Section 3

Detailed Exhibit Explanations

Section 3 – Detailed Exhibit Explanations

Conventions

- Except where noted explicitly, all dollar amounts in the **individual company exhibits** are in thousands of Canadian dollars.
- Starting in 2011, all data for Canadian companies is sourced from the consolidated section of the P&C-1 returns.
- Also note that IFRS was adopted by OSFI and the CCIR in 2011.
- Ratios throughout the report are presented in percentages and are capped at +/- 999
- Where space allows, negative values appear in parenthesis. E.g. (2,000).
- Multi-year averages are always weighted.
- Combined Ratios are calculated as follows throughout the MSA Report:

  {1-[(U/W Income)/NPE]} * 100.

  Underwriting income is taken from row 29 of page 20.30 in the P&C-1 or P&C-2 statements.
- MSA Company Codes: **Companies are identified by a unique six digit** MSA Code **(e.g. 'PCC041'). The first three characters identify the company type as follows:**

  PCC – Property & Casualty – Canadian (Federally Licensed).
  PCB – Property & Casualty – Foreign Branch (Federally Licensed)
  PCP – Property & Casualty – Provincially Licensed *
  GRP – Insurance Group

* ***Pilot Insurance Company*** and ***Scottish and York Insurance Company Ltd.,*** and ***Chartis Insurance Company of Canada*** became federally licensed after being originally provincially licensed. For data continuity purposes, these companies retain their original codes (PCP059, PCP038 and PCP074 respectively).

Glossary of Terms and Acronyms:	
BAAT	Branch Adequacy of Assets Test (branch test introduced in 2003)
BV, MV	Book Value & Market Value
CAGR	Compound Annual Growth Rate. The CAGR is the average compound annual percentage growth rate of the item in question. In formula terms: **(Value at Year 5) = (Value at Year 1)*(1+CAGR)^4** Please note that the multi-year summaries for '*Change in NPW*', '*Change in GPW*' and '*Change in Equity*' in Exhibit 2 are CAGR measures. A '**c**' flag indicates this.

Glossary of Terms and Acronyms:	
Combined Ratio	Also known as the ‘underwriting ratio’. The combined ratio equals total underwriting expenses as a percentage of premiums earned. A ratio under 100% indicates that the insurer made an underwriting profit, while a ratio over 100% indicates that the insurer incurred an underwriting loss. Investment income and capital gains are not taken into account in the combined ratio, thus a company will likely still be profitable with combined ratios in the 100-105% range.
CY	Current Year
Dev %	% Development (of unpaid losses)
DPAE	Deferred Policy Acquisition Expense
GPW	Gross Premiums Written
IBNR	Incurred But Not Reported (claims)
L/R, NLR, DLR	Loss Ratio, Net Loss Ratio, Direct Loss Ratio. Loss ratios are calculated by taking claims incurred as a percentage of premiums earned.
LAE, ULAE, ALAE	Loss Adjustment Expenses, Unallocated Loss Adjustment Expenses (these are typically *internal* adjustment expenses), Allocated Loss Adjustment Expenses (typically *external* adjustment expenses).
MCT	Minimum Capital Test
NPE	Net Premiums Earned
NPW, DPW	Net Premiums Written (after reinsurance), Direct Premiums Written (before reinsurance)
OSFI	The Office of the Superintendent of Financial Institutions (Canada’s federal regulator).
P&C-1, P&C-2	The P&C-1 is the statutory filing statement required of Canadian domiciled property and casualty insurers. The P&C-2 statement is required of foreign branches operating in Canada.
Reg., Un-Reg.	Registered (licensed reinsurance), Unregistered (unlicensed reinsurance)
Stat Surplus, Adjusted Equity Collectively referred to as ‘Equity’	**Statutory Surplus** = assets – liabilities – reserves required **Adjusted Equity** **P&C-1**: Adjusted Equity (OSFI) = total equity – capital required for catastrophes and reinsurance ceded to unregistered insurers. **P&C-2:** Adjusted Equity (MSA) = Head Office Account
Sub Debt	Subordinated Debt
U/W	Underwriting

Exhibit Explanations for Individual Company Reports

Exhibit 1 – Key Company Information

This exhibit presents key information on the company such as address, phone, fax and website addresses. It also provides information on the license type (federal or provincial); ownership (Canadian, US, European or Other); distribution category (broker, direct or multi-channel); name of ultimate parent; identification of appointed actuary and external auditor; name of the CEO or Chief Agent. If the company's parent is publicly traded, a two-year stock chart is presented.

If the company is interactively rated by DBRS, its financial strength rating (FSR) will appear in this exhibit. The ratings of foreign insurers with Canadian branches reflect those of the company's home office. Ratings are current as of publication date (April 23, 2018).

More extensive profile information is available in Section 6, '**Corporate Profiles**', at the end of this book.

Exhibit 2 – Key Financial Indicators

Columns 1-10 of this exhibit present up to five years of early warning **solvency ratios** and tests. These are the ten regulatory solvency tests that were used by the Canadian Federal Regulator, OSFI (The Office of the Superintendent of Financial Institutions). Ratios that fall outside of the acceptable range are visibly **FLAGGED**. This roster of solvency tests was introduced by OSFI in 2007.

It is **IMPORTANT** to note the following points when interpreting the regulatory tests:

1. Most companies often fail some ratios without this being a sign of distress. In fact it is rather rare to find a company that has not failed any of the tests. It is therefore very important to review which tests are out of range, and by how much. Tests should not be viewed in isolation, but rather as a whole. In addition, it is important to ascertain whether trends are improving or deteriorating over time.

2. While very useful in the analysis of company strength, the ratios in themselves should not be construed as conclusive evidence of insolvency risk or lack thereof. Some elements that are not captured in these ratios include subjective analysis of the company's market position, prospects, parental support, sources of capital, quality and sustainability of reinsurance support, management quality and sustainability of earnings. However, if a company has failed its MCT or BAAT test along with other key tests, it is likely on the regulator's radar.

