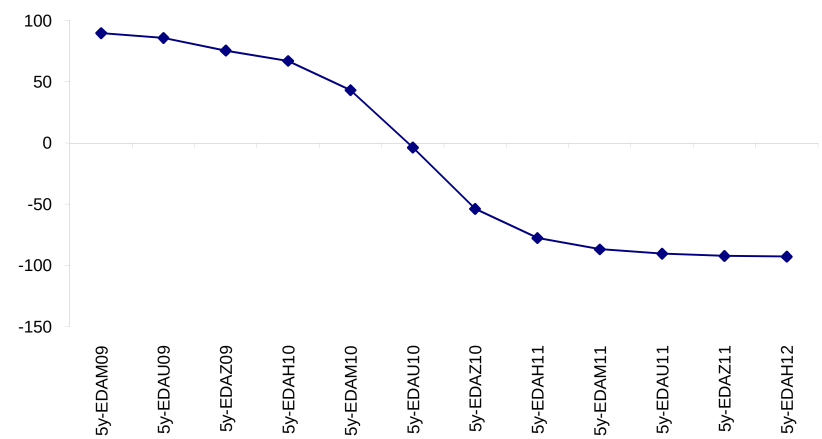
5y - ED Yield



	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAM09	0.1035	4.7126	4.6091	5y-EDAM09
EDAU09	0.3528	4.7126	4.3598	5y-EDAU09
EDAZ09	0.6021	4.7126	4.1105	5y-EDAZ09
EDAH10	0.8514	4.7126	3.8612	5y-EDAH10
EDAM10	1.1007	4.7126	3.6119	5y-EDAM10
EDAU10	1.3501	4.7126	3.3626	5y-EDAU10
EDAZ10	1.5994	4.7126	3.1132	5y-EDAZ10
EDAH11	1.8487	4.7126	2.8639	5y-EDAH11
EDAM11	2.0980	4.7126	2.6146	5y-EDAM11
EDAU11	2.3665	4.7126	2.3461	5y-EDAU11
EDAZ11	2.6158	4.7126	2.0968	5y-EDAZ11
EDAH12	2.8651	4.7126	1.8475	5y-EDAH12

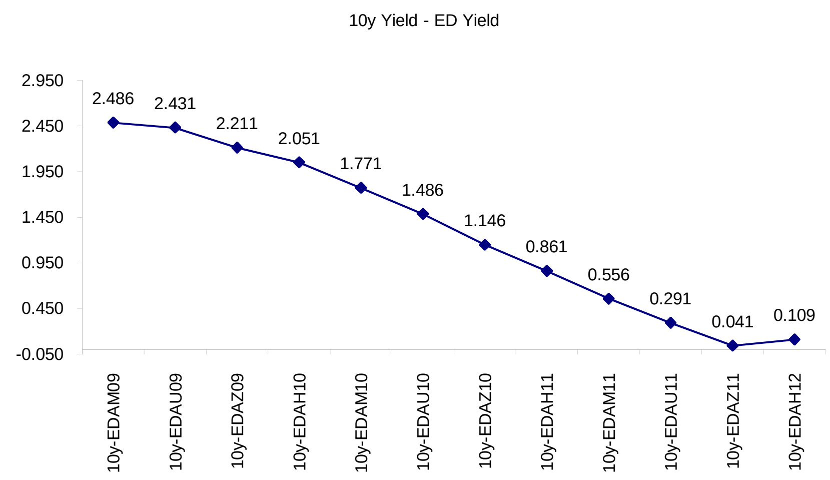
The farther away from 0 the spread duration is the riskier the trade.

Correlation



	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM09	-0.65	2.486	10y-EDAM09	89
EDAU09	-0.60	2.431	10y-EDAU09	85
EDAZ09	-0.38	2.211	10y-EDAZ09	75
EDAH10	-0.22	2.051	10y-EDAH10	67
EDAM10	0.06	1.771	10y-EDAM10	44
EDAU10	0.35	1.486	10y-EDAU10	-4
EDAZ10	0.69	1.146	10y-EDAZ10	-56
EDAH11	0.97	0.861	10y-EDAH11	-80
EDAM11	1.28	0.556	10y-EDAM11	-89
EDAU11	1.54	0.291	10y-EDAU11	-93
EDAZ11	1.79	0.041	10y-EDAZ11	-95
EDAH12	1.94	0.109	10y-EDAH12	-95

