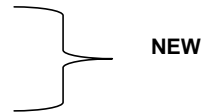


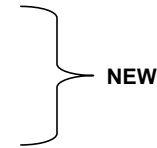
## The Morning Email: TERM TEDS & Dirty TEDS

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### Also new, correlation matrixes for all contracts.

Please note that correlations on CASH treasuries are based on YIELD to PRICE. This means that correlations should be negative.

Want something added? Let me know: [jgoulding@ghco.com](mailto:jgoulding@ghco.com)

**Disclaimer:** All information within this newsletter is meant for internal use at GH Trader's LLC, only. All information has been recorded to the best of my ability. This material is based upon information that I consider reliable, but I do not represent that it is accurate or complete.

F.I. Futures and Cash				
	Last Decimal	Last 32	Last Yield*	**MDuration
ZT	101.6000	101.192	5.078	1.87
ZF	103.2656	103.085	5.133	3.99
ZN	104.3125	104.100	5.167	5.80
Blank				
2y	99.672	99.2150	5.043	2.04
5y	98.288	98.0920	5.143	4.30
10y	94.391	94.1250	5.227	7.82

\*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	94.638	5.363	10	0.027	JUN	} White Pack
EDAU07	94.625	5.375	101	0.276	SEP	
EDAZ07	94.605	5.395	192	0.525	DEC	
EDAH08	94.625	5.375	283	0.775	MAR	} Red Pack
EDAM08	94.630	5.370	374	1.024	JUN	
EDAU08	94.605	5.395	465	1.273	SEP	
EDAZ08	94.560	5.440	556	1.523	DEC	} Green Pack
EDAH09	94.515	5.485	647	1.772	MAR	
EDAM09	94.450	5.550	738	2.021	JUN	
EDAU09	94.405	5.595	829	2.271	SEP	
EDAZ09	94.360	5.640	920	2.520	DEC	
EDAH10	94.365	5.635	1011	2.769	MAR	

**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](mailto:jgoulding@ghco.com)

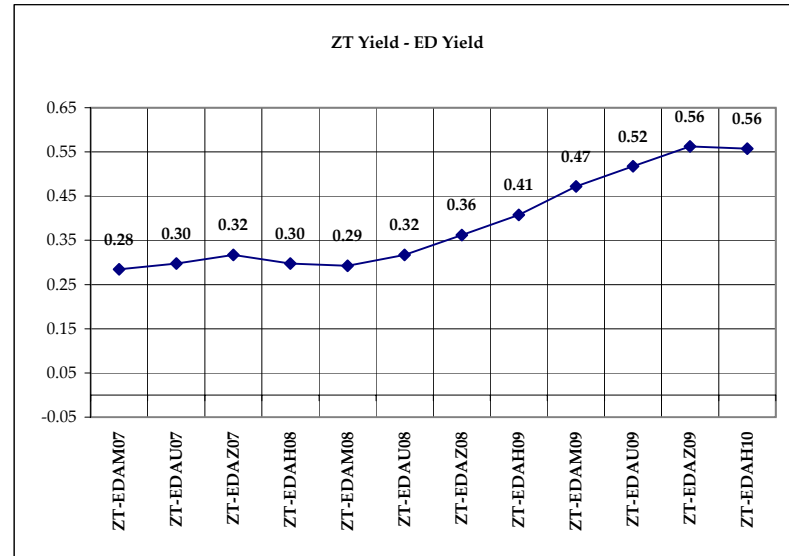
**Eurodollar Color Codes for Individual Year Strips:**

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	6.963	0.28	ZT-EDAM07	86.543
EDAU07	6.975	0.30	ZT-EDAU07	97.565
EDAZ07	6.995	0.32	ZT-EDAZ07	98.963
EDAH08	6.975	0.30	ZT-EDAH08	99.298
EDAM08	6.970	0.29	ZT-EDAM08	99.559
EDAU08	6.995	0.32	ZT-EDAU08	99.190
EDAZ08	7.040	0.36	ZT-EDAZ08	86.543
EDAH09	7.085	0.41	ZT-EDAH09	86.543
EDAM09	7.150	0.47	ZT-EDAM09	86.543
EDAU09	7.195	0.52	ZT-EDAU09	86.543
EDAZ09	7.240	0.56	ZT-EDAZ09	86.543
EDAH10	7.235	0.56	ZT-EDAH10	93.054

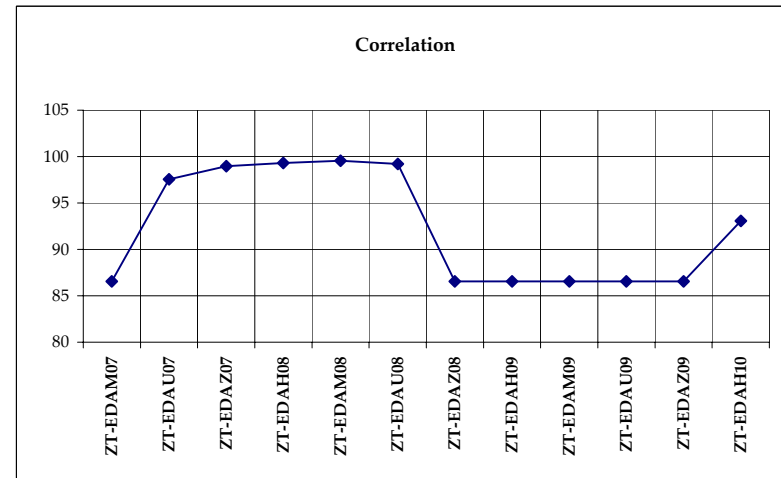
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as

