7/29/09 5:43 AM

The Morning Email: Eurodollar Correlations & R-Squared

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One contract may be correlating with another but does that mean there's causation. You must ask, "is one causing the other?"

That's what the R-Squared is for. Read R-Squared as follows: let's say, CLA and DJIA have an R-Squared of 0.44. That means there's a 44% chance that one is causing the market movement of the other.

You will always see a positive number for the R-Squared. If a correlation is a (negative) number, for example, (87.9) that means the two commodities are mirroring each other, not correlating. For example, today (which is 06/06/2007) the RBA and DJIA have a (87.9)% correlation. The R-Squared is 0.77. Therefore the two instruments are mirroring each other 88% of the time, and there's a 77% chance that one is causing the other.

Conditionally formatted cells:
If there's an R-Squared equal to or greater than 80%, then, the cell will turn BLUE. That tells us that there's an 80% chance that one of the instruments is causing the other to move. --Thanks, Jim

Want something added? Let me know: jgoulding@ghco.com

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7/29/09 5:43			EDs vs. Treasuries									Page 1	
	TU	Z3N	FV	TY	ZB	2Y Yld	3Y Yld	5Y Yld	7Y Yld	10Y Yld	30Y Yld		
EDAU09	-22.7	-21.6	-22.5	-21.7	-16.8	47.2	34.0	38.4	35.9	36.2	37.2	Correlations	Whites
EDAZ09	30.9	33.6	29.4	30.7	29.4	-5.1	-25.1	-17.1	-18.1	-16.4	-10.9		
EDAH10	72.7	75.9	70.1	71.0	64.7	-52.1	-70.0	-63.7	-62.4	-61.3	-53.4		
EDAM10	90.6	93.0	87.8	87.6	79.1	-77.0	-88.8	-85.2	-82.7	-81.4	-72.2		
EDAU10	93.1	95.2	90.4	90.4	81.8	-82.0	-91.5	-89.3	-86.9	-86.0	-77.6		Reds
EDAZ10	89.9	92.4	87.0	87.8	79.2	-77.9	-88.4	-85.3	-83.4	-82.9	-75.5		
EDAH11	84.8	88.0	82.8	84.5	76.9	-70.2	-82.9	-79.7	-78.5	-79.1	-73.0		
EDAM11	79.8	83.5	79.1	81.7	75.6	-62.3	-77.4	-74.4	-74.4	-75.9	-71.2		
EDAU11	77.9	82.0	78.7	81.8	77.1	-58.5	-75.5	-73.4	-74.2	-76.2	-72.6		Greens
EDAZ11	77.2	81.4	79.8	83.3	80.1	-56.2	-75.0	-74.3	-75.8	-78.4	-75.6		
EDAH12	77.3	81.6	81.4	85.1	83.1	-55.7	-75.6	-76.1	-78.2	-81.1	-79.0		
EDAM12	79.8	84.0	84.8	88.3	86.7	-58.6	-78.1	-79.6	-82.0	-84.8	-82.6		
EDAU12	82.0	85.6	88.3	91.8	91.8	-59.7	-79.4	-82.9	-86.1	-89.0	-87.2		Blues
EDAZ12	83.9	87.0	91.3	94.6	95.4	-62.0	-80.9	-86.0	-89.6	-92.4	-90.8		
EDAH13	83.1	85.9	91.4	94.9	97.0	-60.7	-79.5	-86.0	-90.4	-93.5	-92.8		
EDAM13	84.1	86.8	92.7	96.0	97.9	-63.1	-80.7	-87.7	-92.0	-94.8	-93.8		
EDAU13	83.3	85.8	92.4	95.7	98.5	-62.0	-79.6	-87.4	-92.1	-95.1	-94.7		Golds
EDAZ13	82.3	84.5	91.8	95.2	98.7	-60.8	-78.4	-86.9	-92.0	-95.1	-95.2		
EDAH14	80.3	82.2	90.3	93.9	98.4	-57.9	-75.8	-85.2	-90.7	-94.2	-95.1		
EDAM14	80.2	81.9	90.3	93.8	98.5	-58.7	-75.7	-85.6	-91.2	-94.4	-95.4		
EDAU09	5.2	4.7	5.1	4.7	2.8	22.3	11.6	14.8	12.9	13.1	13.8	R - Squared	Whites
EDAU10	9.6	11.3	8.6	9.4	8.6	0.3	6.3	2.9	3.3	2.7	1.2		
EDAU11	52.9	57.6	49.1	50.4	41.8	27.1	49.0	40.5	38.9	37.6	28.6		
EDAU12	82.0	86.4	77.0	76.7	62.6	59.2	78.8	72.7	68.3	66.3	52.2		
EDAU10	86.7	90.6	81.7	81.7	66.9	67.2	83.7	79.7	75.5	73.9	60.2		Reds
EDAZ10	80.8	85.3	75.7	77.0	62.7	60.6	78.1	72.7	69.5	68.8	57.0		
EDAH11	71.9	77.4	68.6	71.4	59.2	49.3	68.7	63.4	61.7	62.6	53.2		
EDAM11	63.6	69.7	62.6	66.8	57.2	38.8	59.9	55.4	55.4	57.6	50.8		
EDAU11	60.7	67.2	61.9	66.9	59.5	34.2	57.1	53.9	55.0	58.1	52.7		Greens
EDAZ11	59.6	66.3	63.6	69.3	64.1	31.6	56.3	55.1	57.4	61.5	57.2		
EDAH12	59.8	66.6	66.3	72.4	69.0	31.0	57.2	57.9	61.1	65.8	62.4		
EDAM12	63.8	70.6	71.9	77.9	75.2	34.3	61.0	63.4	67.2	72.0	68.2		
EDAU12	67.2	73.2	78.0	84.3	84.2	35.6	63.1	68.8	74.1	79.2	76.1		Blues
EDAZ12	70.5	75.8	83.3	89.4	91.0	38.5	65.4	73.9	80.4	85.4	82.4		
EDAH13	69.1	73.8	83.5	90.1	94.1	36.8	63.2	74.0	81.7	87.4	86.1		
EDAM13	70.8	75.4	86.0	92.1	95.9	39.8	65.1	76.9	84.7	89.8	88.0		
EDAU13	69.5	73.6	85.3	91.6	96.9	38.4	63.4	76.4	84.9	90.4	89.6		Golds
EDAZ13	67.8	71.3	84.2	90.6	97.4	36.9	61.5	75.6	84.6	90.4	90.7		
EDAH14	64.4	67.5	81.5	88.2	96.7	33.6	57.5	72.7	82.3	88.7	90.4		
EDAM14	64.4	67.1	81.6	88.1	97.0	34.4	57.4	73.2	83.1	89.2	91.0		

