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The Modernization of Insurance Company Solvency Regulation in the U.S.: Issues and Implications

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Abstract: Since its inception in mid-1800s, insurance regulation in the U.S. has continued to evolve in response to changing circumstances and the opportunity to take advantage of new methods and technologies. Important developments in insurance regulatory policies and practices at an international level, including Solvency II, as well as the recent financial crisis, have caused U.S. regulators to reconsider their current system of solvency supervision of insurance companies. This reconsideration is embodied in the NAIC's Solvency Modernization Initiative (SMI) which, arguably, is the most significant program of regulatory reform in the U.S. that has been attempted since the early 1990s. The establishment of the Federal Insurance Office (FIO) by the Dodd-Frank Act in 2010 has added further impetus to the NAIC's efforts as the FIO has been charged with recommending reforms to the U.S. insurance regulatory system as well as representing the U.S. in international negotiations on insurance regulatory matters. This paper evaluates the five principal components of the NAIC's SMI: 1) capital requirements; 2) governance and risk management; 3) group supervision; 4) statutory accounting and financial reporting; and 5) reinsurance. It also examines the NAIC's risk-focused surveillance framework in addition to other aspects of the modernization of insurance regulations. Key issues arising from the effort to modernize insurance regulation are explored as well as its implications for regulators, insurance companies and other stakeholders.

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Keywords: Insurance Regulation, Solvency, Solvency Modernization Initiative, Solvency II, Federal Insurance Office.

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Introduction

The supervision of insurance company solvency is an important area of financial regulation in most countries including the United States. Indeed, the concern about the financial condition of insurance companies was a principal motivator behind the establishment of insurance regulation in the U.S. in the mid 1800s (Klein, 1995). Since its inception, insurance regulation in the U.S. has continued to evolve in response to changing circumstances and the opportunity to take advantage of new methods and technologies. Regulators have improved their policies, methods and tools as the insurance industry has evolved to meet the changing needs of its customers for insurance products and risk management solutions. While this has been an ongoing process, there have been periods of substantial reforms in reaction to crises or other developments that expose problems that have required some form of regulatory response.

Important developments in insurance regulatory policies and practices at an international level, including Solvency II, as well as the recent financial crisis, have caused U.S. regulators to reconsider their current system of solvency supervision of insurance companies.[1] This reconsideration is embodied in the NAIC's Solvency Modernization Initiative (SMI) which, arguably, is the most significant program of regulatory reform in the U.S. that has been attempted since the early 1990s. The establishment of the Federal Insurance Office (FIO) in 2010 has added further impetus to the NAIC's efforts. The objective of this paper is to examine the "modernization" of insurance solvency regulation in the U.S., the issues it raises, and its implications for regulators and insurance companies.[2]

The next section of paper provides an overview of how insurance solvency regulation is structured in the U.S. and discusses the internal and external forces that influence U.S. regulatory policies. The paper then moves on to describe and evaluate the

[1] The principal document guiding Solvency II is known as the "The Solvency II Directive" (see European Commission, 2009).

[2] This paper draws heavily on research conducted for the National Association of Mutual Insurance Companies (NAMIC) that is reflected in Klein (2012). However, the views expressed in this paper are solely those of the author and do not necessarily reflect the views of NAMIC or any other organization.

five principal components of the NAIC's SMI: 1) capital requirements; 2) governance and risk management; 3) group supervision; 4) statutory accounting and financial reporting; and 5) reinsurance. This is followed by an assessment of the NAIC's risk-focused surveillance framework that, technically, is not a component of the SMI but nonetheless is a critical element of U.S. regulators' efforts to develop a more efficient and effective solvency framework. Other aspects of insurance regulation that are related to FIO's mandate and study of the modernization of insurance regulation also are briefly discussed. The paper concludes with a summary of the key findings in each of these areas and their implications for the future of insurance regulation in the U.S.

II. Insurance Solvency Regulation in the U.S.

A. Structure

Unlike other countries, insurance regulation is conducted at the state level rather than at the national level in the U.S.[3] This has been the case since its inception and was reaffirmed by the Congress when it enacted the McCarran-Ferguson Act (MFA) in 1945. The MFA delegated the principal responsibility for regulating insurance to the states except in instances where the Congress chooses to intervene and establish federal authority over certain areas of insurance or firms involved in the business of insurance. In such instances, the federal government may establish standards that the states are required to enforce or exempt certain areas or firms from state regulation and may or may not delegate their supervision to a federal agency.

Each state (as well as the District of Columbia and the five U.S. territories) has a chief regulatory official who is responsible for supervising insurance companies and markets within the state. The regulatory framework for insurance extends to all levels and branches of government, including the state executive branch, the legislature and the courts that all play a role in insurance regulation. Because insurance is regulated at the state level, the National Association of Insurance Commissioners (NAIC) plays an important role in the U.S. system. The NAIC, whose members are the insurance commissioners in each state, functions in an advisory capacity as well as a service

[3] In a few countries insurance regulatory responsibilities are shared by national and state/provincial authorities.

organization for state insurance departments. The NAIC is leading the effort to develop initiatives that seek to "modernize" solvency regulation – the Solvency Modernization Initiative (SMI) – and is likely to provide certain services to support their implementation.[4]

A paramount objective of insurance regulation is to protect policyholders and society in general against excessive insurer insolvency risk. In principle, regulators should seek to limit the number of insolvencies and the cost of insolvencies within certain parameters. There are both costs and benefits to regulation and these must be balanced in developing an optimal set of regulatory policies. Too little regulation could result in an excessive number of insolvencies and undermine consumer confidence in the insurance industry. On the other hand, excessive regulation could impose unnecessary and inefficient constraints on insurance companies leading to higher costs or reduced benefits for consumers. Further, when and where regulators do choose to intervene, they should employ the most efficient remedies available to achieve the best possible outcomes at the lowest cost.

