

RESEARCH

Insurance Criteria: Nonlife Insurance Risk Control Criteria And Their Role In Enterprise Risk Management

Publication date: 31-Oct-2007
Primary Credit Analysts: Christopher Myers, CFA, New York (1) 212-438-6885;
chris_myers@standardandpoors.com
David Ingram, New York (1) 212-438-7104;
david_ingram@standardandpoors.com
Secondary Credit Analysts: Rob Jones, London (44) 20-7176-7041;
rob_jones@standardandpoors.com
Mark Puccia, New York (1) 212-438-7233;
mark_puccia@standardandpoors.com
Polina Chernyak, New York (1) 212-438-7179;
polina_chernyak@standardandpoors.com

On June 2, 2006, Standard & Poor's Ratings Services published an insurance criteria report, "Refining The Focus Of Insurer Enterprise Risk Management Criteria " on Ratings Direct. That article clarified the core criteria for insurer enterprise risk management (ERM) assessments, including a discussion of nonlife risk controls. This article serves as an expansion of that nonlife discussion, outlining how nonlife risk controls relate to the ERM evaluation process. We address here the respective risk-control processes and considerations for commercial lines, personal lines, reinsurance, catastrophe risk, cycle-management risk, and what we describe as new-venture (or new-product) risk.

As noted in prior ERM criteria, there are four primary elements of consideration for assessing an insurer's risk-control process:

- I Whether the insurer considers all risks when selecting primary areas of concentration of the risk-control activity.
- I Whether for each major risk, the insurer has a risk-control process that will result in limiting losses to within pre-articulated loss tolerances, assuming the process is followed.
- I Whether the insurer has executed its processes in a consistent, disciplined way that enables it to reap the benefits of the process and control losses.
- I Examination of losses when they occur to determine whether they are within the insurer's loss tolerance and whether the insurer's risk-control processes handled the exposure properly.

Standard & Poor's usually evaluates insurance risk controls by applying the above elements to the real-world practices of a particular insurer. These assessments may be applied separately for a decentralized insurance group. As we have noted in prior publications, there is no preference of risk-control functionality executed at the corporate or business-unit level.

Part of the ERM assessment process includes verification of an insurance company's ability to identify and manage its key risks. For most nonlife insurers this includes risks such as underwriting, pricing, reserving, catastrophe risk, and claims management. These risks can affect the organization in different ways. Insurer A's dominant business might include property catastrophe and commercial lines reinsurance, while insurer B might have large exposures to primary directors and officers liability, surety, and commercial casualty. Both firms might be successful despite the distinctly different risk characteristics of their respective risk portfolios. The acumen of underwriting, actuarial, and claims staffs and a company's risk-control processes need to be tailored to the insurer for success to be sustainable. During an ERM evaluation, Standard & Poor's assesses the appropriateness and effectiveness of insurance risk controls in light of the complexity characteristics of the firm's insurance portfolio. Not to be overlooked is the firm's track record of risk selection, pricing, and underwriting integrity. We take both a prospective and retrospective view during our assessment.

Expansion and growth might warrant additional or alternative resources and risk-control processes than what the firm might have used traditionally. We also look at the firm's cycle-management processes and how management considers the inherent risks of new ventures.

This report explores some of the challenges faced by nonlife insurers and highlights, in a suggested order of importance, some better practices followed throughout the industry to control the varied nonlife insurance risks. However, the outlined risks and the best practices described do not make a complete list, and this list is not meant to be prescriptive. Indeed, there are other processes that companies use to perform good risk controls. The practices explained here show the level of detail and range of information that Standard & Poor's uses in forming our ERM opinion.

This article is structured with seven sections. The first is General Risk Control. General risk control highlights risk considerations and potential controls for common risks faced by most insurers and reinsurers. This section should serve as a starting point for an insurance risk-control assessment of nonlife insurers.

Four sections follow the general risk-control section. These sections are tailored to the unique aspects of personal lines, commercial lines, reinsurance, and catastrophe risk and are risk considerations additional to those highlighted in the General Risk-control section. For example, a national personal lines writer would logically be exposed to general insurance risks, but would also be susceptible to personal lines risk considerations and (potentially) catastrophe risk.

The final two sections cover cycle-management risk and risks associated with new ventures. These two sections are common to all insurers and reinsurers and, given their level of importance, are addressed separately.

While we present here the areas of consideration in multiple stages, our analysis and any discussion and feedback are conducted fluidly, touching on all applicable risks and controls concurrently, with the degree of variation dependent on the significance of any particular risk factor.

General Risk Control

In our assessment of nonlife risk control, we review the controls in the context of six focal areas: 1) how risks are identified, 2) how risks are monitored on an ongoing basis, 3) what standards and limits help ensure risks are within tolerance, 4) how such guidelines are enforced, 5) what risk-management strategies are employed, and 6) what process is in place to learn and enhance the risk-control process.

The review process seeks to understand what practices are followed, the appropriateness of those practices, how consistently those practices are followed, and the track record of the firm.

Risk identification

Standard & Poor's examines what the firm's insurance risks are and assesses the effectiveness of the process used to identify risks. Internal sources for risk identification might include interviewing management, examining the planning process, or conducting a robust internal audit. External sources may include literature reviews, industry conferences, external audits, and regulatory and rating agency feedback. The better firms have an active process and are not overly dependent on one or two sources to identify risk. Ultimately, if risks are not properly identified, all other approaches for risk control may be undermined.

A risk-identification process is rated favorable if risks are classified in actionable terms rather than in passive terms. Windstorm is certainly a risk, but it is not actionable. If the risk is market concentration, that is actionable. Management can change their concentration; they cannot change windstorms.

