The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

Also new, correlation matrixes for all contracts.

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

	F.I. Futures and Cash			
	Last Decimal	Last 32	Last Yield*	**MDuration
ZT	102.2094	102.067	4.692	1.79
ZF	105.5938	105.190	4.559	3.84
ZN	108.1250	108.040	4.596	5.80
Blank				
2y	99.672	99.2150	4.680	1.87
5y	99.725	99.2320	4.562	4.41
10y	99.781	99.2500	4.650	7.71

*Futures use CTD for Last Yield
**Mduration = Modified Macaulay Duration

	Eurodollars (ED)					
	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAM07	94.655	5.345	42	0.114	JUN	White Pack
EDAU07	94.745	5.255	133	0.364	SEP	
EDAZ07	94.905	5.095	224	0.613	DEC	
EDAH08	95.075	4.925	315	0.862	MAR	
EDAM08	95.205	4.795	406	1.112	JUN	Red Pack
EDAU08	95.260	4.740	497	1.361	SEP	
EDAZ08	95.280	4.720	588	1.610	DEC	
EDAH09	95.275	4.725	679	1.860	MAR	
EDAM09	95.245	4.755	770	2.109	JUN	Green Pack
EDAU09	95.205	4.795	861	2.358	SEP	
EDAZ09	95.165	4.835	952	2.608	DEC	
EDAH10	95.120	4.880	1043	2.857	MAR	

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

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

Eurodollar Color Codes for Individual Year Strips:

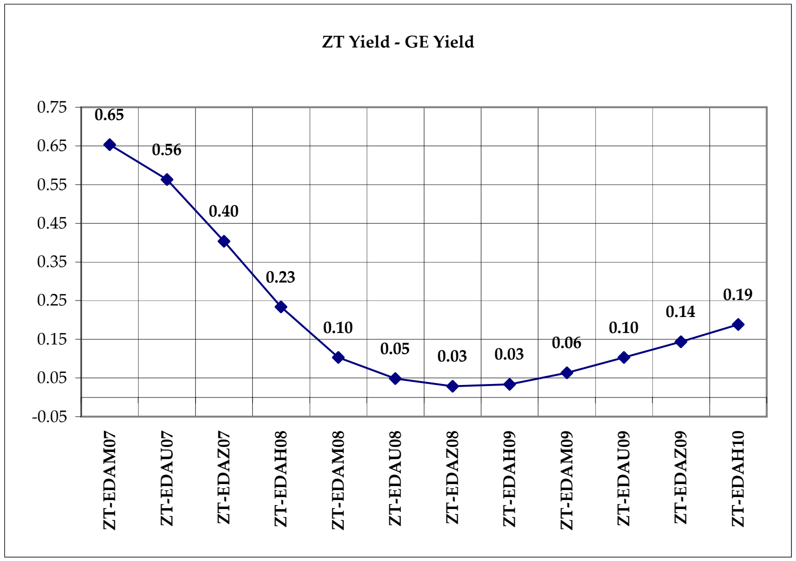
Color	Year	Contracts
White	One	1 – 4
Red	Two	5 – 8
Green	Three	9 – 12
Blue	Four	13 – 16
Gold	Five	17 – 20
Purple	Six	21 – 24
Orange	Seven	25 – 28
Pink	Eight	29 – 32
Silver	Nine	33 – 36
Copper	Ten	37 – 40

..

Dirty TED: ZT vs Eurodollar Contracts

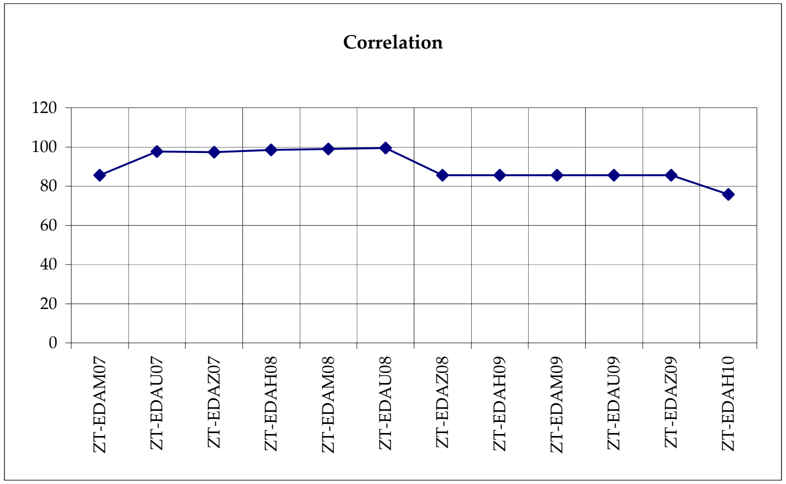
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	7.554	0.65	ZT-EDAM07	85.528
EDAU07	7.464	0.56	ZT-EDAU07	97.699
EDAZ07	7.304	0.40	ZT-EDAZ07	97.384
EDAH08	7.134	0.23	ZT-EDAH08	98.474
EDAM08	7.004	0.10	ZT-EDAM08	98.961
EDAU08	6.949	0.05	ZT-EDAU08	99.359
EDAZ08	6.929	0.03	ZT-EDAZ08	85.528
EDAH09	6.934	0.03	ZT-EDAH09	85.528
EDAM09	6.964	0.06	ZT-EDAM09	85.528
EDAU09	7.004	0.10	ZT-EDAU09	85.528
EDAZ09	7.044	0.14	ZT-EDAZ09	85.528
EDAH10	7.089	0.19	ZT-EDAH10	75.797

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



	GE Duration as Fraction of year	ZT Duration	Spread Duration	
EDAM07	0.114	1.79	1.67	ZT-EDAM07
EDAU07	0.364	1.79	1.43	ZT-EDAU07
EDAZ07	0.613	1.79	1.18	ZT-EDAZ07
EDAH08	0.862	1.79	0.93	ZT-EDAH08
EDAM08	1.112	1.79	0.68	ZT-EDAM08
EDAU08	1.361	1.79	0.43	ZT-EDAU08
EDAZ08	1.610	1.79	0.18	ZT-EDAZ08
EDAH09	1.860	1.79	(0.07)	ZT-EDAH09
EDAM09	2.109	1.79	(0.32)	ZT-EDAM09
EDAU09	2.358	1.79	(0.57)	ZT-EDAU09
EDAZ09	2.608	1.79	(0.82)	ZT-EDAZ09
EDAH10	2.857	1.79	(1.07)	ZT-EDAH10

