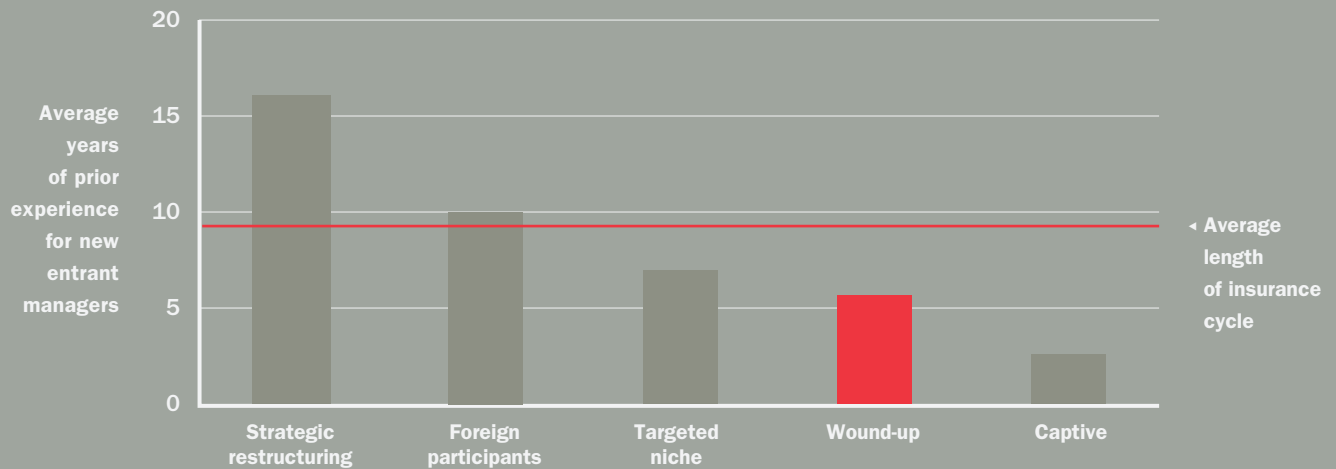


Why insurers fail

Determinants of survivability of new entrants to the P&C industry

Experience matters...



By

Darrell Leadbetter

Why insurers fail

The determinants of survivability of new entrants to the P&C insurance industry

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PACICC's mission and principles

Mission Statement

The mission of the Property and Casualty Insurance Compensation Corporation is to protect eligible policyholders from undue financial loss in the event that a member insurer becomes insolvent. We work to minimize the costs of insurer insolvencies and seek to maintain a high level of consumer and business confidence in Canada's property and casualty insurance industry through the financial protection we provide to policyholders.

Principles

- In the unlikely event that an insurance company becomes insolvent, policyholders should be protected from undue financial loss through prompt payment of covered claims.
- Financial preparedness is fundamental to PACICC's successful management support of insurance company liquidations, requiring both adequate financial capacity and prudently managed compensation funds.
- Good corporate governance, well-informed stakeholders and cost-effective delivery of member services are foundations for success.
- Frequent and open consultations with members, regulators, liquidators and other stakeholders will strengthen PACICC's performance.
- In-depth P&C insurance industry knowledge – based on applied research and analysis – is essential for effective monitoring of insolvency risk.

“The secret to my success is that I bit off more than I could chew and chewed as fast as I could”

PAUL HOGAN

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Executive summary

PACICC has conducted this study as the first comprehensive examination of survivability of new entrants in the P&C insurance industry in Canada. We find that nearly 30 percent of all new companies entering the property and casualty insurance industry in Canada exit in less than ten years. While most exit voluntarily, 12 percent were closed by insurance regulators, adversely affecting thousands of policyholders.

This report analyzed the risk decisions and operational processes of new entrants to identify key differences between those who survived, exited voluntarily or exited involuntarily. For many key metrics – such as initial capitalization, loss and expense ratios and liquidity – there is little to differentiate between new entrants that eventually become distressed and those that do not.

However, this analysis found that new entrants who exited involuntarily made risk decisions and had operational practices that were different than those of other insurers in the industry. Further, there appears to be a feedback process whereby initial risk decisions are either exacerbated or mitigated by operational processes and subsequent risk decisions. This suggests that there is not a linear causation process of entry to failure. In addition, each new entrant is unique as are its reasons for exit. Nevertheless, it is possible to make some inferences from the data.

The experience level of senior managers appears to be an important initial condition that influences subsequent risk decisions and investments in operational processes. New entrants that failed within ten years had, on average, senior managers with less than half the experience level of senior managers of other new entrants. In addition, these less seasoned managers had, on average, not experienced a full insurance cycle as a senior manager of a P&C insurance company.

On average, new entrants that failed relied on more aggressive and sustained market entry strategies – including underpricing and higher acquisition costs – compared to other new entrants. This often resulted in rapid growth that outpaced the company's capital resources. Similarly, new entrants that exited involuntarily on average invested less in data and statistical services compared to other new entrants, handicapping their ability to adequately price policies and monitor claims development. Additional risk decisions related to investment policies and reinsurance further contributed to solvency vulnerability for new entrants.

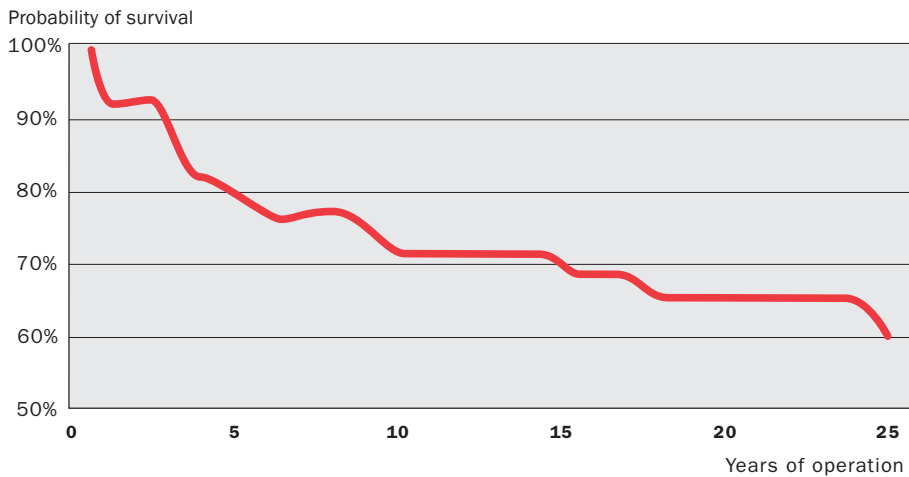
New entrants nearly always “bite off” more than they can “chew”, based on their initial capitalization. However, there appear to be two important factors influencing whether a new entrant survived through the first decade, or exited involuntarily. First, the experience and quality of management appears to be important in risk decision making and establishing effective operational processes. Also important was the availability of external support: in terms of managerial experience/capacity, data/statistical services and access to capital to support growth and adverse development. 📌

Introduction

Since the Property and Casualty Insurance Compensation Corporation (PACICC) was established in 1989, it has secured funding from members for the failure of a property and casualty (P&C) insurance company in 12 of the 20 years of its operation. One quarter of these liquidations have been new entrants with an average length of operation of four years. These new entrants, at the time of liquidation, cumulatively wrote \$145 million in direct written premiums and had liabilities on their books at the time of wind-up of \$146 million. In total, PACICC has provided more than \$53 million in financing (35 percent of total PACICC financing provided to all liquidations) to pay the policyholder claims of these new entrants.

An analysis of the age distribution of 164 involuntarily-exited insurance companies incorporated since 1980 in the United States and Canada suggests that the greatest risk of insolvency for a P&C insurance company is during the first six years after start-up. From the sample of involuntarily

Exhibit 1 – New P&C insurance company survival rates in Canada



Source: PACICC with data from Provincial and Federal Superintendents of Insurance

exited insurers, 39 percent failed within the first five years, and 70 percent failed within the first 10 years of operation.

Using data on involuntary exits and new entrants obtained from the annual reports of provincial and federal insurance Superintendents, PACICC has estimated the survival probability using the Kaplan-Meier method for P&C insurers⁴. As shown in

Exhibit 1, survival probability for new entrants levels off after 10 to 15 years of operation. Note that Canadian new entrants have a modestly higher survival rate than the combined United States and Canadian sample.

