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Renewal Analysis Module

Introduction

The Renewal Analysis Module, which can also be used to do rate projections analysis, proposes basic to very elaborate services.

In the ADVANCED version, which combines simplicity and economy, the module allows for manual input of information, utilize the sophisticated calculation facilities as well as generate various basic reports.

The XPRO version optimizes information input by allowing selective data importation from the “Rating and Experience History” modules. The analysis can cover global history for a given period or only specific divisions/classes or modules. This deluxe version optimizes the processes, ensures for each benefit up to 3 drilled down levels for premiums and claims segmentation as well as allows the integration of notes and recommendation within the generated reports.

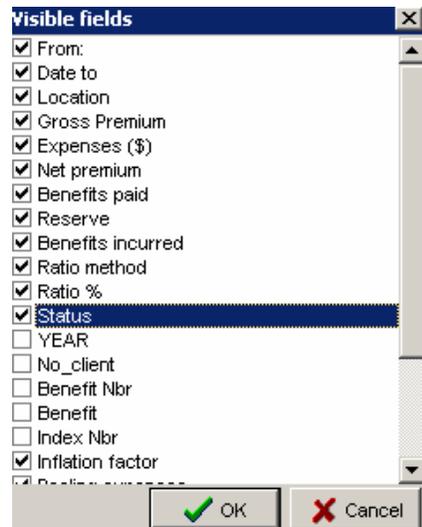
For documentation purposes, we will describe all functionalities. The user should evaluate with an MDI professional the service level that will respond to his specific needs and budgets.

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A. Input of historical information

A.1- “Experience History” module

For the Claim history input, ALL the required fields for the analysis can be selected the option that is accessible on the top command bar. 



The operator can simply check the relevant elements and then place them in the order of his choice to facilitate the input of information to fit the source format.

The expenses in \$ or % of the gross premium are calculated automatically from the input of the equivalent % and \$.

Should the enterprise “Claim History” data be available by divisions/classes or modules and that specific analysis of those locations be required you should insure input the information accordingly. You will then be in a position to easily generate specific analysis.

From	Date to	Location	Gross Premium	Adjusted premium	Expenses (%)	Expenses (\$)	Net premium	Benefits incurred	Ratio m
2002/02/24	2003/02/23	[DIV *,*][DIV 001,01]	\$4,500,000.00	\$456,789.00			\$234,134.00		Paid be
2003/02/24	2004/02/23	[DIV *,*][DIV 001,01]	\$50,000,000.00	\$4,560,000.00			\$2,552,520.00		Paid be
2004/02/24	2005/02/23	[DIV *,*][DIV 001,01]	\$2,502,221.00		0.999 %	\$25,000.00	\$345,437.00		Paid be
2005/02/24	2006/02/23	[DIV *,*][DIV 001,01]	\$25,000,025.00						Paid be

Ratio method	Pooling expenses	Benefits paid	Pooling claims	Reserve	Variation	Ratio %	Status
Paid benefits / gross premiums		\$2,512,500.00				55.833 %	F
Paid benefits / gross premiums		\$52,140,000.00				104.28 %	F
Paid benefits / gross premiums		\$25,055.00				1.001 %	F
Paid benefits / gross premiums		\$25,514,255.00				102.057 %	F