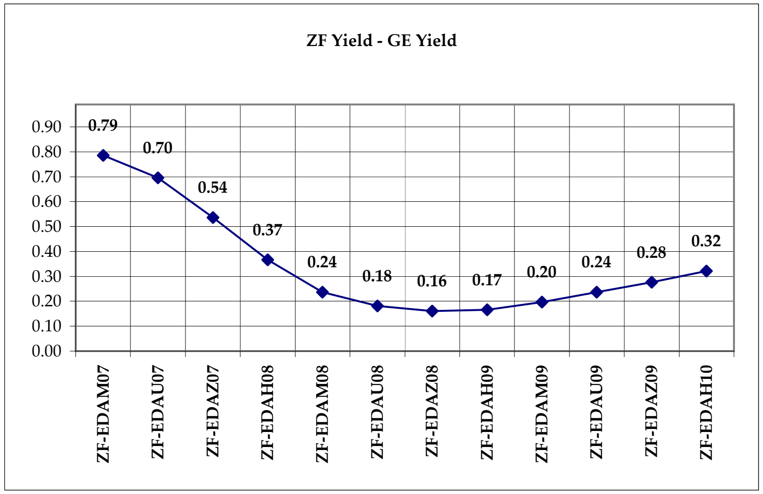
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

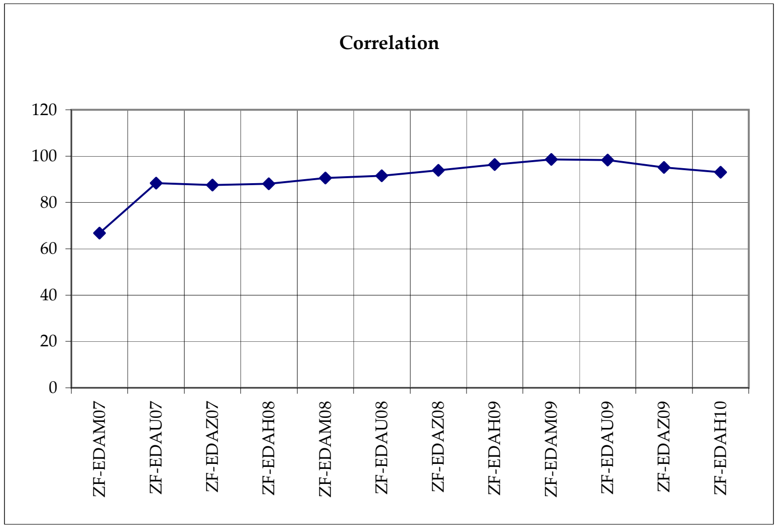
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	10.94	0.79	ZF-EDAM07	66.840
EDAU07	10.85	0.70	ZF-EDAU07	88.310
EDAZ07	10.69	0.54	ZF-EDAZ07	87.505
EDAH08	10.52	0.37	ZF-EDAH08	88.049
EDAM08	10.39	0.24	ZF-EDAM08	90.490
EDAU08	10.33	0.18	ZF-EDAU08	91.587
EDAZ08	10.31	0.16	ZF-EDAZ08	93.882
EDAH09	10.32	0.17	ZF-EDAH09	96.331
EDAM09	10.35	0.20	ZF-EDAM09	98.572
EDAU09	10.39	0.24	ZF-EDAU09	98.314
EDAZ09	10.43	0.28	ZF-EDAZ09	95.155
EDAH10	10.47	0.32	ZF-EDAH10	93.052

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



	GE Duration as Fraction of year	ZF Duration	Spread Duration	
EDAM07	0.114	3.84	3.73	ZF-EDAM07
EDAU07	0.364	3.84	3.48	ZF-EDAU07
EDAZ07	0.613	3.84	3.23	ZF-EDAZ07
EDAH08	0.862	3.84	2.98	ZF-EDAH08
EDAM08	1.112	3.84	2.73	ZF-EDAM08
EDAU08	1.361	3.84	2.48	ZF-EDAU08
EDAZ08	1.610	3.84	2.23	ZF-EDAZ08
EDAH09	1.860	3.84	1.98	ZF-EDAH09
EDAM09	2.109	3.84	1.73	ZF-EDAM09
EDAU09	2.358	3.84	1.48	ZF-EDAU09
EDAZ09	2.608	3.84	1.23	ZF-EDAZ09
EDAH10	2.857	3.84	0.98	ZF-EDAH10

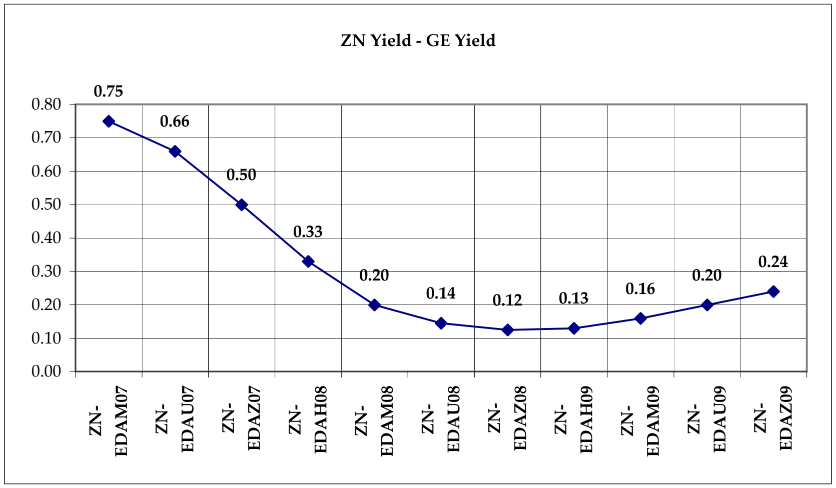
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