	Fraction of year	ZT Duration	Spread Duration	
EDAM07	0.027	1.87	1.84	ZT-EDAM07
EDAU07	0.276	1.87	1.59	ZT-EDAU07
EDAZ07	0.525	1.87	1.34	ZT-EDAZ07
EDAH08	0.775	1.87	1.09	ZT-EDAH08
EDAM08	1.024	1.87	0.84	ZT-EDAM08
EDAU08	1.273	1.87	0.59	ZT-EDAU08
EDAZ08	1.523	1.87	0.34	ZT-EDAZ08
EDAH09	1.772	1.87	0.09	ZT-EDAH09
EDAM09	2.021	1.87	(0.15)	ZT-EDAM09
EDAU09	2.271	1.87	(0.40)	ZT-EDAU09
EDAZ09	2.520	1.87	(0.65)	ZT-EDAZ09
EDAH10	2.769	1.87	(0.90)	ZT-EDAH10

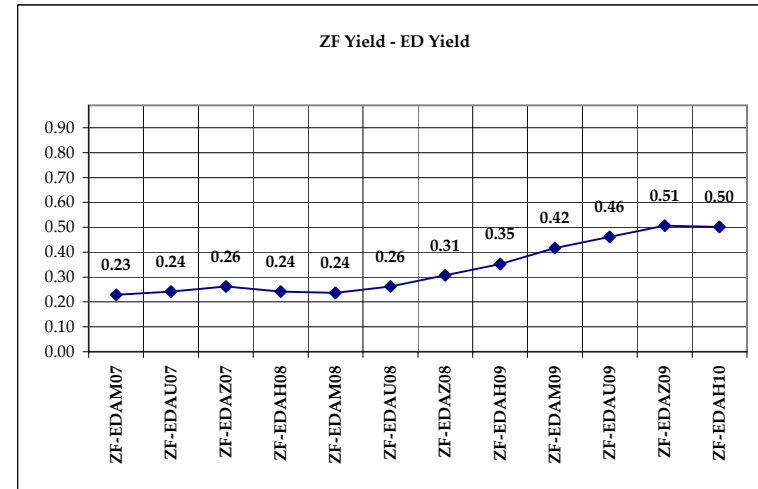
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZF vs Eurodollar Contracts

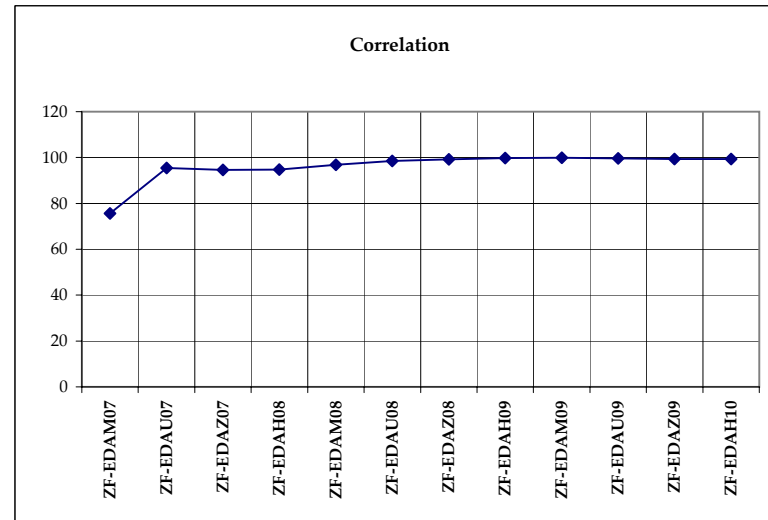
ZF				
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	8.63	0.23	ZF-EDAM07	75.568
EDAU07	8.64	0.24	ZF-EDAU07	95.485
EDAZ07	8.66	0.26	ZF-EDAZ07	94.556
EDAH08	8.64	0.24	ZF-EDAH08	94.729
EDAM08	8.64	0.24	ZF-EDAM08	96.888
EDAU08	8.66	0.26	ZF-EDAU08	98.474
EDAZ08	8.71	0.31	ZF-EDAZ08	99.266
EDAH09	8.75	0.35	ZF-EDAH09	99.749
EDAM09	8.82	0.42	ZF-EDAM09	99.856
EDAU09	8.86	0.46	ZF-EDAU09	99.642
EDAZ09	8.91	0.51	ZF-EDAZ09	99.376
EDAH10	8.90	0.50	ZF-EDAH10	99.336

