The Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

Correlations for the US Cash Treasuries are done on a YIELD basis. Therefore, you'll see negative values. The reason for this is due to the new issues. Every new issue takes too long to 'catch up' because the correlation formula looks back 10days.

Want something added? Let me know: 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.

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Quotes

6/25/2007 5:52	Page A

	Last Decimal	Last 32	Last Yield*	MDuration
	F.I. Futures and Cash			
ZT	101.7969	101.255	4.933	1.87
ZF	103.8438	103.270	4.979	3.95
ZN	105.1563	105.050	5.040	5.77
2y	99.944	99.3020	4.900	2.00
5y	98.938	98.3000	4.994	4.27
10y	95.234	95.0750	5.118	7.79

Eurodollars (ED)

	Last Price	Last Imp Yield	Days til Expr.	Fraction of year	Month	
EDAU07	94.680	5.320	84	0.229	SEP	White Pack
EDAZ07	94.730	5.270	175	0.479	DEC	
EDAH08	94.775	5.225	266	0.728	MAR	
EDAM08	94.795	5.205	357	0.977	JUN	
EDAU08	94.775	5.225	448	1.227	SEP	Red Pack
EDAZ08	94.740	5.260	539	1.476	DEC	
EDAH09	94.695	5.305	630	1.725	MAR	
EDAM09	94.645	5.355	721	1.975	JUN	
EDAU09	94.585	5.415	812	2.224	SEP	Green Pack
EDAZ09	94.540	5.460	903	2.473	DEC	
EDAH10	94.490	5.510	994	2.723	MAR	
EDAM10	94.460	5.540	1085	2.972	JUN	
EDAU10	94.420	5.580	1176	3.221	SEP	
EDAZ10	#VALUE!	#VALUE!	1267	3.471	DEC	
EDAH11	#VALUE!	#VALUE!	1358	3.720	MAR	
EDAM11	#VALUE!	#VALUE!	1449	3.969	JUN	
EDAU11	#VALUE!	#VALUE!	1547	4.238	SEP	
EDAZ11	#VALUE!	#VALUE!	1638	4.487	DEC	
EDAH12	#VALUE!	#VALUE!	1729	4.736	MAR	
EDAM12	#VALUE!	#VALUE!	1820	4.986	JUN	

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

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Overview of Hedging

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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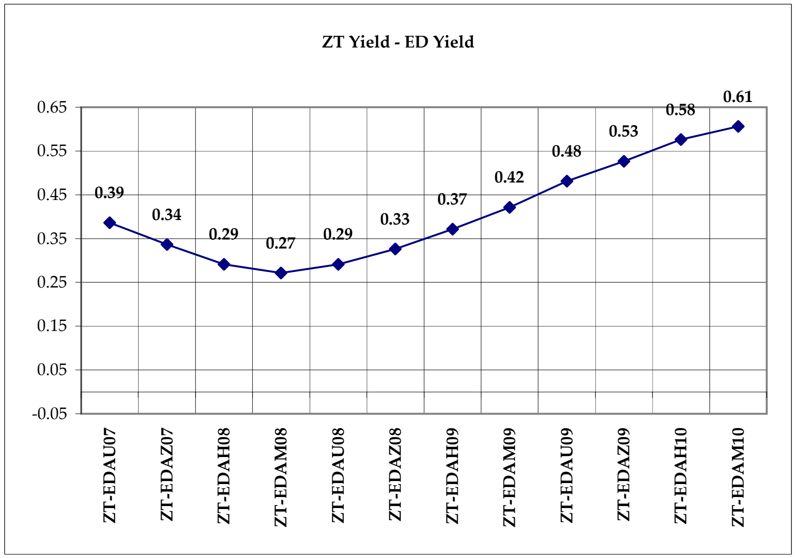
Dirty TED: ZT vs Eurodollar Contracts

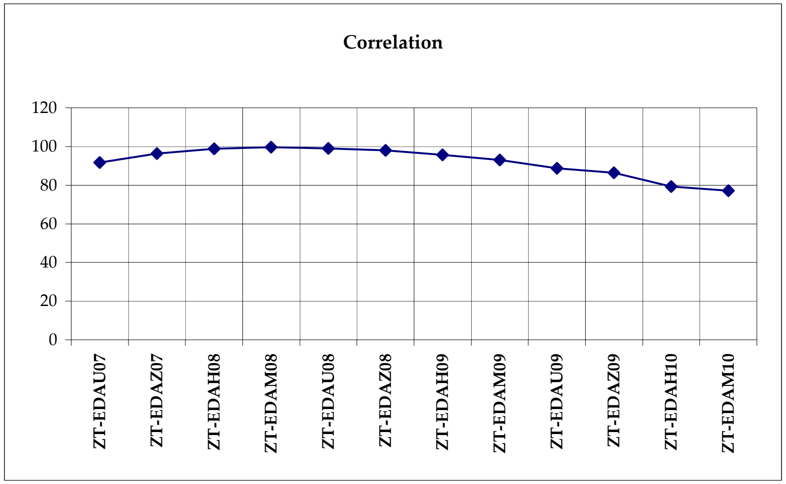
	ZT			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	7.117	0.39	ZT-EDAU07	91.699
EDAZ07	7.067	0.34	ZT-EDAZ07	96.362
EDAH08	7.022	0.29	ZT-EDAH08	98.834
EDAM08	7.002	0.27	ZT-EDAM08	99.670
EDAU08	7.022	0.29	ZT-EDAU08	99.052
EDAZ08	7.057	0.33	ZT-EDAZ08	98.032
EDAH09	7.102	0.37	ZT-EDAH09	95.621
EDAM09	7.152	0.42	ZT-EDAM09	92.972
EDAU09	7.212	0.48	ZT-EDAU09	88.713
EDAZ09	7.257	0.53	ZT-EDAZ09	86.454
EDAH10	7.307	0.58	ZT-EDAH10	79.252
EDAM10	7.337	0.61	ZT-EDAM10	77.069

