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AMERICAN ACADEMY *of* ACTUARIES

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June 24, 2011

Financial Stability Oversight Council

Attn: Lance Auer

1500 Pennsylvania Avenue NW

Washington DC 20220

RE: Metrics to Enable FSOC to Monitor Insurance Industry Systemic Risk

In our letter of February 25, 2011, the Financial Regulatory Reform Task Force (Task Force) of the American Academy of Actuaries'<sup>1</sup> (Academy) provided comments on proposed Rule 12 CFR Part 1310, *Authority to Require Supervision and Regulation of Certain Non-Bank Financial Companies* issued by the Financial Stability Oversight Council ("Council"). Our comments in that letter were intended to provide objective actuarial perspectives on the draft rule and to frame some of the challenges that are inherent with a broad application of metrics to our nation's diverse insurance sector.

In this letter the Task Force offers further detail that reflects additional work on our part since first communicating with you on the issue of systemic risk metrics. Specifically, the metrics outlined herein are intended to aid in the identification of companies, whose financial distress would have the greatest potential to impair the United States economy based on a combination of factors, including: company size, interconnectedness, and lack of substitute for a company. These metrics will assist in identifying industry trends, perhaps as a result of certain at-risk product lines, including the possible accumulation of systemic risk. According to the proposed rule, once these companies, and/or their products are identified they can be further analyzed as to their vulnerability to financial distress and if determined to be vulnerable would be subject to additional prudential regulation.

## Overview

The regulated insurance sector was not the driver of the recent financial crisis. Problems encountered by American International Group, Inc. (AIG) stemmed from financial products sold (outside of AIG's regulated insurance entities). In the past the insurance sector has not been a source of systemic risk and the impact of insurance company failures has been limited to policyholders and other company stakeholders; insurance company failures have generally had limited impact on the insurance market or the broader economy, with that dynamic persisting in the most recent financial crisis.

When such failures have occurred, regardless of size, the insurance industry continued to maintain its risk assumption capacity and existing risk obligations have been generally honored.

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<sup>1</sup> The American Academy of Actuaries is a 17,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

The state-based regulatory system has provided for payments covering the great majority of outstanding liabilities through guaranty funds and the insurance industry's risk assumption capacity has been maintained through other existing insurers and new entrants.

A reason for the relative soundness of the insurance sector relates to the fundamental nature of insurance companies and their business models in addition to the relatively conservative functional regulation (that requires adequate capital and conservative liability values) whose primary focus is on preserving the solvency of the industry and protecting consumers. However, the Council is charged<sup>2</sup> with the responsibility to ensure that Federal regulators are aware of any changes in the overall soundness of the insurance industry that could affect the soundness of the US economy.

Metrics developed for this purpose, to identify systemically relevant individual insurance companies and groups of companies, should aid in providing indication of whether there have been any material or paradigm shifting changes to the risk profiles of systemically relevant companies. Also, as noted above, a methodology to evaluate the financial strength of companies so identified will be needed.

Development of such metrics should be considered a work in progress even after establishment of initial metrics as required by the DFA. Before implementation, we encourage the proposed metrics be tested to ensure they produce appropriate outcomes and do not generate unreasonable results. Our comments herein are intended to provide a basis for discussion and ongoing research and to engender new research to guide future consideration of regulatory implementation of systemic risk metrics and indicators.

We view systemic risk among insurance companies that may pose a threat to the financial stability of the United States, as either a significant potential reduction in the capacity of the insurance industry to assume new risks that are important to the financial stability of the United States, or a significant potential impairment of the insurance industry's ability to honor its existing obligations.

The Task Force views the process of identifying companies and/or insurance coverages whose financial distress can adversely impact the United States economy as an ongoing process that reflects public policy decisions made by the government and relies upon the development of objective quantitative measures consistent with government objectives. We extend our remarks in our February 25 communication with the following observations regarding individual companies or group entities impacting the US economy in a material way. This process should:

1. Identify the categories of systemically important risk assumption services and sub-categories of these services through an objective process.
2. Identify the capabilities of the remainder of the industry to provide substitutes upon the failure of a company or companies, including both continuation of an orderly insurance marketplace as well as the possibility of claims that would not be paid by the various guaranty funds.

