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	4.748	1.76
ZF	105.3281	105.105	4.627	3.81
ZN	107.7344	107.235	4.664	5.77
Blank				
2y	99.563	99.1800	4.732	1.85
5y	99.453	99.1450	4.625	4.38
10y	98.359	98.1150	4.706	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	94.658	5.343	33	0.090	JUN	White Pack
EDAU07	94.755	5.245	124	0.339	SEP	
EDAZ07	94.895	5.105	215	0.588	DEC	
EDAH08	95.035	4.965	306	0.838	MAR	
EDAM08	95.140	4.860	397	1.087	JUN	Red Pack
EDAU08	95.200	4.800	488	1.336	SEP	
EDAZ08	95.215	4.785	579	1.586	DEC	
EDAH09	95.225	4.775	670	1.835	MAR	
EDAM09	95.200	4.800	761	2.084	JUN	Green Pack
EDAU09	95.160	4.840	852	2.334	SEP	
EDAZ09	95.120	4.880	943	2.583	DEC	
EDAH10	95.085	4.915	1034	2.832	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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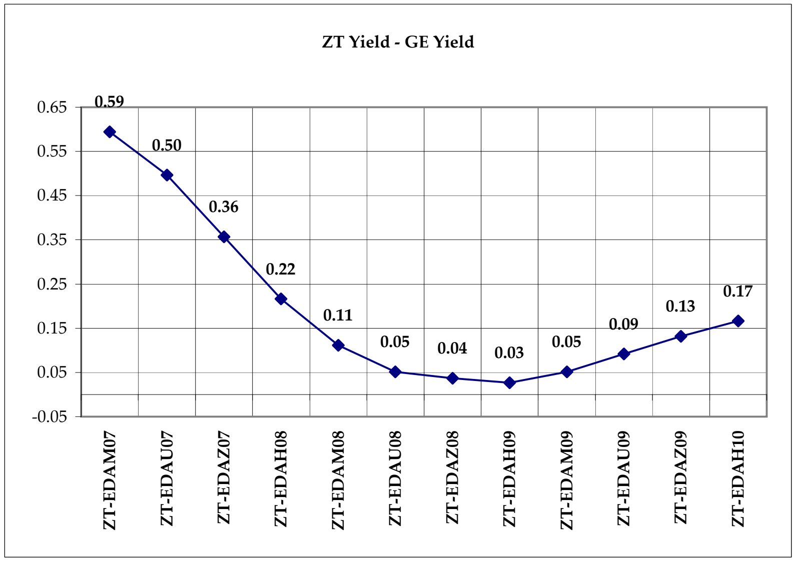
Dirty TED: ZT vs Eurodollar Contracts

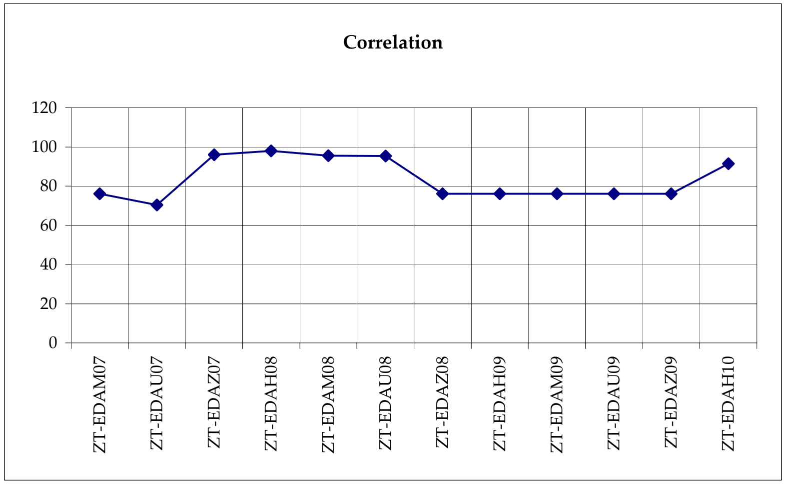
	ZT			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAM07	7.458	0.59	ZT-EDAM07	76.009
EDAU07	7.361	0.50	ZT-EDAU07	70.291
EDAZ07	7.221	0.36	ZT-EDAZ07	96.013
EDAH08	7.081	0.22	ZT-EDAH08	97.905
EDAM08	6.976	0.11	ZT-EDAM08	95.492
EDAU08	6.916	0.05	ZT-EDAU08	95.427
EDAZ08	6.901	0.04	ZT-EDAZ08	76.009
EDAH09	6.891	0.03	ZT-EDAH09	76.009
EDAM09	6.916	0.05	ZT-EDAM09	76.009
EDAU09	6.956	0.09	ZT-EDAU09	76.009
EDAZ09	6.996	0.13	ZT-EDAZ09	76.009
EDAH10	7.031	0.17	ZT-EDAH10	91.440

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	0.090	1.76	1.67	ZT-EDAM07
EDAU07	0.339	1.76	1.43	ZT-EDAU07
EDAZ07	0.588	1.76	1.18	ZT-EDAZ07
EDAH08	0.838	1.76	0.93	ZT-EDAH08
EDAM08	1.087	1.76	0.68	ZT-EDAM08
EDAU08	1.336	1.76	0.43	ZT-EDAU08
EDAZ08	1.586	1.76	0.18	ZT-EDAZ08
EDAH09	1.835	1.76	(0.07)	ZT-EDAH09
EDAM09	2.084	1.76	(0.32)	ZT-EDAM09
EDAU09	2.334	1.76	(0.57)	ZT-EDAU09
EDAZ09	2.583	1.76	(0.82)	ZT-EDAZ09
EDAH10	2.832	1.76	(1.07)	ZT-EDAH10