In addition to these tests, MSA provides nine supplementary ratios in columns 10-18 of Exhibit 2.

Column Explanations for Exhibit 2 – Key Financial Indicators

Regulatory Early Warning Indicators (Columns 1 – 9)

Exhibit 2 – Column 1	
Name	**MCT,BAAT**
Description	These are the primary regulatory solvency tests applied by most Canadian regulators. The Minimum Asset Test (MAT for P&C-1 companies) and Test of Adequacy of Deposit (TAD for P&C-2 companies) were discontinued in 2003 and replaced by the more sophisticated Minimum Capital Test (MCT for P&C-1 companies) and Branch Adequacy of Asset Test (BAAT for P&C-2 companies). The MCT and BAAT are Risk-based Capital Tests (RBC).
Formulas	MCT = (Total Capital Available)/(Minimum Capital Required) BAAT = (Total Net Assets Available)/(Margin Required)
Acceptable Ranges	MCT, BAAT: OSFI requires a bare minimum of 150%. However, individual insurers are often required to achieve higher targets.

Exhibit 2 – Column 2	
Name	**Return on Equity (ROE)**
Description	The ROE measures an insurer's net income as a percentage of equity. The higher the ratio, the greater the return to shareholders per unit of invested capital. It is important to look for sustainability of earnings rather than occasionally high returns followed by periods of low returns or losses. ROE's may be high due to relatively low equity. Examine the other equity-based tests to determine whether the company's highly leveraged position is driving up its ROE during periods of profitability.
Acceptable Range	Minimum 5.4%

Exhibit 2 – Column 3	
Name	**Return on Revenue**
Description	This ratio measures the sum of underwriting income, investment income (excluding gains) and income from subsidiaries as a percentage of gross written premiums. The ratio essentially measures the income generated by the company relative to its revenue generating capacity.
Acceptable Range	Minimum 6.2%

Exhibit 2 – Column 4	
Name	**Return on Assets after Tax**
Description	Net after tax income as a percentage of average beginning and end of year assets. Measures the efficiency of the company in terms of its ability to convert generate income from its asset base.
Acceptable Range	Minimum 2.6%

Exhibit 2 – Column 5	
Name	**Insurance Return on Net Premium Earned**
Description	This ratio measures the core earnings capacity of an insurer based on its underwriting income as well as investment income (excluding capital gains) attributable to underwriting related activity as a percentage of its net premiums earned. Companies with strong underwriting and investment income will fare well on this measure.
Acceptable Range	Minimum 4%

Exhibit 2 – Column 6	
Name	**Liabilities as a percentage of Liquid Assets**
Description	Measures the insurer's liquidity. The higher the ratio, the greater the liabilities relative to the assets available to back them. Balance sheet values are used to measure liquid assets.
Acceptable Range	Maximum 105%

Exhibit 2 – Column 7	
Name	**Net Loss Reserves to Equity**
Description	Given the inherent uncertainty in assessing unpaid claim liabilities, a high ratio of net loss reserves to equity may expose an insurer to financial distress should provisions prove inadequate. In cases where this ratio is extremely high, small % deviations in outstanding reserves can have devastating effects on solvency. For more information on reserve adequacy and loss development trends please see: Column 15 – One-Year Development to Equity Exhibit 11 – Analysis of Outstanding Loss Provisions Exhibit 13 – Claim Runoff Exhibits Exhibit 14 – Accident Year Exhibits
Acceptable Range	Maximum 200%

Exhibit 2 – Column 8	
Name	**One-Year Development to Equity**
Description	This ratio measures an insurer's one-year development margin (or deficiency) on unpaid claims, relative to equity. Adverse development implies that previously estimated liabilities were under-estimated, hence previous equity was over-stated. Investment income is incorporated into the one-year development measure. In addition, the development measure is affected by mandatory loss reserve discounting. For more information on reserve adequacy and loss development trends please see: Exhibit 11 – Analysis of Outstanding Loss Provisions Exhibit 13 – Claim Runoff Exhibits Exhibit 14 – Accident Year Exhibits
Acceptable Range	Minimum -10%

Exhibit 2 – Column 9	
Name	**Overall Net Leverage**
Description	The ratio of net written premiums *plus* net liabilities to equity. Net liabilities = Total Liabilities – Unearned Premiums Recoverable from Reinsurers – Unpaid Claims and Adjustment expenses Recoverable from Reinsurers. This ratio combines the traditional underwriting leverage measure (NPW to equity – see Exhibit 2 – Column 17) with the ratio of liabilities to equity. Excessive premium writings relative to capital or a deterioration in liabilities will erode a company's financial stability.
Acceptable Range	Maximum 500%

Supplementary Ratios (Columns 10 – 18)

Exhibit 2 – Column 10	
Name	**Adjusted Investment Yield (including realized capital gains)**
Description	Measures income and capital gains relative to deployed assets.
Formula	2*(Net Investment Income+OCI)/(Beginning of Year plus End of Year Invested Assets – Net Investment Income-OCI)

Exhibit 2 – Column 11	
Name	**Change in Net Premiums Written**
Description	Year over year % change in net premiums written

Exhibit 2 – Column 12	
Name	**Change in Gross Premiums Written**
Description	Year over year % change in gross premiums written

Exhibit 2 – Column 13	
Name	**Change in Equity**
Description	Year over year % change in equity. Declines in equity decrease the company's cushion available to support premium writings and absorb losses. While usually positive, dramatic increases in equity may be indicative of instability.

Exhibit 2 – Column 14	
Name	**AOCI to Equity**
Description	AOCI or Accumulated other Comprehensive Income is a capital element relating to unrealized (mark to market) capital gains or losses on available for sale securities. This ratio measures AOCI's proportion in relation to overall capital.

