The Morning Email: TERM TEDS & Dirty TEDS

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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	102.2406	102.077	4.683	1.77
ZF	105.7188	105.230	4.518	3.82
ZN	108.3281	108.105	4.569	5.78
Blank				
2y	99.703	99.2250	4.660	1.85
5y	99.875	99.2800	4.525	4.40
10y	99.047	99.0150	4.620	7.79

*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	94.660	5.340	38	0.103	JUN	White Pack
EDAU07	94.765	5.235	129	0.353	SEP	
EDAZ07	94.930	5.070	220	0.602	DEC	
EDAH08	95.095	4.905	311	0.851	MAR	
EDAM08	95.215	4.785	402	1.101	JUN	Red Pack
EDAU08	95.280	4.720	493	1.350	SEP	
EDAZ08	95.305	4.695	584	1.599	DEC	
EDAH09	95.305	4.695	675	1.849	MAR	
EDAM09	95.280	4.720	766	2.098	JUN	Green Pack
EDAU09	95.240	4.760	857	2.347	SEP	
EDAZ09	95.195	4.805	948	2.597	DEC	
EDAH10	95.165	4.835	1039	2.846	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.
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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

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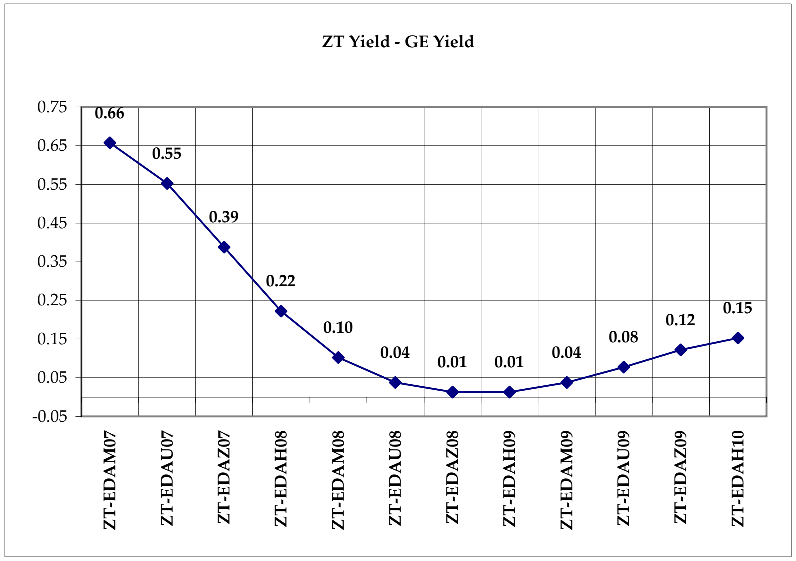
Dirty TED: ZT vs Eurodollar Contracts

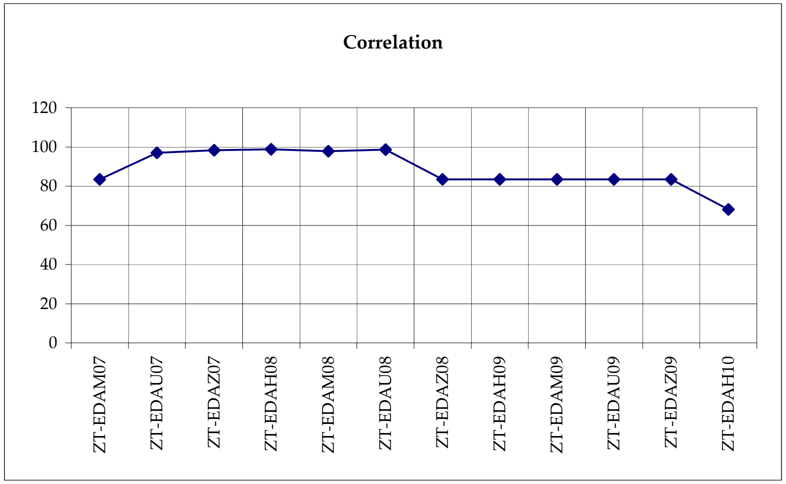
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	7.581	0.66	ZT-EDAM07	83.495
EDAU07	7.476	0.55	ZT-EDAU07	96.910
EDAZ07	7.311	0.39	ZT-EDAZ07	98.359
EDAH08	7.146	0.22	ZT-EDAH08	98.818
EDAM08	7.026	0.10	ZT-EDAM08	97.829
EDAU08	6.961	0.04	ZT-EDAU08	98.680
EDAZ08	6.936	0.01	ZT-EDAZ08	83.495
EDAH09	6.936	0.01	ZT-EDAH09	83.495
EDAM09	6.961	0.04	ZT-EDAM09	83.495
EDAU09	7.001	0.08	ZT-EDAU09	83.495
EDAZ09	7.046	0.12	ZT-EDAZ09	83.495
EDAH10	7.076	0.15	ZT-EDAH10	68.155

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	0.103	1.77	1.67	ZT-EDAM07
EDAU07	0.353	1.77	1.42	ZT-EDAU07
EDAZ07	0.602	1.77	1.17	ZT-EDAZ07
EDAH08	0.851	1.77	0.92	ZT-EDAH08
EDAM08	1.101	1.77	0.67	ZT-EDAM08
EDAU08	1.350	1.77	0.42	ZT-EDAU08
EDAZ08	1.599	1.77	0.17	ZT-EDAZ08
EDAH09	1.849	1.77	(0.08)	ZT-EDAH09
EDAM09	2.098	1.77	(0.32)	ZT-EDAM09
EDAU09	2.347	1.77	(0.57)	ZT-EDAU09
EDAZ09	2.597	1.77	(0.82)	ZT-EDAZ09
EDAH10	2.846	1.77	(1.07)	ZT-EDAH10

