



# Risk Management Report

April 2018

**Updates were made to the following risks:**

- Risks 1-1 and 1-2
- Risks 2-8 and 2-14
- Risks 3-2 and 3-5

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### Current Risk Summary

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**Risk Profile Grid (as at April 2018) – PACICC’s Risk Profile remains stable**

<b>Impact Rating</b>	<b>Very High</b>	<b>Financial Risk</b> 1-1 Insolvency costs exceed risk limit-risk appetite				<b>PACICC’s priority risks (risk profile)</b>  <b>1-1</b> A catastrophic earthquake or other factor causes a very large insurer to fail, or leads to multiple, smaller insolvencies; resulting insolvency costs exceed PACICC’s risk limit-risk appetite (twice our annual general assessment capacity)  <b>1-2</b> Supervisory practices below minimum IAIS standards  <b>1-3</b> Rate regulation causes insolvency  <b>1-4</b> Outdated winding-up legislation  <b>1-5</b> Adverse changes in insurance legislation  <b>1-6</b> PACICC could be forced to increase coverage and benefits  <b>1-7</b> Risk 1-1 puts extraordinary demands on human resources  <b>1-8</b> Lack of member financial data results in unexpected insolvency costs  <b>1-9</b> Much of Canada’s accumulated P&C liquidation expertise has “retired”
	<b>High</b>		<b>Regulatory Risks</b> 1-5 New laws 1-6 Benefits enhanced			
	<b>Medium</b>		<b>Operational Risks</b> 1-7 Resource demands 1-8 Unexpected insolvency costs	<b>Regulatory Risks</b> 1-3 Rate regulation <b>Operational Risks</b> 1-9 Lack of liquidator expertise		
	<b>Low</b>				<b>Regulatory Risks</b> 1-2 Solvency supervision 1-4 Outdated winding up legislation	
		<b>Very Low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	

**Likelihood Rating**

<b>Impact Criteria Ranking</b>	Low	Medium	High	Very High
a) Financial Risk	< \$ 5 million	\$5 to \$500 million	\$ .5 to \$1.5 billion	>\$1.5 billion
b) Operational Risk	<\$100 thousand	\$ .1 to \$1.0 million	\$1.0 to \$2.0 million	>\$2.0 million
c) Reputation Risk	Isolated complaints	Regulatory involvement	Wide media involvement	Government intervention
<b>Likelihood Criteria Ranking</b>	Very Low	Low	Medium	High
All risks	Occur < 1 / 100 years	Occur within 10 years	Occur within 5 years	Occur within 1 year

## Responding to Significant Risks: Actions, Responsibility and Timing

The table below summarizes the nine risks in PACICC’s risk profile, with attention on mitigation strategies and actions; responsibility for implementation; and the expected timing for implementation, or the achievement of specific milestones.

Risk	Mitigation Strategies/Actions	Implementation Responsibility	Timing/Milestones
<p><b>1-1</b> A catastrophic earthquake or other factor causes a very large insurer to fail, or leads to multiple, smaller insolvencies; resulting insolvency costs exceed PACICC’s risk limit-risk appetite (twice our annual general assessment capacity)</p>	<p>The Federal Department of Finance announced it will consider “how to limit the system-wide risks an extreme earthquake could pose to federal P&amp;C insurers.” Whether the government will provide a financial backstop (Plan A), and with what timing, is unclear. If the answer is “no,” PACICC would proceed with its proposed Extraordinary Assessment Mechanism (Plan B) and would need to rely entirely on that tool to limit the potential for contagion from insurer failures.</p>	<p>Paul Kovacs Grant Kelly</p>	<p>Release of Federal Financial Sector Policy Review paper; the Board should review PACICC’s mitigation strategy at the April 2018 meeting</p>
<p><b>1-2</b> Supervisory practices below minimum IAIS standards</p>	<p>PACICC’s strategy is to focus on three key provinces in addition to OSFI: Quebec, Alberta and B.C. These regulators cover the vast majority of solvency supervision in Canada. Approved intervention guidelines with these regulators, and the establishment of the PIRL Committee, bolster this strategy. (Ontario is a residual risk, as its approach to solvency supervision remains unclear).</p>	<p>Grant Kelly</p>	<p>Intervention guidelines are in place with Quebec, and imminent with OSFI; goal is to complete Alberta and B.C. work by mid-year 2018</p>
<p><b>1-3</b> Rate regulation causes insolvency</p>	<p>PACICC’s options for mitigating this risk are limited. (Residual risk factor remains “high”). Our strategy is to influence/strengthen the actuarial standards underpinning rate filing and rate adequacy.</p>	<p>Grant Kelly Jim Harries</p>	<p>PACICC continues to make its concerns known to insurance regulators</p>
<p><b>1-4</b> Outdated winding-up legislation</p>	<p>PACICC first proposed technical amendments to the <i>Winding-Up and Restructuring Act</i> nearly 10 years ago. To date, the Federal government has not updated the Act. Because PACICC rates the (financial) impact of this risk as “low,” the residual risk to the Corporation is relatively modest. If the legislation remains unchanged, can the Board accept the residual risk?</p>	<p>Grant Kelly Ian Campbell</p>	<p>The current Federal Financial Sector policy review provides a potential window for change</p>
<p><b>1-5</b> Adverse changes in insurance legislation</p>	<p>PACICC’s strategy to mitigate this risk is to work constructively and proactively with Canada’s insurance regulators. Recent actions include</p>	<p>Paul Kovacs Grant Kelly</p>	<p>Completion of guidelines with Alberta and B.C. is</p>

