
Commercial Line Price Monitoring

CAS In Focus Seminar:
The Underwriting Cycle
Oct 5th, 6th 2009

Agenda

- Pricing Levers
- Monitoring
 - Must Haves
 - Challenges
 - Resolution
- Price Change through the Cycle
- Conclusions

Typical Pricing Levers

- Company / Underwriting Tier
 - Multiple Underwriting Companies
 - Multiple Underwriting Tiers within a Company
 - May have both
 - Proprietary Rate Structure
 - Base Rate varies by Company based upon a uniform Company Deviation Factor
 - Underwriting Tier Factor within Company
 - ISO Loss Costs
 - LCM by Company
 - Tier Factor within Company
- Discretionary Credit/Debit
 - Individual Risk Premium Modification
 - Schedule Credit

Commercial Lines Price Monitoring

Price Monitoring: Company Utilization

Microsoft Excel - Book1

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A3 evaluated as of August, 2009

COMPANY UTILIZATION - NEW BUSINESS WRITTEN PREMIUM1
Line Of Business
evaluated as of August, 2009
New Business Written Premium1

	2008 through August New Business					2009 through August New Business					2008 YTD New Bus Company Index ³	2009 YTD New Bus Company Index	Change
	Superior	Super-Preferred	Preferred	Standard	Debit	Superior	Super-Preferred	Preferred	Standard	Debit			
Branch 1		69.9%	21.7%	8.4%			64.8%	21.8%	13.4%		0.957	0.969	1.3%
Branch 2		65.7%	15.2%	19.1%			47.1%	31.4%	21.6%		0.854	0.874	2.3%
Branch 3		6.2%	74.7%	19.1%			48.4%	40.2%	11.4%	0.1%	0.927	0.891	-3.9%
Branch 4		23.8%	64.9%	11.2%			54.2%	41.7%	4.1%		0.927	0.886	-4.4%
Region A		33.9%	52.6%	13.5%			55.8%	33.6%	10.6%	0.0%	0.916	0.914	-0.2%
Branch 5	0.1%		4.8%	95.1%	0.1%			2.6%	97.0%	0.4%	1.002	1.008	0.6%
Branch 6		12.1%	59.9%	28.0%			74.9%	19.0%	5.8%	0.3%	1.002	0.935	-6.7%
Branch 7		4.6%	44.5%	41.5%	9.5%		53.0%	10.0%	36.9%		1.035	0.966	-6.7%
Region B	0.0%	2.7%	23.8%	70.0%	3.4%		32.4%	8.1%	59.2%	0.3%	1.014	0.979	-3.4%
Branch 8	34.4%	15.9%	25.1%	9.3%	15.3%	36.4%	29.8%	28.4%	5.3%		0.869	0.818	-5.9%
Branch 9	44.0%	9.5%	30.6%	13.8%	2.1%	18.3%	18.4%	36.0%	27.2%	0.1%	0.834	0.889	6.6%
Branch 10	35.0%	21.1%	29.8%	13.2%	0.8%	39.6%	35.8%	13.5%	7.8%	3.3%	0.835	0.828	-0.8%
Branch 11	16.8%	27.3%	37.1%	6.9%	11.9%	47.3%	11.0%	2.6%	38.2%	1.0%	0.900	0.829	-7.8%
Region C	34.0%	17.8%	28.9%	10.9%	8.3%	33.9%	26.8%	23.5%	14.8%	1.1%	0.856	0.838	-2.1%
COUNTRY	6.4%	25.2%	35.3%	30.2%	2.9%	6.1%	33.8%	29.3%	29.4%	1.4%	0.921	0.916	-0.5%

1 Premiums are Voluntary only
2 Countrywide premium includes premiums from regions designated as "All Other": Specialty business and All Other branches
3 Premium used in 2008 YTD Tot Bus Company Index for Kansas City and Tulsa branches is combined premium for the two branches.

