30 January 2014

Financial Stability Board
Centralbahnplatz 2
CH-4002 Basel
Switzerland

fsb@bis.org

Dear Sir/Madam,

Re: FSB's Consultative Document on Guidance on Supervisory Interaction with Financial Institutions on Risk Culture

We appreciate the opportunity to comment on the *FSB's Consultative Document on Guidance on Supervisory Interaction with Financial Institutions on Risk Culture*. I am pleased to transmit, on behalf of the International Actuarial Association (IAA), our comments and recommendations.

These comments have been prepared by the Insurance Regulations Committee in consultation with the Enterprise and Financial Risk Committee of the IAA. If, upon reading these comments, you identify any points that you wish to discuss or obtain further insight regarding them, please do not hesitate to contact the Chairperson of the Insurance Regulations Committee, care of the IAA Secretariat. The IAA will be pleased to develop these ideas further with you.

Yours sincerely,

Robert L. Brown
President

Attachment: IAA comments

Comments by the International Actuarial Association on the Consultative Document on
GUIDANCE ON SUPERVISORY INTERACTION WITH FINANCIAL INSTITUTIONS ON RISK CULTURE
released by the Financial Stability Board on 18 November 2013

International Actuarial Association and its Due Process
The International Actuarial Association (the "IAA") represents the international actuarial profession. Our sixty-five Full Member actuarial associations, listed in Appendix A to this statement, represent more than 95% of all actuaries practicing around the world. The IAA promotes high standards of actuarial professionalism across the globe and serves as the voice of the actuarial profession when dealing with other international bodies on matters falling within or likely to have an impact on the areas of expertise of actuaries.

The IAA is pleased to be given the opportunity to provide input to the Financial Stability Board on its consultative document. These comments have been prepared by the Insurance Regulation Committee in consultation with the Enterprise and Financial Risk Committee, the members of which are listed in Appendix B to this statement. It has also been subject to the due process required for it to constitute a formal view of the IAA, and will be posted to the IAA's official web site.

General Comments

It has been our experience that supervisors have always formed an impression of the risk culture of the financial services entities that they supervise. But for the most part, that process has been entirely based upon the personal impressions and standards of each individual person involved in supervision. This document is a giant first step forward in taking that process and turning it into something that can provide more consistent and valuable results. However, we feel that understanding the risk culture of a financial services firm is substantially more complex than what is presented in this paper. We agree in general, that many organizations that have a strong risk culture will have many of the practices in place that are described in this paper. We also believe that with a regime of risk culture review as described by the paper, many organizations with weak risk cultures will adopt the described practices to give the impression of a strong risk culture. In addition, we believe that the practices described here are only one possibility of an appropriate risk culture and in addition, that there are many other characteristics of a strong risk culture that are not mentioned in this paper. In our response, we try to give a brief discussion of both possibilities.

We urge the FSB to continue developing this document. This is a very important topic that deserves full enunciation.

We would like to focus our detailed discussion to the following four issues:

1. "Culture" is a much more complex and fluid notion than suggested in the paper, and this needs to be recognized more explicitly lest regulators end up with a very narrow view of this important factor. There are a number of other very important outwardly recognizable aspects to risk culture that the paper does not recognize including integrity, ethics, transparency, nature and style of communication, risk awareness and "risk sense". In addition, the paper does not acknowledge that the visible part of a business culture is merely the tip of the culture iceberg. Most of culture is generally thought to be the largely unspoken embedded assumptions held by the members of an organization. The review process that is proposed by the FSB should be developed further to incorporate understanding of the embedded assumptions through the process of the supervisory review of risk culture.

2. Adaptability to changing environment is absolutely key; this highlights the dangers of embedding a fixed "culture" in processes. While the paper claims to not make a judgment of "good/bad" culture, the

words “sound/unsound” are a simple substitution that takes on a similar meaning. We are concerned if the approach taken in the paper leads to regulators/supervisors encouraging all institutions to go through the motions of adopting the short list of activities that are listed within the paper as sound risk culture. This can lead to undesirable outcomes. For example, where adherence to a strong risk culture led to risk aversion, such as we have seen in the banking industry following 2008 on a significant scale, is this a “good” outcome? Risk management is just as much about the risks an enterprise should be taking, as it is about risks it should not be taking. The process that the FSB proposes should include recognition of the possibility of the evolution of risk culture as it appropriately adapts to the risk environment at each point in the business cycle, rather than promoting a static risk culture that may not provide an appropriate approach to risks in all situations.

