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	102.1156	102.037	4.753	1.76
ZF	105.3281	105.105	4.617	3.81
ZN	107.7188	107.230	4.662	5.77
Blank				
2y	99.578	99.1850	4.728	1.84
5y	99.475	99.1520	4.616	4.38
10y	98.391	98.1250	4.702	7.95

*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	94.653	5.348	32	0.087	JUN	White Pack
EDAU07	94.745	5.255	123	0.336	SEP	
EDAZ07	94.875	5.125	214	0.586	DEC	
EDAH08	95.015	4.985	305	0.835	MAR	
EDAM08	95.110	4.890	396	1.084	JUN	Red Pack
EDAU08	95.165	4.835	487	1.334	SEP	
EDAZ08	95.185	4.815	578	1.583	DEC	
EDAH09	95.190	4.810	669	1.832	MAR	
EDAM09	95.170	4.830	760	2.082	JUN	Green Pack
EDAU09	95.140	4.860	851	2.331	SEP	
EDAZ09	95.095	4.905	942	2.580	DEC	
EDAH10	95.070	4.930	1033	2.829	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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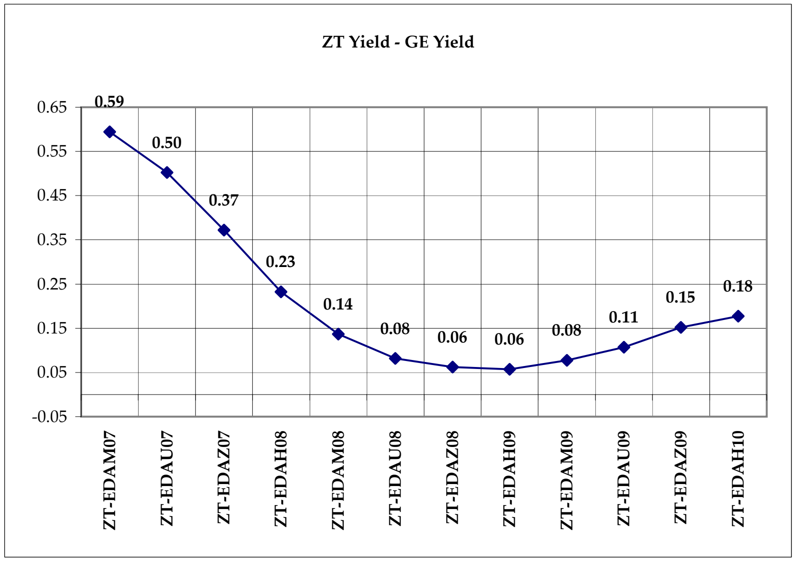
Dirty TED: ZT vs Eurodollar Contracts

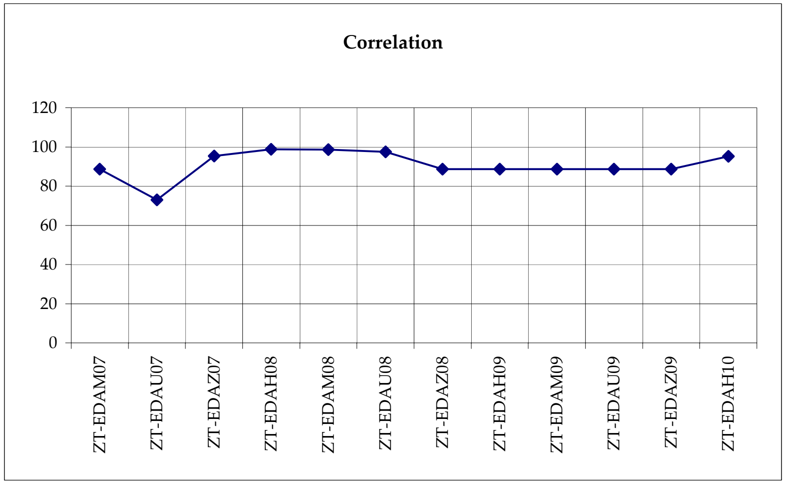
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	7.463	0.59	ZT-EDAM07	88.574
EDAU07	7.371	0.50	ZT-EDAU07	72.962
EDAZ07	7.241	0.37	ZT-EDAZ07	95.372
EDAH08	7.101	0.23	ZT-EDAH08	98.771
EDAM08	7.006	0.14	ZT-EDAM08	98.578
EDAU08	6.951	0.08	ZT-EDAU08	97.468
EDAZ08	6.931	0.06	ZT-EDAZ08	88.574
EDAH09	6.926	0.06	ZT-EDAH09	88.574
EDAM09	6.946	0.08	ZT-EDAM09	88.574
EDAU09	6.976	0.11	ZT-EDAU09	88.574
EDAZ09	7.021	0.15	ZT-EDAZ09	88.574
EDAH10	7.046	0.18	ZT-EDAH10	95.226

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	0.087	1.76	1.67	ZT-EDAM07
EDAU07	0.336	1.76	1.43	ZT-EDAU07
EDAZ07	0.586	1.76	1.18	ZT-EDAZ07
EDAH08	0.835	1.76	0.93	ZT-EDAH08
EDAM08	1.084	1.76	0.68	ZT-EDAM08
EDAU08	1.334	1.76	0.43	ZT-EDAU08
EDAZ08	1.583	1.76	0.18	ZT-EDAZ08
EDAH09	1.832	1.76	(0.07)	ZT-EDAH09
EDAM09	2.082	1.76	(0.32)	ZT-EDAM09
EDAU09	2.331	1.76	(0.57)	ZT-EDAU09
EDAZ09	2.580	1.76	(0.82)	ZT-EDAZ09
EDAH10	2.829	1.76	(1.07)	ZT-EDAH10