A.2- “Rating History” module

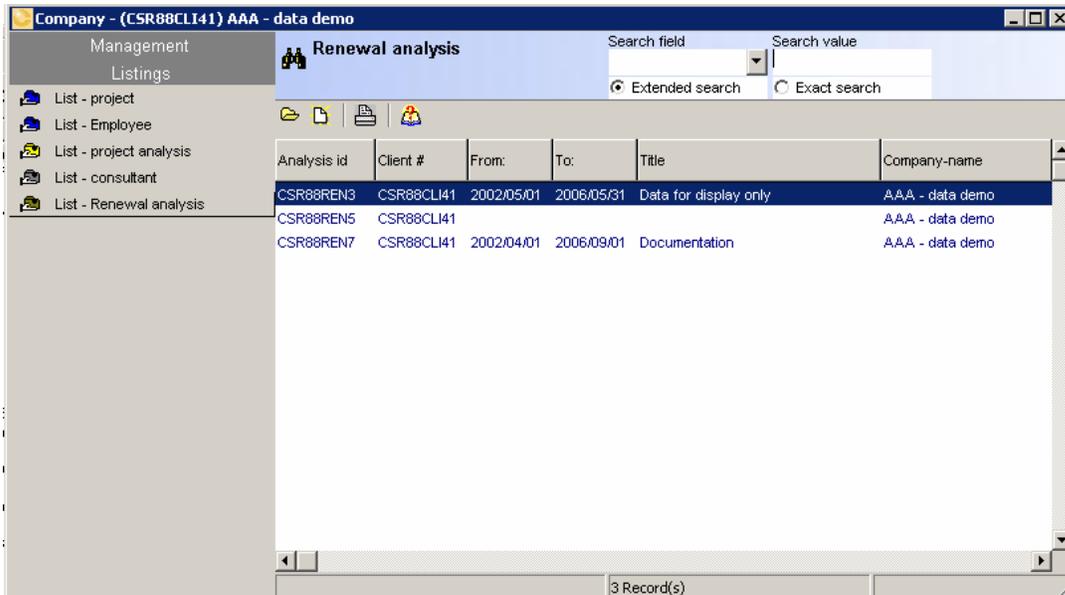
Start date	End date	Location	Individual	Couple	Single parent	Family	Reason
2003/02/24	2004/02/23	[DIV *,*]					Contract emission
2004/02/24	2005/02/23	[DIV *,*]					Contract renewal
2005/02/24	2006/02/23	[DIV *,*]					Contract renewal

B. Lists of renewal analysis module

After selecting the List - Renewal analysis option on your left menu you can either create a new analysis by clicking on the button or access an existing analysis by double clicking on one of the available list.

Analysis id	Client #	From	To	Title	Company-name
CSRBREN3	CSRBCL141	2002/05/01	2006/05/01	Data for display only	AAA - data demo
CSRBREN5	CSRBCL141				AAA - data demo
CSRBREN7	CSRBCL141	2002/04/01	2006/09/01	Documentation	AAA - data demo

The analysis module is rich in options and potential in order to provide you with all the needed tools to analyse your information and provide professional reporting. We invite you to very carefully explore the various possibilities in order to maximize its potential.

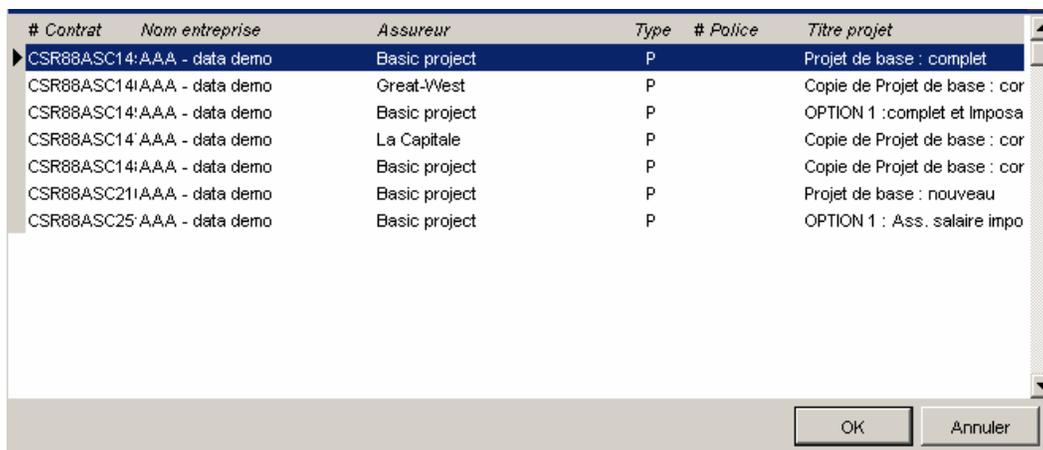
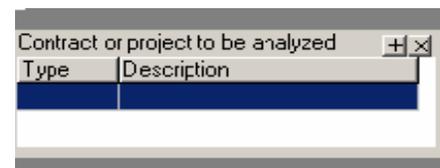


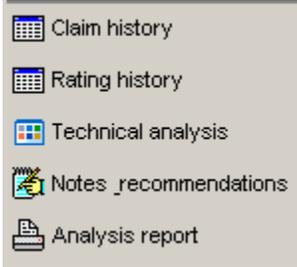
When creating a new analysis, it will be important to properly define the claim and rating period of your analysis.