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	
EDAU07	0.229	1.87	1.64	ZT-EDAU07
EDAZ07	0.479	1.87	1.39	ZT-EDAZ07
EDAH08	0.728	1.87	1.14	ZT-EDAH08
EDAM08	0.977	1.87	0.89	ZT-EDAM08
EDAU08	1.227	1.87	0.64	ZT-EDAU08
EDAZ08	1.476	1.87	0.39	ZT-EDAZ08
EDAH09	1.725	1.87	0.14	ZT-EDAH09
EDAM09	1.975	1.87	(0.11)	ZT-EDAM09
EDAU09	2.224	1.87	(0.36)	ZT-EDAU09
EDAZ09	2.473	1.87	(0.61)	ZT-EDAZ09
EDAH10	2.723	1.87	(0.86)	ZT-EDAH10
EDAM10	2.972	1.87	(1.11)	ZT-EDAM10

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



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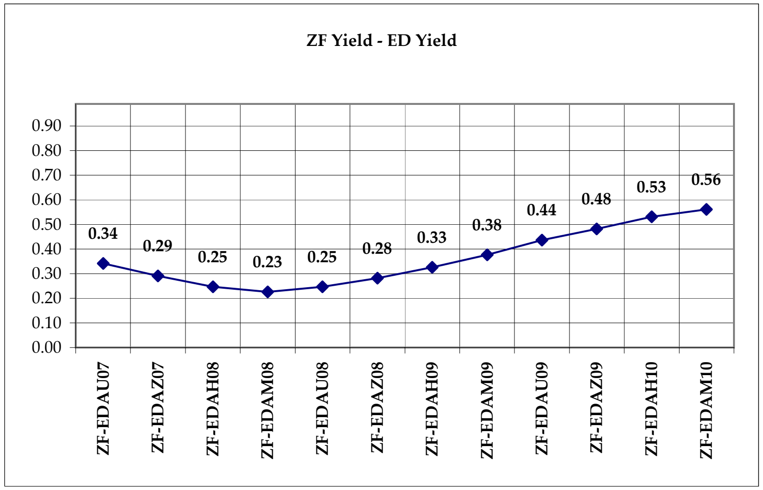
Dirty TED: ZF vs Eurodollar Contracts

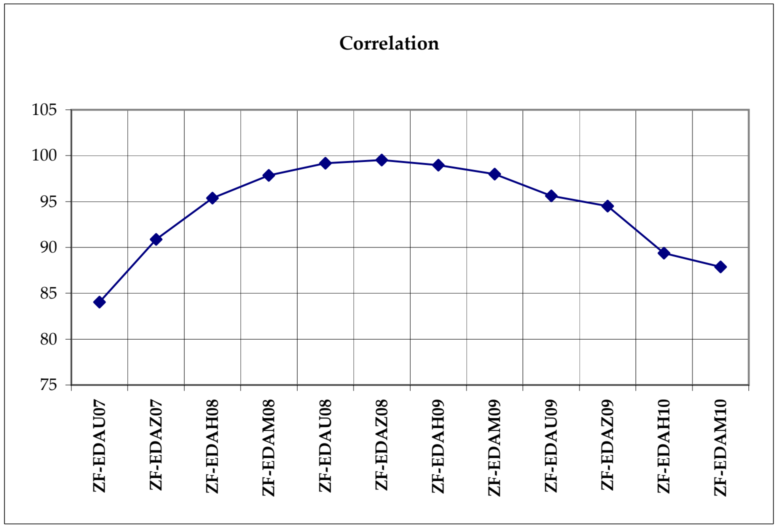
	ZF			
	Spread Price	**Spread Yield**	**Spread Name**	**Correlation* (percent)**
EDAU07	9.16	0.34	ZF-EDAU07	84.050
EDAZ07	9.11	0.29	ZF-EDAZ07	90.881
EDAH08	9.07	0.25	ZF-EDAH08	95.365
EDAM08	9.05	0.23	ZF-EDAM08	97.845
EDAU08	9.07	0.25	ZF-EDAU08	99.159
EDAZ08	9.10	0.28	ZF-EDAZ08	99.507
EDAH09	9.15	0.33	ZF-EDAH09	98.948
EDAM09	9.20	0.38	ZF-EDAM09	97.976
EDAU09	9.26	0.44	ZF-EDAU09	95.621
EDAZ09	9.30	0.48	ZF-EDAZ09	94.495
EDAH10	9.35	0.53	ZF-EDAH10	89.387
EDAM10	9.38	0.56	ZF-EDAM10	87.869

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**	
EDAU07	0.229	3.95	3.72	ZF-EDAU07
EDAZ07	0.479	3.95	3.47	ZF-EDAZ07
EDAH08	0.728	3.95	3.22	ZF-EDAH08
EDAM08	0.977	3.95	2.97	ZF-EDAM08
EDAU08	1.227	3.95	2.72	ZF-EDAU08
EDAZ08	1.476	3.95	2.47	ZF-EDAZ08
EDAH09	1.725	3.95	2.22	ZF-EDAH09
EDAM09	1.975	3.95	1.98	ZF-EDAM09
EDAU09	2.224	3.95	1.73	ZF-EDAU09
EDAZ09	2.473	3.95	1.48	ZF-EDAZ09
EDAH10	2.723	3.95	1.23	ZF-EDAH10
EDAM10	2.972	3.95	0.98	ZF-EDAM10

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



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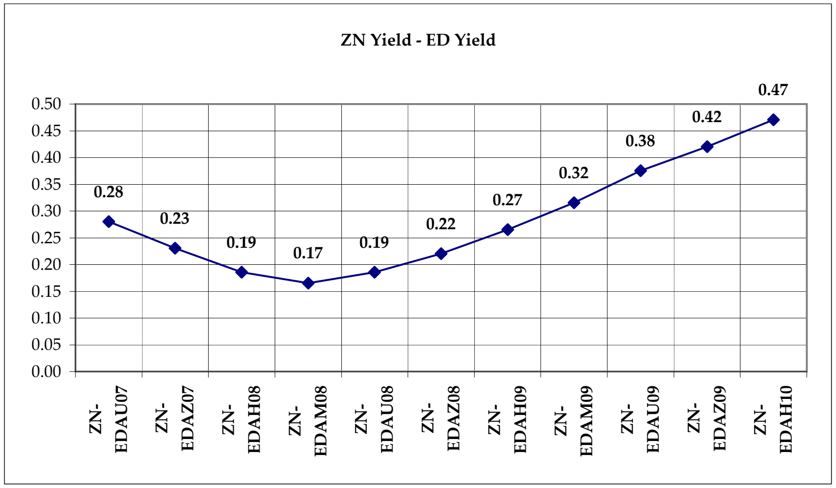
Dirty TED: ZN vs Eurodollar Contracts