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<sup>2</sup> Dodd Frank Wall Street Reform Act of 2010 (DFA) Sec. 113

3. Determine the extent of any interconnectedness of the company with other insurance companies/entities, including foreign insurance companies, affiliates, and other non-insurance financial services companies and the general economy.
4. Identify metrics for measuring the size and market share of companies providing such risk assumption services to gauge the likelihood they will impact the economy and to ascertain whether there is availability of substitutes upon failure. [It is important to note that, unlike a company-centric focus for insuring company health and stability, the metrics utilized for the purpose of systemic risk should identify a group of companies who have assumed a significant portion of a risk when viewed in terms of the insurance industry in aggregate].

In sum, this process should identify companies or groups of companies who, because of their size, concentration of risks, and interconnectedness, would not have their market share or their existing obligations readily replaced should they face financial distress and that would impact broader areas of the economy. We have found it useful to examine such entities by breaking them into three categories:

1. Individual companies with substantial market share of systemically important risk assumption services;
2. Groups of companies with substantial market share of systemically important risk assumption services; and
3. Individual companies or groups of companies with large existing obligations of systemically important risk assumption services.

The failure of a single company or a group of companies may arise from common risky behavior or a single external event, such as a catastrophic event, man-made and other. If a company views a risk assumption service to be susceptible to an event such that the frequency and cost of claims may rise unexpectedly it may decline to provide such services. Should such company move to reduce its risk assumption capacity, it would be unrelated to the financial capability of the insurer to accept the risk. Rather, it would amount to a decision related to the financial soundness of providing the service. Therefore, we would not view this event as a systemically significant event arising from the financial weakness of an insurance company or companies.

Once a company or group of companies is identified whose financial distress has the potential to create systemic risk, then that company or those companies should be evaluated to determine “vulnerability” to financial failure.

## **Metrics**

For each phase of the process, metrics should be established. The establishment of metrics for these purposes should be dynamic and ongoing. Procedures should be established accordingly for the continued assessment of the metrics to either ascertain they are accomplishing their objectives or to be expanded to reflect financial services or insurance services activities and risk assumption services that emerge over time. We would not expect one set of metrics to be utilized over a long time period without review as the economy and the insurance industry continues to evolve and change.

The attachment to this letter provides in chart form some metrics that can help gauge various aspects of company or group size, interconnectedness and market share and they are referred to in the remainder of our comments.

*Risk Assumption Services: Identification of Exposure to Systemic Risk Events*

The insurance industry sells many different financial products that allow consumers to transfer risk to the insurance company. Some of these risk assumption services are listed below:

- Life Insurance
- Health Insurance and Disability Insurance
- Longevity
- Reinsurance
- Catastrophe
- Sudden/Accidental Events
- Financial Guaranty insurance
- Guarantee of Policy Investment Returns

These categories can be considered in a bifurcated manner for purposes of providing more targeted risk management services in an evaluation of systemic relevance. For example, mortality risk in life insurance can be split between individual and group insurance.

*Size and Lack of Substitute Metrics: Development of Metrics*

Develop metrics to identify individual companies or groups of companies that, based on market share, bear a significant portion of systemically important risk assumption services. Metrics should relate directly to the risk assumption service in question (e.g. premiums, liabilities, face amount, guarantees of investment performance). Risk assumption services data will be sourced from publicly available information but, in some cases, may require additional sources. The criteria established for the identification of systemically relevant companies (e.g. market share) will vary by risk assumption service.