Experience period	2002/05/01	to	2006/05/31
Actual tarification	2002/04/09	to	2005/05/31
New tarification	2005/05/09	to	2006/05/09

These periods will define the data that will be imported from both history tables.

You will be able to link your analysis (method #2) to a specific contract or request for proposal. In order to do so, you can click on the “+” and choose the contract or the project from a list.





Your left menu will give you an access to relevant information as well as allow you to generate a professional report of your analysis.

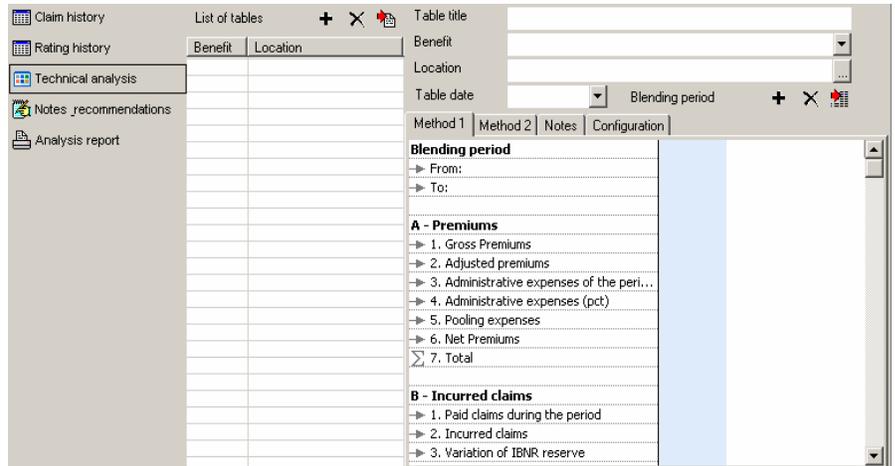
The first 2 choices give you an access to the same history modules as your main menu.

The “Technical Results” option will enable you to process your analysis. The “Notes and Recommendations” section will make it possible to add your professional comments **Notes Recommendation** which will document the technical analysis. The recommendations will become and integrated part of your report. Lastly, the “Analyse Report” option will generate your reports which could be saved in a format of your choice. (See “Report samples” in appendix)

B.1- Technical Results

This module makes it possible to input the information manually or to import them from the history tables.

Information can be inputted for each benefit.



B.1.a Information input for analysis

B.1.a.i Manual input

For the manual input, you first must select the “+” in order to add a benefit to be analyzed, then you insure proper document by filling the relevant information starting with “Table Title”.



Table title	<input type="text"/>
Benefit	<input type="text"/>
Location	<input type="text"/>
Table date	<input type="text"/> Blending period <input type="button" value="+"/> <input type="button" value="X"/> <input type="button" value="📄"/>
<input type="button" value="Method 1"/> <input type="button" value="Method 2"/> <input type="button" value="Notes"/> <input type="button" value="Configuration"/>	

For both the benefits and locations option, you will be provided with drop-down menu or a list of multiple choices.

To define the benefits, you can simply pick and then click on the needed service to analyse.

Lastly, for the location section you can define the various divisions/classes or modules that will be analysed. A contextual list will be provided from the Division/Class and Module that were set up previously.

Technical analysis	
Table title	Rating evolution
Benefit	Dental care
Location	Policy holder life insurance Employee's accidental death and dismemberment Life insurance of dependants Dependant optional ADM Short term disability Long term disability Optional long term disability Extended health care Drug insurance
Table date	
Method 1	Meth
Blending period	
From:	
To:	
A - Premiums	
1. Gross Prem	Dental care
2. Adjusted p	Employee assistance programs
3. Administrat	Policy holder optional life insurance
4. Administrat	Spouse optional life insurance
5. Pooling exp	Policy holder optional ADM
7. Total	Dependant optional ADM Children Optional life insurance Union contribution
B - Incurred cl	