Sheet1 / Sheet2 / Sheet3

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Commercial Lines Price Monitoring

Price Monitoring: IRPM / Schedule Credit

Microsoft Excel - Book1

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B2

IRPM REPORT - RENEWAL WRITTEN PREMIUM ¹									
Line Of Business									
evaluated as of August, 2009									
	August 2009 only				Year To Date				
	August, 2009 Written Premium	August, 2008 Total Business	August, 2009 Renewal Business	% change	YTD 2009 Written Premium	YTD 2008 Total Business	YTD 2009 Renewal Bus.	% change	
9	Branch 1	\$100,000	-18.6%	-0.2%	22.6	\$800,000	-22.7%	-19.7%	3.9
10	Branch 2	\$100,000	0.0%	1.4%	1.4	\$800,000	-6.4%	-6.8%	-0.4
11	Branch 3	\$100,000	0.0%	0.0%	0.0	\$800,000	-8.3%	-13.1%	-5.2
12	Branch 4	\$100,000	-3.7%	-7.6%	-4.1	\$800,000	-11.3%	-13.9%	-2.9
13	Region A	\$400,000	-6.3%	-1.7%	4.8	\$3,200,000	-12.7%	-13.6%	-1.1
14									
15	Branch 5	\$100,000	2.0%	1.7%	-0.3	\$800,000	-1.4%	-1.2%	0.2
16	Branch 6	\$100,000	0.0%	0.0%	0.0	\$800,000	-0.9%	-0.9%	0.0
17	Branch 7	\$100,000	0.0%	0.0%	0.0	\$800,000	-0.5%	-0.8%	-0.3
18	Region B	\$300,000	0.7%	0.6%	-0.1	\$2,400,000	-0.9%	-1.0%	0.0
19									
20	Branch 8	\$100,000	-1.0%	-4.6%	-3.6	\$800,000	-9.0%	-9.4%	-0.4
21	Branch 9	\$100,000	-10.0%	-2.7%	8.1	\$800,000	-11.5%	-10.8%	0.8
22	Branch 10	\$100,000	-8.2%	-7.8%	0.5	\$800,000	-11.8%	-11.7%	0.1
23	Branch 11	\$100,000	-8.8%	-10.2%	-1.6	\$800,000	-10.1%	-10.7%	-0.6
25	Region C	\$400,000	-7.1%	-6.4%	0.8	\$3,200,000	-10.6%	-10.6%	0.0
26									
50	COUNTRYW	\$1,100,000	-4.8%	-2.9%	2.0	\$8,800,000	-9.0%	-9.4%	-0.4
51									
53	¹ Premiums are Voluntary only								
55	² Countrywide premium includes premiums from regions designated as "All Other": Specialty business and All Other branches								
56									
57	Source: MIS Department Monthly Reports								
58									

Sheet1 | Sheet2 | Sheet3

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Commercial Lines Price Monitoring

Average IRPM / Schedule Credit Calculation

	Collected				Premium excluding IRPM		
	August, 2009 Written Premium	August, 2008 Total Business	August, 2009 Renewal Business	% change	August, 2008 Total Business	August, 2009 Renewal Business	% Change
Branch 1	\$100,000	-18.6%	-0.2%	22.6	\$122,850	\$100,200	22.6
Branch 2	\$100,000	0.0%	1.4%	1.4	\$100,000	\$98,619	1.4
Branch 3	\$100,000	0.0%	0.0%	0.0	\$100,000	\$100,000	0.0
Branch 4	\$100,000	-3.7%	-7.6%	-4.1	\$103,842	\$108,256	-4.1
Region A	\$400,000	-6.3%	-1.7%	0.0	\$426,692	\$407,076	4.8

- Re-state the premium to a “manual” level by dividing out the Average IRPM or Company Deviation
 - Premium excluding IRPM for Branch 1: $\$122,850 = \$100,000 / (1 + (-0.186))$
 - % Change = $\$122,850 / \$100,200 - 1 = 0.226$
 - Change in IRPM is Old / New because IRPM is in the denominator.
- Do this policy by policy, Sum of Collected Premium / Sum of Manual Premium = Average