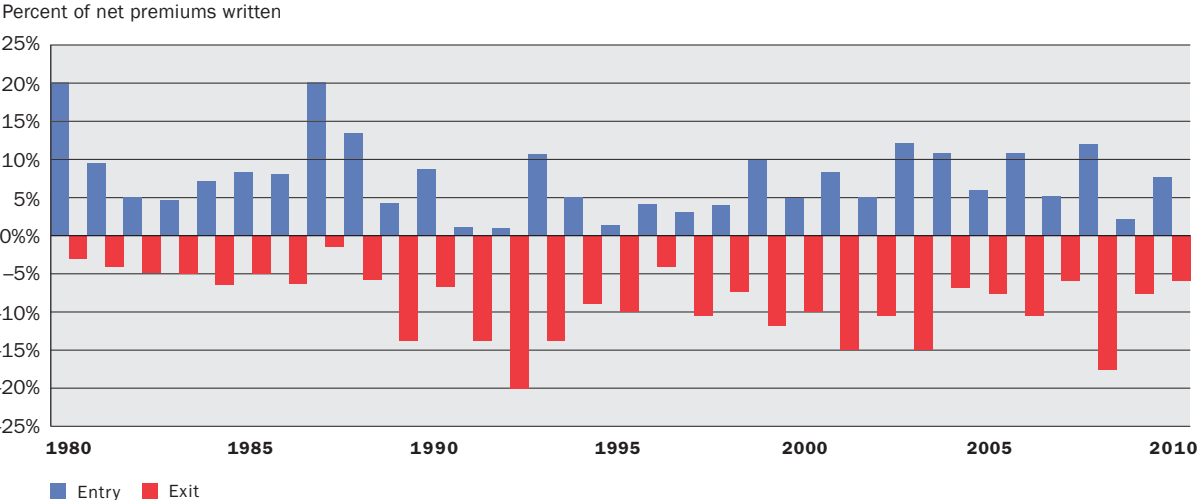
Based on these results, the focus of the analysis of the survivability of new entrants in this report is the first decade after incorporation and the beginning of underwriting new business. For the purposes of this report, we broaden the definition of survivability to be an insurer continuing to be licensed 10 years following incorporation. However, we distinguish between distressed and non-distressed exit of new entrants. Distressed new entrants include those who exit involuntarily and those who fell below regulatory capital thresholds but were purchased by another entity and recapitalized. Non-distressed new entrants exited (that is surrendered their license) for business reasons. In general these reasons included merging with another entity, and exiting the P&C insurance market either through a portfolio transfer, reinsurance assumption agreement or running off the business to extinction. 🇨🇦

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 1 This is a conditional probability (the probability of being a survivor (not insolvent) at the end of the interval on condition that the insurer was a survivor at the beginning of the interval). Survival to any time point is calculated as the product of the conditional probabilities of surviving each time interval. Firms that exit in a solvent fashion are considered survivors.

A historical overview of insurer entry and exit in Canada

Joseph Schumpeter, an Austrian-American economist popularized the term “creative destruction” to describe the dynamic process of innovation, market entry, competition and exit of firms. The Canadian property and casualty (P&C) insurance industry is a dynamic and competitive industry. Only two of the top 10 insurance companies, by premium written, in 1980 remained in the top 10 in 2010. And only two insurance companies have been among the 10 largest writers (although the position has fluctuated) every year over that period. During the 30-year period of 1980 to 2010 there have been 513 license authorizations or cancellations. Exhibit 2 illustrates the historical trends in entry and exit.

Exhibit 2 – Entry and exit in the Canadian P&C industry



Source: PACICC with data from the General Insurance Register

Similarly, with new entry and competition, insurance products have evolved, diversifying into more forms of risk (identity theft, pet insurance, etc). Fire and theft, once synonymous with personal property insurance (79 percent of claims in 1980) now only represent a little over one-third (38 percent) of personal property claims activity in Canada.

Entry

In the past 30 years, 230 new insurance company licenses were issued by federal and provincial superintendents of insurance. PACICC has identified six broad categories of new entrants based on their structure and characteristics: start-ups, foreign participants, strategic restructurings, local fire mutuals, targeted niche insurers and captives.

Start-ups are defined as insurers that do not have a financial institution as a parent company. These types of insurers predominantly consist of entrepreneurial entry into the industry by a relatively small number of shareholders and limited access to external sources of capital.

Foreign participants are insurers – both branches and Canadian incorporated entities – that have a foreign insurance parent and entered one or more of the main lines of business (liability, property or automobile).

Strategic restructurings consist of a new company created out of the amalgamation of existing insurers or the incorporation of an entirely new legal entity within an existing group structure. Typically, early growth is due to the transfer of existing business into a new legal entity from elsewhere in the group.

Local fire mutuals are typically newly incorporated entities emerging out of the amalgamation of existing fire mutual insurance companies. In rare cases it also included a start-up fire mutual. Local fire mutuals in the sample of new entrants were based in Quebec or Ontario.

Targeted niche insurers were new entrants (either foreign or Canadian) that focused on specialty lines of business (for example: title, marine, surety).

Captives is used as shorthand for alternative insurance mechanisms, including both insurers that only provide insurance to non-insurance parent or affiliate companies and reciprocal exchanges.

The following table summarizes the distribution of new entrants by category and highlights their primary distinguishing characteristics.

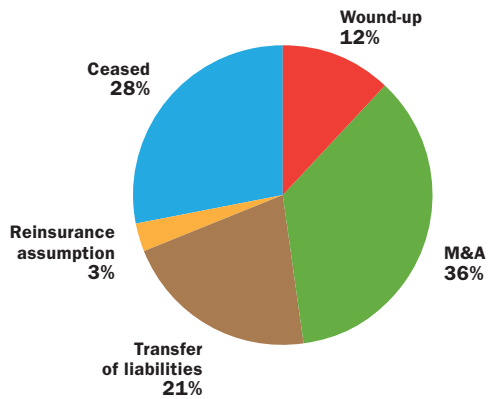
Characteristics of new P&C insurance entrants		
	Share of new entrants	Primary characteristics
Foreign participant	27.0%	Branch or subsidiary of a foreign insurance company/group
Start-up	22.4%	Canadian stand-alone incorporation
Captive	14.4%	Incorporation of an alternative insurance mechanism
Strategic restructuring	13.2%	Incorporation of a subsidiary in an insurance group
Fire Mutual	12.6%	Ontario/Quebec mutual insurance company
Targeted niche	10.3%	Focused writer on a single line, outside of main products

Exit

During the last 30 years, 283 insurance companies have exited the Canadian P&C insurance market. The longest continuously operating company to exit during the 1980 to 2010 period had operated in Canada for 187 years. The shortest period of license authorization was less than one year. On average, a company exiting the Canadian market during the past 30 years had been in operation in Canada for 44 years.

The majority of companies have exited the market voluntarily. Voluntary exits that were not the result of being amalgamated with an existing insurer generally used portfolio transfers or reinsurance to transfer the liabilities. For 28 percent of all exits, the mechanism for exit could not be determined except that they were not insolvent (as no wind-up order had been issued).

Exhibit 3 – License cancellations by form of exit

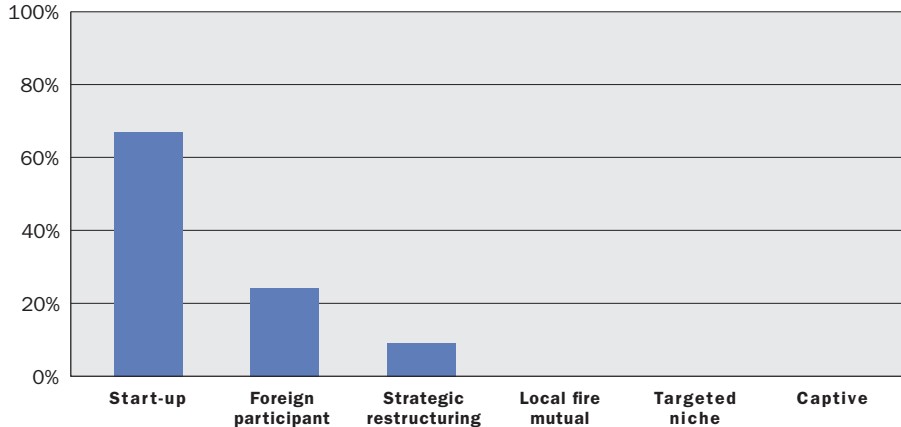


Source: PACICC with data from General Insurance Register

Among voluntary exits there was no correlation between date of license cancellation and the insurance cycle (lagged or contemporaneous). This is mainly the result of the large relative proportion of foreign insurers operating in the Canadian P&C insurance market. Reinsurance assumption agreements had a modest (37%) correlation with a two-year lag in license cancellation. Exhibit 3 illustrates the relative frequency of various exit mechanisms.

Twelve percent of P&C insurance company exits from 1980 to 2010 resulted from insolvency and were wound-up. The wind-up of a P&C insurance company is modestly correlated (36%) with a one-year lag of the insurance cycle. This correlation is weaker than similar correlations in the United States. This is largely because one-third of insurer wind-ups in Canada were triggered by the failure of a foreign parent, whose failure was linked to their home market rather than the Canadian market. Further, several insurers that were amalgamated and discontinued were distressed insurers prior to being acquired and absorbed.

Exhibit 4 – Distressed insurers by form of entry – 1960 to 2001



Source: PACICC with data from the General Insurance Register

Among the population of companies that entered the market after 1980, those that exited as a result of financial distress were concentrated within a few categories of new entrant (Exhibit 2). Specifically, start-ups were two-thirds of all distressed

exits. One quarter of distressed exits resulted from financially distressed foreign participants being wound-up, or from the repatriation of capital out of Canada to support the home office. The remaining 10 percent of distressed exits were failed strategic restructurings. ❏

Literature review

The literature on firm survival is extensive. Jovanovic (1982) pioneered innovative work on firm selection and survival. His theoretical model predicts that new entrants have higher growth and mortality rates. Similarly, the model by Hopenhayn (1992) suggests that the rate of survival will be higher for older firms.