There are common insurance risks faced by most property/casualty (P/C) insurers, often in varying degrees. These include:

- I Natural or man-made catastrophes.
- I Deficient pricing or underwriting.
- I Cycle management.
- I Adverse reserve development.
- I Claims volatility.
- I Misclassification of risk (information risk, agency risk).
- I Concentration and accumulation of risk.
- I External influences, such as regulators, legislatures, and competitors.
- I Media risks and reputation risks.

This list is by no means exhaustive, and insurers face these or other risks in varying degrees. For example, all P/C insurers face a degree of cycle-management risk. However, a personal auto writer may have relatively low adverse reserve development risk compared to a carrier with an extensive workers' compensation portfolio.

Models may support pricing, risk selection, catastrophe risk, and reserve development and generally help in identifying inherent risks, but the use of models creates its own risks. These risks are caused by management decisions and actions, and can be controlled by management. Standard & Poor's favorably views insurers that identify significant model risks when they exist.

Risk monitoring

Standard & Poor's assesses the risk-monitoring process and how information is used to measure and control risks. The timeliness and relevance of the information and how the risk focal points align with the risk characteristics are key considerations. We also consider the board's involvement and oversight of senior management teams alongside risk-tracking in the field.

As firms grow into different product lines and geographies, the benefits of diversification may be offset by the need for more complex systems capable of identifying a broader set of risks. Likewise, smaller firms or specialty carriers may benefit from certain knowledge advantages—expertise that other firms might not have—in their writings, but risk large concentrations. We assess how these trade-offs are considered and tracked.

Insurance risks are dynamic and will continue to grow in complexity, and the need for robust information technology and operations management grows with that complexity. Our assessment includes evaluation of the technology employed, the people responsible, the frequency of the process, and how this supports other risk-control elements.

One area of risk monitoring where Standard & Poor's has seen a particularly broad divergence of practice is in the monitoring of terms and conditions (T&Cs). Some firms maintain steadfastly that it is impossible to monitor T&Cs real-time, while others claim they are doing it. Often monitoring is limited to periodic underwriting audits or peer reviews done well after T&Cs are in place. However, a few firms are actively working to remedy situations in which their ability to track T&Cs is not on par with their ability to track rate or premium growth. Standard & Poor's strongly believes that this is an important aspect of insurance risk control, and insurers with better T&C risk-monitoring capabilities are judged as having better ERM.

Risk limits and guidelines

Having established risk limits helps to minimize surprises. Standard & Poor's wants to understand how limits are established and communicated and examines the relevance of such limits to the tolerance and risk appetite of the firm. An important consideration is the appropriateness of risk limits in light of the insurer's acumen in each area of risk taking. Stronger firms may have limits established on multiple dimensions, such as by client type, coverage, capacity, geography, etc., and adjust these limits often based on expertise and available capital, which support the overall risk tolerances of the firm.

Firms should be able to distinguish how individual limits and guidelines are more or less effective than others for the risks that they entertain. For example, prudent pricing and reserving practices for excess casualty business differ from those applied to property catastrophe business.

We also look at how limits and guidelines evolve over time. Factors such as the underwriting cycle, loss experience, and risk learning may influence that evolution.

Stronger firms are able to articulate current positions for each major insurance risk, how these positions track against limits, and forecasts of future risk levels versus plan.

Risk limit enforcement

Standard & Poor's assesses the enforcement process and the relevance to risk. Limited delegated authority, peer reviews, and internal audits are examples of limit enforcement. Stronger firms have robust and timely mechanisms with multiple checks to ensure that risk taking is aligned with risk appetite. We assess the effectiveness of such mechanisms and how they evolve within the insurance cycle.

Risk management

Standard & Poor's assesses the risk-management practices of the firm in a way that losses are largely expected and are within the firm's tolerance. Stronger firms employ several favorable practices to treat their key insurance risks, which should minimize the likelihood that losses will be outside the boundaries of the firm's appetite.

Our assessment considers the effectiveness and appropriateness of models used, reinsurance and retrocessions employed,

and other methods used to transfer or mitigate risks. Likewise, when the decision is to retain risks, we assess the reasoning behind that decision. Diversification is considered as well, with the recognition that in some instances a concentrated position of specialty writings may present certain competitive and risk-management advantages. A key consideration is the risk-selection capabilities of the firm and its ability to diversify within its strategy, even if that strategy is focused on a particular product or geography.

Risk management goes beyond internal control processes. Better firms educate and guide the insurance buyers as to loss potential so as to build awareness of best practices for all involved in the risk-transfer process. Examples include loss-control engineering services for commercial clients and reinsurers training external company underwriters in the insurance risks of new products.

Risk optimization is another consideration. We examine how capital and capacity are disseminated throughout the organization. Stronger firms have a formalized process where capacity utilization is structured to help optimize risk-adjusted returns across the organization.

Risk learning

We evaluate how risk learning interplays with overall risk control. Firms with stronger practices demonstrate a proven, diligent process that results in minimal surprises as risk control is refined over time.

Frequent and concerted review of strengths and weakness surrounding risk control is sound practice. This risk-learning process may involve several general themes that are similar for all types of insurance risks:

- I Internal and external audit feedback.
- I Review of loss expectations versus actual results.
- I Researching and implementing the latest industry best practices.
- I Training and development of both internal staff and external clients.
- I Refining risk-tolerance levels to reflect strengths and weaknesses uncovered in the risk-learning process.

Regular tweaks and enhancements may better position these firms for improved risk taking in the future. This may include testing and updating assumptions and parameters, data, or the models used to reflect current understanding. Sound practice would also recognize and respond to the limitations and usefulness of risk-management tools.