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



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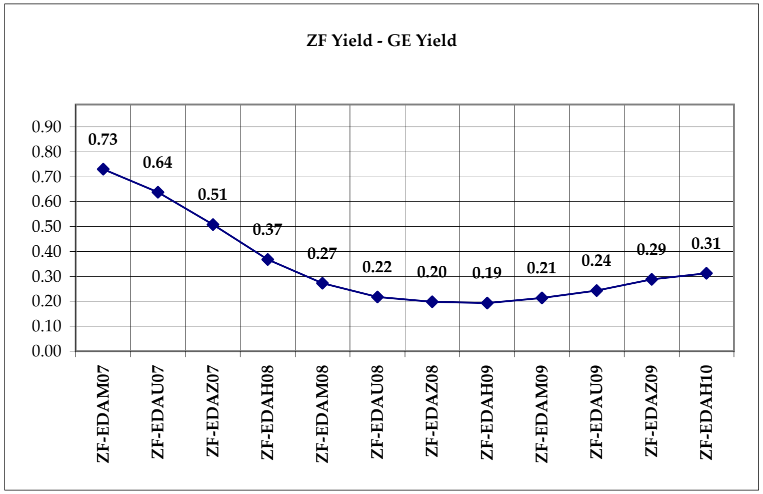
Dirty TED: ZF vs Eurodollar Contracts

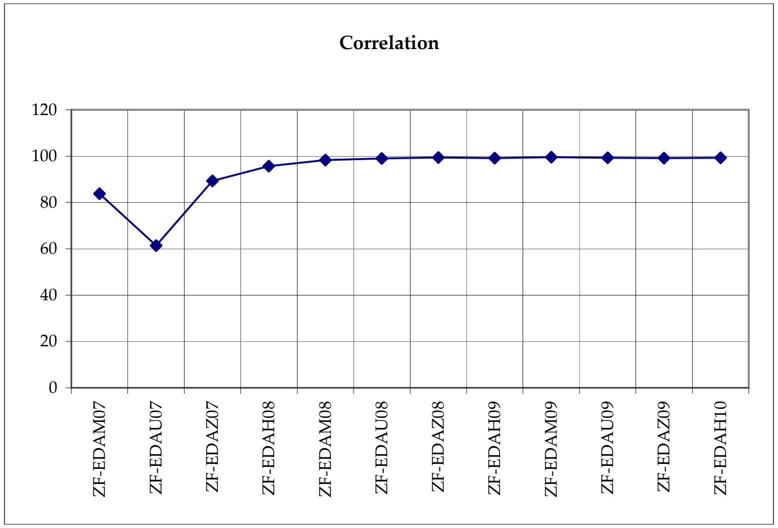
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	10.68	0.73	ZF-EDAM07	83.753
EDAU07	10.58	0.64	ZF-EDAU07	61.434
EDAZ07	10.45	0.51	ZF-EDAZ07	89.349
EDAH08	10.31	0.37	ZF-EDAH08	95.720
EDAM08	10.22	0.27	ZF-EDAM08	98.252
EDAU08	10.16	0.22	ZF-EDAU08	99.018
EDAZ08	10.14	0.20	ZF-EDAZ08	99.443
EDAH09	10.14	0.19	ZF-EDAH09	99.191
EDAM09	10.16	0.21	ZF-EDAM09	99.519
EDAU09	10.19	0.24	ZF-EDAU09	99.199
EDAZ09	10.23	0.29	ZF-EDAZ09	99.131
EDAH10	10.26	0.31	ZF-EDAH10	99.194

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	0.087	3.81	3.72	ZF-EDAM07
EDAU07	0.336	3.81	3.47	ZF-EDAU07
EDAZ07	0.586	3.81	3.23	ZF-EDAZ07
EDAH08	0.835	3.81	2.98	ZF-EDAH08
EDAM08	1.084	3.81	2.73	ZF-EDAM08
EDAU08	1.334	3.81	2.48	ZF-EDAU08
EDAZ08	1.583	3.81	2.23	ZF-EDAZ08
EDAH09	1.832	3.81	1.98	ZF-EDAH09
EDAM09	2.082	3.81	1.73	ZF-EDAM09
EDAU09	2.331	3.81	1.48	ZF-EDAU09
EDAZ09	2.580	3.81	1.23	ZF-EDAZ09
EDAH10	2.829	3.81	0.98	ZF-EDAH10

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



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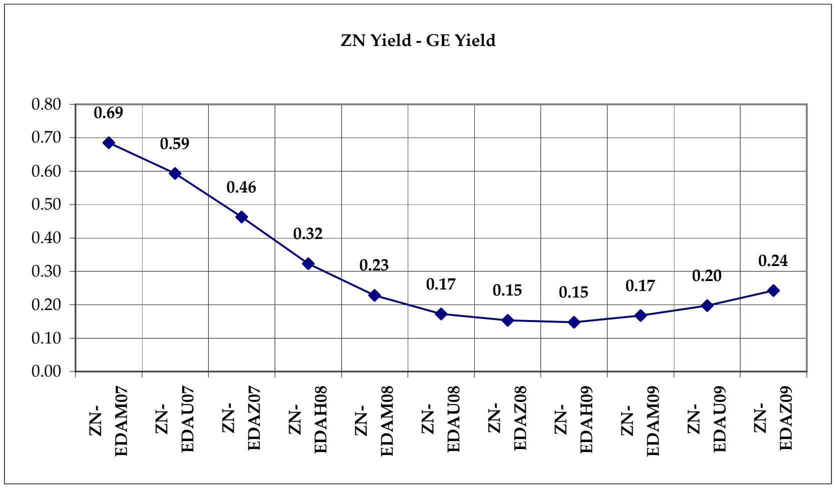
Dirty TED: ZN vs Eurodollar Contracts