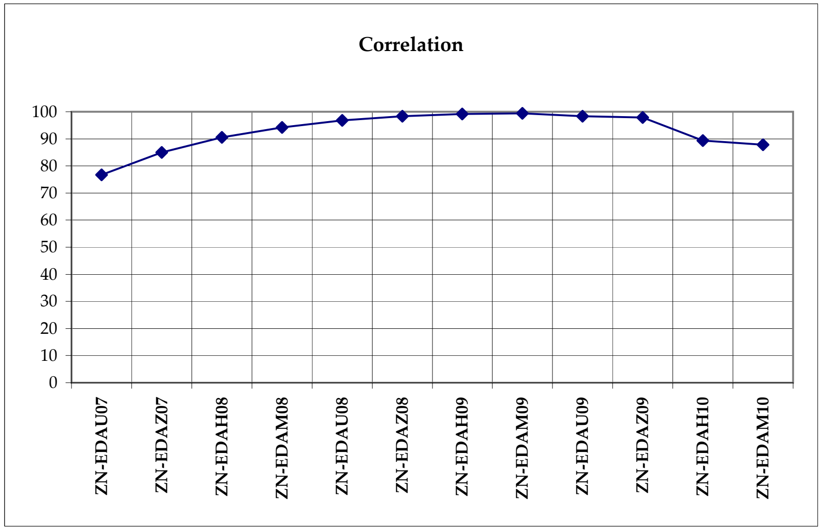
	ZN			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	10.48	0.28	ZN-EDAU07	76.71
EDAZ07	10.43	0.23	ZN-EDAZ07	84.94
EDAH08	10.38	0.19	ZN-EDAH08	90.54
EDAM08	10.36	0.17	ZN-EDAM08	94.20
EDAU08	10.38	0.19	ZN-EDAU08	96.86
EDAZ08	10.42	0.22	ZN-EDAZ08	98.38
EDAH09	10.46	0.27	ZN-EDAH09	99.16
EDAM09	10.51	0.32	ZN-EDAM09	99.38
EDAU09	10.57	0.38	ZN-EDAU09	98.39
EDAZ09	10.62	0.42	ZN-EDAZ09	97.91
EDAH10	10.67	0.47	ZN-EDAH10	89.39
EDAM10	10.70	0.50	ZN-EDAM10	87.87

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	
EDAU07	0.229	5.77	5.54	ZN-EDAU07
EDAZ07	0.479	5.77	5.29	ZN-EDAZ07
EDAH08	0.728	5.77	5.04	ZN-EDAH08
EDAM08	0.977	5.77	4.79	ZN-EDAM08
EDAU08	1.227	5.77	4.54	ZN-EDAU08
EDAZ08	1.476	5.77	4.29	ZN-EDAZ08
EDAH09	1.725	5.77	4.04	ZN-EDAH09
EDAM09	1.975	5.77	3.79	ZN-EDAM09
EDAU09	2.224	5.77	3.54	ZN-EDAU09
EDAZ09	2.473	5.77	3.29	ZN-EDAZ09
EDAH10	2.723	5.77	3.04	ZN-EDAH10
EDAM10	2.972	5.77	2.80	ZN-EDAM10

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)
EDAU07	5.26	0.42	2y-EDAU07	-89.633
EDAZ07	5.21	0.37	2y-EDAZ07	-94.901
EDAH08	5.17	0.32	2y-EDAH08	-96.956
EDAM08	5.15	0.30	2y-EDAM08	-97.949
EDAU08	5.17	0.32	2y-EDAU08	-97.668
EDAZ08	5.20	0.36	2y-EDAZ08	-97.949
EDAH09	5.25	0.40	2y-EDAH09	-95.747
EDAM09	5.30	0.46	2y-EDAM09	-94.011
EDAU09	5.36	0.51	2y-EDAU09	-90.497
EDAZ09	5.40	0.56	2y-EDAZ09	-88.625
EDAH10	5.45	0.61	2y-EDAH10	-82.424
EDAM10	5.48	0.64	2y-EDAM10	-80.155

Price = Outright Decimal Price - Euro Contract Price
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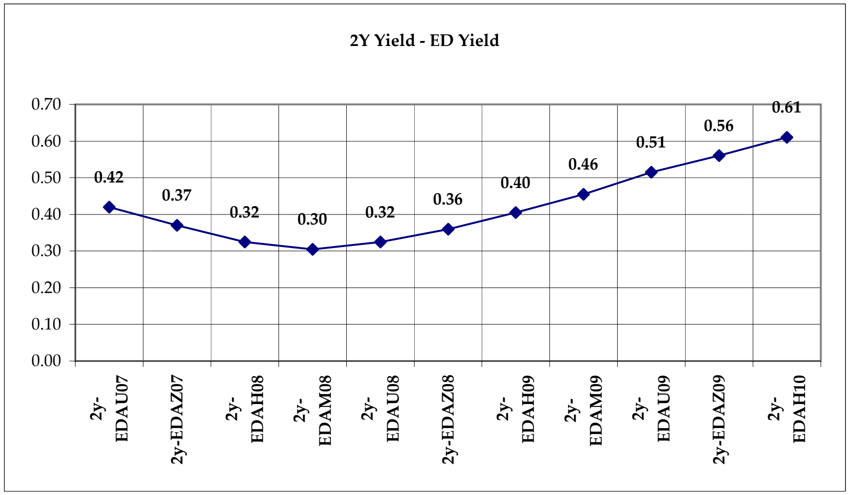
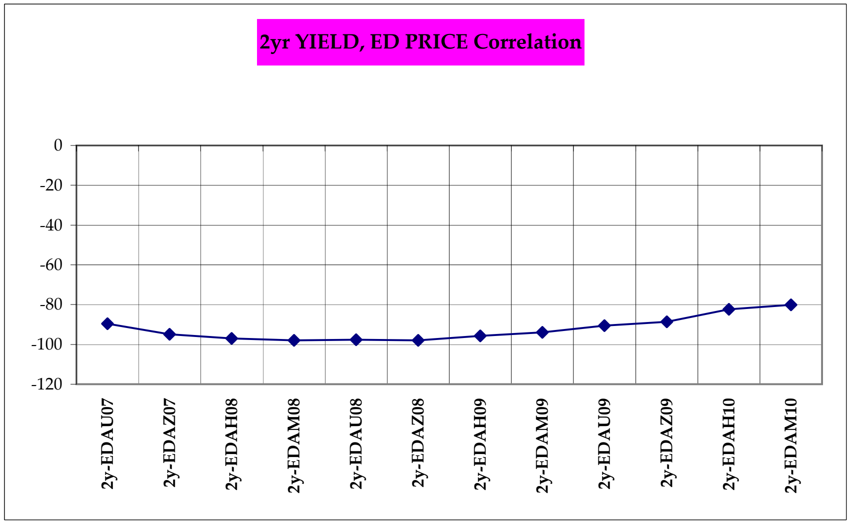
These are measuring YIELD correlations.