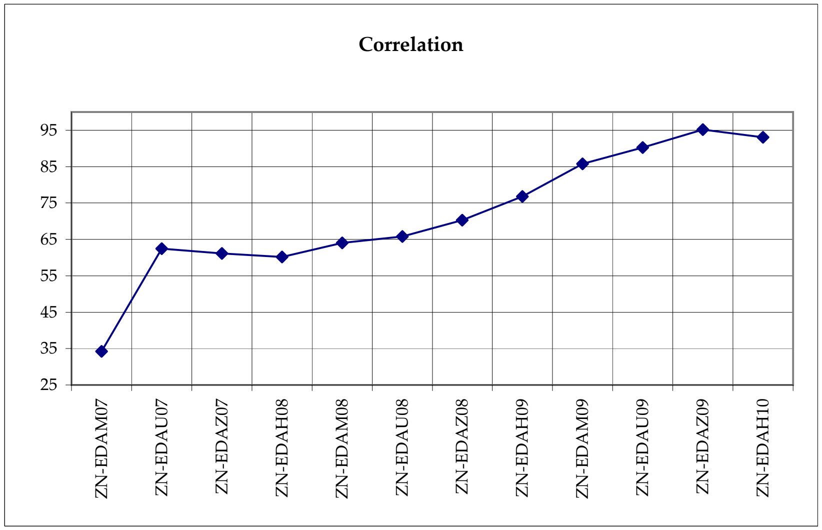
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	13.47	0.75	ZN-EDAM07	34.20
EDAU07	13.38	0.66	ZN-EDAU07	62.47
EDAZ07	13.22	0.50	ZN-EDAZ07	61.16
EDAH08	13.05	0.33	ZN-EDAH08	60.18
EDAM08	12.92	0.20	ZN-EDAM08	64.03
EDAU08	12.87	0.14	ZN-EDAU08	65.76
EDAZ08	12.85	0.12	ZN-EDAZ08	70.31
EDAH09	12.85	0.13	ZN-EDAH09	76.79
EDAM09	12.88	0.16	ZN-EDAM09	85.76
EDAU09	12.92	0.20	ZN-EDAU09	90.22
EDAZ09	12.96	0.24	ZN-EDAZ09	95.16
EDAH10	13.01	0.28	ZN-EDAH10	93.05

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



	GE Duration as Fraction of year	ZN Duration	Spread Duration	
EDAM07	0.114	5.80	5.68	ZN-EDAM07
EDAU07	0.364	5.80	5.43	ZN-EDAU07
EDAZ07	0.613	5.80	5.18	ZN-EDAZ07
EDAH08	0.862	5.80	4.93	ZN-EDAH08
EDAM08	1.112	5.80	4.68	ZN-EDAM08
EDAU08	1.361	5.80	4.44	ZN-EDAU08
EDAZ08	1.610	5.80	4.19	ZN-EDAZ08
EDAH09	1.860	5.80	3.94	ZN-EDAH09
EDAM09	2.109	5.80	3.69	ZN-EDAM09
EDAU09	2.358	5.80	3.44	ZN-EDAU09
EDAZ09	2.608	5.80	3.19	ZN-EDAZ09
EDAH10	2.857	5.80	2.94	ZN-EDAH10

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

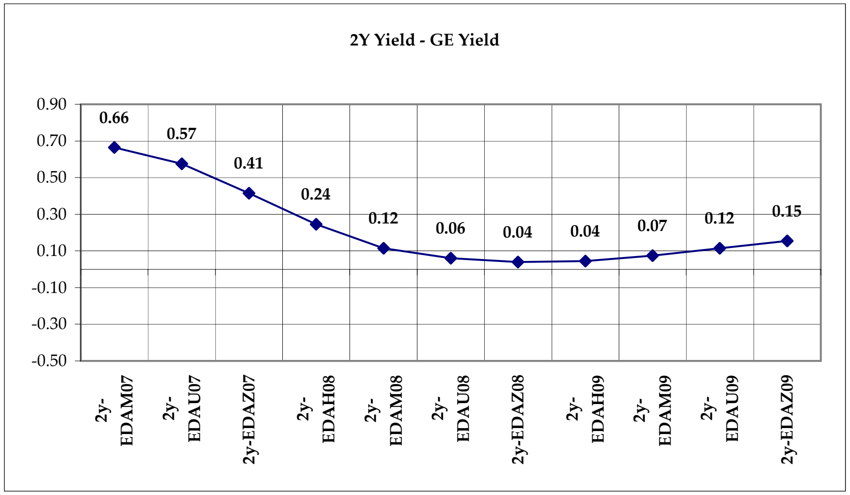


Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

TERM TED: 2y vs Eurodollar Contracts

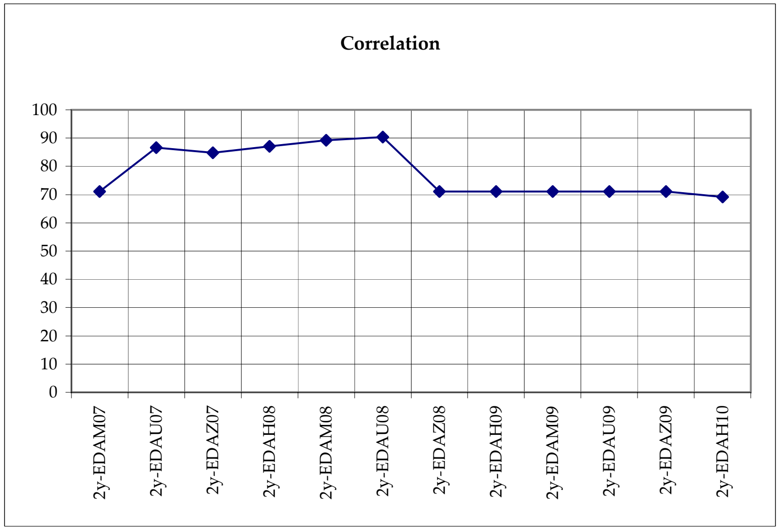
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	5.02	0.66	2y-EDAM07	71.088
EDAU07	4.93	0.57	2y-EDAU07	86.672
EDAZ07	4.77	0.41	2y-EDAZ07	84.819
EDAH08	4.60	0.24	2y-EDAH08	87.093
EDAM08	4.47	0.12	2y-EDAM08	89.273
EDAU08	4.41	0.06	2y-EDAU08	90.418
EDAZ08	4.39	0.04	2y-EDAZ08	71.088
EDAH09	4.40	0.04	2y-EDAH09	71.088
EDAM09	4.43	0.07	2y-EDAM09	71.088
EDAU09	4.47	0.12	2y-EDAU09	71.088
EDAZ09	4.51	0.15	2y-EDAZ09	71.088
EDAH10	4.55	0.20	2y-EDAH10	69.175