EDs vs. Index Futures, Energy, Metals, & German Bond Futures

	Mini			Nymex	Gold	Eurex				
	S&Ps	Dow (5$)	Nasdaq	Crude	Futures	Bund	Bobl	Schatz	Correlations	
EDAU09	57.8	60.1	61.8	53.1	8.1	-41.1	-49.8	-67.3		Whites
EDAZ09	39.6	46.6	43.2	43.1	40.7	-14.6	-17.7	-30.7		
EDAH10	0.9	9.0	3.1	8.9	43.6	24.1	24.9	16.9		
EDAM10	-30.9	-23.9	-31.0	-20.5	32.9	50.7	53.2	49.7		
EDAU10	-41.1	-34.8	-41.6	-31.3	25.7	59.0	62.2	59.9		Reds
EDAZ10	-32.8	-26.5	-33.5	-24.4	28.8	53.6	57.0	53.7		
EDAH11	-22.7	-16.1	-23.1	-23.1	29.6	47.9	50.8	44.6		
EDAM11	-14.6	-7.7	-14.5	-11.7	28.5	43.8	46.1	37.2		
EDAU11	-12.8	-5.3	-11.7	-11.5	25.7	43.8	45.7	35.2		Greens
EDAZ11	-14.0	-6.1	-12.2	-14.4	22.4	46.5	48.1	36.4		
EDAH12	-16.8	-8.5	-14.4	-18.2	19.6	49.8	51.4	39.1		
EDAM12	-23.3	-14.9	-20.7	-24.5	15.6	55.5	56.9	44.8		
EDAU12	-32.3	-24.2	-29.5	-35.0	7.0	64.3	65.3	52.6		Blues
EDAZ12	-41.4	-33.5	-38.6	-44.5	-0.5	71.9	72.7	60.2		
EDAH13	-46.3	-38.7	-43.3	-51.0	-8.1	76.7	77.1	64.2		
EDAM13	-50.3	-42.9	-47.5	-54.2	-9.5	79.3	79.8	67.5		