Some other common considerations in the risk-learning process that Standard & Poor's considers include, but are not limited to, the following:

- I Has the firm followed industry best practices in the risk-control process? What can be enhanced?
- I Did the modeled risk aggregations and correlations provide an acceptable range of output?
- I Where deficiencies exist, what is the process to identify and remedy problem areas?
- I How have accident-year results tracked over time relative to expectations? What are the reasons for significant deviations?
- I How effective was the insurer's pricing during changing market cycles?
- I Was the risk-classification process and expectation robust? For those risks misclassified, where did the breakdowns occur? What needs to be changed going forward?

Table 1 outlines examples of favorable indicators of strong general insurance risk control that are in practice today, as well as some less favorable indicators.

Table 1

Evaluation Of Nonlife General Risk Control

	More Favorable Indicators	Less Favorable Indicators
Risk Identification	There is a formal process to respond to new or unusual risks; uses internal and external information to identify risks; risk types are placed in a heat map, and a proactive process to update risks exists; there is an extensive internal index of risk types with which to catalogue submissions; identifies risk in an actionable framework; looks at multiple possible risk types and risk drivers; validates risk list broadly, both internally and externally; takes forward- and backward-looking	New risks are typically identified only after a loss occurs; looks only at the past when identifying risks; risks are identified as broad categories only; identifies most risks as nonactionable things that happen to the company; management is focused on one or two key risk indicators; uses only internal view

views when identifying risks.

of risks; identifies only risks that are concerns of regulators or rating agencies; forgets the past when identifying risks.

Risk Monitoring	Risk reports are produced regularly and presented to top management and appropriate field management; risk reports provide information in time to make decisions; robust cycle-management process, including active tracking of market rates and drifts in terms and conditions; data analysis includes both historical internal results and those general to the industry. Such controls may be dependent on having: Multiple views of how risks accumulate, correlate, and aggregate, such as by geography, product, layer/attachment, contract type, construction type, or peril; use of multiple metrics to measure such exposures as PMLs, VaR, market share, gross/net, and deterministic and stochastic outputs; often several methods with conservative adjustments are used to produce these outputs; risk reports that clearly outline exposures versus gross and net limits.	Risk-monitoring efforts are limited to what's expected by regulators, auditors, and rating agencies; risk reports take extensive time to produce and are often out of date; one or two reported numbers drive all decisions; reports are always provided in arrears and have limited ability to support proactive decisions; reports are not clear; they require significant analysis to be useable; limited cycle-management process exists, with only one or two variables used to measure cycle conditions.
Risk Limits and Standards	Guidelines are readily accessible and frequently updated via intranet application; these outline appropriate underwriting guidelines, pricing processes, claims management processes, and the use of reserving protocols; limits and guidelines are developed jointly among actuarial, claims, underwriting, and finance; guidelines and results are periodically measured against third-party opinion; the firm is reluctant to release reserves quickly following favorable accident-year development; rigorous process to test and validate loss expectations; multiple methods are applied to develop reserve estimates; formal guidelines exist as to when applicable reinsurers or retrocession carriers should be informed for claims support decisions or actions; there is a formal process to respond to new or unusual risks.	Guidelines for micro-level risk concerns such as policy type or customer are not aligned with aggregate tolerance levels; guidelines are updated every few years or only after a significant event; risk-takers rely on a limited number of exposure variables for pricing and decision making; guidelines are disseminated largely via ad-hoc e-mails and memoranda; no central repository exists; reserves are traditionally released quickly following favorable development pattern, without independent review; inconsistent process to respond to new or unusual risks.
Risk Limit Enforcement	Clear accountability exists when limits are breached, with escalation procedures; significant risks or decisions require multiple internal sign-offs at defined levels; compensation tied to risk limits; frequent internal and external audit process, with results tied to compensation; peer review process to assess significant risks and clear definition of "significant"; actions are outlined to address limit breaches and are consistently followed.	All limits are soft and are often adjusted when breaches are imminent; limits are relaxed when current profits are strong; compensation among field underwriting staff largely linked to top-line growth and new business production; no procedures exist for when breaches occur; each situation is judged on its own merits; internal audits of underwriting, reserving, and claims management are done infrequently.
Risk Management	There is a clear and consistent strategy for risk transfer (reinsurance, Cat Bonds, ILWs, etc.); several checks exist to assure data integrity, and clear responsibilities exist to assure accountability of information; central system to interface claims, actuarial, underwriting, and finance exists. Strategies or initiatives in one function flow through to and are understood by other functions; there is a centralized process for assessing terms and conditions of reinsurance and retrocession placements to assure consistency and fluidity of coverage and financial integrity of counterparties; regular dialogue and feedback loops among claims, actuarial, and underwriting is clearly evident; exit strategies or capacity constraints are predetermined in case market conditions deteriorate; diversification strategies exist to balance the risk profile; strategy is in place to respond to adverse cycle conditions.	The use of risk-transfer vehicles happens ad-hoc, without consideration of other risks that such vehicles may present; communication among claims, actuaries, and underwriters occurs only after a significant loss event; risk-management actions are often reactive, and untimely relative to peers; assessment of reinsurance needs and reinsurance placements are largely decentralized and redundant; decisions to retain risks are inconsistent with risk appetite; no strategy exists to respond to adverse cycle conditions.
Risk Learning	Pricing models and contract structures are frequently updated to reflect new research, findings, or market conditions; frequent and required training for insurance professionals regardless of position or experience level; white papers outlining emerging risks and their potential effect on insurance risks are produced regularly and distributed to all insurance professionals; constant updating to best practices; post-mortem analysis after major Cat events results in timely changes to practices and plans; internal audit and claims analysis used extensively to update underwriting guidelines and processes.	Pricing models are updated infrequently or only after an industry-wide change; training is infrequent or is targeted only to less experienced staff; detailed analysis is performed primarily when an explanation is needed for unexpectedly large loss; little feedback offered from claims or reserving to underwriting or pricing; underwriting guideline updates do not regularly reflect claims and internal audit feedback.