B.1.a.ii Data Import from the history tables

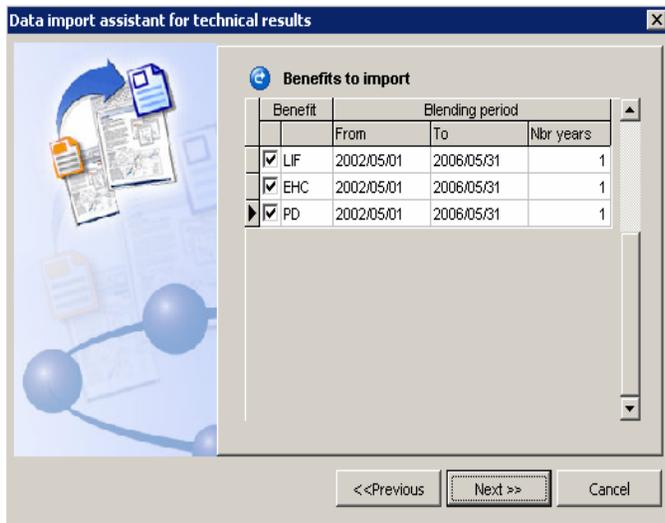
List of tables <input type="button" value="+"/> <input type="button" value="X"/> <input type="button" value="📄"/>	
Benefit	Location

The Importation function is automatic. Starting from the icon, the system will propose a series of choice to you.

Within each stage, the “technical results data importation assistant” will guide the process and allow you to either validate your previous choices or make selections.

Experience period	2002/05/01	to	2006/05/31
Actual tarification	2002/04/09	to	2005/05/31
New tarification	2005/05/09	to	2006/05/09

Data import assistant for technical results	
Data for display only	
Experience period	2002/05/01 to 2006/05/31
Actual tarification	2002/04/09 to 2005/05/31
New tarification	2005/05/09 to 2006/05/09
Technical results table title	
Rating evolution	
Data are imported from claim history	
<input type="button" value="<<Previous"/> <input type="button" value="Next >>"/> <input type="button" value="Cancel"/>	

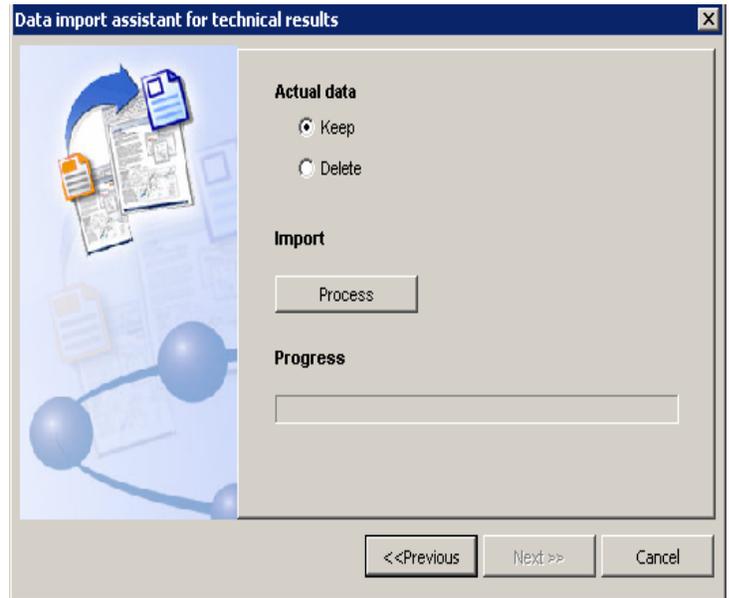


If need be, you will be able to adjust your processing dates by revisiting your main data screen.

The second screen provides you the list of the benefit that contains data within the referred period.

Select (Check/Uncheck) the benefit to be processed and, if needed, adjust the terms and # of years of analyses that are to be analysed.

Lastly, you will be prompted to either add existing results or replace all existing data before you confirm “Running” the importation.



B.1.b Methods and Configuration

The analysis module offers 2 analysis methods, a personal notes section and a configuration option. Method 1 | Method 2 | Notes | Configuration

Method 1 is based on historical experiences and trends and is aimed at defining the fair and negotiated adjustment ratio. The Method 2 will apply the previous historical trends ratio to current rates or premium as set in the selected contract or Request for proposal.

The “Configuration” tab makes it possible to define the process parameters to be used in method 1.

The Note tab enables you to document your analysis.

B.I.b.i Method 1

Table date		2005/05/09	Blending period		+	X	
Method 1		Method 2	Notes	Configuration			
Blending period							
▶ From:		2002/05/31					
▶ To:		2003/02/23					
A - Premiums							
▶ 1. Gross Premiums		800,000 \$					
▶ 2. Adjusted premiums		485,000 \$					
▶ 3. Administrative expenses of the peri...		106,700 \$					
▶ 4. Administrative expenses (pct)		22 %					
▶ 5. Pooling expenses		25,000 \$					
Σ 7. Total		353,300 \$					
B - Incurred claims							
▶ 1. Paid claims during the period		0 \$					
▶ 2. Incurred claims		450,000 \$					
▶ 3. Variation of IBNR reserve		2,000 \$					
▶ 4. Pooled claims		35,000 \$					
Σ 5. Total		417,000 \$					

Based on the selected configuration, you will be able to input all the needed information to make the analysis based on your past history.