	establishing the PIRL Committee and completing intervention guidelines with AMF and OSFI.		targeted mid-year 2018 (OSFI guidelines needed to be completed first)
<b>1-6</b> PACICC could be forced to increase coverage and benefits	PACICC considers the likelihood of a forced increase in benefits to be “low.” However, the property claims incurred by members from the Fort McMurray wildfire demonstrates that a significant shortfall in PACICC’s coverage could occur.	Paul Kovacs Grant Kelly Ian Campbell	Coverage and benefits review is scheduled for 2019 (preliminary work has begun)
<b>1-7</b> Risk 1-1 puts extraordinary demands on human resources	PACICC has a Board-approved Claims Management Contingency Plan in place to mitigate this risk. A recent review of the Plan demonstrated that it remains appropriate and up-to-date.	John Connor Jim Harries	The Contingency Plan should be reviewed every 24 months (next review in 2019)
<b>1-8</b> Lack of member financial data results in unexpected insolvency costs	The number of member companies (and percentage of covered premiums) for which PACICC does not have adequate financial data has been significantly reduced over the past 10 years. We rate the likelihood of this risk occurring as “low.” Nonetheless, some residual risk remains.	Grant Kelly Ian Campbell	PACICC monitors this risk and requests financial data voluntarily from members when not disclosed by regulators
<b>1-9</b> Much of Canada’s accumulated P&C liquidation experience has “retired”	PACICC’s ability to mitigate this risk is limited. It is largely the result of a sustained period of good financial health in Canada’s P&C industry.	Paul Kovacs Jim Harries	PACICC continues to make its concerns known to regulators and to the firms providing liquidation services

## Risk Limit-Risk Appetite

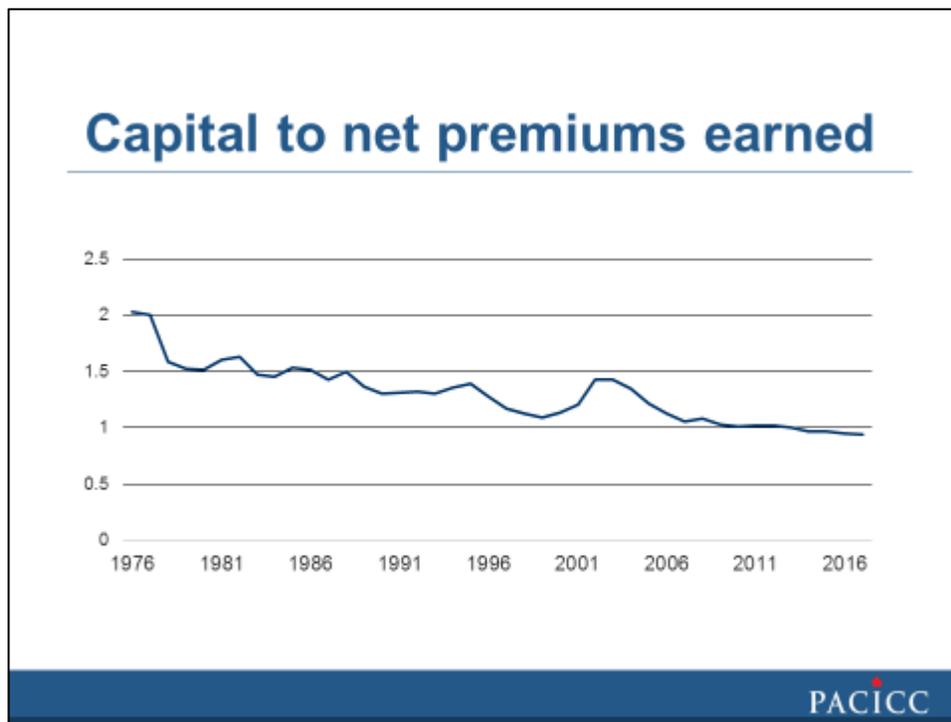
PACICC's current Risk Limit-Risk Appetite is \$1.70 billion. PACICC measures its Risk Limit-Risk Appetite in relation to its ability to collect funds from members over a two-year period to pay for the eligible claims of insolvent members.

PACICC's maximum annual assessment capacity is 1.5 percent of the total covered premiums of members. Based on the most recent annual industry results, 1.5 percent of covered premiums equates to \$848.7 million (as stated in Note 9 to PACICC's audited financial statements for the year ended December 31, 2017).

As of this Report, two times PACICC's annual assessment capacity of \$848.7 million thus yields a Risk Limit-Risk Appetite of \$1.70 billion.

In addition, PACICC maintains a Compensation Fund to address liquidity issues in the period immediately following a member insolvency. The current market value of the Compensation Fund (as at December 31, 2017) is \$54.1 million.

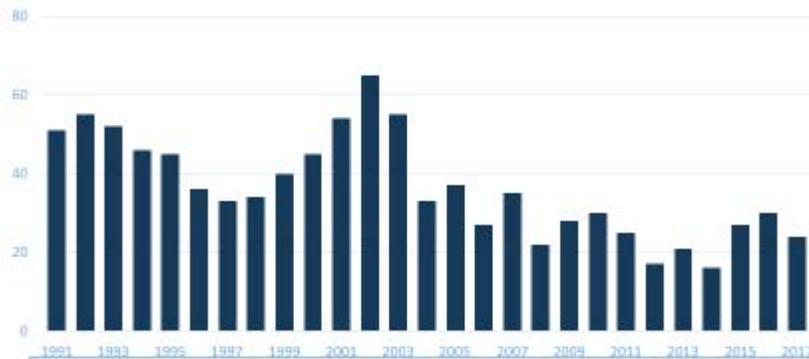
## Key indicators of P&C solvency risk



There has been a steady “deleveraging” of P&C premiums in relation to capital over the past 40 years – from a ratio of 2 to 1 in the mid-1970s, to an approximate 1 to 1 ratio now.