The metrics for size will relate to the market share of a company or group of companies versus the industry in order to determine the extent to which the market is diversified. Data for such metrics and those described below could be developed from various public and proprietary sources, including, but not limited to:

- Annual Statements filed with state insurance departments and other publicly available financial information
- Statistical agencies and data compilers
- National Association of Insurance Commissioners databases
- Functional Regulators

Proposed Rule 12 CFR Part 1310 provides that interconnected companies of a certain size could be systemically risky if they lack substitutes to replace their risk assumption capacity. The lack of substitutes can be measured by measuring the concentration of systemically important risk

assumption services by company. Such a measurement could serve as an indicator of the capabilities of other companies to fill the void of a particular risk capacity in the event of a financial distress. As was previously noted, an historical perspective of company failures in the insurance industry illustrates that there have been substitutes with other companies able to assume the risk of distressed companies. Therefore, the spread of market share will serve as an indicator of companies available to provide substitutes for failed companies.

#### *Interconnectedness Metrics: Development of Metrics*

The US insurance industry is interlinked with the financial services industry through a number of sources. Examples are:

1. Risk assumption services provided to the insurance companies through reinsurers, foreign and domestic (e.g. mortality risk in excess of a company's risk management limit).
2. Risk assumption services provided by the non-insurance financial services companies to the insurance industry, (e.g. hedging of financial risk, catastrophe bonds).
3. The interconnectedness of the insurance industry when part of a financial services group.
4. The interconnectedness of a U.S. insurance company that is owned by a foreign financial services company.
5. The insurance industry as a lender to the US economy (e.g. through its purchase of corporate bonds).
6. The interconnectedness of risk assumption services external to the insurance industry when part of a financial services group.

While the impact of these linkages can be evaluated in part through measurement of the concentration of risk held by each counterparty with an insurance company, including transactions between affiliates, the impact of various mitigating elements such as the presence of required statutory capital, conservative reserves and other types of collateral need to be taken into account.

There are a number of metrics that can be applied to measure whether a high level of interconnectedness exists:

- The percentage of business reinsured to a third party, foreign and domestic.
- The percentage of total insurance and investment risk hedges outstanding with each non-insurance financial services company.
- The extent of an insurance company's transactions with its affiliates, including non-insurance financial services firms and foreign owners of the insurance company.
- The diversification of the insurance company as an investor in the general economy and the extent of reliance of the economy on insurers as providers of credit.
- The percentage of risk assumption services undertaken by a non-insurance financial services company unregulated by a functional insurance regulator relative to the aggregate industry exposure.

The attachment describes for each of these items potential metrics to measure interconnectedness. From these measurements, if a company or companies are considered to be

systemically risky based on size and interconnectedness, their vulnerability to financial distress should be assessed.

### *Measurement of Vulnerability*

Those companies identified as being systemically risky should be evaluated for financial strength and the completeness of their functional regulation and the rigor of their risk management processes. This process will be a complex undertaking involving quantitative and qualitative analyses based on public as well as non-public/proprietary information.

Once these explicit metrics are applied and appropriate stress testing performed, companies failing to achieve appropriate targeted levels, if any, should become subject to enhanced levels of scrutiny involving additional stress testing. These stress tests should further evaluate the likelihood of the company to fail (to inform decision-makers' appropriate actions with respect to possible intervention). Metrics utilized in these situations will depend upon the profile of the company identified and its relationship to its affiliates. However, we recommend that common to any analysis would be the evaluation of the company's risk management practices and the effectiveness of functional regulation as applicable to it.

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We hope these comments help your efforts in the rulemaking process. We would be pleased to answer any questions you have related to this letter. If you have any questions, please contact Tina Getachew, the Academy's Senior Analyst for Risk Management and Financial Reporting issues (202-223-8196; [Getachew@actuary.org](mailto:Getachew@actuary.org)).

Sincerely,



Jesse M. Schwartz  
Chair, Financial Regulatory Reform Task Force  
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CC: Michael McRaith, Director, Federal Insurance Office, Department of Treasury  
Christopher Ledoux, Federal Insurance Office, Department of Treasury

## Proposed Process for Developing and Implementing Insurance Industry Systemic Risk Metrics for Nonbank Financial Companies