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



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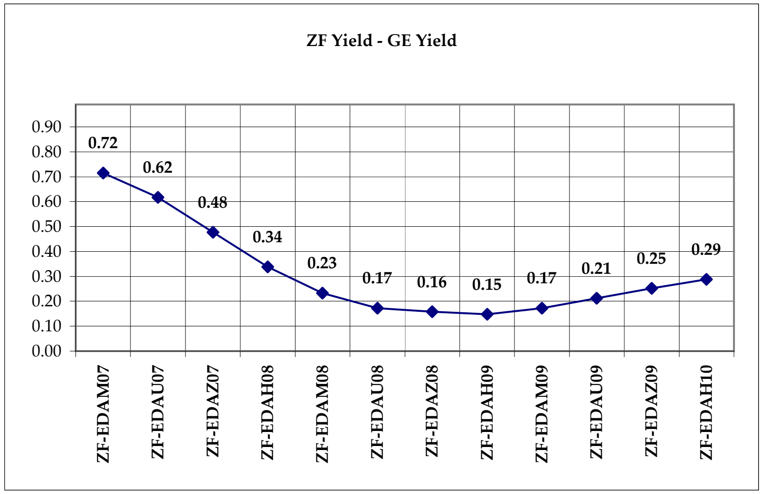
Dirty TED: ZF vs Eurodollar Contracts

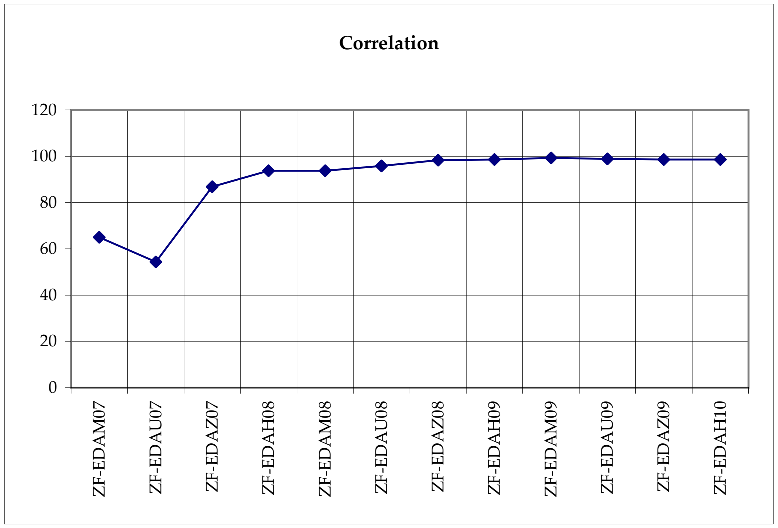
	ZF			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	10.67	0.72	ZF-EDAM07	65.029
EDAU07	10.57	0.62	ZF-EDAU07	54.350
EDAZ07	10.43	0.48	ZF-EDAZ07	86.885
EDAH08	10.29	0.34	ZF-EDAH08	93.675
EDAM08	10.19	0.23	ZF-EDAM08	93.719
EDAU08	10.13	0.17	ZF-EDAU08	95.822
EDAZ08	10.11	0.16	ZF-EDAZ08	98.317
EDAH09	10.10	0.15	ZF-EDAH09	98.526
EDAM09	10.13	0.17	ZF-EDAM09	99.272
EDAU09	10.17	0.21	ZF-EDAU09	98.868
EDAZ09	10.21	0.25	ZF-EDAZ09	98.537
EDAH10	10.24	0.29	ZF-EDAH10	98.614

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	0.090	3.81	3.72	ZF-EDAM07
EDAU07	0.339	3.81	3.48	ZF-EDAU07
EDAZ07	0.588	3.81	3.23	ZF-EDAZ07
EDAH08	0.838	3.81	2.98	ZF-EDAH08
EDAM08	1.087	3.81	2.73	ZF-EDAM08
EDAU08	1.336	3.81	2.48	ZF-EDAU08
EDAZ08	1.586	3.81	2.23	ZF-EDAZ08
EDAH09	1.835	3.81	1.98	ZF-EDAH09
EDAM09	2.084	3.81	1.73	ZF-EDAM09
EDAU09	2.334	3.81	1.48	ZF-EDAU09
EDAZ09	2.583	3.81	1.23	ZF-EDAZ09
EDAH10	2.832	3.81	0.98	ZF-EDAH10

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



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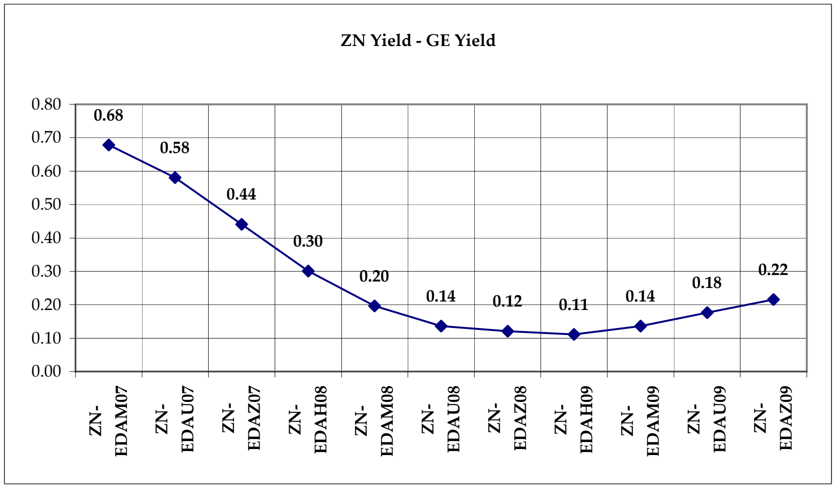
Dirty TED: ZN vs Eurodollar Contracts