Insurance regulators seek to ensure that insurance companies can meet their obligations to policyholders by requiring them to adhere to specific financial standards and maintain their financial risk with certain bounds.[5] Market discipline is supported through the requirement that insurance companies file public financial reports that can be used by insurance buyers to gain a better understanding of insurers' financial condition. Beyond the provision for public financial reporting, insurance companies must receive regulatory approval to transact business in each state. Through this process, regulators impose and enforce a number of requirements with which insurers must comply in order to obtain and maintain a license to do business. States laws and regulations set minimum capital requirements, set limits on certain financial transactions and types of investments, and provide detailed rules on insurer financial reporting. Regulators are authorized to examine insurers and, if necessary, take remedial actions to secure the interests of policyholders. Various aspects of insurers' operations are encompassed by solvency

[4] A summary description of the SMI and its status (as of November 30, 2011) can be found in NAIC (2011).
[5] Klein (2005) provides a detailed review of the system for insurance solvency regulation in the U.S.

regulation, including but not limited to capitalization, investment practices, reinsurance transactions, reserving, and management.

There are two levels of oversight in the U.S. regulatory system. At the first level, the domiciliary regulator of an insurance company is given the principal responsibility for supervising its financial condition. At a second level, an insurer is required to comply with the laws and regulations of other states in which it does business. Typically, non-domiciliary regulators do not intervene in the financial affairs of an insurance company but may do so if its domiciliary regulator fails to take appropriate action to address perceived solvency problems. This secondary level of oversight is supported by a peer review process that is conducted by the NAIC for insurers deemed to be "nationally significant."

These two levels of solvency monitoring may be viewed as redundant by some and possibly an aspect of U.S. regulation that the FIO may criticize. However, the states would likely argue, with good reason, that these dual layers of oversight are critical in a state-based system of regulation. They help to ensure that if a domiciliary regulator of an insurance company is failing to do his/her job properly, that other states in which that company does business can step in and take measures to protect the policyholders in their respective jurisdictions. Moreover, there is a high degree of uniformity and coordination among the states in the area of solvency regulation. Unfortunately, the same cannot be said for the "market regulation" (e.g., rates, policy forms, conduct, etc.) where there can be considerable differences among the states. The state licensing process for insurance companies and agents can also cumbersome and is the subject of considerable criticism by the industry. These issues are discussed further in Section IX.

Regulators scrutinize insurers' financial reports and other information to determine whether they are in compliance with state statutes and regulations or if there are issues or problems with an insurer's financial condition or risk. Regulators use a number of automated tools in their analysis of insurers' financial information such as the Financial Analysis Solvency Tools (FAST) system developed by the NAIC. The FAST consists of several applications including the Insurance Regulatory Information System (IRIS), Scoring System results, and Insurer Profiles, as well as financial data on insurance

companies for which these applications are used.[6] Regulators can customize these applications to meet their specific needs as well as augment them with their own applications. The NAIC also has developed a Financial Analysis Handbook to guide departmental analysts in how to use the data, processes and tools available to them to conduct a more thorough and informative assessment of the financial condition, prospective risk and complexity of each insurer on a quarterly basis. If such an analysis uncovers evidence of non-compliance or raises other solvency concerns, regulators can request additional information from an insurer, conduct further investigation of issues raised, or call a targeted examination that focuses on certain aspects of an insurer's operation. This analysis process occurs alongside the periodic risk-focused examinations that are conducted every 3-5 years for every insurance company.

In this kind of system one might infer two sets of "tripwires" that can result in subsequent regulatory investigation and potentially remedial intervention. The first tripwire is non-compliance with statutory/regulatory requirements. One example of this would be if an insurer's actual capital fell below its capital requirement. As discussed further below, U.S. insurers are subject to both fixed and risk-based capital requirements. Under the RBC system, four levels of company and regulatory action are specified that become progressively more severe as an insurer's actual capital falls farther below its RBC requirement.

The second set of tripwires allow for greater regulatory discretion based on both quantitative metrics (e.g., financial ratio tests) and more qualitative assessments of an insurer's financial condition and risk. For example, if an insurer has several financial ratios that are outside the bounds of established parameters then this could trigger further regulatory investigation. The assessment of other aspects of insurers' financial structure, transactions or activities could be more qualitative in nature. For instance, regulators may become concerned if an insurer expands into risky lines of business for which it has no experience or there are other indicators that it may not be managed safely or competently. Such concerns could also lead to further regulatory investigation. Over time, the NAIC and state regulators have been increasing their emphasis on this type of regulatory assessment in the development of the risk-focused surveillance framework.

[6] Klein (2009) provides a review of financial monitoring systems used by U.S. insurance regulators.

In evaluating the U.S. system for insurance solvency regulation, it is important to consider its governing philosophy. In looking at the various insurance regulatory systems across the world, one can find two basic approaches: 1) a prescriptive or "rules-based" approach; and 2) a "principles-based" approach. Historically, U.S. regulators have generally employed a rules-based approach. Insurers are subject to an extensive set of laws, regulations, rules and other measures that govern their financial structure and transactions. The primary focus had been on insurers' compliance with these rules rather than on how well they are being managed and their overall financial risk. However, over time, the U.S. is moving toward adopting more principles in its insurance regulatory system and increasing its emphasis on assessing insurers' financial risk and how well it being managed. This evolution is likely to be further enhanced with the implementation of reforms contemplated under the SMI. Hence, the U.S. is moving towards a hybrid approach that encompasses both rules and principles.[7] In contrast, the EU under Solvency II is placing a stronger emphasis on principles than rules.[8] Also, it should be noted that in the U.S. it appears that principles-based methods are being layered on top of existing rules while in the EU a number of specific rules are being replaced by principles to guide regulatory actions and company compliance with regulatory standards.