3. Accountability, as described in the paper, focuses blame and consequences on mid and low level employees of a firm and this is a contra indicator of good risk culture. The FSB needs to focus its proposed approach to accountability on how far up the organizational chart the responsibility for the failure should go.

4. Any final document should make it abundantly clear that at best, the document should be seen as providing no more than a broad framework for use in developing an approach to assessing “risk culture” that is relevant to the local circumstances; it is NOT a definitive checklist of how to develop a view. The FSB needs to make sure that this discussion of risk culture does not lead to a checklist approach to evaluating risk culture that can be easily satisfied by firms without a strong risk culture but who are willing to create an artificial set of risk management policies statements and committees within their organization for the sole purpose of getting credit for risk culture.

Comments on each section

Introduction

- We notice that the paper mentions the high importance of discerning whether the agreed risk appetite is followed as was pointed out in the November 2013 paper on Risk Appetite.
- The reference to a risk culture that “discourages unrestrained profit maximization” sounds much more like a reference to the entire culture of a profit-oriented business. (Restrained maximization seems like a perfect oxymoron.) If the entire culture supports “profit maximization” and the risk culture discourages profit maximization, there will be an incessant fight between the risk culture and the main culture of the organization. The key is to view profit in relation to the level of risk.
- The statement that the paper does not define “good” or “bad” risk culture is troublesome as the implied tone of the paper certainly does promote the idea that there is one and only one desirable risk culture by substituting the word “sound” for the word “good”. We suggest that if the FSB clearly articulated the particular results that they are expecting to result from a “strong” risk culture it would help move the paper’s focus from implying there is a check list of “right” behaviors. As we suggest below, the actual risk culture that will best achieve relatively static goals is one that also adapts to the constantly changing risk environment. The regulatory culture also needs to adapt to the environment, just as the regulated firms risk culture will naturally do as well.
- It would also help to clarify what the goal is in reviewing a company’s risk culture. Is the regulatory purpose market surveillance of individual firms, enforcement focused, systemic risk monitoring or to encourage/lead better practices? Or is it some prioritized combination of all of these?
- In fact, there are other risk cultures than the two (“sound” and “unsound”) that the paper acknowledges. The best risk management culture is not the “sound” or the “unsound” cultures that are described in the paper; it would be a risk culture that is fully “adaptive” to the business and economic cycle. What is described in the paper as a “sound” risk culture is the culture that would

naturally develop during the part of the business cycle with moderate risks. So, as we saw a few years ago, due to regulatory efforts to prolong the "Great Moderation" and spare the economies the tribulations of a recession, organizations naturally worried less and less about risk and drifted into what the paper calls an "unsound" culture. Yet, for a while, many institutions were very successful with that "unsound" risk culture. Their success was a very strong reinforcer to that "unsound" culture. During the height of the crisis, the organizations that shifted most quickly into a total triage mode were the most successful. Those were the banks that were refusing to lend, no matter how much money that they were given. Some parts of some institutions may still be in that mode. While an "uncertain" economy is not mentioned in most economics texts, many firms have, on their own, shifted their risk culture to adapt to that environment. They were/are stockpiling cash and when they do make commitments, those are smaller and more dispersed than previously. It will not be desirable to force financial institutions into the "sound" risk culture for all times since periods of boom and bust and uncertainty will reoccur, not just the moderate environments that the "sound" risk culture is best suited for.

- The regulatory culture will also need to recognize and adapt to the business cycle as well. In the run up to the financial crisis, some regulators had adapted to a culture where they were not in any way discouraging the excessive risk taking of a few very large firms, thinking them to be self-regulating. More thinking is needed to discern the best regulatory approach in each different part of the business cycle in hopes of preventing a repeat of the experiences of the run up to the financial crisis of a procyclical regulatory risk culture.

1. Foundational elements of a sound risk culture

As noted in the previous section, these three "foundation elements" (Risk Appetite, Risk Governance and Compensation) have already been covered in other publications.