Empirically, research has supported the conclusions of these theoretical models. Dunne, Roberts and Samuelson (1988) found that diversified firms survive longer and grow faster than new entrants, but also that diversifying firms with experience in related fields perform better than less experienced entrants. The results of Mitchell (1991), Carroll et al. (1996), and Klepper and Simons (2000) provide similar support.

A number of studies find that a strong reservoir of support is important for firm survival. For example, Klepper and Sleeper (2001) and Walsh, Kirchhoff and Boylan (1996) find that subsidiary companies survive longer than new stand-alone companies. Further, Klepper and Thompson (2002) demonstrate that the quality of a subsidiary's parent company is an important factor for survival. Eisenhardt and Schoonhoven (1990) report firm performance strengthens with the industry experience of management. Similarly, Thompson (2005) found that new entrants learn by doing, with results improving over time and that the prior experience of management is an important factor in firm survival rates.

This research literature has consistently found that:

- pre-entry experience has large and persistent effects on firm survival
- new entrants learn by doing, with improved results over time
- survival rates increase with age.

While this literature has largely been focused on manufacturing sectors, there is a substantive literature on insolvency detection among P&C insurance companies. This work has used a variety of approaches including variations on logit/probit models (Grace, Harrington and Klein, 1998; Chen and Wong, 2004; Jones and Hensher, 2004) and hazard models (Doherty, Kartasheva and Phillips, 2009) to estimate an insurance company's probability of survival based on financial statement metrics and some qualitative characteristics. Studies have identified that new insurance business has higher loss ratios than renewal business (D'Arcy and Doherty, 1989; Cohen, 2005 and D'Arcy and Gorrivett, 2004). Choi (2010) explores insurance company growth and age, finding support in the U.S. P&C insurance industry that new entrants more aggressively pursue growth and older established firms focus more on profitable business.

Generally, however, the insurance company literature does not examine the role of new entrants or include the age of the insurance company as an explanatory variable in studies on firm survival.² 

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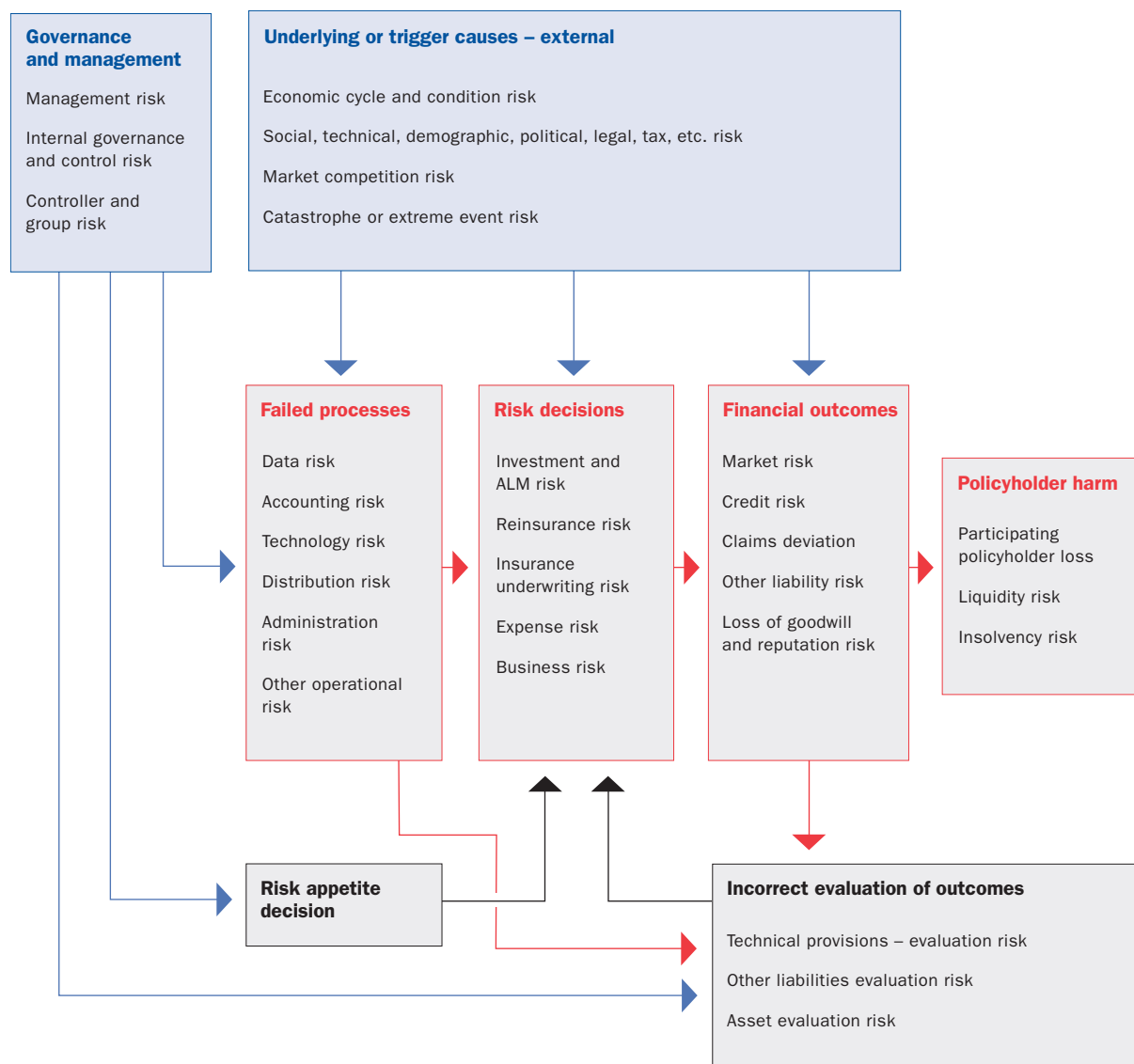
² Virtually all studies use size as an independent variable which has been found in manufacturing studies to have some correlation with age.

Analytical framework

Insurance companies generally fail as the result of the interaction of a number of factors. Sharma (2002), McDonnell (2002) and Dibra and Leadbetter (2008) utilize a detailed risk map approach that highlights the interactions between risk decisions (reinsurance, underwriting, reserving, product/geographic business), failed processes (data, administration and other operational risk) and governance/management in generating financial outcomes and implications for policyholders³. The approach also incorporates feedback processes through the incorrect evaluation of outcomes.

This framework is reproduced in Exhibit 5.

Exhibit 5 – Analytical framework



³ The approach also incorporates the influence of the external economic environment on the various processes, decisions and outcomes. However, these are external to this discussion as the same external environmental conditions were experienced by both surviving and non-surviving insurance companies.

Risk decisions in new entrants

This section analyzes and compares the risk decisions made by new entrants over the study period in particular, focusing on the entry and growth strategy (including reserving, acquisition incentives), capitalization, business risk (product/geographic market), investment decisions and reinsurance risk.

Market entry strategy

The Canadian P&C insurance industry is a relatively mature industry with many established players. A market entry strategy is the planned method for entering and growing an insurance offering to consumers. Some new entrants successfully operate in a niche market without expanding into mainstream products. Canadian insurance company new entrants generally adopt one or more of four market entry strategies:

Distribution	Offering higher commissions to brokers for new business
Pricing	Offering lower prices (pricing the product below industry levels)
Targeted niche	Focusing on a niche market
Strategic restructuring	Transferring existing business from insurers within a group to a newly incorporated group member

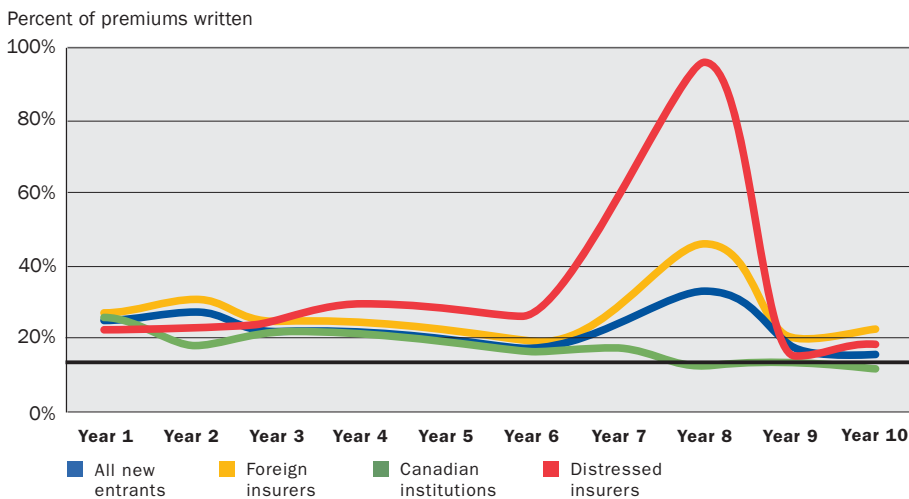
Distribution

Nearly all new entrants use commission incentives to attract business and build a brand with insurance brokers. Brokers have historically been the primary distribution channel that consumers use to purchase insurance, particularly in the personal lines. However, as illustrated in Exhibit 6,

over time for most insurers, the commission rate converges toward the industry average as the insurer becomes more established.

