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	105.8750	105.280	2.510	1.86
ZF	111.0000	111.000	3.182	3.99
ZN	114.3750	114.120	3.800	6.41
2y	100.328	100.1050	2.577	1.92
5y	100.225	100.0720	3.322	4.50
10y	99.078	99.0250	3.985	8.01

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU08	97.105	2.895	52	0.142	SEP	White Pack
EDAZ08	96.940	3.060	143	0.391	DEC	
EDAH09	96.855	3.145	234	0.640	MAR	
EDAM09	96.645	3.355	325	0.890	JUN	
EDAU09	96.360	3.640	416	1.139	SEP	Red Pack
EDAZ09	96.045	3.955	507	1.388	DEC	
EDAH10	95.815	4.185	598	1.638	MAR	
EDAM10	95.635	4.365	689	1.887	JUN	
EDAU10	95.515	4.485	780	2.136	SEP	Green Pack
EDAZ10	95.405	4.595	871	2.386	DEC	
EDAH11	95.370	4.630	962	2.635	MAR	
EDAM11	95.315	4.685	1053	2.884	JUN	
EDAU11	95.275	4.725	1151	3.153	SEP	Blue Pack
EDAZ11	95.210	4.790	1242	3.402	DEC	
EDAH12	95.190	4.810	1333	3.651	MAR	
EDAM12	95.130	4.870	1424	3.901	JUN	
EDAU12	95.115	4.885	1515	4.150	SEP	Gold Pack
EDAZ12	95.070	4.930	1606	4.399	DEC	
EDAH13	95.015	4.985	1697	4.649	MAR	
EDAM13	94.980	5.020	1788	4.898	JUN	

Pack Prices

	Last Yield	Net Yield	Last Price
White Pack	3.182	1.875	9688.625
Red Pack	4.134	5.250	9596.375
Green Pack	4.717	5.625	9540.125
Blue Pack		1.125	9518.375
Gold Pack		3.375	9503.750

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)

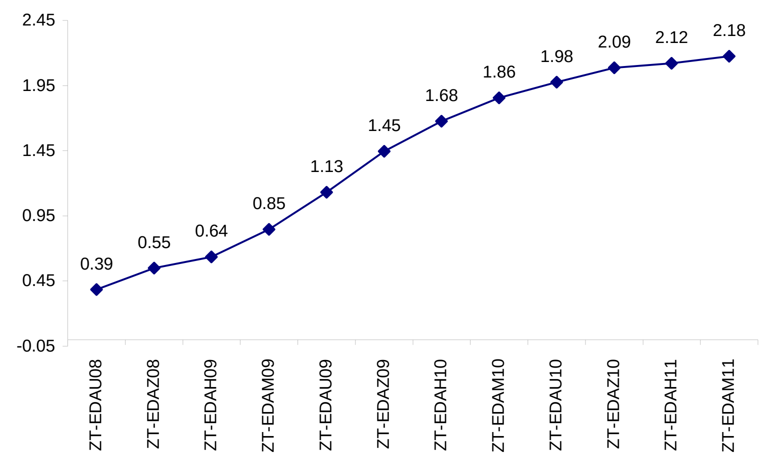
Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days. So, it's much easier to formulate the correlations based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

Dirty TED: ZT vs Eurodollar Contracts

	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	8.770	0.39	ZT-EDAU08	95.646
EDAZ08	8.935	0.55	ZT-EDAZ08	97.242
EDAH09	9.020	0.64	ZT-EDAH09	98.451
EDAM09	9.230	0.85	ZT-EDAM09	98.860
EDAU09	9.515	1.13	ZT-EDAU09	98.616
EDAZ09	9.830	1.45	ZT-EDAZ09	98.516
EDAH10	10.060	1.68	ZT-EDAH10	98.317
EDAM10	10.240	1.86	ZT-EDAM10	97.653
EDAU10	10.360	1.98	ZT-EDAU10	96.845
EDAZ10	10.470	2.09	ZT-EDAZ10	95.779
EDAH11	10.505	2.12	ZT-EDAH11	94.854
EDAM11	10.560	2.18	ZT-EDAM11	94.425

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

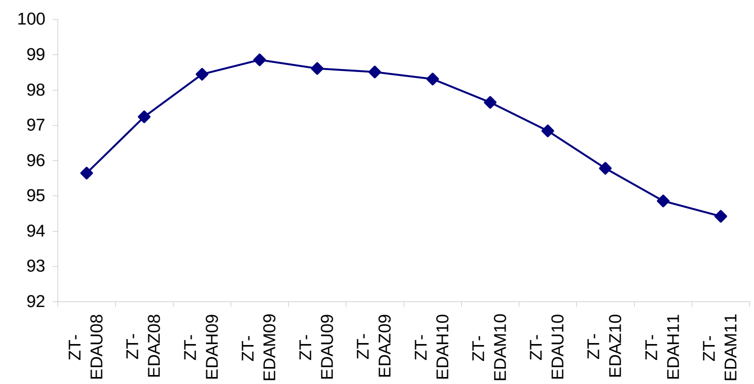
ZT Yield - ED Yield



	ED Duration as Fraction of year	ZT Duration	Spread Duration	
EDAU08	0.142	1.86	1.72	ZT-EDAU08
EDAZ08	0.391	1.86	1.47	ZT-EDAZ08
EDAH09	0.640	1.86	1.22	ZT-EDAH09
EDAM09	0.890	1.86	0.97	ZT-EDAM09
EDAU09	1.139	1.86	0.72	ZT-EDAU09
EDAZ09	1.388	1.86	0.47	ZT-EDAZ09
EDAH10	1.638	1.86	0.22	ZT-EDAH10
EDAM10	1.887	1.86	(0.03)	ZT-EDAM10
EDAU10	2.136	1.86	(0.28)	ZT-EDAU10
EDAZ10	2.386	1.86	(0.53)	ZT-EDAZ10
EDAH11	2.635	1.86	(0.78)	ZT-EDAH11
EDAM11	2.884	1.86	(1.03)	ZT-EDAM11