2. Indicators of a sound risk culture

The four ideas put forward in this section are only <u>some</u> of the indicators of good risk culture. Other ideas such as Integrity and Ethics are good indicators as well as are quite a number of other concepts. This section and the following give a very strong impression that these four ideas and these alone define a strong risk culture. In addition, this section gives the strong impression that there is one and only one way to have a strong risk culture. That is not correct as explained above. Forcing all institutions into a single culture will greatly increase systemic risk since if there is any flaw in the proscribed risk culture, the entire financial sector will be subject to risks that are taken or mismanaged because of that flaw. Variety of practice, not uniformity, is an important aspect of systemic resilience.

Transparency is another major indicator of a strong risk culture. The easiest way to sabotage the risk management system of a firm is to fail to report activity. This is much easier in a firm where secrecy and limited distribution of information is the norm. In a firm where there is a high degree of transparency, the withholding of information would be much more difficult and would stand out so that it is much easier to find.

Communication is another key indicator of a strong Risk Culture. A firm that communicates what it is doing and why it is doing it will have a much easier time getting employees to understand the espoused risk values than the employees in a firm where the intentions of management are not communicated.

Another key indicator of strong Risk Culture is that the management and the board are Risk Aware - aware of the potential range of riskiness of each type of activity undertaken by the firm and monitor the volume of activity so that they can directly form opinions about the volume of risk held by the firm at any point in time. In a risk aware culture, it is unlikely that (a) someone within a firm can undertake high volumes of activities that are not known almost immediately to management or (b) someone, without top management and/or board approval, can undertake activities that are much riskier than those understood ranges. In a very strong risk culture, this Risk Awareness extends several layers down in the organization and is one of the knowledge sets that are seen to be a necessity to be promoted to the top management group.

An organization with a strong risk culture also has Risk Sense - the skill to quickly assess risks without complex models. These organizations will usually then use the complex models to refine and confirm their impressions of risk.

In addition, a firm with a strong risk culture will have internal standards that their risk managers will always take into account. There are a number of important considerations to review before making decisions about risk assessment and risk mitigation such as:

a. "*information about the financial strength, risk profile, and risk environment of the organization that is appropriate to the assignment. Such information may include the following:*
    1. *the financial flexibility of the organization;*
    2. *the nature, scale, and complexity of the risks faced by the organization;*
    3. *the potential differences between the current and long-term risk environments;*
    4. *the organization's strategic goals, including goals for the level and volatility of profits, both short term and long term;*
    5. *the interests, including the risk/reward expectations, of relevant stakeholders. These stakeholders may include some or all of the following: owners, boards of directors, management, customers, partners, employees, regulators and others potentially impacted by the organization's management of risk;*
    6. *regulatory or rating agency criteria for risk levels and the implications of potential risk levels on the continuation of business operations as reflected in ratings or other external measures of security;*
    7. *the degree to which the organization's different risks interact with one another; actual and perceived diversification benefits; and dependencies or correlations of the different risks;*
    8. *limitations to the fungibility of capital across the organization; and*
    9. *the extent to which the organization's exposure to risks may differ from the exposures of its competitors.*

b. *information about the organization's own risk management system as appropriate to the assignment. Such information may include the following:*
    1. *the risk tolerance of the organization;*
    2. *the risk appetite of the organization. This may be explicit or inferred from objectives of the organization including those related to solvency, market confidence, earnings expectations, or other objectives;*
    3. *the components of the organization's enterprise risk management control cycle;*
    4. *the knowledge and experience of the management and the board of directors regarding risk assessment and risk management; and*
    5. *the actual execution of the organization's enterprise risk management control cycle including how unexpected outcomes are acted upon.*

c. *the relationship between the organization's financial strength, risk profile, and risk environment as identified in (a) above, and the organization's risk management system as identified in (b) above. If in the actuary's professional judgment, as appropriate to the assignment, a significant* *inconsistency exists, then that inconsistency should be reflected in the risk evaluation.*[1]"