Exhibit 2 – Column 15	
Name	**Reinsurance Recoverables to Equity**
Description	Recoverable from reinsurers on unpaid claims and unearned premiums as a percentage of equity. If the ratio is very high, this would indicate that the insurer is significantly dependent on the recoverability of these funds and the financial health of its reinsurers. Note this is a gross measure, thus it is not offset by 'payables to reinsurers'. Note that in addition to reinsurance recoverables the ratio also takes recoverables due to salvage and subrogation into account. For more information, please see: Exhibit 5 – Analysis Reinsurance

Exhibit 2 – Columns 16	
Name	**Net Underwriting Leverage Ratio**
Description	Ratio of net premiums written to equity. This ratio attempts to measure a company's underwriting exposure relative to its capital base. The utility of this ratio is mitigated by the fact that the volume of written premiums is an imperfect proxy for exposure. However, very high leverage ratios (over 300%) may indicate capital strain and vulnerability.

Exhibit 2 – Column 17	
Name	**Two-Year Combined Ratio**
Description	The company's combined ratio over the preceding 24 months. This provides a smoother measure of the company's underwriting performance than the single-year measure. Ratios over 100 indicate underwriting loss, while ratios under 100 indicate underwriting profit. See also: Exhibit 4- Profitability and Liquidity Measures Exhibit 6 – Loss, Expense & Commission Ratio Analysis

Exhibit 2 – Column 18	
Name	**Overall Diversification Score (1-100)**
Description	The diversification score measures how closely the insurer tracks the overall Canadian market both in terms of geographic and line-of-business (LOB) spread. The higher the score, the closer the insurer's spread of business tracks that of the overall industry. National multi-line writers will tend to have higher scores, while regional niche players will have lower ones. The overall diversification score is the product of the 'Line of Business Diversification Score' (Exhibit 7 - Column 17) and the 'Geographic Diversification Score (Exhibit 8 - Column 14). Each of which has a range of 1-10. A well-diversified company that closely tracks the industry will have a higher score (in excess of 65), while niche or regional insurers will have lower scores. Things to keep in mind: • The industry benchmark that the company is measured against excludes the government owned 'Insurance Corporation of British Columbia' (ICBC). • If the insurer you are examining is part of a group, look into the group's diversification score on the group summary page. • No value judgment should automatically be assigned to low or high scores. A low score simply indicates that the company is concentrated either by LOB or geographically (or both). Niche players can be extremely successful. High scores simply indicate that the insurer is highly diversified and will generally track the market's overall performance. For calculation methodologies please see: Exhibit 7 – Column 17 – LOB Diversification Score Exhibit 8 – Column 14 – Geographic Diversification Score

Exhibit 3 – Balance Sheet & Income Statement

Exhibit 3 presents the company's summary financials over a five-year period.

Exhibit 3 – Balance Sheet and Income Statement		
Column	**Name**	**Comments**
Balance Sheet Assets		Source: Page 20.10 of the P&C-1 and P&C-2
1	Cash and Investment Income Due and Accrued	
2	Fixed Income Assets	Term Deposits, Bonds and Debentures
3	Mortgage Loans	
4	Preferred and Common Shares	
5	Other Investments	Includes Real Estate and 'Other'
6	Receivables from Agents and Brokers	
7	Receivables from Policyholders and Installment Premiums	
8	Receivables from Other Insurers, Facility, Facility Association ("FA"), FA Risk Sharing Pool ("FARSP") and the "Plan de Répartition des risques" ("P.R.R.")	
9	Receivables from Subsidiaries and Affiliates	
10	Other Receivables	Includes Income Taxes Receivables and 'Other'
11	Recoverables from Reinsurers	Includes Recoverables on Unearned Premiums, Unpaid Claims and Other Recoverables
12	Investments in Subsidiaries and Affiliates and own-use Real-Estate	
13	DPAE and Other	Deferred Policy Acquisition Expenses, Goodwill, Other Intangible Assets Miscellaneous -- Furniture, Telephone, Computer Equipment & Software and Future/Deferred Income Tax Assets
14	Total Assets	
Liabilities and Capital		Source: Page 20.20 of the P&C-1 and P&C-2
15	Payables	Payables to Agents and Brokers, Policyholders, Other Insurers, Subsidiaries and Affiliates
16	Unearned Premiums	Gross
17	Unpaid Claims	Gross
18	Unearned Commission	Gross
19	Other Liabilities	Includes: Overdrafts, Borrowed Money and Accrued Interest, Expenses Due and Accrued, Income Taxes Due and Accrued, Other Taxes Due and Accrued, Policyholder Dividends and Rating Adjustments, Encumbrances on Real-Estate, Premium Deficiencies, Self-Insured Retention (SIR), Portion of Unpaid Claims, Preferred Shares – Debt Miscellaneous -- Post Retirement Benefits. Excludes Subordinated Debt and Future Tax Liabilities
20	Total Liabilities	Excludes Subordinated Debt and Future Tax Liabilities