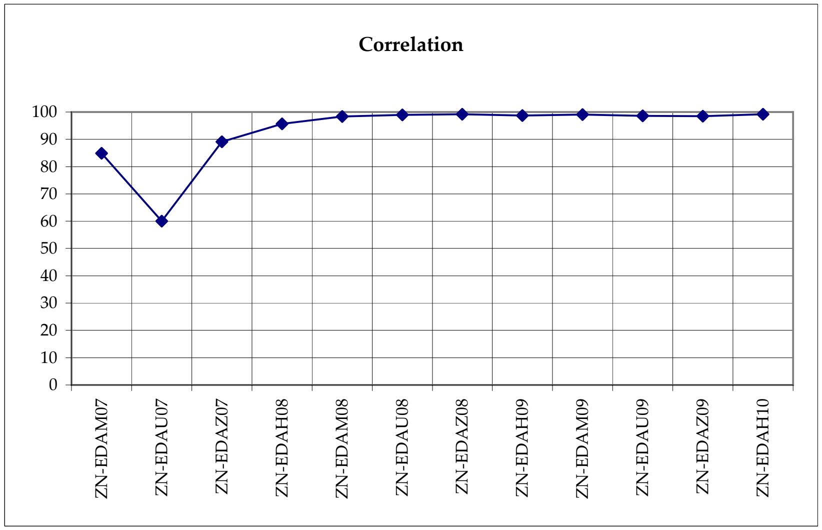
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	13.07	0.69	ZN-EDAM07	84.89
EDAU07	12.97	0.59	ZN-EDAU07	60.01
EDAZ07	12.84	0.46	ZN-EDAZ07	89.13
EDAH08	12.70	0.32	ZN-EDAH08	95.66
EDAM08	12.61	0.23	ZN-EDAM08	98.35
EDAU08	12.55	0.17	ZN-EDAU08	98.97
EDAZ08	12.53	0.15	ZN-EDAZ08	99.15
EDAH09	12.53	0.15	ZN-EDAH09	98.70
EDAM09	12.55	0.17	ZN-EDAM09	99.05
EDAU09	12.58	0.20	ZN-EDAU09	98.59
EDAZ09	12.62	0.24	ZN-EDAZ09	98.51
EDAH10	12.65	0.27	ZN-EDAH10	99.19

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	0.087	5.77	5.68	ZN-EDAM07
EDAU07	0.336	5.77	5.43	ZN-EDAU07
EDAZ07	0.586	5.77	5.18	ZN-EDAZ07
EDAH08	0.835	5.77	4.93	ZN-EDAH08
EDAM08	1.084	5.77	4.68	ZN-EDAM08
EDAU08	1.334	5.77	4.43	ZN-EDAU08
EDAZ08	1.583	5.77	4.18	ZN-EDAZ08
EDAH09	1.832	5.77	3.93	ZN-EDAH09
EDAM09	2.082	5.77	3.68	ZN-EDAM09
EDAU09	2.331	5.77	3.43	ZN-EDAU09
EDAZ09	2.580	5.77	3.19	ZN-EDAZ09
EDAH10	2.829	5.77	2.94	ZN-EDAH10

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



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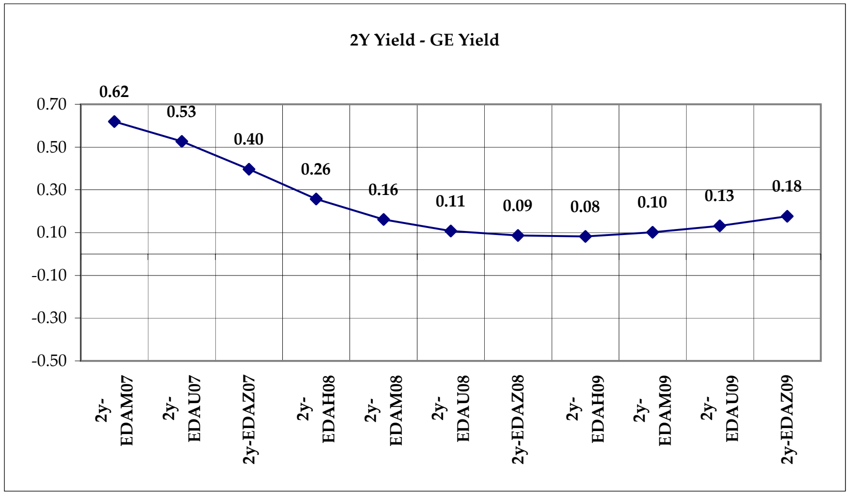
TERM TED: 2y vs Eurodollar Contracts

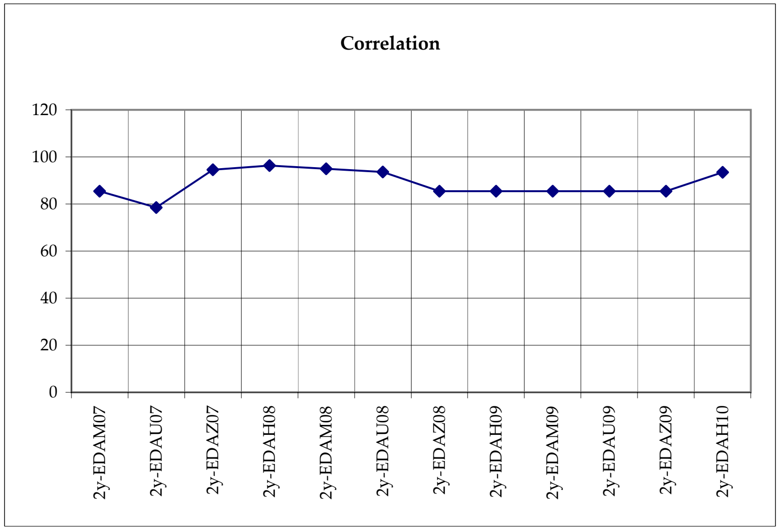
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.93	0.62	2y-EDAM07	85.375
EDAU07	4.83	0.53	2y-EDAU07	78.518
EDAZ07	4.70	0.40	2y-EDAZ07	94.578
EDAH08	4.56	0.26	2y-EDAH08	96.349
EDAM08	4.47	0.16	2y-EDAM08	95.032
EDAU08	4.41	0.11	2y-EDAU08	93.629
EDAZ08	4.39	0.09	2y-EDAZ08	85.375
EDAH09	4.39	0.08	2y-EDAH09	85.375
EDAM09	4.41	0.10	2y-EDAM09	85.375
EDAU09	4.44	0.13	2y-EDAU09	85.375
EDAZ09	4.48	0.18	2y-EDAZ09	85.375
EDAH10	4.51	0.20	2y-EDAH10	93.480

