



Risk Based Supervision

Tony Randle

PRIMER SERIES ON INSURANCE
ISSUE 14, DECEMBER 2009

NON-BANK FINANCIAL
INSTITUTIONS GROUP

GLOBAL CAPITAL MARKETS
DEVELOPMENT DEPARTMENT

FINANCIAL AND PRIVATE SECTOR
DEVELOPMENT VICE PRESIDENCY



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THIS ISSUE

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The Primer Series on Insurance provides a summary overview of how the insurance industry works, the main challenges of supervision, and key product areas. The series is intended for policymakers, governmental officials, and financial sector generalists who are involved with the insurance sector. The monthly primer series, launched in February 2009 by the World Bank's Insurance Program, is written in a straightforward, non-technical style to share concepts and lessons about insurance with a broad community of non-specialists.

The Non-Bank Financial Institutions Group in the Global Capital Markets Development Department aims to promote the healthy development of insurance, housing finance, and pension markets, and to expand access to a broad spectrum of financial services among the poor. These markets provide opportunities for household investment and long-term savings, and can buffer the poor against the risks of sickness, loss of breadwinner, catastrophic events, and other misfortunes.

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Insurer Governance and Risk Management

Tony Randle

Risk based supervision for insurance supervisors

The role of supervisory authorities undertaking prudential supervision is to promote the maintenance of efficient, fair, safe and stable insurance markets for the benefit and protection of policyholders¹. An effective supervisory authority is able to require an insurer to take timely preventive and corrective measures if the insurer fails to operate in a manner that is consistent with sound business practices or regulatory requirements.

Traditionally, authorities have performed this role by way of compliance based supervision. Under this style of supervision, insurers must comply with a set of prudential rules generally written into the law or the subordinate legislation. The role of the supervisory authority is to ensure that insurers do, in fact, comply with these rules. In recent years, supervision has been evolving and moving from a style that is compliance based to one that is risk based. This progression has also been a feature of the activities of bank supervision and pension supervision.

A. What is risk based supervision?

Risk is the exposure to loss or injury. There is a degree of risk attached to every activity which people undertake. Risk based supervision (RBS) requires supervisors to review the manner in which insurers are identifying and controlling risks. It requires supervisors to assess system and

1 IAIS Insurance core principles (2003)

individual firm risk and to respond with the supervisor's own processes and interventions in line with the assessment. This, in turn, allows supervisors to allocate resources to the insurers with the greatest risk and areas within individual insurers that are high risk. RBS involves supervisors assessing four factors: inherent risk, controls, residual risk and additional support. A simple example of a pedestrian crossing the road explains these concepts.

Inherent risk is the risk of an adverse event occurring. The inherent risk may not be the same for identical activities undertaken in different circumstances. In the example, one of the inherent risks for the pedestrian is the risk of being hit by a car. The inherent risk would be different if the pedestrian crossed a major road compared with a minor road, crossed during a rain storm or crossed at peak hour rather than some other time. Insurers face a large number of risks that are of concern to the supervisor and which will be explored further on.

Controls are those actions that are put in place to lessen the probability, the severity or both of inherent risk. Controls to mitigate the risk of being hit by a car may be to cross only with green lights at intersections where there are traffic lights or to look both ways before crossing the road. The degree to which these controls mitigate the risk is different for each control.

Residual risk is the risk of an adverse event occurring even though the controls are in place and are working or being applied correctly. A very cautious pedestrian who only crosses at green lights may still be hit by a car, because the car itself went through a red light.

Additional support refers to any additional factor that may be in place to deal with the outcome of an event occurring and which would lessen the overall impact of that event. The unfortunate pedestrian in the example may have accident insurance in place which will lessen the financial impact of the event if it occurs. While the pedestrian's medical bills will be the same, the economic loss suffered by the pedestrian is lessened if the insurer pays the medical bills and provides income support while the person is recovering.

There is one further important concept that has to be considered in relation to risks and controls. Each risk has both a *probability* of the event occurring and a *severity* if it does occur. RBS considers both the probability and the severity in making the assessment. Looking at both is critical to an assessment of controls—controls can mitigate the probability of an event occurring (for example crossing on green) or the severity of the event occurring (for example wearing protective clothing may lessen the impact of being hit by a car), but generally individual controls do not mitigate both the probability and severity in the same way or to the same extent.