Commercial Lines Price Monitoring

Price Monitoring: New Versus Renewal

Microsoft Excel - Sample Pricing Exhibits.xls

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Verdana 9

A4

	A	B	C	D	E	F	G	H	I	J
1	NEW vs RENEWAL PRICING REPORT									
2	Line of Business									
3	evaluated as of August, 2009									
4										
8		YTD New Business Written Premium1	YTD Renewal Written Premium1	YTD New Business Average IRPM	YTD Renewal Average IRPM	YTD New Business Company Index	YTD Renewal Company Index	YTD New Business Index	YTD Renewal Index	difference
9	Branch 1	\$706,656	\$1,674,100	-27.2%	-19.7%	0.969	0.990	0.706	0.795	-11.2%
10	Branch 2	\$142,709	\$272,554	-11.1%	-6.8%	0.874	0.975	0.776	0.909	-14.6%
11	Branch 3	\$552,850	\$1,136,598	-5.8%	-13.1%	0.891	0.868	0.839	0.755	11.2%
12	Branch 4	\$626,389	\$1,969,512	-15.5%	-13.9%	0.886	0.993	0.749	0.855	-12.4%
13	Region A	\$2,028,604	\$5,052,763	-16.4%	-15.3%	0.914	0.960	0.764	0.813	-6.0%
14										
15										
16	Branch 5	\$716,701	\$4,582,299	-2.1%	-1.2%	1.008	1.007	0.988	0.994	-0.7%
17	Branch 6	\$268,514	\$2,443,392	-0.1%	-0.9%	0.935	0.991	0.934	0.982	-4.9%
18	Branch 7	\$565,214	\$2,178,508	0.0%	-0.8%	0.966	1.011	0.966	1.004	-3.8%
19	Region B	\$1,550,429	\$9,204,198	-0.9%	-1.0%	0.979	1.004	0.970	0.993	-2.3%
20										
21										
22	Branch 8	\$864,649	\$6,876,340	-10.4%	-9.4%	0.818	0.925	0.733	0.838	-12.6%
23	Branch 9	\$581,097	\$3,877,459	-14.3%	-10.8%	0.889	0.924	0.761	0.824	-7.6%
24	Branch 10	\$658,531	\$3,178,124	-20.5%	-11.7%	0.828	0.920	0.658	0.812	-19.0%
25	Branch 11	\$236,146	\$1,313,220	-10.6%	-10.7%	0.829	0.933	0.741	0.834	-11.1%
26	Region C	\$2,340,423	\$15,245,142	-14.5%	-10.3%	0.838	0.924	0.717	0.829	-13.5%
27										
52	COUNTRYWIDE	\$17,721,381	\$60,354,612	-16.0%	-11.1%	0.916	0.949	0.770	0.844	-8.8%
53										
55	<i>1 Premiums are Voluntary only</i>									
58	<i>2 Countrywide premium includes premiums from regions designated as "All Other": Specialty business and All Other branches</i>									
59										
60										

CO UTL | IRPM | NB vs RB | Sample Calc

Draw AutoShapes

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Price Monitoring: Rate Changes

Microsoft Excel - Sample Pricing Exhibits.xls

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Verdana 9

C4

2008-2009 RATE CHANGE REPORT
Line of Business
evaluated as of August, 2009

Branch	2008 Direct Written Premium 1	First Rate Change				Second Rate Change				Third Rate Change				Cumulative Effective Rate Change at Year-End :
		Effective Date	Filed Change	Approved Change	Status	Effective Date	Filed Change	Approved Change	Status	Effective Date	Filed Change	Approved Change	Status	
Branch 1	\$ 1,200,000	01/01/2008	-10.2%	-10.2%	A	05/01/2009	-11.2%	-11.2%	A					-6.5%
Branch 2	\$ 1,200,000	07/01/2008	-23.4%	-23.4%	A	07/01/2009	-15.7%	-15.7%	A					-18.8%
Branch 3	\$ 1,200,000	03/01/2008	-14.0%	-14.0%	A	03/01/2009	-10.0%		F					-4.2%
Branch 4	\$ 1,200,000	01/01/2008	2.4%	2.4%	A	07/01/2008	-14.2%	-14.2%	A	07/01/2009	-5.5%	-5.5%	A	-10.4%
Branch 5	\$ 1,200,000	01/01/2008	3.1%	3.1%	A	01/01/2009	-0.5%	-0.5%	A					-0.5%
Branch 6	\$ 1,200,000	10/01/2008	-6.2%	-6.2%	A									-4.5%
Branch 7	\$ 1,200,000	10/01/2008	-6.2%	-6.2%	A									-4.4%
Branch 8	\$ 1,200,000	07/01/2008	-6.3%	-6.3%	A									-3.0%
Branch 9	\$ 1,200,000	07/01/2008	-6.3%	-6.3%	A									-3.1%
Branch 10	\$ 1,200,000	07/01/2008	-6.3%	-6.3%	A									-2.8%
Branch 11	\$ 1,200,000	07/01/2008	-6.3%	-6.3%	A									-3.3%