	GE Duration as Fraction of year	2Y Duration	Spread Duration	
EDAU07	0.229	2.00	1.77	2y-EDAU07
EDAZ07	0.479	2.00	1.52	2y-EDAZ07
EDAH08	0.728	2.00	1.27	2y-EDAH08
EDAM08	0.977	2.00	1.03	2y-EDAM08
EDAU08	1.227	2.00	0.78	2y-EDAU08
EDAZ08	1.476	2.00	0.53	2y-EDAZ08
EDAH09	1.725	2.00	0.28	2y-EDAH09
EDAM09	1.975	2.00	0.03	2y-EDAM09
EDAU09	2.224	2.00	(0.22)	2y-EDAU09
EDAZ09	2.473	2.00	(0.47)	2y-EDAZ09
EDAH10	2.723	2.00	(0.72)	2y-EDAH10
EDAM10	2.972	2.00	(0.97)	2y-EDAM10

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



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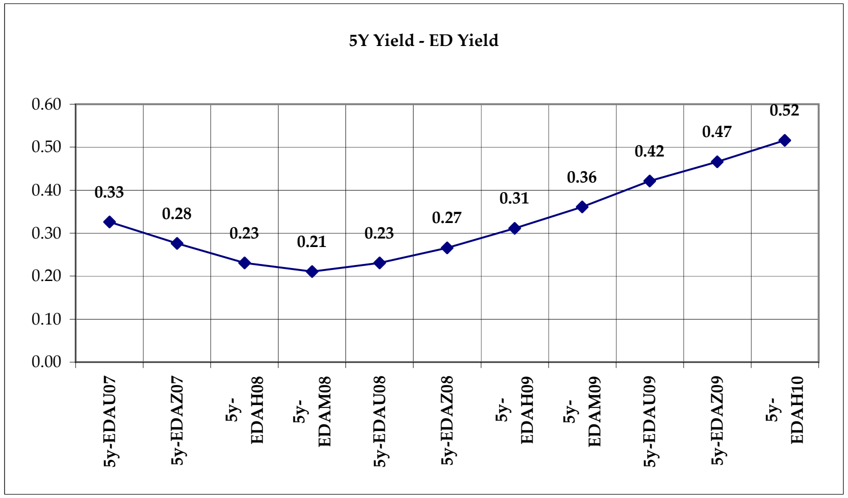
TERM TED: 5y vs Eurodollar Contracts

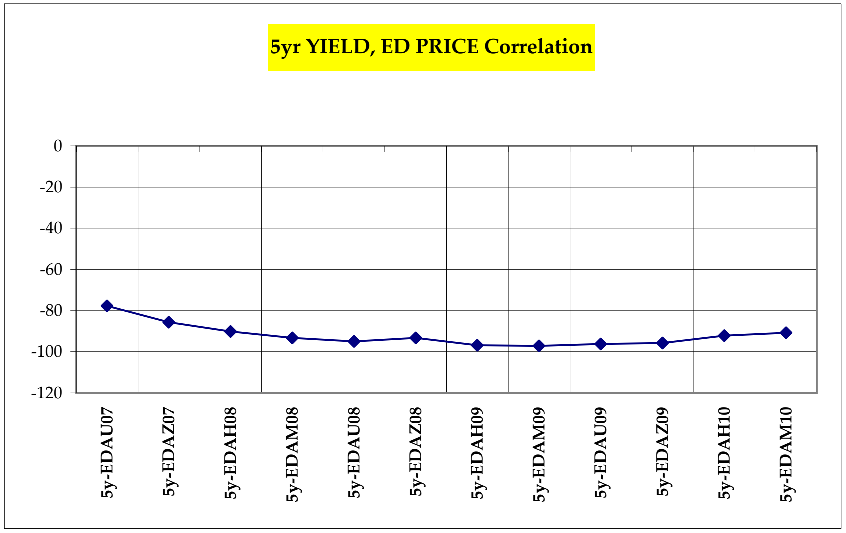
	5y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	4.26	0.33	5y-EDAU07	-77.795
EDAZ07	4.21	0.28	5y-EDAZ07	-85.606
EDAH08	4.16	0.23	5y-EDAH08	-90.182
EDAM08	4.14	0.21	5y-EDAM08	-93.225
EDAU08	4.16	0.23	5y-EDAU08	-95.036
EDAZ08	4.20	0.27	5y-EDAZ08	-93.225
EDAH09	4.24	0.31	5y-EDAH09	-96.808
EDAM09	4.29	0.36	5y-EDAM09	-97.194
EDAU09	4.35	0.42	5y-EDAU09	-96.168
EDAZ09	4.40	0.47	5y-EDAZ09	-95.700
EDAH10	4.45	0.52	5y-EDAH10	-92.149
EDAM10	4.48	0.55	5y-EDAM10	-90.773

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 measuring YIELD correlations.



	GE Duration as Fraction of year	5Y Duration	Spread Duration	
EDAU07	0.229	4.27	4.04	5y-EDAU07
EDAZ07	0.479	4.27	3.79	5y-EDAZ07
EDAH08	0.728	4.27	3.54	5y-EDAH08
EDAM08	0.977	4.27	3.29	5y-EDAM08
EDAU08	1.227	4.27	3.04	5y-EDAU08
EDAZ08	1.476	4.27	2.79	5y-EDAZ08
EDAH09	1.725	4.27	2.54	5y-EDAH09
EDAM09	1.975	4.27	2.29	5y-EDAM09
EDAU09	2.224	4.27	2.04	5y-EDAU09
EDAZ09	2.473	4.27	1.79	5y-EDAZ09
EDAH10	2.723	4.27	1.54	5y-EDAH10
EDAM10	2.972	4.27	1.29	5y-EDAM10