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

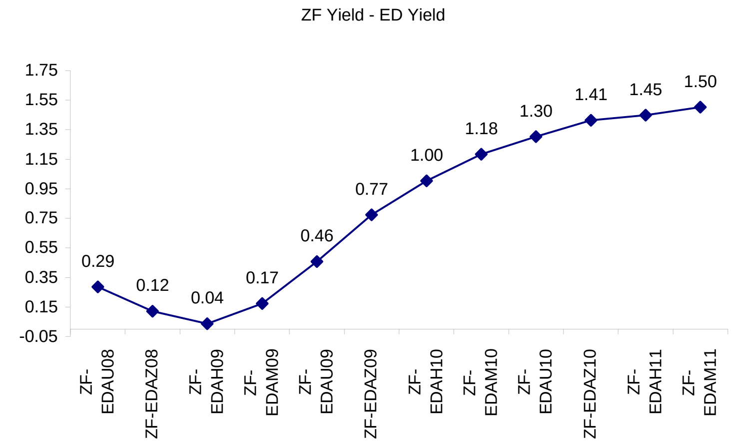
Correlation



Dirty TED: ZF vs Eurodollar Contracts

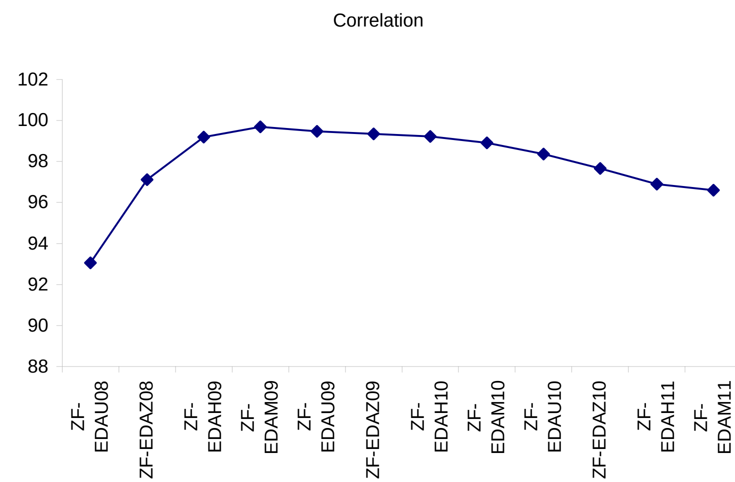
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	13.895	0.29	ZF-EDAU08	93.059
EDAZ08	14.060	0.12	ZF-EDAZ08	97.118
EDAH09	14.145	0.04	ZF-EDAH09	99.185
EDAM09	14.355	0.17	ZF-EDAM09	99.697
EDAU09	14.640	0.46	ZF-EDAU09	99.475
EDAZ09	14.955	0.77	ZF-EDAZ09	99.354
EDAH10	15.185	1.00	ZF-EDAH10	99.224
EDAM10	15.365	1.18	ZF-EDAM10	98.912
EDAU10	15.485	1.30	ZF-EDAU10	98.363
EDAZ10	15.595	1.41	ZF-EDAZ10	97.661
EDAH11	15.630	1.45	ZF-EDAH11	96.891
EDAM11	15.685	1.50	ZF-EDAM11	96.603

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	
EDAU08	0.142	3.99	3.85	ZF-EDAU08
EDAZ08	0.391	3.99	3.60	ZF-EDAZ08
EDAH09	0.640	3.99	3.35	ZF-EDAH09
EDAM09	0.890	3.99	3.10	ZF-EDAM09
EDAU09	1.139	3.99	2.85	ZF-EDAU09
EDAZ09	1.388	3.99	2.60	ZF-EDAZ09
EDAH10	1.638	3.99	2.35	ZF-EDAH10
EDAM10	1.887	3.99	2.10	ZF-EDAM10
EDAU10	2.136	3.99	1.86	ZF-EDAU10
EDAZ10	2.386	3.99	1.61	ZF-EDAZ10
EDAH11	2.635	3.99	1.36	ZF-EDAH11
EDAM11	2.884	3.99	1.11	ZF-EDAM11