In summary, a risk based supervision approach assesses the probability and severity of the material risks to which insurers are subject; it assesses the effectiveness of the controls in reducing the probability of risk events occurring or the severity if they do occur. It further considers what the insurer has in place to deal with an event occurring even though the controls are in place and are functioning properly. The *risk of failure* can be approximated as the combination of all the risks (being the product of the probability of an event happening and the severity if that event happened) less the value of the additional support.

B. What are the main characteristics of RBS?

Under a compliance based approach, supervisory activities focus on the financial situation of the supervised entities at a given point in time. RBS on the contrary is a dynamic process where the emphasis is more on understanding and anticipating the possible risks the supervised entity will be facing when executing its business plan thus going beyond its current financial situation. For example, under an RBS approach, the supervisor in considering an insurer's business plan to introduce new products would focus more on the effects on the insurer's capital if the initiatives were unsuccessful or, even, too successful. Compliance focuses more on whether the insurer currently has sufficient capital and follows the rules that, it is assumed, are sufficient to ensure the objectives of supervision are met. In a sense, RBS can be said to be more preventative.

There is a greater degree of flexibility generally in RBS. Compliance relies on rules which the insurer must observe, while under RBS the authority is more focused on principles. If the rules are contained in legislation or subordinate legislation it may be costly and time consuming to change those rules in response to changes in the market. An interesting example arises from the purchase by some institutions of highly rated; yet high yielding complex financial products—one of the events that led to the 2008 global financial crisis. A RBS approach is more likely to have identified the apparent anomaly between the high credit rating and the high rate of return and required the insurer to demonstrate that its capital was adequate to be able to hold these instruments. The supervisor's approach would have been based on questioning why other instruments with which it was familiar and which had similar yields carried a lower credit rating. This analysis would have substituted for reliance on the ratings assigned externally to instruments which the market in retrospect did not understand.

A compliance approach would have relied more on the authority prescribing rules concerning the instruments with the high rating.

Traditional compliance approaches focus on a limited number of risks that are the subject of the rules. These are normally credit, liquidity, market and insurance risk. Because RBS is forward looking, the starting point for supervisors is the business strategy of the insurer. Having to understand the insurer's business strategy properly obliges supervisors to consider other risks such as the risks inherent in the strategy, the risk that the Board and Management cannot execute the strategy effectively or the Board and Management not being aware of any legal constraints.

RBS takes into consideration risks that are external to the individual insurers. In looking at an insurer's business strategy, supervisors need to understand the economy, the insurance market and the activities of the insurer's competitors and the risks arising from these factors on the insurer. Compliance generally does not take these factors into consideration because it is based on rules for the entire industry and not the risks of individual insurers. Where an insurer is looking to expand its business lines, for example, RBS may impose a requirement for additional capital to support the lines on an insurer that has not done an appropriate analysis of the market, the competition and the risks and has not taken measures to mitigate those risks.

The central tenet of RBS is the relationship between risks and capital—the higher the risk profile of an insurer, the higher the capital it must hold. Excess capital is not desirable from an insurer's perspective because of the costs of servicing that capital. Therefore, there is a significant incentive for insurers to maintain strong risk management practices in order to avoid holding additional capital. An insurer that is under-pricing its products relative to the risks because it needs to compete with lower cost providers has high insurance risk. The normal response of authorities under RBS is to require the insurer to raise its capital to deal with the risk. The insurer is faced with the option of raising the capital or trying to improve its risk management practices—that is to align premium and risk more closely to avoid the capital “penalty”.

Both supervisory approaches require some amount of transaction testing—compliance requires supervisors to satisfy themselves that insurers comply with sometimes complex rules. RBS requires supervisors to be satisfied that insurers are complying with their own formal risk management practices. In doing so, supervisors under RBS must have a holistic view of the insurer and understand the relationships between the risks.

Compliance based approaches require extensive transaction testing, validating financial statements, reviewing individual files and verifying

assets. Compliance based supervision can, to an extent, duplicate the work of the internal and external auditors.

RBS gives the supervisor a formal framework to allocate scarce supervisory resources. Resources can be directed to the insurers that present higher risks relative to their peers and allocated to particular higher risk areas within individual insurers.