B. Forces Influencing U.S. Regulation

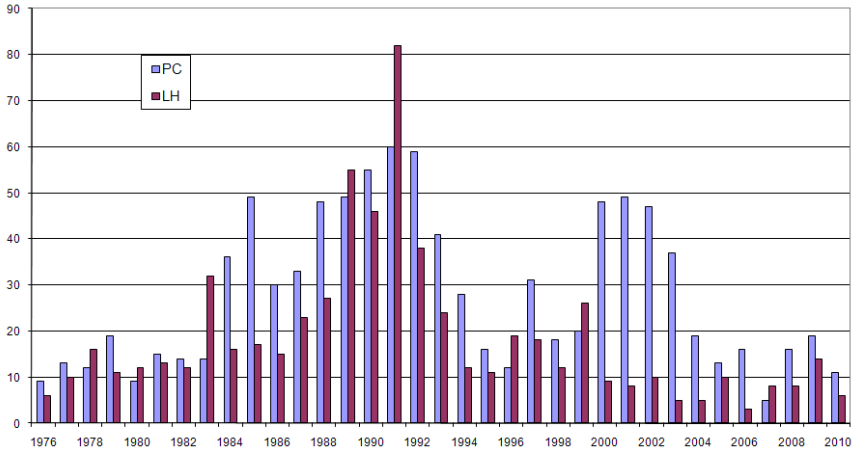
It appears that both internal and external forces are likely motivating U.S. regulators interest in modernizing the system for insurance company solvency oversight. A review of the history of U.S. insurance regulation reveals episodes of particularly significant regulators reforms adopted over a relatively short-period of time. These episodes appear to be triggered by industry developments and problems that reveal deficiencies in regulatory systems. A good example is the financial regulatory reforms that were adopted in the late 1980s and early 1990s. These reforms were prompted by a

[7] Vaughan (2009) argues that "the optimal structure of insurance supervision is likely to be a combination of a rules-based and principles-based approach."

[8] See, for example, Eling, Klein and Schmit (2009) for an assessment and comparison of U.S. and EU insurance financial regulation. Work on Solvency II continues as the European Commission and the European Insurance and the European Insurance and Occupational Pensions Authority (EIOPA) address outstanding issues and finalize the technical specifications that will underlie Solvency II standards and practices. Associated reports and technical documents are available at http://ec.europa.eu/internal_market/insurance/solvency/index_en.htm and https://eiopa.europa.eu/.

large increase in the number and cost of property-liability and life-health insurance company insolvencies than began in the mid-1980s and peaked in 1991 as shown in Figure 1.

Figure 1
Insurance Company Impairments
Property-Casualty & Life-Health Insurers



Source: A.M. Best

Regulators reacted by adopting a number of improvements to existing methods and policies which include risk-based capital requirements, enhancements to early warning systems, improved examination procedures, limitations on certain asset classes, the development of a financial regulation standards and accreditation program, and the codification of statutory accounting principles, among other changes. Regulators would have likely undertaken many of these reforms without external prodding but an intensive Congressional investigation added further impetus to the NAIC's efforts and state adoption of the reforms that were developed.

Since that period, further enhancements to the U.S. regulatory have occurred at a slower pace until the NAIC embarked on the SMI in 2008. It appears that the principal motivation behind the SMI is U.S. regulator's desire to employ their perception of what constitutes best practices informed by but not dictated by regulatory developments in other countries such as the EU. The recent financial crisis which began in 2007 but rapidly accelerated in 2008 has added further impetus to the NAIC's program for regulatory reforms. The financial crisis also reignited federal interest in insurance regulation and contributed to the establishment of the Federal Insurance Office (FIO) in 2010.

The NAIC's SMI includes a review of international developments regarding insurance supervision, banking supervision, and international accounting standards and their potential use in U.S. insurance regulation (NAIC, 2011a). Why are U.S. regulators interested in international regulatory developments? One reason could be that U.S. regulators are interested in looking at international developments to identify potential improvements in U.S. regulation that they believe have inherent merit. A second reason could be that they might feel some pressure to adopt certain methods or practices to meet international standards or forestall conflicts over "regulatory equivalency." A third reason might be that they wish to avoid further federal intrusions into state regulation by adopting reforms that are reasonably consistent with international standards and address any perceived deficiencies in the current regulatory system. In a perfect world, U.S. regulators would like prefer to adhere to their own internal compass as to what reforms make sense but these external pressures could compel them to go beyond what they believe is necessary and appropriate for the U.S. system.

In 2010, the Congress created the FIO as one of the provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Its primary responsibilities are to advise the Secretary of the Treasury on insurance issues, consult with the states on insurance matters of national and international importance, and monitor all aspects of the insurance industry. It also has the authority to identify issues or gaps in the regulation of insurance that could contribute to a systemic crisis and to make recommendations to the Financial Stability Oversight Council as to whether an insurer should be subject to supervision by the Board of Governors of the Federal Reserve. It will also play a substantial role in coordinating federal efforts and policies on international insurance issues.