Personal Lines Insurance Risk Control

Standard & Poor's defines personal lines insurance as the group of offerings traditionally written to address common risks that persons face by operating vehicles and those risks associated with renting or owning a home. These risks are usually short tail in nature. Moreover, coverages are typically more homogeneous than commercial lines cover. Risk for any one policy is low, but exposure management is essential at the portfolio level.

As part of our assessment of nonlife insurance risk control, Standard & Poor's might examine the effectiveness and appropriateness of controls surrounding personal lines insurance. Some insurers have little or no risk in this area, while

others might have extensive writings. The relevance and significance of the risk dictates the level of focus during our evaluation.

Insurers that have significant personal lines operations undergo an assessment of their approach to general insurance risks. As an extension to that analysis, we inform these firms of their inherent personal lines risks and of the related controls for such risks. Our analysis addresses general insurance risks and common risk factors inherent in personal lines insurance that differ in many ways from other insurance lines. Those might include and might not be limited to the following broad categories:

- I Systematic risks. Management of pricing, underwriting, and claims is often automated to some degree. Models and procedure may present pervasive risks throughout the risk portfolio.
- I Risk interaction. Different personal lines products may correlate with one another or with other insurance products in particular ways.
- I Distribution demographics. Risk characteristics of policies may differ depending on directly written or agency-written placements and those sourced through other channels.
- I Claims management. Personal lines claims are typically frequency driven. Necessary controls surrounding timeliness and quality of settlement may differ from those applicable to commercial lines.

Table 2 outlines examples of more favorable indicators of strong personal insurance risk controls that are applied by many insurers today, as well as examples of less favorable indicators.

Table 2

Evaluation Of Personal Lines Risk Control

	More Favorable Indicators	Less Favorable Indicators
Risk Identification	Considers nonpolicy-specific influences such as regulation, legal, cycles, competitors, and environment; active claims and legal efforts to understand and influence local regulatory and legislative concerns.	No process exists to assure consistencies with reported exposures.
Risk Monitoring	Real-time exposure reports, including views of how risks accumulate, correlate, and aggregate, such as by geography, product, layer/attachment, contract type or peril; active tracking of policyholder behavior, with links to potential risk concerns.	Exposure monitoring is largely done in arrears, with lags of up to a month or more.
Risk Limits and Standards	Guidelines are formally documented, readily accessible, and frequently updated via intranet application; multidimensional rating process is used to price most risks; on-site claims adjustment within 24 hours of reported losses; proactive claims management process where adjusters engage policyholders following a significant event and prior to claims being filed.	Guidelines for micro-level risk concerns, such as for each product, are not inline with aggregate tolerance levels; rating is primarily dependent on manual work-ups by an underwriter; the same underwriting approach and system is applied regardless of distribution method (e.g., agency vs. Internet).
Risk Limit Enforcement	Pricing systems are randomly checked for integrity of outputs; pricing and projected losses are periodically checked against actual results.	No process exists to validate model outputs; pricing and projected losses are rarely checked against actual results.
Risk Management	Minimal usage of third-party administrators; active process to educate policyholders of methods of controlling risks; considers nonpolicy-specific influences such as regulation, legal, cycles, competitors, environment.	Communication with policyholders is largely nonexistent; policyholder turnover is high relative to the industry; heavy reliance on third-party administrators.
Risk Learning	Pricing models and contract structures are frequently updated to reflect new research, findings, or market conditions.	Limited feedback from internal audit; limited training of risk professionals.

Commercial Insurance Risk Control

Standard & Poor's defines commercial insurance as the group of offerings traditionally written to address the various risks that businesses and organizations face when producing products or providing services. These business risks are typically not financial and may include the risk of injury or damages to employees, customers, suppliers, or infrastructure.

As part of our assessment of nonlife insurance risk control, Standard & Poor's might examine the effectiveness and appropriateness of controls surrounding commercial lines insurance. Some insurers have little or no risk in this area, while others might have extensive writings. The relevance and significance of the risk dictates the level of focus during our evaluation.

Insurers that have significant commercial lines operations undergo an assessment of their approach to general insurance risks. As an extension to that analysis, we inform these firms of their inherent commercial lines risks and of the related

controls for such risks. Our analysis addresses general insurance risks and common risk factors inherent in commercial lines insurance that differ in many ways from other insurance lines. Those might include and might not be limited to the following broad categories:

- I Length of liabilities. Long-tail lines often have different risk considerations compared with short-tail lines (e.g., reserves, pricing adequacy). Moreover, these considerations often extend beyond insurance risk (e.g., asset/liability management (ALM) risk).
- I Frequency and severity. Some products, such as excess casualty, are prone to severity exposures, and commercial package policies might have both severity and frequency exposures.
- I Customer demographics. Portfolio considerations, such as average account size, industry, or geography, might present different risk considerations that demand particular risk controls.
- I Risk interaction. Different commercial lines products might correlate with one another or with noncommercial insurance products in ways that warrant specific risk controls.
- I Claims management. Commercial lines coverages are often specialized, and related claims can be extremely large. The specialty and severity features of commercial coverage cause claims-management approaches to a product liability loss, for example, to differ from an owner's, landlord's, and tenant's policy loss.

A firm can execute different methods of practice to ensure that risks such as those listed above are within its risk appetite. We examine the appropriateness of those practices, the consistency in how they are applied, and the resulting losses relative to the firm's tolerance.

In some cases, the lines of distinction between personal-lines products and commercial-lines products are blurring. Multivariate pricing is becoming more prevalent in personal lines and is starting to be applied to standard commercial policies. Likewise, coverages that have traditionally been limited to commercial-lines products are being extended to personal-lines writings. As these lines continue to blur, so should the applicable risk controls.