Under RBS there is a process of continuously updating risk assessments through onsite reviews, offsite reviews and market intelligence that creates an “early warning” or “rating” system for the supervisory authority to anticipate and deal with emerging issues. For example, the occurrence of a major risk event which an authority has become aware of through news channels would prompt it to revisit the risk ratings and capital positions of all insurers that underwrite the particular risk.

The supervisory authority can observe readily how the risk profile of both individual insurers and the industry changes over time. These observations are useful from the perspectives of the authority looking at the adequacy of the legislation, alerting policymakers and in discussions with industry bodies.

The supervisory authorities can benchmark institutions against their peers and the industry in a meaningful way. Compliance based approaches are more likely to benchmark on the basis of asset size, asset growth or capital strength. Benchmarking on the basis of risk is preferable from the perspective of the authority.

There are advantages to RBS but also additional risks. RBS requires experienced and knowledgeable supervisors to exercise subjective judgments on a continuous basis. Compliance based approaches require supervisors to determine whether or not insurers comply with a requirement so is a “yes” or “no” type decision whereas RBS requires supervisors to evaluate “how well or otherwise” an insurer handles its business. Successful implementation requires authorities that are properly structured to train and manage supervisors to ensure consistent application of risk rating principles across all supervisors and to have more highly trained supervisors with an understanding of business risks and management of them. Successful implementation is not an easy task and despite the advantages discussed above, authorities find that they need to implement the approach cautiously.

C. How is RBS conducted?

Supervisors perform RBS by looking at all the material risks that are faced by an insurer and how it controls those risks. Supervisors assess the financial position of the insurer in the context of the residual

risk and its ability to raise further capital if it is required to do so. In conducting reviews, the policies, process and systems of the insurer and the compliance with these are critical. A low risk insurer is one which has excellent policies and systems to mitigate risks and implements them effectively at all times and is well capitalized with access to additional capital if required. The inputs into the assessment come from onsite and offsite reviews and general market information.

D. What are the preconditions for successful RBS?

In order to implement RBS effectively, supervisory agencies have some preconditions that must be met. There are five elements that need to be considered: The state of the law, the structure of the supervisory agency, guidance and training for supervisors, a risk rating model and a measurement tool. Each of these will be examined in turn.

THE STATE OF THE LAW

The central tenet of RBS is that supervisors have a role in making certain that insurers have capital in place or available that is sufficient having regard to the insurers' risks. Where a supervisor is not satisfied that the level of capital is commensurate with the risks of an insurer, it must compel the insurer to increase its capital. Clearly, the supervisory agency must have the power under the law to do this.

Additionally, the authority has to have a graduated range of powers to intervene so that the interventions can be consistent with the risk assessment. Supervisors with more limited powers may not have the range of actions that can be graduated according to risk.

THE STRUCTURE OF THE SUPERVISORY AGENCY

The assessments of risks and the quality of controls are both subjective. The subjectivity is influenced by the attitude of individuals to personal risk. Very risk averse supervisors are likely to assess risks more harshly than less risk averse supervisors to mitigate their own risk of underestimation. Similarly, they are likely to underestimate the quality of controls for the same reason. Two of the advantages of RBS elaborated above are the ability to compare institutions and to establish how an insurer's risk profile is changing over time. Supervisory authorities need to be structured in such a way as to ensure a high level of consistency in

order to exploit these advantages. A structure that has been successful in some authorities is to assign the responsibility for the supervision of individual insurers to individual supervisors under the management of a person who oversees all the insurers and signs off on each risk and control assessment. This has the additional advantage of having individual supervisors acquiring more in-depth knowledge of the insurers for which they are responsible. Supplementing this structure with further quality control mechanisms would bring added consistency.

TRAINING AND GUIDANCE FOR SUPERVISORS

To deal with the possibility of inconsistency further, authorities will need to pay particular attention to initial and ongoing training and the provision of detailed guidance to supervisors. A useful form of guidance is a series of summaries for supervisors of some attributes of an insurer that has, for example very high, high, medium, low or very low risk in relation to each risk category. The guidance needs to extend to the attributes for each part of the control environment. The guidance needs to be introduced to supervisors in formal training sessions. Supervisors will be making a transition from objective rules based compliance assessments to more subjective risk assessments; therefore ongoing and follow up training is essential.