As part of its mandate, the FIO was charged with conducting a study of insurance regulation that will cover a number of topics. These topics include:

1. Systemic risk regulation with respect to insurance;

2. Capital standards and the relationship between capital allocation and liabilities, including standards related to liquidity and duration risk;

3. Consumer protection for insurance products and practices, including the gaps in state regulation and access by traditionally underserved communities, minorities, and low and moderate-income persons to affordable insurance products;

4. The degree of national uniformity of state insurance regulation, including the identification of, and methods for assessing, excessive, duplicative or outdated insurance regulation or regulatory licensing process;

5. The regulation of insurance companies and affiliates on a consolidated basis;

6. International coordination of insurance regulation;

7. The costs and benefits of potential federal regulation of insurance across various lines of insurance (except health insurance);

8. The feasibility of regulating only certain lines of insurance at the federal level, while leaving other lines of insurance to be regulated at the state level;

9. The ability of any potential federal regulator to eliminate or minimize regulatory arbitrage;

10. The impact that developments in the regulation of insurance in foreign jurisdictions might have on the potential federal regulation of insurance;

11. The ability of any potential federal regulation or federal regulators to provide robust consumer protection for policyholder, and:

12. The potential consequences of subjecting insurance companies to a federal resolution authority, including the effects of any federal resolution authority.

Several of these areas relate directly to solvency regulation while others have potential implications for solvency regulation to the extent that they concern the overall system for insurance regulation in the U.S. The areas most pertinent to solvency regulation are: 1) systemic risk regulation; 2) capital standards; 3) the regulation of insurance companies and affiliates on a consolidated basis; 4) international coordination of insurance regulation; and 5) the potential consequences of subjecting insurance companies to a federal resolution authority. The extent to which the NAIC's SMI may or may not fully address any concerns that the FIO may have in these areas is discussed below.

III. Capital Standards

A. Capital Standard in the U.S.

The first component of the SMI deals with capital requirements and this is no surprise as they are a subject of considerable attention in both insurance and bank regulation. Insurer capital requirements can be determined in several different ways. Fixed capital requirements were common were common for insurance companies prior to the 1990s. Since then, most of the major countries have moved towards some form of volume-based or risk-based approach to determining insurance company capital standards (ChandraShekar and Warrier, 2007; Eling, Klein and Schmit, 2009).[9] These approaches typically utilize simple or complex formulas or internal or standard models to determine the amount of capital an insurer should hold for regulatory purposes.

In the U.S., insurers are subject to fixed capital requirements set by each state as well as uniform risk-based capital (RBC) standards based on complex formulas developed by the NAIC that have been adopted by every state.[10] Different formulas for property-casualty, health and life insurance companies have been developed. In the RBC formulas, selected factors are multiplied times various accounting values (for example, assets, liabilities, or premiums) to produce RBC charges or amounts for each item. Stochastic modeling is only used in certain elements of the Life RBC formula.[11] In the U.S. system, risk charges are summed into several categories and then a covariance adjustment is performed to reflect the assumed independence of certain risks. The basic formula for property-casualty insurers is shown below.

R0: Investments in affiliates
R1: Fixed-income assets (interest rate and credit risk)
R2: Equity assets (market value risk)
R3: Credit (risk associated with reinsurance recoverables)
R4: Loss reserves (risk associated with adverse loss development)
R5: Premiums (risks of underpricing and rapid growth)

$$RBC = R0 + \sqrt{R1^2 + R2^2 + R3^2 + R4^2 + R5^2}$$

[9] Also see Holzmuller (2009) for a comparison and critique of capital standards in the U.S., the EU (Solvency II), and Switzerland.
[10] An insurer is required to have capital that meets or exceeds the higher of the two standards.
[11] Model-based components are used to assess the interest rate risk associated with fixed annuities and the market risk, interest rate, and expense-recovery risk of variable annuities.

Asset risks are accounted for in the R1, R2, and R3 components and insurance risks are accounted for in the R4 and R5 components. The R0 component is intended to reflect the risk of default by affiliates and off-balance-sheet items, such as derivative instruments and contingent liabilities. R1 accounts for the primary risks associated with fixed-income investments – the risk of default (i.e., credit risk) and the risk of declines in asset values due to interest rate changes. In calculating R1 charges, assets are categorized by "credit quality," and the factors applied vary inversely with quality. The R2 component sets charges for the risks associated with the declining value of other investments, such as stocks or real estate, and assigns selected factors to account for these risks. The R3 component accounts for the credit risk associated with reinsurance recoverables and other receivables. The R4 component reflects the risk associated with adverse loss reserve development and different factors are assigned for different lines of business based on their historical loss development patterns. Finally, the R5 component accounts for "underwriting risk," which is the risk that premiums collected in a given year may not be sufficient to cover the corresponding claims that arise from the business that is written. Different factors are also assigned in the R5 calculation for different lines of business based on historical loss ratios.

The covariance adjustment presumes that the R1 through R5 risks are independent but that the R0 risk is correlated with the other risks. This approach was adopted likely due to its simplicity even though in reality one would expect that correlation between these different risk categories would vary (Butsic, 1993). The NAIC recognizes this issue and is revising its approach to more accurately represent the degree of correlation between risks and to allow for correlations between 0 and 1.

The RBC formulas for life and health insurance companies contain some of the same components found in the property-casualty RBC formula but there are some differences to account for risks particular to these sectors. The components of the life RBC formula include C0 (asset risk-affiliates), C1 (asset risk-other), C2 (insurance risk), C3 (interest rate risk, health credit risk, market risk), C4 (business risk). The components of the health formula are H0 (asset risk-affiliates, H1 (asset risk-other), H2 (underwriting risk), H3 (credit risk), and H4 (business risk).