43 Status: A = Approved, D = Decision, F = Filed
44 1 Premiums are Voluntary only
45 2 Approved rate changes only.

48 NOTE: Cumulative Effective Rate Change at Year-End : Earned Impact ... Using On-Level Calculation

CO UTL IRPM NB vs RB Rate Sample Calc

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Leaves Gaps

- Bare Minimum not Enough
 - Monitor average Company Deviation
 - Monitor average Discretionary Price Change
 - Monitor expected average Base Rate Change
 - Estimate expected average Inflationary Exposure Change
- Total did not explain overall movement in average premium
- Identify Gaps
 - Error in the Base Rate Change Estimate
 - Actual versus Expected Exposure Change
 - Hidden Pricing Levers

Hidden Pricing Levers

- ITV procedures: Building Values
- Audit procedures: GL Exposures; WC Exposures
- Rate Modification Factor Components
 - Expense Credit
 - Experience Modification
 - “Other” Credit
 - Size of Premium Credit
- Lack of System Edits (Can processor over-ride rating factors in the processing system?)
- Manually Rated Coverage
 - Non-Filed Inland Marine Classes
 - A-Rated Classes
 - Broadening Endorsements
 - COP (Commercial Output Policy)
 - Subcontracting Loss Cost

Solution: “New Money”

- Compares renewing written premium to expiring written premium
- Looks only at those policies that have renewed
- Expressed as a percentage and as a dollar amount
 - Formula:
 - New Money Amount = Renewing Premium – Expiring Premium
 - New Money Percent = New Money Amount / Expiring Premium
 - (or, Renewing Premium / Expiring Premium – 1)
 - Example;
 - A policy expires at \$1,000 and renews for \$1,100
 - New Money amount = **\$100**
 - New Money percent = \$100 / \$1,000 = **+10%**

Components of New Money

- Price Change
 - Filed base rates, increased limits, deductibles, class plan, etc....
 - Movement between companies or tiers
 - Experience Rating and Schedule Rating/IRPM
 - Changing policy limits

- Exposure Change - Changes in vulnerability to loss
 - Adding or deleting a vehicle/building from a policy
 - Change in building/contents value (amount of insurance, TIV)
 - Increasing or decreasing payroll
 - Adding or deleting specific coverage

Split New Money into Rate and Exposure Price Change Analysis

- **Start with expiring and renewing written premium & written exposure**
 - Sort by Coverage; by Exposure Base
 - Commercial Auto and Workers Compensation fairly straight forward exposure bases
 - CPP and BOP much more complex
 - Property Exposure is Total Insured Value
 - General Liability Exposure varies by Class Code
 - 50 Different Exposure Bases ... # of Farm Animals
 - Sales, Payroll, Square Footage are most common
- **Determine the % change in exposure at each level of detail**
- **Use exposure % change to calculate an implied rate change; “new rate”**