The period in input mode is identified in blue.

You can choose to set your analysis on 1, 2 or 3 time periods. To adjust the number of periods,



you can add or delete blending periods by using either the + or the X.

The 3rd button makes it possible to select specific divisions/classes or modules within the analysis period that you wish to process. Following this selection, an importation of the specific data to these locations will be carried out for the period referred to.

Selection of claim history items									
Drug insurance									
2004/05/31 - 2005/02/23 [DIV *,*][DIV 001,01]									
Date from	Date to	Gross Premium	Adjusted premium	Expense (\$)	Expenses (%)	Net Premium	Paid claims	Incurred claim	
▶ 2004/05/31	2005/02/23	650000	640000	169000	26 %	600000	500000	521000	

0 item(s) selected

OK Cancel

The “electronic assistant” will insure automatic calculations based on your

List of tables		Table title	Évolution de la tarification		
Benefit	Location	Benefit	Drug insurance		
PD	[DIV *:] [DIV 001,01]	Location	[DIV *:] [DIV 001,01]		
		Table date	2005/05/09	Blending period	
		Method 1	Method 2	Notes	Configuration
Blending period					
→ From:			2002/05/31	2003/05/31	2004/05/31
→ To:			2003/02/23	2004/02/23	2005/02/23
A - Premiums					
→ 1. Gross Premiums			800,000 \$	700,000 \$	650,000 \$
→ 2. Adjusted premiums			485,000 \$	486,000 \$	640,000 \$
→ 3. Administrative expenses of the peri...			106,700 \$	131,220 \$	160,000 \$
→ 4. Administrative expenses (pct)			22 %	27 %	25 %
→ 5. Pooling expenses			25,000 \$	28,000 \$	26,000 \$
Σ 7. Total			353,300 \$	326,780 \$	454,000 \$
B - Incurred claims					
→ 1. Paid claims during the period			0 \$	0 \$	0 \$
→ 2. Incurred claims			450,000 \$	425,252 \$	521,000 \$
→ 3. Variation of IBNR reserve			2,000 \$	18,000 \$	12,000 \$
→ 4. Pooled claims			35,000 \$	32,000 \$	31,500 \$
Σ 5. Total			417,000 \$	411,252 \$	501,500 \$
C - Net experience Ratio					
Σ 1. For period			118 %	125.8 %	110.5 %

configurations preference or the evolution of your data input. The fields in light grey, as those identified with a Σ , are calculated automatically.

The gross premiums field hides a unique function that makes it possible for the operator to segment the gross premiums as well as the paid or incurred claims.

Method 1	Method 2	Notes	Configuration
Blending period			
→ From:			2002/05/31
→ To:			2003/02/23
A - Premiums			
→ 1. Gross Premiums			800,000 \$
→ 2. Adjusted premiums			485,000 \$

Clicking on the “gross premiums” field **800,000 \$** will split the contained information into 2 distinct elements: an amount and a (...) box.

Additional information Drug insurance									
+ X		Total premium :		800,000 \$		Total claims :		0 \$	
Items		Premiums		Claims		Ratio		Inflation	
Desc. french	Desc. english	\$	%	\$	%	Inflation	Real	Blended	
Medicaments	Drugs	300,000 \$	37.5 %	245,025 \$	61.3 %	61.3 %	0 %	0 %	
Hopitaux									
Hors Province									
Hors du pays									
Marijuana									
Medicaments									
Médicament									
Original									
Origine									

By clicking on the (...) box, a new screen will provide you with the option of splitting up the premiums as well as claims by category of services. By defining the projected rates of inflation for each element, the module will calculate the blended inflation rates to be used in further calculation.

Another assistant is available to help you define the credibility factors. Same as with gross premium, an access to a (...) box is available.

E - Calculation of needed adjustment...			
Σ 1. Adjustment based on net experience	27.6 %	27.6 %	27.6 %
➔ 2. Credibility based on history	24.6 %	24.6 %	24.6 %
Σ 3. Balance of credibility	75.4 %	75.4 %	75.4 %

You will simply need to fill the relevant information that reflects the file being analysed.