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



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAM07	0.114	1.87	1.75	2y-EDAM07
EDAU07	0.364	1.87	1.51	2y-EDAU07
EDAZ07	0.613	1.87	1.26	2y-EDAZ07
EDAH08	0.862	1.87	1.01	2y-EDAH08
EDAM08	1.112	1.87	0.76	2y-EDAM08
EDAU08	1.361	1.87	0.51	2y-EDAU08
EDAZ08	1.610	1.87	0.26	2y-EDAZ08
EDAH09	1.860	1.87	0.01	2y-EDAH09
EDAM09	2.109	1.87	(0.24)	2y-EDAM09
EDAU09	2.358	1.87	(0.49)	2y-EDAU09
EDAZ09	2.608	1.87	(0.74)	2y-EDAZ09
EDAH10	2.857	1.87	(0.99)	2y-EDAH10

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

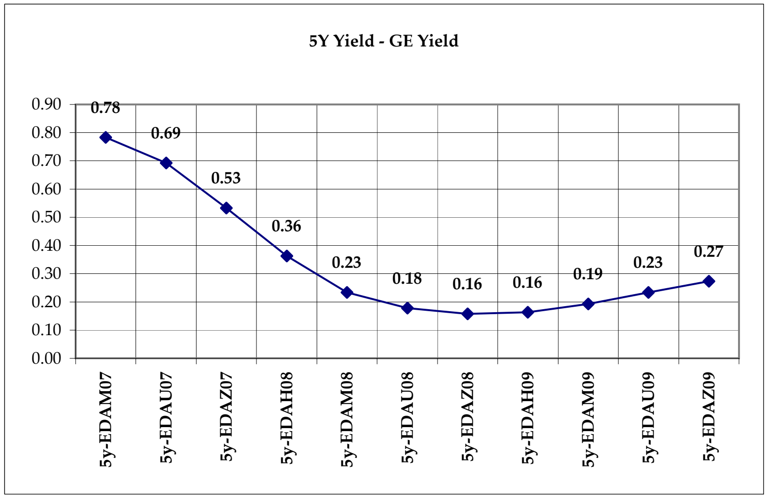


Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

TERM TED: 5y vs Eurodollar Contracts

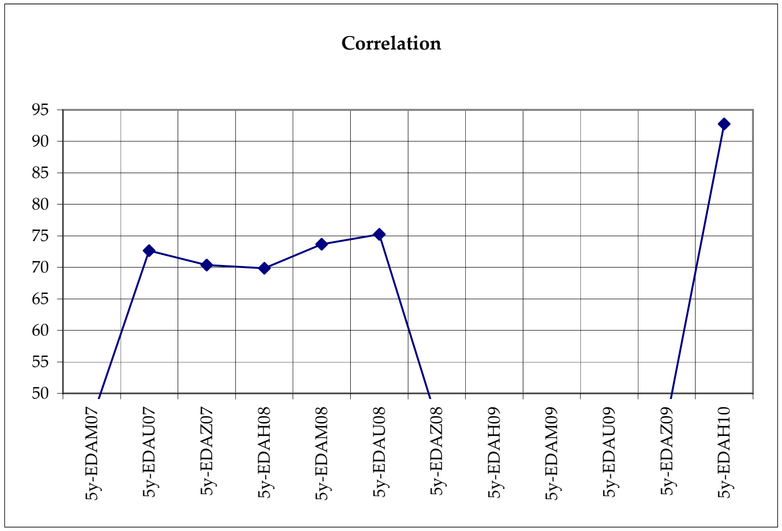
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	5.07	0.78	5y-EDAM07	45.879
EDAU07	4.98	0.69	5y-EDAU07	72.659
EDAZ07	4.82	0.53	5y-EDAZ07	70.381
EDAH08	4.65	0.36	5y-EDAH08	69.837
EDAM08	4.52	0.23	5y-EDAM08	73.651
EDAU08	4.46	0.18	5y-EDAU08	75.265
EDAZ08	4.44	0.16	5y-EDAZ08	45.879
EDAH09	4.45	0.16	5y-EDAH09	45.879
EDAM09	4.48	0.19	5y-EDAM09	45.879
EDAU09	4.52	0.23	5y-EDAU09	45.879
EDAZ09	4.56	0.27	5y-EDAZ09	45.879
EDAH10	4.60	0.32	5y-EDAH10	92.751

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



	GE Duration as Fraction of year	5Y Duration	Spread Duration	
EDAM07	0.114	4.41	4.30	5y-EDAM07
EDAU07	0.364	4.41	4.05	5y-EDAU07
EDAZ07	0.613	4.41	3.80	5y-EDAZ07
EDAH08	0.862	4.41	3.55	5y-EDAH08
EDAM08	1.112	4.41	3.30	5y-EDAM08
EDAU08	1.361	4.41	3.05	5y-EDAU08
EDAZ08	1.610	4.41	2.80	5y-EDAZ08
EDAH09	1.860	4.41	2.55	5y-EDAH09
EDAM09	2.109	4.41	2.30	5y-EDAM09
EDAU09	2.358	4.41	2.05	5y-EDAU09
EDAZ09	2.608	4.41	1.80	5y-EDAZ09
EDAH10	2.857	4.41	1.55	5y-EDAH10