Commercial Lines Price Monitoring

Price Change Analysis Example Rate Change Only

Microsoft Excel - Sample Pricing Exhibits.xls

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Type a question for help

K15

A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	1) Your company writes the same Auto policy effective 01/01/2008:						4) The policy renews on 01/01/2009.							
3	Policy #	Vehicle	Liability Premium	Comprehensive Premium	Collision Premium	Liab Rate Chg %	Phys Dam Rate Chg %	Policy #	Vehicle	Liability Premium	Comprehensive Premium	Collision Premium		
4	1234567	Toyota Camry	\$1,000	\$100	\$200	-10%	5%	1234567	Toyota Camry	\$900	\$105	\$210		
5	1234567	Ford F-150	\$1,000	\$100	\$300	-10%	5%	1234567	Ford F-150	\$900	\$105	\$315		
6	1234567	Audi A4	\$1,000	\$200	\$400	-10%	5%	1234567	Audi A4	\$900	\$210	\$420		
7	1234567	Total	\$3,000	\$400	\$900			1234567	Total	\$2,700	\$420	\$945		
9	2) Effective 01/01/2009, the insurance company files a 10% decrease to auto liability rates and a 5% increase to phys dam rates													
10	3) Upon Renewal the insured deletes Physical Damage on the Audi A4													
12	5) You are asked to calculate New Money, Price Change and Exposure Change for this renewal:													
14	Policy #	Coverage	Exposure Base	Expiring Written Premium	Expiring Written Exposure	Renewing Written Premium	Renewing Written Exposure							
15	1234567	Liability	Car-Months	\$3,000	36	\$2,700	36							
16	1234567	Comprehensive	Car-Months	\$400	36	\$420	36							
17	1234567	Collision	Car-Months	\$900	36	\$945	36							
18	1234567	Total	Car-Months	\$4,300	108	\$4,065	108							
20	Policy #	Coverage	New Money \$\$	New Money %	Exposure Change %	Implied Rate Change % (a)	Implied New Expo \$\$ (c)	Implied New Rate \$\$ (b)						
21	1234567	Liability	(\$300)	-10.00%	0.00%	-10.00%	\$0.00	(\$300.00)						
22	1234567	Comprehensive	\$20	5.00%	0.00%	5.00%	\$0.00	\$20.00						
23	1234567	Collision	\$45	5.00%	0.00%	5.00%	\$0.00	\$45.00						
24	1234567	Total	(\$235)	-5.47%			\$0.00	(\$235.00)						
26	NOTES													
27	(a)	Implied Rate Change = (1 + New Money %) / (1 + Exposure %)												
28	(b)	Implied New Rate \$\$ = Implied Rate Change * Expiring Written Premium												
29	(c)	Implied New Exposure \$\$ = New Money \$\$ - Implied Rate Change \$\$												

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Commercial Lines Price Monitoring

Price Change Analysis Example Rate Change with Exposure Change

Microsoft Excel - Sample Pricing Exhibits.xls

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Type a question for help

J24

1) Your company writes the same Auto policy effective 01/01/2008: 4) The policy renews on 01/01/2009.

Policy #	Vehicle	Liability Premium	Comprehensive Premium	Collision Premium	Liab Rate Chg %	Phys Dam Rate Chg %	Policy #	Vehicle	Liability Premium	Comprehensive Premium	Collision Premium
1234567	Toyota Camry	\$1,000	\$100	\$200	-10%	5%	1234567	Toyota Camry	\$900	\$105	\$210
1234567	Ford F-150	\$1,000	\$100	\$300	-10%	5%	1234567	Ford F-150	\$900	\$105	\$315
1234567	Audi A4	\$1,000	\$200	\$400	-10%	5%	1234567	Audi A4	\$900	\$0	\$0
1234567	Total	\$3,000	\$400	\$900			1234567	Total	\$2,700	\$210	\$525

2) Effective 01/01/2009, the insurance company files a 10% decrease to auto liability rates and a 5% increase to phys dam rates
3) Upon Renewal the insured deletes Physical Damage on the Audi A4

5) You are asked to calculate New Money, Price Change and Exposure Change for this renewal:

Policy #	Coverage	Exposure Base	Expiring Written Premium	Expiring Written Exposure	Renewing Written Premium	Renewing Written Exposure
1234567	Liability	Car-Months	\$3,000	36	\$2,700	36
1234567	Comprehensive	Car-Months	\$400	36	\$210	24
1234567	Collision	Car-Months	\$900	36	\$525	24
1234567	Total	Car-Months	\$4,300	108	\$3,435	84

Policy #	Coverage	New Money \$\$	New Money %	Exposure Change %	Implied Rate Change % (a)	Implied New Expo \$\$ (c)	Implied New Rate \$\$ (b)
1234567	Liability	(\$300)	-10.00%	0%	-10.00%	\$0.00	(\$300.00)
1234567	Comprehensive	(\$190)	-47.50%	-33.33%	-21.25%	(\$105.00)	(\$85.00)
1234567	Collision	(\$375)	-41.67%	-33.33%	-12.50%	(\$262.50)	(\$112.50)
1234568	Total	(\$865)	-20.12%			(\$367.50)	(\$497.50)

NOTES

(a) Implied Rate Change = (1 + New Money %) / (1 + Exposure %)