	Mini			Nymex		Eurex				
	S&Ps	Dow (5$)	Nasdaq	Crude	Gold	Bund	Bobl	Schatz	R - Squared	
EDAU09	33.4	36.1	38.2	28.2	0.7	16.9	24.8	45.3		Whites
EDAU10	15.7	21.7	18.7	18.6	16.6	2.1	3.1	9.4		
EDAU11	0.0	0.8	0.1	0.8	19.0	5.8	6.2	2.9		
EDAU12	9.6	5.7	9.6	4.2	10.8	25.7	28.3	24.7		
EDAU10	16.9	12.1	17.3	9.8	6.6	34.8	38.6	35.9		Reds
EDAZ10	10.7	7.0	11.2	6.0	8.3	28.7	32.5	28.8		
EDAH11	5.2	2.6	5.4	5.4	8.8	22.9	25.8	19.9		
EDAM11	2.1	0.6	2.1	1.4	8.1	19.2	21.3	13.8		
EDAU11	1.6	0.3	1.4	1.3	6.6	19.2	20.9	12.4		Greens
EDAZ11	2.0	0.4	1.5	2.1	5.0	21.7	23.2	13.2		
EDAH12	2.8	0.7	2.1	3.3	3.8	24.8	26.4	15.3		
EDAM12	5.4	2.2	4.3	6.0	2.4	30.8	32.4	20.1		
EDAU12	10.5	5.8	8.7	12.2	0.5	41.3	42.6	27.7		Blues
EDAZ12	17.1	11.2	14.9	19.8	0.0	51.7	52.8	36.3		
EDAH13	21.4	15.0	18.8	26.0	0.6	58.8	59.4	41.2		
EDAM13	25.3	18.4	22.5	29.4	0.9	62.9	63.7	45.5		

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EDs vs. Specialty Spreads

Read the last page

Correlations

	EURUSD	EURJPY	USDJPY	ZT	ZF	ZN	ZB	2Y Yld	5Y Yld	10Y Yld	30Y Yld	Spread * Ratio
ZF - ED7	3.4	-71.3	-81.7	75.2	82.3	80.4	79.3		81.8	78.5	66.8	10:12
5yr - ED7	-14.8	-76.2	-76.9	68.8	74.3	70.1	71.1		81.4	76.4	68.4	1:12

This page will be updated with spreads as time permits. Always feel free to send me a spread you'd like to follow and I'll enter it on this page.

R - Squared

ZF - ED7	0.1	50.8	66.7	56.5	67.7	64.6	62.8	#VALUE!	66.9	61.7	44.7
5yr - ED7	2.2	58.0	59.1	47.3	55.2	49.1	50.5	#VALUE!	66.3	58.3	46.8
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Correlations