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



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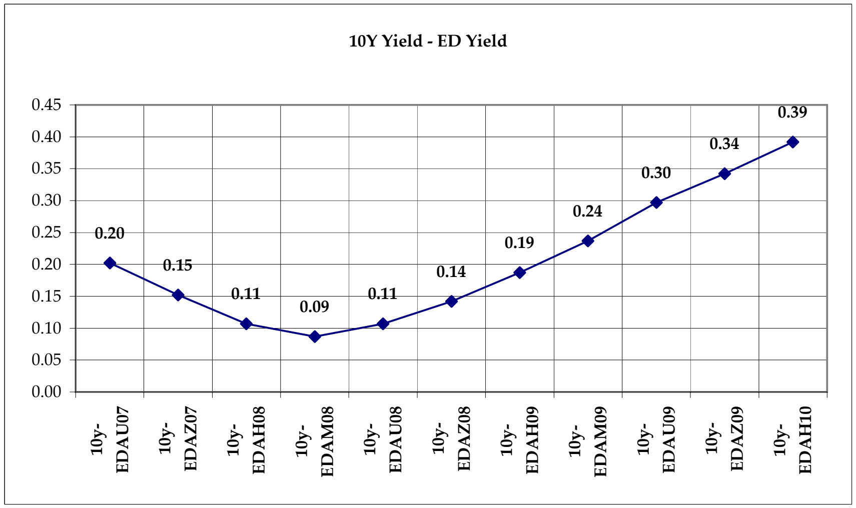
TERM TED: 10y vs Eurodollar Contracts

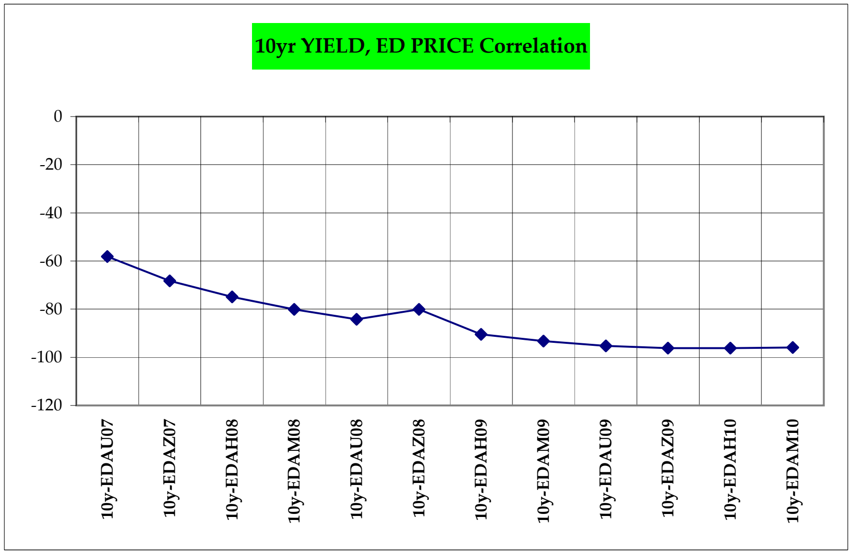
	10y			
	Spread Price	Spread Yield	Spread Name	Correlation* (percent)
EDAU07	4.26	0.20	10y-EDAU07	-58.103
EDAZ07	4.21	0.15	10y-EDAZ07	-68.283
EDAH08	4.16	0.11	10y-EDAH08	-74.894
EDAM08	4.14	0.09	10y-EDAM08	-80.053
EDAU08	4.16	0.11	10y-EDAU08	-84.192
EDAZ08	4.20	0.14	10y-EDAZ08	-80.053
EDAH09	4.24	0.19	10y-EDAH09	-90.483
EDAM09	4.29	0.24	10y-EDAM09	-93.305
EDAU09	4.35	0.30	10y-EDAU09	-95.213
EDAZ09	4.40	0.34	10y-EDAZ09	-96.223
EDAH10	4.45	0.39	10y-EDAH10	-96.224
EDAM10	4.48	0.42	10y-EDAM10	-95.863

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 measuring YIELD correlations.



	GE Duration as Fraction of year	10Y Duration	Spread Duration	
EDAU07	0.229	7.79	7.56	10y-EDAU07
EDAZ07	0.479	7.79	7.31	10y-EDAZ07
EDAH08	0.728	7.79	7.06	10y-EDAH08
EDAM08	0.977	7.79	6.82	10y-EDAM08
EDAU08	1.227	7.79	6.57	10y-EDAU08
EDAZ08	1.476	7.79	6.32	10y-EDAZ08
EDAH09	1.725	7.79	6.07	10y-EDAH09
EDAM09	1.975	7.79	5.82	10y-EDAM09
EDAU09	2.224	7.79	5.57	10y-EDAU09
EDAZ09	2.473	7.79	5.32	10y-EDAZ09
EDAH10	2.723	7.79	5.07	10y-EDAH10
EDAM10	2.972	7.79	4.82	10y-EDAM10