An insurer's RBC is compared to its actual total adjusted capital (TAC) to determine whether any company or regulatory action is required. Certain company and regulatory actions are prescribed if a company's TAC falls below its RBC. Four RBC levels for company and regulatory action have been established, with more strict action required for companies as they reach lower levels (see Table 1). When an insurer's TAC is between the highest level (company action level) and the second-highest level (regulatory action level), it is required to explain its financial condition and how it proposes to correct its capital deficiency to regulators. When an insurer's TAC drops below the second level, regulators are required to examine the insurer and institute corrective action, if necessary. When an insurer's TAC falls between the third level (authorized control level) and fourth level (mandatory control level), regulators are authorized to rehabilitate or liquidate the company. If an insurer's TAC drops below the lowest threshold, regulators are required to seize control of the insurer.

When the NAIC developed and adopted its RBC formulas in 1992, there was a great deal of concern that if insurers' RBC levels were set too high it could force unwarranted company and regulatory actions. The primary objective at the time was to institute a new and better approach to determine insurers' regulatory capital even if it was imperfect.

Table 1
RBC Action Levels

Action Level	Percent of ACL	Requirements
Company Action	200	Company must file plan.
Regulatory Action	150	Commissioner must examine insurer.
Authorized Control	100	Commissioner authorized to seize insurer.
Mandatory Control	70	Commissioner required to seize insurer.

Indeed, for most insurers their RBC was significantly higher than the fixed capital requirements that they were required to meet in the various states. That said, the vast majority of insurers have capital that greatly exceeds their company action RBC level. As revealed in Figures 2 and 3, most insurance companies considerably exceed their RBC requirements. In 2010, only 60 property-casualty insurers fell below the company action level. One hundred insurers had RBC ratios between 200-300 percent; 968 insurers had ratios between 400-1,000 percent and 1,353 insurers had ratios that exceeded 1,000

percent. This pattern is even more pronounced for life-health companies – in 2010 only 10 life-health insurers had RBC ratios that fell below the company action level. Twelve life-health insurers had RBC ratios between 200-300 percent; 318 insurers had ratios between 400-1,000 percent and 427 insurers had ratios that exceeded 1,000 percent. Whether regulators have set the bar too low for insurers' regulatory capital requirements is a question for debate. Indeed, an equally if not more important question is how accurately the RBC formulas measure insurers' financial risk as a basis for determining their capital requirement. Less accurate formulas will lead to more "false positives" (i.e., adequately capitalized companies deemed to be deficient) the higher RBC levels are set.

There have been several empirical studies of the accuracy of U.S. RBC ratios in "predicting" which insurers will fail or become insolvent. These studies have generally concluded that RBC has minimal predictive power when compared with other measures of insurers' financial risk.[12] While these studies raise questions about the accuracy of U.S. RBC in terms of measuring the risk profile of an insurer, they do not constitute an explicit test of its effectiveness in achieving its regulatory objectives. Further empirical analysis of the effectiveness of the U.S. RBC system would be helpful in evaluating its stringency as well as its accuracy in identifying insurers that warrant some form of regulatory intervention, ideally before they become insolvent and impose bankruptcy costs on guaranty associations and unsecured creditors. Ultimately, the effectiveness of the current U.S. approach to capital standards and any proposed changes should be evaluated in terms of a set of clear of objectives for these standards.

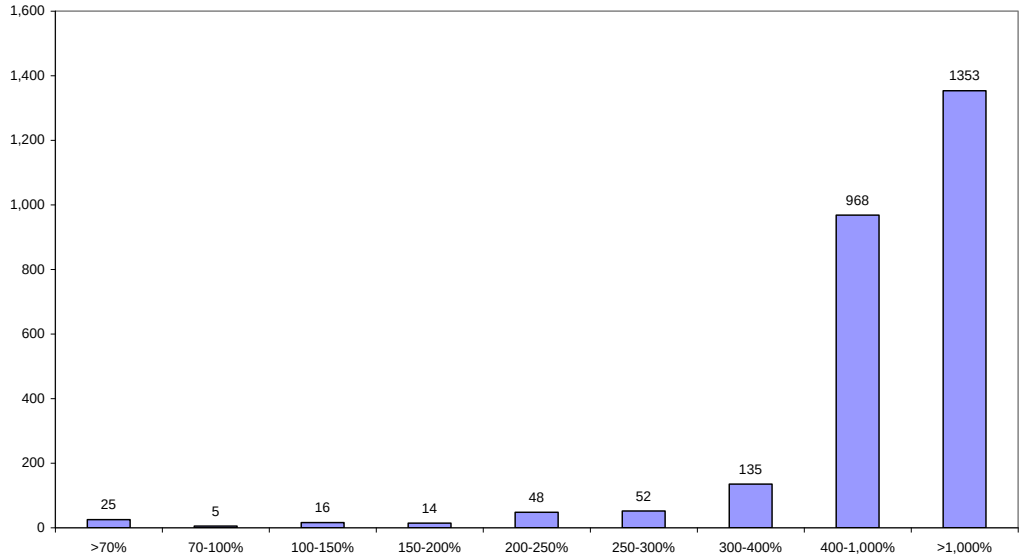
B. Capital Standards in the EU

As noted earlier, regulatory developments in the EU and other countries are being closely scrutinized by U.S. regulators in developing its SMI and this includes capital standards. The capital standards being developed under Solvency II in the EU have received particular attention. When the EU began working on a common set of capital standards it was able to take advantage of the advances in risk analysis and modeling that have occurred since the NAIC developed its RBC standards. A primary goal of Solvency

[12] See Cummins, Harrington and Klein (1995), Grace, Harrington and Klein (1998), Cummins, Grace, and Phillips (1999) and Pottier and Sommer (2002).