	Cash Markets						US $	Futures				
	EURUSD	EURJPY	EURGBP	EURCHF	USDJPY	GBPUSD	Index	US Dollar	Euro	Yen	Swiss	Canadian
EDAU09	44.9	52.0	45.3	49.3	32.7	10.9	-56.7	-45.7	32.4	-31.3	-3.9	53.3
EDAZ09	78.7	34.1	50.9	2.0	-5.3	38.7	-72.6	-61.2	58.4	7.3	48.6	34.5
EDAH10	79.9	-1.0	43.9	-45.4	-44.6	45.0	-58.7	-47.0	54.7	47.9	76.7	-2.7
EDAM10	66.1	-26.6	31.6	-70.6	-65.5	40.8	-34.8	-23.7	39.8	69.1	80.3	-34.0
EDAU10	57.8	-36.4	27.8	-76.6	-71.8	35.9	-25.2	-14.0	31.2	75.8	77.6	-43.6
EDAZ10	62.4	-30.4	30.4	-71.1	-67.4	38.4	-32.8	-21.5	35.6	72.4	78.5	-35.4
EDAH11	67.2	-23.8	33.6	-63.5	-62.5	40.6	-40.7	-28.9	38.8	68.2	76.9	-25.7
EDAM11	70.1	-19.2	36.3	-56.6	-58.9	41.5	-46.0	-33.6	39.7	65.0	73.6	-18.0
EDAU11	69.3	-20.0	37.8	-55.0	-59.4	39.6	-45.2	-32.6	37.0	65.1	70.2	-16.5
EDAZ11	67.1	-23.0	35.5	-55.4	-61.4	39.1	-41.6	-29.4	33.1	66.5	66.8	-17.8
EDAH12	64.2	-26.8	32.3	-57.2	-64.1	38.4	-36.9	-25.3	29.1	68.4	64.1	-20.6
EDAM12	60.8	-32.9	29.8	-61.5	-69.0	36.9	-30.9	-19.2	24.6	72.8	62.7	-27.1
EDAU12	55.2	-40.9	26.8	-65.1	-74.9	33.7	-21.2	-8.7	15.9	78.2	57.6	-36.4
EDAZ12	49.0	-48.8	23.5	-69.2	-80.3	30.2	-11.5	1.3	7.9	83.0	53.3	-45.7
EDAH13	43.3	-53.7	22.3	-69.6	-82.7	25.8	-4.3	9.0	0.3	85.4	47.4	-50.8
EDAM13	40.9	-57.2	19.3	-72.5	-85.2	25.6	-0.8	12.2	-1.7	87.5	47.2	-54.6

R - Squared

	Cash Markets						US $	Futures				
	EURUSD	EURJPY	EURGBP	EURCHF	USDJPY	GBPUSD	Index	US Dollar	Euro	Yen	Swiss	Canadian
EDAU09	20.2	27.0	20.5	24.3	10.7	1.2	32.1	20.8	10.5	9.8	0.2	28.4
EDAU10	62.0	11.6	26.0	0.0	0.3	14.9	52.8	37.4	34.1	0.5	23.7	11.9
EDAU11	63.8	0.0	19.3	20.6	19.9	20.3	34.5	22.1	29.9	23.0	58.8	0.1
EDAU12	43.7	7.1	10.0	49.8	42.9	16.7	12.1	5.6	15.8	47.7	64.4	11.5
EDAU10	33.4	13.3	7.7	58.7	51.6	12.9	6.3	2.0	9.7	57.5	60.2	19.0
EDAZ10	38.9	9.2	9.2	50.5	45.5	14.7	10.8	4.6	12.7	52.4	61.7	12.5
EDAH11	45.1	5.6	11.3	40.4	39.1	16.5	16.6	8.4	15.1	46.5	59.1	6.6
EDAM11	49.2	3.7	13.2	32.1	34.7	17.2	21.2	11.3	15.8	42.2	54.1	3.2
EDAU11	48.0	4.0	14.3	30.2	35.3	15.7	20.4	10.6	13.7	42.4	49.3	2.7
EDAZ11	45.1	5.3	12.6	30.7	37.7	15.3	17.3	8.6	11.0	44.2	44.6	3.2
EDAH12	41.3	7.2	10.4	32.7	41.1	14.8	13.6	6.4	8.5	46.7	41.1	4.2
EDAM12	37.0	10.8	8.9	37.9	47.6	13.6	9.6	3.7	6.0	53.0	39.3	7.4
EDAU12	30.5	16.7	7.2	42.4	56.1	11.4	4.5	0.8	2.5	61.1	33.1	13.3
EDAZ12	24.0	23.8	5.5	47.9	64.4	9.1	1.3	0.0	0.6	68.9	28.4	20.8
EDAH13	18.7	28.9	5.0	48.5	68.3	6.7	0.2	0.8	0.0	72.9	22.5	25.8
EDAM13	16.7	32.7	3.7	52.5	72.7	6.5	0.0	1.5	0.0	76.6	22.3	29.8