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	0.027	3.99	3.96	ZF-EDAM07
EDAU07	0.276	3.99	3.71	ZF-EDAU07
EDAZ07	0.525	3.99	3.46	ZF-EDAZ07
EDAH08	0.775	3.99	3.21	ZF-EDAH08
EDAM08	1.024	3.99	2.96	ZF-EDAM08
EDAU08	1.273	3.99	2.71	ZF-EDAU08
EDAZ08	1.523	3.99	2.46	ZF-EDAZ08
EDAH09	1.772	3.99	2.21	ZF-EDAH09
EDAM09	2.021	3.99	1.96	ZF-EDAM09
EDAU09	2.271	3.99	1.71	ZF-EDAU09
EDAZ09	2.520	3.99	1.47	ZF-EDAZ09
EDAH10	2.769	3.99	1.22	ZF-EDAH10

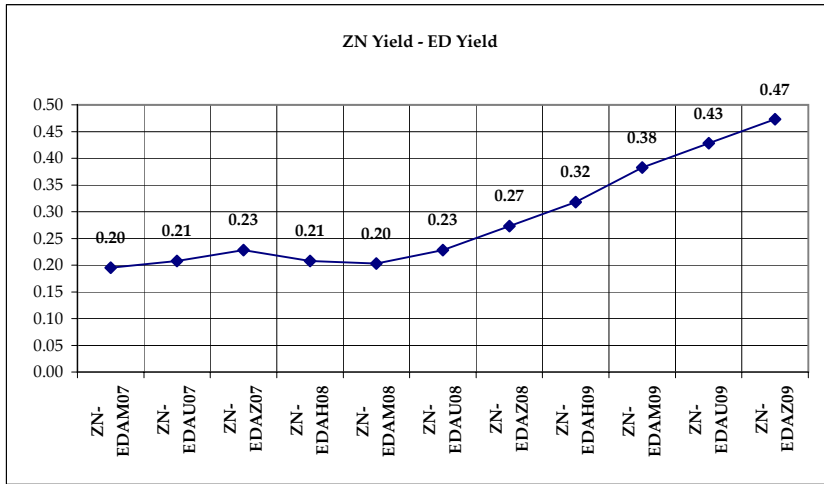
The farther away from 0 the spread duration is the riskier the trade.



Dirty TED: ZN vs Eurodollar Contracts

	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	9.68	0.20	ZN-EDAM07	68.21
EDAU07	9.69	0.21	ZN-EDAU07	92.10
EDAZ07	9.71	0.23	ZN-EDAZ07	90.00
EDAH08	9.69	0.21	ZN-EDAH08	90.06
EDAM08	9.68	0.20	ZN-EDAM08	93.06
EDAU08	9.71	0.23	ZN-EDAU08	95.57
EDAZ08	9.75	0.27	ZN-EDAZ08	97.02
EDAH09	9.80	0.32	ZN-EDAH09	98.25
EDAM09	9.86	0.38	ZN-EDAM09	99.30
EDAU09	9.91	0.43	ZN-EDAU09	99.61
EDAZ09	9.95	0.47	ZN-EDAZ09	99.76
EDAH10	9.95	0.47	ZN-EDAH10	99.34

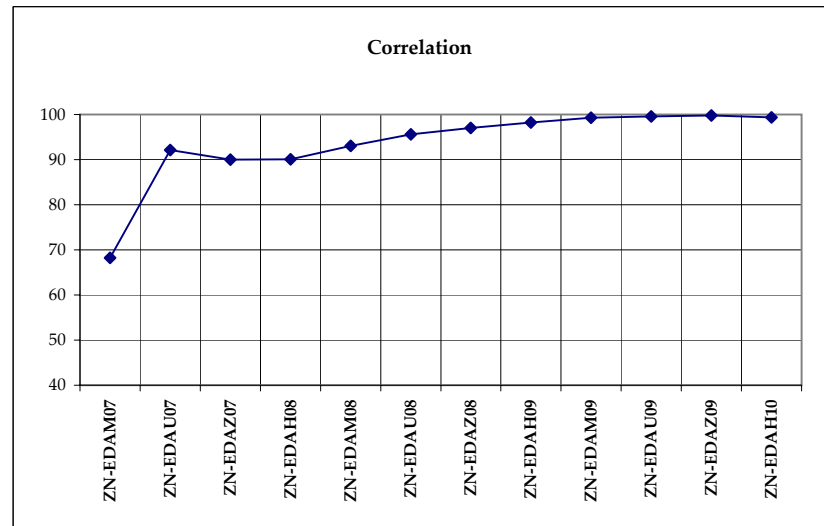
Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days



GE Duration as Fraction of year

	ZN Duration	Spread Duration	
EDAM07	0.027	5.80	ZN-EDAM07
EDAU07	0.276	5.80	ZN-EDAU07
EDAZ07	0.525	5.80	ZN-EDAZ07
EDAH08	0.775	5.80	ZN-EDAH08
EDAM08	1.024	5.80	ZN-EDAM08
EDAU08	1.273	5.80	ZN-EDAU08
EDAZ08	1.523	5.80	ZN-EDAZ08
EDAH09	1.772	5.80	ZN-EDAH09
EDAM09	2.021	5.80	ZN-EDAM09
EDAU09	2.271	5.80	ZN-EDAU09
EDAZ09	2.520	5.80	ZN-EDAZ09
EDAH10	2.769	5.80	ZN-EDAH10