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

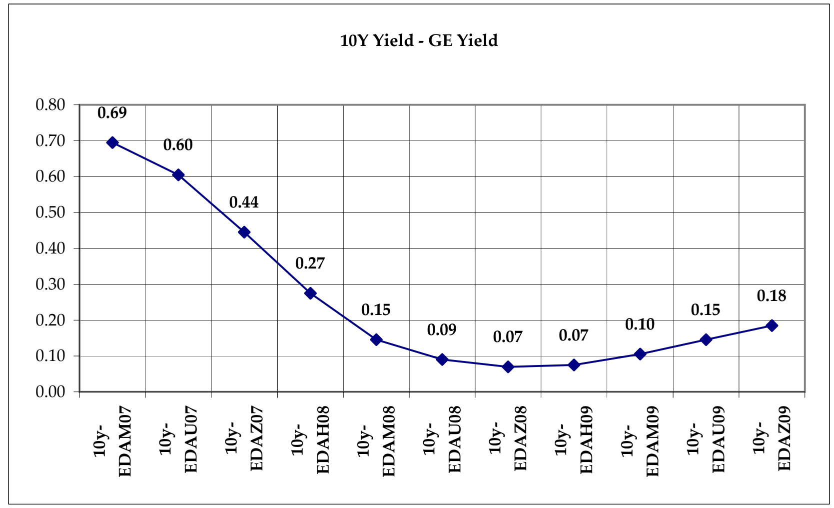


Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

TERM TED: 10y vs Eurodollar Contracts

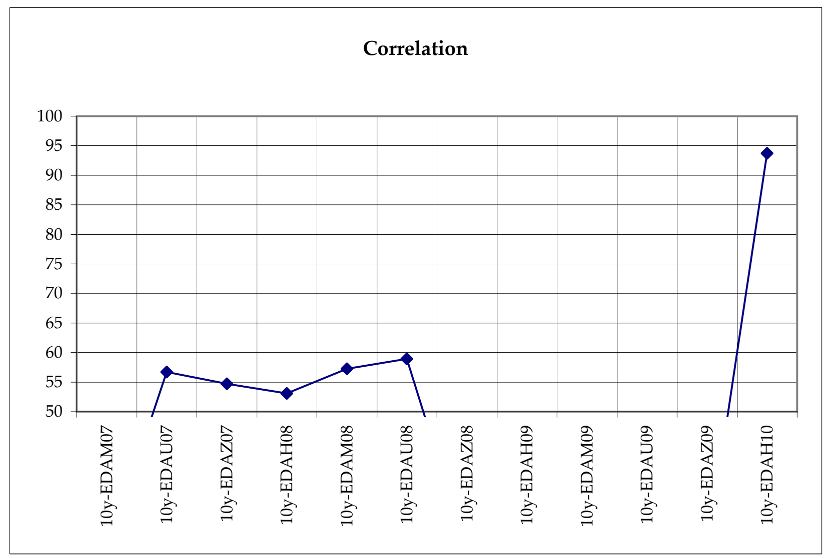
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	5.07	0.69	10y-EDAM07	26.306
EDAU07	4.98	0.60	10y-EDAU07	56.707
EDAZ07	4.82	0.44	10y-EDAZ07	54.699
EDAH08	4.65	0.27	10y-EDAH08	53.104
EDAM08	4.52	0.15	10y-EDAM08	57.274
EDAU08	4.46	0.09	10y-EDAU08	58.932
EDAZ08	4.44	0.07	10y-EDAZ08	26.306
EDAH09	4.45	0.07	10y-EDAH09	26.306
EDAM09	4.48	0.10	10y-EDAM09	26.306
EDAU09	4.52	0.15	10y-EDAU09	26.306
EDAZ09	4.56	0.18	10y-EDAZ09	26.306
EDAH10	4.60	0.23	10y-EDAH10	93.722

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



	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAM07	0.114	7.71	7.60	10y-EDAM07
EDAU07	0.364	7.71	7.35	10y-EDAU07
EDAZ07	0.613	7.71	7.10	10y-EDAZ07
EDAH08	0.862	7.71	6.85	10y-EDAH08
EDAM08	1.112	7.71	6.60	10y-EDAM08
EDAU08	1.361	7.71	6.35	10y-EDAU08
EDAZ08	1.610	7.71	6.10	10y-EDAZ08
EDAH09	1.860	7.71	5.85	10y-EDAH09
EDAM09	2.109	7.71	5.60	10y-EDAM09
EDAU09	2.358	7.71	5.35	10y-EDAU09
EDAZ09	2.608	7.71	5.10	10y-EDAZ09
EDAH10	2.857	7.71	4.85	10y-EDAH10