RISK RATING MODEL

The outcomes of all the components of the risk assessment are summarized in a risk model. The model generally summarizes each of the risk and control factors measured and condenses these into an overall risk assessment. The sophistication of the model depends to a large extent on how the supervisory agency elects to express the assessments. Simple risk models express individual consequences and probabilities in qualitative terms i.e. very high, high, medium and highly likely, likely, etc, respectively. More sophisticated models express consequences and probabilities in qualitative and quantitative terms. Clearly, the more granularities that exist in the initial measures, the more useful the final outcome will be in comparing insurers and differentiating between them.

In addition, more sophisticated risk models may assign weights to risks to reflect the fact that the significance of individual risks may vary between insurers. For example, an insurer that cedes more premiums to a reinsurer may have more significant credit risk and less insurance risk than an insurer that cedes less.

In the context of analyzing the risk of an insurance company it is worthwhile mentioning the role that rating agencies can play. Ratings agencies and RBS essentially both form a view of an insurer's risk. For supervisors using RBS the external ratings can add another validation to an authority's risk scoring model. If the model is calibrated correctly, it should be possible to observe a correlation between the supervisor's risk assessment and the agency's external rating, for example, agencies may assign an AAA or AA rating to an insurer which the supervisor considers to be very low risk, or conversely an insurer which the supervisor rates as very high risk may be rated sub investment grade by the agency. While the credit ratings of external agencies can be helpful in checking the calibrations of an authority's risk model, they should not be used as a substitute for effective supervision, as events leading up to the global financial crisis have shown.

MEASUREMENT TOOL

Supervisors are expected to analyze and comment formally on each risk identified and the quality of each of the management controls. Under RBS, it is not sufficient merely to identify these elements; a supervisor must perform detailed analysis. The supervisors are expected to be able to justify the ratings that have been assigned to each risk and control. Authorities that design proper templates increase the consistency between ratings when the templates are used in conjunction with comprehensive guidance materials.

E. What kinds of risks should a supervisor consider?

This section does not try to specify every risk to which an insurer can be exposed. It defines the common risks that are considered in most existing risk management systems.

Strategic risk is the risk associated with the insurer's business model and business strategy. For example, an insurer that is introducing a new business line with which it has had no prior experience or is entering a market segment in which it previously was not represented may face high strategic risk because the new business line may not be accepted by the market or the insurer may have difficulty penetrating the new segment. In this case, the insurer faces the possibility of losing its investment in the new business and the risk of damaging its reputation.

Governance and Management risk is the risk to the insurer that could arise from the failure of the Board and Management to govern

the insurer properly, whether through lack of skills or lack of probity. The Board has the task of determining how much risk will be taken, plotting the future direction and overseeing the operations of the insurer. The Board must balance the interests of the shareholders with the interests of the policyholders. The failure to set and oversee a sensible business direction could result in a significant financial loss to the insurer, while the failure to balance the interests of shareholders and policyholders appropriately could result in a loss of license and/or significant financial penalties. Management's role is to implement the Board's strategy through setting appropriate policies and processes and monitoring the performance of the insurer against those. Considerable losses could be experienced by the insurer if management does not discharge its responsibilities properly.

Legal risk is the risk to the insurer resulting from the legal system in which it operates. Insurers like other business enterprises operate in a world that is subject to a vast array of legal requirements, not only from its own insurance legislation but also from taxation, labor, company, consumer protection and competition laws to name a few. In many cases, failure to comply with the requirements of these laws carries substantial penalties. Legal risk is the risk that an insurer incurs a loss through its failure to be aware of and comply with all the legal requirements to which it is subject.

Liquidity risk is the risk that the insurer does not manage its cash flows adequately and is therefore unable to meet its financial obligations as and when they fall due. If an insurer cannot meet its financial obligations, there is a risk of the supervisory authority revoking its license, a loss of business or damage to its business reputation. Liquidity risk also considers the risk that the insurer has to borrow funds from the market at higher rates of interest than its internally generated funds because it has not managed its cash inflows and outflows effectively.

Credit risk is the risk of default by counterparties in which the insurer has a financial interest. Insurers have three main groups of counterparties for which credit risk is relevant. Most insurers cede part of their business to one or more reinsurers. In paying claims, especially major claims, insurers rely on their ability to obtain timely settlement from reinsurers of their portion of the claim. The second group of counterparties is those institutions in which the insurer holds its financial assets. In addition to premium income, insurers generate a significant portion of their income through investing funds externally. Default by institutions in which the insurer has invested or reinsurers may have a severe impact on the insurer's profitability and liquidity. Thirdly, insurers that have large corporate clients may write material

amounts of business on account. Credit risk extends to those clients not honoring the payment of those premiums.