- Tone from the Top – board and senior management words and actions do influence and reinforce culture (but they do not drive culture under normal circumstances). As such, the sorts of statements and actions by the board and senior management that support the desired risk culture should be articulated. For example, it gives a clear sign when the CEO can give a lengthy report to shareholders on the sales of the organization, but the CRO must talk about the risk position. But it is not a sign that is favorable to the risk culture. It would be a good sign if senior managers all understood the risk profile of the firm as well as the risk appetite. The leadership can attempt to monitor the risk culture, but the strongest indication of risk culture is what employees do when they think that they are not being monitored. The FSB should be directing regulators to attend to the everyday messages from top management and the board, rather than the formal pronouncements.
- The term "core values" is used several times in this section. It would be valuable for supervisors to discern which stated core values are real and which are window dressing. This may be relatively easy to discern because the real core values are commonly mentioned and evidenced in corporate behavior and recognition awards. The window dressing core values are never mentioned anywhere outside of the core values statement.
- Accountability: This discussion missed the most important element of accountability - that is the accountability that flows uphill in the organization. Accountability that pins the blame for bad decisions on a middle or low level employee is a good indicator of a poor risk culture. Such a culture will stop people reporting problems and start them either looking for ways to bury problems or to blame them on someone else. Accountability that flows upwards to senior management is the only real accountability that matters. That sort of accountability is an indication of a "good" risk culture. That sort of "real" accountability means that management and the board must never feel able to say that they didn't know about any major risk related activity (see Turnbull Report, 1999).
- Effective challenge: This element is vital to an "adaptive" risk culture and should be a very important consideration for supervisors. However, the tone of the challenge process can be an indicator of a drastically unhealthy Risk Culture. In some firms, there is open animosity between the Risk function and the Businesses. The challenges always go one way. The Risk function always sees more risk and the Businesses always see less. When an ethical person counts their change, they find that in some situations, there are mistakes in their favor and in others the mistakes are in the other party's favor and they act equally on both. A healthy challenge process should include some examples of challenges in both directions. This should be the case at the board level as well. In the end, however, it also has to be clear who makes the final call – can the CRO overrule/veto a business unit decision on risk grounds, or not?
- Incentives: Usually incentives reveal the real core values. When incentives do not include a risk element; that is a clear indication that risk management is not a real core value. However, too heavy a reliance on incentive comp to convey the risk culture on the part of either management OR supervisors is not appropriate. Management actions should be given much higher weight in the creation of (and review of) a strong risk culture.

3. General supervisory guidance

- Rather than the suggested practice of the supervisor reporting to the board only those activities that are "not supportive of sound risk management", the supervisor should expect to report all of their

[1] Excerpt from Actuarial Standard of Practice 46 "Risk Evaluation for Enterprise Risk Management" from the US Actuarial Standards Board, 2012.

findings. That will allow management to see if the supervisor is noticing all of the important elements of the risk culture of a firm.

- Willingness to document things for the supervisor is not, in and of itself, an indication of risk culture. Documentation needs to be sufficient to convey the intended risk culture in situations where that is not being well conveyed by interpersonal communications. Over documentation of a good risk culture may end up undermining that culture, making it seem more like a set of restrictive rules when in fact it is a process of empowering employees to make good risk decisions on behalf of the company.
- In general, the items in sections 3.1, 3.2 and 3.3 will lead directly to a checklist approach to the evaluation of risk culture. As noted above, this is then most likely to focus on the most clear outward features of the risk management practices and will likely miss actual indications of culture (the embedded assumptions and other unspoken cultural elements) that are much more subtle and time consuming to unearth.

3.1 Tone from the top

3.1.1 – Management should be able to give evidence of situations where decisions about risk taking were made **by senior management** to enforce compliance with the risk appetite statement. Actions are much better indications of culture than "commitments" that are mentioned in the paper.
3.1.2 – Management needs to also have a clear view of the risk culture that they actually have and the steps that they must take to achieve the aspirational culture. (This is the only place where it is admitted that the risk culture is often an aspiration, rather than a reality.) ***That truth should be incorporated into the rest of the document***.)
3.1.3 – The paper mentions promoting integrity. This is the only use of that word in this document. Integrity should be one of the Indicators of Sound Risk Culture along with Ethics and simple honesty as indicated in comments on Section 2. In a firm without integrity, honesty or ethics, any impressions that the supervisor may form regarding Risk Culture could easily be driven by intentional deception.
3.1.4 – This item fails to consider that not all risk related situations are brought to the attention of the board. For example, in the JP Morgan trading situation, a risk model was changed, possibly incorrectly, which was part of the underreporting of the build-up of risk there. In addition, the easiest way for staff or management to avoid oversight of risk related behavior is to fail to report that activity.
3.1.5 – The only thing that can offset a strong personality is another strong personality. And in fact, the presence of multiple strong personalities can be an indicator of a robust risk culture. The strong personalities will, for example, promote a healthy challenge process.
3.1.6 – Surveys are the low cost approach to this question. But they are generally considered to be ineffective. People quickly learn the "right" answers to give. Otherwise, this requires expensive and intrusive study by organizational consultants. But if such study becomes routine, it is quite possible that employees will learn how that they need to act and talk around the consultants. It is probably much more practical to strike the words "and adhered to" from the phrase "communicated and adhered to". Universal communication is itself a very important component of risk culture. Supervisors should be directed to lean away from surveys as a repeatable method of assessing risk culture.
3.1.8 – The importance of compensation to culture is overstated. The culture is strong if it sends clear signals about appropriate risk behaviors that are heard above the noise of the compensation structure. It is highly unlikely that a weak culture will be able to overcome their weaknesses through compensation structure. Said another way, a culture is weak if it expects compensation to do the heavy lifting of management.
3.1.9 – See our suggestion above that strengthens this point and elevates it to a major aspect of a strong Risk Culture.
3.1.12 –We recommend developing different language to describe what this is trying to convey. Culture, as defined by the paper, is a quality of the organization. The failure is perhaps a failure to control risk as