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



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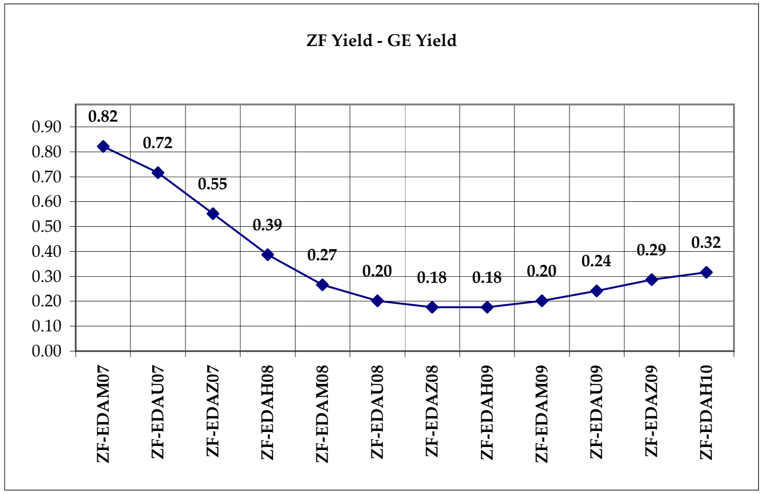
Dirty TED: ZF vs Eurodollar Contracts

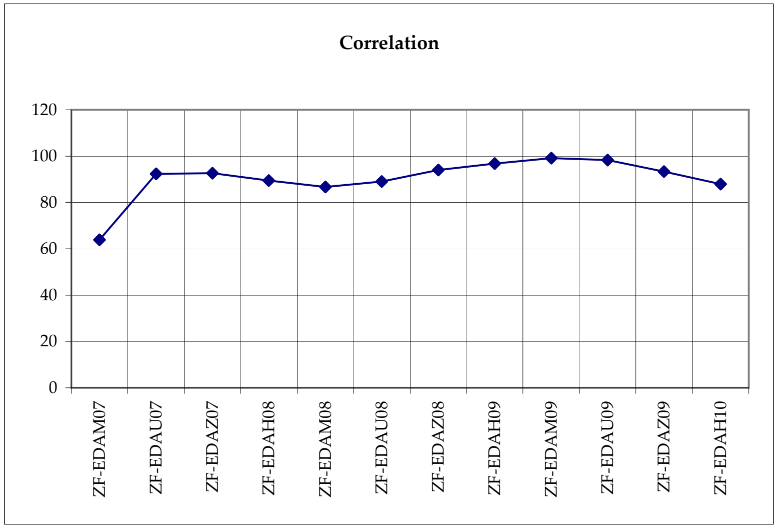
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	11.06	0.82	ZF-EDAM07	63.860
EDAU07	10.95	0.72	ZF-EDAU07	92.315
EDAZ07	10.79	0.55	ZF-EDAZ07	92.562
EDAH08	10.62	0.39	ZF-EDAH08	89.455
EDAM08	10.50	0.27	ZF-EDAM08	86.658
EDAU08	10.44	0.20	ZF-EDAU08	88.986
EDAZ08	10.41	0.18	ZF-EDAZ08	93.955
EDAH09	10.41	0.18	ZF-EDAH09	96.706
EDAM09	10.44	0.20	ZF-EDAM09	99.076
EDAU09	10.48	0.24	ZF-EDAU09	98.302
EDAZ09	10.52	0.29	ZF-EDAZ09	93.273
EDAH10	10.55	0.32	ZF-EDAH10	87.994

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	0.103	3.82	3.72	ZF-EDAM07
EDAU07	0.353	3.82	3.47	ZF-EDAU07
EDAZ07	0.602	3.82	3.22	ZF-EDAZ07
EDAH08	0.851	3.82	2.97	ZF-EDAH08
EDAM08	1.101	3.82	2.72	ZF-EDAM08
EDAU08	1.350	3.82	2.47	ZF-EDAU08
EDAZ08	1.599	3.82	2.23	ZF-EDAZ08
EDAH09	1.849	3.82	1.98	ZF-EDAH09
EDAM09	2.098	3.82	1.73	ZF-EDAM09
EDAU09	2.347	3.82	1.48	ZF-EDAU09
EDAZ09	2.597	3.82	1.23	ZF-EDAZ09
EDAH10	2.846	3.82	0.98	ZF-EDAH10

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



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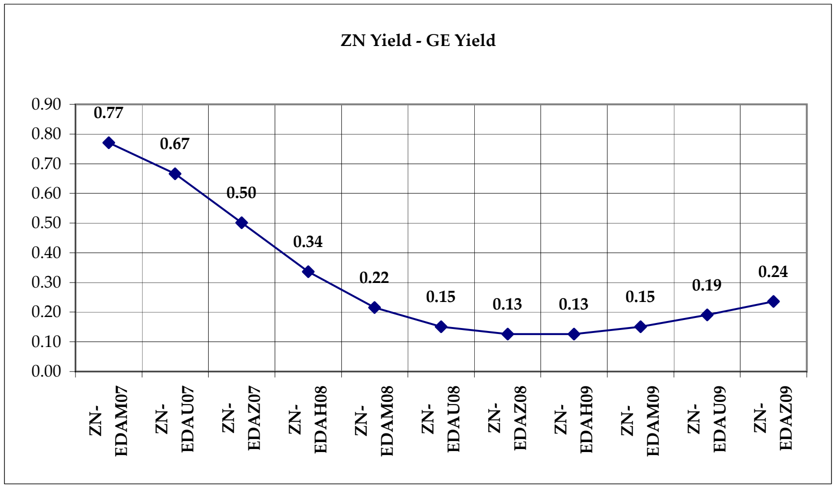
Dirty TED: ZN vs Eurodollar Contracts