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	0.1035	8.3859	8.2824	10y-EDAM09
EDAU09	0.3528	8.3859	8.0331	10y-EDAU09
EDAZ09	0.6021	8.3859	7.7837	10y-EDAZ09
EDAH10	0.8514	8.3859	7.5344	10y-EDAH10
EDAM10	1.1007	8.3859	7.2851	10y-EDAM10
EDAU10	1.3501	8.3859	7.0358	10y-EDAU10
EDAZ10	1.5994	8.3859	6.7865	10y-EDAZ10
EDAH11	1.8487	8.3859	6.5372	10y-EDAH11
EDAM11	2.0980	8.3859	6.2879	10y-EDAM11
EDAU11	2.3665	8.3859	6.0194	10y-EDAU11
EDAZ11	2.6158	8.3859	5.7700	10y-EDAZ11
EDAH12	2.8651	8.3859	5.5207	10y-EDAH12

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

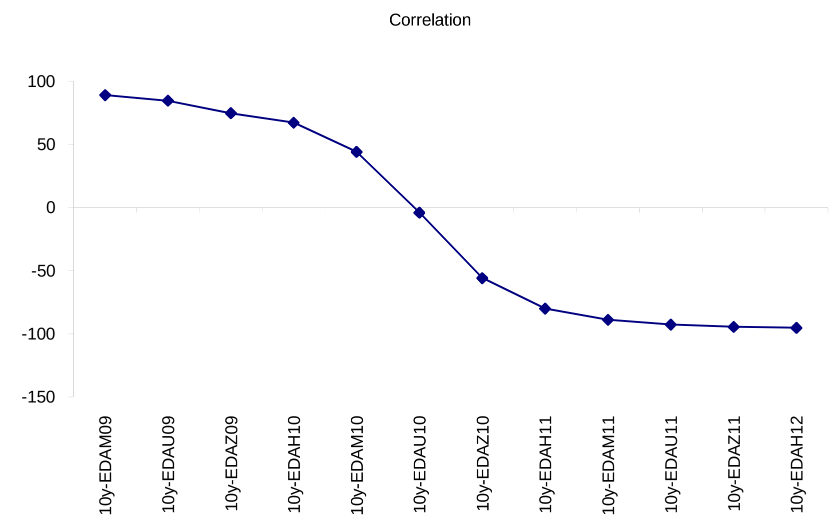
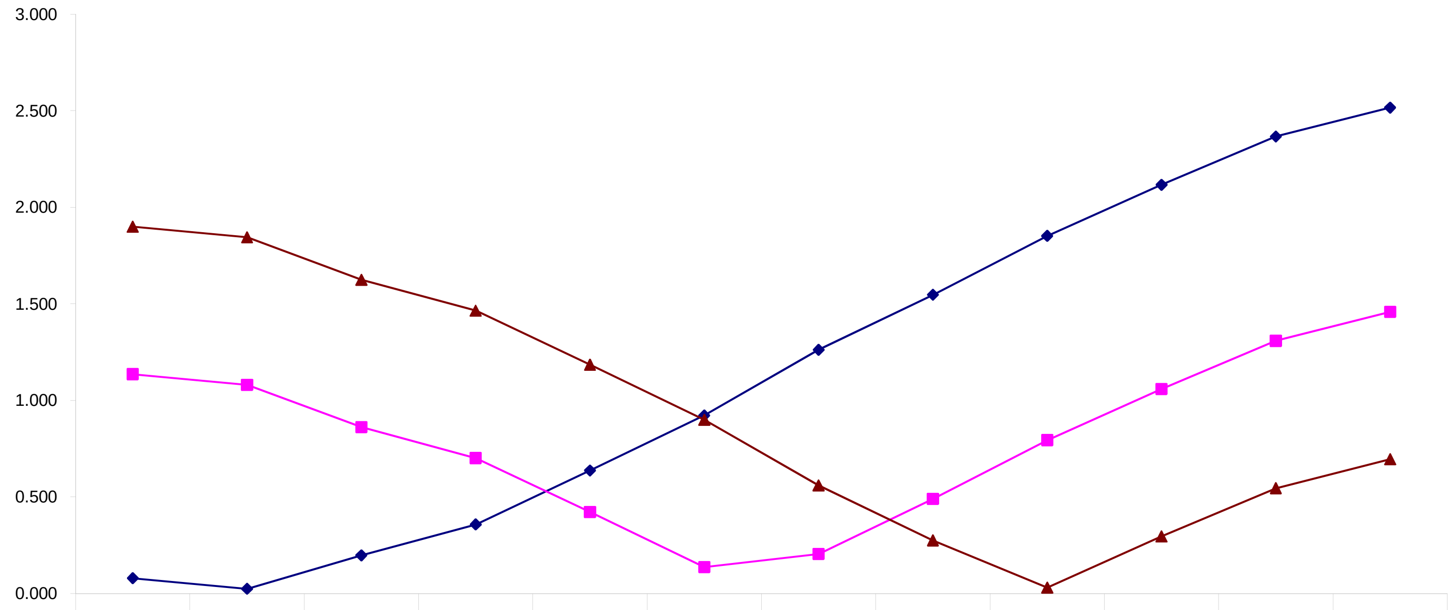
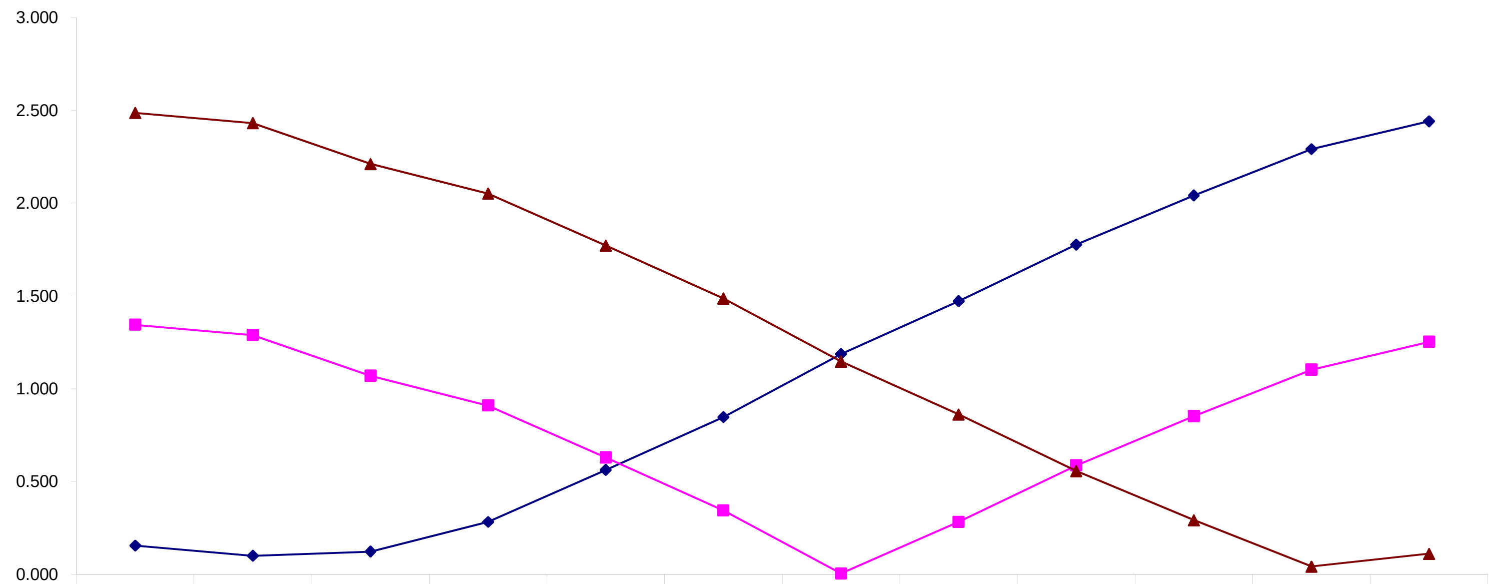


Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



ZT	0.078	0.023	0.197	0.357	0.637	0.922	1.262	1.547	1.852	2.117	2.367	2.517
ZF	1.136	1.081	0.861	0.701	0.421	0.136	0.204	0.489	0.794	1.059	1.309	1.459
ZN	1.900	1.845	1.625	1.465	1.185	0.900	0.560	0.275	0.030	0.295	0.545	0.695