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

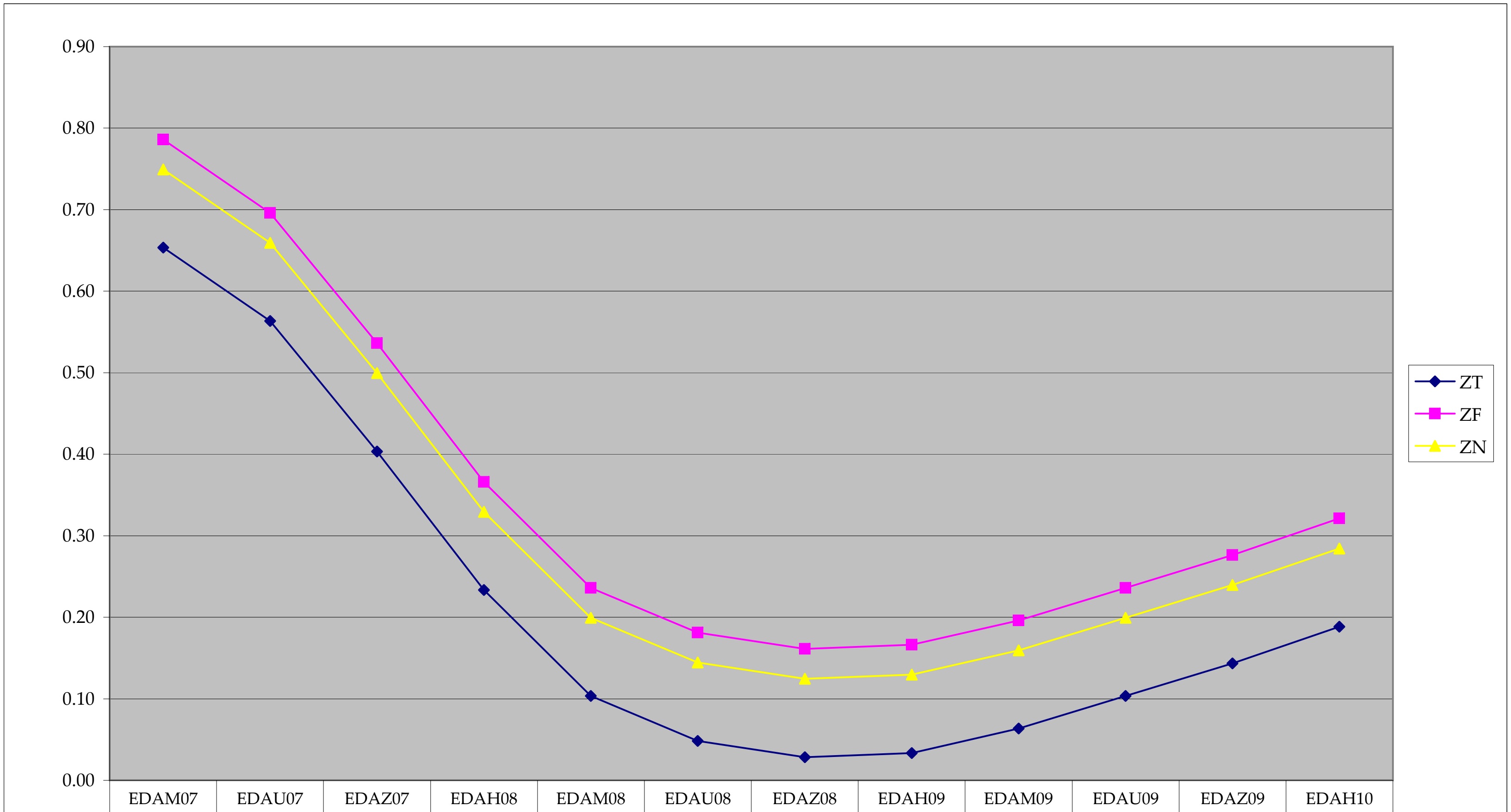


Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

Dirty TED Curve

Chart values show the differences between ED contract and Treasury Futures conctract. 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.

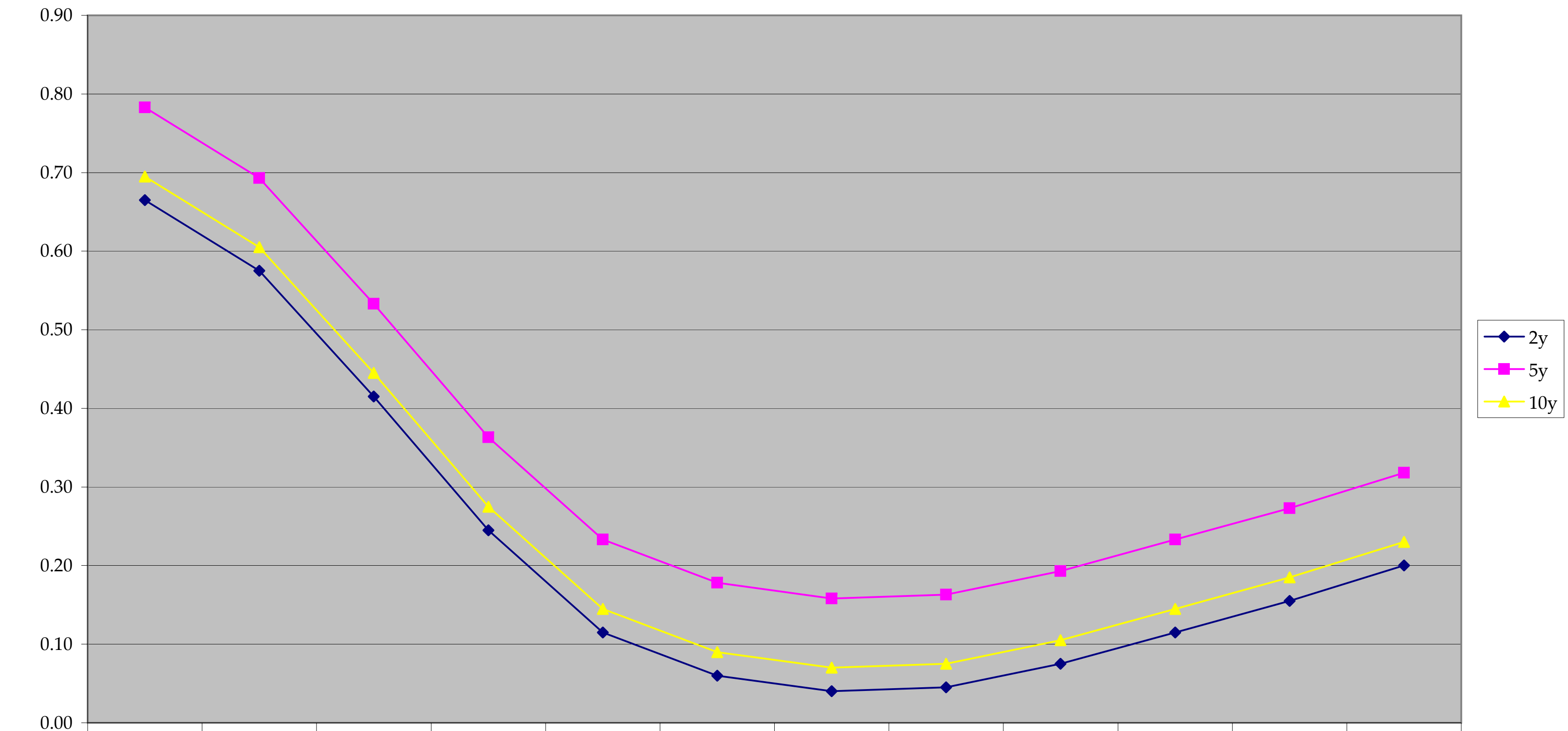


	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
ZT	0.65	0.56	0.40	0.23	0.10	0.05	0.03	0.03	0.06	0.10	0.14	0.19
ZF	0.79	0.70	0.54	0.37	0.24	0.18	0.16	0.17	0.20	0.24	0.28	0.32
ZN	0.75	0.66	0.50	0.33	0.20	0.14	0.12	0.13	0.16	0.20	0.24	0.28