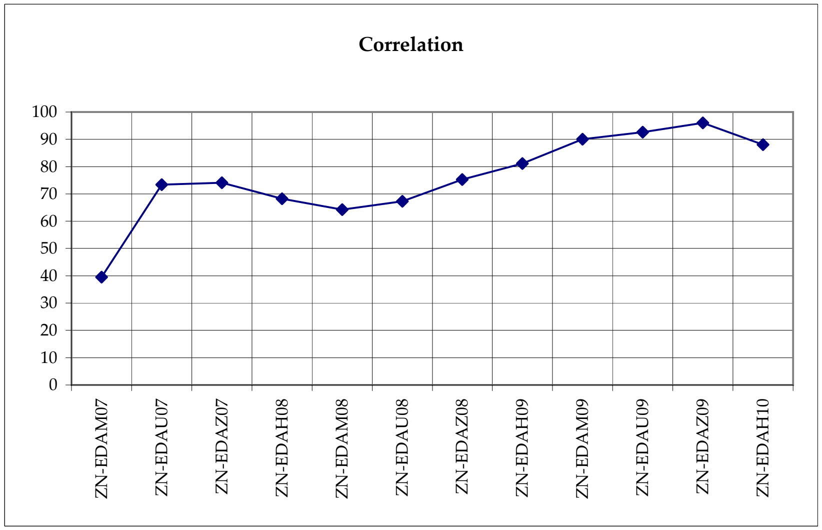
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	13.67	0.77	ZN-EDAM07	39.55
EDAU07	13.56	0.67	ZN-EDAU07	73.38
EDAZ07	13.40	0.50	ZN-EDAZ07	74.06
EDAH08	13.23	0.34	ZN-EDAH08	68.28
EDAM08	13.11	0.22	ZN-EDAM08	64.29
EDAU08	13.05	0.15	ZN-EDAU08	67.32
EDAZ08	13.02	0.13	ZN-EDAZ08	75.21
EDAH09	13.02	0.13	ZN-EDAH09	81.10
EDAM09	13.05	0.15	ZN-EDAM09	90.00
EDAU09	13.09	0.19	ZN-EDAU09	92.56
EDAZ09	13.13	0.24	ZN-EDAZ09	96.02
EDAH10	13.16	0.27	ZN-EDAH10	87.99

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	0.103	5.78	5.68	ZN-EDAM07
EDAU07	0.353	5.78	5.43	ZN-EDAU07
EDAZ07	0.602	5.78	5.18	ZN-EDAZ07
EDAH08	0.851	5.78	4.93	ZN-EDAH08
EDAM08	1.101	5.78	4.68	ZN-EDAM08
EDAU08	1.350	5.78	4.43	ZN-EDAU08
EDAZ08	1.599	5.78	4.18	ZN-EDAZ08
EDAH09	1.849	5.78	3.93	ZN-EDAH09
EDAM09	2.098	5.78	3.68	ZN-EDAM09
EDAU09	2.347	5.78	3.43	ZN-EDAU09
EDAZ09	2.597	5.78	3.18	ZN-EDAZ09
EDAH10	2.846	5.78	2.94	ZN-EDAH10

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



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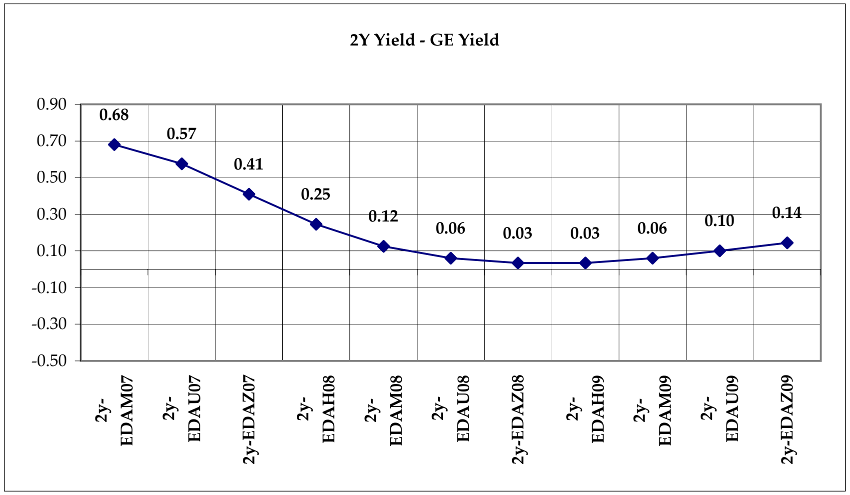
TERM TED: 2y vs Eurodollar Contracts

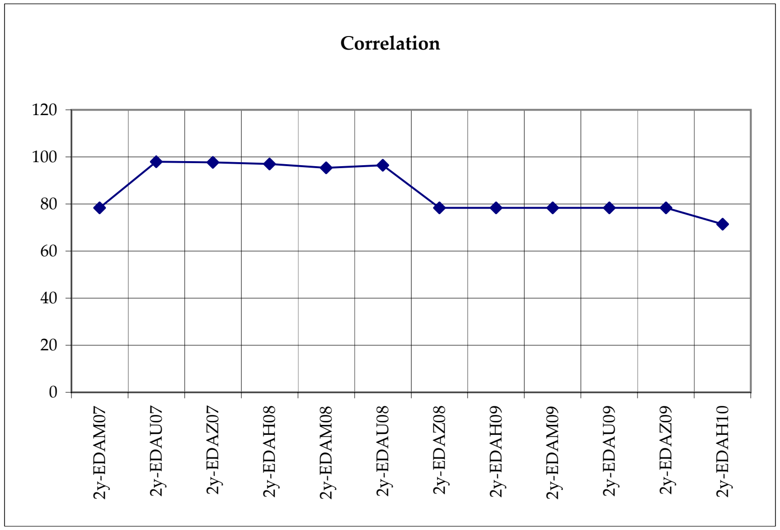
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	5.04	0.68	2y-EDAM07	78.408
EDAU07	4.94	0.57	2y-EDAU07	97.985
EDAZ07	4.77	0.41	2y-EDAZ07	97.708
EDAH08	4.61	0.25	2y-EDAH08	97.061
EDAM08	4.49	0.12	2y-EDAM08	95.359
EDAU08	4.42	0.06	2y-EDAU08	96.427
EDAZ08	4.40	0.03	2y-EDAZ08	78.408
EDAH09	4.40	0.03	2y-EDAH09	78.408
EDAM09	4.42	0.06	2y-EDAM09	78.408
EDAU09	4.46	0.10	2y-EDAU09	78.408
EDAZ09	4.51	0.14	2y-EDAZ09	78.408
EDAH10	4.54	0.17	2y-EDAH10	71.480