In contrast, distressed new entrants, on average maintain elevated or increase commission rates until 2 years prior to resolution when rates spike. After resolution (for those purchased rather than wound-up) commission rates converge to the industry average.

Exhibit 6 – Time path for commission rates of new entrants



Source: PACICC with data from TRAC

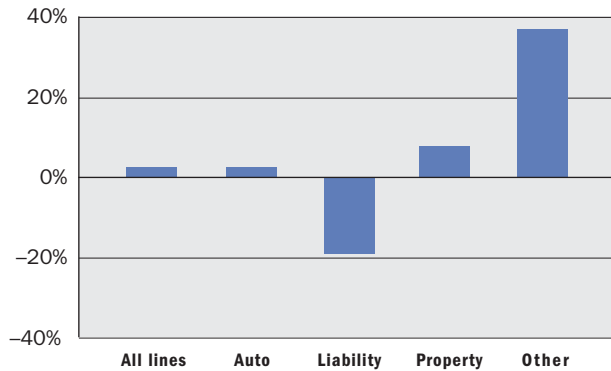
Price adequacy and reserving

For new entrants across nearly all lines of business, the weighted average of reserves as a proportion of net premiums written was largely on par with the industry average – with the exception of liability insurance (Exhibit 7).⁴ Underpricing of liability insurance largely reflects the under-reserved portfolios transferred in strategic restructuring. Strategic restructurings were also underpriced relative to the industry for property insurance.

Exhibit 7 – Price adequacy

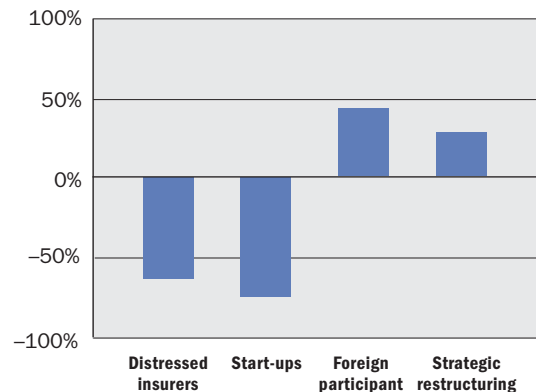
All new entrants

Reserves as a percent of NPW net of the industry average



Auto insurer by entry type

Reserves as a percent of NPW net of the industry average



Source: PACICC with data from TRAC and A.M. Best

Start-ups were significantly underpriced in auto insurance (Exhibit 7), with a weighted average for reserving over the first decade of operation at 76 percent less than the industry average. Start-ups were also underpriced in liability (-26 percent) and property (-5 percent) relative to the industry. As shown in Exhibit 4, distressed insurers are predominately start-up insurers, so the two categories are highly correlated. On average, reserve adequacy was weakest through the first five years, improving over the second half of the decade. For distressed insurers, while reserve adequacy was consistently weak across all periods, the trend did not worsen over time.⁵

A quarter of new entrants either targeted an industry niche (10 percent) or a restructuring (13 percent) to enter a new market. Nearly three quarters (71 percent) of these new entrants employed commission incentives to attract policyholder volume, and nearly two-thirds (62 percent) offered consumers discounted prices on insurance products. And 56 percent of all new entrants employed both higher commission rates and priced below market average in their market entry strategies.

⁴ For much of the sample period between 1980 and 1990, the industry was experiencing a liability crisis which saw the failure of 16 P&C insurance companies in Canada during the decade.

⁵ Reserve adequacy and rate adequacy are closely linked as reserves are funded by premiums.

Capitalization

Capital is central to the operation of an insurance company. The primary purpose of capital in an insurance company is to provide protection to the insurers policyholders. For new entrants it is necessary for the underwriting of risks and to finance growth.

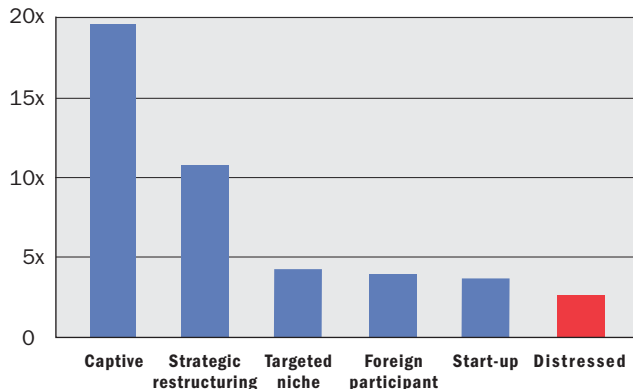
For the purposes of this study the regulatory capital minimum is defined as \$3 million. In fact, minimum regulatory capital varies by chartering jurisdiction. Current regulatory capital requirements include minimum dollar thresholds and/or risk-based requirements. Currently one jurisdiction requires that assets exceed liabilities; three jurisdictions have minimum requirements of \$3 million; one with \$4 million; and the remainder have risk-based capital requirements. Risk-based capital requirements were introduced after the period of study, 1980-2001. During the period of study minimum capital requirements across provincial and federal jurisdictions toward the end of the period were typically either \$1 million or \$3 million.

Average initial capitalization, defined as contributions by shareholders or mutual policyholders through the issuance of equity capital and contributed surplus, for all new entrants during the

Exhibit 8 – Capitalization

Initial capitalization

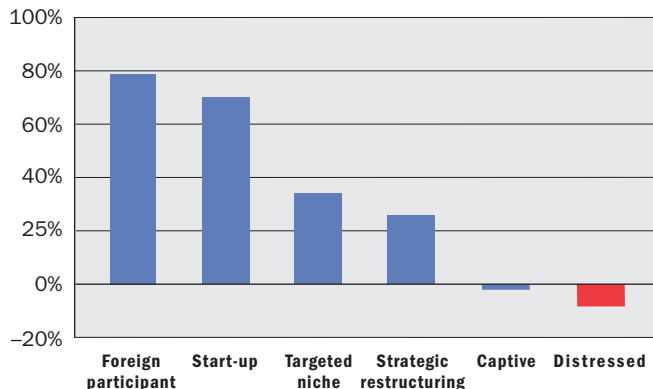
Multiple of regulatory minimum



Source: PACICC with data from TRAC and A.M. Best

Additional capitalization

Proportion of initial capitalization



study period was 4.29 times the regulatory minimum. Exhibit 8 outlines the initial capitalization by entry type. New entrants that were captives or strategic restructurings were significantly better capitalized at start-up than other types of new entrants.

For new entrants targeting a specific industry niche, additional capital injections by the parent company were highly correlated (0.92 correlation coefficient) with premium growth. For all other types of new entrants, additional capitalizations were not correlated with growth. For these, a combination of growth and adverse claims development in early years account for the additional capitalization.

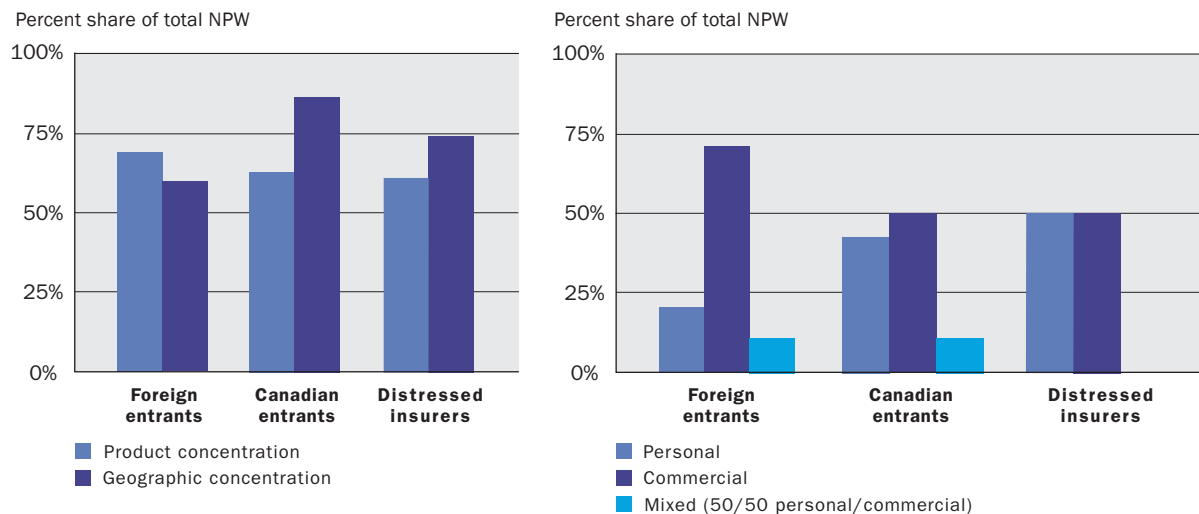
Among insurers that became distressed, a majority (70 percent) provided no additional capitalization after the initial start-up. The negative additional capitalization for the group as a whole is due to the large withdrawal of capital (23.8% of total assets or half of its initial capitalization) from an insurance subsidiary to its parent.