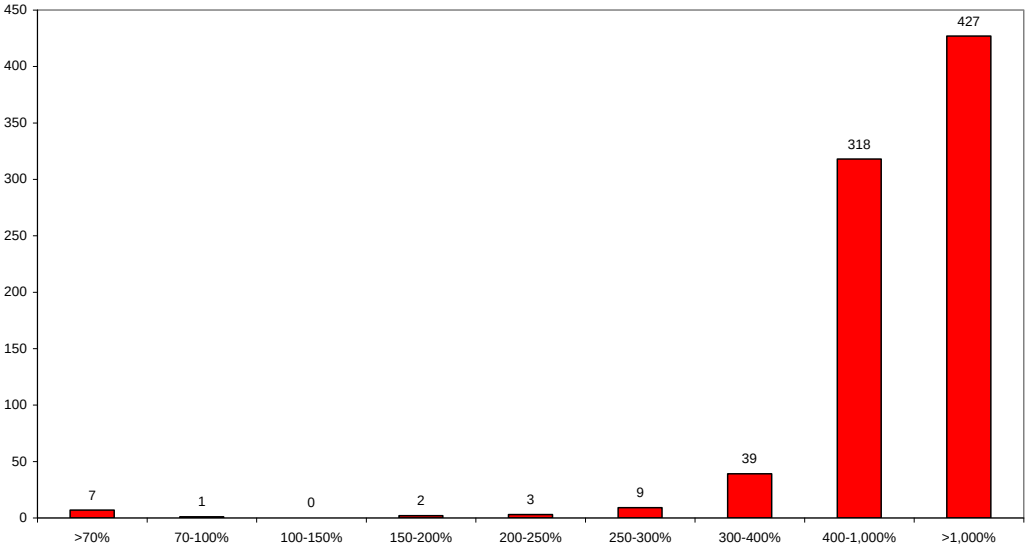
II is to develop and implement harmonized risk-based capital standards across the EU. The intent is to take an enterprise risk-management (ERM) approach toward capital standards that will provide an integrated solvency framework that covers all significant risk categories and their interdependencies (Eling, Klein and Schmit, 2009).

Figure 2
Distribution of Insurers by Property-Casualty Insurers
by TAC/RBC: 2010



Source: NAIC database, author's calculations.

Figure 3
Distribution of Insurers by Life-Health Insurers
by TAC/RBC: 2010



Source: NAIC database; author's calculations.

Based on the Solvency II directives that have been adopted to date, there will be two levels of regulatory capital requirements. The first level is the minimum capital requirement (MCR) which is the minimum amount of capital that an insurer would be required to hold below which policyholders would be subject to an "unacceptable" level of risk (in the view of regulators). An insurer that fails to meet its MCR would be subject to immediate regulatory intervention. The second level is the solvency capital requirement (SCR), also known as "target capital," that is intended to represent the economic capital an insurer needs to hold that will allow it meet its claims obligations within a prescribed safety level. The economic capital for a given insurer will be derived by using a value-at-risk (VaR) calibration at a 99.5 percent confidence level over a one-year time horizon.[13] The SCR will encompass all risk categories that are viewed as significant by regulators, including insurance, market, credit, and operational risk as well as risk mitigation techniques employed by insurers (e.g., reinsurance and securitization). An insurer that falls between its MCR and SCR may be subject to regulatory action based on regulators' determination of whether corrective steps are warranted. The MCR would be calculated using a simplified modular approach calibrated at an 85 percent (VaR) confidence level subject to a corridor of 25-45 percent of an insurer's SCR and a monetary minimum floor.

EU regulators are considering the use of both standard and internal models or some combination of both to calculate the MCR and the SCR. In the standard model, the capital charges for various risk classes would be calculated using a combination of stress tests, scenarios, and factors. The standard model includes underwriting risk, market risk, credit default risk, and operational risk, based on aggregations of sub-risks, such as market interest rate risk and non-life underwriting catastrophe risk. Capital charges are determined using a bottom-up approach, where the capital required to meet the 95.5 percent VaR target is first calculated for each sub-risk, then aggregated to compute a total company SCR using a prescribed correlation matrix.

The EU has been subjecting both standard models and internal models to a series of quantitative tests to assess their performance and potential impact on insurers (EIOPA, 2011). These tests have revealed potential issues and flaws in these models as well as

[13] This is essentially equivalent to limiting an insurer's probability of default to 0.5 percent.

generated regulatory and industry comments. As a consequence, there have been adjustments to the technical specifications for determining insurers' capital requirements – a process which is taking longer to conclude then originally contemplated. Based on current projections, the final standards will be adopted in 2012, implemented in 2013, and their enforcement will begin in 2014.

C. Assessment of U.S. Capital Standards

Arguably, the U.S. approach to determining risk-based capital requirements reflects both the heights and the limits to what can be achieved with a formula-based method. When first adopted, the U.S. system was considered relatively advanced when compared with how regulatory capital requirements were determined in other countries and was seen as a significant improvement over fixed capital requirements. However, over time, using static formulas to determine how much capital an insurer hold seems increasingly outmoded in view of the improvements that have occurred in dynamic financial analysis (DFA) and the use of models to assess and manage insurers' financial risk. Some academics such as Holzmuller (2009) and Cummins and Phillips (2009) have criticized the reliance on static formulas in the U.S. system and its failure to make more extensive use of stochastic modeling and scenario testing.

Cummins and Phillips (2009) argue that the U.S. system is out of date when compared with how capital requirements will be determined under Solvency II and the Swiss Solvency Test (SST). They observe that the U.S. system is static and ratio-based whereas the European systems are dynamic and model-based. They further contend that U.S. RBC takes a "one-size fits all" approach contrary to Solvency II and the SST which can be geared to individual company characteristics.

Additionally, while not all risks can be quantified, the U.S. RBC formula omits some that can be, such as operational and catastrophe risks, using methods currently available. The omission of catastrophe risk from the U.S. RBC formula has been a matter of considerable attention, but the NAIC has been working on a catastrophe component to the RBC requirements for property-casualty insurers for several years and hopes to adopt a framework for such a change in 2012.