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	0.087	1.84	1.76	2y-EDAM07
EDAU07	0.336	1.84	1.51	2y-EDAU07
EDAZ07	0.586	1.84	1.26	2y-EDAZ07
EDAH08	0.835	1.84	1.01	2y-EDAH08
EDAM08	1.084	1.84	0.76	2y-EDAM08
EDAU08	1.334	1.84	0.51	2y-EDAU08
EDAZ08	1.583	1.84	0.26	2y-EDAZ08
EDAH09	1.832	1.84	0.01	2y-EDAH09
EDAM09	2.082	1.84	(0.24)	2y-EDAM09
EDAU09	2.331	1.84	(0.49)	2y-EDAU09
EDAZ09	2.580	1.84	(0.74)	2y-EDAZ09
EDAH10	2.829	1.84	(0.99)	2y-EDAH10

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



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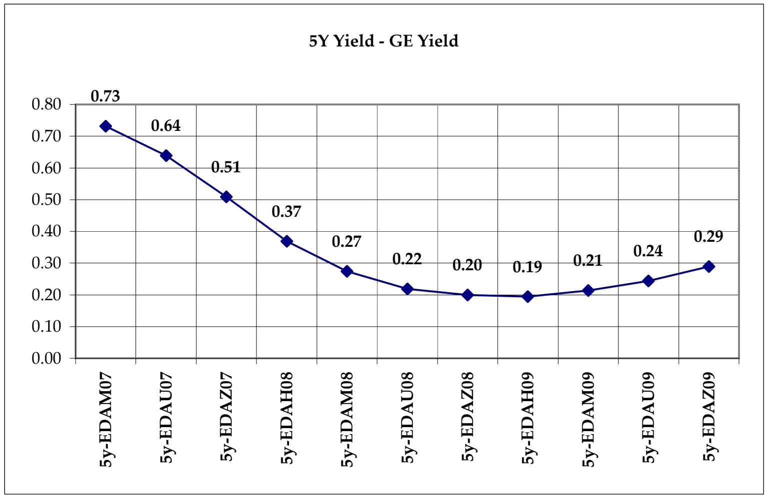
TERM TED: 5y vs Eurodollar Contracts

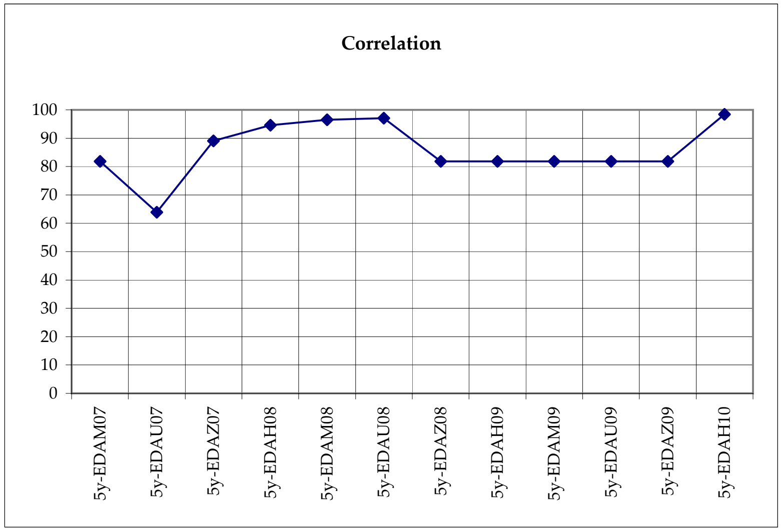
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.82	0.73	5y-EDAM07	81.801
EDAU07	4.73	0.64	5y-EDAU07	63.903
EDAZ07	4.60	0.51	5y-EDAZ07	89.052
EDAH08	4.46	0.37	5y-EDAH08	94.531
EDAM08	4.37	0.27	5y-EDAM08	96.503
EDAU08	4.31	0.22	5y-EDAU08	97.118
EDAZ08	4.29	0.20	5y-EDAZ08	81.801
EDAH09	4.29	0.19	5y-EDAH09	81.801
EDAM09	4.31	0.21	5y-EDAM09	81.801
EDAU09	4.34	0.24	5y-EDAU09	81.801
EDAZ09	4.38	0.29	5y-EDAZ09	81.801
EDAH10	4.41	0.31	5y-EDAH10	98.467

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	0.087	4.38	4.29	5y-EDAM07
EDAU07	0.336	4.38	4.05	5y-EDAU07
EDAZ07	0.586	4.38	3.80	5y-EDAZ07
EDAH08	0.835	4.38	3.55	5y-EDAH08
EDAM08	1.084	4.38	3.30	5y-EDAM08
EDAU08	1.334	4.38	3.05	5y-EDAU08
EDAZ08	1.583	4.38	2.80	5y-EDAZ08
EDAH09	1.832	4.38	2.55	5y-EDAH09
EDAM09	2.082	4.38	2.30	5y-EDAM09
EDAU09	2.331	4.38	2.05	5y-EDAU09
EDAZ09	2.580	4.38	1.80	5y-EDAZ09
EDAH10	2.829	4.38	1.55	5y-EDAH10

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



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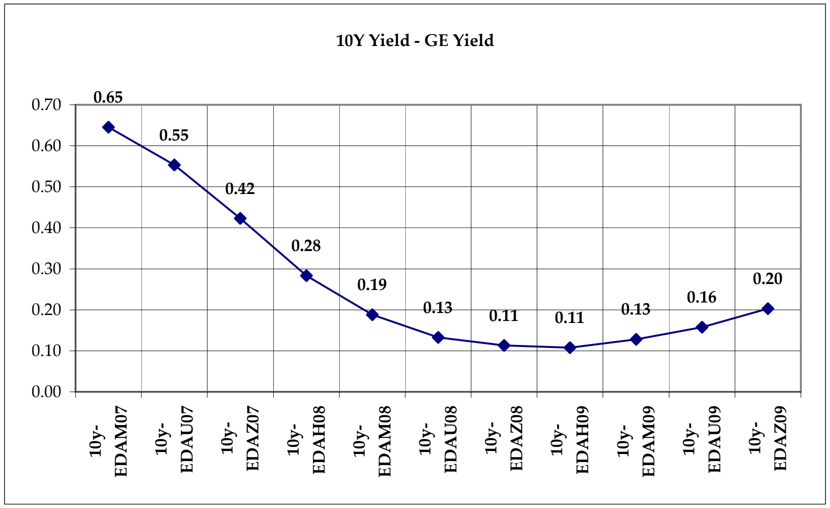
TERM TED: 10y vs Eurodollar Contracts