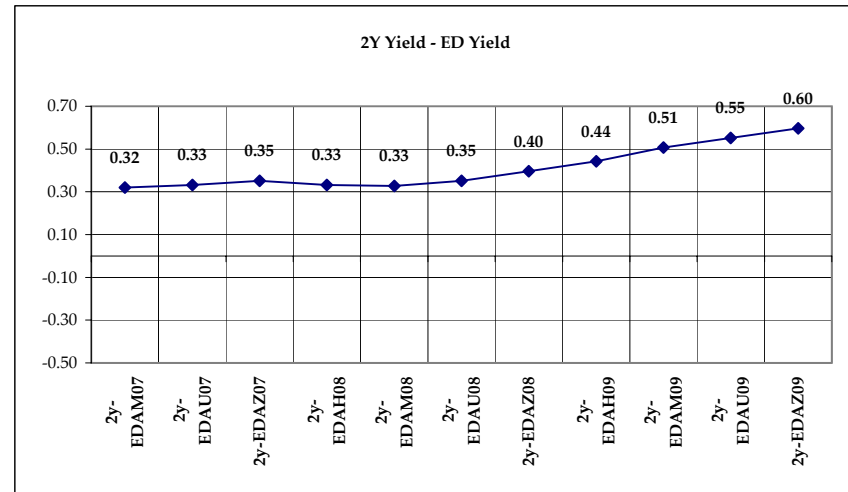
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	5.03	0.32	2y-EDAM07	-88.487
EDAU07	5.05	0.33	2y-EDAU07	-96.714
EDAZ07	5.07	0.35	2y-EDAZ07	-97.239
EDAH08	5.05	0.33	2y-EDAH08	-98.018
EDAM08	5.04	0.33	2y-EDAM08	-98.553
EDAU08	5.07	0.35	2y-EDAU08	-98.282
EDAZ08	5.11	0.40	2y-EDAZ08	-88.487
EDAH09	5.16	0.44	2y-EDAH09	-88.487
EDAM09	5.22	0.51	2y-EDAM09	-88.487
EDAU09	5.27	0.55	2y-EDAU09	-88.487
EDAZ09	5.31	0.60	2y-EDAZ09	-88.487
EDAH10	5.31	0.59	2y-EDAH10	-91.948

Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days.  
 These are YIELD correlations.

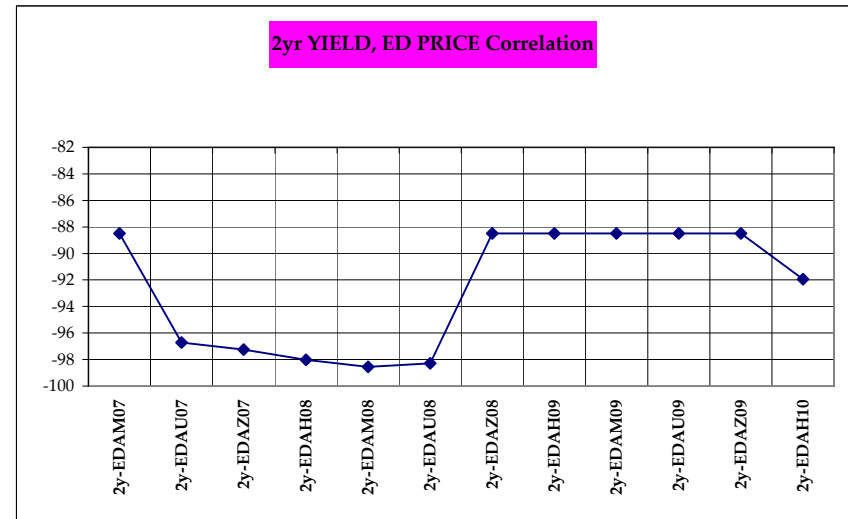


GE Duration as Fraction of year

	2Y Duration	Spread Duration	
EDAM07	0.027	2.04	2y-EDAM07
EDAU07	0.276	2.04	2y-EDAU07
EDAZ07	0.525	2.04	2y-EDAZ07
EDAH08	0.775	2.04	2y-EDAH08
EDAM08	1.024	2.04	2y-EDAM08
EDAU08	1.273	2.04	2y-EDAU08
EDAZ08	1.523	2.04	2y-EDAZ08
EDAH09	1.772	2.04	2y-EDAH09
EDAM09	2.021	2.04	2y-EDAM09
EDAU09	2.271	2.04	2y-EDAU09
EDAZ09	2.520	2.04	2y-EDAZ09
EDAH10	2.769	2.04	2y-EDAH10