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

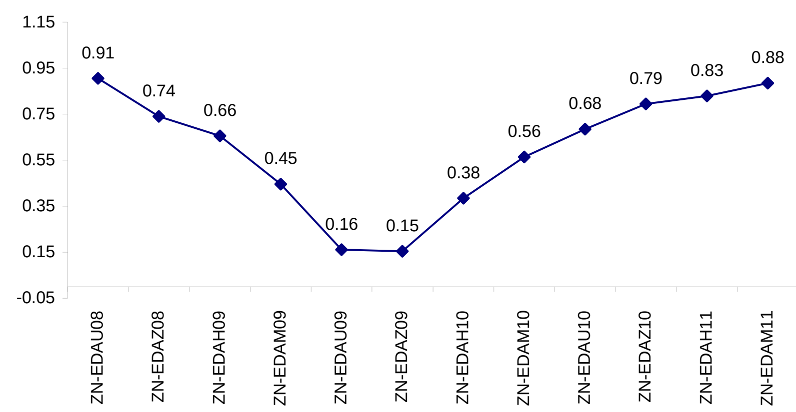


Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAU08	17.270	0.91	ZN-EDAU08	89.215
EDAZ08	17.435	0.74	ZN-EDAZ08	96.988
EDAH09	17.520	0.66	ZN-EDAH09	99.256
EDAM09	17.730	0.45	ZN-EDAM09	99.342
EDAU09	18.015	0.16	ZN-EDAU09	98.843
EDAZ09	18.330	0.15	ZN-EDAZ09	98.675
EDAH10	18.560	0.38	ZN-EDAH10	99.224
EDAM10	18.740	0.56	ZN-EDAM10	98.912
EDAU10	18.860	0.68	ZN-EDAU10	98.363
EDAZ10	18.970	0.79	ZN-EDAZ10	97.661
EDAH11	19.005	0.83	ZN-EDAH11	96.891
EDAM11	19.060	0.88	ZN-EDAM11	96.603

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

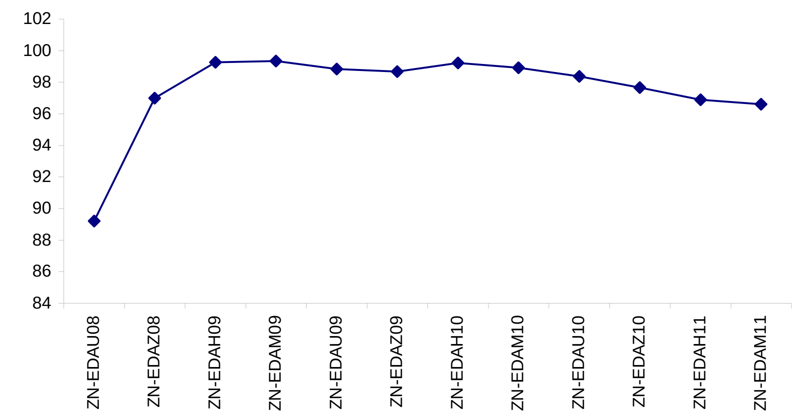
ZN Yield - ED Yield



	ED Duration as Fraction of year	**ZN Duration**	**Spread Duration**	
EDAU08	0.142	6.41	6.27	ZN-EDAU08
EDAZ08	0.391	6.41	6.02	ZN-EDAZ08
EDAH09	0.640	6.41	5.77	ZN-EDAH09
EDAM09	0.890	6.41	5.52	ZN-EDAM09
EDAU09	1.139	6.41	5.27	ZN-EDAU09
EDAZ09	1.388	6.41	5.02	ZN-EDAZ09
EDAH10	1.638	6.41	4.77	ZN-EDAH10
EDAM10	1.887	6.41	4.52	ZN-EDAM10
EDAU10	2.136	6.41	4.27	ZN-EDAU10
EDAZ10	2.386	6.41	4.02	ZN-EDAZ10
EDAH11	2.635	6.41	3.77	ZN-EDAH11
EDAM11	2.884	6.41	3.52	ZN-EDAM11