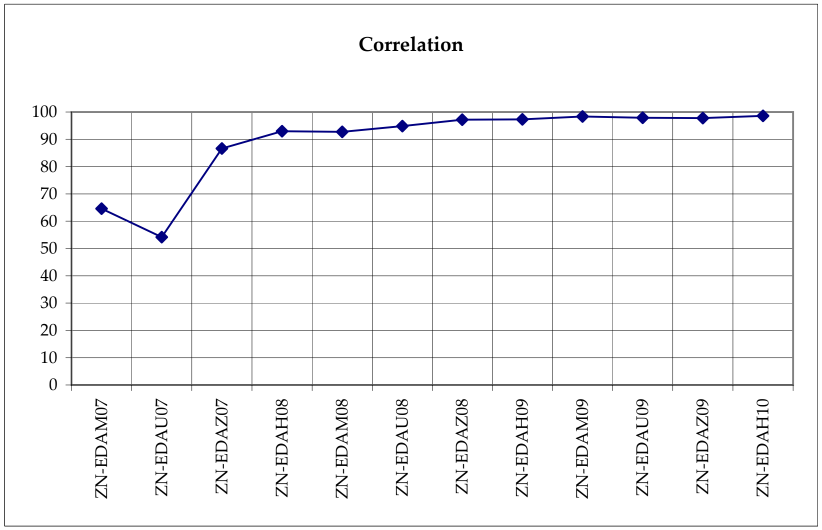
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	13.08	0.68	ZN-EDAM07	64.63
EDAU07	12.98	0.58	ZN-EDAU07	54.21
EDAZ07	12.84	0.44	ZN-EDAZ07	86.59
EDAH08	12.70	0.30	ZN-EDAH08	92.92
EDAM08	12.59	0.20	ZN-EDAM08	92.75
EDAU08	12.53	0.14	ZN-EDAU08	94.82
EDAZ08	12.52	0.12	ZN-EDAZ08	97.20
EDAH09	12.51	0.11	ZN-EDAH09	97.31
EDAM09	12.53	0.14	ZN-EDAM09	98.38
EDAU09	12.57	0.18	ZN-EDAU09	97.89
EDAZ09	12.61	0.22	ZN-EDAZ09	97.78
EDAH10	12.65	0.25	ZN-EDAH10	98.61

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	0.090	5.77	5.68	ZN-EDAM07
EDAU07	0.339	5.77	5.43	ZN-EDAU07
EDAZ07	0.588	5.77	5.18	ZN-EDAZ07
EDAH08	0.838	5.77	4.93	ZN-EDAH08
EDAM08	1.087	5.77	4.68	ZN-EDAM08
EDAU08	1.336	5.77	4.43	ZN-EDAU08
EDAZ08	1.586	5.77	4.18	ZN-EDAZ08
EDAH09	1.835	5.77	3.93	ZN-EDAH09
EDAM09	2.084	5.77	3.69	ZN-EDAM09
EDAU09	2.334	5.77	3.44	ZN-EDAU09
EDAZ09	2.583	5.77	3.19	ZN-EDAZ09
EDAH10	2.832	5.77	2.94	ZN-EDAH10

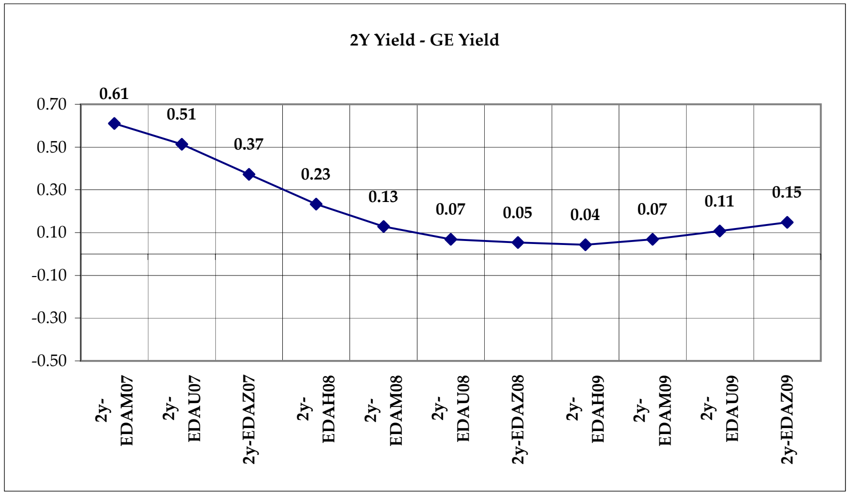
The farther away from 0 the spread duration is the riskier the trade.



TERM TED: 2y vs Eurodollar Contracts

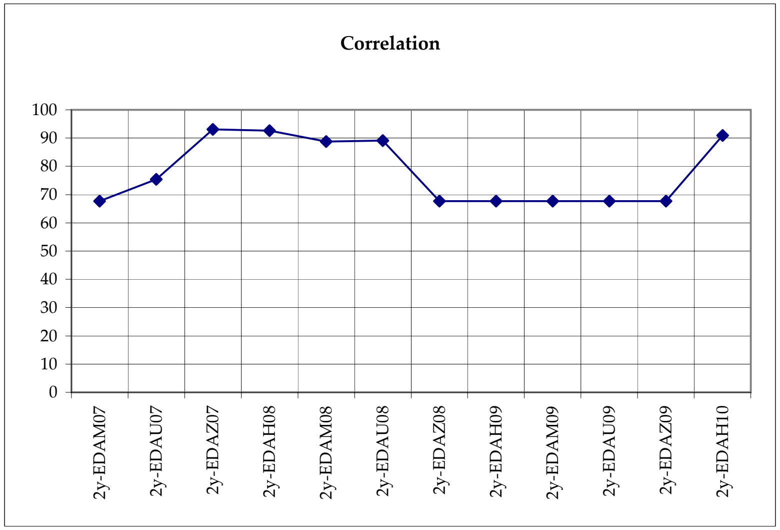
	2y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.91	0.61	2y-EDAM07	67.714
EDAU07	4.81	0.51	2y-EDAU07	75.406
EDAZ07	4.67	0.37	2y-EDAZ07	93.046
EDAH08	4.53	0.23	2y-EDAH08	92.589
EDAM08	4.42	0.13	2y-EDAM08	88.797
EDAU08	4.36	0.07	2y-EDAU08	89.081
EDAZ08	4.35	0.05	2y-EDAZ08	67.714
EDAH09	4.34	0.04	2y-EDAH09	67.714
EDAM09	4.36	0.07	2y-EDAM09	67.714
EDAU09	4.40	0.11	2y-EDAU09	67.714
EDAZ09	4.44	0.15	2y-EDAZ09	67.714
EDAH10	4.48	0.18	2y-EDAH10	90.908