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



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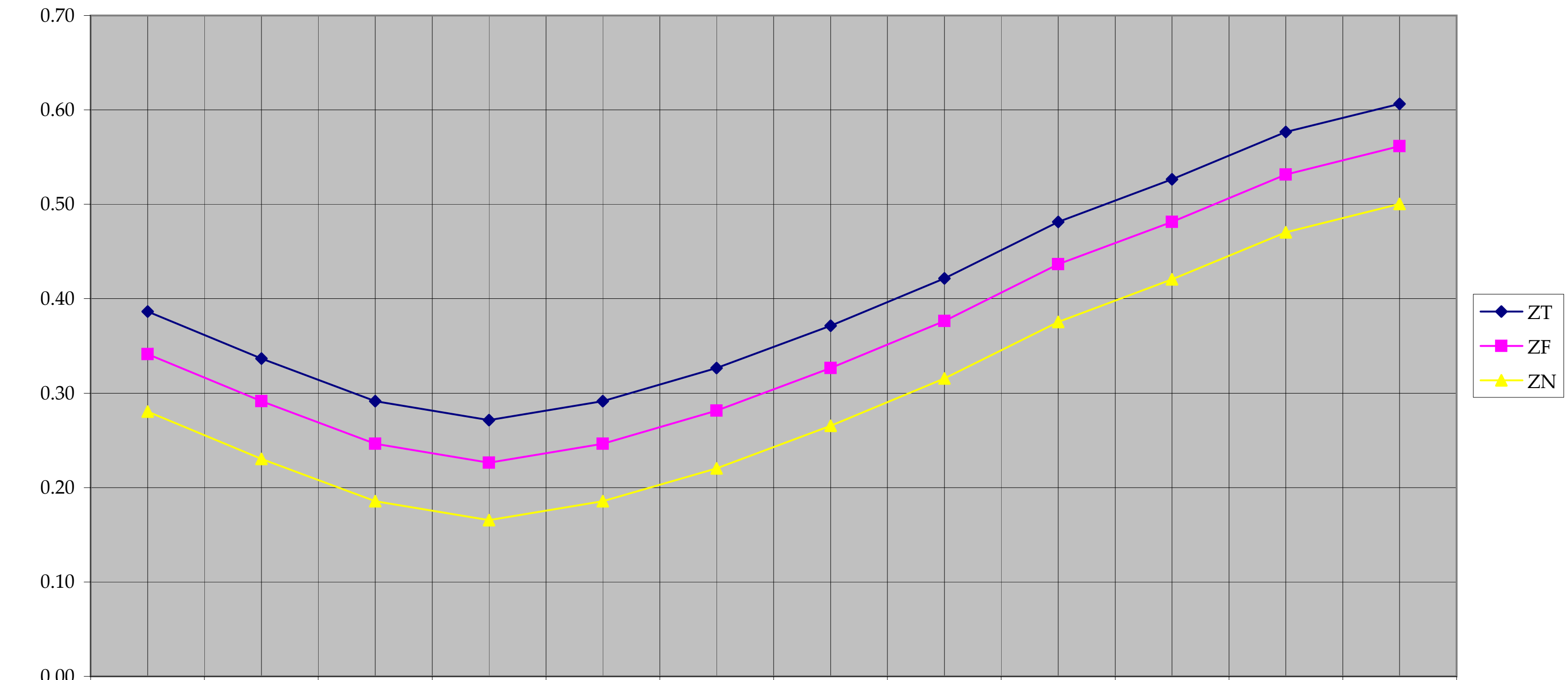
Dirty TED Curve

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.



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
ZT	0.39	0.34	0.29	0.27	0.29	0.33	0.37	0.42	0.48	0.53	0.58	0.61
ZF	0.34	0.29	0.25	0.23	0.25	0.28	0.33	0.38	0.44	0.48	0.53	0.56
ZN	0.28	0.23	0.19	0.17	0.19	0.22	0.27	0.32	0.38	0.42	0.47	0.50

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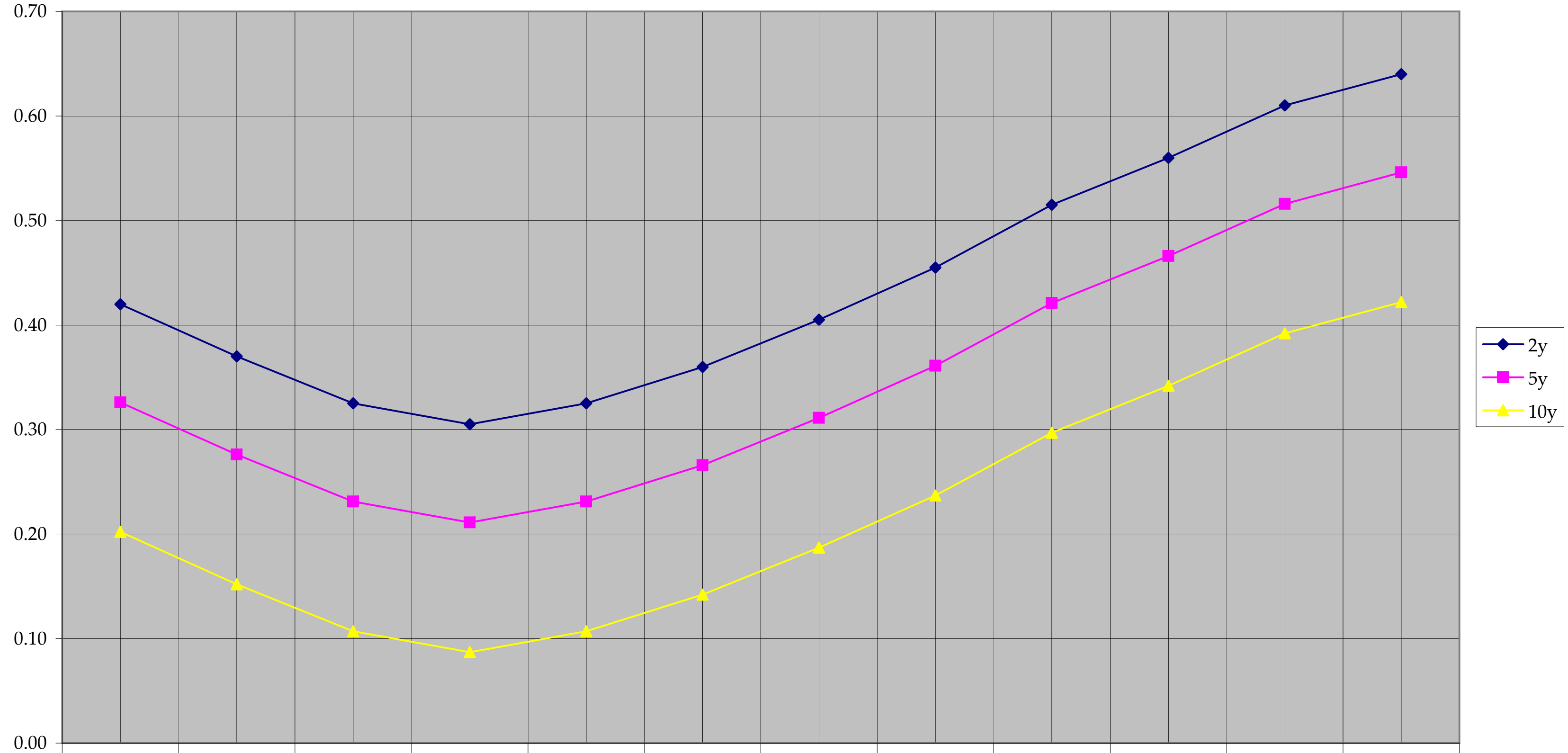
TED Curve

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.