EDs vs. ED Pack & Bundles

Read the last page

Correlations

	Packs				Bundles				
	Wht Pak	Red Pak	Green Pak	Blue Pak	2yr	3yr	4yr	5yr - 1	5yr -2
EDAU09	41.0	-2.5	12.1	-2.0	9.6	10.9	6.7	1.9	-2.3
EDAZ09	85.5	52.3	64.1	47.2	62.9	63.9	59.5	53.6	47.9
EDAH10	99.6	89.9	92.7	79.7	94.8	94.6	91.4	94.8	85.0
EDAM10	90.7	98.8	93.9	87.6	98.9	97.4	96.0	93.5	96.3
EDAU10	83.5	98.6	91.5	87.8	96.8	95.1	94.5	93.0	96.7
EDAZ10	85.7	99.7	93.6	87.4	98.2	96.9	95.5	93.3	96.0
EDAH11	89.2	99.8	96.4	87.8	99.3	98.7	97.0	94.1	95.0
EDAM11	91.5	98.6	98.1	88.5	99.0	99.4	97.6	94.5	93.6
EDAU11	92.4	97.4	99.2	90.3	98.3	99.6	98.4	95.6	94.1
EDAZ11	91.9	96.0	99.9	92.8	97.1	99.2	99.0	97.0	94.4
EDAH12	90.5	94.4	99.9	94.9	95.6	98.3	99.1	97.8	95.1
EDAM12	88.7	94.1	99.5	96.8	94.8	97.7	99.3	98.9	96.4
EDAU12	84.7	91.9	97.7	99.1	92.1	95.4	98.5	99.6	98.3
EDAZ12	80.0	89.5	94.9	100.0	89.0	92.4	96.8	99.1	96.0
EDAH13	75.4	86.4	92.1	99.8	85.4	89.2	94.5	97.8	94.4
EDAM13	73.0	85.4	90.6	99.5	84.0	87.7	93.4	97.1	95.8

R - Squared

	Packs				Bundles				
	Wht Pak	Red Pak	Green Pak	Blue Pak	2yr	3yr	4yr	5yr - 1	5yr -2
EDAU09	16.8	0.1	1.5	0.0	0.9	1.2	0.5	0.0	0.1
EDAU10	73.1	27.3	41.1	22.3	39.5	40.9	35.4	28.7	22.9
EDAU11	99.2	80.9	85.9	63.5	89.9	89.5	83.5	89.9	72.3
EDAU12	82.3	97.6	88.2	76.7	97.8	94.9	92.1	87.3	92.8
EDAU10	69.8	97.3	83.7	77.1	93.6	90.5	89.3	86.5	93.5
EDAZ10	73.5	99.4	87.6	76.4	96.4	93.8	91.3	87.0	92.2
EDAH11	79.6	99.7	92.8	77.1	98.6	97.5	94.0	88.5	90.2
EDAM11	83.7	97.2	96.3	78.2	98.0	98.8	95.3	89.3	87.6
EDAU11	85.4	94.8	98.5	81.5	96.7	99.1	96.7	91.4	88.5
EDAZ11	84.5	92.1	99.8	86.1	94.4	98.4	97.9	94.0	89.2
EDAH12	81.9	89.0	99.7	90.0	91.3	96.7	98.1	95.7	90.4
EDAM12	78.7	88.5	98.9	93.7	89.9	95.5	98.7	97.8	93.0
EDAU12	71.8	84.4	95.4	98.2	84.8	91.0	97.0	99.1	96.5
EDAZ12	63.9	80.0	90.0	99.9	79.1	85.4	93.6	98.2	92.1
EDAH13	56.8	74.7	84.9	99.6	72.9	79.6	89.4	95.7	89.2
EDAM13	53.3	72.9	82.1	99.1	70.5	76.9	87.3	94.3	91.8