## Insurers with large swings in premium volume

Number of PACICC members



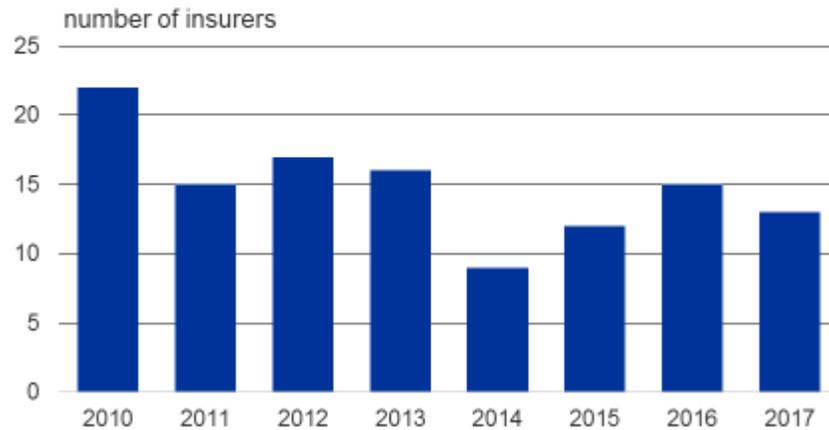
Insurers reporting change in net direct premiums written greater than -33% to +33% on a single year.

27/03/2018

PACICC

Large swings in premium volume for individual insurers is a key indicator of solvency risk. (PACICC defines “large” in this context as greater than +/- 33% in a single year). This indicator of solvency risk peaked in 2002. Despite a few, modest year-on-year increases, this indicator has been trending down in Canada for more than a decade.

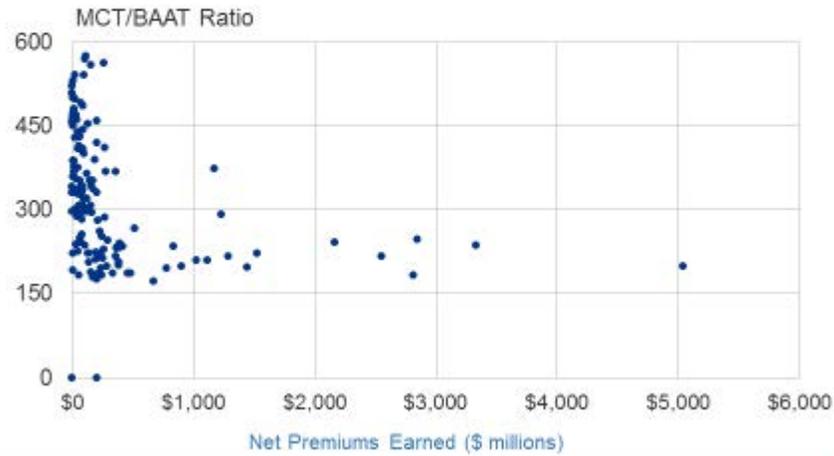
## Losses in consecutive years



PACICC

Since 2010, the number of PACICC member insurers incurring losses in (two) consecutive years has trended down – although 2015 and 2016 saw a slight uptick.

## MCT to NPE, 2017



PACICC

Most PACICC members currently maintain an MCT/BAAT ratio that is well above the regulatory minimum of 150%.

## Section 1: Major Risks (red) and Significant Risks (yellow) to be addressed

### Risk Priority Coding

	Major risks
	Significant risks
	Risks to be monitored
	Emerging risks

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
1-1	<p>Financial Risk:</p> <p>Insolvency costs exceed PACICC's risk limit-risk appetite (twice our annual general assessment capacity)</p>	<ul style="list-style-type: none"> <li>o A catastrophic earthquake resulting in the insolvency of one of PACICC's 10-largest member companies (or their parent companies)</li> <li>o Concurrent, multi-member insolvencies</li> <li>o An extensive major financial crisis leading to multiple insolvencies (triggering factors could include: higher inflation, adverse reaction to market volatility, and higher interest rates)</li> </ul>	<ul style="list-style-type: none"> <li>o The Federal Department of Finance announced it will consider "how to limit the system-wide risks an extreme earthquake could pose to federal P&amp;C insurers." Whether the government will provide a financial backstop (Plan A), and with what timing, is unclear. If the answer is "no," PACICC would proceed with its proposed Extraordinary Assessment Mechanism (Plan B) and would need to rely entirely on that tool to limit the potential for contagion from insurer failures</li> <li>o Prepared an extensive analysis of the industry's capacity to manage catastrophes (<b>Natural Disasters and Catastrophes – 2013</b>; a follow-up report was completed using 2016 industry data and released to PACICC members and other stakeholders in February 2017)</li> <li>o PACICC has completed work on a proposed Extraordinary Assessment Mechanism; consultations with industry and regulatory stakeholders have validated its usefulness and workability. However, the Mechanism is "on hold" until it becomes clear whether the industry (IBC) will succeed in securing a government backstop. (<b>Note: this leaves the residual risk for PACICC Risk 1-1 unchanged for an indeterminate period</b>)</li> <li>o PACICC has a <b>Compensation Fund</b> of \$54 million under our control to meet immediate requirements</li> </ul>	Very High	Very Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
			<ul style="list-style-type: none"> <li>o Regulators monitor insurer exposure to earthquake (<b>OSFI Guideline B-9</b>)</li> <li>o IBC has a committee reviewing impact of the costs of extreme earthquakes</li> <li>o PACICC commissioned RMS Canada to develop accurate estimates for a large earthquake that could trigger member insolvency</li> <li>o OSFI periodically conducts scenario stress testing exercises for correlated risks</li> </ul>		
1-2	<p>Regulatory Risk:</p> <p>Certain provincial regulators have limited solvency supervision resources and expertise</p>	<ul style="list-style-type: none"> <li>o Insurance legislation and/or regulations at the provincial level do not contain adequate standards for insurance solvency supervision</li> <li>o Practices do not meet the minimum standards of the International Association of Insurance Supervisors (IAIS)</li> <li>o Failure to execute supervisory activities due to inadequate staffing and resources</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC advocates that P&amp;C provincial solvency supervision meets IAIS standards</li> <li>o CCIR established a Solvency Supervisory working group</li> <li>o PACICC has developed an intervention guideline; updated its Model Winding-Up Order; developed information materials for distribution to all regulators; and conducted seminars with the regulators in B.C., Alberta, Ontario, Quebec and Newfoundland during the past three years</li> <li>o PACICC has established a Pre-Insolvency Regulatory Liason (PIRL) Committee consisting of the public Directors of the Board, to facilitate sharing of sensitive information by regulators</li> <li>o Intervention guidelines have been completed by PACICC with AMF and OSFI (and are under discussion with Alberta and BC FICOM). These initiatives may encourage provinces with weaker relative solvency supervision to strengthen their practices</li> </ul>	Low	High
1-3	<p>Regulatory Risk:</p> <p>Regulation of insurance rates may contribute to member insolvency</p>	<ul style="list-style-type: none"> <li>o Political pressure exerted on the rate filing/approval process (e.g. Ontario, to reduce auto insurance rates)</li> <li>o Incorrect assumptions regarding what constitutes an adequate rate of return for an insurer</li> <li>o Insurance companies are not permitted to challenge the decisions of rate regulators if they disagree</li> </ul>	<ul style="list-style-type: none"> <li>o Scrutiny of insurance company financial condition by rating agencies, supplemented by PACICC's own financial analysis</li> <li>o Use of risk-based supervision by regulators</li> <li>o PACICC research on the relationship between solvency and rate regulation</li> <li>o PACICC encourages senior staff at OSFI to communicate concerns regarding the regulation of rates (for example, automobile insurance rate</li> </ul>	Medium	Medium