Investment risk is the risk of loss in the value of an insurer's assets due to changes in interest rates or other factors. It is frequently referred to as market risk. Insurers have pools of assets which are held in financial instruments and other assets. In rare circumstances, insurers may hold physical assets such as commodities. The value of these assets is subject to fluctuations due to changes in interest rates and other factors and this may result in losses to the insurer. Investment risk refers to the risk that these losses may arise. Insurers may also hold assets or have incurred liabilities that are denominated in foreign currencies and are subject to changes in value when foreign exchange rates change. Exchange rate risk which is a form of investment risk is sometimes considered separately where the assets and liabilities of the insurer that are denominated in foreign currency are material.

Insurance risk is the risk that the claims payable are greater than the contribution to make these payments from premiums received, in other words that the insurer is writing business at a loss on technical account. Insurers set premiums based on their expectations of having to pay claims in the future. In setting the premium levels, insurers must calculate the present value of estimated future claims which themselves are uncertain and set a premium level which at least breaks even. A breakeven premium level is one where the present value of the future premiums is equal to the present value of the expected claims and the expenses associated with the operations. In performing this analysis, there are two significant unknowns being the future claims and the discount rate to calculate the present value. Insurance risk is the risk that these calculations are not correct and result in the insurer incurring a technical loss. This is sometimes referred to as underwriting risk.

Operational risk is the risk to the insurer resulting from its own internal systems, processes and procedures. It should be noted that internal systems, processes and procedures are not limited to technology but extend to every facet of the operations of the business in which there is a possibility of error, fraud or breakdown, caused by either internal or external events. If there is a failure, there can be considerable disruption to the business, loss of business and costs incurred in correcting or replacing defective systems.

F. What kinds of controls should a supervisor consider?

Before discussing the controls for the individual risks in the previous section, it is helpful to consider the role of the different participants in the risk management process.

The role of *the Board* is to determine the risk preference for the insurer, set its overall direction and to ensure that management is following the direction that it has set.

The role of *the Management* is to implement the strategies and overall direction of the Board. Management makes decisions on how these strategies and direction are to be achieved, sets policies and procedures to ensure they are communicated to operational staff. Management also monitors compliance with the policies and procedures.

The role of the *External Auditor* is to ensure that the insurer presents a true and fair view of its operations to stakeholders and to express a view on the insurer's adherence to its policies and procedures.

The *Internal Auditor* is responsible to the Board for ensuring that the management is implementing the strategies and directions of the Board and that operational staff is complying with the policies and procedures that have been formulated by the management. In some insurers, the Internal Auditor is also the *Risk Manager*, whose responsibility is to identify risks and ensure that adequate risk management systems are in place to mitigate these risks to the level of the Board's risk appetite.

The role of the *Actuary* is to advise on the financial soundness of the insurer and ensure especially that insurance risk is properly estimated and mitigated.

All these roles are essential to effective risk management and an assessment of how the insurer is controlling risks could not be completed without an assessment of how the roles are being fulfilled.

STRATEGIC RISK

In considering how strategic risk is controlled, supervisors need to consider a number of factors including:

- Does the insurer have a formal strategic planning process and, if so, does the process consider the insurer's strengths, weaknesses, opportunities and threats?
- Does the process require consideration of the risks of particular strategies, the costs of the alternative strategies and the financial capacity of the insurer to pursue those strategies?
- Is the Board actively involved in the strategic planning process or is it left to management to undertake?
- Are the assumptions underlying the strategies valid or reasonable?
- What mechanisms are in place for the Board to monitor performance against the strategic plan and amend it if necessary?

- Can the insurer amend or switch strategies easily if they are not delivering the results anticipated?
- Is there evidence that the insurer has incurred significant write off or losses in the past due to failed business initiatives?