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

2yr YIELD, ED PRICE Correlation



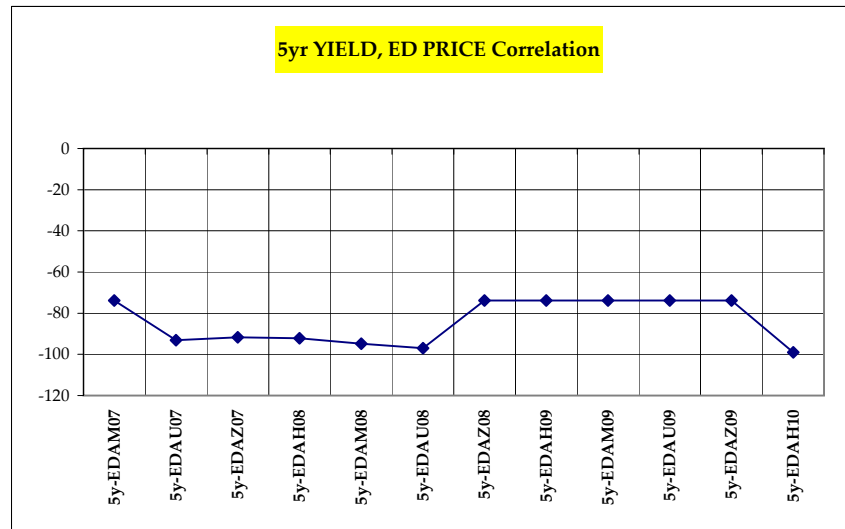
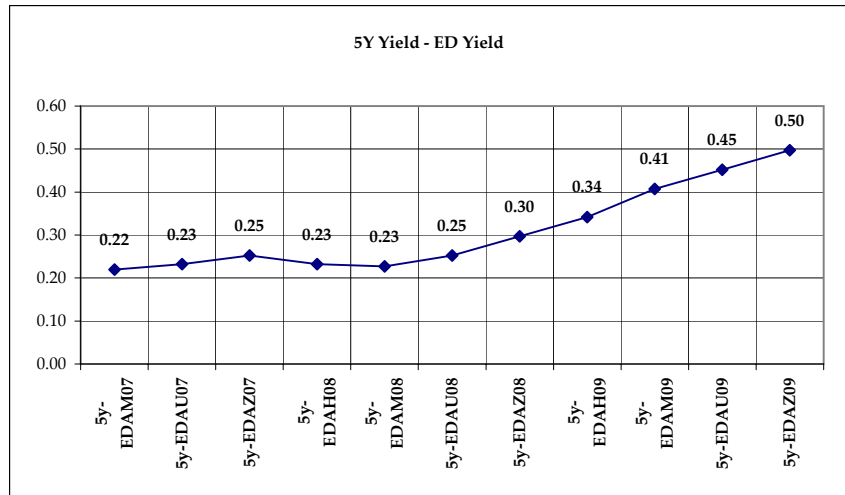
TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	3.65	0.22	5y-EDAM07	-73.787
EDAU07	3.66	0.23	5y-EDAU07	-93.171
EDAZ07	3.68	0.25	5y-EDAZ07	-91.765
EDAH08	3.66	0.23	5y-EDAH08	-92.196
EDAM08	3.66	0.23	5y-EDAM08	-94.875
EDAU08	3.68	0.25	5y-EDAU08	-96.937
EDAZ08	3.73	0.30	5y-EDAZ08	-73.787
EDAH09	3.77	0.34	5y-EDAH09	-73.787
EDAM09	3.84	0.41	5y-EDAM09	-73.787
EDAU09	3.88	0.45	5y-EDAU09	-73.787
EDAZ09	3.93	0.50	5y-EDAZ09	-73.787
EDAH10	3.92	0.49	5y-EDAH10	-99.003

Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days  
 These are YIELD correlations.

	GE Duration as Fraction of year	5Y Duration	Spread Duration	
EDAM07	0.027	4.30	4.27	5y-EDAM07
EDAU07	0.276	4.30	4.02	5y-EDAU07
EDAZ07	0.525	4.30	3.77	5y-EDAZ07
EDAH08	0.775	4.30	3.53	5y-EDAH08
EDAM08	1.024	4.30	3.28	5y-EDAM08
EDAU08	1.273	4.30	3.03	5y-EDAU08
EDAZ08	1.523	4.30	2.78	5y-EDAZ08
EDAH09	1.772	4.30	2.53	5y-EDAH09
EDAM09	2.021	4.30	2.28	5y-EDAM09
EDAU09	2.271	4.30	2.03	5y-EDAU09
EDAZ09	2.520	4.30	1.78	5y-EDAZ09
EDAH10	2.769	4.30	1.53	5y-EDAH10

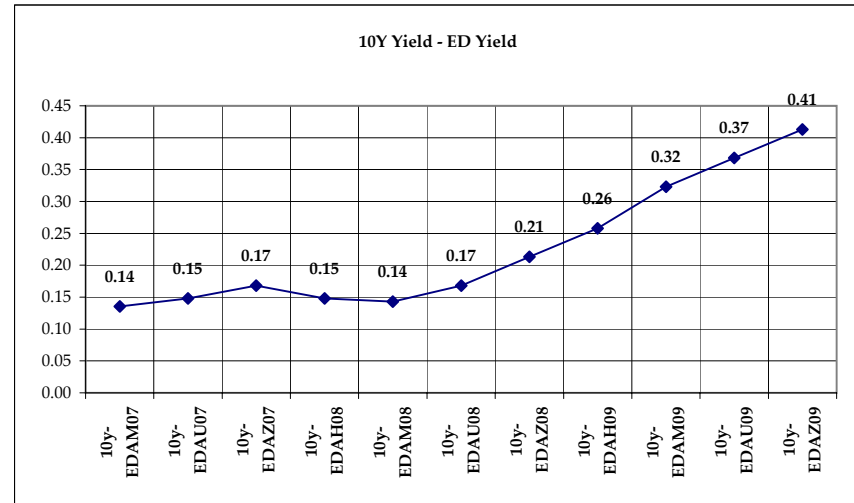
The farther away from 0 the spread duration is the riskier the trade.