(b) Implied New Rate \$\$ = Implied Rate Change * Expiring Written Premium

(c) Implied New Exposure \$\$ = New Money \$\$ - Implied Rate Change \$\$

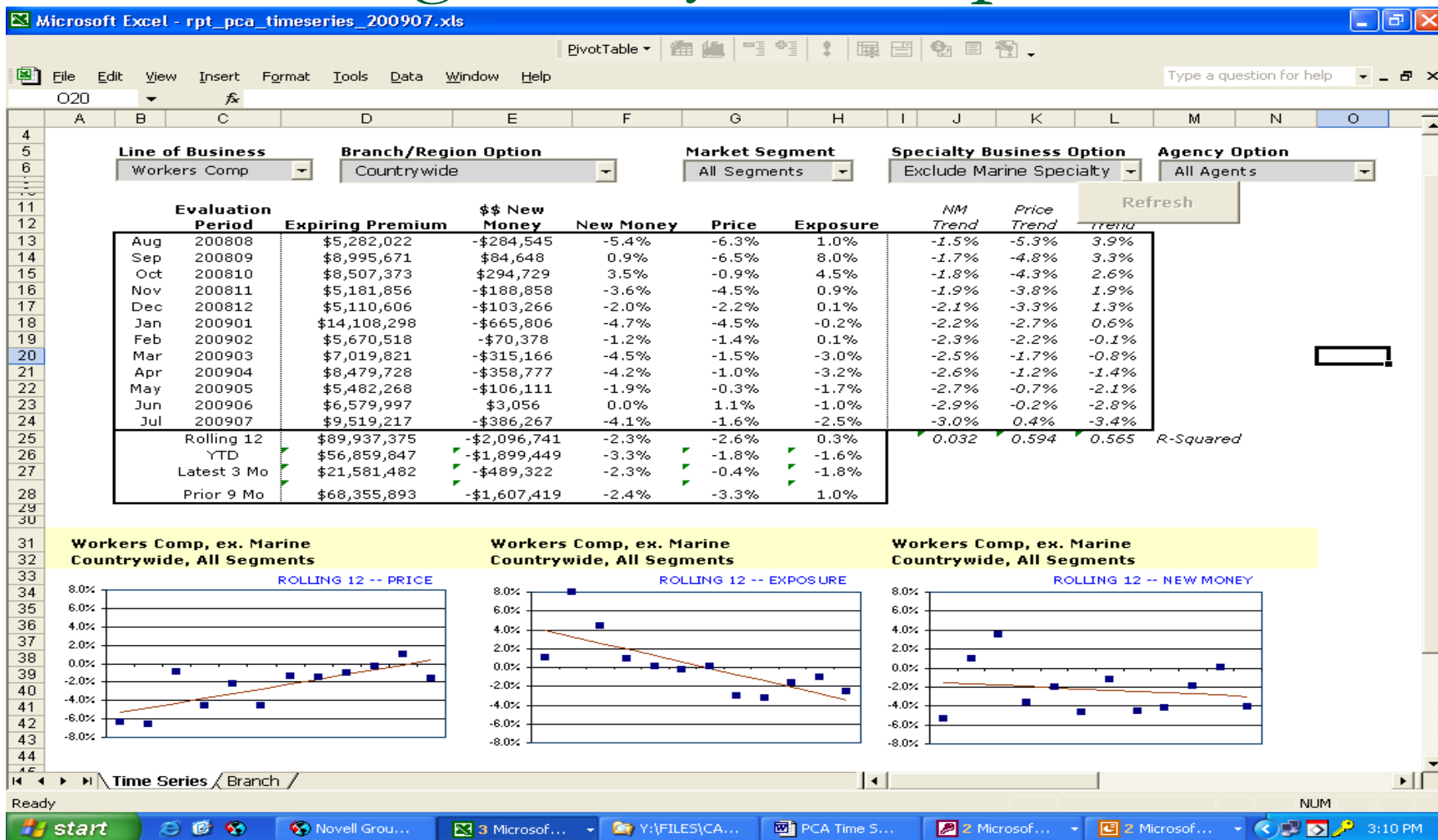
CO UTL / IRPM / NB vs RB / Rate / PCA Rate Only / PCA Rate and Expo / Sample Calc /

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Commercial Lines Price Monitoring