GOVERNANCE RISK

In considering how governance risk is controlled in relation to the Board, supervisors need to understand how the Board is appointed and functions and consider a number of factors including:

- Has the Board put in place a formal charter that defines its role and distinguishes it from the role of management?
- Are the individual Directors fit and proper? In this context “fit” means having the necessary skills and experience to be a director and “proper” means having the necessary integrity and honesty for the position.
- Is the Board collectively fit? Does it possess collectively all the skills to be an effective Board?
- Are there any directors who are so critical to the success of the Board that their absence would render the Board ineffective (i.e. is there any “key person” risk) and what mitigating steps are in place to address this risk?
- Has the Board put in place adequate processes to deal with potential and actual conflicts of interest?
- Has the Board put in place a formal process to evaluate its own performance periodically?

The considerations for the management are similar:

- Are the management roles clearly defined and include a framework for reporting to the Board?
- Are members of the management fit and proper?
- Are there any members of the management group who are so critical to the success of the insurer that their absence would cause serious business disruption or increase the risk profile of the insurer significantly?
- Is there a succession plan in place for members of the management team (especially those who present a key person risk)?
- Are members of the management group subject to effective rules about conflicts of interest?
- Is the performance of management reviewed regularly by the Board?

- How effectively does the management communicate with operational staff and monitor their performance?
- How does the Board delegate functions to the management and how does management delegate to operational staff?

LEGAL RISK

In considering how legal risk is controlled, supervisors need to gain a general understand of the various legal requirements to which an insurer is subject. Forming a view about the insurer's ability to control legal risk does not require supervisors to check the insurer's compliance with the relevant laws so an in depth knowledge of the legal requirements is not required.

Supervisors need to consider the following:

- What is in place to ensure that the Board and Management are aware of the legal framework in which the insurer operates and how do Board and Management apprise themselves when laws change?
- Who in the insurer has the role of ensuring compliance with the various legal requirements?
- Does the legal compliance function work effectively?
- How are the legal requirements and any changes to them communicated to staff and incorporated in policies, processes and procedures?
- Is there any evidence that the insurer has been sanctioned in the past for failing to comply with any legal requirements?

LIQUIDITY RISK

Some of the matters that supervisors need to consider in forming a view about how insurers mitigate liquidity risk are:

- Is the management of liquidity risk a concern of the Board?
- Has the Board put in place a vehicle for managing this risk (a common vehicle is an Asset and Liability Committee)?
- Has the insurer put in place a satisfactory set of policies and procedures to manage liquidity risk and is there evidence that the insurer is complying with these policies and procedures?
- Does the insurer prepare forecasts of its cash needs and perform stress tests or scenario tests on these forecasts?

- Has the insurer put in arrangements that would give it access to external finance if it requires liquidity support?
- Is there any evidence of past liquidity problems?

To form a view about the adequacy of these controls under an RBS framework, supervisors will review the insurer's policies and procedures and satisfy themselves that they are functioning and can be expected to do so under alternative scenarios. Supervisors frequently review the work of the internal and external auditors as part of forming their view.

CREDIT RISK

Insurers must control the credit risk that arises from their arrangements with clients (especially corporations with large premium insurance), reinsurers and institutions in which insurers invest. Central to the control of this risk is a set of policies and procedures that govern how the insurer selects counterparties, sets and maintains limits on exposures to particular counterparties, and how it monitors the performance of the counterparties. Under RBS, supervisors must assess:

- Are the Board and management aware of the need to manage credit risk?
- Has the insurer installed a framework including policies and procedures to manage credit risk?
- Do the policies and procedures set criteria for selecting counterparties, limits to individual counterparties and for monitoring those counterparties?
- Is compliance with the credit risk policy regularly reviewed and reported to the Board and management?
- Do the financial statements from prior periods reflect excessive credit risk in the past through high provisions or large amounts of receivables having been written off?

Again, supervisors will review the adequacy of the policies, seek evidence of compliance with them and may consider reviewing the work of the external and internal auditors.

INVESTMENT RISK (MARKET RISK)

Again, the assessment of investment risk under RBS centers on the insurer's policies and procedures. Supervisors need to establish:

- Are the Board and management aware of the need to manage investment risk?
- Has the insurer installed a framework, policies and systems for managing this risk that in the supervisor's opinion are adequate?
- Has the Board established an investment committee with proper delegations from the Board to select investment opportunities?
- Has the Board established appropriate investment guidelines and are they working properly?
- Does framework include an appropriate committee (such as an Asset and Liability Committee) to oversee the management of this risk?
- Are the levels of delegation to manage the risk appropriate?
- Does the policy set realistic limits of market risk to which the insurer can be exposed?
- Is the performance of the insurer measured frequently against the limits set in the policy and, where limits are exceeded, is remedial action appropriate and timely?
- Do financial statements from prior periods indicate excessive market risk in the past through items such a large write downs of investment values?