desired by the regulator.

3.2 Accountability

As noted already, this idea of culture of accountability needs to be established at the top of the firm. When it is not required that top managements are accountable, then why should the people who work for them be accountable? The culture of "no accountability" is exactly what results from the lack of accountability at the top. It may well follow that if top managers are accountable, that there will also be accountability down the hierarchy, but the main concern of supervisors needs to be the accountability at the top, not in the middle or the bottom of the organization.

3.2.1 – Need to separate current and emerging risks at the very least into different sentences. Almost by definition, there is no "information" about emerging risks. If there was information, then they should be current risks. Actions based upon information about current risks are usually very different from actions that are in response to hints about emerging risks. Putting them in the same sentence with the word "and" between them suggests an equivalence of expected response, which is rarely likely to be the case.

3.2.2 – This is a good idea that has nothing to do with accountability. This statement seems more appropriately included under the "communication" aspect of risk culture.

3.2.3 – Should read "Management should be held responsible for all actions of their employees, regardless…" as noted above. Again, if management is responsible, they would hold their employees responsible.

3.2.5 – The awareness that there is a pathway for the escalation of concerns is important. However, the culture is stronger if the actual need for formal escalation is minimal because informal consideration of concerns is done in such a manner to make those who raise the concerns believe that there was proper consideration of their issues.

3.2.6 – There is room for this type of idea in a "strong risk culture" but only in moderation as described above.

3.2.8 – This statement needs to be put at the top of this paper. Perhaps it should be modified to say "Consequences appropriate to the level of breach". This might also simplify/clarify other parts of the paper and make other parts unnecessary. Supervisors could assist with the elevation of this process by making sure that there are consequences for firms, boards and management teams that are guilty of significant breaches of their own risk appetite. Perhaps risk appetite statements could become a required part of required annual corporate filings and material breach of risk appetite could be considered a securities violation. Any financial firm that has a significant positive or negative variation from expected earnings could then be examined for potential risk appetite violations.

3.2.9 – Isn't this just another sentence to the point above? Why is it separate? Also, what are the consequences for a business unit in 3.2.8 that are separate from the consequences to the individuals responsible? The consequences should always be applied to people within a firm. The supervisor may need to apply consequences on a firm.

3.3 Effective challenge

See comments regarding 3.2.5 and 3.2.6 above. Transparency is a major aspect of Risk Culture as also noted previously. Perhaps this challenge idea is a symptom of a different problem. Risk is only about the future. There are no facts about the future, only opinions. All statements about the future must be in the form of "if x then y". There are two types of challenges. One type is challenging the assumption upon which the extrapolation into the future is based; the other is challenging the extrapolation process, more of a methodology challenge. Frequent methodology challenges are often a substitute for actual disagreements over the assumption about the future and are mostly unhealthy. Frequent challenges to the assumptions about the future are absolutely vital to long term success. But it is important to understand that when there is a major change in the assumption about future risk, there may also be a major shift in the risk appetite and the risk management system and possibly the Risk Culture. The assumption about the risk environment is a key driver for all three.