EDs vs. ED Calendar Spreads

Read the last page

Correlations

	WR1	WR2	WR3	WR4	WG1	WG2	WG3	WG4	RG1	RG2	RG3	RG4
EDAU09	30.7	-2.5	12.1	-2.0	3.7	10.2	10.7	-16.8	-64.1	-61.8	-37.2	-2.6
EDAZ09	-26.6	52.3	64.1	47.2	-51.8	-43.6	-43.5	-54.9	-72.2	-64.8	-50.7	-25.6
EDAH10	-75.1	89.9	92.7	79.7	-88.5	-82.6	-81.5	-70.0	-52.0	-40.5	-38.3	-32.0
EDAM10	-94.6	98.8	93.9	87.6	-95.8	-92.7	-91.0	-64.9	-24.2	-13.1	-20.1	-29.9
EDAU10	-98.3	98.6	91.5	87.8	-95.7	-93.9	-92.0	-62.3	-15.0	-3.8	-13.4	-28.1
EDAZ10	-97.0	99.7	93.6	87.4	-97.6	-95.3	-93.1	-65.1	-23.1	-9.3	-15.4	-25.7
EDAH11	-93.5	99.8	96.4	87.8	-98.9	-96.3	-94.1	-70.6	-35.0	-20.0	-22.2	-26.8
EDAM11	-89.0	98.6	98.1	88.5	-98.9	-96.3	-94.4	-76.1	-45.8	-30.9	-30.5	-30.3
EDAU11	-86.5	97.4	99.2	90.3	-98.6	-96.4	-95.0	-80.7	-50.8	-38.1	-38.1	-36.6
EDAZ11	-85.0	96.0	99.9	92.8	-98.0	-96.6	-96.1	-85.1	-53.2	-43.5	-45.7	-44.5
EDAH12	-84.0	94.4	99.9	94.9	-97.2	-96.5	-96.9	-88.2	-53.3	-46.7	-51.6	-51.8
EDAM12	-85.3	94.1	99.5	96.8	-96.8	-96.9	-97.7	-88.8	-49.3	-44.8	-52.5	-55.9
EDAU12	-85.1	91.9	97.7	99.1	-94.7	-96.1	-97.6	-89.6	-44.1	-43.3	-55.0	-62.3
EDAZ12	-85.1	89.5	94.9	100.0	-92.1	-94.7	-96.7	-88.4	-37.3	-39.4	-54.7	-66.3
EDAH13	-83.4	86.4	92.1	99.8	-89.3	-92.9	-95.3	-88.0	-34.1	-38.3	-55.5	-69.1
EDAM13	-83.7	85.4	90.6	99.5	-88.1	-92.1	-94.6	-86.7	-30.3	-35.4	-54.2	-69.9

R - Squared

	WR1	WR2	WR3	WR4	WG1	WG2	WG3	WG4	RG1	RG2	RG3	RG4
EDAU09	9.4	0.1	1.5	0.0	0.1	1.0	1.1	2.8	41.0	38.2	13.8	0.1
EDAU10	7.1	27.3	41.1	22.3	26.9	19.0	18.9	30.1	52.2	41.9	25.7	6.6
EDAU11	56.4	80.9	85.9	63.5	78.4	68.1	66.4	49.0	27.0	16.4	14.7	10.2
EDAU12	89.5	97.6	88.2	76.7	91.8	85.9	82.9	42.2	5.9	1.7	4.0	9.0
EDAU10	96.6	97.3	83.7	77.1	91.6	88.2	84.7	38.8	2.3	0.1	1.8	7.9
EDAZ10	94.1	99.4	87.6	76.4	95.3	90.9	86.7	42.4	5.3	0.9	2.4	6.6
EDAH11	87.3	99.7	92.8	77.1	97.8	92.8	88.5	49.8	12.3	4.0	4.9	7.2
EDAM11	79.2	97.2	96.3	78.2	97.8	92.8	89.0	58.0	20.9	9.6	9.3	9.2
EDAU11	74.9	94.8	98.5	81.5	97.1	92.8	90.3	65.1	25.8	14.5	14.5	13.4
EDAZ11	72.2	92.1	99.8	86.1	96.1	93.3	92.4	72.4	28.3	18.9	20.8	19.8
EDAH12	70.6	89.0	99.7	90.0	94.4	93.1	93.9	77.8	28.4	21.8	26.6	26.9
EDAM12	72.7	88.5	98.9	93.7	93.7	93.8	95.4	78.8	24.3	20.1	27.6	31.2
EDAU12	72.4	84.4	95.4	98.2	89.7	92.3	95.3	80.3	19.5	18.8	30.3	38.9
EDAZ12	72.4	80.0	90.0	99.9	84.9	89.6	93.5	78.2	13.9	15.5	30.0	44.0
EDAH13	69.5	74.7	84.9	99.6	79.8	86.3	90.8	77.5	11.6	14.7	30.9	47.8
EDAM13	70.0	72.9	82.1	99.1	77.7	84.7	89.5	75.2	9.2	12.6	29.4	48.9