**TERM TED: 10y vs Eurodollar Contracts**

	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	3.65	0.14	10y-EDAM07	-64.372
EDAU07	3.66	0.15	10y-EDAU07	-88.569
EDAZ07	3.68	0.17	10y-EDAZ07	-85.943
EDAH08	3.66	0.15	10y-EDAH08	-86.299
EDAM08	3.66	0.14	10y-EDAM08	-89.880
EDAU08	3.68	0.17	10y-EDAU08	-92.964
EDAZ08	3.73	0.21	10y-EDAZ08	-64.372
EDAH09	3.77	0.26	10y-EDAH09	-64.372
EDAM09	3.84	0.32	10y-EDAM09	-64.372
EDAU09	3.88	0.37	10y-EDAU09	-64.372
EDAZ09	3.93	0.41	10y-EDAZ09	-64.372
EDAH10	3.92	0.41	10y-EDAH10	-98.902

Price = Outright Decimal Price - Euro Contract Price  
 Yield = ABS(Proxy Yield - Implied Euro Contract yield)  
 \*Correlation = ED Correlation to Treasury Future over 10 days  
 These are YIELD correlations.

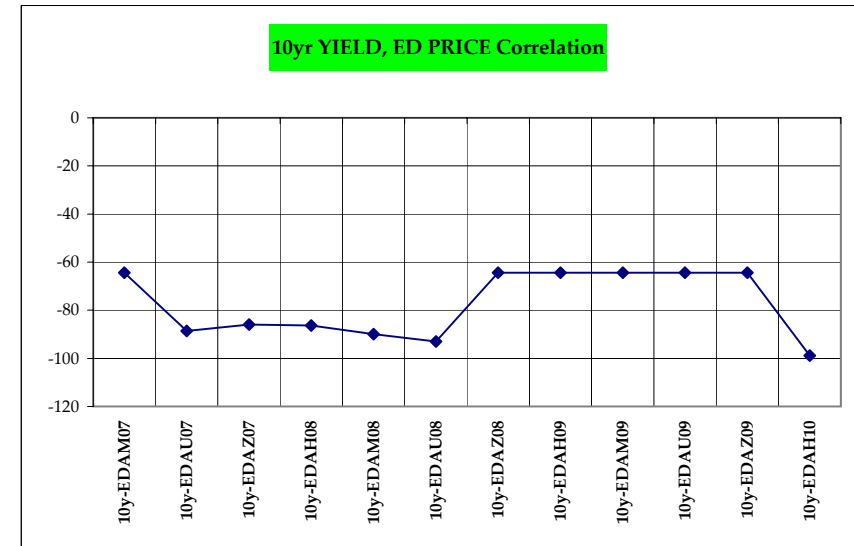


**GE Duration as Fraction of year**

	10Y Duration	Spread Duration	
EDAM07	0.027	7.82	10y-EDAM07
EDAU07	0.276	7.82	10y-EDAU07
EDAZ07	0.525	7.82	10y-EDAZ07
EDAH08	0.775	7.82	10y-EDAH08
EDAM08	1.024	7.82	10y-EDAM08
EDAU08	1.273	7.82	10y-EDAU08
EDAZ08	1.523	7.82	10y-EDAZ08
EDAH09	1.772	7.82	10y-EDAH09
EDAM09	2.021	7.82	10y-EDAM09
EDAU09	2.271	7.82	10y-EDAU09
EDAZ09	2.520	7.82	10y-EDAZ09
EDAH10	2.769	7.82	10y-EDAH10