A model-based approach to determining regulatory capital requirements for insurance companies could prove to be superior to a formula-based approach. A model-based approach has the desirable attributes of compelling insurers to take a more forward-looking and comprehensive view of their financial risk and determining a regulatory capital amount that is better tailored to fit a particular insurer's specific needs and circumstances. Many insurers are already performing capital modeling and incorporating ERM practices in their risk management activities. Hence, a model-based approach would seem most consistent with the regulatory goal of employing best practices to ensure that regulatory policies and standards are effective and efficient.

The NAIC is currently considering changes to its methods for determining insurers' capital requirements under its SMI. In 2011, the Capital Adequacy (E) Task Force indicated that it will continue to evaluate RBC formulas, factors and methodology, concentrating first on priority areas and the method to combine risk charges (i.e., the "square root formula"). Its priority areas include the following:

- Introduction of an explicit property-casualty catastrophe risk charge;
- Increased granularity in the asset and investment risk charges (the C-1 factor review); and
- Refinement of the credit risk charge for reinsurance recoverables.

The NAIC has generally rejected the idea of an economic capital requirement akin to the SCR under Solvency II. At present, the NAIC is only considering adding additional modeling to its formulas where it believes a factor based-approach is ineffective. The only specific area where this has been identified outside of existing modeling required for the life RBC formula is a catastrophe component for the property-casualty RBC formula. While some have suggested that the NAIC could develop and test a standard model as an alternative or adjunct to the current RBC formulas it does not appear that U.S. regulators are taking any steps in that direction (Cummins and Phillips, 2009).[14]

[14] Cummins and Phillips (2009) recommend that U.S. insurers should be allowed to use internal models but that a standard model should also be run for every insurer and that an insurer should be permitted to hold capital less than that indicated by the standard model only if thoroughly justified by the insurer. This approach would be complemented by a "model evaluation office" to assist regulators in reviewing in vetting internal models.

U.S. regulators should give more serious consideration to the broader use of stochastic modeling and scenario testing in assessing insurance companies' capital adequacy. At the very least, the NAIC could experiment with the development of a standard model that employs stochastic methods and scenario testing for assessing those risks for which these methods are appropriate. Developing and testing such a model would yield insights into whether it would prove superior to the current RBC formula for determining insurers' minimum capital requirements. Testing and alternative calibrations of a standard model also could be performed to balance regulatory safety objectives with any additional resource and capital burdens placed on insurers. Consideration could also be given to exempting certain insurers from a requirement that they use a model-based approach to determining their regulatory capital based on their size and scope of business. That said, the adequacy of U.S. capital standards cannot be fully assessed in isolation but must be evaluated in the context of the entire system for solvency oversight and financial regulation.

Although the changes to U.S. RBC are relatively modest when compared with the changes to capital standards being developed under Solvency II, they are likely to have some effect on U.S. insurer's capital requirements. RBC requirements would be expected to increase due to the more refined approach that will be used to account for interdependencies between risk categories. Also, adding a catastrophe component to the RBC calculation for property-casualty companies could be significant for some insurers. That said, given that most insurers hold amounts of capital that considerably exceed their current RBC requirements it is not clear that many will be compelled to substantially increase their capital levels for regulatory purposes.

It is uncertain whether the FIO will be fully satisfied with the changes to U.S. RBC that are currently being contemplated. As noted above, U.S. regulators are comfortable with current system with the changes being considered. The insurance industry also appears to be generally against the idea of making radical changes to U.S. capital standards, a view that is understandable given that most insurers have capital levels that far exceed their RBC requirements. Nonetheless, U.S. regulators' resistance to the broader use of financial modeling in determining insurers' capital needs for regulatory purposes may be viewed as falling short of what would constitute best

practices in this area. At the same time, if the FIO's views are closely aligned with that of state regulators and the industry then it may conclude that U.S. capital standards are adequate.

It is true that the U.S. RBC does not explicitly consider liquidity risk. As noted above, the life RBC formula does contain model-based components that are used to assess the interest rate risk associated with fixed annuities and the market risk, interest rate, and expense-recovery risk of variable annuities. Under Solvency II, EU capital standards will use a simplified formula approach to account for liquidity risk; asset-liability matching (ALM) will be addressed through scenario testing. If U.S. regulators were to adopt a model-based approach to capital standards they could incorporate components for liquidity and duration risk. However, it should be noted that these risks are addressed in other elements of U.S. solvency regulation. The FAST system includes ratios for leverage and liquidity. U.S. life insurers are also required to file actuarial opinions that employ cash flow testing to determine asset adequacy. Further enhancements to the RBC C-3 component for life insurers will employ more extensive use of cash flow testing under various scenarios. If the FIO determines that further improvements are needed with respect to standards relating to liquidity and duration risk then it will be interesting to see whether it believes these can be accomplished using the mechanisms that are already in place or whether it sees the need for creating separate mechanisms that will address these risks.

IV. Governance and Risk Management

Regulators in many countries, including the U.S. and the EU, are gaining an increasing appreciation of the limitations of capital requirements and other quantitative regulations and measures aimed at limiting insurers' financial risk.[15] This is reflected in Pillar II of Solvency II which focuses on supervisory review of insurers' corporate governance and risk management systems. The International Association of Insurance Supervisors (IAIS) also has developed core principles relating to "suitability", corporate governance and risk management, and internal controls (IAIS, 2003). In view of these

[15] The importance of the qualitative elements of the financial supervision of insurance companies is discussed in Sharma (2002) and Ashby, Sharma, and McDonnel (2003).

developments and their own recognition of the limitations of quantitative regulations, U.S. regulators have taken steps to enhance their qualitative assessment of insurers' risk levels and risk management. An important component of the NAIC's SMI is the development of principles for corporate governance and an "own solvency and risk assessment" (ORSA) proposal.