Exhibit 3 – Balance Sheet and Income Statement		
Column	**Name**	**Comments**
21	Accumulated Other Comprehensive Income (AOCI)	Introduced in 2007 as part of fair value accounting. AOCI is a capital element representing unrealized gains and losses related to ‘available for sale’ securities in the insurer’s portfolio.
22	Share Capital Issued & Paid	
23	Contributed Surplus (Head Office Account for branches)	
24	Other Capital Elements	Includes General and Contingency Reserves for P&C-1 Companies
25	Retained Earnings	
26	Regulatory Reserves	Mostly discontinued in 2003
27	Total Equity	Capital and surplus
28	Adjusted Equity	**Adjusted Equity** **P&C-1**: Adjusted Equity (OSFI) = Total Equity – Capital Required for Catastrophes and Reinsurance Ceded to Unregistered Insurers. **P&C-2:** Adjusted Equity (MSA) = Head Office Account
29	Total Liabilities and Equity	
Statement of Income		Source: Page 20.30 of the P&C-1 and P&C-2
30	Premiums Written - Direct	
31	Premiums Assumed	
32	Premiums Ceded	
Note that due to space limitations, Net Premiums Written are not displayed on this exhibit. This metric can however, be found in exhibit 7 and exhibit 8. Net premiums written equal Direct Premiums Written + Assumed Premiums – Ceded Premiums.		
33	Net Premiums Earned	
34	Net Claims and Adjustment Expenses Incurred	
35	Acquisition Expenses	Includes Commissions, Taxes and ‘Other Acquisition Expenses’
36	General Expenses and Other	General Expenses Net of Service Charges and ‘Other’. Page 20.30 Row 16 – Row 7 – Row 8
37	Total Underwriting Expenses	Includes Premium Deficiency Adjustments
38	Total Underwriting Income (loss)	
39	Net Investment Income	Includes Recognized Gains
40	Other Income	Income (Loss) from Ancillary Operations, Share of Net Income (Loss) of Subsidiaries and Affiliates, Gain (losses) from Fluctuations in Foreign Exchange Rates and ‘Other Income’
41	Net Income Before Tax	And Before Extraordinary Items
42	Net Income After Tax	And After Extraordinary Items
43	Total Comprehensive Income (Loss)	Comprehensive Income = Net Income + Other Comprehensive Income (OCI). OCI includes captures changes in fair asset values for assets that are not classified as ‘Held for Trading’ or ‘Held to Maturity’.
44	Dividends Declared, Transfers to (from) Head Office	

Exhibit 4 – Profitability and Liquidity Measures

Loss Reserve Discounting:

Starting in 2003, Canada's regulators required that P&C insurers 'discount' their outstanding loss reserves to reflect the time-value of money. In addition, ultimate loss provisions have also been adjusted by three 'Margins for Adverse Deviations'. The margins address uncertainties relating to claims development, reinsurance recoverables and investment return rates.

These adjustments impair comparability of 2003 results with those of prior years as well as comparability with other jurisdictions such as the US.

Mandatory reserve discounting flows directly through the balance sheet and income statements affecting:

- Loss ratios (accident-year and calendar-year)
- Combined ratios (accident-year and calendar-year)
- ROE's
- Loss development metrics etc.

The impact of discounting to date has been rather muted. However, should interest rates climb; we can expect the impact to become increasingly significant, particularly for companies with long-tail casualty liabilities.

Exhibit 4 presents profitability measures on both the 'discounted' and the traditional 'undiscounted' basis, thereby allowing for apples-to-apples comparability with prior years and other jurisdictions.

Discounting vis-à-vis Quebec Licensed Insurers:

Reserve discounting is not new to provincially licensed insurers in Quebec. These companies already discounted their provisions prior to the change enacted federally by OSFI. (In other words, data provided on page 60.40 of the P&C-1 statement for these companies was always discounted). Thus, for Quebec licensed companies, figures appearing under the 'un-discounted' heading will in fact be discounted.

Exhibit 4 – Profitability and Liquidity Measures		
Column	**Name**	**Comments**
Discounted Measures (Columns 1 – 7)		Note that all measures exclude 'Marine' for P&C-2 companies for years prior to 2010.
1	Underwriting Income	
2	Calendar Year Combined Ratio	(Discounted Losses, and Expenses Incurred in Year)/(NPE in Year)
3	Accident Year Combined Ratio	= (Developed Discounted Losses Incurred for Specific Accident Year+ Other U/W Expenses for Year)/(NPE in Year)
4	Calendar Year Loss Ratio	(Discounted Losses Incurred in Year)/(NPE in Year)
5	Accident Year Loss Ratio	= (Developed Discounted Losses Incurred for Specific Accident Year)/(NPE in Year)
6	Pre-Tax ROE	
7	After Tax ROE	
Un-Discounted Measures (Columns 8-14)		Note that all measures exclude 'Marine' for P&C-2 companies for years prior to 2010
8	Underwriting Income	
9	Calendar Year Combined Ratio	(Un-Discounted Losses, and Expenses Incurred in Year)/(NPE in Year)
10	Accident Year Combined Ratio	= (Developed Un-Discounted Losses Incurred for Specific Accident Year+ Other U/W Expenses for Year)/(NPE in Year)
11	Calendar Year Loss Ratio	(Un-Discounted Losses Incurred in Year)/(NPE in Year)
12	Accident Year Loss Ratio	= (Developed Un-Discounted Losses Incurred for Specific Accident Year)/(NPE in Year)
13	Pre-Tax ROE	
14	After Tax ROE	The MSA Report applies the company's current tax rate to arrive at an estimate of the company's after-tax ROE on an undiscounted basis.
15	(Pre-Tax impact of discounting) / NPE	Measures the 'contribution' of discounting to the company's reported combined ratio. I.e. How many points on the combined ratio are attributable strictly to discounting?
Liquidity Ratios		Liquidity ratios use book values for branches (P&C-2). This is due to the fact that market values are only available for vested assets.
16	Cash Ratio	Cash and Equivalents to Current Liabilities (Cash + Inv Income Due + Short Term Deposits)/(Net Current Liabilities)
17	Quick Ratio	Cash and 'Quick' Assets to Current Liabilities (Cash + Inv Income Due + Short Term Deposits + Common Shares + Pref-Shares)/(Net Current Liabilities excluding Deferred Taxes and Subordinated Debt) P&C-1 Fixed income assets expiring in 1-year or less taken at market-value starting in 2003 (book-value in 2002 and prior)

Exhibit 4 – Profitability and Liquidity Measures		
Column	**Name**	**Comments**
18	Current Ratio	Current Assets to Current Liabilities (Cash + Inv Income Due + (Total Investments excluding Real Estate and Other)@MV)/(Net Current Liab) P&C-1 Fixed income assets expiring in 1-year or less taken at market-value.