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

TED Curve

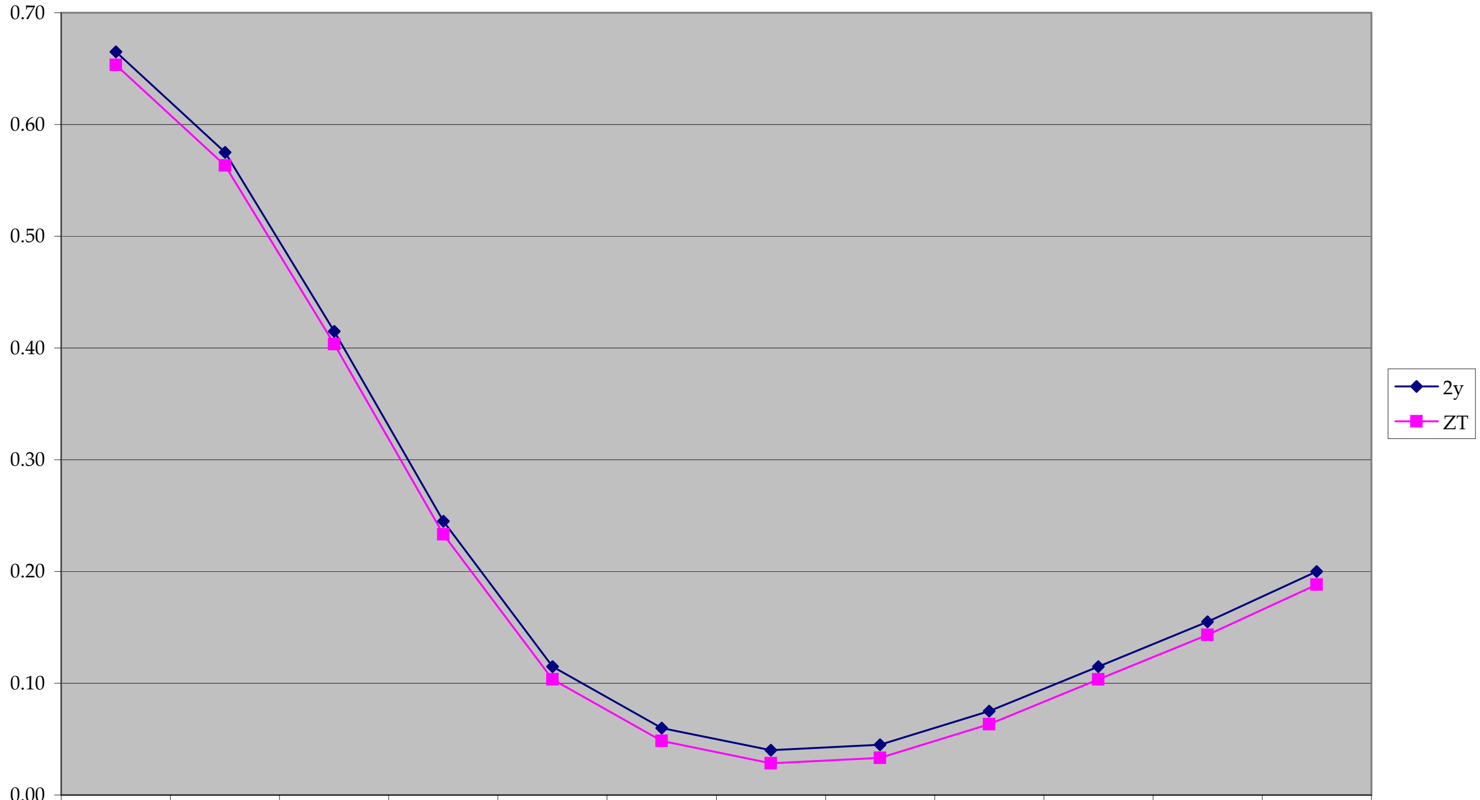
Chart values show the differences between ED contract and Treasury Cash conctract. Those values can be seen in the table at the bottom of the chart.
Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
2y	0.66	0.57	0.41	0.24	0.12	0.06	0.04	0.04	0.07	0.12	0.15	0.20
5y	0.78	0.69	0.53	0.36	0.23	0.18	0.16	0.16	0.19	0.23	0.27	0.32
10y	0.69	0.60	0.44	0.27	0.15	0.09	0.07	0.07	0.10	0.15	0.18	0.23

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

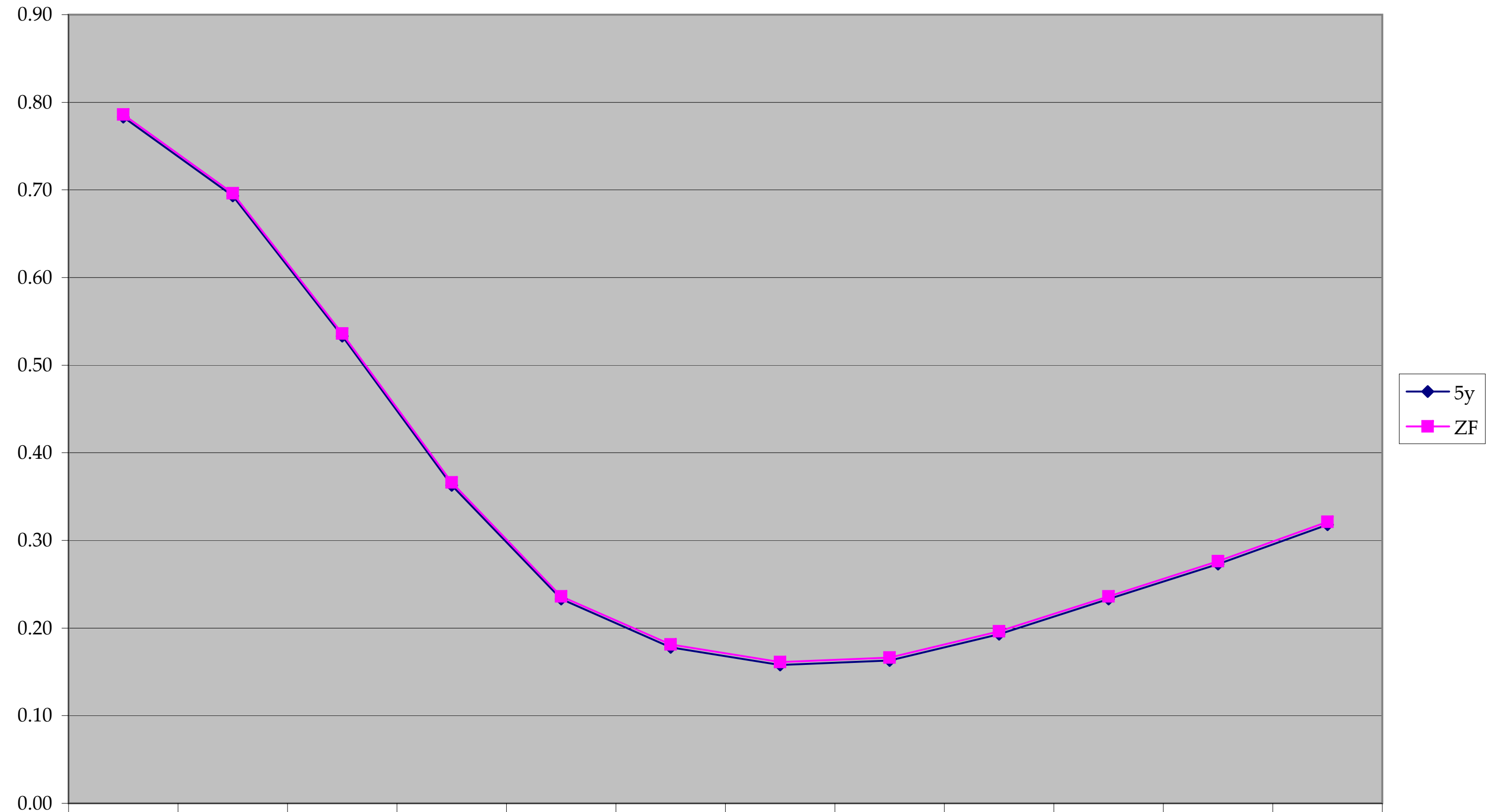
2y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
2y	0.66	0.57	0.41	0.24	0.12	0.06	0.04	0.04	0.07	0.12	0.15	0.20
ZT	0.65	0.56	0.40	0.23	0.10	0.05	0.03	0.03	0.06	0.10	0.14	0.19