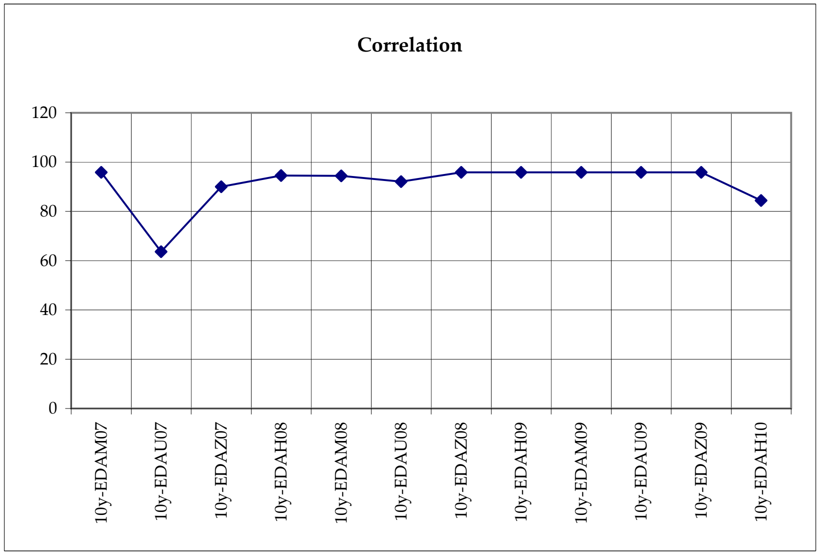
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.82	0.65	10y-EDAM07	95.809
EDAU07	4.73	0.55	10y-EDAU07	63.611
EDAZ07	4.60	0.42	10y-EDAZ07	89.986
EDAH08	4.46	0.28	10y-EDAH08	94.495
EDAM08	4.37	0.19	10y-EDAM08	94.389
EDAU08	4.31	0.13	10y-EDAU08	92.133
EDAZ08	4.29	0.11	10y-EDAZ08	95.809
EDAH09	4.29	0.11	10y-EDAH09	95.809
EDAM09	4.31	0.13	10y-EDAM09	95.809
EDAU09	4.34	0.16	10y-EDAU09	95.809
EDAZ09	4.38	0.20	10y-EDAZ09	95.809
EDAH10	4.41	0.23	10y-EDAH10	84.435

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	0.087	7.95	7.86	10y-EDAM07
EDAU07	0.336	7.95	7.61	10y-EDAU07
EDAZ07	0.586	7.95	7.36	10y-EDAZ07
EDAH08	0.835	7.95	7.11	10y-EDAH08
EDAM08	1.084	7.95	6.86	10y-EDAM08
EDAU08	1.334	7.95	6.62	10y-EDAU08
EDAZ08	1.583	7.95	6.37	10y-EDAZ08
EDAH09	1.832	7.95	6.12	10y-EDAH09
EDAM09	2.082	7.95	5.87	10y-EDAM09
EDAU09	2.331	7.95	5.62	10y-EDAU09
EDAZ09	2.580	7.95	5.37	10y-EDAZ09
EDAH10	2.829	7.95	5.12	10y-EDAH10

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



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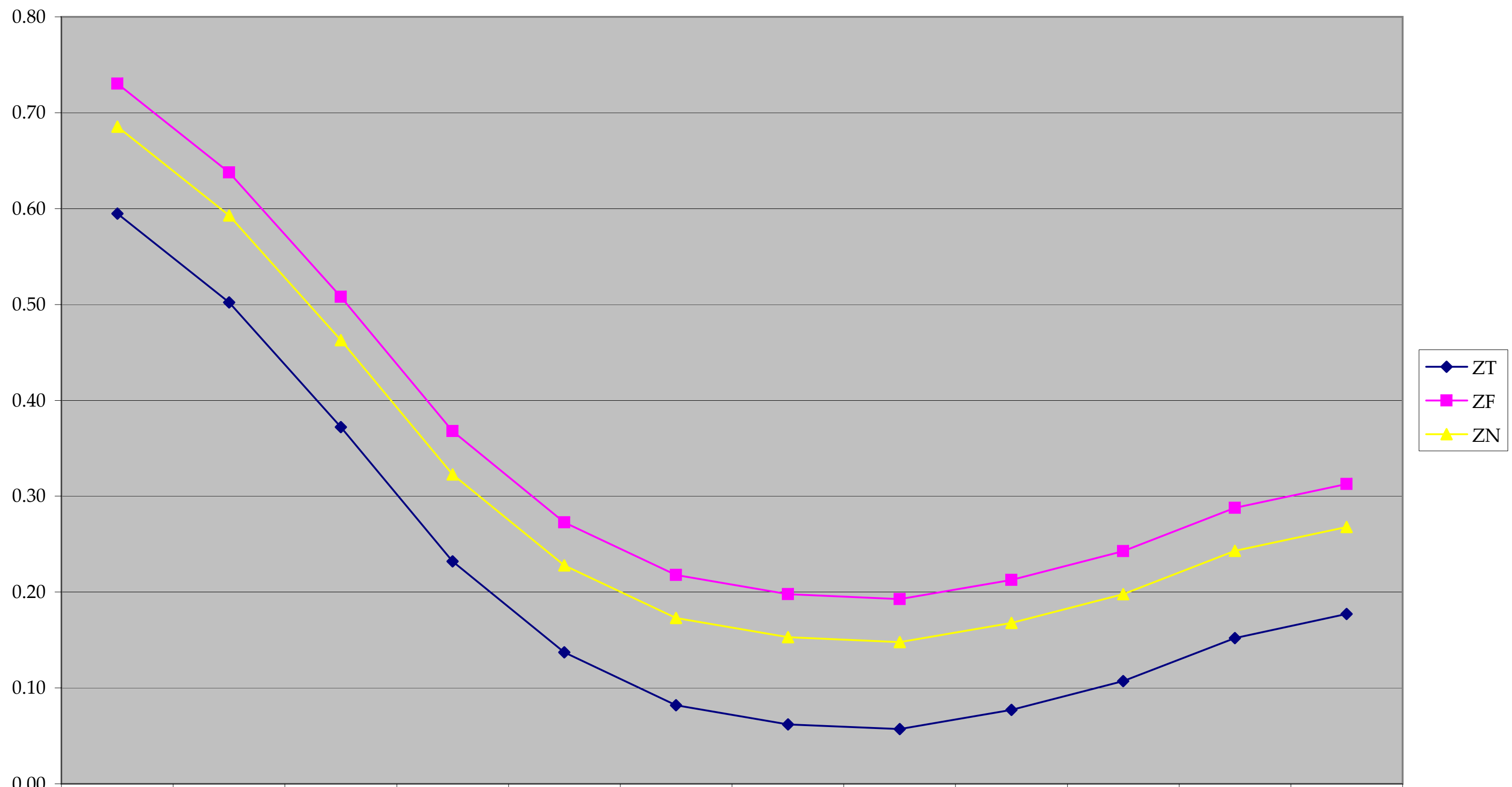
Dirty TED Curve