Exhibit 5 – Analysis of Reinsurance Ceded

Exhibit 5 presents information on ceded business by various categories including: To affiliated and un-affiliated reinsurers; To registered and unregistered reinsurers; and by various treaty types. This exhibit allows the reader to analyze the insurer's cession patterns and loss experience of various categories of assuming parties. It also allows the reader to assess the degree to which the insurer is utilizing unlicensed capacity.

General Comments:

- For years prior to 2010, columns 1-9 exclude Marine business for branches.

Exhibit 5 – Analysis of Reinsurance Ceded		
Column	**Name**	**Comments**
1	Total Premiums Ceded	
Columns 2-10 reflect Reinsurance Ceded as a % of Gross Written Premiums.		Note that insurers generally may not cede more than 75% of their gross writings. In addition, insurers may not generally cede more than 25% of their gross writings to unregistered (unlicensed) reinsurers.
2	Ceded to Affiliated Carriers that are Registered	
3	Ceded to Affiliated Carriers that are NOT Registered	
4	Ceded to Affiliated Carriers Total	
6	Ceded to Unaffiliated Carriers that are Registered	
7	Ceded to Unaffiliated Carriers that are NOT Registered	
8	Ceded to Unaffiliated Carriers Total	
10	Total Ceded	
11	Ceded to Unregistered Carriers as a % of Total Business Ceded	
12	Loss Ratio of Ceded Business	Ratio taken to 'Ceded written' business rather than to 'earned'
13	Net Loss Ratio	Loss ratio of retained business
14	Gross Loss Ratio	
Premiums Ceded by Treaty Type		Note that the following ratios do not differentiate between affiliated and unaffiliated cessions. Thus inter-company pooling and other related party reinsurance may dominate these ratios.
15	Quota-Share EP % Tot	(Earned Premiums Ceded to Quota Share)/(Total Ceded Earned Premiums)
16	Quota-Share Loss Ratio	
17	Surplus EP % Tot	(Earned Premiums Ceded to Surplus Treaties)/(Total Ceded Earned Premiums)

Exhibit 5 – Analysis of Reinsurance Ceded		
Column	**Name**	**Comments**
18	Surplus Treaty Loss Ratio	
19	Excess Treaty EP % Tot	(Earned Premiums Ceded to Excess Treaties)/(Total Ceded Earned Premiums)
20	Excess Treaty Loss Ratio	
21	Facultative Treaty EP % Tot	(Earned Premiums Ceded to Facultative Treaties)/(Total Ceded Earned Premiums)
22	Facultative Treaty Loss Ratio	

Exhibit 6 – Loss, Expense and Commission Ratios

Exhibit 6 – Loss, Expense and Commission Ratios		
Column	**Name**	**Comments**
Ratios in Columns 1-7 are taken as a % of Net Premiums Earned		
1	Net Loss Ratio	Net Loss Ratio
2	Commission Ratio	
3	Taxes	Excluding income taxes
4	General Expenses	
5	Other	Includes: Other acquisition expenses + Premium deficiency adjustment – Service Charges – Other UW Revenue.
6	Total U/W Expenses	This is equivalent to the combined ratio.
General and Acquisition Expense Categories as a % of Net Premiums Written		
7	Salaries	Includes benefits
8	Management Fees	
9	IT	
10	Home Office Overhead	
11	Occupancy	
12	Professional Fees, Bureaus and Associations and Regulatory Assessments.	
13	Other	Includes: Director’s remuneration, Agency (excluding commissions), Inspections and Investigations and Allowance for doubtful accounts
14	Total General & Acquisition Expense Categories	Excluding Commissions.
Net Commission Expense as a % of Net Premiums Earned – By Major Line		Commission ratios in columns 16-20 exclude contingent commission expense.
15	Property	
16	Auto	
17	Liability	
18	Other	Includes Marine and ‘Other’
19	Total All Lines	

Exhibit 7 – Net Premiums Written by Major Line

This exhibit presents net premiums written and net loss ratios by major line.

<u>**General Comments**</u>

- Note that, in the 'CY % Tot' Row (below the most recent year's data), premium writings for each line are shown as a percentage of total writings for the most recent year, while losses for each line are shown as a percentage of total losses incurred for the most recent year**.**
- Note that the multi-year NPW measure depicts compound annual growth (CAGR). This is indicated by a '**c**', while the multi-year Net Loss measure depicts a multi-year loss ratio.

For detailed line of business information broken out by province, please see the **MSA Researcher Software Package.** For more information, visit **msaresearch.com or call 416-368-0777.**

Exhibit 7 – NPW by Major Line		
Column	**Name**	**Comments**
1	Auto NPW	
2	Auto Net Loss Ratio	
3	Personal Property NPW	
4	Personal Property Net Loss Ratio	
5	Commercial Property NPW	
6	Commercial Property Net Loss Ratio	
7	Liability NPW	
8	Liability Net Loss Ratio	
9	Surety NPW	
10	Surety Net Loss Ratio	
11	Boiler & Machinery NPW	
12	Boiler & Machinery Net Loss Ratio	
13	Other NPW	Includes Aircraft, Credit, Credit Protection, Fidelity, Hail, Legal Expense, Mortgage, Other Approved Products, Title, Marine and Accident and Sickness.
14	Other Net Loss Ratio	
15	Total NPW	
16	Total Net Loss Ratio	

Exhibit 7 – NPW by Major Line		
Column	**Name**	**Comments**
17	Line of Business Diversification Score. 1-10	The LOB diversification score measures the divergence of the company's LOB spread from that of the Canadian insurance industry (excluding ICBC). The calculation is as follows: LOB Diversification Score = $10-9\times\sum_{i}\text{Max}[(\text{CoNWP}_{\text{LOB}_i}/\text{CoNWP}_{\text{Total}} - \text{IndNWP}_{\text{LOB}_i}/\text{IndNWP}_{\text{Total}}),0]$ The positive proportional deviations from the industry are summed, multiplied by 9, and deducted from 10. Thus a company that is perfectly tracking the industry will have zero deviations and a score of 10. Conversely a company whose business mix is totally uncorrelated with that of the industry will have a score of 1. See also: Exhibit 2 – Column 19 – Overall Diversification Exhibit 8 – Column 14 – Geographic Diversification.