Table 3 outlines examples of more favorable indicators of strong commercial insurance risk control that are applied by some insurers today, and also lists some less favorable indicators.

Table 3

Evaluation Of Commercial Insurance Risk Control

	More Favorable Indicators	Less Favorable Indicators
Risk Identification	Considers nonpolicy-specific influences such as regulation, legal, cycles, competitors, and environment; active efforts by claims and legal staffs to understand and influence local regulatory and legislative concerns.	Loss-control engineering is rarely used, or when used is reliant on an agent or a broker's report.
Risk Monitoring	Uses real-time exposure reports, including views of how risks accumulate, correlate, and aggregate, such as by geography, product, layer/ attachment, contract type, or peril; systems allow for detailed exposure analysis, such as tracking by policy type, endorsement, industry class, rate, and underwriter.	Risk reports are limited to information based primarily on lagging data of a quarter or more in the past; limited ability to look at micro-level details for most risk variables; cycle management is limited to rate versus exposure trend analysis.
Risk Limits and Standards	Rates and the rating process are updated regularly with a robust process to measure and link underlying costs to filed rates; guidelines are readily accessible and frequently updated via intranet application; guidelines outline required underwriting information, pricing processes to use, and internal resources for both existing and emerging risks; minimal authority is granted to managing general agents; claims guidelines are tailored to product and coverage; claims forms are reviewed regularly to assure clarity and appropriateness.	Rating plans and the rating process used are dated, relative to the industry; ISO-based rating and exposure analysis drives all insurance decisions; quotes or binders are often done subject to receipt of information after the fact; claims are managed under a general approach regardless if short- or long-tail in nature.
Risk Limit Enforcement	Adherence to and proper execution of standards and guidelines are directly linked to compensation and recognition; checkpoints exist along the underwriting assessment and pricing process, and are linked to authority levels; claims processing procedures include maximum allowable open days for particular claims; peer review process to assess significant risks; checks are in place to assure pricing consistency; technical pricing is aligned well to actual booked pricing across the portfolio.	Authority is granted largely based on title; no system checks exist to prevent unauthorized quotes or binders; audits occur every two-to-three years, with timing left to management discretion; results not consistently reported to top management; deviations from manual or technical price are frequently applied.
Risk Management	Minimal usage of third-party administrators, with an extensive and comprehensive approval process when they are used (see also reinsurance risk control); loss-control engineers regularly advise insurance buyers of the latest quality control and safety standards.	Facultative reinsurance placements are done in the field without home office approval or tracking; the firm has frequent adverse and favorable development of reserves.
Risk Learning	Regular training and testing occur to assure insurance staff is up to date	Insurance contracts and pricing structures are

in knowledge and awareness; pricing models and contract structures are frequently updated to reflect new research, findings, or market conditions; insurance professionals are actively engaged with reinsurers and specialty carriers when new products are considered.

dated and require several endorsements to bring to current standards; the audit process is limited to compliance exercises and evaluation.

Reinsurance Risk Control

Standard & Poor's defines reinsurance risk as the group of insurance offerings traditionally written to indemnify other insurance companies and reinsurers. Reinsurance is structured in various ways, such as treaty, facultative, excess of loss, and quota share.

As part of our assessment of nonlife insurance risk control, Standard & Poor's might examine the effectiveness and appropriateness of controls surrounding reinsurance writings. In addition to traditional reinsurers, some insurers have risk in this area. As with the other sections, the relevance and significance of the risk dictates the level of focus during our evaluation.

Examination of a reinsurer's risk controls includes an assessment of its approach to general insurance risks. As an extension to that analysis, these firms are informed of their inherent reinsurance risks and of the related controls for such risks. Our analysis addresses general insurance risks and common risk factors inherent in the various types of reinsurance, which in many ways differs from other insurance lines. Those might include and might not be limited to the following broad categories:

- I Length of liabilities. Long-tail lines often have different risk considerations compared to short-tail lines (e.g., reserves, pricing adequacy). Moreover, these considerations often extend beyond insurance risk (e.g., ALM risk).
- I Treaty versus facultative. Treaty programs usually don't afford the per-risk analysis of facultative writings. However, treaty underwriters may be more engaged with the primary carriers insurance risk-control process.
- I Excess of loss versus quota share. Loss ratio stabilization is a common reason for entering into excess of loss treaties. With quota share arrangements, reinsurer's and primary carrier's risk-sharing is more aligned. Such structural differences demand specific risk analytics.
- I Catastrophe versus noncatastrophe. Programs structured to meet working layers of expected losses require different pricing, underwriting, and reserving approaches relative to programs structured for catastrophes.
- I Reinsurance function. Capacity expansion, surplus relief, and catastrophe protection are common reasons cedents will use reinsurance. Reinsurance usage may be an extension of a buyer's capital management process. These varying intents may require different risk controls.
- I Retrocessions. Retrocession is reviewed similarly to traditional reinsurance, but considering the additional data quality demands, modeling complexity, and potential volatility concerns, it creates the need for particular risk controls to mitigate the potentially higher risk profile.

There are different methods of practice that a reinsurer can execute to ensure that any risks, such as those listed above, are within the firm's risk appetite. We look at the appropriateness of those practices, the consistency with which they are applied, and the resulting losses relative to the firm's tolerance.

Table 4 outlines examples of more favorable indicators of strong reinsurance risk control that are applied by some reinsurers today and examples of less favorable indicators.