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	0.42	0.37	0.32	0.30	0.32	0.36	0.40	0.46	0.51	0.56	0.61	0.64
5y	0.33	0.28	0.23	0.21	0.23	0.27	0.31	0.36	0.42	0.47	0.52	0.55
10y	0.20	0.15	0.11	0.09	0.11	0.14	0.19	0.24	0.30	0.34	0.39	0.42

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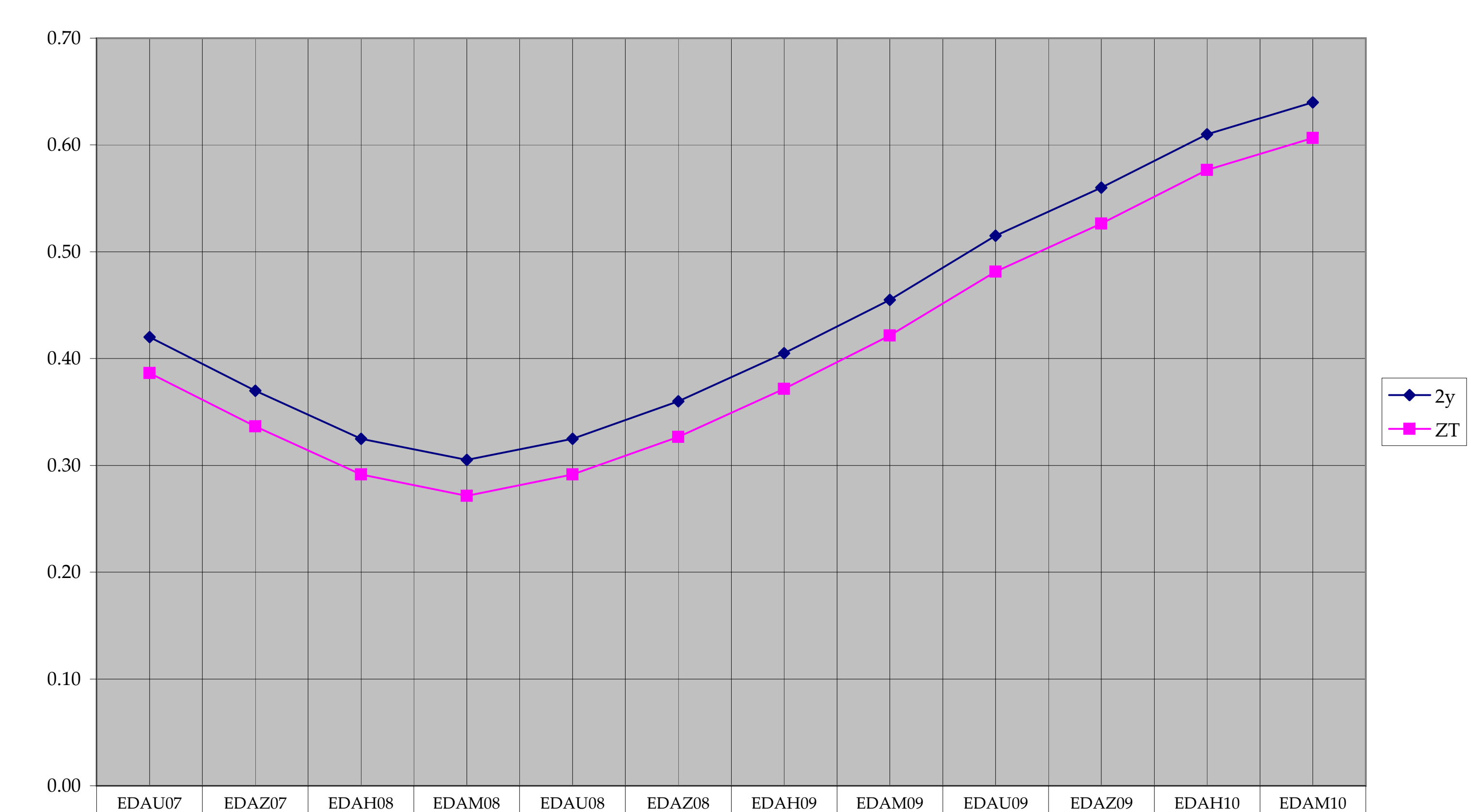
2y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
2y	0.42	0.37	0.32	0.30	0.32	0.36	0.40	0.46	0.51	0.56	0.61	0.64
ZT	0.39	0.34	0.29	0.27	0.29	0.33	0.37	0.42	0.48	0.53	0.58	0.61

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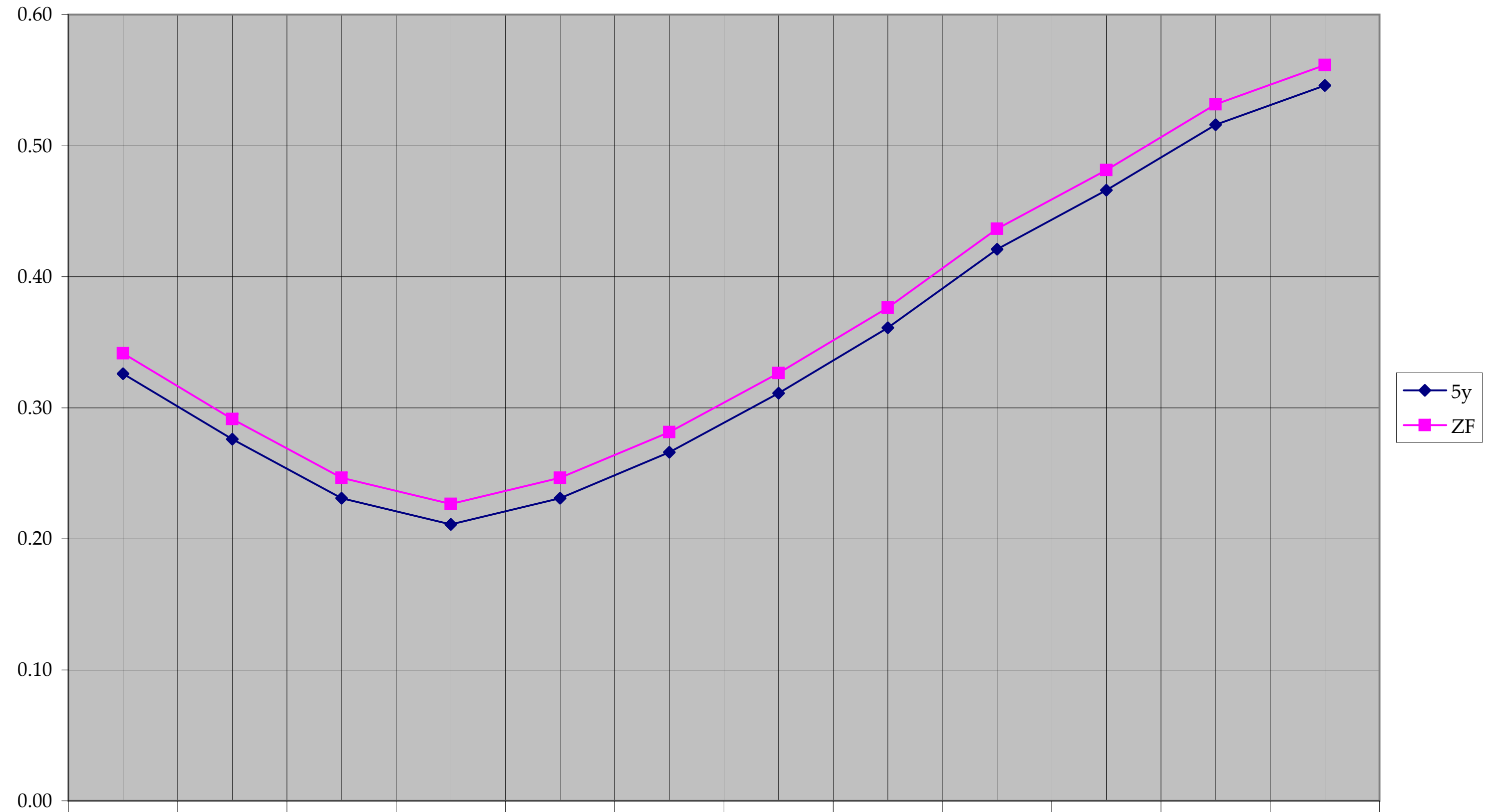
5y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
5y	0.33	0.28	0.23	0.21	0.23	0.27	0.31	0.36	0.42	0.47	0.52	0.55
ZF	0.34	0.29	0.25	0.23	0.25	0.28	0.33	0.38	0.44	0.48	0.53	0.56