Exhibit 8 – Territorial Distribution of NPW – All Lines

This exhibit presents net premiums written in each jurisdiction over five years. Net loss ratios are presented for the current year only.

For detailed line of business information broken down by province, please see the **MSA Researcher Software Package.** For more information, visit **msaresearch.com or call 416 368-0777**

Exhibit 8 – Net Premiums Written by Territory – All Lines		
Column	**Name**	**Comments**
1	NFLD	Newfoundland
2	PEI	Prince Edward Island
3	NS	Nova Scotia
4	NB	New Brunswick
5	QC	Quebec
6	ON	Ontario
7	MB	Manitoba
8	SK	Saskatchewan
9	AB	Alberta
10	BC	British Columbia
11	YT/NT/NU	Yukon, Northwest Territories and Nunavut
12	Out of CN	Out of Canada Business
13	Total	Total

Exhibit 8 – Net Premiums Written by Territory – All Lines		
Column	**Name**	**Comments**
14	Geographic Diversification Score. 1-10	The geographic diversification score measures the divergence of the company's territorial spread from that of the Canadian insurance industry (excluding ICBC). The calculation is as follows: Geographic Diversification Score = $10-9\times\sum_i \mathrm{Max}[(\mathrm{CoNWP}_{\mathrm{Province}_i}/\mathrm{CoNWP}_{\mathrm{Total}} - \mathrm{IndNWP}_{\mathrm{Province}_i}/\mathrm{IndNWP}_{\mathrm{Total}}),0]$ The positive proportional deviations from the industry are summed, multiplied by 9, and deducted from 10. Thus a company that is perfectly tracking the industry will have zero deviations and a score of 10. Conversely a company whose territorial mix is totally uncorrelated with that of the industry will have a score of 1. See also: Exhibit 2 – Column 19 – Overall Diversification Exhibit 7 – Column 17 – Line of Business Diversification.

Exhibit 9 – Analysis of Auto Writings

This exhibit presents direct auto premiums written and direct auto loss ratios by jurisdiction over five years. Note that premiums in this exhibit are presented in **millions of dollars**.

Also note that, starting in 2011, breakouts for private passenger and non-private passenger auto are now available. This information is broken out in MSA's Researcher Software.

Exhibit 10 – Analysis of Investments

General Comments:

- This exhibit only displays **vested assets** for P&C-2 companies (branches).
- For years starting in 2007, items in this exhibit reflect the introduction of fair value accounting.

Exhibit 10 – Analysis of Investments		
Column	**Name**	**Comments**
1	Bonds & Term Deposits @ Balance Sheet Value	Includes the sum of securities held at fair value plus those held on an amortized cost basis (HtM).
2	Bonds & Term Deposits @ Fair Value	Yhis item excludes securities held on an amortized cost basis (HtM).
3	Mortgage Loans @ Balance Sheet Value	Includes the sum of securities held at fair value plus those held on an amortized cost basis (HtM).
4	Mortgage Loans @ Fair Value	This item excludes securities held on an amortized cost basis (HtM).

Exhibit 10 – Analysis of Investments		
Column	**Name**	**Comments**
5	Preferred Shares @ Balance Sheet Value	
6	Preferred Shares @ Fair Value	
7	Common Shares @ Balance Sheet Value	
8	Common Shares @ Fair Value	
9	Real Estate & Other @ Balance Sheet Value	Includes consumer and commercial loans and ‘Other Investments’
10	Real Estate & Other @ Fair Value	Includes consumer and commercial loans and ‘Other Investments’
11	Total Investments @ Balance Sheet Value	Includes the sum of securities held at fair value plus those held on an amortized cost basis (HtM).
12	Total Investments @ Fair Value	This item excludes securities held on an amortized cost basis (HtM).
13	Allocations to Amortized Cost	Displays assets held on an amortized cost basis (designated as Held to Maturity -HtM)
14	Reported ROE	The standard return on equity formula. Net income as a percentage of the average beginning and ending equity.
15	Adjusted ROE excluding AOCI	Net income as a percentage of the average beginning and ending equity net of AOCI. This ratio removes the dampening effect of AOCI
16	Adjusted ROE – with OCI taken into income.	This ratio takes net income *plus* Other Comprehensive Income (OCI) as a percentage of average beginning and ending equity. The benefit of taking OCI into income is that by doing so, the measure more accurately reflects the performance of company Management and treats the economic value of ‘Available for Sale’ securities on a similar basis with ‘Held for Trading’ securities (changes in unrealized values in HfT securities flow through income, while changes in AfS securities bypass the income statement and impact equity – this ratio forces the changes in unrealized gains in AfS securities through income). The market-adjusted ROE provides a more objective measure of a company’s overall performance than the reported ROE., as changes in unrecognized gains are taken into consideration.
17	Non-Investment Grade Preferred Shares @ Book Value	See below for OSFI definition of Investment Grade
18	Non-Investment Grade Securities as a percentage **of the insurer’s** Equity	See below for OSFI definition of Investment Grade

Exhibit 10 – Analysis of Investments		
Column	**Name**	**Comments**
19	Vested Assets as a % of Total in-Canada Cash and Invested Assets	This ratio applies only to P&C-2 branches. It measures the proportion of cash, investment income due and accrued and invested assets that are vested with OSFI relative to the branch's total cash, investment income due and accrued and invested assets. Note that only 'vested assets' are admissible for the Branch Adequacy of Assets Test (BAAT). See Exhibit 2 – Column 1 – BAAT Ratio.

OSFI Definition of 'Investment Grade' Securities
Source: OSFI MCT Guideline No. A - July 2003

Investment Grade

A security is treated as Investment Grade if its rating (excluding securities that are included in the Government Grade category) meets or exceeds the rating listed in the table below. If a rating is not available, or where the rating of the security, or guarantor, is less than the rating listed in the table, it will be assigned a Not-Investment Grade factor. A P&C insurer wishing to use the rating of another rating agency should seek the approval of the regulator.