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

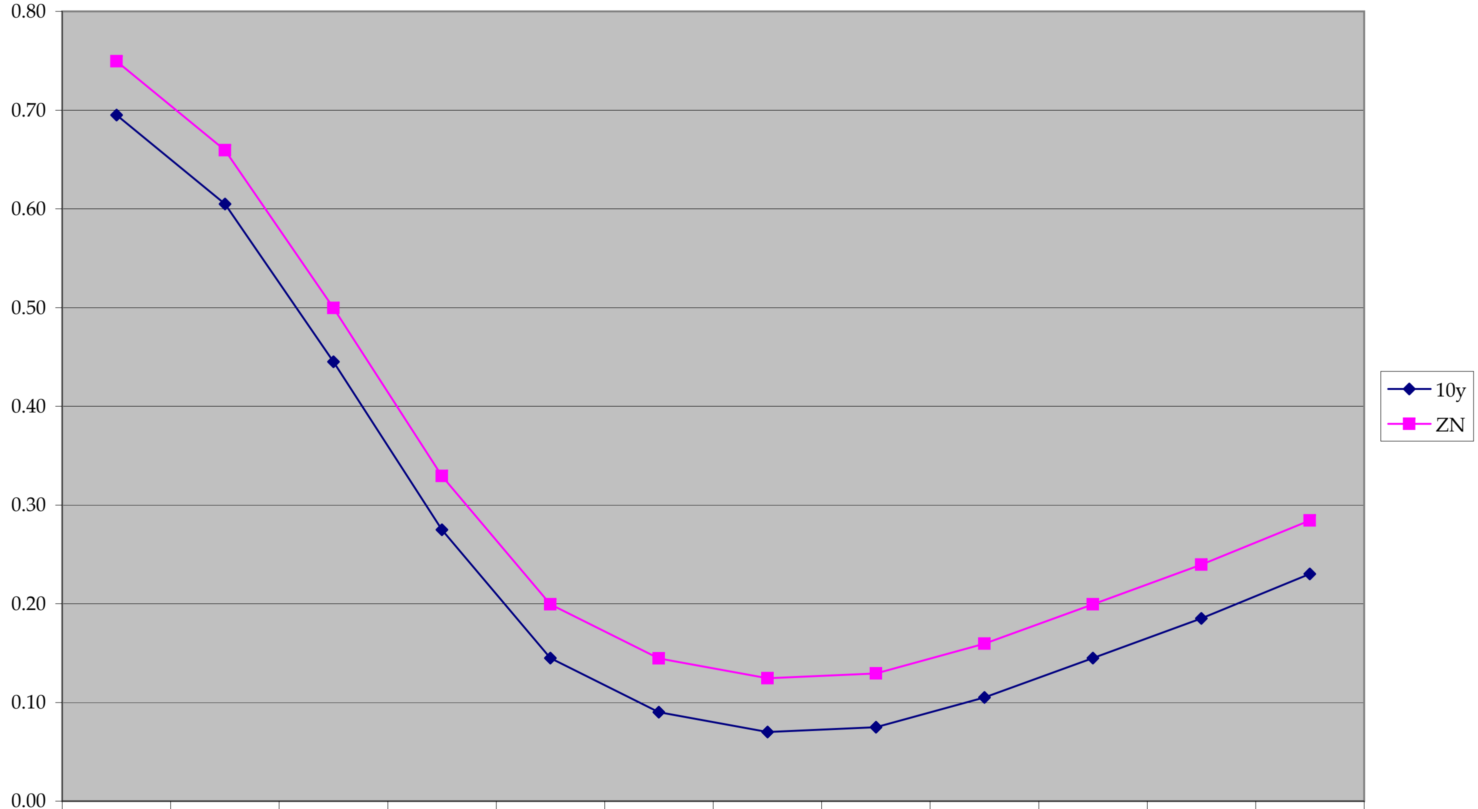
5y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
5y	0.78	0.69	0.53	0.36	0.23	0.18	0.16	0.16	0.19	0.23	0.27	0.32
ZF	0.79	0.70	0.54	0.37	0.24	0.18	0.16	0.17	0.20	0.24	0.28	0.32

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com

10y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
10y	0.69	0.60	0.44	0.27	0.15	0.09	0.07	0.07	0.10	0.15	0.18	0.23
ZN	0.75	0.66	0.50	0.33	0.20	0.14	0.12	0.13	0.16	0.20	0.24	0.28

Jim Goulding, GH Traders LLC, Treas-Arb, Chicago, jgoulding@ghco.com