3.3.3, 3.3.4, 3.3.5 – stature of risk management.
This section reads like an attempt to force a specific management structure on all firms. It is likely to result in a waste of money at the best and a dysfunctional risk culture at the worst. The standing of risk management in a firm needs to be something that fits with the rest of the management system and is also dependent upon the personal stature of the CRO. The CRO or "Head of Risk Function" must be in a position to understand what is going on in the organization and must have access to the CEO/Board in order to provide a risk perspective on what is going on in the business. This access is independent of the "status" or positioning within an organization, but does talk to "stature".

3.4 Incentives

See prior discussion on this topic.

Conclusion of the IAA comments

Unless the supervisory process itself is willing to build, integrate and maintain a sound risk culture within its supervisory structure, the efforts to "lead" the industry into practicing an enhanced risk culture will create their own haphazard, unintended consequences of encouraging undesirable risk taking activity. Sound risk culture needs to create a dialogue and space for issues to be surfaced, reviewed and assessed from the perspective of what could be better or what can be learned from one's current risk practices. Unless the regulator is willing to be a fellow participant in this process (with an active understanding and transparent disclosure of its own risk appetites, limits and accountabilities, etc.) it will, at best, by necessity lag behind emerging best practices or, at worst, encourage and lead to less sound corporate risk cultures.

Appendix A

Full Member Organizations - 65

Caribbean Actuarial Association
Consejo Profesional de Ciencias Económicas de la Ciudad Autónoma de Buenos Aires (Argentina)
Actuaries Institute Australia (Australia)
Aktuarvereinigung Österreichs (AVÖ) (Austria)
Institut des Actuaires en Belgique (Belgique)
Aktuarsko Drustvo U Bosni I Hercegovini (Bosnia and Herzegovina)
Instituto Brasileiro de Atuária (IBA) (Brazil)
Bulgarian Actuarial Society (Bulgaria)
Canadian Institute of Actuaries/Institut Canadien des Actuaires (Canada)
China Association of Actuaries (China)
Actuarial Institute of Chinese Taipei (Chinese Taipei)
Asociación Colombiana de Actuarios (Colombia)
Institut des Actuaires de Côte d'Ivoire (Côte D`Ivoire)
Hrvatsko Aktuarsko Drustvo (Croatia)
Cyprus Association of Actuaries (Cyprus)
Ceská Spolecnost Aktuárù (Czech Republic)
Den Danske Aktuarforening (Denmark)
Egyptian Society of Actuaries (Egypt)
Eesti Aktuaaride Liit (Estonia)
Suomen Aktuaariyhdistys (Finland)
Institut des Actuaires (France)
Deutsche Aktuarvereinigung e. V. (DAV) (Germany)
Hellenic Actuarial Society (Greece)
Actuarial Society of Hong Kong (Hong Kong)
Magyar Aktuárius Társaság (Hungary)
Félag Islenskra Tryggingastærðfræðinga (Iceland)
Institute of Actuaries of India (India)
Persatuan Aktuaris Indonesia (Indonesia)
Society of Actuaries in Ireland (Ireland)
Israel Association of Actuaries (Israel)
Istituto Italiano degli Attuari (Italy)
Institute of Actuaries of Japan (Japan)
Japanese Society of Certified Pension Actuaries (Japan)
The Actuarial Society of Kenya (Kenya)
Latvijas Aktuaru Asociacija (Latvia)
Lebanese Association of Actuaries (Lebanon)
Lietuvos Aktuariju Draugija (Lithuania)
Persatuan Aktuari Malaysia (Malaysia)
Colegio Nacional de Actuarios A. C. (Mexico)
Association Marocaine des Actuaires (Morocco)
Het Actuarieel Genootschap (Netherlands)
New Zealand Society of Actuaries (New Zealand)
Den Norske Aktuarforening (Norway)
Pakistan Society of Actuaries (Pakistan)
Actuarial Society of the Philippines (Philippines)
Polskie Stowarzyszenie Aktuariuszy (Poland)
Instituto dos Actuários Portugueses (Portugal)

Russian Guild of Actuaries (Russia)
Udruzenje Aktuara Srbije (Serbia)
Singapore Actuarial Society (Singapore)
Slovenska Spolocnost Aktuarov (Slovakia)
Slovensko Aktuarsko Drustvo (Slovenia)
Actuarial Society of South Africa (South Africa)
Institute of Actuaries of Korea (South Korea)
Col.legi d'Actuaris de Catalunya (Spain)
Instituto de Actuarios Españoles (Spain)
Svenska Aktuarieföreningen (Sweden)
Association Suisse des Actuaires (Switzerland)
Society of Actuaries of Thailand (Thailand)
Institute and Faculty of Actuaries (United Kingdom)
American Academy of Actuaries (United States)
American Society of Pension Professionals & Actuaries (United States)
Casualty Actuarial Society (United States)
Conference of Consulting Actuaries (United States)
Society of Actuaries (United States)