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	0.090	1.85	1.76	2y-EDAM07
EDAU07	0.339	1.85	1.51	2y-EDAU07
EDAZ07	0.588	1.85	1.26	2y-EDAZ07
EDAH08	0.838	1.85	1.01	2y-EDAH08
EDAM08	1.087	1.85	0.76	2y-EDAM08
EDAU08	1.336	1.85	0.51	2y-EDAU08
EDAZ08	1.586	1.85	0.26	2y-EDAZ08
EDAH09	1.835	1.85	0.01	2y-EDAH09
EDAM09	2.084	1.85	(0.24)	2y-EDAM09
EDAU09	2.334	1.85	(0.49)	2y-EDAU09
EDAZ09	2.583	1.85	(0.74)	2y-EDAZ09
EDAH10	2.832	1.85	(0.99)	2y-EDAH10

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



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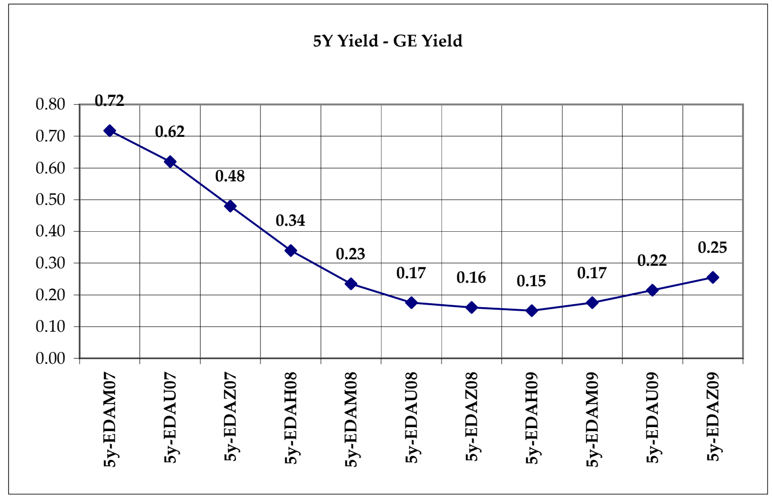
TERM TED: 5y vs Eurodollar Contracts

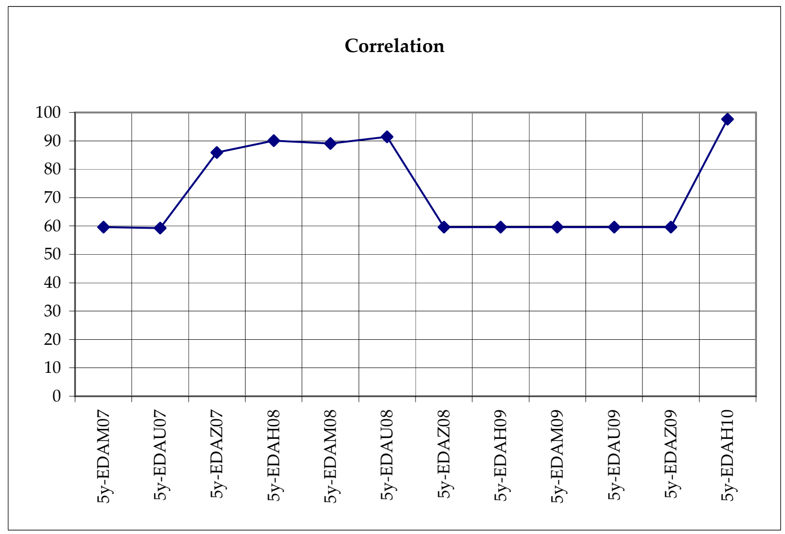
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.80	0.72	5y-EDAM07	59.637
EDAU07	4.70	0.62	5y-EDAU07	59.214
EDAZ07	4.56	0.48	5y-EDAZ07	85.876
EDAH08	4.42	0.34	5y-EDAH08	90.116
EDAM08	4.31	0.23	5y-EDAM08	89.033
EDAU08	4.25	0.17	5y-EDAU08	91.427
EDAZ08	4.24	0.16	5y-EDAZ08	59.637
EDAH09	4.23	0.15	5y-EDAH09	59.637
EDAM09	4.25	0.17	5y-EDAM09	59.637
EDAU09	4.29	0.22	5y-EDAU09	59.637
EDAZ09	4.33	0.25	5y-EDAZ09	59.637
EDAH10	4.37	0.29	5y-EDAH10	97.642

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	0.090	4.38	4.29	5y-EDAM07
EDAU07	0.339	4.38	4.05	5y-EDAU07
EDAZ07	0.588	4.38	3.80	5y-EDAZ07
EDAH08	0.838	4.38	3.55	5y-EDAH08
EDAM08	1.087	4.38	3.30	5y-EDAM08
EDAU08	1.336	4.38	3.05	5y-EDAU08
EDAZ08	1.586	4.38	2.80	5y-EDAZ08
EDAH09	1.835	4.38	2.55	5y-EDAH09
EDAM09	2.084	4.38	2.30	5y-EDAM09
EDAU09	2.334	4.38	2.05	5y-EDAU09
EDAZ09	2.583	4.38	1.80	5y-EDAZ09
EDAH10	2.832	4.38	1.55	5y-EDAH10

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



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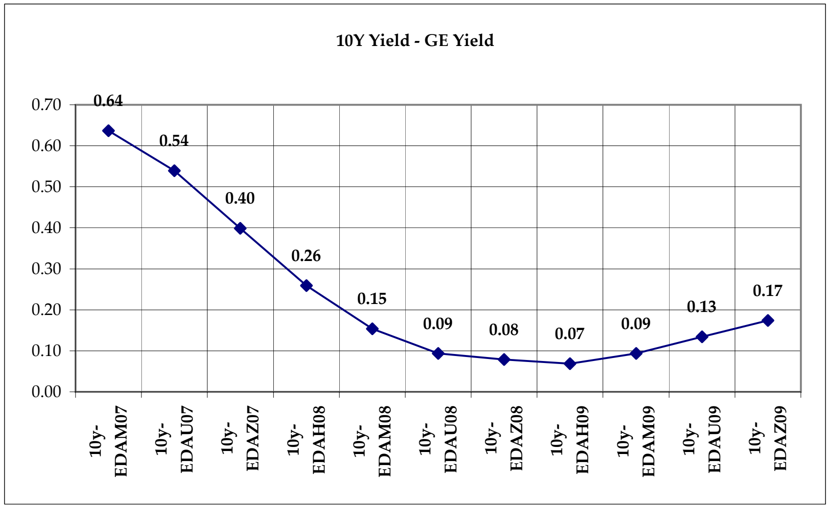
TERM TED: 10y vs Eurodollar Contracts