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

**10yr YIELD, ED PRICE Correlation**



**Dirty TED Curve**

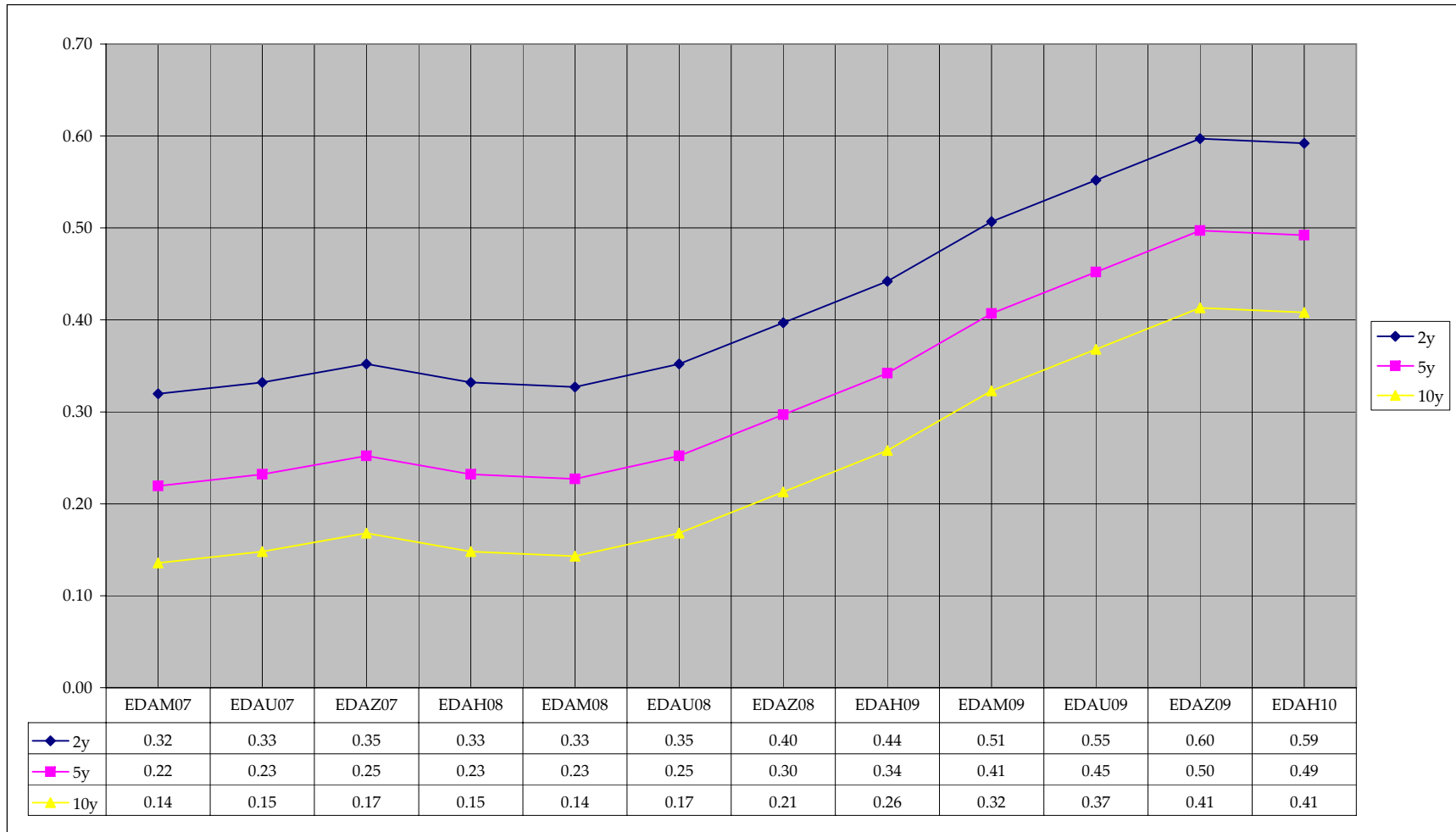
Chart values show the differences between ED contract and Treasury Futures contract. Those values can be seen in the table at the bottom of the chart.

Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.