Business risk

The product and geographic mix of business that an insurer writes can affect performance through scope economies, firm growth and exposure to perils. After ten years of operation, new entrants were more concentrated than the industry.

The product market Herfindahl index for new entrants was 2.01 times that of the industry.⁶ As can be seen in Exhibit 9, there is no appreciable difference in product concentration between foreign, Canadian or distressed new entrants.

Exhibit 9 – Business mix



Source: PACICC with data from TRAC and A.M. Best

Geographically, new entrants were even more concentrated, with 58 percent writing in a single province and an average geographic market Herfindahl index 3.12 times that of the industry. Canadian-owned insurers tend to be much more geographically concentrated than foreign-owned insurers.

Canadian-owned new entrants had, on average, a more diversified portfolio of business with a roughly equal split between personal and commercial lines of business. Foreign entrants are typically focused on commercial lines. New entrants that eventually became distressed were on average writing an even mix of personal and commercial lines. Interestingly, 6.3 percent of new entrants switched their business mix from either personal to commercial (63.4 percent) or commercial to personal (36.4 percent). No distressed insurer switched its business orientation. More typically, distressed insurers had product concentrations similar to that of Canadian insurers and began writing in other lines as they became distressed.

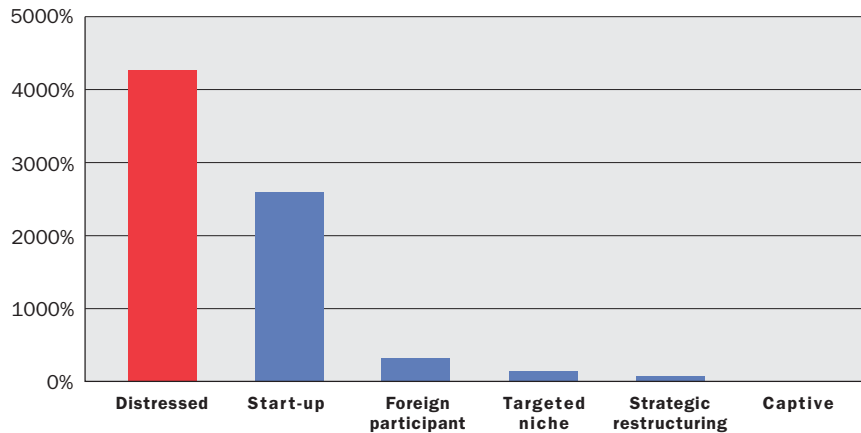
Rapid growth, the third leading cause of involuntary exit in Canada, was a contributing factor in 41 percent of involuntary exits (Dibra and Leadbetter, 2008). In many cases failing companies tended to grow rapidly in the last few years of business. Where rapid growth was identified as either a main or a contributing factor, on average these companies grew rapidly for two years

⁶ A Herfindahl index is a measure of concentration. Higher Herfindahl scores generally indicate increased concentration.

prior to being wound-up. In these periods prior to wind-up, financial ratios began to deviate from previous company and industry patterns. Among new entrants, distressed insurers (and start-ups which are heavily influenced by distressed insurers) grew much faster than other new entrants (Exhibit 10).

Exhibit 10 – Premium growth (NPW)

Over first decade of operation after initial year



Source: PACICC, with data from TRAC and A.M. Best

For an insurance company, rapid growth is usually accompanied by deteriorating loss reserves. Rapid growth was the most frequent contributing cause (67 percent) for companies with deficient loss reserves as the main cause of involuntary exit. Furthermore, two-thirds of the companies with rapid growth as their main cause had deficient loss reserves contribute to involuntary exit (Dibra and Leadbetter, 2008).

The incentive to embark on long-term, aggressive expansion strategies tends to increase during periods associated with diminishing capital strength. Companies may also enter new areas of business where they lack expertise. Moreover, during periods of rising short-term interest rates, some insurers may grow rapidly in the hope that investment income from the increased premium writings will offset underwriting losses.

Investments

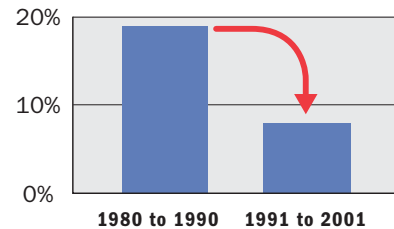
Insurance companies invest insurance premiums to earn interest and other income until claims are paid out. Over the study period, the Canadian P&C insurance industry had an underwriting loss every year. Investment income was used to generate a positive economic result.

Rate regulation

The introduction of rate regulation in Ontario is correlated with reduced entry into the Ontario auto insurance product. In the decade following the introduction of rate regulation, the proportion of new entrants opting to write Ontario automobile insurance fell to less than half the number of new entrants that chose to write Ontario automobile insurance prior to the introduction of strict price regulation.

Exhibit 11 – Impact of rate regulation on entry

Share of new entrants in Ontario auto

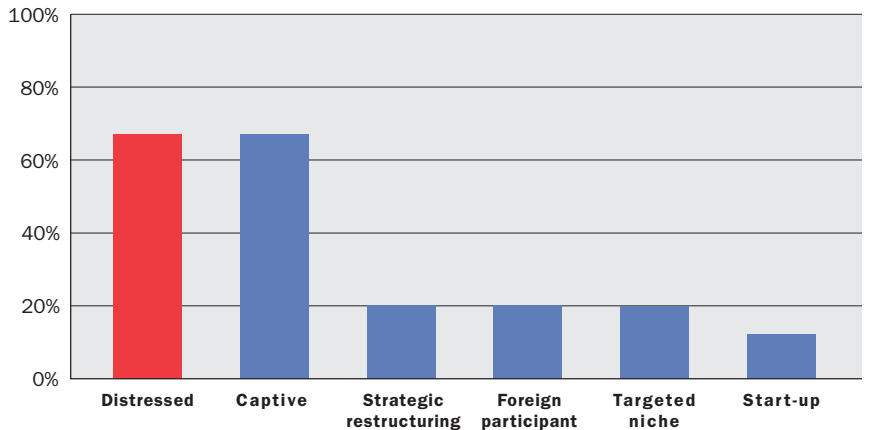


Source: PACICC, with data from TRAC and A.M. Best

Historically, the Canadian P&C insurance industry has allocated, on average, 76.7 percent of its investment portfolio to bonds. Most new entrants followed this industry trend (Exhibit 12). However, both captives and insurers that eventually became distressed invested in bonds at about half the rate of the rest of the industry, opting instead to invest in higher-risk assets such as equities. Interestingly, captives appear to have been better able to leverage higher returns from their higher risk portfolio. In contrast, insurers that eventually became distressed exhibited less expertise in leveraging their portfolio. On average, distressed insurers earned a return on investment 130 basis points less than other insurers.

Exhibit 12 – Investment risk in new entrants

Equities, real estate and other investments as percent of total



Source: PACICC, with data from TRAC and A.M. Best

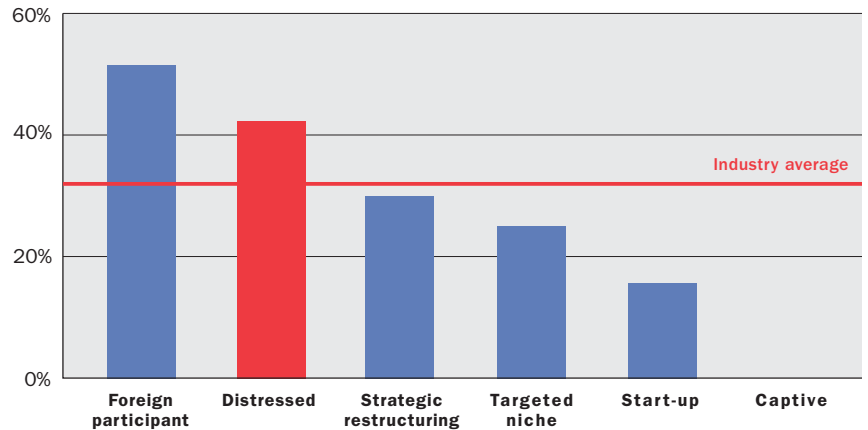
Reinsurance

Reinsurance allows insurers to transfer risks that exceed their underwriting capacity or to share risks which they choose not to bear alone. The principal value of reinsurance to a primary insurance company is recognition in the financial statement of a reduction in its liabilities (in its unearned premium reserve and its unpaid claims loss reserve). The reduction in these two accounts is commensurate with the payments that can be recovered from reinsurers. The purchase of reinsurance can reduce the volatility of insurer underwriting results, provide capital relief and also provide specific expertise and services for an insurer. Highlighting the value of reinsurance to primary companies, in 1998 and 2005 the global reinsurance market bore about two-thirds of the Canadian P&C industry's combined CDN \$3.9 billion in catastrophe losses.

In the industry, reinsurance recoverables have on average represented 14 percent of industry assets. Among new entrants, reliance on reinsurance (as measured by the proportion of assets that were in the form of reinsurance recoverables) averaged 33 percent for strategic restructurings, start-ups and captives. New foreign participants

Exhibit 13 – Unregistered reinsurance utilization by new entrants

Percent of total reinsurance



Source: PACICC, with data from TRAC and A.M. Best

and entrants targeting a market niche were less reliant on reinsurance but reinsurance recoverables still averaged more than 20 percent of total assets. New entrants of all types tend to rely more on reinsurance than more mature companies.