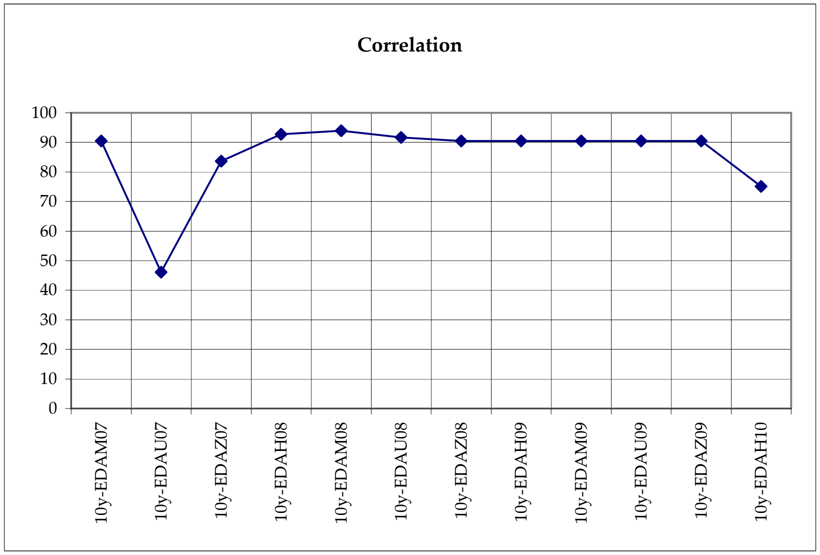
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAM07	4.80	0.64	10y-EDAM07	90.530
EDAU07	4.70	0.54	10y-EDAU07	46.152
EDAZ07	4.56	0.40	10y-EDAZ07	83.605
EDAH08	4.42	0.26	10y-EDAH08	92.777
EDAM08	4.31	0.15	10y-EDAM08	93.938
EDAU08	4.25	0.09	10y-EDAU08	91.671
EDAZ08	4.24	0.08	10y-EDAZ08	90.530
EDAH09	4.23	0.07	10y-EDAH09	90.530
EDAM09	4.25	0.09	10y-EDAM09	90.530
EDAU09	4.29	0.13	10y-EDAU09	90.530
EDAZ09	4.33	0.17	10y-EDAZ09	90.530
EDAH10	4.37	0.21	10y-EDAH10	75.137

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	0.090	7.95	7.86	10y-EDAM07
EDAU07	0.339	7.95	7.61	10y-EDAU07
EDAZ07	0.588	7.95	7.36	10y-EDAZ07
EDAH08	0.838	7.95	7.11	10y-EDAH08
EDAM08	1.087	7.95	6.86	10y-EDAM08
EDAU08	1.336	7.95	6.61	10y-EDAU08
EDAZ08	1.586	7.95	6.37	10y-EDAZ08
EDAH09	1.835	7.95	6.12	10y-EDAH09
EDAM09	2.084	7.95	5.87	10y-EDAM09
EDAU09	2.334	7.95	5.62	10y-EDAU09
EDAZ09	2.583	7.95	5.37	10y-EDAZ09
EDAH10	2.832	7.95	5.12	10y-EDAH10

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



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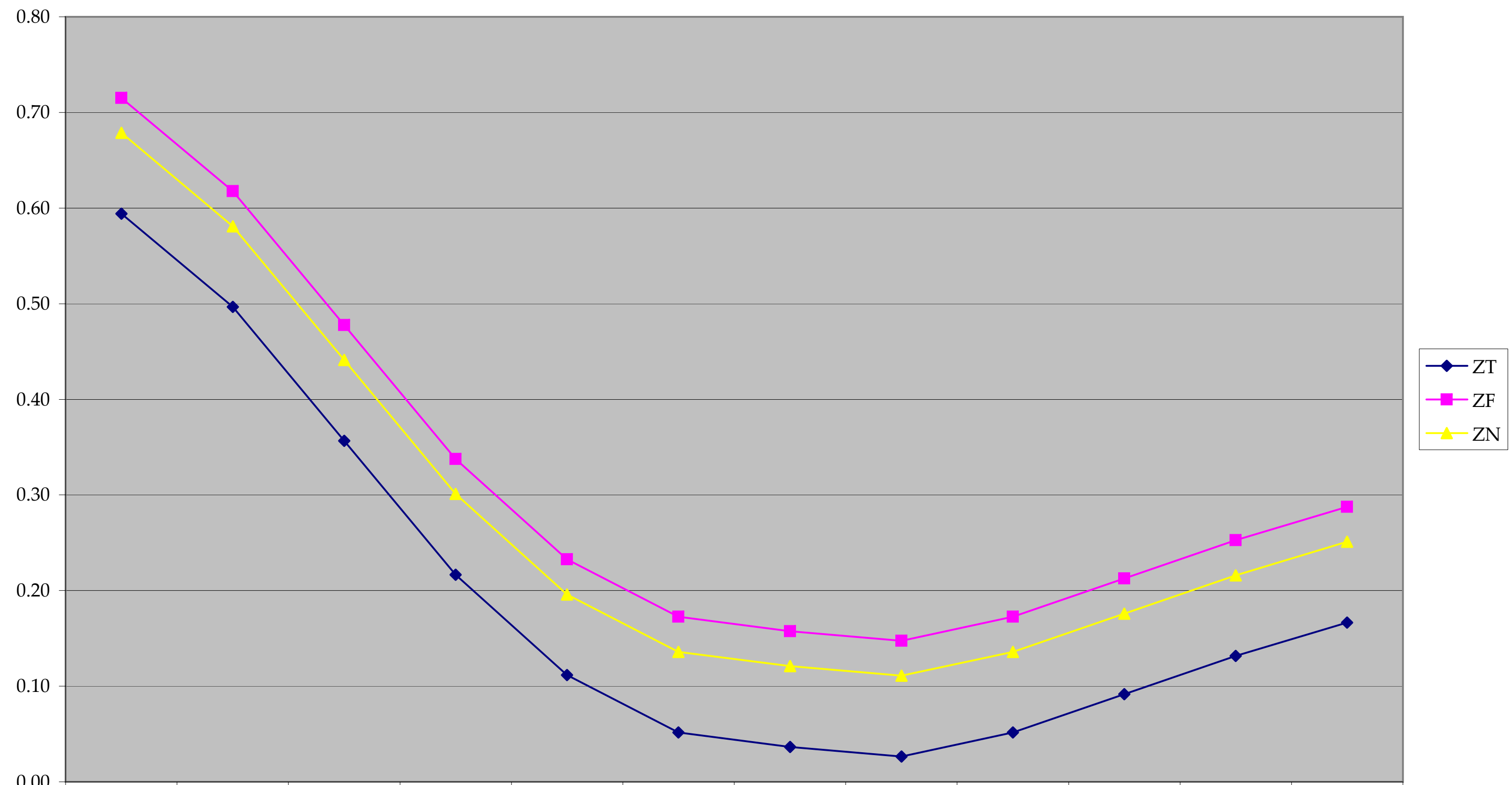
Dirty TED Curve