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Correlations

	Packs				Bundles				
	Wht Pak	**Red Pak**	**Green Pak**	**Blue Pak**	**2yr**	**3yr**	**4yr**	**5yr - 1**	**5yr -2**
WR1	-72.5	-95.1	-85.5	-84.6	-91.0	-89.2	-89.4	-88.8	-93.9
WR2	-65.4	-92.8	-81.8	-80.9	-87.4	-85.5	-85.6	-85.2	-89.7
WR3	-69.1	-94.6	-86.5	-82.8	-89.7	-89.0	-88.6	-87.5	-89.7
WR4	-74.7	-78.8	-86.4	-72.5	-79.5	-83.4	-81.3	-77.7	-72.5
WG1	-74.7	-98.6	-98.0	-91.4	-97.5	-98.5	-98.0	-96.1	-96.0
WG2	-80.1	-96.3	-96.9	-94.3	-94.1	-96.2	-97.4	-97.0	-96.2
WG3	-78.9	-94.2	-96.8	-96.4	-92.2	-95.1	-97.4	-97.8	-96.6
WG4	-68.3	-69.3	-86.1	-88.5	-70.7	-78.4	-83.3	-78.4	-79.3
RG1	-52.1	-30.4	-51.8	-36.5	-37.2	-44.3	-42.5	-44.3	-35.2
RG2	-41.1	-16.5	-43.5	-39.2	-23.8	-33.1	-35.8	-35.9	-28.9
RG3	-37.7	-20.7	-47.4	-55.1	-26.0	-36.1	-43.2	-47.3	-40.2
RG4	-30.8	-28.0	-47.7	-67.2	-29.4	-38.1	-48.7	-56.5	-51.5

R - Squared

	Packs				Bundles				
	Wht Pak	**Red Pak**	**Green Pak**	**Blue Pak**	**2yr**	**3yr**	**4yr**	**5yr - 1**	**5yr -2**
WR1	52.5	90.4	73.1	71.6	82.9	79.6	79.9	78.9	88.3
WR2	42.8	86.2	66.9	65.4	76.3	73.1	73.3	72.5	80.4
WR3	47.7	89.5	74.9	68.5	80.5	79.2	78.5	76.6	80.5
WR4	55.8	62.0	74.7	52.6	63.3	69.5	66.1	60.4	52.6
WG1	55.8	97.2	96.0	83.5	95.1	97.0	96.1	92.3	92.2
WG2	64.2	92.7	94.0	88.8	88.5	92.5	94.8	94.1	92.5
WG3	62.3	88.7	93.8	92.9	85.0	90.4	94.8	95.7	93.3
WG4	46.6	48.0	74.2	78.4	49.9	61.4	69.5	61.4	62.9
RG1	27.2	9.2	26.9	13.4	13.8	19.6	18.1	19.6	12.4
RG2	16.9	2.7	19.0	15.4	5.7	11.0	12.8	12.9	8.3
RG3	14.2	4.3	22.4	30.3	6.8	13.0	18.7	22.4	16.2
RG4	9.5	7.8	22.7	45.2	8.7	14.5	23.7	31.9	26.5