Under RBS, supervisors will consider the adequacy of the insurer's policies and systems and satisfy themselves that the insurer is complying with them.

INSURANCE RISK

Under an RBS framework, supervisors must target two factors—how products are designed and priced and how claims are assessed.

An insurer must have in place a systematic approach under which it selects its suite of products and prices them to reflect the risk.

Specific issues for consideration are:

- Are the Board and Management aware of insurance risk?
- Have the Board and Management put in place procedures to select those business lines that it will offer?
- Do the Board and Management understand the risks of the selected business lines?
- Has the insurer put in place a systematic approach to the pricing of the products that it offers that reflects the underlying risks?
- Are these approaches and procedures working effectively and are they subject to ongoing review?

The same logic applies to the claims management process. Under an RBS approach, an insurer would only be considered to have good controls where it has formal written and effective policies and procedures to handle this function properly. In many instances insurers outsource this function and its policies would have to extend to any service provider used.

Specific matters that a supervisor will consider:

- Are the Board and Management aware of the risks that are involved in the claims management process?
- Have the Board and Management put in place effective systems, policies and procedures to mitigate the risks?
- Are these in operation and working effectively?
- Where an insurer has outsourced the claims management process, does it exercise adequate control over the activities of the service provider and is the relationship between the insurer and the service provider adequately documented in a legally binding contract?
- Does an analysis of the financial statements for prior periods indicate excessive insurance risk through large losses on technical account?

The work of the external and internal auditors and the actuary can be a source of information for the supervisor.

OPERATIONAL RISK

Operational risk arises from many components of an insurer's business and encompasses human resource management, information technology, manual processes and fraud and dishonesty to name a few functions. It also extends to functions which the insurer has outsourced.

The supervisor is concerned with:

- Are the Board and management aware of operational risk and the need to manage it?
- Has the insurer put in place adequate policies, procedures and systems to mitigate this risks and what is the supervisor's assessment of the quality of these?
- Are these policies, procedures and systems operating effectively in practice?
- Are there sufficient controls over the information technology function?

- Can these controls be demonstrated to be effective? Often, fire drills or other tests might be useful to examine.
- Where an insurer has outsourced key functions, does it effectively control and monitor how it expects the service providers to operate in respect of the outsourced functions?
- Has the insurer considered the consequences of its systems breaking down, has it put in contingency plans and a disaster recovery plan to manage any breakdown and are these systems regularly tested?
- Have there been past incidents of breakdowns of significant systems or material business disruptions?

Again, the work of the external and internal auditor and the risk manager may assist supervisors in assessing this area.

G. What is meant by “additional support” for insurers?

To date, the discussion has focused on the measurement of residual risk. Even an insurer with a high degree of residual risk may not necessarily face a high risk of failure if it has the capacity to absorb the losses arising from the residual risk events that occur. This section looks at the capacity of the insurer to absorb these losses from its own resources both current and future.

Although most insurance legislation contains requirements for the insurer to hold capital against unexpected losses, the manner in which this requirement is met differs quite significantly. Some legislation requires a fixed amount, some laws require a risk weighted percentage of the assets on the insurer’s balance sheet and more sophisticated legislation requires insurers to hold sufficient capital commensurate with the risks of the business, subject to some minimum. For the sake of the discussion, the legal requirement is referred to as the *minimum capital requirement (MCR)*.

Under an RBS approach, the supervisor concentrates on four aspects—the excess of capital over the MCR, the quality of capital, the insurer’s ability to raise additional capital and its earnings.

Obviously, the greater the excess of capital over the insurer’s MCR, the greater is its ability to deal with unexpected losses.

However, not all capital instruments are equal and this fact requires the supervisor to consider the quality of each item that an insurer regards as capital. The common example is subordinated debt which is quasi capital, ranks ahead of common stock and is generally accepted as being a capital instrument of inferior quality compared with common

stock. Not all regulatory regimes consider such quasi capital in their system at all.