Unregistered reinsurance is reinsurance provided by companies that are not registered and regulated by a Canadian supervisory authority. Reinsurance purchased by these unregistered providers is generally believed to be of higher risk than reinsurance placed with registered reinsurers. Within the Canadian insurance industry, unregistered reinsurance on average has accounted for 32 percent of total reinsurance. Exhibit 13 shows the utilization of unregistered reinsurance by new entrants. Both foreign participants and insurers that eventually became distressed had higher unregistered reinsurance utilization.

Liquidity

Liquidity is a less serious challenge for a property and casualty insurance company that receives premiums in advance of incurring claims. In addition, balance sheets for most insurers consist of highly liquid investments. However, while remote, there is potential for catastrophe losses to generate a large claim without sufficient liquidity where there is reliance on the insurer's reinsurance program.⁷

New entrants rarely experienced liquidity problems. On average, cash and investments accounted for 67 percent of their total assets. New entrants that eventually became distressed were rarely affected by liquidity challenges. 🍁

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⁷ Primary insurers typically pay the claim and seek reimbursement from the reinsurer. As a result, losses of a sufficient scale could generate liquidity issues in a primary insurer that is reliant on reinsurance as it may have few liquid assets to use for those initial payments.

Failed processes in new entrants

An insurance company's internal capabilities have a significant bearing on its survival. This section analyzes and compares the operational processes in new entrants over the study period, focusing in particular on administration risk, data/technology risk and accounting risk.

Administration risk

Technical efficiency is the effectiveness with which a given set of inputs is used to produce an output, whether a good or service. Several studies have identified firm-level efficiency as an important variable for insurer profitability and growth (Choi, 2010; Choi and Weiss, 2005; Cummins and Weiss, 2000). Inputs here are defined as general expense ratio (expenses over net premiums written) which includes salaries, occupancy costs, printing, stationery, travel, statistical analysis and other expenses. It does not include taxes, claims costs or commissions.

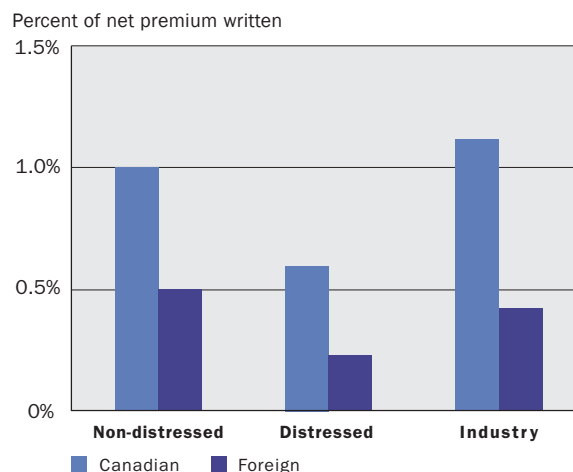
New entrants had an average expense ratio of 25.4, or 80 percent of the industry expense ratio over the period. As expected, new entrants with the capacity to leverage parent resources (strategic restructurings and foreign participants) had significantly lower expense ratios (20.8 percent) than other new entrants. Start-up insurers, which are reliant on internal resources, had an average expense ratio of 40.9, 128 percent of the industry average. However, the expense ratios of new entrants that eventually became financially distressed were not different than those of other insurers, suggesting that administration risk was not a significant factor in contributing to financial distress.

Data and technology risk

The insurance industry devotes considerable actuarial resources to developing pricing tools and techniques for managing insurance risks. The need to measure risk and develop expectations on future claims costs means that insurance pricing relies heavily on statistical loss data for its pricing models. The lack of adequate data and analysis are likely a major source of operational risk for new entrants which could ultimately contribute to underpricing and deficient reserves. Further, inadequate data collection could cause a delay in the recognition of claims trends being experienced by a company.

Historically, Canadian chartered insurance companies have spent 1.1 percent of net written premium on data and statistical services. Foreign-owned insurance companies have spent about a third of this (0.4 percent of net premiums written). Since the early 1980s this resource allocation has been stable for both Canadian and foreign insurers.⁸ As illustrated in Exhibit 14, for both Canadian and foreign-owned new entrants, resource allocation to data and statistical services was similar to the industry. However, distressed insurers, which are predominantly Canadian start-ups, invested in data and statistical services at about half that rate.

Exhibit 14 – Investment in statistical services



⁸ In the late 1970s until 1980/81 the resource allocation was lower (0.8% and 0.3% respectively for Canadian and foreign insurers).

Accounting risk

Internal controls and processes may break down for a number of reasons, but company solvency risk is further increased when they are purposefully circumvented. Prior research found that alleged fraud was involved in 21 percent of the identified involuntary exits in the entire period 1960 and 2010 (Dibra and Leadbetter, 2008). Most of these failed companies were newly licensed and operating for less than three years.

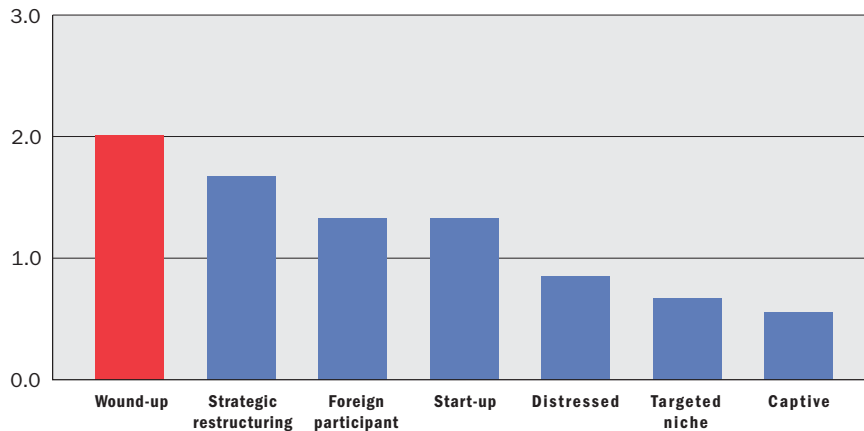
Once a company fails, breakdowns in internal controls can be readily identified. It is more difficult to detect from financial statement data in surviving firms. Reserves and receivables are among the balance sheet assets with the greatest opportunity for management judgement and manipulation. For the purposes of this study, a proxy variable (receivables as a proportion of total assets) was utilized to estimate the reliability of financial reporting, and hence internal controls.⁹ At an industry level, receivables to total assets relationship has been largely stable over the past 30 years. Within specific institutions, significant variations can signify changes in business practice, for example with regards to receivables from agents; instalment premiums from policyholders or a change in intra-group transactions reflected in receivables from subsidiaries or affiliates.

Among new entrants, strategic restructurings and foreign participants held a higher-than-average proportion of their assets in receivables, reflecting intra-group/company transactions. Start-ups

also held a higher-than-average proportion of their assets in receivables, largely reflecting non-insurance company affiliates. Distressed insurers did not have a higher proportion of receivables to assets. However, insurers that were eventually wound-up had receivables relative to assets twice that of the industry average. Further, their receivables-to-asset ratio increased 108.5 percent in the last year of operation.

Exhibit 15 – Receivables to assets ratio

(Relative to industry = 1)



Source: PACICC, with data from TRAC and A.M. Best

While this suggests that insurers in financial distress do not necessarily experience a breakdown in internal control, those companies that ultimately do fail likely experience such a breakdown in their later years. ❄️

⁹ Reserves are analyzed separately under pricing.

Governance and management of new entrants

This section analyzes and compares the management and governance of new entrants over the study period, in particular the organizational structure, the presence of an executive chairman, manager experience and the turnover of senior management in new entrants.

Corporate governance is a topic of considerable interest in the financial sector and guarantee funds in particular. Large and spectacular failures of companies internationally (for example Enron, BCCI and HIH Insurance) have highlighted the important role that corporate governance plays and the consequences of getting it wrong. A.M. Best (2004) and McDonnell (2002) in their studies of U.S. and European insurance company involuntary exits found that management and governance issues were related to decisions or failed processes that caused companies to fail.

Further, a number of studies suggest that management styles and internal processes persist strongly over time (Nelson and Winter, 1982; Nelson, 1991; Dosi *et al.*, 2000). Risks that are persistently poorly managed render an insurance company more vulnerable to adverse external events. The A.M. Best (2004) and McDonnell (2002) findings are largely consistent with research that links quality of management with firm survival.