Table 4

Evaluation Of Nonlife Reinsurance Risk Control

	More Favorable Indicators	Less Favorable Indicators
Risk Identification	A robust process exists to screen submissions for inconsistencies.	No process exists to screen submissions for inconsistencies.
Risk Monitoring	Ceding-company audits for exposure confirmation have formal schedules; capacity utilization is actively tracked and measured against capital levels; capacity is allocated based on a formal and comprehensive process; projected ultimate loss reports can be developed within days of a significant event.	Ceding-company exposure audits typically occur only at policy inception; typically, it takes several weeks or more to understand the ultimate impact of a stress event; capacity utilization is not actively tracked.
Risk Limits and Standards	Guidelines outline required underwriting information, including required ceding company underwriting experience and claims management standards, required ceding company pricing standards and modeling capabilities, minimum premium levels, and target industry classes; underwriting and pricing systems for both treaty and facultative covers use common platforms and	All limits are soft and broad. Guidelines vary significantly by region for similar products; limits are extremely broad or extremely tight, and as a result, less effective; reserve levels are developed using one process, which is rarely reviewed by external parties beyond a compliance exercise; the level of actuarial

	are managed centrally for the organization; reserving practices are frequently updated; large actuarial staff; robust interaction with ceding company claims, actuarial, and underwriting staffs.	support seems misaligned to the level of written premium; infrequent interaction with ceding company claims, actuarial, and underwriting staffs.
Risk Limit Enforcement	Frequent audits of ceding company's underwriting, reserving, and claims management practices.	Ceding company operations audits typically occur at policy inception only.
Risk Management	There is a comprehensive process to understand known and potential correlations throughout the reinsurer's risk portfolio; there is a robust arbitration process that includes dedicated and specialty legal and claims staff; multidiscipline discussions of current and evolving risks are commonplace, particularly for larger treaties. This includes internal discussions and training of customers.	Minimal dialogue between facultative and treaty underwriting groups; alternative loss transfer mechanisms never considered; infrequent communication with insurer's underwriting and pricing staffs.
Risk Learning	Processes and procedures are actively updated to reflect industry best practices; regular training is required.	Processes and procedures updates lag the industry; ongoing training is voluntary.

Catastrophe Insurance Risk Control

Standard & Poor's defines catastrophic (Cat) risk as the group of insurance offerings traditionally written to address extreme events where resulting damages or injuries are vast and disastrous. Events can be naturally made, such as tornadoes, floods, or earthquakes, or they can be man-made, such as an accidental explosion or an act of terrorism. These events are typically infrequent in occurrence, but significant in loss potential. Moreover, writers of commercial lines, personal lines, and reinsurance lines may all face catastrophe risks within their insurance portfolio.

In addition to our assessment of general insurance risk control, Standard & Poor's examines the effectiveness and appropriateness of controls surrounding Cat risk. The extent of this analysis depends on the applicability of this risk to the company's risk portfolio.

Our analysis explores controls for common risk factors inherent with Cat risk writers. Broad areas of consideration may include:

- I Risk correlations. Insurance risks often have inherent correlation risks. These correlations tend to be even more pronounced during extreme events.
- I Modeling risk. Quantifying exposures and potential losses related to Cat events is an imperfect science, and even the best modeling efforts are susceptible to errors, misuse, or abuse.

There are different methods of practice that a reinsurer can execute to ensure that risks are within the firm's risk appetite. We examine the appropriateness of those practices, the consistency in how they are applied, and the resulting losses relative to the firm's tolerance.

Table 5 outlines examples of more favorable and less favorable indicators of strong catastrophic risk control that are applied by some insurers and reinsurers today, as well as some less favorable indicators.

Table 5

Evaluation Of Nonlife Catastrophe Risk Control

	More Favorable Indicators	Less Favorable Indicators
Risk Identification	A formal process exists to audit exposures and potential Cat risk; a formal environmental scanning process exists to assess emerging risks and their potential for large-scale impacts.	No consistently applied process exists to identify and distinguish Cat risks; ineffective process or capability to contemplate emerging or evolving risks.
Risk Monitoring	Process and outputs are occasionally vetted through third parties; both internally and externally developed models are used, and often different models are used to validate output ranges; stress tests consider gross and net limits; modeling contemplates impact of demand surge, storm surge, or fire following on PMLs (even if excluded).	Scenarios or considerations reflecting excluded losses are not examined; exposures are tracked through a few deterministic scenarios; reliance on one model's output for all risk considerations.
Risk Limits and Standards	Multiple pricing structures and models are used for complex risks; both deterministic and stochastic models are used in the risk-assessment process.	The firm uses one model and one modeling approach that uses dated assumptions relative to the industry.
Risk Limit Enforcement	Cat capacity is restricted to areas where underwriting and pricing information is most robust	Cat capacity allocation is rarely discussed at the board level.
Risk Management	Engaged with local emergency response groups for areas with highest concentrations; catastrophe reinsurance and risk-transfer vehicles are used consistently and in consideration of company tolerance; central	Limited dialogue with local emergency response units; ad-hoc use of risk-transfer mechanisms; no clear strategy exists for

oversight of risk-transfer execution.

reinsurance placements, with decisions left to local business units.

Risk Learning Active research into evolving construction practices and the ultimate impact of extreme event damages; modeling updates are frequent and not dependent on vendor updates.

Learning process is often reactive and limited to information provided by third parties; model updates limited to vendor-initiated updates.

Cycle Management

Effective management of insurance risk throughout the underwriting cycle is perhaps the single greatest challenge of nonlife insurers. In a soft cycle, perspectives of good versus bad risks and sound risk taking may be more easily clouded by the influence of agents and brokers, customers, and investors. Stronger firms that are better able to manage through the cycle have proven mechanisms and processes in place that assure disciplined and stable pricing and terms over the course of the cycle. These mechanisms usually support proactive cycle-management action plans.

Strategies surrounding risk selection, terms and conditions, reserving and claims management, capital management, and investment returns are often adjusted as market conditions evolve. A significant part of Standard & Poor's assessment of risk control includes reviewing the firm's cycle-management plans, the effectiveness of the execution, and the insurer's ability to sustain targeted results at each point along the cycle.