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
		<ul style="list-style-type: none"> <li>Weak regulation of actuarial practices for pricing and loss reserving in some provinces</li> <li>Some politicians have discussed regulating property rates</li> </ul>	<ul style="list-style-type: none"> <li>reduction) to provincial supervisors when they deem it appropriate</li> <li>PACICC is seeking to strengthen provincial regulation of actuarial practices. It is also seeking more information about the role of consulting actuaries in the regulation of insurance rates</li> </ul>		
1-4	Regulatory Risk:  Insurance company winding-up and restructuring legislation and practices in Canada	<ul style="list-style-type: none"> <li>Canada's Winding-up and Restructuring Act (WURA) has not undergone a comprehensive review in nearly 100 years</li> <li>Insolvency management and restructuring practices have evolved internationally more than in Canada</li> </ul>	<ul style="list-style-type: none"> <li>PACICC made a detailed submission to Finance Canada proposing specific changes to modernize WURA. The submission was made in response to a periodic five-year review of Federal financial-legislation</li> <li>PACICC has initiated stakeholder discussions about the difficulties expected with a complex, conglomerate failure</li> </ul>	Low	High
1-5	Regulatory Risk:  Adverse changes in insurance legislation	<ul style="list-style-type: none"> <li>Government could enact legislation affecting aspects of PACICC's operations (e.g. membership eligibility, industry funding, reporting procedures, Board composition, regulatory oversight, etc.)</li> <li>PACICC could be compelled to add members in a line or lines of business inconsistent with its current mandate</li> </ul>	<ul style="list-style-type: none"> <li>Review of policyholder coverage and benefits is scheduled as PACICC's 2019 strategic priority</li> <li>Maintain regular dialogue with industry regulators to ensure that possible risks and exposures are understood</li> <li>Active monitoring of industry developments and financial performance</li> <li>Regular communication with stakeholders to ensure that PACICC's mandate is clearly understood</li> </ul>	High	Low
1-6	Regulatory Risk:  Benefits unilaterally enhanced by government regulators	<ul style="list-style-type: none"> <li>Broader interpretation of insurance policy wording by courts and regulators</li> <li>Regulators could require the industry into funding higher premium refunds than currently provided (max of \$ 700 per policy)</li> <li>Regulators force coverage of certain specialty lines, where the assessment base could be insufficient to fund the insolvency costs</li> </ul>	<ul style="list-style-type: none"> <li>Maintain a good understanding of financial guarantee fund best practices in other countries</li> <li>Educate stakeholders on best practices</li> <li>Continue to advocate that moral hazard risk be minimized and that protection apply to personal lines and business policyholders, but excluding large corporations</li> </ul>	High	Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
1-7	Operational Risk:  Extraordinary demands on human resources with insolvency of larger member, group, or concurrent multiple member failures	<ul style="list-style-type: none"> <li>o Large or multiple insurer failures could require: high volume of requests for claims settlement authority and/or resolution of related issues; complicated assessment process; extensive queries.</li> <li>o PACICC needs to outsource functions and could have difficulty administering with existing staff</li> <li>o Loss of “key persons” at PACICC could exacerbate this risk</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC has developed a Claims Management Contingency Plan to address this risk. The plan was approved by the Board in November 2010. It was most recently reviewed in April 2017; management believes the plan remains up-to-date and provides an effective framework for mitigating this risk</li> <li>o Regular dialogue takes place with regulators to discuss troubled members and to ensure adequate preparedness</li> <li>o New agreements on intervention guidelines (with AMF and OSFI) will improve PACICC’s ability to plan for adverse outcomes</li> <li>o Succession plan in place to help mitigate “key person risk”</li> </ul>	Medium	Low
1-8	Operational Risk:  Insolvency costs greater than anticipated	<ul style="list-style-type: none"> <li>o Member insolvency occurs, but PACICC has no or limited financial data and is unable to properly calculate insolvency costs in advance</li> <li>o Deficient loss reserves and/or inadequate pricing are key causes of insurer failure (deficient reserves are hard to detect in advance)</li> </ul>	<ul style="list-style-type: none"> <li>o We advocate that regulators make insurer financial data publicly available (consistent with PACICC position paper). Some success was achieved with Alberta in 2009</li> <li>o From publicly available data and voluntary disclosure, PACICC has financial data for all but 17 of its member companies (as at Dec 2017)</li> <li>o We encourage provincial insurance supervisors to adopt the IAIS standards of solvency supervision</li> <li>o Continue dialogue with regulators and members to gain better understanding of marketplace</li> </ul>	Medium	Low
1-9	Operational Risk:  Loss of liquidation expertise	<ul style="list-style-type: none"> <li>o Ageing and pending retirement of licensed trustees in bankruptcy with experience liquidating P&amp;C insurers</li> <li>o Firms have limited ability to assemble, on short notice, a full team of qualified professionals</li> <li>o A sustained period of good financial health in the P&amp;C insurance industry has diminished opportunities to train successors</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC’s concerns have been communicated to insurance supervisors and to the leading firms that provide insurance company liquidation services</li> <li>o PACICC’s ability to mitigate this risk is limited. Although the estimated financial impact in a single calendar year may be modest, we consider the likelihood of occurrence to be “medium” (meaning the risk could occur within five years – especially in the event of a member insolvency)</li> </ul>	Medium	Medium