Organizational structure

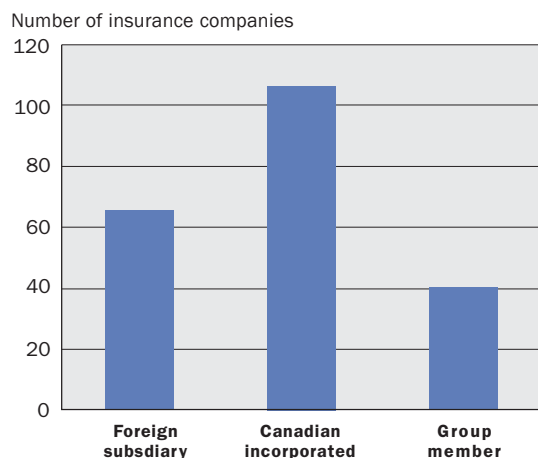
Different organizational forms have particular cost structures (“objective functions”) and incentives among the contractual parties. Controlling for the organizational form of an insurance company allows for the possibility for different levels of risk behaviour among resource allocations Canadian and foreign or stand-alone and groups of insurance companies.¹⁰

A number of studies find that a strong reservoir of support is important for firm survival. For example, Klepper and Sleeper (2001) and Walsh, Kirchhoff and Boylan (1996) find that subsidiary companies survive longer than new stand-alone companies. Further Klepper and Thompson (2002) demonstrate that the quality of a subsidiary’s parent company is an important factor for survival.

Previous sections of this paper have noted that foreign insurers and members of insurance groups (strategic restructurings) have consistently differed in areas such as data services, capital management and business mix.

In the sample, 38 percent of new entrants are subsidiaries of foreign owned insurance companies, with more than two-thirds (68.8 percent) being branches. One quarter (24 percent) of new entrants were members of an insurance group.

Exhibit 16 – Organizational form of new entrants



Source: PACICC, with data from TRAC and A.M. Best

¹⁰ Within the literature, organizational form generally means a stock or mutual insurance company. However, within our sample, mutual insurers are a small subset and for most variables, there is insufficient data to include in the analysis. Therefore, unless the local fire mutual category is included, all new entrants in the sample are stock companies. Therefore the traditional differentiation is less relevant.

Differences in survivability after five and ten years between foreign owned, members of a group and stand-alone Canadian insurers are minimal, with similar proportions surviving through to each milestone. However, consistent with the literature, entrants with group or foreign parent support are less likely to exit as a result of distress. Group and foreign-owned new entrants that exited after experiencing financial distress represented 7.3 percent and 7.8 percent of entrants in that group respectively. In contrast, 15.7 percent of Canadian-owned, non-group new entrants exited as a result of financial distress.

Board composition: Executive Chairperson

The role of independent non-executive directors features prominently in corporate governance codes and research literature. The presence of independent representatives on the board, capable of challenging the decisions of the management, is widely considered to be a key means of protecting the interests of stakeholders.

The results of research on the impact of executive chairpersons on firm performance has been ambiguous. Numerous studies have found no significant effects, others found some enhanced performance and yet others showed a negative impact. For a review of the literature on corporate governance and in particular executive chairpersons see Finegold *et al*, 2007.

Historically, executive chairpersonship has been common in the property and casualty insurance industry. Within the sample period, 80 insurance companies at some time or another had an executive chairperson. Among new entrants between 1980 and 2001, only six companies (3.4 percent) had either a chairperson or vice chairperson also hold the post of president or chief executive officer. Two-thirds of these new insurers survived less than five years. However, only one-half exited under financial distress. Comparison with operational risk factors (such as accounting risk) did not identify any significant correlation between executive chairpersonship and operational risk.

Managerial experience

Managerial quality and experience are often considered to be important inputs into the survivability of a firm. The literature on this is mixed. Several studies have found that managers of failed firms are not necessarily less capable than managers of survivors (Lang and Stulz, 1992; John et al, 1992 and Khanna and Poulsen, 1995).

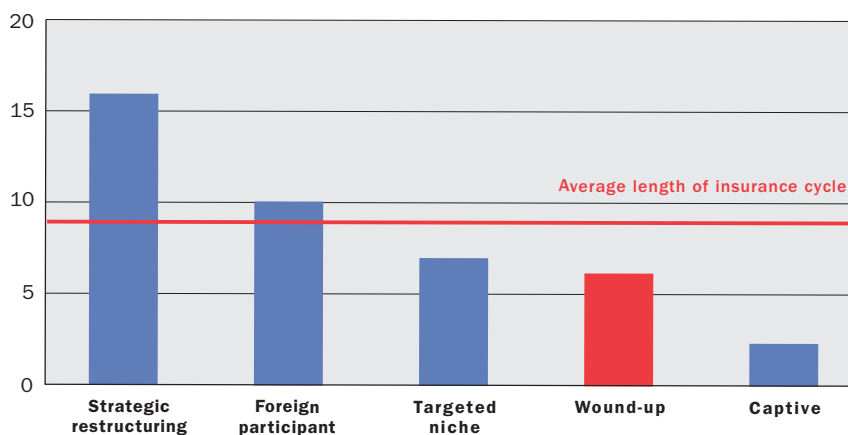
In contrast, Eisenhardt and Schoonhoven (1990) report that firm performance is strengthened by the industry experience of their management. Similarly, Thompson (2005) found that new entrants learn by doing, with results improving over time and that the prior experience of management is an important factor in firm survival rates. Using property and casualty insurance company data in the United States, Leverty and Grace (2010) find a correlation between managerial quality and the likelihood of failure. Specifically, they find that managerial quality affects the capacity and timeliness of firms being able to remove themselves from regulatory scrutiny.

PACICC constructed a database of senior managers in the Canadian property and casualty insurance industry covering the period 1975-2005 to measure the prior senior management experience of senior officers of new entrants. While managerial quality consists of many factors, level of experience was used as a basic proxy for managerial quality.

On average, senior managers in new entrants had nine years of prior experience in a senior officer position in the Canadian P&C insurance industry at the time of incorporation. New entrants that exited had above average years of experience (11 years) at the time of incorporation compared to the total sample of new entrants (survivors and those that exited).

As can be seen in Exhibit 17, strategic restructurings and foreign participants have managers with the greatest starting experience. Captives and insurers that were eventually wound-up started with managers with the least experience. The experience of these managers, on average, was half that of the average level of experience and did not extend across a full insurance cycle, suggesting that their senior level experience was biased toward either a hard or soft market, but not both.

Exhibit 17 – Average years of prior experience for new entrant managers



Source: PACICC, with data from the General Insurance Register

Further, survivability of an insurer (with a correlation coefficient of 0.38) is modestly correlated with years of prior management experience.

The database also included information on whether senior management experience was based in underwriting, claims or finance. However, 86 percent of senior manager experience was in underwriting with only 9 percent and 5 percent in finance and claims respectively. As a result, comparison by experience type did not reveal any significant information.

Management turnover

Human capital is the central commodity of any knowledge-based enterprise such as property and casualty insurance. Employees are not simply brought in to manage the assets of an insurance company as they are for more traditional manufacturing and service-based enterprises.

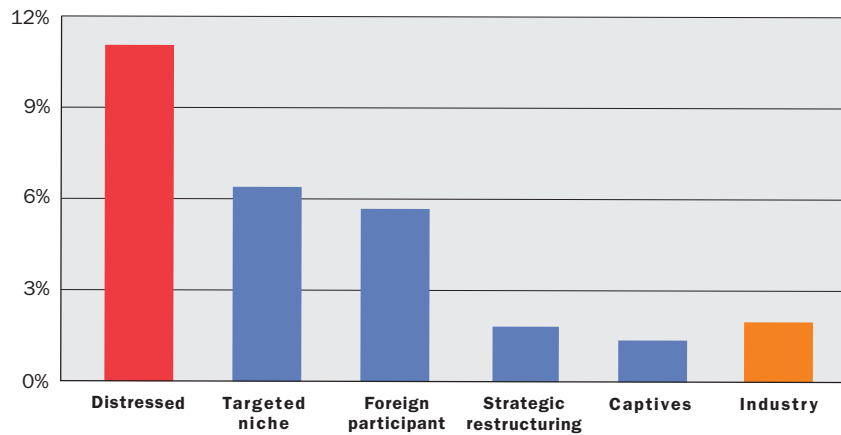
In contrast to most other goods and services where input costs are largely known beforehand and are used to set prices, insurer output prices (premiums) are established before most of the input

costs (claims) are known. At the beginning of the contract, policyholders pay a known insurance premium in exchange for a promise of compensation should some uncertain future event involving a loss occur.

Due to this inverted production process, employees are the assets, possessing critical institutional and industry knowledge necessary to make appropriate risk decisions. As such, identifying and retaining key personnel is critical to the success of knowledge-based enterprises such as property and casualty insurance.

Exhibit 18 – Senior manager turnover in new entrants

Proportion of senior managers leaving the firm



Source: PACICC, with data from the General Insurance Register

As illustrated in Exhibit 18, insurers that experienced financial distress had much higher levels of managerial turnover than other new entrants or the established industry. From the available data, it is not possible to determine the direction of causality. Managerial turnover may be caused by a firm experiencing distress or may be itself a cause of distress as managers leave the new entrant for qualitative reasons. Further, there may be a feedback loop whichever the source of causation. 🇨🇦

Discussion

The Canadian property and casualty (P&C) insurance industry is a dynamic and competitive industry. During the 30 year period from 1980 to 2010 there were 513 license authorizations and cancellations.

However, nearly 40 percent of all new entrants exited before the end of the first decade. While most exit voluntarily, 12 percent exited involuntarily, adversely affecting thousands of policyholders. In this context, PACICC has conducted this study as the first comprehensive examination of new entrants in the P&C insurance industry in Canada.