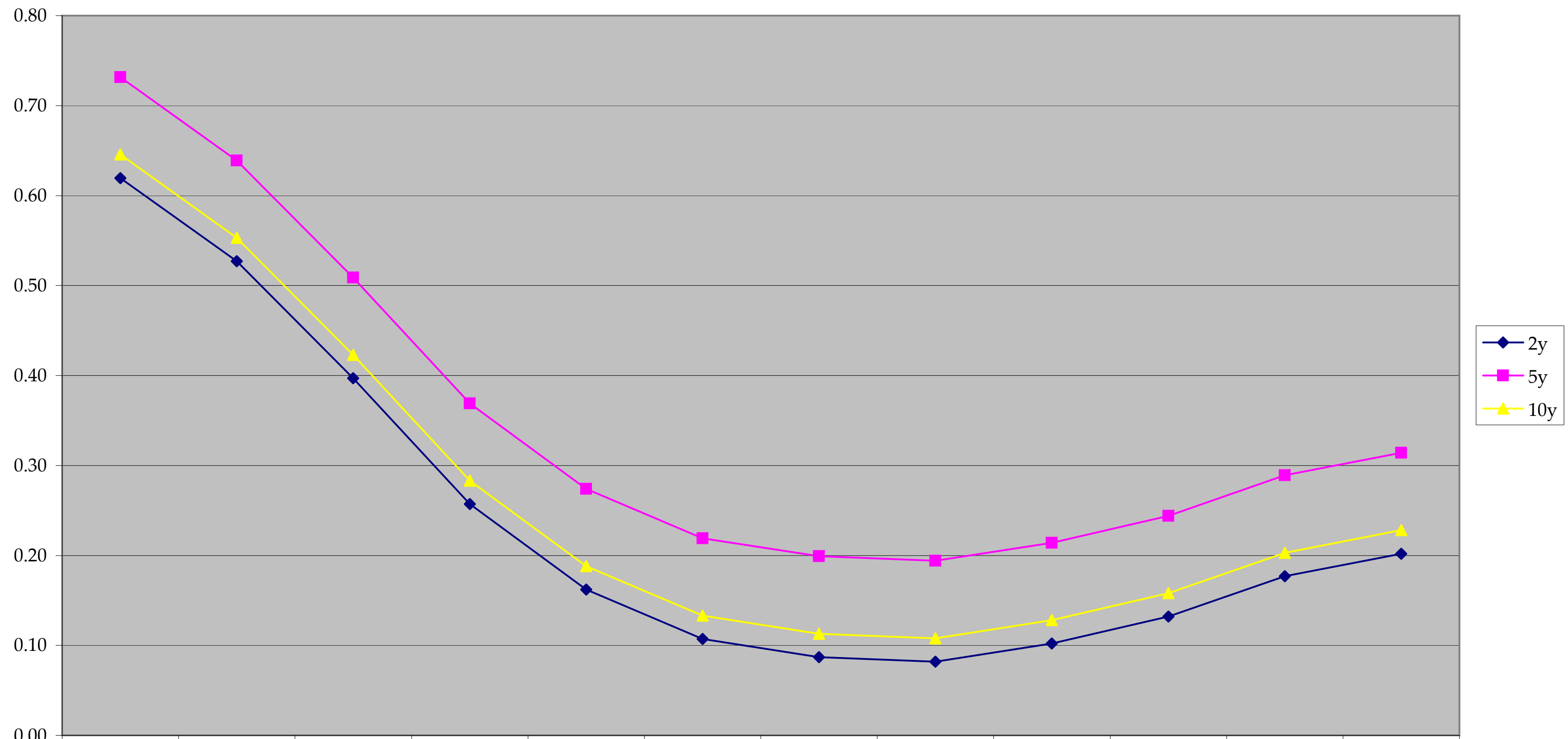
Chart values show the differences between ED contract and Treasury Futures conctract. Those values can be seen in the table at the bottom of the chart.

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	0.59	0.50	0.37	0.23	0.14	0.08	0.06	0.06	0.08	0.11	0.15	0.18
ZF	0.73	0.64	0.51	0.37	0.27	0.22	0.20	0.19	0.21	0.24	0.29	0.31
ZN	0.69	0.59	0.46	0.32	0.23	0.17	0.15	0.15	0.17	0.20	0.24	0.27

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	0.62	0.53	0.40	0.26	0.16	0.11	0.09	0.08	0.10	0.13	0.18	0.20
5y	0.73	0.64	0.51	0.37	0.27	0.22	0.20	0.19	0.21	0.24	0.29	0.31
10y	0.65	0.55	0.42	0.28	0.19	0.13	0.11	0.11	0.13	0.16	0.20	0.23