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

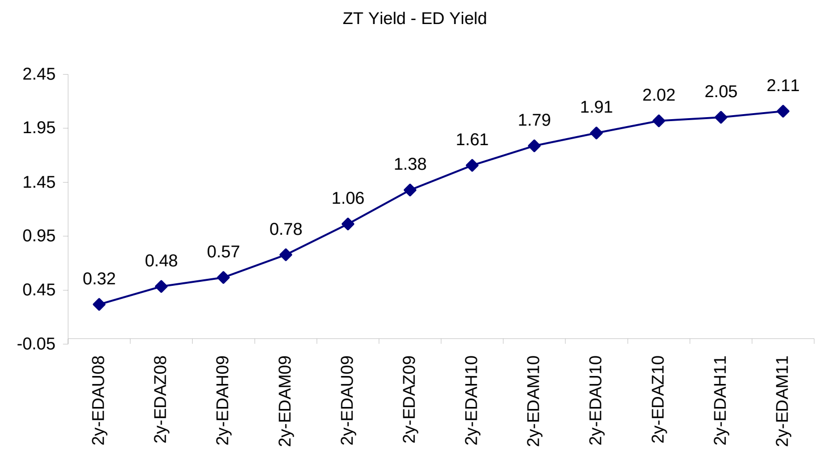
Correlation



TERM TED: 2y vs Eurodollar Contracts

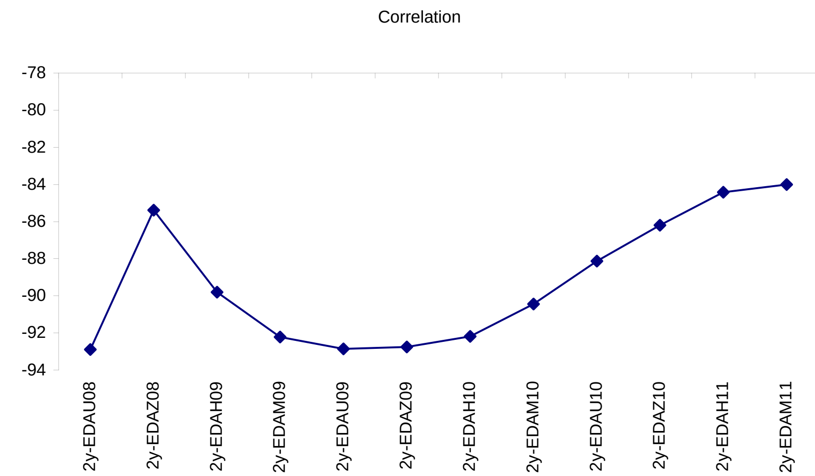
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.223	0.32	2y-EDAU08	-92.893
EDAZ08	3.388	0.48	2y-EDAZ08	-85.388
EDAH09	3.473	0.57	2y-EDAH09	-89.807
EDAM09	3.683	0.78	2y-EDAM09	-92.215
EDAU09	3.968	1.06	2y-EDAU09	-92.868
EDAZ09	4.283	1.38	2y-EDAZ09	-92.764
EDAH10	4.513	1.61	2y-EDAH10	-92.182
EDAM10	4.693	1.79	2y-EDAM10	-90.442
EDAU10	4.813	1.91	2y-EDAU10	-88.130
EDAZ10	4.923	2.02	2y-EDAZ10	-86.193
EDAH11	4.958	2.05	2y-EDAH11	-84.413
EDAM11	5.013	2.11	2y-EDAM11	-84.002

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	
EDAU08	0.142	1.92	1.77	2y-EDAU08
EDAZ08	0.391	1.92	1.53	2y-EDAZ08
EDAH09	0.640	1.92	1.28	2y-EDAH09
EDAM09	0.890	1.92	1.03	2y-EDAM09
EDAU09	1.139	1.92	0.78	2y-EDAU09
EDAZ09	1.388	1.92	0.53	2y-EDAZ09
EDAH10	1.638	1.92	0.28	2y-EDAH10
EDAM10	1.887	1.92	0.03	2y-EDAM10
EDAU10	2.136	1.92	(0.22)	2y-EDAU10
EDAZ10	2.386	1.92	(0.47)	2y-EDAZ10
EDAH11	2.635	1.92	(0.72)	2y-EDAH11
EDAM11	2.884	1.92	(0.97)	2y-EDAM11

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



	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.120	0.43	5y-EDAU08	-92.434
EDAZ08	3.285	0.26	5y-EDAZ08	-91.075
EDAH09	3.370	0.18	5y-EDAH09	-95.029
EDAM09	3.580	0.03	5y-EDAM09	-96.392
EDAU09	3.865	0.32	5y-EDAU09	-96.595
EDAZ09	4.180	0.63	5y-EDAZ09	-96.531
EDAH10	4.410	0.86	5y-EDAH10	-96.336
EDAM10	4.590	1.04	5y-EDAM10	-95.560
EDAU10	4.710	1.16	5y-EDAU10	-94.221
EDAZ10	4.820	1.27	5y-EDAZ10	-93.096
EDAH11	4.855	1.31	5y-EDAH11	-91.905
EDAM11	4.910	1.36	5y-EDAM11	-91.708

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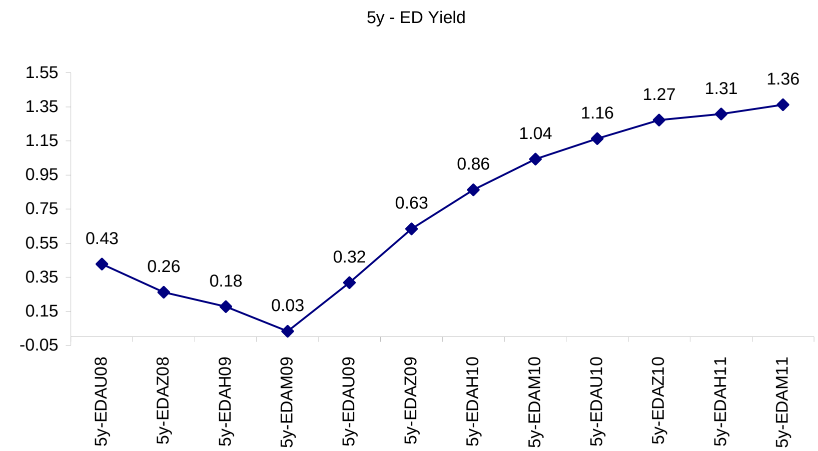
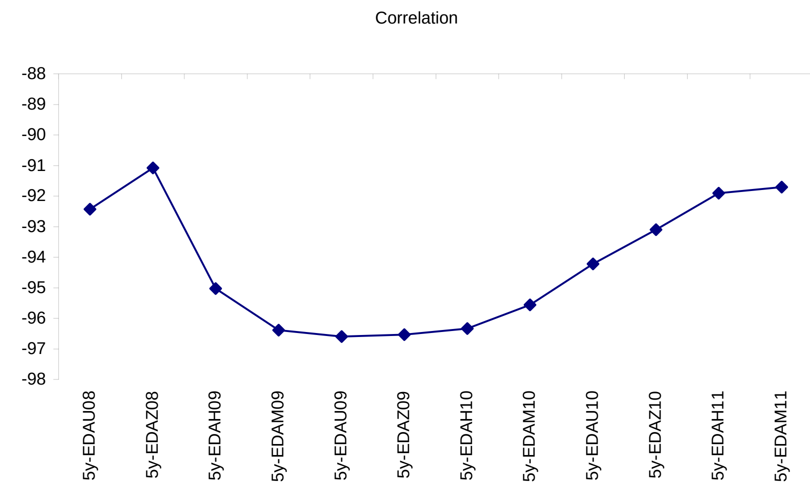