There are broad themes upon which we look to gain perspective. Areas of consideration that serve as likely focal points for discussions and analysis surrounding an insurer's cycle management include the following:

Measuring and monitoring the cycle

- I Reporting. Methods used to track trends with market rates and terms, including hit ratios, loss ratios, submission counts, renewal retentions, rate-per-exposure trends, and declination rates.
- I Research. Sources and uses of information to gauge competitor behaviors.

Cycle-management execution

- I Contingency planning. The extent to which reference points and thresholds are used in the planning cycle to identify when to curb or extend writings, and how these triggering points are determined.
- I Implementation. The expected resource reallocation process, including movement of people, technology, and capital throughout the cycle. Practices used to maintain distributor relationships through difficult market conditions.

Standards and guidelines

- I Underwriting decisions. Controls used to track and enforce appropriate risk selection may be adjusted as the cycle evolves. We examine how deviations from standard product structures and terms are assessed and tracked for new business and renewals.
- I Pricing decisions. Procedures used to develop technical pricing and the process to assess and track deviations from technical prices. Standards for inclusion of "free" coverages and the systems for enforcing those standards. Standards for granting multiyear guarantees of prices and the systems for enforcing those standards.
- I Claims management. Processes in place to monitor claims trends and loss reserves during the cycle and how this supports and is linked to underwriting and reserving. Timeliness of feedback loop between claims, actuarial, and underwriting and the plans to tighten that loop if an area is softening.
- I Exceptions. Authority delegation and retraction process as the cycle evolves. Review of the escalation process for deviations from standards, limits, or preferred risks.

Compensation and incentives

- I Internal. The extent to which top-line growth or new business production is linked to financial incentives for underwriting staff. How incentives change as market conditions change. The extent to which there is a healthy exchange between the marketing staff and the risk-control staff.
- I External. Review of primary and alternative distribution channels and the related direct distribution costs, such as commissions or profit-sharing arrangements. We also consider indirect costs, such as the effect of packaging low-profit products to secure high-profit products.

Table 6 outlines examples of more favorable indicators of sound cycle management and examples of less favorable indicators of cycle management practiced in the nonlife insurance sector.

Table 6

Evaluation Of Insurance Cycle Management

	More Favorable Indicators	Less Favorable Indicators
Monitoring the Cycle	Current rates are measured against technical price under current and expected loss costs; real-time views on loss ratios, hit ratios, submission rates, quote rates, and declination rates, and trends seen in each; active research process via multiple media outlets and information sources to gauge market pricing actions and competitor behaviors.	Current rates are measured against rates at the prior soft cycle for appropriateness; business flow is tracked infrequently and not shared among business units; no targets exist for such business flow metrics as loss ratios, hit ratios, submissions, and percent quoted or declined; legal and regulatory influences are rarely considered or are not fully understood until well after a significant change in law or case ruling.
Cycle Management Execution	Planning cycle reflects flat-to-negative growth for softly priced lines; bottom-line market share outweighs top-line market share; the insurer's expected losses are actively tracked against industry-expected losses; there are predetermined floors for minimum adequate pricing levels; as floors are reached, actions are triggered to curb writings and reallocate capital and capacity; alternative resource utilization plans are in place and triggered when product pricing becomes unfavorable; actions to curb writings reflect legal, regulatory, and infrastructure implications.	Writings are maintained to cover expense costs; benefits of market share outweigh pricing concerns; losses relative to the industry are usually tracked ex-post; in-place processes for responding to cycle changes are largely reactionary, and regulations may prevent the preferred action; no contingency plans are developed to respond to cycle variations.
Standards and Guidelines	Authority levels are restructured as cycles change or tolerance levels change; minimum rates and terms are hard-coded into quote and binding systems and are adjusted by senior management as the cycle evolves; pricing trends are linked directly to the reserve development process where cycle conditions alter reserving assumptions; a conservative approach is taken to reserve releases of favorable years.	Lowering retentions, with little effect on premium or rate; authority levels are reduced only when cycles harden; extensive use of multiyear policies; expanding capacity or limits to secure additional premiums in order to offset rate reductions; structural changes to sustain premium levels, such as moving to occurrence from traditional claims-made policies, extensive guaranteed cost provisions for large long-tail writings, replacement cost versus actual cash value provisions.
Compensation and Incentives	Adherence to underwriting fundamentals and audit results drive rewards and compensation of underwriting staff and business unit management; distributor compensation is linked to top- and bottom-line growth; distributor compensation is linked to the risk profile characteristics of submissions.	Top-line growth, new business production, and renewal retention goals are significant drivers of underwriter performance reviews; bonuses of claims and actuarial staff linked to firm growth; producer compensation has no linkage to portfolio loss performance; quid pro quo arrangements with producers by writing less desired business to secure or retain highly desired business.

New Venture Risk

New ventures include the launch of a new product, entering into a new market or territory, starting a joint venture, and even, sometimes, a divestiture. The ERM process is highly important in many of these situations.

Standard & Poor's views favorably the use of a formal new venture approval process that documents the due diligence and implementation steps to be applied to all new ventures. This is highly important, primarily because there are often no existing risk-control processes or measures that apply to a completely new venture. Moreover, Standard & Poor's considers the new venture track record of the firm. Those firms that have a clearly articulated strategy and risk-control process surrounding past successfully executed new ventures are viewed favorably.

These processes will sometimes specify standards for many of the types of issues mentioned here, along with standards for review of the new venture proposal by managers of the various departments and functions affected by the new venture. The items below focus solely on the risk and risk-management aspects of a new venture approval and implementation process.