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	0.36	0.22	0.11	0.05	0.04	0.03	0.05	0.09	0.13	0.17
ZF	0.72	0.62	0.48	0.34	0.23	0.17	0.16	0.15	0.17	0.21	0.25	0.29
ZN	0.68	0.58	0.44	0.30	0.20	0.14	0.12	0.11	0.14	0.18	0.22	0.25

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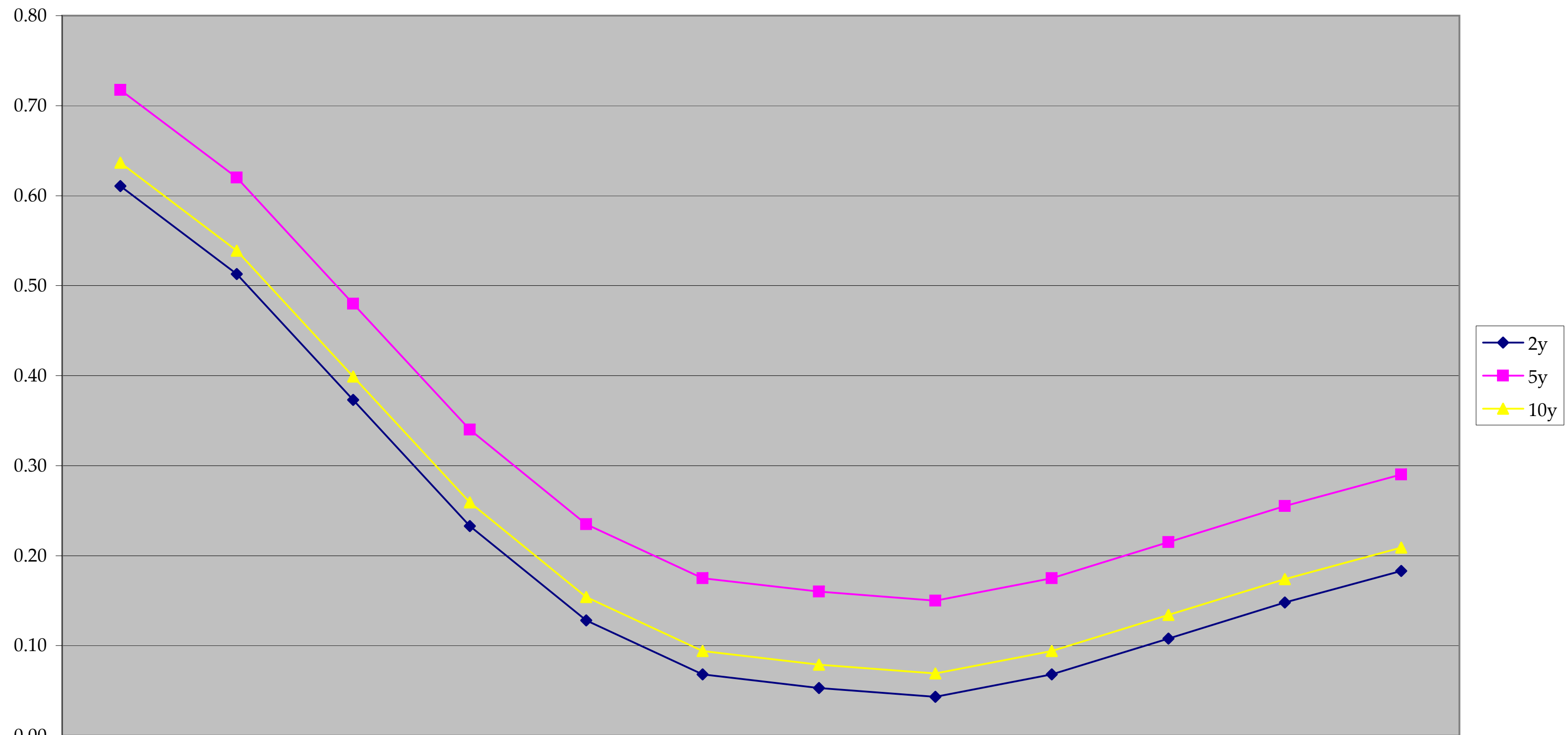
TED Curve

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	0.61	0.51	0.37	0.23	0.13	0.07	0.05	0.04	0.07	0.11	0.15	0.18
5y	0.72	0.62	0.48	0.34	0.23	0.17	0.16	0.15	0.17	0.22	0.25	0.29
10y	0.64	0.54	0.40	0.26	0.15	0.09	0.08	0.07	0.09	0.13	0.17	0.21