This report analyzed the risk decisions and operational processes of new entrants to identify key differences between those who survived or exited voluntarily and those who exited involuntarily. For many key metrics such as – initial capitalization, loss and expense ratios and liquidity – there is little to differentiate between new entrants that eventually become distressed and those that do not.

However, this analysis found that new entrants who exited involuntarily made risk decisions and had operational practices that were different than those of other insurers in the industry. Further, there appears to be a feedback process whereby initial risk decisions are either exacerbated or mitigated by operational processes and subsequent risk decisions. This suggests that there is not a linear causation process of entry to failure. In addition, each new entrant is unique as are its reasons for exit. Nevertheless, it is possible to make some inferences from the data.

The experience level of senior managers appears to be an important initial condition that influences subsequent risk decisions and investments in operational processes. New entrants that exited involuntarily had, on average, senior managers with less than half the experience level of senior managers of other new entrants. In addition, these less seasoned managers had, on average, not experienced a full insurance cycle as a senior manager of a P&C insurance company.

It should be noted that not all involuntarily exiting insurers had inexperienced management teams. One company for example had a highly experienced team but had limited access to new capital and relied on retained earnings to sustain its solvency position. It involuntarily exited after an external factor (natural catastrophe) overwhelmed its available capital. Another company also had a highly experienced management team, but this experience was largely in run-off and with companies that ultimately also entered into distress. These cases suggest that experience is not a perfect proxy for either quality of management, nor can it necessarily ensure firm survival in the face of external pressures. However, the data suggest that, consistent with the literature, managerial experience generally plays a role in how an insurance company exits the market.

Managerial experience, as a proxy for quality of management, appears to be a factor in the initial risk decisions and operational processes established by new entrants that subsequently failed.

On average, new entrants that failed relied on more aggressive and sustained market entry strategies – including underpricing and higher acquisition costs – compared to other new entrants. This often resulted in rapid growth that outpaced the company’s capital resources.

Similarly, new entrants that exited involuntarily on average invested less in data and statistical services compared to other new entrants, handicapping their ability to adequately price policies and monitor claims development.

Additional risk decisions related to investment policies and reinsurance further contributed to solvency vulnerability for new entrants. More aggressive investment strategies often exposed new entrants to further risks in addition to the insurance risks undertaken. Similarly, while there may be sound reasons for utilizing unregistered reinsurance, such reinsurance programs carry additional risks that need to be carefully managed.

On average, new entrants that eventually became distressed experienced turnover among the senior management staff at five times the rate of the Canadian P&C insurance industry as a whole. This loss of institutional knowledge and experience further limited the capacity of new entrants to resolve their distress situations and potentially resulting in a breakdown of internal controls.

Important factors influencing whether a new entrant exited involuntarily were the availability of external support – both in terms of managerial experience/capacity, data/statistical services – and access to capital to support growth and adverse development.

In summary, whether it was inexperience, underwriting mis-judgement, capital management decisions (or in some cases, fraud), in the end strategic choices and risk appetites were at the root of all causes of distressed exits. From the Canadian P&C insurance experience with the involuntary exit of new entrants, the following observations can be made for prospective entrants and supervisory authorities:

- experience matters, and greater experience of senior management reduces the likelihood of involuntary exit
- a market entry strategy needs to include a transition plan from that of a new entrant breaking into the market to a recognized market participant
- strong internal controls and financial reporting reduce insolvency risk. New entrants that exited involuntarily demonstrated clear breakdowns in internal controls. 🇨🇦

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Appendix A – Methodology

The risk map approach of McDonnell (2002) and the Sharma (2002) was utilized in this study. The risk map utilizes a framework that illustrates the sources of risk (failed processes, risk decisions, external factors, management) and the links between them. In using historical data, the external factors and the financial and policyholder harm outcomes are known, allowing a focus on the management/governance, process failures and risk decisions of new entrants, comparing those that survived the first decade of operation to those that entered financial distress.

Data from the date of incorporation up to the end of the first ten years of operation was used for all insurance companies in the sample. Not all companies survived the first decade, and some companies did not report data in all the years, so the data did not encompass a full decade for many companies.

Data

The main sources of the information utilized in this study were from MSA Research, Insurance T.R.A.C. Report (Canada) and the General Insurance Register. Since insurers voluntarily file their financial data with MSA Research, T.R.A.C., Canadian Insurance and the General Insurance Register, some data may not have been available in all years. Between 99 and 104 new entrants, representing 56.6 percent to 59.4 percent of new entrants over the period had data in the relevant variables.

As the firm survival literature has identified managerial experience as an important factor in firm mortality, a historical management database was constructed from the General Insurance Register which lists the senior managers and corporate officers for all P&C insurance companies which provided data to the publication for the period 1975-2005. In total there were 38,436 individual records for a total of 192,180 data points (first name, last name, title, year, company). On average each year 1,281 corporate officers were identified. From this, it is possible to estimate the prior senior managerial experience for the corporate officers of a new entrant. It is also possible to determine their background (finance, claims, underwriting).

Internal processes/Operational risk

To analyze and compare the operational risk level of new entrants, data on general expenses, expenditures on statistical/actuarial services and management turnover was collected.

General expense, defined as the general expense ratio (general expenses over premiums written) is a measure of firm-level efficiency, which has been identified as an important component to competitive effectiveness (Choi and Weiss, 2005).

Statistical/actuarial analysis of historical, both industry level and own-firm data, is a critical input in the claims monitoring, reserving and pricing processes for insurance companies. Data on this is drawn from the T.R.A.C./A.M. Best reports on E.D.P (electronic data processing which includes statistical equipment and services).

Intellectual work is the central commodity of any knowledge-based enterprise, including P&C insurance. Staff in an insurance company does not operate and manage capital assets as staff for a more traditional manufacturing enterprise might. Underwriters and claims staff are core assets and as such, identifying and retaining key personnel is a major concern for knowledge-based enterprise such as insurance. Using the management database, turnover in the senior management team was tracked for new entrants to provide an estimate of internal stability and retention of institutional knowledge.

Risk decisions

To analyze and compare the risk decisions of new entrants, the choice of entry strategy, reinsurance program, investment risk, capitalization, liquidity and market and product concentration were reviewed.

Four market entry strategies among new entrants were identified:

- Distribution** Offer higher commissions to brokers for new business
- Pricing** Offering lower prices – pricing the product below industry levels
- Targeted niche** Focus on a niche market
- Strategic restructuring** Transfer of existing business from insurers within the group to the newly incorporated group member

Data on commission rates and reserving (reserves as a proportion of premiums written) by line was collected to analyze and compare distribution and pricing strategies for new entrants. Higher commission rates can generate incentives for brokers to direct business to a new entrant trying to enter the market. Similarly, under-reserving/pricing allows a new entrant to offer a lower priced product.

Premium by line for new entrants was also collected to identify whether the company targeted a particular niche product. Initial starting premium, or premium growth due to transfers from affiliated insurers (with the corresponding supporting assets) was also analyzed to determine if growth was a result of strategic restructuring within an insurance group. Business mix, personal lines (defined as automobile and personal property) and commercial (all other lines) was also analyzed.

Data on premiums by line and province were used to construct Herfindahl indexes (a measure of diversification) for product and geographic markets.¹¹ The number of product and geographic markets written by an insurer can affect firm mortality through diversification benefits. However, activity in products outside the experience of the company may also increase risk.

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¹¹ A Herfindahl index is defined as the sum of the squared shares of business by line of business (product concentration) or by province (geographic concentration).

Data on reinsurance utilization (reliance on reinsurance for capital support) and the proportion of the reinsurance program underwritten by unregistered reinsurance was collected and reviewed. An insurer's reinsurance program is related to underwriting risk and capacity. Reinsurers face moral hazard and monitoring costs in the underwriting of primary insurers. Increased utilization of unregistered reinsurance may indicate greater risk in a new entrant's underwriting that could not be placed with registered reinsurers.

To analyze investment risk, data on proportion of investments that were invested in bonds was collected and compared with the return on investment to estimate the capacity to manage risk and return.

Data on initial capitalization (common equity and contributed surplus) by shareholders was collected and compared with regulatory minimums. Data on additional contributions or deductions to common equity and contributed surplus were collected to estimate the level of external capital support.

Data on liquidity (cash and investments as a proportion of total assets) was also collected.

Management and corporate governance

Group membership allows for different behaviours in operations as many functions may be performed elsewhere in the group, for example the new entrant may receive statistical and other back office support. A dummy variable was constructed for those new entrants that were members of an insurance group. Foreign branches/ownership was also identified through a dummy variable.

Managerial experience, defined as years of senior management/officer experience in the Canadian P&C insurance market prior to the incorporation of the new entrant was collected. Total years of experience as well as whether that experience was in claims, underwriting or finance was identified.

Other data variables collected

Various other variables were employed to control for firm characteristics in new entrants. These include whether a new entrant was a reinsurer or primary insurer and the proportion of business in Ontario auto insurance.

Organizational form variables (mutual/stock) were not included as other than the local fire mutuals, which were separated from the other groups, all new entrants were stock companies over the period. ❖