An important factor in the discussion about capital is the ability of insurers to raise additional capital should the need arise. Assessment of the insurers' ability requires supervisors to understand how the insurer manages its capital, what contingency plans it has in place to raise additional capital if needed and the willingness and ability of shareholders to subscribe further amounts, particularly major shareholders. This is particularly important where the insurer is part of a financial group if it relies on other entities within the group for capital support.

Finally, supervisors using RBS will have to consider earnings for two reasons. Earnings are available to absorb losses and reestablish reserves diminished by unexpected losses. Markets generally do not like corporations that exhibit widely inconsistent earnings between reporting periods. So the market view may have some bearing on the ability of an insurer to raise additional capital. The supervisor under the RBS approach looks at the current earnings and future projections and forms a view as to whether the current earnings are purely from operations and whether the projections are realistic based on past trends and business plans for the future.

It is interesting to note that in developed countries, minimum capital requirements are becoming more risk based. This is, in some part, because an RBS approach that measures the adequacy of capital requires a measure that is more consistent with the risk profile of the insurer. The Boards of insurers in the countries that will adopt the Solvency II capital requirements will be required to hold minimum capital that is commensurate with the insurer's risk and to manage the capital and risk relationship. Supervisors in these countries will have an obligation to set individual MCRs with regard to the risk characteristics of each insurer. This approach mirrors the requirements for banks under the Basel II capital accord. For supervisory authorities in countries adopting Solvency II, RBS is imminent.

The insurers in Solvency II compliant countries will have to put in some formal measures for assessing risk. The insurer's assessment will provide a valuable input into the supervisor's assessment and negotiations with the insurer on its minimum capital requirement. Supervisory agencies in countries that will not adopt Solvency II should nevertheless encourage insurers to formalize their risk assessment and management.

H. How often should risk assessments be reviewed?

The short answer is every time the supervisory agency obtains information about an insurer. RBS is a dynamic process and the risk assessment

should be reviewed after each onsite and offsite review. Where other information comes to the supervisor's attention, this should trigger a review of the supervisor's risk assessment. An example of this is where the external credit rating of a reinsurer or a large client corporation is downgraded, an RBS approach requires supervisors to review the assessment of the credit risk rating of all the insurers that are exposed to that reinsurer or corporation.

1. Transitioning to RBS.

Supervisory authorities that want to adopt a more risk-based supervisory approach need to plan the transition carefully. Although there are many advantages to the approach, there are also some risks. The main risks arise from doing the transition hastily and without proper planning.

RBS requires supervisors to exercise judgments that are more subjective than they may be accustomed to doing under compliance programs. For example, under RBS, supervisors will look at the business plan of an insurer and try to estimate what effects (both positive and negative) the business plan may have on the insurer's capital. Compliance focuses more on the quantity and quality of the insurer's present capital against prescribed requirements. It is essential that supervisors be given adequate time and training to make the transition successfully.

One of the advantages of RBS is that it allows comparisons of the risk profiles of different insurers in the industry and demonstrates how the risk profiles of individual insurers evolve over time. This advantage can only be enjoyed if there is a high level of consistency in the approaches of individual supervisors and their managers to assessing risks. Supervisory authorities need to prepare and test detailed guidance material for supervisors on what constitutes risks and controls at various levels.

One of the aims of RBS is to be able to capture an insurer's risk profile. This is undertaken using a risk scoring model. Successful implementation of RBS depends on designing, testing and implementing a suitable risk scoring model.

Most supervisors that have adopted a risk based approach have introduced it gradually and in tandem with their existing compliance approaches. Only once they have become confident in the ability of their supervisors to make sound risk judgments and the reliability of their measurement tools do they become entirely risk based. This is a pertinent example of authorities trying to minimize their own risk—the risk of ineffective supervision.

J. Supervision and the global financial crisis.

The year 2008 will be marked in history as the start of the global financial crisis that has seen failures in many financial institutions and governments having to support those financial institutions that were seen as too systemically important to fail. The debate over the causes and whether the crisis could have been avoided will continue for many years. Some criticisms have already been leveled at supervisors for failing to ensure that institutions understood and dealt with the risks that they were undertaking and failing to ensure that institutions could raise capital from conventional sources when the need arose. Only time will tell whether these criticisms are justified, however, the crisis does contain lessons for supervisors in the imprudence of relying on third party judgments and the need to approach supervision with experience, knowledge and importantly a healthy degree of skepticism. This is equally true whether supervision is compliance or risk based.

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