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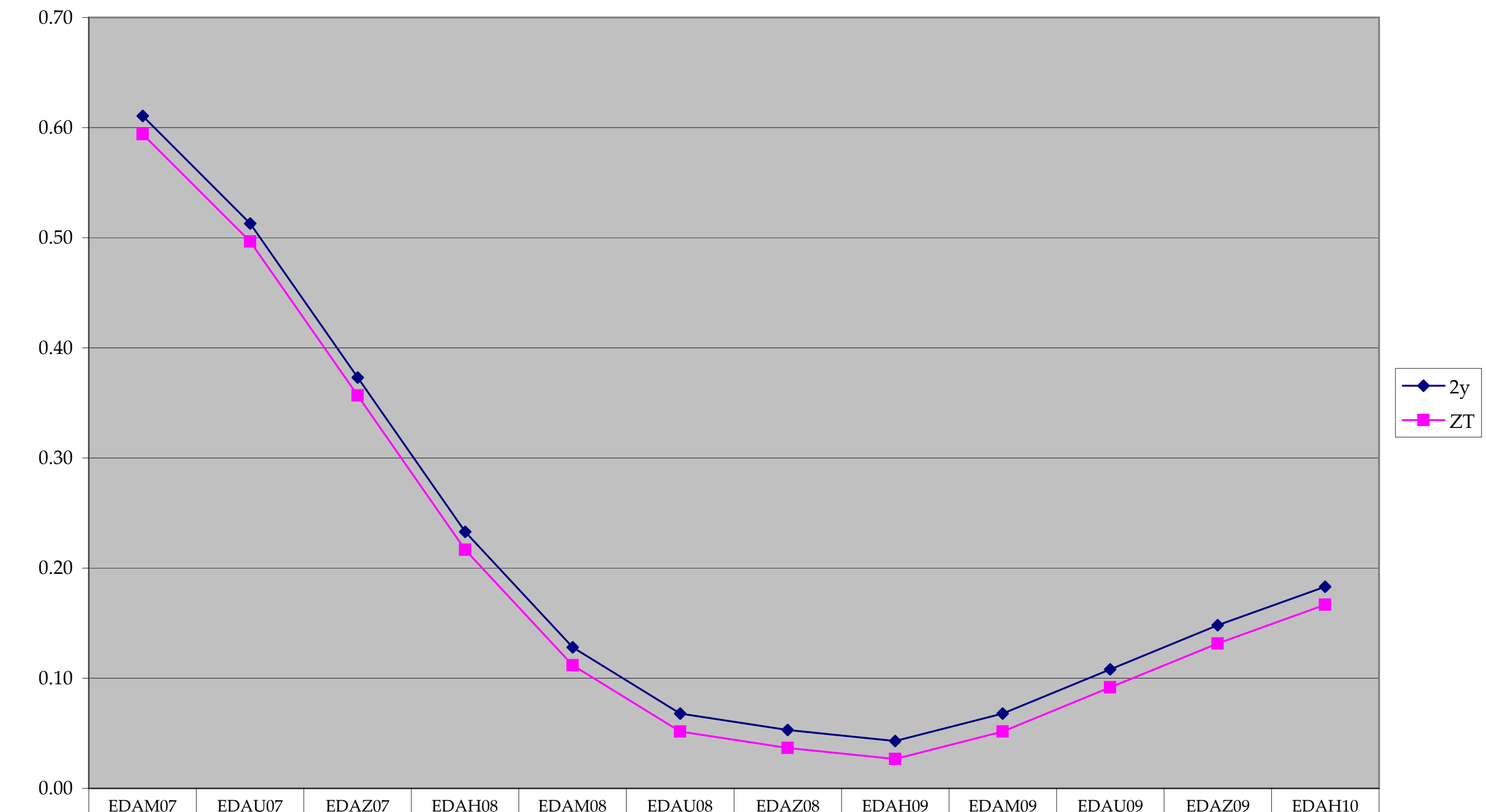
2y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
2y	0.61	0.51	0.37	0.23	0.13	0.07	0.05	0.04	0.07	0.11	0.15	0.18
ZT	0.59	0.50	0.36	0.22	0.11	0.05	0.04	0.03	0.05	0.09	0.13	0.17

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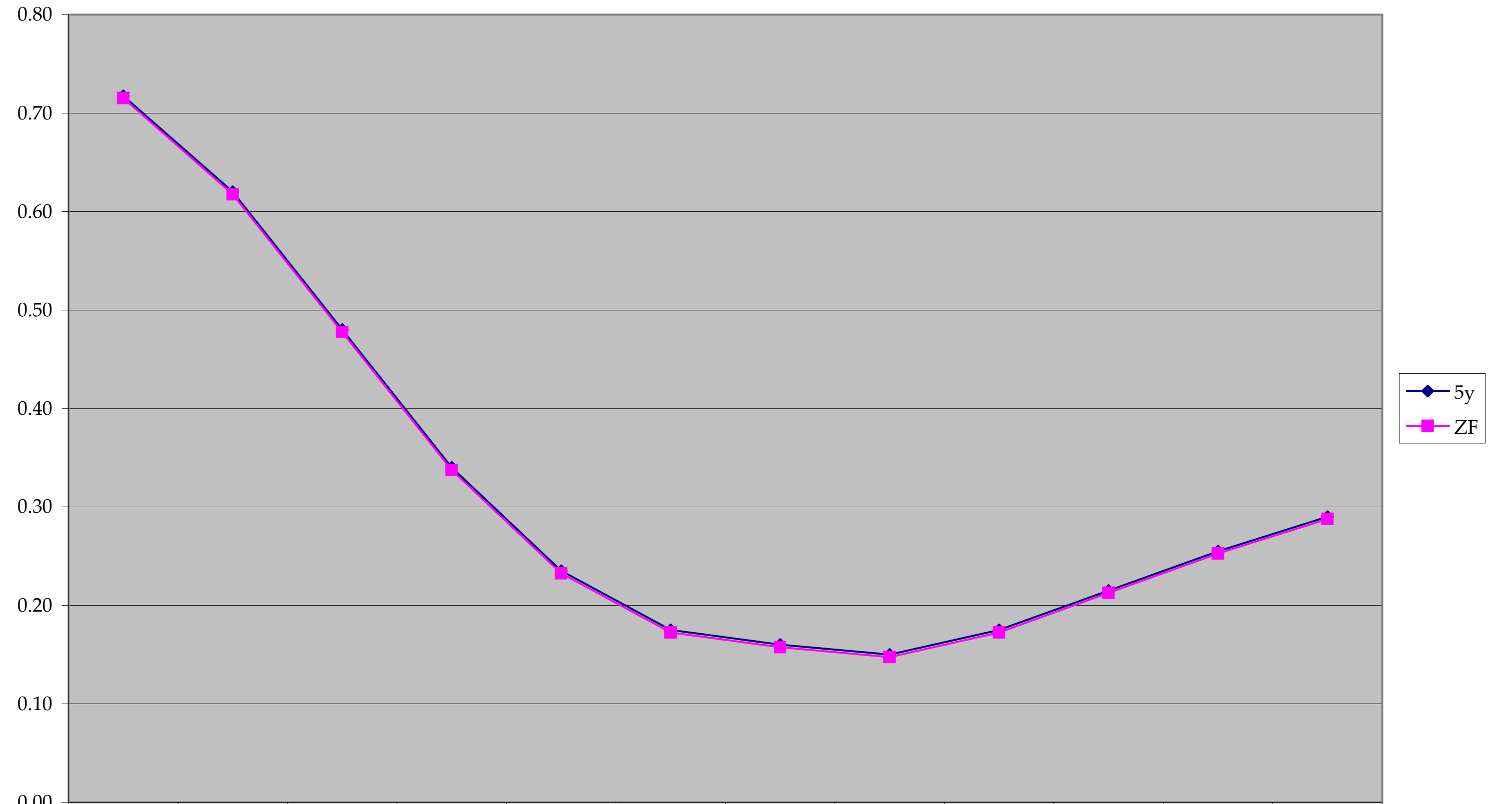
5y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
5y	0.72	0.62	0.48	0.34	0.23	0.17	0.16	0.15	0.17	0.22	0.25	0.29
ZF	0.72	0.62	0.48	0.34	0.23	0.17	0.16	0.15	0.17	0.21	0.25	0.29