Asset/Guarantor Ratings

Rating Agency	Commercial Paper	Bonds & Debentures	Preferred Shares
	(at least as high as)		
Moody's Investor Service	P-1	A	Aa
Standard and Poor's Corporation	A-	A	AA
Dominion Bond Rating Service	R1 (low)	A	Pfd-2

Exhibit 11 – Analysis of Outstanding Loss Provisions

General Comments:

- **Loss reserve components in this exhibit are presented on a discounted basis.** For a discussion of discounting, please see the explanations for Exhibit 4 – Profitability and Liquidity Measures.

- Line of business adequacy (columns 12-18) are shown *before* investment income. Investment income attributable to unpaid claims is shown in column 19, and is incorporated into the total margin calculation in column 20.

Exhibit 11 – Analysis of Outstanding Loss Provisions		
Column	**Name**	**Comments**
Net Unpaid Claims as a % of Net Premium Earned		Columns 1-8 measure the unpaid claim reserves relative to the premiums earned by major line of business. These ratios can be useful in assessing whether the reserves carried by a specific company are 'in line' with those of its peers or benchmarks. (see the **MSA Benchmark Report**).
1	Property	
2	Auto Liability	
3	Auto Personal Accident	
4	Auto Other	
5	Liability	
6	Boiler and Machinery	
7	All Other	Includes: Aircraft, credit, credit protection, fidelity, hail, legal expense, mortgage, other approved products, surety, title, marine and accident & sickness.
8	Total	All lines
Unpaid Claim Provisions by Type		
9	Total IBNR	Total IBNR Reserve
10	Total Case	Total Case Reserve
11	IBNR/Unpaid	IBNR as a % of total unpaid claims.
Adequacy of Claim Provisions – Margin (Deficiency)		Columns 12-20 present the one-year margin by major line of business.
12	Property	
13	Auto Liability	
14	Auto Personal Accident	
15	Auto Other	
16	Liability	
17	Boiler and Machinery	
18	All Other	Includes: Aircraft, credit, credit protection, fidelity, hail, legal expense, mortgage, other approved products, surety, title, marine and accident & sickness.
19	Investment Income Attributable to Unpaid Claims	Starting in 2003, insurers were required to attribute part of their investment income to the assets backing their unpaid claim reserves. This income is then incorporated into the total margin calculation.
20	Total Margin	

Exhibit 11 – Analysis of Outstanding Loss Provisions		
Column	**Name**	**Comments**
21	Total Margin as a % of NPE	Measures the prior-year development impact on the company's loss and combined ratios.
22	Total Margin as a % of Equity	Notably important in cases of large adverse loss development.
23	One-Year Development Ratio	Includes investment income starting in 2003.

Exhibit 12 – Analysis of Adjustment Expenses

This exhibit presents an analysis of internal and external loss adjustment expenses over a five-year period.

Exhibit 12 – Analysis of Adjustment Expenses		
Column	**Name**	**Comments**
1	Direct internal adjustment expenses incurred.	Internal adjustment expenses, otherwise known as 'Unallocated Loss Adjustment Expenses' (or ULAE), include both explicit loss adjustment expenses incurred internally by the company *plus* costed or otherwise allocated overhead charges that are attributable to the claims function of the company. This item is net of reinsurance.
2	Direct external adjustment expenses	External adjustment expenses, otherwise known as 'Allocated Loss Adjustment Expenses' (or ALAE), include any externally sourced adjustment related service incurred by the company This item is net of reinsurance.
3	Total Direct adjustment expenses	Also known as 'Loss Adjustment Expenses' or LAE. This item is net of reinsurance.
4	Direct internal adjustment expenses incurred as a % of net premiums earned.	Taking the ratio of ULAE to NPE allows for easier comparisons across time and between companies. In addition this ratio represents the ULAE contribution to the company's combined ratio.
5	Direct external adjustment expenses incurred as a % of net premiums earned.	Taking the ratio of ALAE to NPE allows for easier comparisons across time and between companies. In addition this ratio represents the ALAE contribution to the company's combined ratio.
6	Direct adjustment expenses incurred as a % of net premiums earned.	Taking the ratio of LAE to NPE allows for easier comparisons across time and between companies. In addition this ratio represents the LAE contribution to the company's combined ratio. This item also ties in with Exhibit 6 - Column 2.
Columns 7-14 present internal adjustment expenses categories as a percent of net claims incurred. The accuracy of these ratios is highly sensitive to the reliability of each company's costing methodology.		
7	Salaries and benefits.	
8	Management fees	
9	Information technology	
10	Inspections and investigations	
11	Occupancy	

Exhibit 12 – Analysis of Adjustment Expenses		
Column	**Name**	**Comments**
12	Professional fees	
13	Other	Includes: director’s remuneration, agency (excluding commissions),; home office overhead,; allowance for doubtful accounts and 'other expenses'.
14	Total	
Columns 15-19 present external adjustment expense types 'paid' as a % of claims paid.		
15	Adjusters and appraisers (gross)	Paid to adjusters and appraisers before recoveries from reinsurers as a percent of gross paid claims.
16	Legal (gross)	Paid in legal fees before recoveries from reinsurers as a percent of gross paid claims.
17	Other (gross)	Other external adjustment expenses paid before recoveries from reinsurers as a percent of gross paid claims.
18	Total (gross)	Total external adjustment expenses paid before recoveries from reinsurers as a percent of gross paid claims.
19	Total (net)	Total external adjustment expenses paid **after** recoveries from reinsurers as a percent of net paid claims.

Exhibit 13 – Claim Runoff Exhibits

Exhibit 13 presents cumulative loss development metrics on both a discounted and undiscounted basis.