	ED Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU08	0.142	4.50	4.36	5y-EDAU08
EDAZ08	0.391	4.50	4.11	5y-EDAZ08
EDAH09	0.640	4.50	3.86	5y-EDAH09
EDAM09	0.890	4.50	3.61	5y-EDAM09
EDAU09	1.139	4.50	3.36	5y-EDAU09
EDAZ09	1.388	4.50	3.11	5y-EDAZ09
EDAH10	1.638	4.50	2.86	5y-EDAH10
EDAM10	1.887	4.50	2.61	5y-EDAM10
EDAU10	2.136	4.50	2.36	5y-EDAU10
EDAZ10	2.386	4.50	2.11	5y-EDAZ10
EDAH11	2.635	4.50	1.86	5y-EDAH11
EDAM11	2.884	4.50	1.62	5y-EDAM11

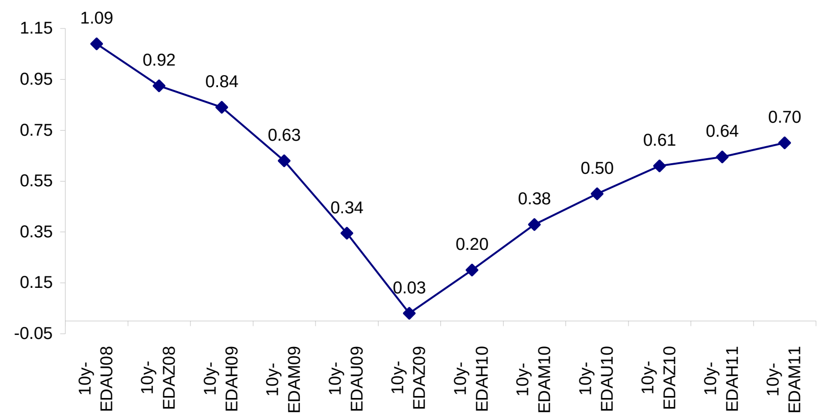
The farther away from 0 the spread duration is the riskier the trade.



	10y Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU08	3.120	1.09	10y-EDAU08	-85.910
EDAZ08	3.285	0.92	10y-EDAZ08	-90.840
EDAH09	3.370	0.84	10y-EDAH09	-94.871
EDAM09	3.580	0.63	10y-EDAM09	-95.539
EDAU09	3.865	0.34	10y-EDAU09	-95.583
EDAZ09	4.180	0.03	10y-EDAZ09	-95.560
EDAH10	4.410	0.20	10y-EDAH10	-95.720
EDAM10	4.590	0.38	10y-EDAM10	-95.948
EDAU10	4.710	0.50	10y-EDAU10	-95.597
EDAZ10	4.820	0.61	10y-EDAZ10	-95.331
EDAH11	4.855	0.64	10y-EDAH11	-94.875
EDAM11	4.910	0.70	10y-EDAM11	-94.978

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

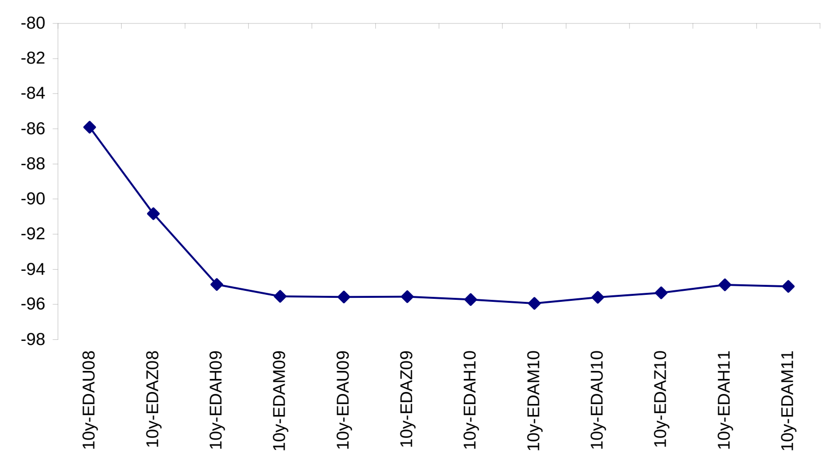
10y Yield - ED Yield



	ED Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU08	0.142	8.01	7.87	10y-EDAU08
EDAZ08	0.391	8.01	7.62	10y-EDAZ08
EDAH09	0.640	8.01	7.37	10y-EDAH09
EDAM09	0.890	8.01	7.12	10y-EDAM09
EDAU09	1.139	8.01	6.88	10y-EDAU09
EDAZ09	1.388	8.01	6.63	10y-EDAZ09
EDAH10	1.638	8.01	6.38	10y-EDAH10
EDAM10	1.887	8.01	6.13	10y-EDAM10
EDAU10	2.136	8.01	5.88	10y-EDAU10
EDAZ10	2.386	8.01	5.63	10y-EDAZ10
EDAH11	2.635	8.01	5.38	10y-EDAH11
EDAM11	2.884	8.01	5.13	10y-EDAM11