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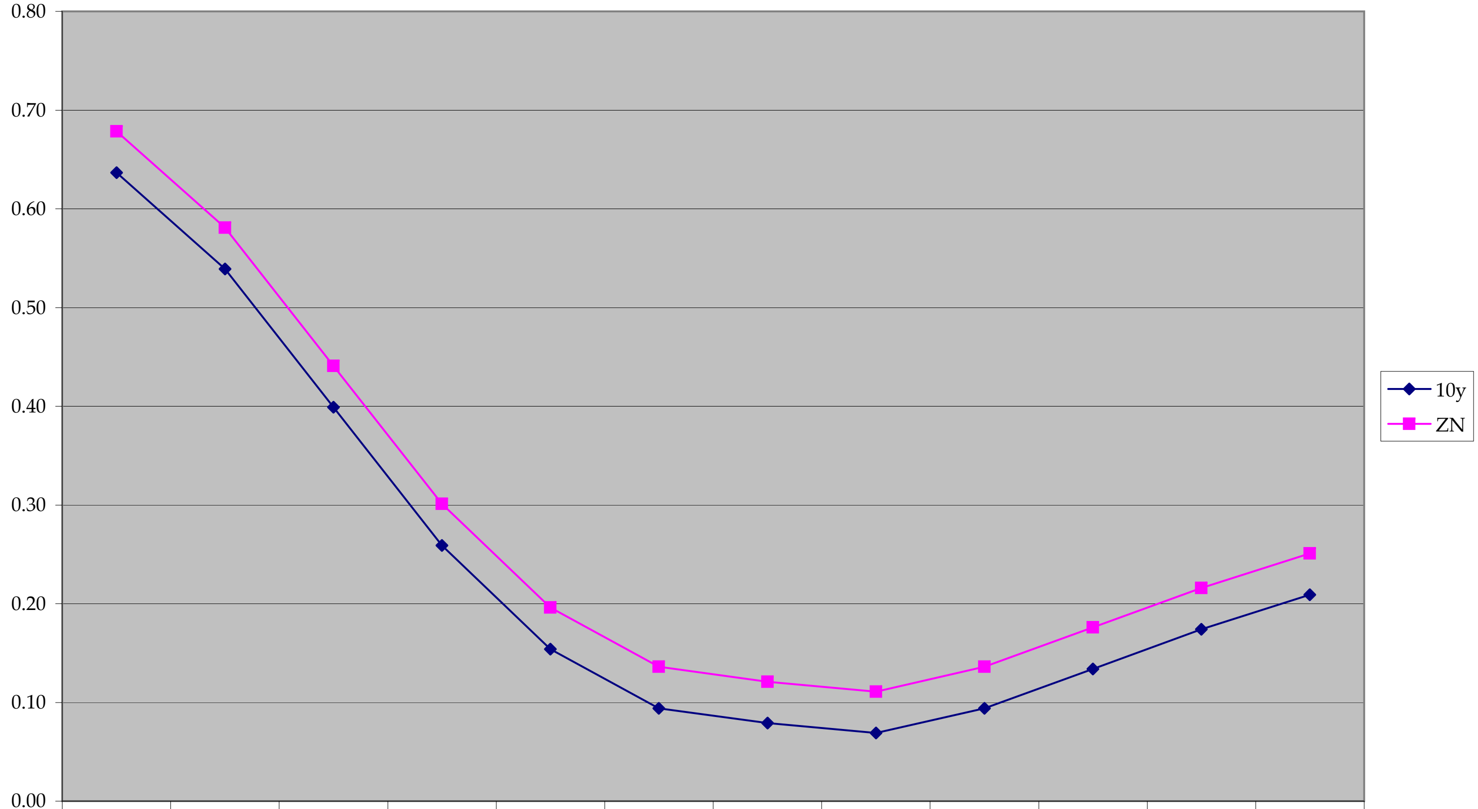
10y Basis TED Curve



	EDAM07	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10
10y	0.64	0.54	0.40	0.26	0.15	0.09	0.08	0.07	0.09	0.13	0.17	0.21
ZN	0.68	0.58	0.44	0.30	0.20	0.14	0.12	0.11	0.14	0.18	0.22	0.25

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