Other assistants within this analysis management module will become available to facilitate the operator tasks. We invite the operator to explore each one of these new opportunities by seeking for and exploring the various fields allowing for (...) boxes.

B.1.b.ii Method 2

Method 2 provides an additional tools to calculate the impact of Method 1 analysis to selected premiums or rates.

The blending period's option will be replaced by a choice of status: Individual, couple, family or single-parent. You can select analyse one or many status.

Status table + X To define the required status, you can add or remove by using the + or X.

The 3rd button makes it possible to select specific divisions/classes or modules within the analysis period that you wish to process. Following this selection, an importation of the specific data to these locations will be carried out for the period referred to.

The “current rate” will be imported based on the benefit, status and location from the contract or project that was previously defined in the “contract or project to be analyzed” section.

Status table	Current rate	Adjustment factor
Monoparental	10 \$	107.9 %

Current	Net experience	Credibility	Projected	Blended rate
10 \$	71.7 %	24.6 %	1.16	2.05 \$
10 \$	100 %	75.4 %	1.16	8.75 \$
Total			100 %	10.8 \$

Adjustment Factor **107.9 %**

Contract or project to be analyzed	
Type	Description

These fields will be automatically imported from table Method 1:

- experience (C.4 and 100%)
- credibility ratio (E.2 and E.3),
- inflation (D.1 * D.2 /12) and (1 + D.1)
- blended rates or premium becomes the results.

Information can be inputted manually to replace the automatic imports.

Whenever you click on method 1 then return to method 2, all the method 1 values will be automatically imported.

Σ 5. Total	417,000 \$	411,252 \$	501,500 \$
C - Net experience Ratio			
Σ 1. For period	118 %	125.8 %	110.5 %
→ 2. Blended rate for the period	10 %	30 %	20 %
Σ 3. Net blended experience Ratio	11.8 %	37.8 %	22.1 %
Σ 4. Total group	71.7 %	71.7 %	71.7 %
D - Projected Net experience Ratio			
→ 1. Annual factor of inflation and usage...	2.2 %	68.4 %	16 %
Σ 2. Number of months for projection	36	24	12
Σ 3. Total	12.6 %	89.4 %	25.6 %
Σ 4. Total group	127.6 %	127.6 %	127.6 %
E - Calculation of needed adjustmen...			
Σ 1. Adjustment based on net experience	27.6 %	27.6 %	27.6 %
→ 2. Credibility based on history	24.6 %	24.6 %	24.6 %
Σ 3. Balance of credibility	75.4 %	75.4 %	75.4 %
Σ 4. Theoretical adjustment	86.6 %	86.6 %	86.6 %
Σ 5. Adjustment Factor	172.1 %	172.1 %	172.1 %
→ Suggested carrier factor	12 %	12 %	12 %
→ Negotiated factor	8 %	8 %	8 %

B.1.b.iii Notes

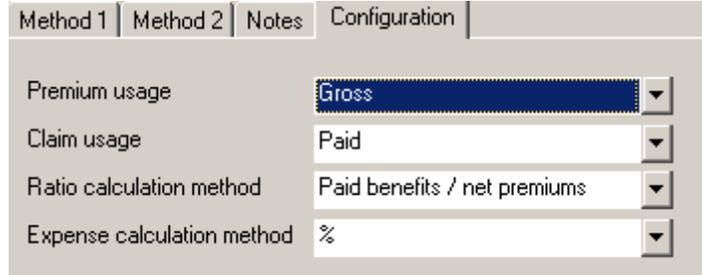
Corresponds to personal notes of the operator. This information will be printed in the analysis report.

B.1.b.iv Configuration

The “Configuration” tab provides with the means to define the process parameters which will be used in method 1. You will be able to determine for your analysis the usage of:

- Gross or Net premiums,
- Paid or Incurred claims,
- Calculation ratio method and finally
- Define if administration expenses are based on fixed amounts or % of the gross or adjusted premium.

Method 1	Method 2	Notes	Configuration
			Premium usage
			Claim usage
			Ratio calculation method
			Expense calculation method



The last configuration setup will be used as default configuration for the following new analysis.

B.2- Notes and recommendations

These notes and recommendations will be printed on your analysis report.

B.3- Analysis Report

See report samples as generated that are available in appendix.