Correlations

	Packs				Bundles				
	Wht Pak	**Red Pak**	**Green Pak**	**Blue Pak**	**2yr**	**3yr**	**4yr**	**5yr - 1**	**5yr -2**
FCAL1	-85.3	-99.6	-94.8	-90.0	-98.0	-97.3	-96.7	-95.1	-97.4
FCAL2	-84.8	-99.6	-95.6	-90.5	-97.9	-97.6	-97.6	-95.4	-97.0
FCAL3	-87.7	-99.1	-98.3	-92.1	-98.3	-99.1	-98.6	-96.8	-96.5
FCAL4	-90.1	-92.2	-99.3	-92.3	-96.8	-98.9	-98.6	-96.6	-94.0
FCAL21	-90.1	-92.2	-99.3	-93.6	-93.8	-97.1	-97.8	-96.5	-94.3
FCAL22	-86.9	-89.5	-98.2	-96.8	-90.9	-95.0	-97.5	-97.7	-92.8
FCAL23	-82.4	-87.0	-96.0	-98.6	-96.0	-92.3	-96.2	-96.0	-93.3
FCAL24	-78.6	-86.5	-94.0	-99.6	-86.4	-90.6	-95.4	-86.4	-95.9

R - Squared

	Packs				Bundles				
	Wht Pak	**Red Pak**	**Green Pak**	**Blue Pak**	**2yr**	**3yr**	**4yr**	**5yr - 1**	**5yr -2**
FCAL1	72.8	99.2	89.8	81.0	96.1	94.7	93.6	90.3	94.8
FCAL2	71.9	99.3	91.5	81.9	95.8	95.3	95.3	91.1	94.2
FCAL3	76.9	98.1	96.6	84.8	96.6	98.2	97.3	93.7	93.2
FCAL4	81.2	85.0	98.7	85.3	93.6	97.8	97.2	93.3	88.4
FCAL21	81.2	85.0	98.7	87.7	88.0	94.4	95.7	93.2	88.9
FCAL22	75.5	80.1	96.4	93.7	82.6	90.3	95.0	95.4	86.1
FCAL23	67.9	75.6	92.2	97.2	92.2	85.2	92.6	92.2	87.1
FCAL24	61.8	74.8	88.4	99.3	74.6	82.1	91.0	74.6	91.9

Concerning spread ratios : Don't use these ratios unless you talk to me. Or, use at your own risk. However, if you decide to use them and don't take care of convexity bias when you increase your size, you're doomed.

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Concerning Packs: Formula for packs = ((EDAA9+EDAA10+EDAA11+EDAA12)/4)

Where the number in the equation , ie EDAA9, represents the 9th Eurodollar contract **not** including serials. The 9th contract is always GREEN 1.

EDAA12 represent GREEN 4 or the 12th Eurodollar contract, etc.

BUNDLES are priced the same way. HOWEVER, there are two-types of 5y bundles. I've labeled them 5y -1 and 5y-2. The first is priced like all the other bundles. The 2nd is the 5yr bundle futures contract that exires quarterly (symbol = Y5 on CQG). This 2nd contract trades more than the regular 5yr bundles.

CALENDAR SPREADS:
WR1 = White 1 contract and the RED 1 contract.
WG1 = White 1 contract and the Green 1 contract
RG1 = GREEN 1 contract and the RED 1 contract
The fornula used to determine the yield is 100-longer duration minus 100-shorter duration

CALENDAR FLYs
FCAL1 = White 1, Red 1 , Green 1
FCAL2 = White 2, Red 2 , Green 2
FCAL3 = White 3, Red 3 , Green 3
FCAL4 = White 4, Red 4 , Green 4
FCAL21 = RED 1, Green 1 , Blue 1
FCAL22 = RED 2, Green 2 , Blue 2
FCAL23 = RED 3, Green 3 , Blue 3
FCAL24 = RED 4, Green 4 , Blue 4
The fornula used to determine the calendar flys is :
(100-F.EDAA?9)+((100-F.EDAA?5)*2)-(100-F.EDAA?1)