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	0.103	1.85	1.75	2y-EDAM07
EDAU07	0.353	1.85	1.50	2y-EDAU07
EDAZ07	0.602	1.85	1.25	2y-EDAZ07
EDAH08	0.851	1.85	1.00	2y-EDAH08
EDAM08	1.101	1.85	0.75	2y-EDAM08
EDAU08	1.350	1.85	0.50	2y-EDAU08
EDAZ08	1.599	1.85	0.25	2y-EDAZ08
EDAH09	1.849	1.85	0.00	2y-EDAH09
EDAM09	2.098	1.85	(0.24)	2y-EDAM09
EDAU09	2.347	1.85	(0.49)	2y-EDAU09
EDAZ09	2.597	1.85	(0.74)	2y-EDAZ09
EDAH10	2.846	1.85	(0.99)	2y-EDAH10

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



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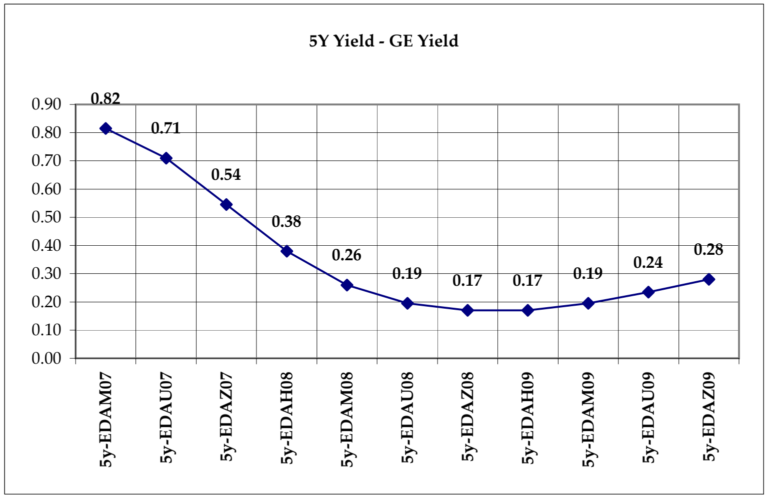
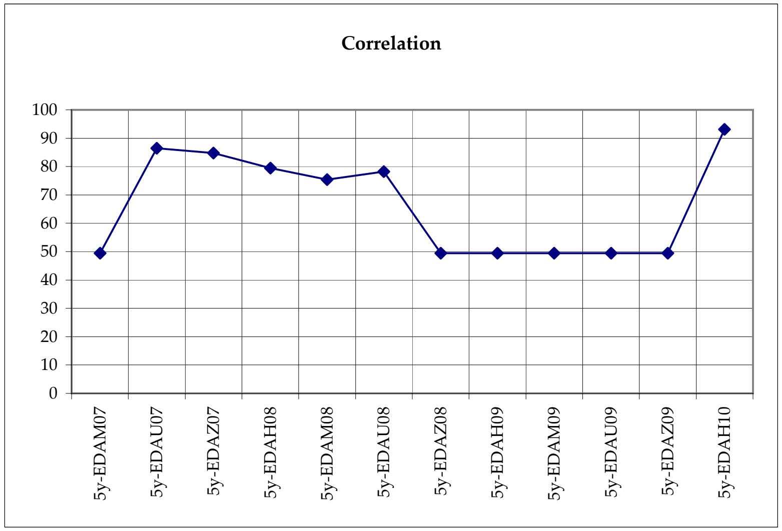
TERM TED: 5y vs Eurodollar Contracts

	5y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM07	5.22	0.82	5y-EDAM07	49.434
EDAU07	5.11	0.71	5y-EDAU07	86.488
EDAZ07	4.94	0.54	5y-EDAZ07	84.760
EDAH08	4.78	0.38	5y-EDAH08	79.482
EDAM08	4.66	0.26	5y-EDAM08	75.411
EDAU08	4.60	0.19	5y-EDAU08	78.226
EDAZ08	4.57	0.17	5y-EDAZ08	49.434
EDAH09	4.57	0.17	5y-EDAH09	49.434
EDAM09	4.60	0.19	5y-EDAM09	49.434
EDAU09	4.64	0.24	5y-EDAU09	49.434
EDAZ09	4.68	0.28	5y-EDAZ09	49.434
EDAH10	4.71	0.31	5y-EDAH10	93.092

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	0.103	4.40	4.29	5y-EDAM07
EDAU07	0.353	4.40	4.04	5y-EDAU07
EDAZ07	0.602	4.40	3.79	5y-EDAZ07
EDAH08	0.851	4.40	3.54	5y-EDAH08
EDAM08	1.101	4.40	3.29	5y-EDAM08
EDAU08	1.350	4.40	3.04	5y-EDAU08
EDAZ08	1.599	4.40	2.80	5y-EDAZ08
EDAH09	1.849	4.40	2.55	5y-EDAH09
EDAM09	2.098	4.40	2.30	5y-EDAM09
EDAU09	2.347	4.40	2.05	5y-EDAU09
EDAZ09	2.597	4.40	1.80	5y-EDAZ09
EDAH10	2.846	4.40	1.55	5y-EDAH10

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

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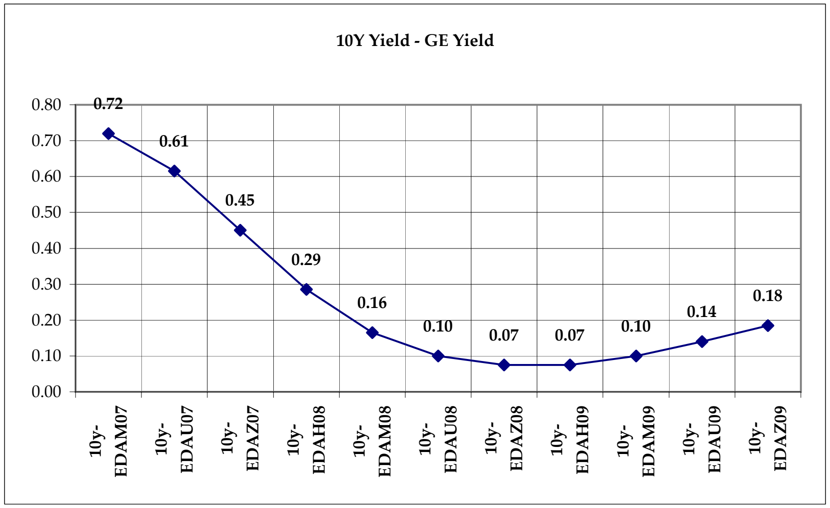
TERM TED: 10y vs Eurodollar Contracts