Appendix B

Members of the IAA Insurance Regulation Committee

Chairperson
David K. Sandberg

Co-Vice-Chairpersons
Hans-Peter Boller
Michael John Eves
Toshihiro Kawano

Members

Igotz Aubin	Institut des Actuaires en Belgique
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Andrew Chamberlain	Institute and Faculty of Actuaries
Benoît Courmont	Institut des Actuaires
Rajesh Dalmia	Institute of Actuaries of India
Isagani de Castro	Actuarial Society of the Philippines
Kris DeFrain	Casualty Actuarial Society
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Simen Johan Gaarder	Den Norske Aktuarforening
Richard A Johnson	New Zealand Society of Actuaries
Thomas Karp	Actuaries Institute Australia
Philipp Keller	Association Suisse des Actuaires
Jolanta Krastina	Latvijas Aktuaru Asociacija
Helena Kudlakova	Slovenska Spolocnost Aktuarov
Ming Guang Li	China Association of Actuaries
En-Kuei Liu	Actuarial Institute of Chinese Taipei
Deana Macek	Hrvatsko Aktuarsko Drustvo
Ana Maria M Pereira	Instituto dos Actuários Portugueses
Ramon Nadal	Instituto de Actuarios Españoles
Jari Niittuinperä	Suomen Aktuaariyhdistys
Lutz Oehlenberg	Deutsche Aktuarvereinigung e. V. (DAV)
Gennaro Olivieri	Istituto Italiano degli Attuari
Gábor Ferenc Pásztor	Magyar Aktuárius Társaság
Godfrey Perrott	Society of Actuaries
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Arne Sandström	Svenska Aktuarieföreningen
Masaaki Shigehara	Institute of Actuaries of Japan
Jacques Tremblay	Canadian Institute of Actuaries/Institut Canadien des Actuaires
Henk Van Broekhoven	Het Actuarieel Genootschap
Eret Võsa	Eesti Aktuaaride Liit
Igor Zoric	Udruzenje aktuara Srbije

Appendix B *Continued…*

Members of the IAA Enterprise and Financial Risk Committee

Chairperson
David N Ingram

Co-Vice-Chairpersons
John Leo Maroney
Lars Pralle

Members

Artyom Rubenovich Ambartsumyan	Russian Guild of Actuaries
Marc Arias Bellot	Col.legi d'Actuaris de Catalunya
Réjean Besner	Canadian Institute of Actuaries/Institut Canadien des Actuaires
Paul Braithwaite	Casualty Actuarial Society
Malcolm Campbell	Svenska Aktuarieföreningen
François Chauvet	Institut des Actuaires
Xiao-lei Chi	China Association of Actuaries
Paolo De Angelis	Istituto Italiano degli Attuari
Ann Duchêne	Institut des Actuaires en Belgique
Svetlana Dudkina	Eesti Aktuaaride Liit
Garth Griffin	Actuarial Society of South Africa
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Peter Kodada	Slovenska Spolocnost Aktuarov
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Charles Levi	Polskie Stowarzyszenie Aktuariuszy
Sanchit Pal Maini	Institute of Actuaries of India
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Gregory Charles Martin	Actuaries Institute Australia
Robert Meisingset	Den Norske Aktuarforening
Padraic Martin O'Malley	Society of Actuaries in Ireland
José Oliveres Vidal	Colegio Nacional de Actuarios A. C.
Branko Pavlovic	Udruzenje aktuara Srbije
Lars Pralle	Deutsche Aktuarvereinigung e. V. (DAV)
Francis P Sabatini	Society of Actuaries
David K. Sandberg	American Academy of Actuaries
Mateja Slapar	Slovensko Aktuarsko Drustvo
Karen Tan	Association Suisse des Actuaires
Ágnes Tatai	Magyar Aktuárius Társaság
Elina Tilta-Gerika	Latvijas Aktuaru Asociacija
Eduardo Trigo Martinez	Instituto de Actuarios Españoles
Masaaki Yoshimura	Institute of Actuaries of Japan