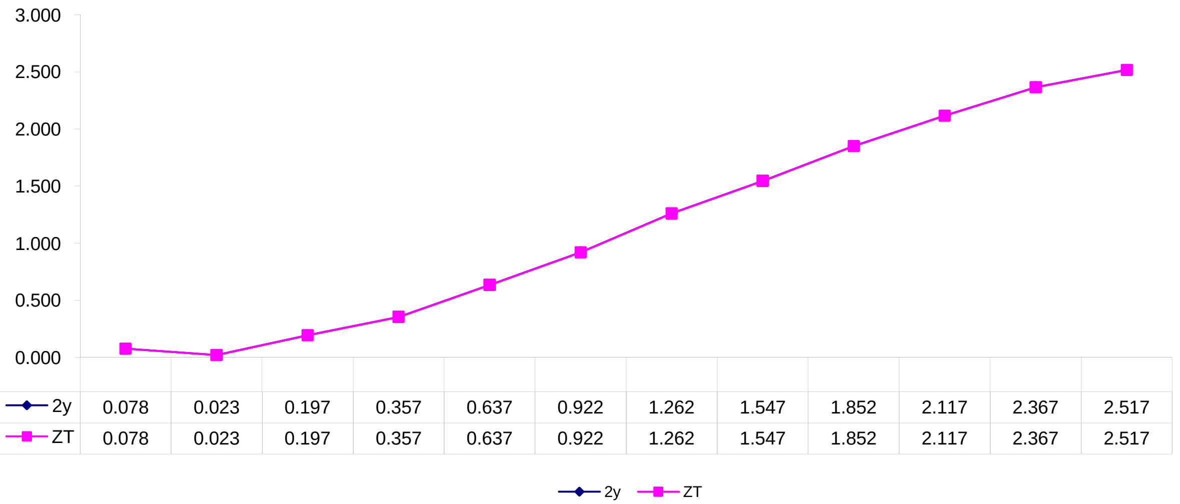
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



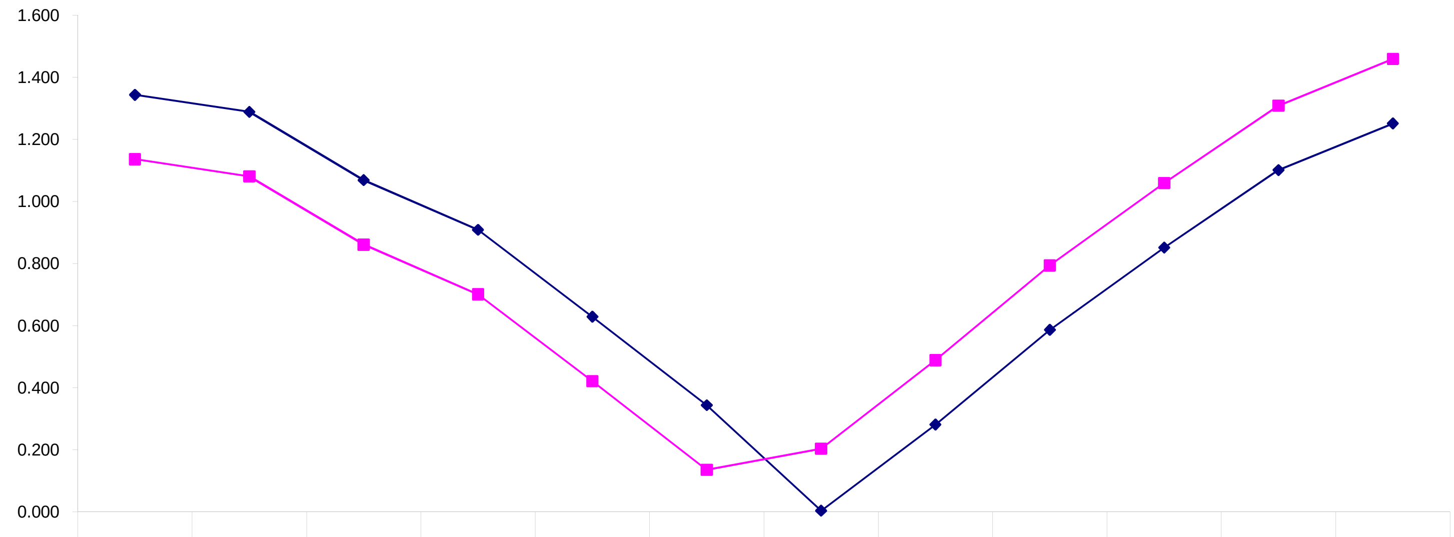
2y	0.154	0.099	0.121	0.281	0.561	0.846	1.186	1.471	1.776	2.041	2.291	2.441
5y	1.344	1.289	1.069	0.909	0.629	0.344	0.004	0.281	0.586	0.851	1.101	1.251
10y	2.486	2.431	2.211	2.051	1.771	1.486	1.146	0.861	0.556	0.291	0.041	0.109