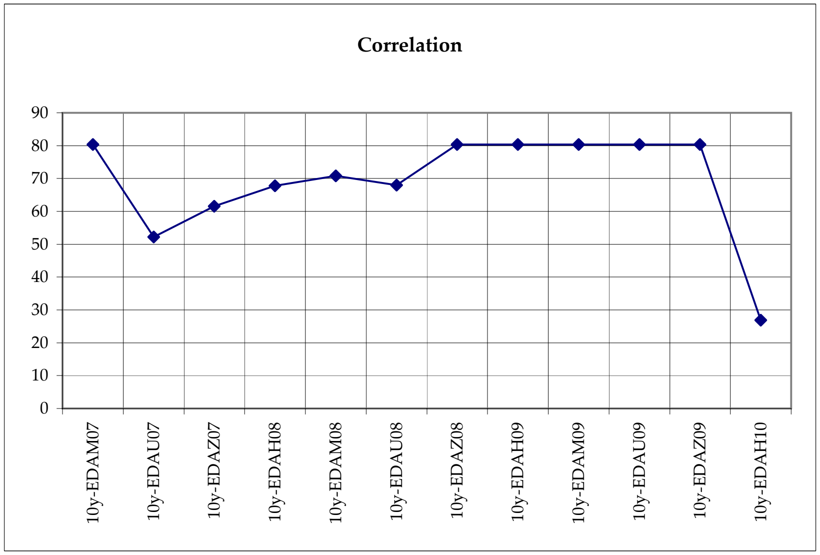
	10y			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM07	5.22	0.72	10y-EDAM07	80.321
EDAU07	5.11	0.61	10y-EDAU07	52.174
EDAZ07	4.94	0.45	10y-EDAZ07	61.537
EDAH08	4.78	0.29	10y-EDAH08	67.803
EDAM08	4.66	0.16	10y-EDAM08	70.811
EDAU08	4.60	0.10	10y-EDAU08	68.029
EDAZ08	4.57	0.07	10y-EDAZ08	80.321
EDAH09	4.57	0.07	10y-EDAH09	80.321
EDAM09	4.60	0.10	10y-EDAM09	80.321
EDAU09	4.64	0.14	10y-EDAU09	80.321
EDAZ09	4.68	0.18	10y-EDAZ09	80.321
EDAH10	4.71	0.21	10y-EDAH10	26.921

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	0.103	7.79	7.69	10y-EDAM07
EDAU07	0.353	7.79	7.44	10y-EDAU07
EDAZ07	0.602	7.79	7.19	10y-EDAZ07
EDAH08	0.851	7.79	6.94	10y-EDAH08
EDAM08	1.101	7.79	6.69	10y-EDAM08
EDAU08	1.350	7.79	6.44	10y-EDAU08
EDAZ08	1.599	7.79	6.19	10y-EDAZ08
EDAH09	1.849	7.79	5.94	10y-EDAH09
EDAM09	2.098	7.79	5.69	10y-EDAM09
EDAU09	2.347	7.79	5.45	10y-EDAU09
EDAZ09	2.597	7.79	5.20	10y-EDAZ09
EDAH10	2.846	7.79	4.95	10y-EDAH10

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



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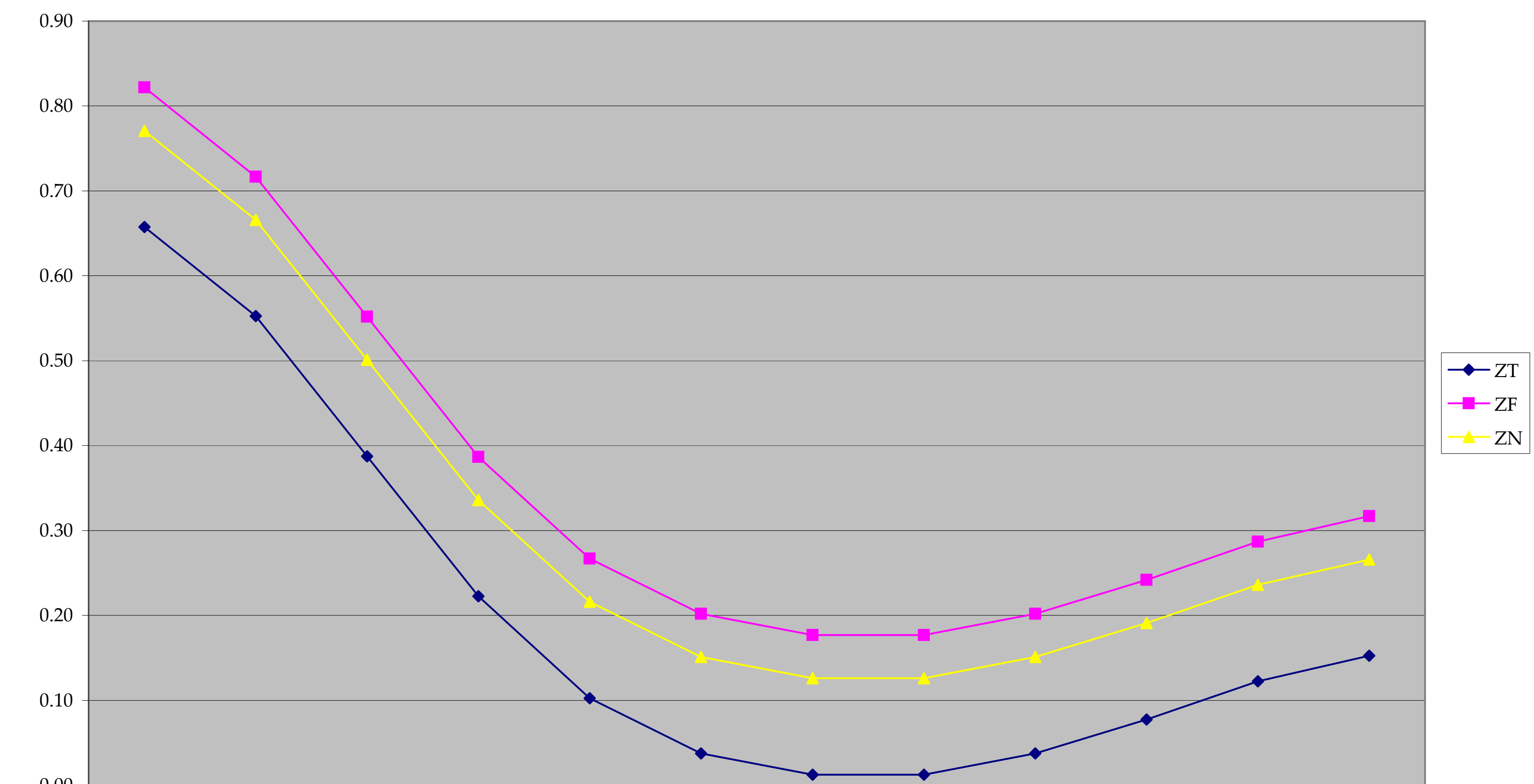
Dirty TED Curve