In the due diligence phase of the new venture process, Standard & Poor's looks for a robust process for identifying all the potential risks of the new venture. If the new venture is significantly outside the experience of the firm, it may be necessary for the firm to acquire outside expertise to assist with that analysis. If the firm has a robust internal ERM framework, a major part of this risk-identification process might be to identify which of the risks that have already been identified within the firm are present in the new venture.

For property or casualty products or lines of business, we thoroughly analyze all coverages offered under the policy and make a clear determination on how losses can occur and what the associated costs of these losses are. These include both direct and indirect costs, such as legal costs. Policy design in P/C is also particularly relevant, as the risk for a broad interpretation of coverage is higher than for life products. This is particularly so in all-events policies, where only certain risks are explicitly excluded, or with an entirely new product offering where intended coverages and policy language have not been tested against unintended claims.

After identifying the risks, Standard & Poor's determines whether the firm has made plans to monitor all the risks. The monitoring might be in terms of direct measures of risk, where they are able to directly measure risk because of existing processes for risk assessment, or it might be in terms of less direct key risk indicators. Management must decide when the monitoring of these risks will be integrated into existing risk-monitoring reports. In some cases, management decides to keep separate reports on a new venture for a period of time; in others, the new venture is immediately integrated into existing reports. In situations where a specific risk-assessment process is indicated, the firm may decide that the new venture requires the development or acquisition of additional risk-assessment tools.

Sound practices in new-venture risk management include a methodical assessment of pricing adequacy. Complex benefits structures and open-wording policies often increase the risks of mispricing, as it can be difficult to correctly evaluate embedded options and risks. Pricing should be done by modeling all identified risks, using methodologies that vary from simple stress test assumptions to stochastic scenarios, depending on the complexity of the risk and the available data. The pricing process often includes an assessment of the capital requirement for the new products. This allows the risk-adjusted profitability of a product to be assessed, which should be one of the first considerations when launching a new product or entering a new business line.

Once the risks have been identified and methods for monitoring them have been determined, some firms assess the potential effect of the new venture on the risk profile of the firm. The firm is viewed favorably if it is able to articulate the expected changes to its risk profile, as well as any ways that the new venture creates additional risks that require inclusion in existing risk-control processes or the development of new risk-control processes. Best practice would be for the firm to have in place a view of the point in the implementation of the new venture when such actions would be triggered. Once the venture has reached a stage where the risks are large enough to be material within the firm's risk-control framework, Standard & Poor's would expect to find a full limit system ready for implementation, consistent with the other risk-limit systems of the firm. This would include a full set of governance processes for limit enforcement and for actions following breaches of limits. The likely risk-management tools to be used to keep the risks within the limits are usually identified in advance.

In addition, Standard & Poor's checks to see if the firm is developing a complete link between existing risk-management guidelines and the risks of the new venture, identifying where those guidelines are insufficient and filling those holes.

Before the decision is made to implement the new venture, many firms have a formal sign-off process, in which senior officers are called upon to agree that the venture meets firm standards and guidelines, including those for risks, reward for any risks that will be retained, the ability to cover within the revenues of the venture the costs of risk-management and risk-monitoring activities, and the likelihood that risks can be maintained within the firm's risk tolerances using the proposed methods.

Governance aspects are of particular relevance in the new-venture process, particularly for large insurance groups. Sound practices may include:

- I Full involvement of local top management, including product, technical, investment, and local risk managers, with the designation of an individual responsible for the risk management of the product.
- I An appropriate standardized decision-making process, which includes all aspects illustrated above and allows senior management/the executive committee to assess all consequences of launching the new product before giving the final sign-off.
- I For large insurance groups, once the local approval process is completed, the new venture report is submitted to the company's group risk-management section.
- I Group risk management gives final approval on the new venture's risk/return profile; the valuation framework used for pricing (which should be consistent throughout the group); the risk-mitigation techniques to be used (particularly as far as reinsurance is concerned); and local risk-management activities.
- I Group risk management addresses such group risk considerations as overall risk tolerance, accumulation, concentration, and diversification. Group risk management may have a veto if, when accumulated at group level, the new venture represents an unacceptable level of risk.

Standard & Poor's would want to understand how the firm expects to monitor and manage the implementation risk. During the implementation process, the firm is expected to be alert for signs that any of the assessments of risk made during the due diligence phase are materially in error. In addition, Standard & Poor's finds it favorable whenever an insurer is alert to the possibility of unexpected risk when a new venture is much more successful than expected.

Analytic services provided by Standard & Poor's Ratings Services (Ratings Services) are the result of separate activities designed to preserve the independence and objectivity of ratings opinions. The credit ratings and observations contained herein are solely statements

of opinion and not statements of fact or recommendations to purchase, hold, or sell any securities or make any other investment decisions. Accordingly, any user of the information contained herein should not rely on any credit rating or other opinion contained herein in making any investment decision. Ratings are based on information received by Ratings Services. Other divisions of Standard & Poor's may have information that is not available to Ratings Services. Standard & Poor's has established policies and procedures to maintain the confidentiality of non-public information received during the ratings process.

Ratings Services receives compensation for its ratings. Such compensation is normally paid either by the issuers of such securities or third parties participating in marketing the securities. While Standard & Poor's reserves the right to disseminate the rating, it receives no payment for doing so, except for subscriptions to its publications. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

Any Passwords/user IDs issued by S&P to users are single user-dedicated and may ONLY be used by the individual to whom they have been assigned. No sharing of passwords/user IDs and no simultaneous access via the same password/user ID is permitted. To reprint, translate, or use the data or information other than as provided herein, contact Client Services, 55 Water Street, New York, NY 10041; (1) 212.438.9823 or by e-mail to: research_request@standardandpoors.com.

[Privacy Notice](#)

Copyright © 2008 Standard & Poor's, a division of The McGraw-Hill Companies. All Rights Reserved.