**Section 2: Risks to be monitored** (not currently considered 'Major' or 'Significant')

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
2-1	Operational Risk: Collecting member assessments	<ul style="list-style-type: none"> <li>Some members may not understand their payment obligations</li> <li>Deliberate non-payment due to disagreement or dissatisfaction</li> </ul>	<ul style="list-style-type: none"> <li>Members are required by legislation to pay assessments. The rules are specified in the Memorandum of Operation</li> <li>PACICC notifies regulators to compel payment of overdue accounts</li> </ul>	Very Low	Low
2-2	Financial Risk: Economic downturn impacts member; i.e. liquidity, return on investments and business results	<ul style="list-style-type: none"> <li>New financial products are poorly developed and generate large unexpected or unintended losses</li> <li>Investment capital held by insurers declines in value and yield</li> <li>Credit availability reduced</li> </ul>	<ul style="list-style-type: none"> <li>Monitor the financial condition of members (where adequate data available)</li> <li>Monitor efforts by legislators and solvency regulators to address the underlying causes of economic downturn</li> </ul>	Low	Low
2-3	Financial Risk: Changes in interest rates and inflation (impact on PACICC)	<ul style="list-style-type: none"> <li>Lower interest rates reduce rates of return on investments</li> <li>Poor investment choices reduce rate of return</li> <li>Ratings downgrade(s) could reduce the value of investments held</li> </ul>	<ul style="list-style-type: none"> <li>Regular reviews (at least annually) of investment policy by A&amp;R Committee</li> <li>PACICC uses a professional investment manager</li> <li>A senior PACICC manager is assigned responsibility for overseeing investments</li> </ul>	Low	Low
2-4	Operational Risk: Property and liability insurance coverage	<ul style="list-style-type: none"> <li>PACICC's coverage could prove inadequate for insurable losses (e.g. business interruption, loss of records, cyber attack)</li> <li>Improper actions (e.g. breach of duty or conflict of interest) by officers or directors</li> </ul>	<ul style="list-style-type: none"> <li>Annual review of insurance policies and limits</li> <li>PACICC's By-laws provide that member assessments can be made if claims exceeded the D&amp;O insurance policy limit</li> </ul>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
2-5	Operational Risk: Operating expenses exceed budget	<ul style="list-style-type: none"> <li>Unanticipated large capital or operating expenditure, e.g. IT</li> <li>Accounting changes (for example, Board decision to pay investment management fees from the operating budget rather than from the Compensation Fund)</li> </ul>	<ul style="list-style-type: none"> <li>Operating Fund surplus (\$1.65 million) can, with Board approval, fund a short-term budget deficit without asking members to pay additional assessments</li> </ul>	Low	Low
2-6	Regulatory Risk: Use of unlicensed reinsurance in Canada	<ul style="list-style-type: none"> <li>Unlicensed reinsurance is difficult to collect for an insolvent insurer</li> <li>Unlicensed reinsurers not subject to Canadian insurance regulation</li> <li>Unlicensed reinsurance contract may not contain an insolvency clause</li> <li>OSFI Guideline B-3 has removed the 25 percent limit on unlicensed reinsurance</li> </ul>	<ul style="list-style-type: none"> <li>Monitor changes in the use of unlicensed reinsurance and review with OSFI changes in the share of unlicensed reinsurance</li> <li>OSFI Guideline B-3 requires each insurer file a Reinsurance Risk Management Plan (RRMP), which addresses use of unlicensed reinsurance</li> </ul>	Low	Low
2-7	Regulatory Risk: Non-profit tax exemption for investment income	<ul style="list-style-type: none"> <li>Existing policies “reinterpreted” by the CRA to challenge the tax-free status of PACICC’s investment income from Compensation Fund</li> <li>CRA is conducting audits of non-profit corporations to check for activities <i>intended</i> to be profitable</li> </ul>	<ul style="list-style-type: none"> <li>Maintain a good understanding of the tax treatment of guarantee funds in other countries</li> <li>Work with guarantee fund counterparts in Canada, should PACICC need to counter a tax-related threat</li> </ul>	Low	Low
2-8	Regulatory Risk: Regulators seek to exert more influence over PACICC governance	<ul style="list-style-type: none"> <li>Insurance regulators seek to expand PACICC mandate to address restructuring</li> <li>Regulators are encouraged by other stakeholders to merge PACICC with larger financial guarantee funds</li> <li>Regulator requires all Board members to be public directors</li> </ul>	<ul style="list-style-type: none"> <li>PACICC expects to change the terms of reference for its Board Chair later this year. (The intent is for the Chair to be a public director on a permanent basis; and to serve for longer than a two-year term)</li> <li>Regulators invited to attend Board meetings and they receive copies of proceedings</li> <li>PACICC has <i>Code of Ethics and Business Practices</i> and an annual attestation</li> <li>International P&amp;C guarantee fund boards typically have a majority of industry directors</li> </ul>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
2-9	Operational Risk: Attract and retain knowledgeable and experienced personnel	<ul style="list-style-type: none"> <li>o Senior staff leaves PACICC to accept other employment, for personal, financial or health reasons</li> <li>o Lack of adequate succession planning</li> </ul>	<ul style="list-style-type: none"> <li>o Staff could be borrowed short-term from IBC, Assuris, CDIC, and/or members</li> <li>o HR policies and procedures documented</li> <li>o A management succession plan is overseen by the Governance and HR Committee of the Board</li> <li>o The plan is scheduled to be reviewed by the Committee in Fall 2018</li> </ul>	Low	Low