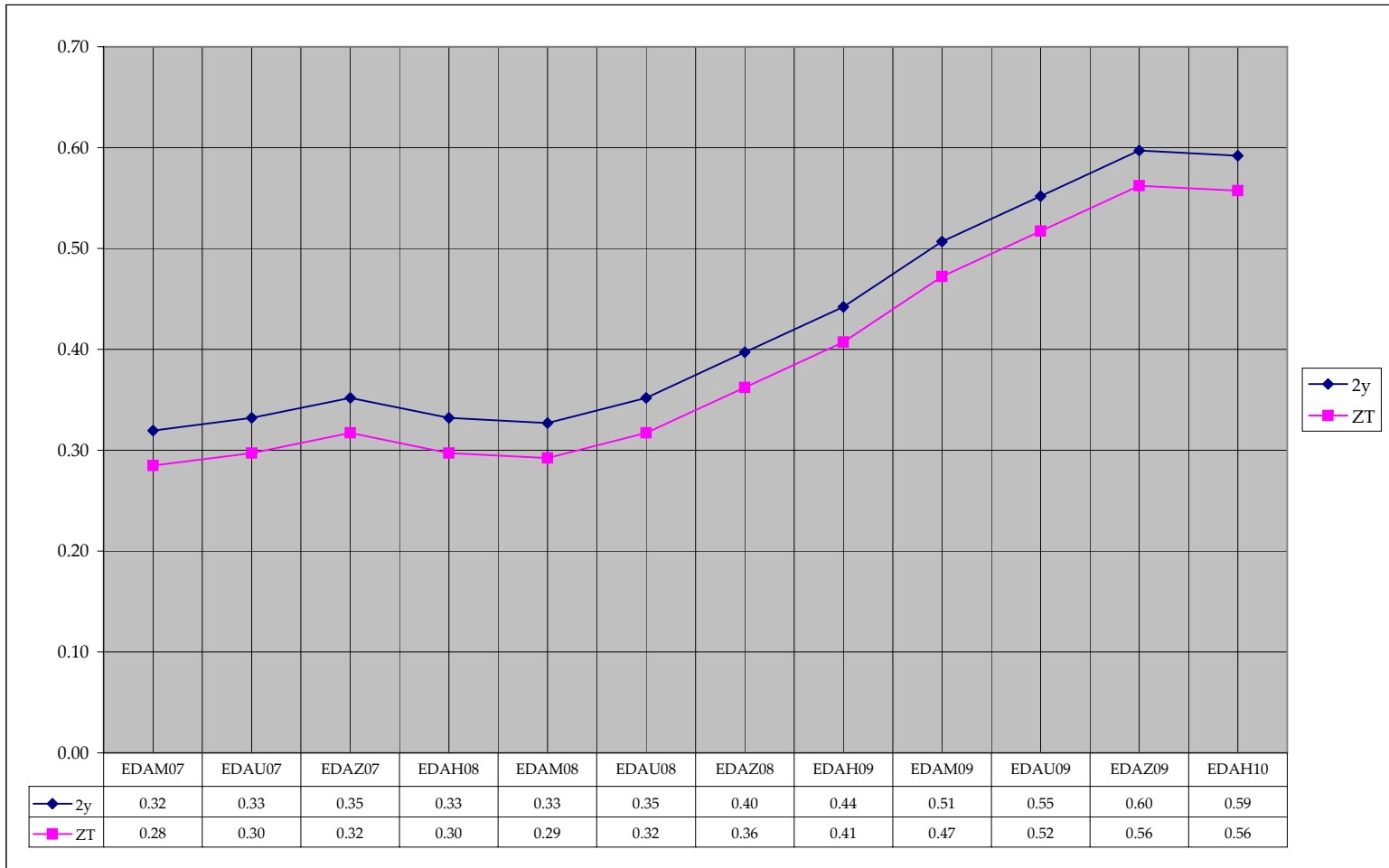


TED Curve

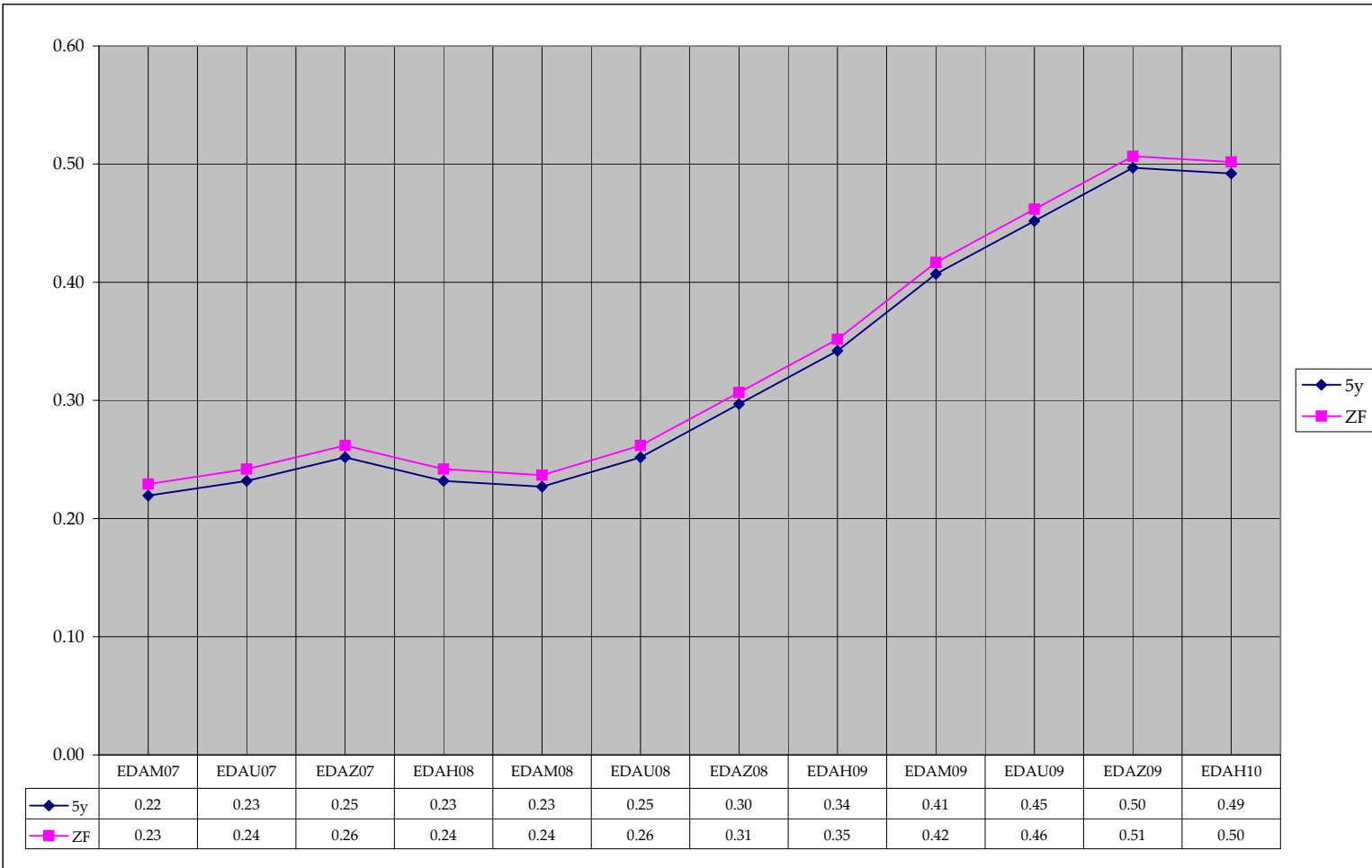
Chart values show the differences between ED contract and Treasury Cash contract. Those values can be seen in the table at the bottom of the chart. Each cash treasury is then plotted on the chart to compare differences in the durations and basis point values.



2y Basis TED Curve



### 5y Basis TED Curve



10y Basis TED Curve