Price Change Analysis: Report



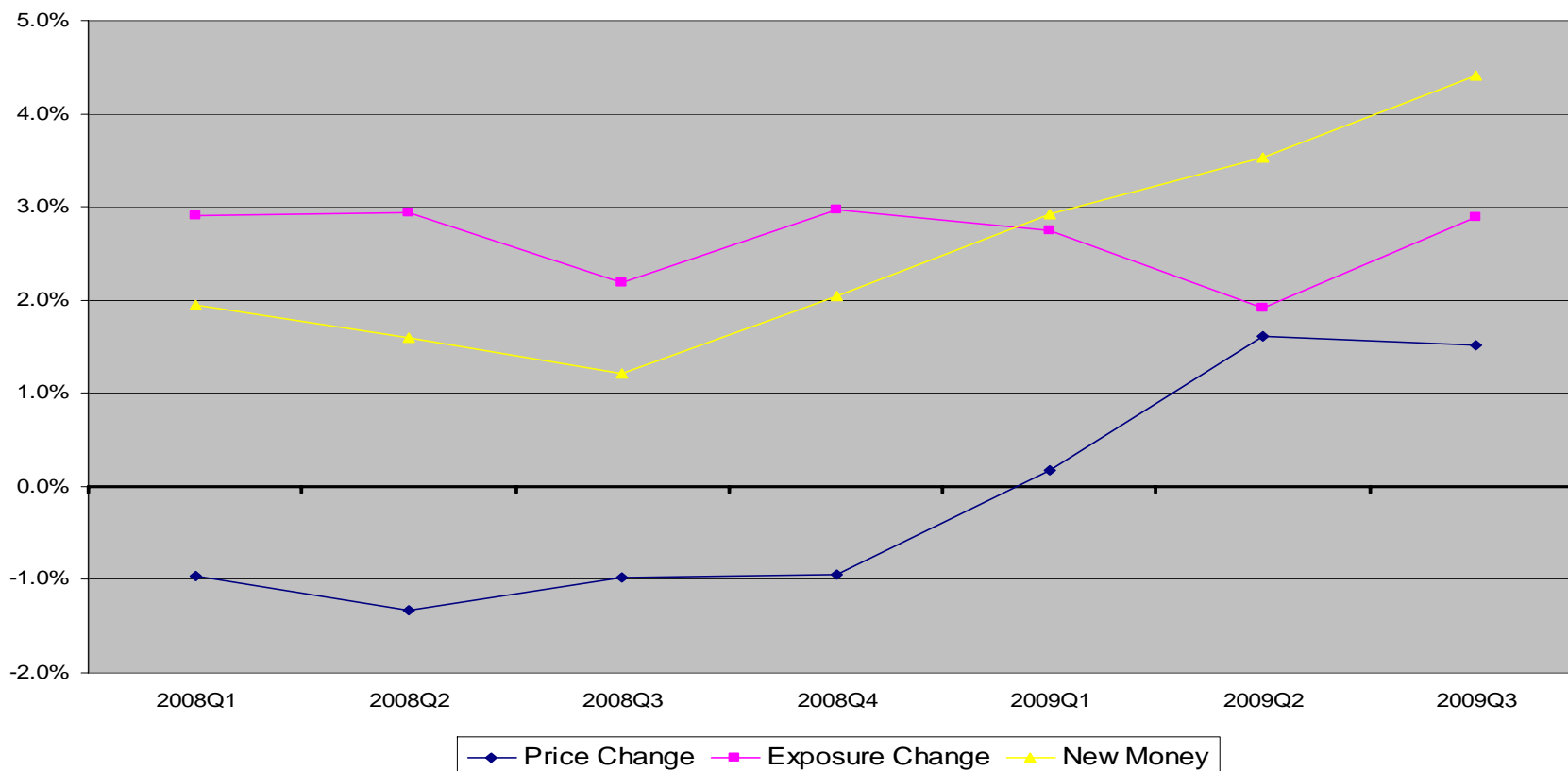
Ongoing Challenges

- Short Term Policies
- Change in Mix by Class / Exposure Base
- Deductible / Coinsurance %
- Change in Liability Limit
 - Rate or Exposure?
 - Current Calculation puts with Rate
- Direct Basis Only
- Premium Audit
- Policies that are canceled and rewritten to same effective date

Commercial Lines Price Monitoring

Price Change through the UW Cycle

Price Change Analysis
Line of Business 1



Conclusions

- Commercial Line Pricing is not easy to Monitor
- Start by monitoring the known Pricing Levers
- Institute Pricing Standards
- Audit Pricing Practices
- Automate / Edit as many pricing options as possible
- Monitor the final result: Renewal Price Change
- Establish goals and accountability
- Build tools that enable understanding