2y 5y 10y

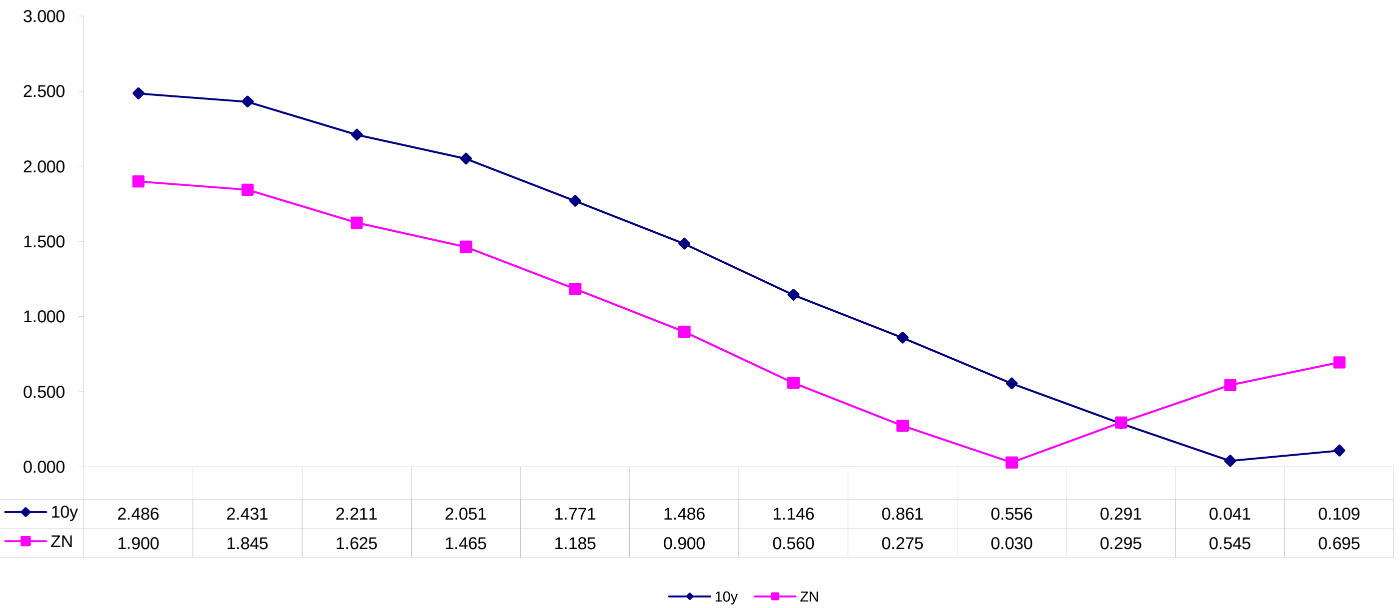
2y Basis TED Curve



2y	0.078	0.023	0.197	0.357	0.637	0.922	1.262	1.547	1.852	2.117	2.367	2.517
ZT	0.078	0.023	0.197	0.357	0.637	0.922	1.262	1.547	1.852	2.117	2.367	2.517



5y	1.344	1.289	1.069	0.909	0.629	0.344	0.004	0.281	0.586	0.851	1.101	1.251
ZF	1.136	1.081	0.861	0.701	0.421	0.136	0.204	0.489	0.794	1.059	1.309	1.459



10y	2.486	2.431	2.211	2.051	1.771	1.486	1.146	0.861	0.556	0.291	0.041	0.109
ZN	1.900	1.845	1.625	1.465	1.185	0.900	0.560	0.275	0.030	0.295	0.545	0.695

	Last Yield	Net Last Yield	Last Price
White Pack	1.059	-1.000	9895.8750
Red Pack	2.059	-6.250	9798.0000
Green Pack	3.210	-9.250	9685.8750
Blue Pack	3.846	-6.750	9624.2500
Gold Pack	4.210	-5.750	9589.0000