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	0.66	0.55	0.39	0.22	0.10	0.04	0.01	0.01	0.04	0.08	0.12	0.15
ZF	0.82	0.72	0.55	0.39	0.27	0.20	0.18	0.18	0.20	0.24	0.29	0.32
ZN	0.77	0.67	0.50	0.34	0.22	0.15	0.13	0.13	0.15	0.19	0.24	0.27

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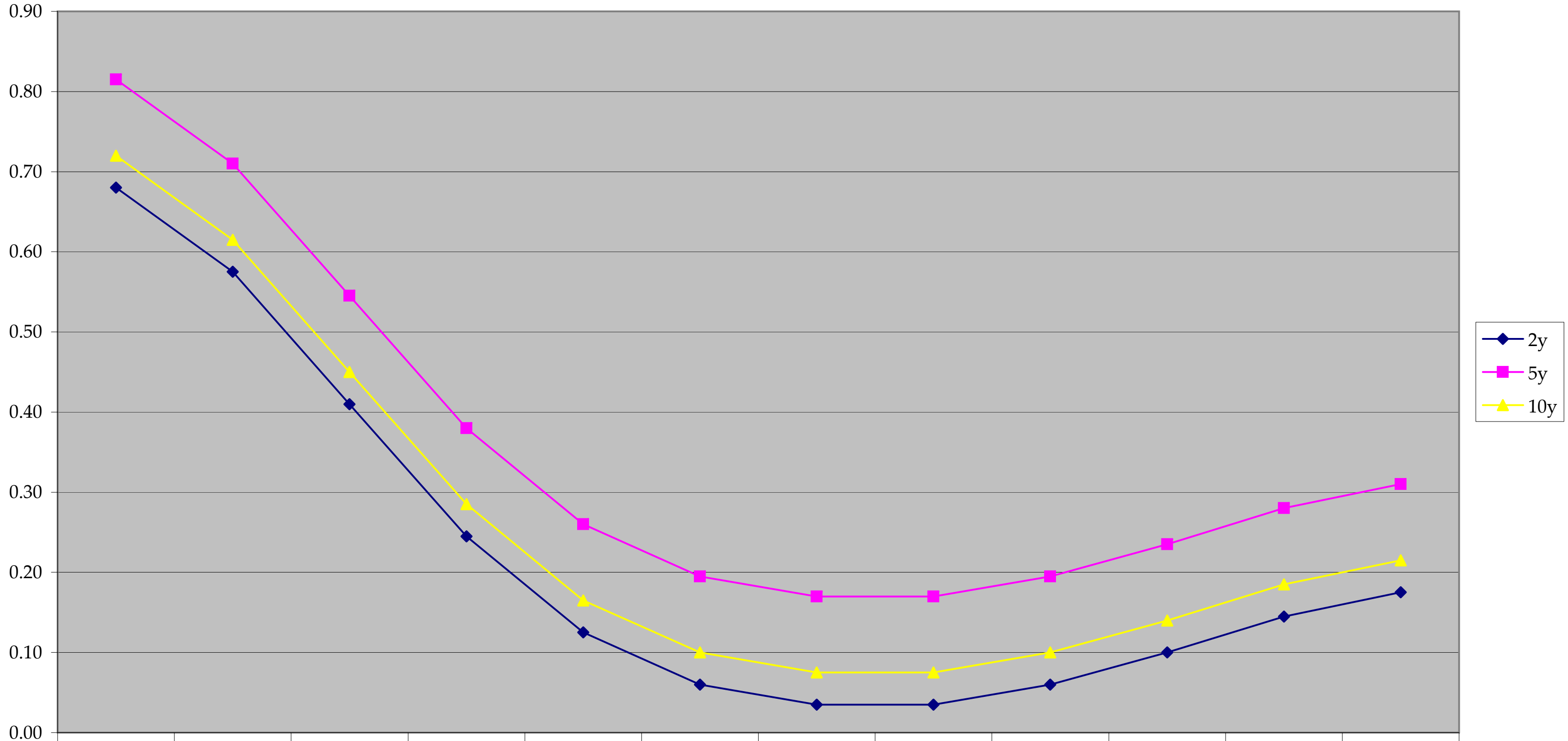
TED Curve

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	0.68	0.57	0.41	0.25	0.12	0.06	0.03	0.03	0.06	0.10	0.14	0.17
5y	0.82	0.71	0.54	0.38	0.26	0.19	0.17	0.17	0.19	0.24	0.28	0.31
10y	0.72	0.61	0.45	0.29	0.16	0.10	0.07	0.07	0.10	0.14	0.18	0.21