2-10	Operational Risk: Reliance on IT outsourced operation	<ul style="list-style-type: none"> <li>o Service provider removes service</li> <li>o Equipment issues not readily resolved</li> <li>o Unauthorized access</li> <li>o Cyber attack: viruses, hacker, data breach</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC uses an externally hosted, secure, internet-based server that provides full back up and recovery</li> <li>o All staff are equipped to work offsite when required using their own computers</li> </ul>	Low	Low
2-11	Operational Risk: Disaster Recovery Plan (DRP)	<ul style="list-style-type: none"> <li>o Power outage, ice storms, floods where entire community shut down affecting the availability of staff and infrastructure (as per recent actual events)</li> <li>o Other possible events include: flu pandemic (SARS), terrorist attack, large-scale natural disaster</li> </ul>	<ul style="list-style-type: none"> <li>o HR policies and procedures in place, with outsource agreement with IBC</li> <li>o Website available to communicate with stakeholders</li> <li>o DRP is documented and in place, including off-site work arrangement (plan is scheduled to be reviewed by the Governance &amp; HR Committee in Fall 2018)</li> <li>o Insurance in place</li> <li>o Fire-proof safe for protecting original documents</li> </ul>	Medium	Low
2-12	Operational Risk: Inadequate or insufficient resources and/or funding	<ul style="list-style-type: none"> <li>o Failure to gather and analyze sufficient information regarding current industry practices</li> <li>o Inadequate coordination with other financial guarantee funds</li> <li>o Necessary functions not performed</li> <li>o Lack of controls leads to fraud, misappropriation, security breaches, inaccurate or incomplete reporting</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC is sharing information with domestic and international guarantee funds</li> <li>o Management ensures the Board is advised of operating issues</li> <li>o OECD suggests that increasing “co-insurance” could be effective practice (this could, however, result in reputation damage)</li> </ul>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
2-13	Operational Risk: Ineffective governance	<ul style="list-style-type: none"> <li>o Fraud not prevented or detected</li> <li>o Security breach not prevented or detected</li> <li>o Unauthorized access causes loss of data or compromises integrity</li> <li>o Incomplete or inaccurate reports prepared</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC Board places significant emphasis on good governance practices</li> <li>o PACICC has followed the lead by OSFI for enhancing governance in the industry – OSFI Guideline E-13 and CSA Guidelines</li> </ul>	Low	Low
2-14	Operational Risk: Insurers fail for various reasons	<ul style="list-style-type: none"> <li>o Products not properly developed or rated</li> <li>o Products provide unexpected coverage, e.g. court interpretation</li> <li>o Losses greater than expected , e.g. claims staff not properly trained</li> <li>o Excessive concentrations of risk</li> </ul>	<ul style="list-style-type: none"> <li>o Memorandum of Operation limits PACICC's coverage to seven classes of insurance. (Policies outside these classes are not covered)</li> <li>o PACICC has the ability to estimate liquidation costs through its own modeling</li> <li>o Coverage and Benefits review, scheduled for 2019, should address potential inadequacies in current limits</li> <li>o PACICC addressed the issue of excessive risk concentration in a 2015 submission to CCIR</li> <li>o PACICC has also initiated a discussion with the Alberta regulator concerning excessive risk concentration – with particular reference to the Fort McMurray wildfire</li> </ul>	Medium	Low
2-15	Operational Risk: Failure of a financial conglomerate involving multiple Guarantee Funds	<ul style="list-style-type: none"> <li>o International failure of organization with Canadian branch or subsidiary</li> <li>o Domestic conglomerate with Life and or Deposit-Taking affiliates</li> <li>o Powers of various Guarantee Funds are inconsistent, e.g. CDIC has more extensive powers and can create a "bridge bank" in the event of a failure</li> </ul>	<ul style="list-style-type: none"> <li>o While PACICC maintains regular contact with other financial guarantee funds in Canada (including CDIC), the organization's ability to mitigate this risk is limited</li> </ul>	Medium	Low
2-16	Operational Risk: Key suppliers of services and outsourced arrangements	<ul style="list-style-type: none"> <li>o Unanticipated failure could impair PACICC operations in the short-term while alternate arrangements are made (new supplier contracted or new equipment sourced)</li> </ul>	<ul style="list-style-type: none"> <li>o PACICC retains established, reputable suppliers with proven experience</li> <li>o Service level agreements are in place (for example, IT)</li> <li>o While the loss of service by a supplier could be disruptive in the short term, management</li> </ul>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse Impact	Mitigation/Controls	Rating	
				Impact	Likelihood
		(Key outsourced service areas include: IT supplier, Accounts payable, Investment management, Banking and Legal)	believes that PACICC's current outsourced service arrangements could be replaced quickly (in most cases within one month)		

### Section 3: Emerging Risks

Most of the risks below have been preliminarily rated “low.” As more information develops – particularly about the potential of these risks to cause solvency problems for PACICC members – the ratings could change.