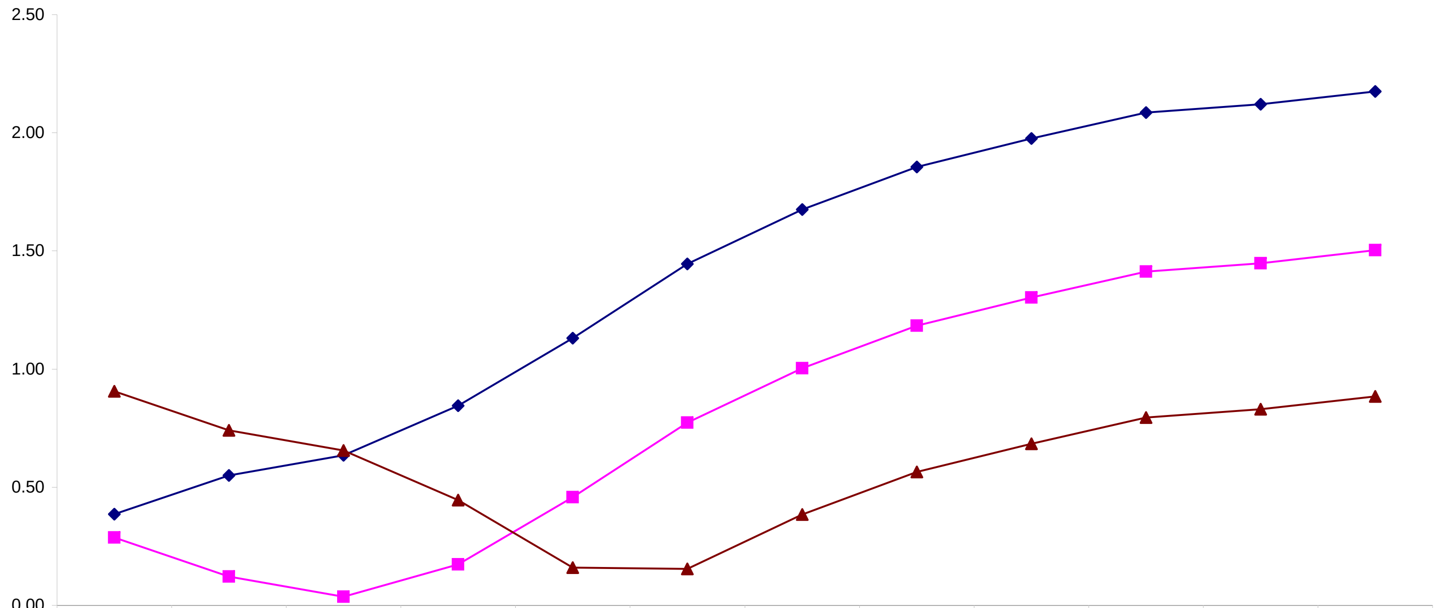
The farther away from 0 the spread duration is the riskier the trade.

Correlation



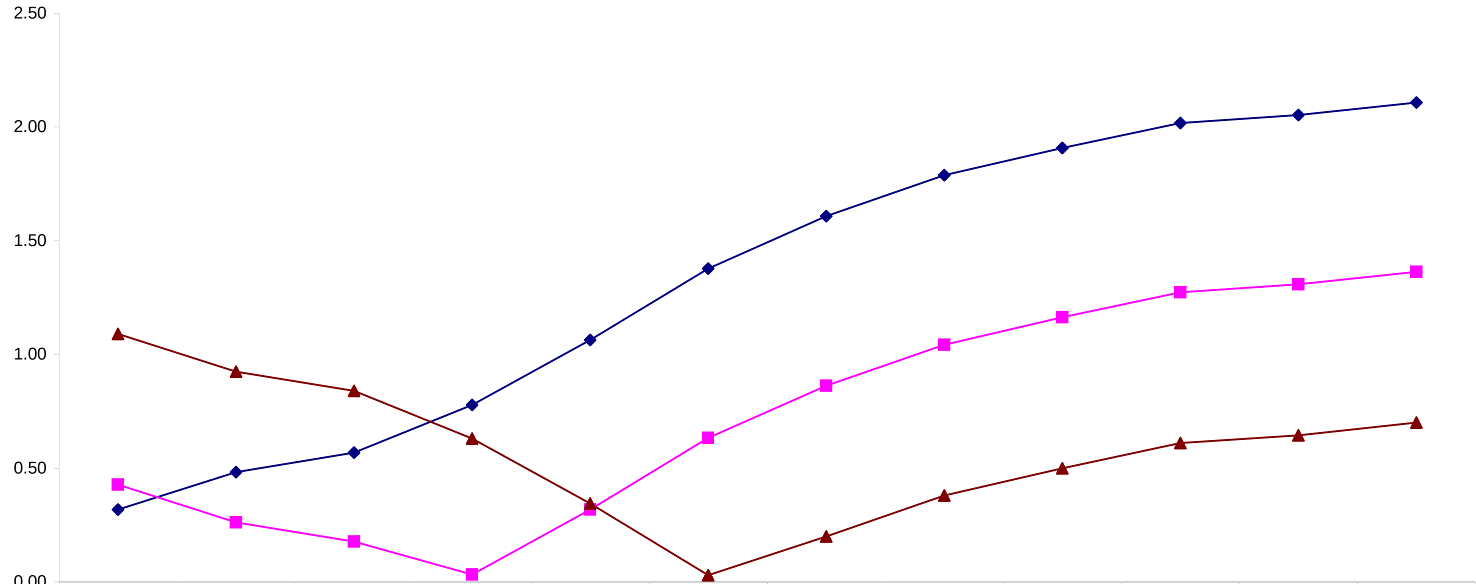
Dirty TED Curve

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.