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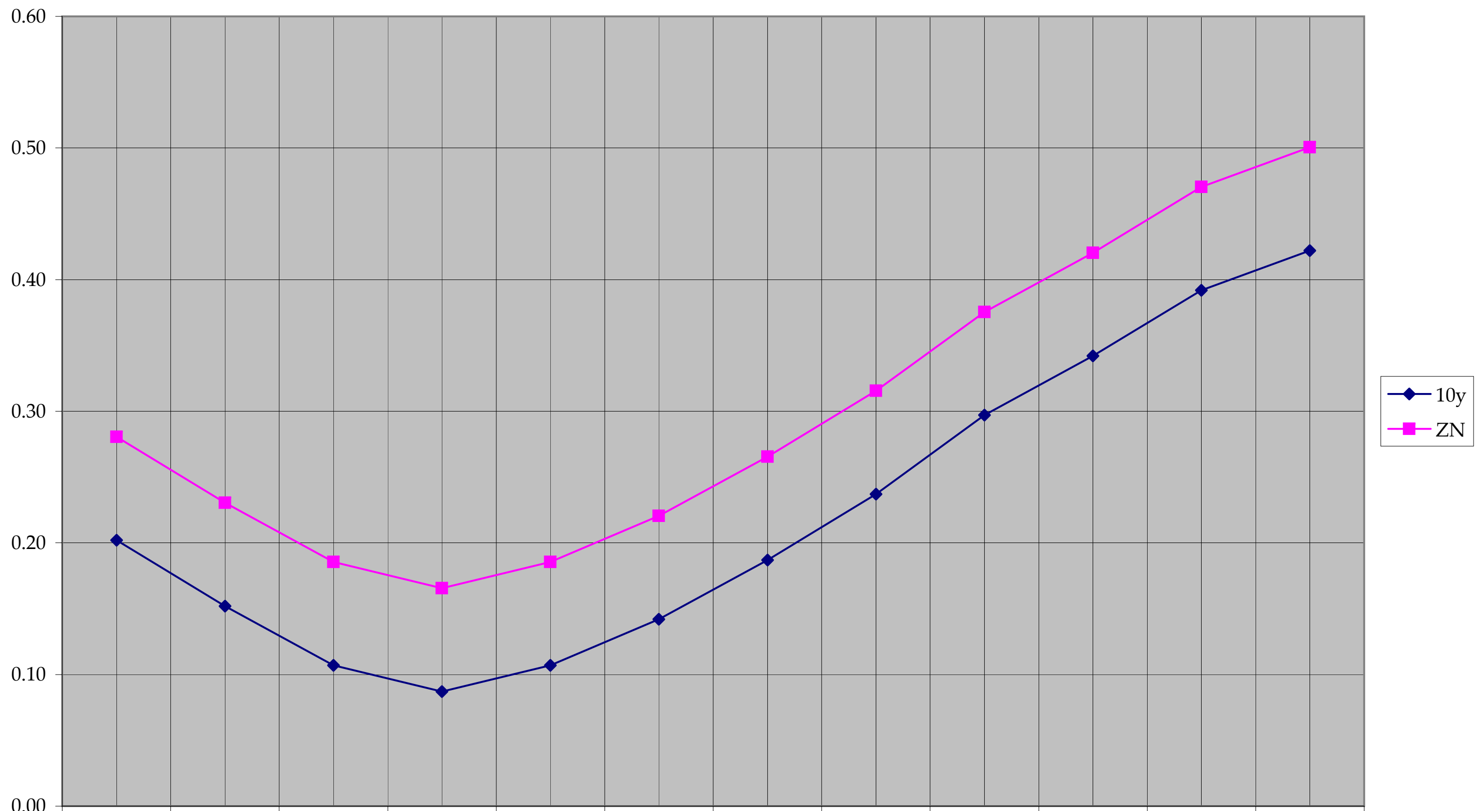
10y Basis TED Curve



	EDAU07	EDAZ07	EDAH08	EDAM08	EDAU08	EDAZ08	EDAH09	EDAM09	EDAU09	EDAZ09	EDAH10	EDAM10
10y	0.20	0.15	0.11	0.09	0.11	0.14	0.19	0.24	0.30	0.34	0.39	0.42
ZN	0.28	0.23	0.19	0.17	0.19	0.22	0.27	0.32	0.38	0.42	0.47	0.50

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