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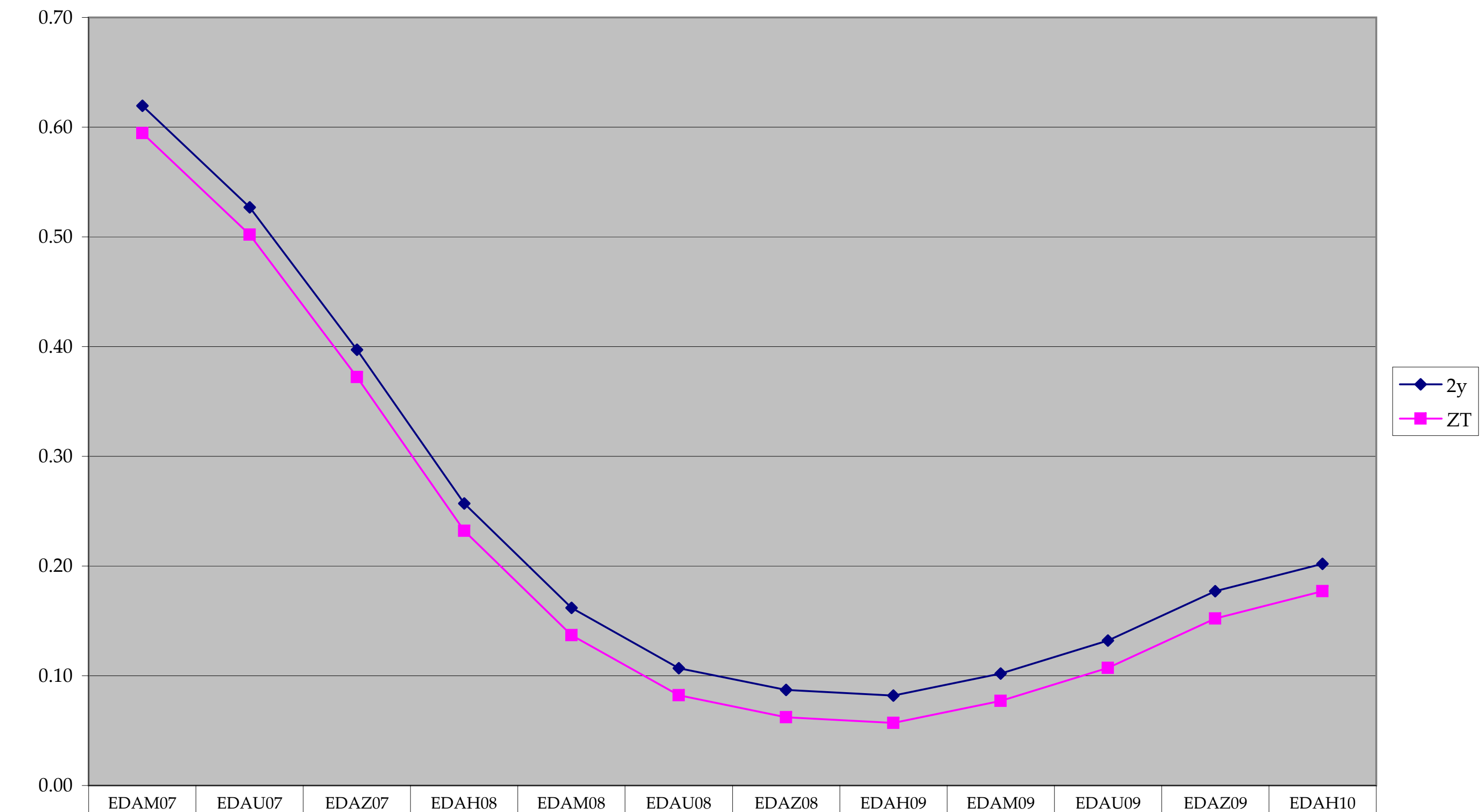
2y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
2y	0.62	0.53	0.40	0.26	0.16	0.11	0.09	0.08	0.10	0.13	0.18	0.20
ZT	0.59	0.50	0.37	0.23	0.14	0.08	0.06	0.06	0.08	0.11	0.15	0.18