Risk No	Inherent Risk and Description	Triggers for adverse impact	Comments	Rating	
				Impact	Likelihood
3-1	Operational Risk:  Risk of non-covered policies impacting covered portfolios	<ul style="list-style-type: none"> <li>Members that participate in the Nuclear Insurance pool in Canada incur major losses, leading to possible insolvency</li> </ul>	While covered lines are clearly defined in PACICC’s Memorandum of Operation, it is difficult to mitigate potential “spillover” solvency risk from non-covered lines. Analysis of potential impacts could help PACICC better understand this risk.	Low	Low
3-2	Financial Risk:  PACICC coverage limits may prove inadequate	<ul style="list-style-type: none"> <li>Price of homes increasing</li> <li>Price of insurance cover increasing (\$700 cap per policy on unearned premium refund may be inadequate)</li> <li>Claims limits could be inadequate, especially in the case of total property losses</li> </ul>	<p>The Board has decided to review PACICC’s coverage and benefits in 2019.</p> <p>The Board can decide to cover losses beyond PACICC’s limits in exceptional circumstances.</p> <p>The potential for reputation damage due to a sizeable shortfall in PACICC coverage has been highlighted by loss claims from the Fort McMurray wildfire.</p> <p>The Superintendent of Insurance for Alberta has expressed concern that PACICC’s limits may be too low.</p> <p>PACICC plans to undertake a member survey (assisted by Eckler) to estimate the current (2018) cost of covered claims.</p> <p><i>* Recommended action: in April 2018, the Board will be receiving a plan to address the coverage and benefits review (2019 PACICC priority).</i></p>	Medium	Low

Risk No	Inherent Risk and Description	Triggers for adverse impact	Comments	Rating	
				Impact	Likelihood
3-3	Financial/Operational and Regulatory Risks:  As new insurance product(s) emerge, PACICCC's coverage may need to be clarified	<ul style="list-style-type: none"> <li>o Driverless cars</li> <li>o Drones (for commercial use)</li> <li>o Cyber-crime coverage (see comments in next column)</li> <li>o Flood insurance</li> </ul>	Emerging risks/ policies in the four areas noted as triggers would appear to be covered by PACICCC. Driverless cars are still several years away from wider commercial availability (5 to 10 years, according to experts). While the other three risks are already occurring, the potential to cause insurer solvency problems appears to be low. Cyber insurance may be an exception, particularly if the coverages offered turn out to be poorly understood by some insurers, and/or the pricing does not fully reflect the risks involved. Some critics question whether cyber risk is truly insurable – particularly if an attack occurred on a previously unprecedented level (a “9/11 moment in the cyberworld”)	Low	Low
3-4	Regulatory Risk:  Increased requirements for consumer education and awareness	<ul style="list-style-type: none"> <li>o Consumers not aware of coverage provided by PACICCC</li> <li>o Financial Literacy initiatives of government</li> <li>o Increasing international regulatory initiatives</li> </ul>	While this risk seems unlikely to pose significant financial cost to PACICCC, the potential exists for reputation damage if government/ regulatory expectations increased.	Low	Low
3-5	Financial Risk:  P&C industry consolidation	<ul style="list-style-type: none"> <li>o P&amp;C industry consolidation results in PACICCC having a greater number of “large” member insurance companies</li> <li>o Could some PACICCC members be “too small to succeed” in a rapidly consolidating, technology-driven environment?</li> </ul>	<p>Data show that P&amp;C industry concentration in Canada has increased over the past decade. Comparing data from 2006 (earliest available from MSA) and 2015 reveals the following:</p> <p>DWP for Canada's top-10 P&amp;C insurers increased from 37.9% of total premiums in 2006 to 49.2% in 2016.</p> <p>The number of PACICCC member insurers reporting total unpaid claims reserves &gt; twice PACICCC's annual assessment</p>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse impact	Comments	Rating	
				Impact	Likelihood
			<p>capacity (our risk limit-risk appetite) increased from 11 companies in 2006 to 17 companies in 2016.</p> <p>PACICC will probe the “too small to succeed” issue by examining key performance measures by size of firm.</p>		
3-6	<p>Regulatory Risk:</p> <p>Peer-to-peer commerce poses new and possibly disruptive insurance risks</p>	<ul style="list-style-type: none"> <li>o Peer-to-peer (P2P) service providers like Uber, Airbnb, et al. pose different insurance risks compared with traditional (and often more regulated) service providers. Will these risks be adequately covered by our industry? Could possible solvency risks emerge?</li> <li>o P2P insurance networks also have the potential to disrupt traditional forms of insurance. Part of their appeal is the prospect of lower costs, which advocates claim will come from dividends or return of premiums.</li> </ul>	<p>PACICC should continue to monitor developments in the P2P sector, particularly as they relate to insurance.</p> <p>Key issues relating to P2P insurance start-ups/networks include: how would they be licensed or regulated in Canada? If undercapitalized, they could pose greater solvency risks. Would PACICC be expected to cover an insolvent P2P insurer?</p>	Low	Low
3-7	<p>Financial Risk:</p> <p>Could the rise of Insurtech, as a potential P&amp;C insurance “disruptor,” introduce solvency risks?</p>	<ul style="list-style-type: none"> <li>o P&amp;C insurance companies that fail to adopt these new technologies (encompassing Artificial Intelligence, data analytics, and the Internet of Things) may be uncompetitive with respect to underwriting expertise and expenses, and out-of-step with younger customers</li> <li>o However, there may also be a risk of P&amp;C insurance companies “over-leveraging” insurtech as an attempt to gain competitive advantage. (Insurtech capabilities notwithstanding, underpricing and inadequate reserving remain the principal causes of P&amp;C insurer insolvency).</li> </ul>	<p>Insurtech is both a potential disruptor (imagine a “digital” insurance company) and a loss prevention / cost reduction tool. The latter may explain why established insurers are investing in and partnering with insurtech start-ups.</p> <p>PACICC will continue to monitor insurtech developments for potential industry disruption, new business products, and possible solvency implications</p>	Low	Low

Risk No	Inherent Risk and Description	Triggers for adverse impact	Comments	Rating	
				Impact	Likelihood
3-8	Financial Risk:  New financial technologies could pose risks to the stability of the financial system	<ul style="list-style-type: none"> <li>○ FINTECH has the potential to disrupt the stability of bank funding, credit quality – and possibly even the stability of the broader economy</li> <li>○ FINTECH developments appear to be outpacing the ability (and resources) of regulators to keep up.</li> </ul>	Warnings related to the potential systemic risks of FINTECH have been sounded recently by the Financial Stability Board, for example.	Low	Low

## Appendix

### PACICC Risk Management Definitions

**Note:** The following definitions are based on the ISO 31000 2009 Plain English Risk Management Dictionary, with minor edits as appropriate for PACICC's risk management environment.