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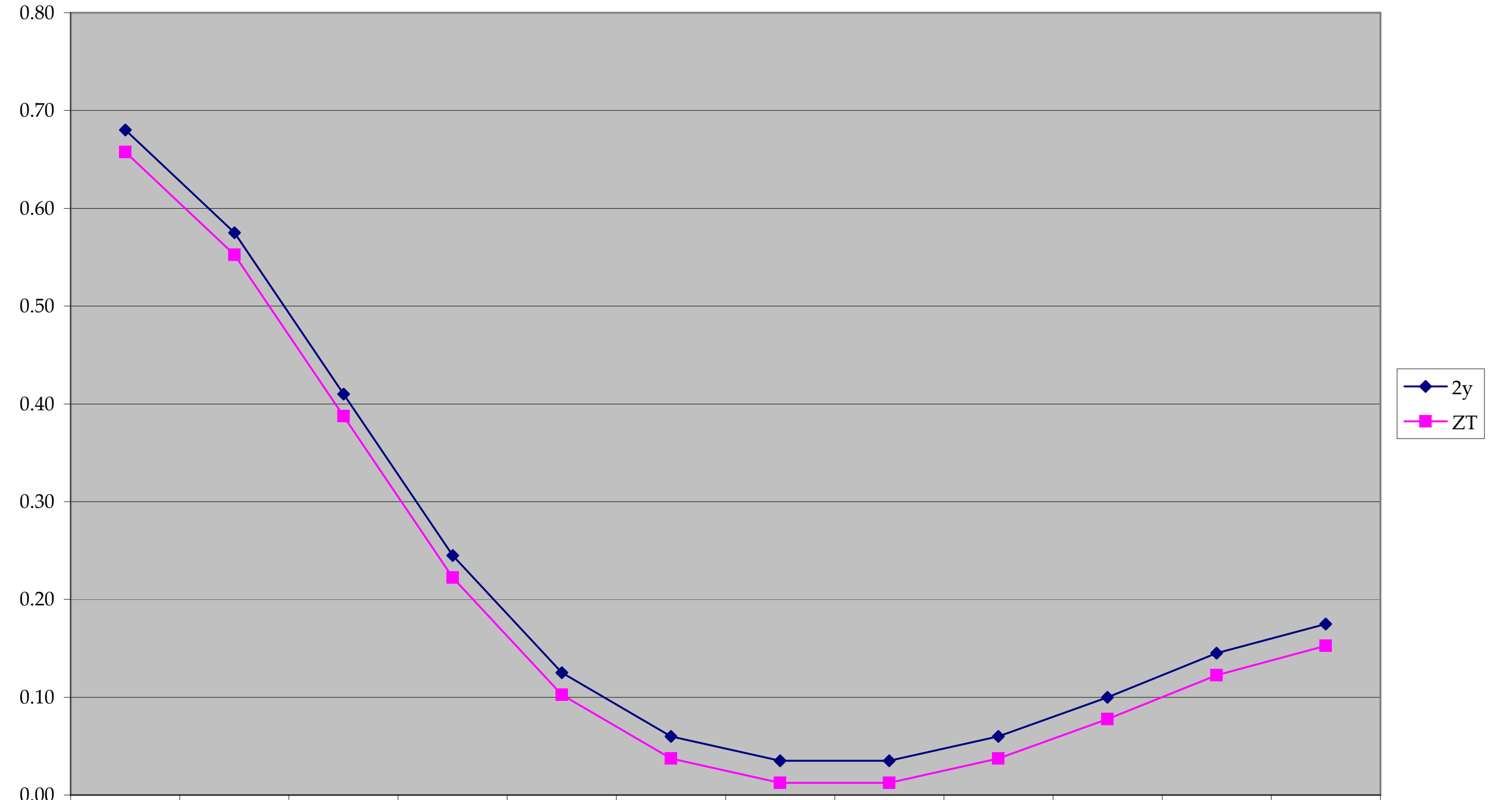
2y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
2y	0.68	0.57	0.41	0.25	0.12	0.06	0.03	0.03	0.06	0.10	0.14	0.17
ZT	0.66	0.55	0.39	0.22	0.10	0.04	0.01	0.01	0.04	0.08	0.12	0.15