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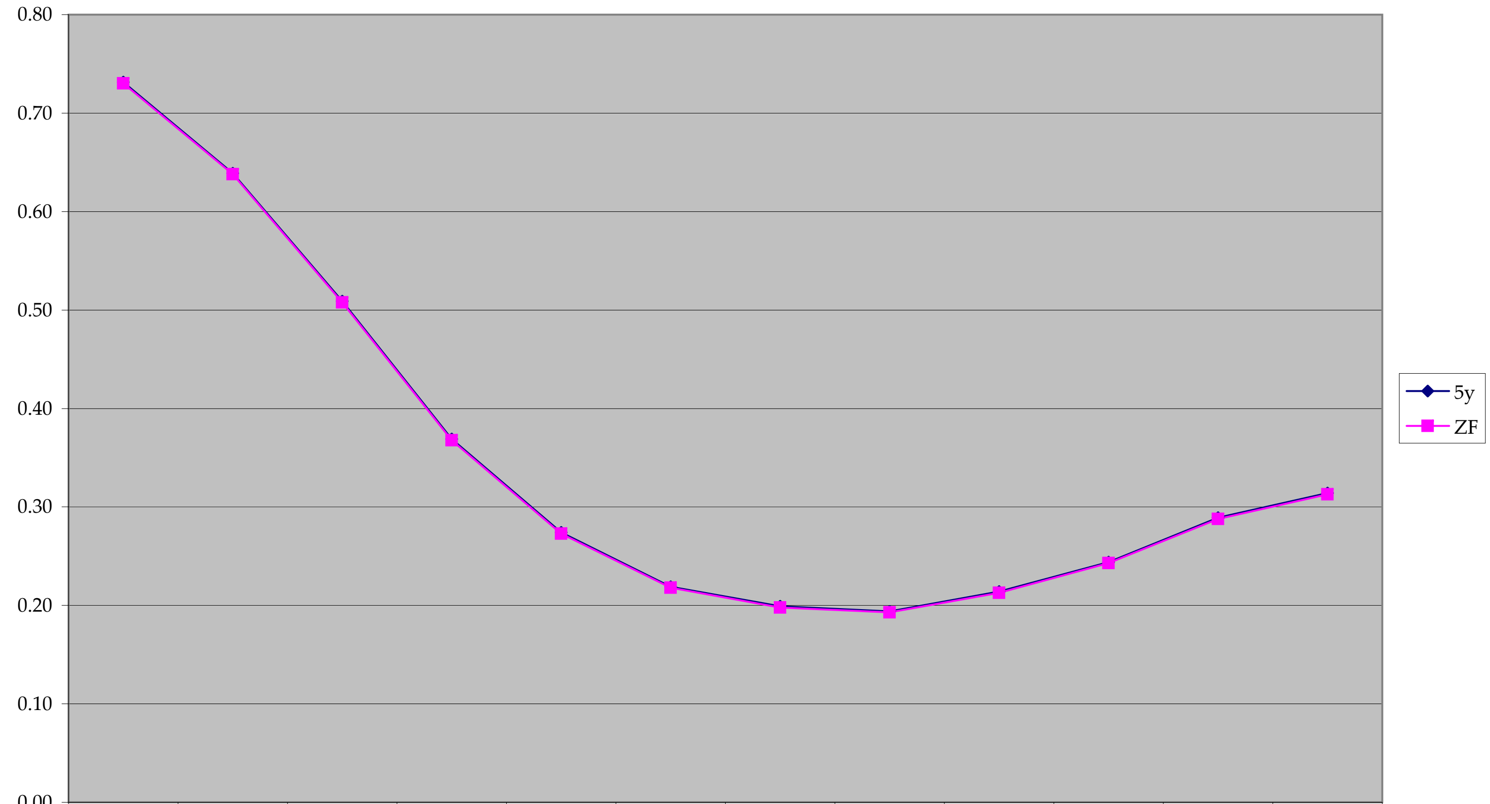
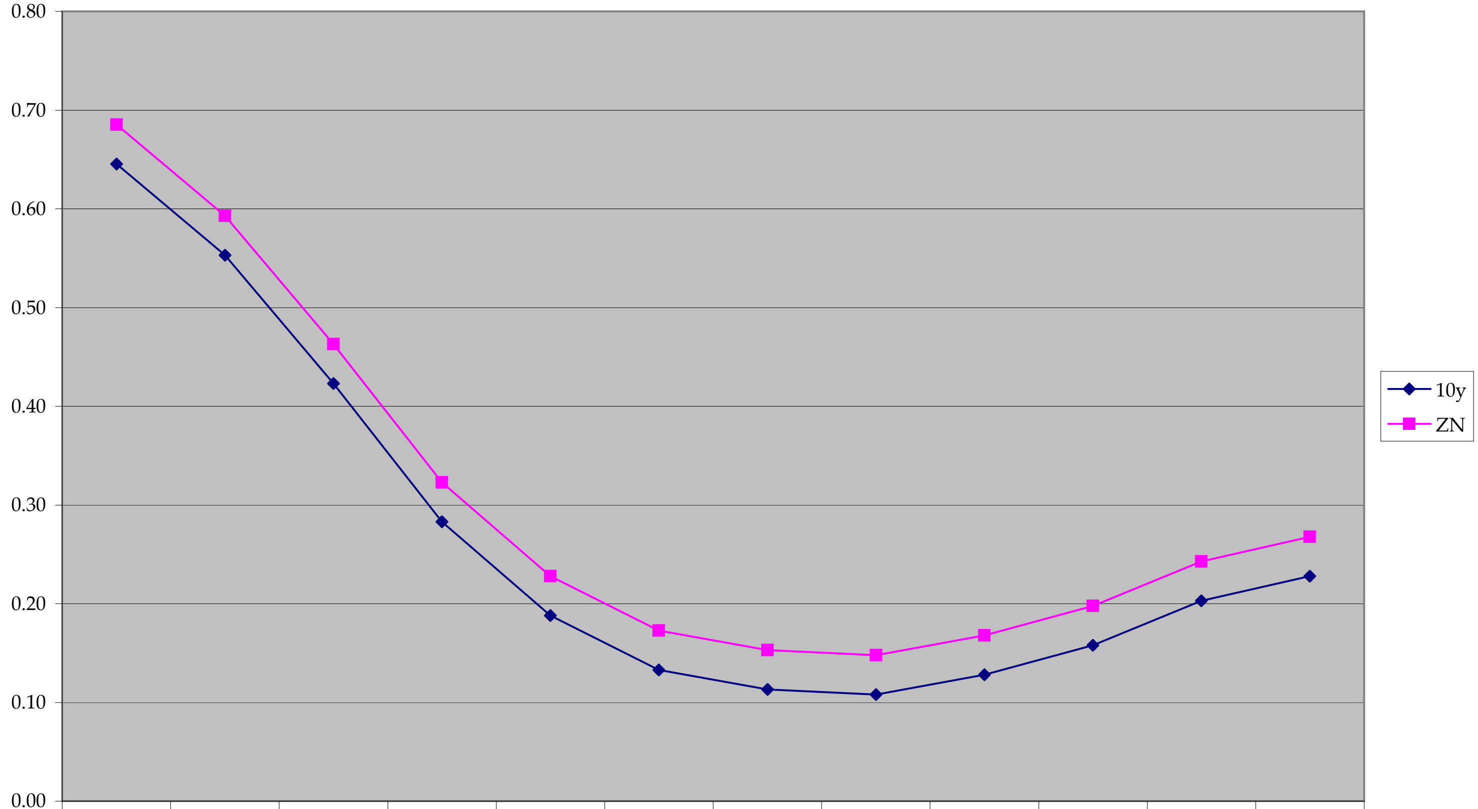
5y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
5y	0.73	0.64	0.51	0.37	0.27	0.22	0.20	0.19	0.21	0.24	0.29	0.31
ZF	0.73	0.64	0.51	0.37	0.27	0.22	0.20	0.19	0.21	0.24	0.29	0.31

10y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
10y	0.65	0.55	0.42	0.28	0.19	0.13	0.11	0.11	0.13	0.16	0.20	0.23
ZN	0.69	0.59	0.46	0.32	0.23	0.17	0.15	0.15	0.17	0.20	0.24	0.27

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