Technical analysis (method 1)

(Fig 1.0)

Title **Évolution de la tarification** Date 2005/05/09
Benefit **Extended Health** Location [DIV *,*][DIV 001,01]

Blending period

From:	2002/05/31	2003/05/31	2004/05/31
To:	2003/02/23	2004/02/23	2005/02/23

A - Premiums

1. Gross Premiums	800000 \$	700000 \$	650000 \$
2. Adjusted premiums	485000 \$	486000 \$	640000 \$
3. Administrative expenses of the period	106700 \$	131220 \$	160000 \$
4. Administrative expenses (pct)	22 %	27 %	25 %
5. Pooling expenses	25000 \$	28000 \$	26000 \$
7. Total	353300 \$	326780 \$	454000 \$

B - Incurred claims

1. Paid claims during the period	0 \$	0 \$	0 \$
2. Incurred claims	450000 \$	425252 \$	521000 \$
3. Variation of IBNR reserve	2000 \$	18000 \$	12000 \$
4. Pooled claims	35000 \$	32000 \$	31500 \$
5. Total	417000 \$	411252 \$	501500 \$

C - Ratio d'expérience nette

1. For period	118 %	125.8 %	110.5 %
2. Blended rate for the period	10 %	30 %	20 %
3. Net blended experience Ratio	11.8 %	37.8 %	22.1 %
4. Total group			71.7 %

D - Projected Net experience Ratio

1. Annual factor of inflation and usage increase	2.2 %	68.4 %	16 %
2. Number of months for projection	36	24	12
3. Total	12.6 %	89.4 %	25.6 %
4. Total group			127.6 %

E - Calculation of needed adjustment factor

1. Adjustment based on net experience	27.6 %
2. Credibility based on history	24.6 %
3. Balance of credibility	75.4 %
4. Theoretical adjustment	86.6 %
5. Adjustment Factor	172.1 %

Suggested carrier factor	12 %
Negotiated factor	8 %

Premium and Claims breakdown

(Fig 1.1)

Blending period 2002/05/31 to 2003/02/23

Location [DIV *,*][DIV 001,01]

Benefit **Extended Health**

	Premiums		Benefits		Inflation		
	\$	%	\$	%	Ratio %	Real %	Blended %
Drugs	200000	25	35000	8.7	8.7	25	2.2
Life style	50000	25	15000	42.9	42.9	0	0
Generic	50000	25	15000	42.9	42.9	0	0
New	50000	25	3000	8.6	8.6	0	0
Others	50000	25	2000	5.6	5.6	0	0
Hospital	300000	37.5	245025	61.3	61.3	0	0
Others	200000	25	110987	27.7	27.7	0	0
Professional	100000	100	8988	2.3	2.3	0	0
Totals	800000	187.5	400000	100	100		2.2

Premium and Claims breakdown

(Fig 1.2)

Blending period 2003/05/31 to 2004/02/23

Location [DIV *,*][DIV 001,01]

Benefit **Extended Health**

	Premiums		Benefits		Inflation		
	\$	%	\$	%	Ratio %	Real %	Blended %
Drugs	250000	35.7	250000	50	50	130	65
Prescription	50000	20	25000	10	10	11	1.1
	50000	100	25000	100	100	0	0
Generic	50000	20	35000	14	14	12	1.7
Life style	75000	30	45000	18	18	13	2.3
New	35000	14	25000	10	10	14	1.4
Others	40000	16	120000	48	48	0	0
Professional	100000	14.3	15000	3	3	115	3.4
Hospital	200000	28.6	125000	25	25	0	0
Out of Province	25000	3.6	45000	9	9	0	0
Out of country	65000	9.3	25000	5	5	0	0
Others	60000	8.5	40000	8	8	0	0
Totals	700000	100	500000	100	100		68.4

Premium and Claims breakdown

(Fig 1.3)

Blending period 2004/05/31 to 2005/02/23

Location [DIV *,*][DIV 001,01]

Benefit **Extended Health**

	Premiums		Benefits		Inflation		
	\$	%	\$	%	Ratio %	Real %	Blended %
Drugs	200000	30.8	125000	25	25	0	0
New	100000	50	65000	52	52	0	0
Generic	50000	25	30000	24	24	0	0
Life style	25000	12.5	12350	9.9	9.9	0	0
Others	25000	12.5	17650	14.1	14.1	0	0