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
ZT	0.39	0.55	0.64	0.85	1.13	1.45	1.68	1.86	1.98	2.09	2.12	2.18
ZF	0.29	0.12	0.04	0.17	0.46	0.77	1.00	1.18	1.30	1.41	1.45	1.50
ZN	0.91	0.74	0.66	0.45	0.16	0.15	0.38	0.56	0.68	0.79	0.83	0.88

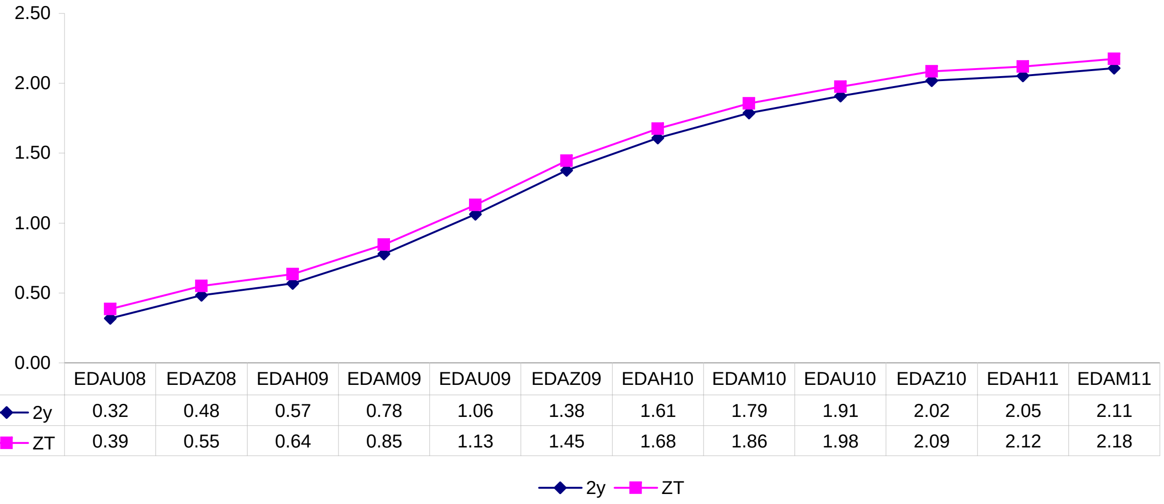
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.32	0.48	0.57	0.78	1.06	1.38	1.61	1.79	1.91	2.02	2.05	2.11
5y	0.43	0.26	0.18	0.03	0.32	0.63	0.86	1.04	1.16	1.27	1.31	1.36
10y	1.09	0.92	0.84	0.63	0.34	0.03	0.20	0.38	0.50	0.61	0.64	0.70

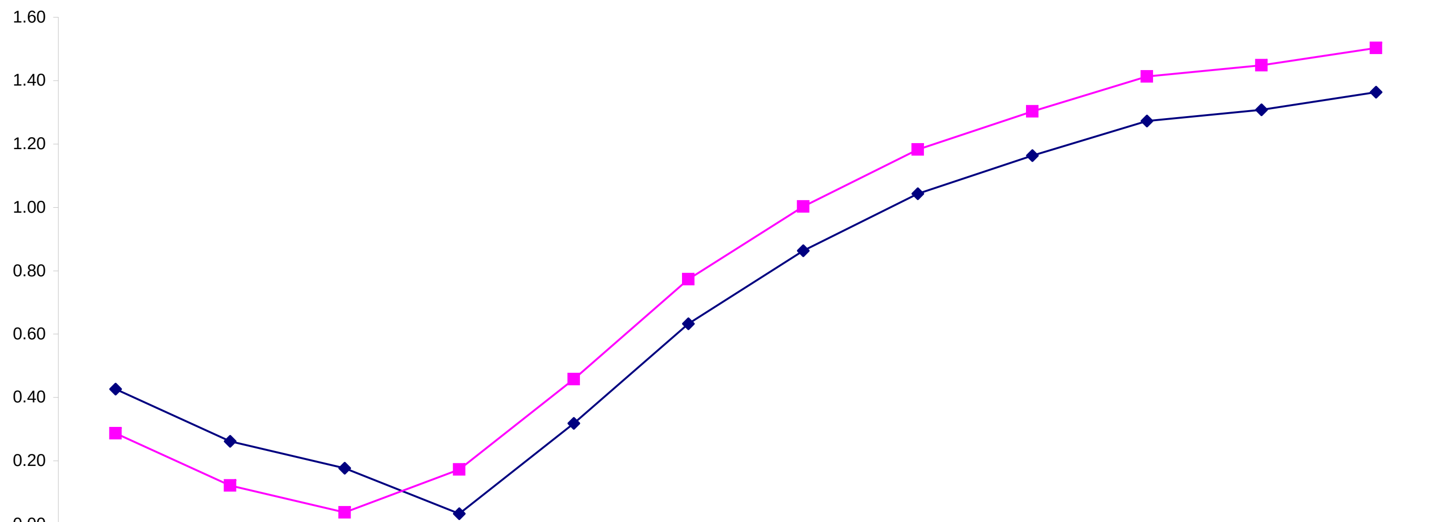
2y 5y 10y

2y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
2y	0.32	0.48	0.57	0.78	1.06	1.38	1.61	1.79	1.91	2.02	2.05	2.11
ZT	0.39	0.55	0.64	0.85	1.13	1.45	1.68	1.86	1.98	2.09	2.12	2.18