In Exhibit 13, accident years are presented in cohorts. That is 'YYYY **and prior**' encapsulates claim development activity relating to claims occurring in all years up to and including YYYY.

Exhibit 13	Claim Runoff Exhibits					
Accident Years	**Undiscounted** Developed Through					
	1998	1999	2000	2001	2002	2003
	(7)	(8)	(9)	(10)	(11)	(12)
1998 & *prior*	**1,578,062**	-2.1%	-0.8%	-11.8%	-6.6%	-7.4%
1999 & *prior*		**1,637,206**	-0.9%	-7.3%	-8.6%	-9.4%
2000 & *prior*			**1,465,483**	-10.1%	-14.8%	-16.1%
2001 & *prior*				**1,421,765**	-5.6%	-6.7%
2002 & *prior*					**1,396,572**	-3.1%
2003 & *prior*						**1,379,206**

Dollar amounts represent the opening unpaid claim balance. In this case unpaid claims relating to 1998 and prior, as at December 31, 1998.

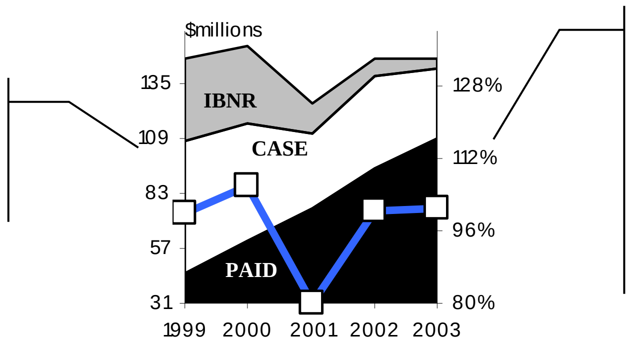
The percentages represent the cumulative development on the opening unpaid over time. In this case, the opening unpaid of 1,578,062 developed adversely by 11.8% by December 31, 2001. By applying the 11.8% we can see that the adverse development on the 1998 and prior years equaled approximately $186 million at the end of 2001.(0.118*1,578,062) .

By the end of 2003, we can see that the development recovered somewhat, with the total adverse development on those accident years totaling approximately $117 million.

Exhibit 14 – Accident Year Exhibits

Exhibit 14 presents MSA’s proprietary charts and accident-year statistics. The charts depict loss development activity for each separate accident year. The exhibit is presented on a discounted and undiscounted basis.

Left Axis: Paid, Case and IBNR in millions of dollars over time.



Right Axis: Unpaid Claim Development relative to opening provisions over time.

Increasing line indicates adverse development.

Decreasing line indicates favorable development

<u>Notes:</u>

- In contrast to Exhibit 13, Exhibit 14 elements are presented on an <u>individual accident</u> year basis.
- The charts combined with the statistics to the left of them provide the reader with an excellent view of the activity of the accident year in question.
- The black 'PAID' layer on the chart depicts paid claims for the accident year in question for each calendar year.
- The white 'CASE' layer depicts case reserves (known unpaids) for the accident year in question for each calendar year.
- The grey 'IBNR' layer depicts 'incurred but not reported' provisions for the accident year for each calendar year.
- In the chart above, paid claims for the accident year started out at around $40 million. Case reserves started out at around $70 million and IBNR started at around $30 million for an opening incurred of about $140 million. As time progressed, the paids increased and the unpaids (Case+IBNR) decreased. In this case, the development was textbook, after a bump in 2000 and a dip in 2001, the ending incurred for the accident year hardly moved from the original $140 million.
- Loss development can be seen clearly by focusing on the line cutting across the chart. **The line relates to the right hand axis**, and depicts the development of unpaid claims (Case + IBNR) relative to the starting position. Looking from the left, the line always starts at 100% (the origin). In the example above we can clearly see that in 2001 the provisions developed favorably to 80% of the original estimate, but then surged back up to around 100% in 2002, staying there through 2003.
- Note that the line magnifies claim development activity. Make sure to look at the percentages on the right hand axis to get a feel for the scale of the movement. Small movements in unpaid claims may not be discernable when looking at the Paid/Case/IBNR layers. This will be especially true for short-tail companies with heavy upfront paids (paids at the origin have no development).

  Large movements will be discernable in the layers. In the example above, the drop in 2001 is clearly visible as a drop in both case reserves and IBNR.

- Longer tail writers (especially casualty type writers) will tend to show fatter Case and IBNR layers. Indeed, these layers *are the tail*. In companies writing short-tail business (property) the tail will tend to shrink quickly.

- As opposed to most other elements of the financial statement, the tail can be looked at as a forward-looking item. By looking at the IBNR in the most recent calendar year (the right side of the chart), you can discern whether the company's actuaries believe that there is significant 'unknown' claim potential for the accident year. This would include provisions for adverse deviations on 'known' claims. Compare to similar companies or to the **MSA Benchmark Report** for comparisons or reality-checks.

- **<u>Reinsurers</u>** sometime prepare their run-off schedules on a basis other than ‘Accident-Year’. If information regarding the basis is known, it is flagged in the title of Exhibit 14. The bases are as follows:

AY	Accident Year
UY	Underwriting Year. Reinsurers that use an UY-Year basis may show false ‘severe’ reserve developments in immature years. When reviewing charts, it is advisable to look at development from year 1 onwards rather than from year 0.
Mixed	A mixed basis indicates that some of the losses reflect accident-year accounting while others reflect underwriting-year accounting. Typically, proportional business would be presented on an UY basis, while non-proportional business would be presented on an accident-year basis.

The figures to the right of each chart provide additional information on the accident year, including:

- Total <u>developed</u> incurred losses for the accident-year.
- Beginning unpaid provisions (Case+IBNR).
- Developed unpaid provisions
- The margin (or deficiency). This equals the developed unpaid provisions *minus* the beginning unpaid provisions.
- The percentage development ratio for the accident year. This equals the margin *divided* by the beginning unpaid provision.