Data shown are for display only

Hospital	125000	19.2	52000	10.4	10.4	0	0
Out of Province	50000	7.7	35000	7	7	0	0
Out of country	125000	19.2	95000	19	19	0	0
Professional	100000	15.4	125000	25	25	0	0
Others	50000	7.7	68000	13.6	13.6	0	0
Totals	650000	100	500000	100	100		0

Premium and Claims breakdown - Graphical display

(Fig 1.1.1)

Blending period 2002/05/31 to 2003/02/23

Location [DIV *,*][DIV 001,01]

Benefit **Extended Health**

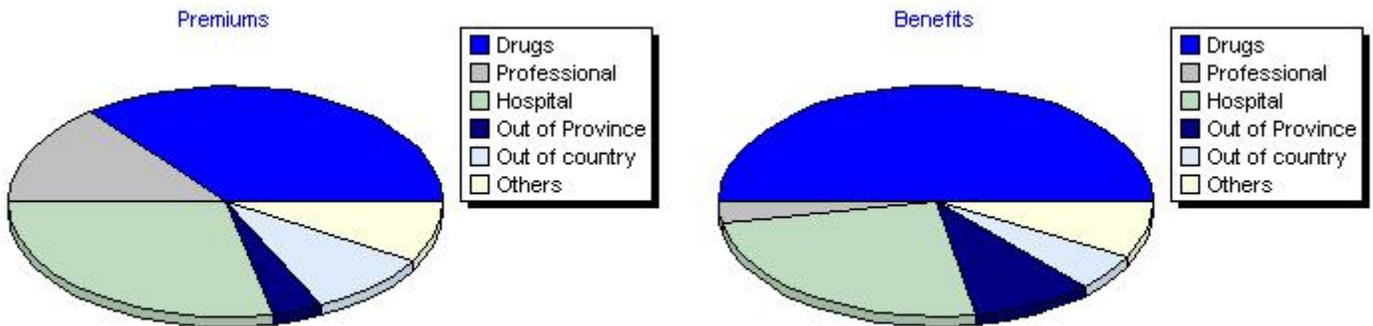


(Fig 1.2.1)

Blending period 2003/05/31 to 2004/02/23

Location [DIV *,*][DIV 001,01]

Benefit **Extended Health**

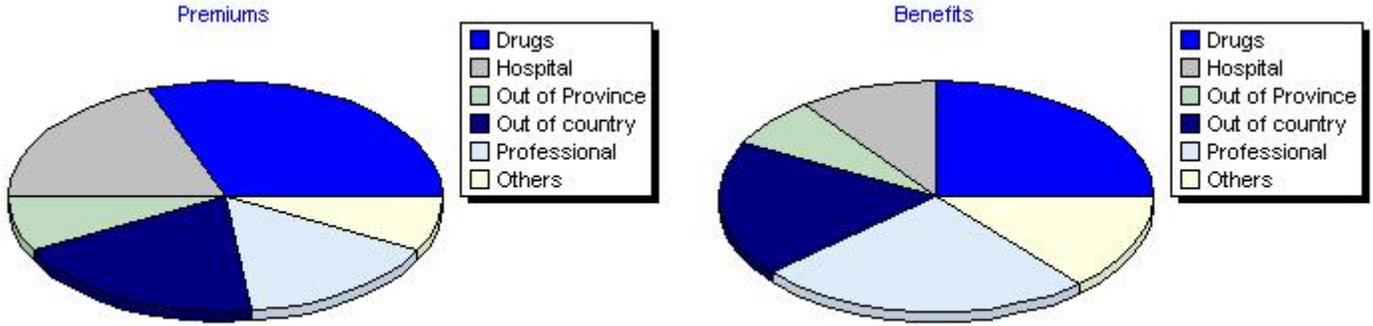


Data shown are for display only

(Fig 1.3.1)

Blending period 2004/05/31 to 2005/02/23
 Benefit

Location [DIV *,*][DIV 001,01]



Technical analysis (method 2)

Title **Évolution de la tarification**
Benefit **Extended Health**

Date 2005/05/09
Location [DIV *,*][DIV 001,01]

Table for status : **Single**

Current rate	Net experience	Credibility	Projected inflation	Blended rate
10 \$	71.7 %	24.6 %	1.16	2.05 \$
10 \$	100 %	75.4 %	1.16	8.75 \$
Total		100 %		10.8 \$
		Adjustment factor		107.9 %