#### **Risk**

*Risk* is the “effect of uncertainty on objectives” and an *effect* is a positive or negative deviation from what is expected. Organizations strive to reduce uncertainty as much as possible.

*Uncertainty* is a state or condition that involves a deficiency of information and leads to inadequate or incomplete knowledge or understanding. In the context of risk management, uncertainty exists whenever the knowledge or understanding of an event, consequence, or likelihood is inadequate or incomplete.

#### **Risk management (Enterprise Risk Management – ERM)**

*Risk management* refers to a coordinated set of activities and methods that is used to direct an organization and to mitigate or control the many risks that can affect its ability to achieve objectives.

The term *risk management* also refers to the architecture that is used to manage risk. This architecture includes risk management principles, the risk management framework and risk management processes.

#### **Risk management framework (Risk Management Statement)**

A *risk management framework* is a set of components that support and sustain risk management throughout an organization. There are two types of components: foundations and organizational arrangements. *Foundations* include the risk management policy, goals and objectives, mandate, and commitment (Mission and Principles). *Organizational arrangements* include the plans, relationships, accountabilities, resources, processes and activities used to manage the organization's risks.

#### **Risk management policy**

A *risk management policy* documents an organization's commitment to risk management and clarifies its general direction and intention. Components include procedures, practices, controls, responsibilities and activities (including their sequence and timing).

## **Risk management process**

A *risk management process* is one that systematically applies management policies, procedures, controls and practices to a set of activities intended to establish the context of risks, communicate with stakeholders and identify, analyze, evaluate, treat, monitor and review risks.

To establish the *context* means to define the external and internal parameters that organizations must consider when they manage risk. External context includes external stakeholders, local, national, and international environment, as well as any external factors that influence an organization's objectives. Key drivers and trends include stakeholder views, perceptions and relationships, as well as social, cultural, political, legal, regulatory, financial, technological, economic, natural, and the competitive environment factors.

Internal *context* includes an organization's internal stakeholders, the approach to governance, contractual relationships, capabilities, culture and standards. *Governance* includes the organization's structure, policies, objectives, roles, accountabilities and decision-making processes. Capabilities include knowledge and resources; human, technological and capital.

## **Risk assessment**

*Risk assessment* is a three-part process consisting of risk identification, risk analysis and risk evaluation.

*Risk identification* is a process that is used to find, recognize and describe the risks that could affect the achievement of objectives. It also includes the identification of possible causes and potential consequences. Historical data, theoretical analysis, informed opinions, expert advice and/or stakeholder input could be used to identify an organization's risks.

*Risk analysis* is a process that is used to understand the nature, sources and causes of the risks that are identified, and to estimate the level of risk. Analysis is also used to study impacts and consequences and to examine the mitigation and controls that currently exist.

*Risk evaluation* is a process that is used to compare risk analysis results with risk appetite in order to determine whether or not a specified level of risk is acceptable or tolerable.

## **Risk Register (as defined by PACICC)**

PACICC has compiled a *Risk Register* identifying risks that could cause PACICC not to meet its goals and objectives, including a brief assessment of each risk. More significant risks are then selected for in-depth review and, if deemed appropriate, escalated to PACICC's Risk Profile.

## **Risk Profile (as defined by PACICC)**

PACICC's *Risk Profile* is a graphic presentation and written description of the major risks which could potentially have a significant, adverse impact on PACICC's ability to meet its goals and objectives. The description includes a comprehensive risk assessment (see definition), ranking of the impact and likelihood (probability) of the risk occurring, a description of consequences, and a description of the treatment (action plan) showing owners and timelines. The *Risk Profile* includes any risks that the organization must monitor and manage, regardless of type of risk (for example, financial, operational or reputational).

A *consequence* is the outcome of an event and has an effect on objectives. A single event can generate a range of consequences that can positively or negatively affect goals and objectives. Initial consequences can also escalate through ripple effects.

*Likelihood* (probability) is the chance of a risk occurring. *Likelihood* can be defined, determined, or measured objectively or subjectively; and it can be expressed qualitatively or quantitatively.

*Severity* refers to the magnitude of a risk. Severity is estimated by considering and combining consequences and likelihoods. It can be assigned to a single risk or to a combination of risks. Severity is described as Level of risk per ISO 39000.

*Risk treatment* is a risk modification process. It involves selecting and implementing one or more treatment options – for example, avoiding the risk, reducing the risk, removing the source of the risk, modifying the consequences, changing the probabilities, sharing the risk with others, or simply retaining the risk.

## **Risk appetite**

(As defined by PACICC, with adaption / modification of ISO definitions of Risk Attitude and Risk Criteria)

*Risk appetite* is a point of reference used to assess and evaluate the significance or importance of an organization's risks. It is used to determine whether a specified level of risk is acceptable or tolerable. An organization's *risk appetite* also defines its general approach to risk, for example, whether risks should be retained, shared, reduced or avoided, and whether or not risk treatments are implemented or postponed.

## **Residual risk**

*Residual risk* is the risk left over by determining the inherent risk of an activity, then reducing the risk based on the organization's governance and control processes, and specific risk-mitigation measures.

The key objective in monitoring risks on the Risk Profile is to ensure that action plans serve to reduce residual risk. Mitigation strategies may include removing the source of the risk, modifying the consequences, changing the probabilities, transferring the risk or retaining the risk.