Identify Risk Assumption Services	Metrics
<p>1. Life Insurance, for example:</p> <ul style="list-style-type: none"> <li>a. Individual insurance</li> <li>b. Group insurance</li> </ul>	<p>Market Share by line of business:                      New face amount underwritten as a percentage of new industry face amount underwritten</p> <p>In force amount of face amount (net amount at risk) as a percentage of industry amount of insurance in force</p> <p>Life insurance liabilities as a percentage of industry life insurance liabilities</p>
<p>2. Health and Disability Insurance, for example:</p> <ul style="list-style-type: none"> <li>a. Medical care</li> <li>b. Long-term care</li> <li>c. Disability Income</li> </ul>	<p>Market Share by line of business:                      New premium underwritten as a percentage of total industry new premium underwritten</p> <p>Total premium written as a percentage of total industry premium written</p> <p>Health insurance liabilities as a percentage of industry health insurance liabilities</p>
<p>3. Longevity (e.g., Guaranteed payment of retirement income for life)</p> <ul style="list-style-type: none"> <li>a. Individual</li> <li>b. Group</li> </ul>	<p>Market Share by line of business:                      New monthly retirement income insured as a percentage of industry new monthly retirement income</p> <p>Monthly retirement income in force as a percentage of total industry monthly retirement income</p> <p>Retirement income liabilities as a percentage of total industry retirement income liabilities.</p>
<p>4. Sudden/Accidental Events (Property &amp; Casualty Coverages)</p> <ul style="list-style-type: none"> <li>a. Title Insurance</li> <li>b. Catastrophe Risk</li> <li>c. Medical Malpractice</li> <li>d. Financial Guaranty</li> <li>e. Credit Insurance</li> <li>f. Mortgage Insurance</li> <li>g. Aviation/Satellite</li> <li>h. Nuclear</li> <li>i. Auto</li> <li>j. Property</li> </ul>	<p>Measurement of market concentration by line of business by the Herfindahl-Hirschman Index</p> <p>Market Share by line of business:                      Premiums written as a percentage of industry premiums written</p> <p>Liabilities as a percentage of total industry liabilities</p>
<p>5. Guaranteed Policy Investment Returns, for example:</p> <ul style="list-style-type: none"> <li>a. Life Insurance</li> <li>b. Individual Deferred Annuities</li> <li>c. Pension Accumulation Products</li> </ul>	<p>Market share by line of business:                      Guaranteed policy values as a percentage of industry guaranteed policy values.</p>
<p>6. Reinsurance</p>	<p>Market share by Reinsurer by line of business, for example:                      Face amount (net amount at risk) of new insurance assumed as a percentage of industry face amount assumed                      Face amount of reinsurance in force reinsured as a percentage of industry reinsured face amount in force                      Catastrophe exposure reinsured as a percentage of industry reinsurance catastrophe exposure</p>

Categories of Interconnectedness	Metrics
1. Risk assumption services provided to the insurance industry through the reinsurance industry, e.g. life insurance	<p>Percentage of new and in force insurance reinsured by line of business as a percentage of total face amount.</p> <p>Percentage of loss reserves reinsured as a percentage of total loss reserves.</p> <p>Percentage of catastrophe liabilities reinsured as a percentage of total liabilities.</p>
2. Risk assumption services provided by the non-insurance financial services industry to the insurance industry, e.g. hedging of risk	Risk exposure applicable to each counterparty in relation to hedging transactions for insurance risk liability and investment positions as a percentage of the aggregate corporate risk exposure of the insurance company
3. Interconnectedness when part of a financial services conglomerate	The percentage of the volume of investment and reinsurance transactions between the insurance company and affiliates, incl. investments, loans, hedging transactions as a percentage of total transactions.
4. Interconnectedness when owned by a foreign financial services company	The percentage of the volume of investment and reinsurance transactions between the insurance company and affiliates, incl. investments, loans, hedging transaction as a percentage of total transactions.
5. The insurance industry as a lender to the general economy	The percentage distribution of investments, including bonds and mortgages among borrowers.
6. The interconnectedness of risk assumption services provided external to the insurance industry when part of a financial services conglomerate	The percentage of risk assumption services undertaken by financial services companies unregulated by the insurance regulator in comparison to the total risk assumption services provided by the conglomerate.