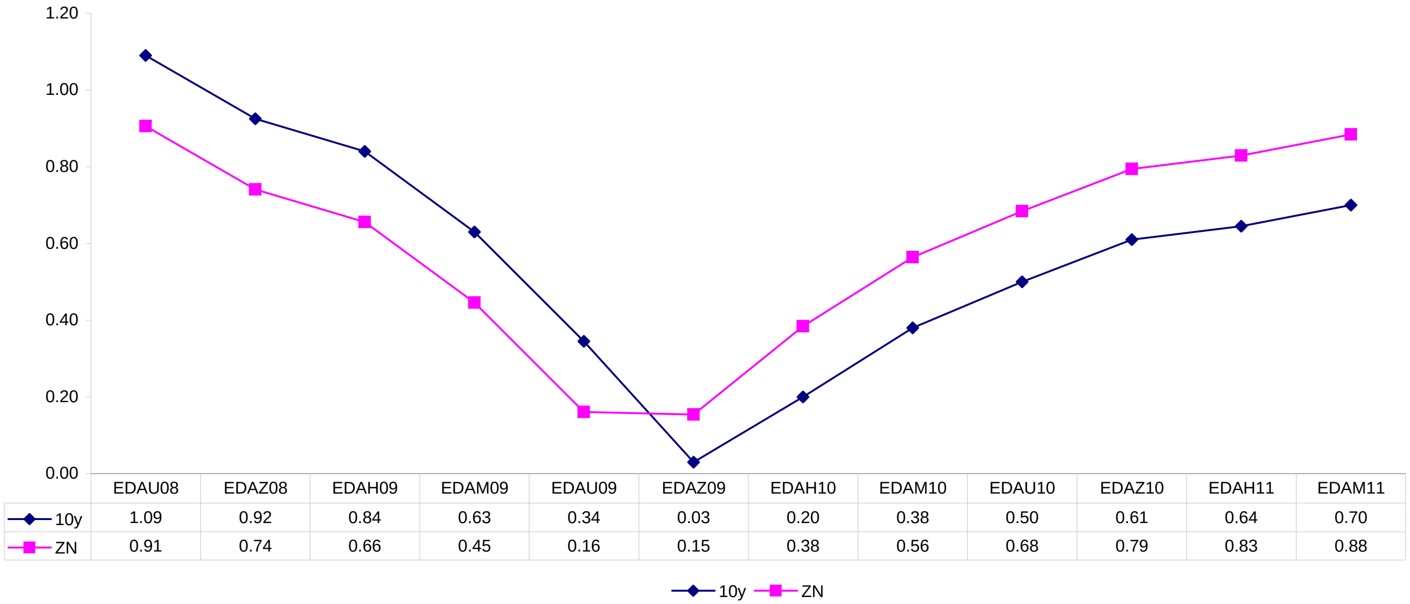
5y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
5y	0.43	0.26	0.18	0.03	0.32	0.63	0.86	1.04	1.16	1.27	1.31	1.36
ZF	0.29	0.12	0.04	0.17	0.46	0.77	1.00	1.18	1.30	1.41	1.45	1.50

5y ZF

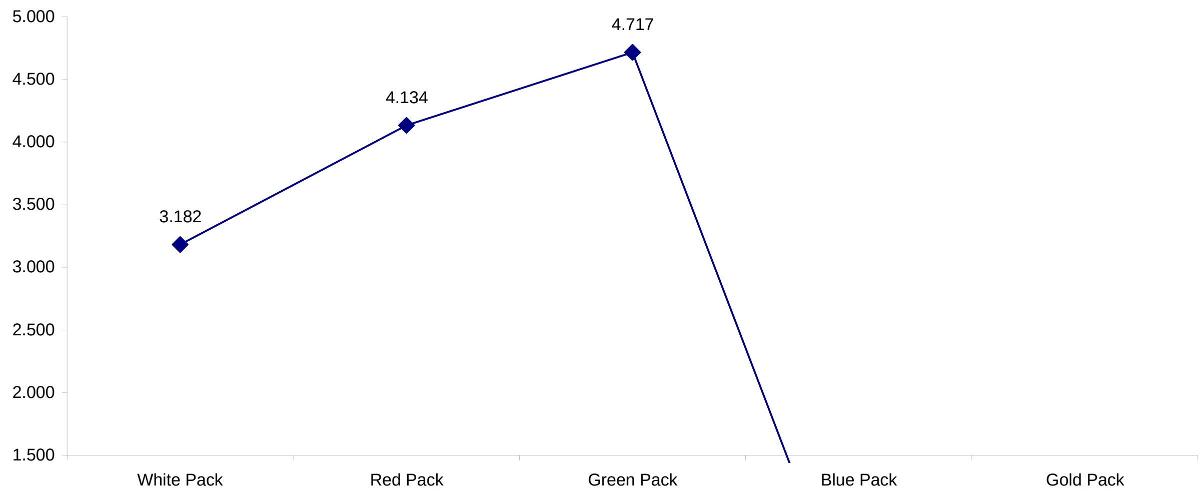
10y Basis TED Curve



	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10	EDAU10	EDAZ10	EDAH11	EDAM11
10y	1.09	0.92	0.84	0.63	0.34	0.03	0.20	0.38	0.50	0.61	0.64	0.70
ZN	0.91	0.74	0.66	0.45	0.16	0.15	0.38	0.56	0.68	0.79	0.83	0.88

Packs

	Last Yield	Net Last Yield	Last Price
White Pack	3.182	1.875	9688.625
Red Pack	4.134	5.250	9596.375
Green Pack	4.717	5.625	9540.125
Blue Pack		1.125	9518.375
Gold Pack		3.375	9503.750



2y, 5y, 10y Basis Curves vs ED