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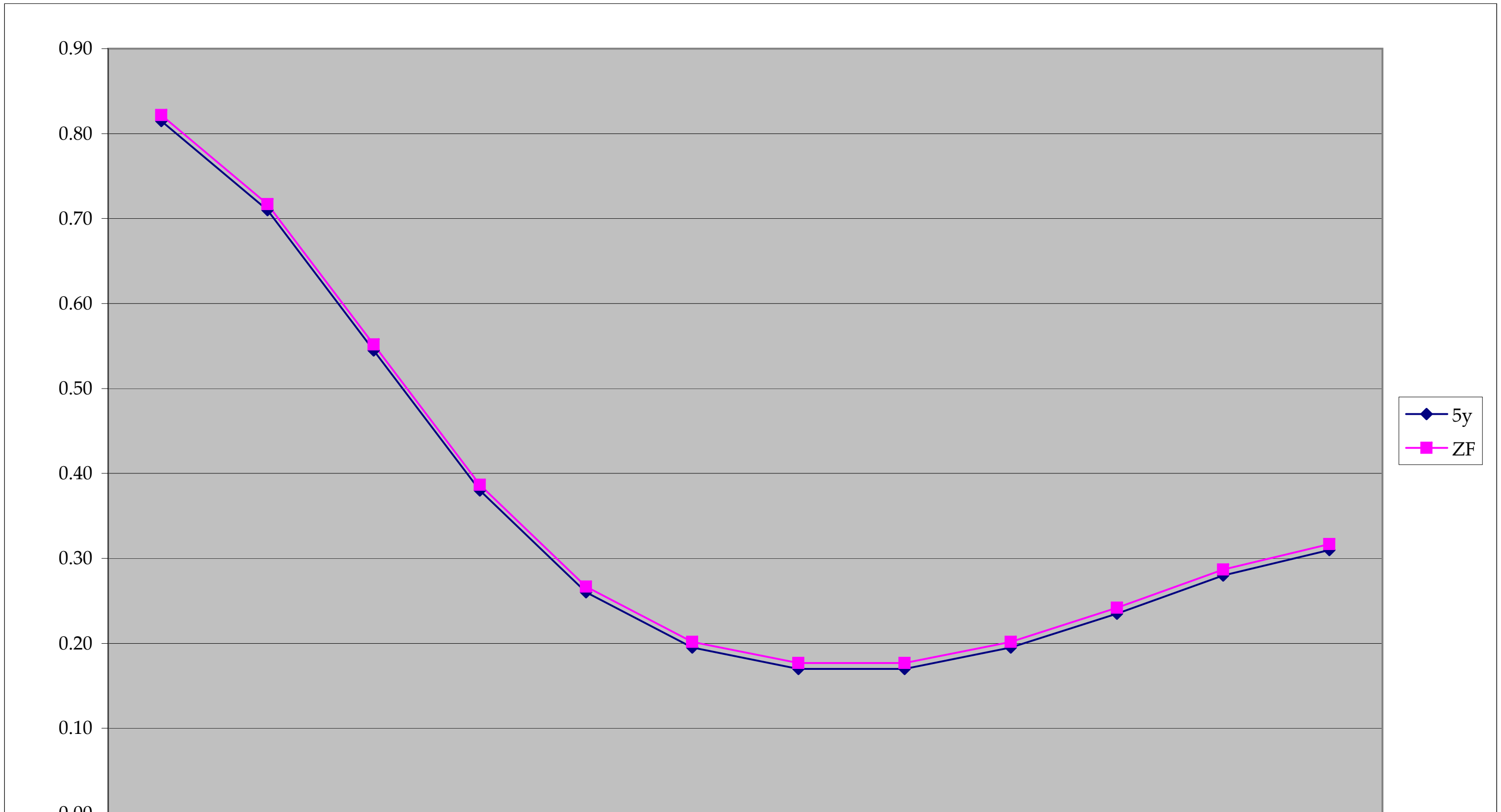
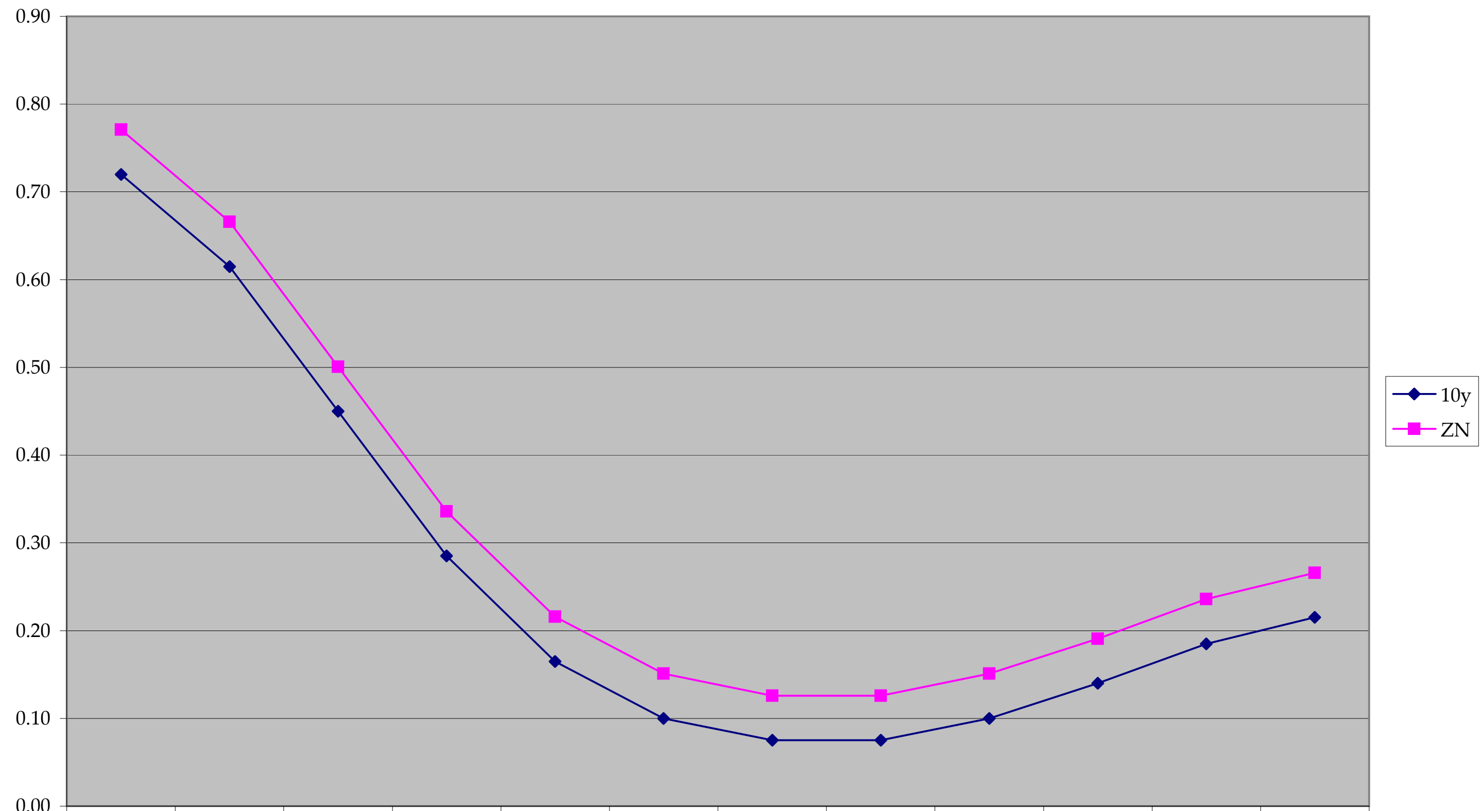
5y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
5y	0.82	0.71	0.54	0.38	0.26	0.19	0.17	0.17	0.19	0.24	0.28	0.31
ZF	0.82	0.72	0.55	0.39	0.27	0.20	0.18	0.18	0.20	0.24	0.29	0.32

10y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
10y	0.72	0.61	0.45	0.29	0.16	0.10	0.07	0.07	0.10	0.14	0.18	0.21
ZN	0.77	0.67	0.50	0.34	0.22	0.15	0.13	0.13	0.15	0.19	0.24	0.27

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