Historically, U.S. regulators had tended to place much greater emphasis on quantitative regulations and financial ratios than qualitative analysis. Most of their attention was focused on capital requirements (especially with the adoption of RBC standards in the early 1990s), early warning systems, and financial examinations. The early warning systems are based on quantitative ratios derived from insurers' financial statements. Financial examinations and analysis were focused on determining whether insurers' financial statements were accurate and insurers' compliance with quantitative regulations (e.g., percentage limits on certain types of assets). Insurers are also required to file a management's discussion and analysis report but, historically, these reports were used primarily by insurance company managers to explain anomalies in their financial statements rather than to present forward-looking business plans and discuss a company's risks and how they were being managed.

Beginning in the 1990s and accelerating over the last decade, U.S. insurance regulators have sought to increase their use of qualitative assessments of insurers' financial condition and risk profiles. Examples include increasing emphasis on risk-focused surveillance and the use of various sources of qualitative information to augment quantitative reports. This information includes financial strength ratings, SEC reports, media articles, and communications with rate and market conduct analysts. In theory, these information sources enable financial regulators to develop a better understanding of how well an insurer is managing its risk and/or alert them to adverse developments in a company's performance before such developments were revealed in its financial statement. How well regulators are using this information is a matter that warrants further investigation and discussion.

Under Pillar II of Solvency II, the EU is placing significant emphasis on enhancing the use of qualitative measures to augment the quantitative measures under Pillar I. The premise underlying Pillar II is that the risks recognized by quantitative

models under Pillar I must be managed with appropriate processes and decisions in the context of a comprehensive risk-management system. A key element of Pillar II is the supervisory review process. It involves the appraisal of the strategies, processes, and reporting procedures established by the insurer as well as the risks the insurer faces or may face and its ability to assess these risks. Regulators must also evaluate the adequacy of an insurer's methods and practices to identify possible events or future changes in economic conditions that could have unfavorable effects on its overall financial position (Eling, Klein and Schmit, 2009).

Hence, a principal focus of the supervisory review process is an insurer's corporate governance structure. It can be divided into four key functions: 1) risk management; 2) actuarial analysis; 3) internal audits, and 4) internal controls. Risk management encompasses underwriting and reserving, asset-liability management, investments, liquidity, and concentration/diversification of risks. The actuarial function comprises the methodologies and procedures to assess the sufficiency and uncertainty of technical reserves among other areas. Internal auditing is an independent and objective consulting activity designed to evaluate and improve the effectiveness of a firm's risk management, control and governance processes. Internal controls are designed to ensure the effectiveness of a firm's operations with respect to its risk, the availability and reliability of its information, and regulatory compliance.

Pillar II requires every insurer to conduct its "own solvency and risk assessment" (ORSA). This includes a regular assessment of an insurer's solvency needs and how it is addressing those needs going forward. In such an assessment, an insurer would be expected to highlight areas where its assessment deviates significantly from its SCR assumptions. ORSA also requires insurers to implement appropriate processes for identifying and quantifying their risks in a coherent framework. Insurers will further need to demonstrate that their assessments are integrated into their strategic decision-making process. As a result of this process, a regulator might require an insurer to hold more capital than its SCR.

Corporate governance and risk management are important components of the NAIC's SMI. The NAIC's Corporate Governance (EX) Working Group issued a consultation paper on these topics and solicited comments from interested parties (NAIC,

2009). It has defined corporate governance as "a framework of rules and practices by which a board of directors ensures accountability, fairness, and transparency in an insurer's relationship with all of its stakeholders." The paper recognizes that, historically, U.S. regulators have only set basic requirements for insurance companies in this area, as corporate governance has been viewed as a company responsibility determined by corporate law. At the same time, due to changes in the economic environment and the move towards some aspects of a principles-based system, the NAIC believes that additional information may be needed to articulate regulators' expectations concerning corporate governance.

The paper presents a detailed set of principles that are summarized by Klein (2012). Industry representative expressed significant concerns about how the concepts and principles discussed in the paper might actually be implemented. A consistent theme in the industry's comments was that corporate governance is currently addressed in a number of regulations and reporting requirements and that adding a new layer of regulations could be redundant and burdensome. In response to these comments, it appears that the NAIC is backing off from developing extensive "new" corporate governance regulations (at least for time being) and looking at how existing regulations can be utilized and potentially enhanced to effectively achieve the objectives articulated in the consultation paper.[16]

One vehicle discussed in the paper is clearly moving forward – this is a requirement that insurers perform their "own risk and solvency assessment" (ORSA) to document its risk management activities and controls. An initial ORSA proposal was issued in February 2011 and received extensive industry comments. The industry's concerns were that what was initially proposed would be very burdensome for insurers and require them to conduct analyses that were not in synch with their existing ERM practices and the different approaches that they use. As a consequence, a revised ORSA manual has been adopted for further consideration that would provide considerably more flexibility to both regulators and insurers in terms of how this report would be structured and used (see NAIC, 2011a).

[16] In December 2012 the NAIC adopted a document entitled "Existing U.S. Corporate Governance Requirements" which reflects its attempt to consider current regulations before adopting new regulations regarding corporate governance.

Key features of the ORSA manual are summarized here. According to the manual, "the ORSA is essentially an internal assessment of the risks associated with an insurer's current business plan, and the sufficiency of capital resources to support those risks. The manual goes on to assert two primary goals of the ORSA:

1. To foster an effective level of enterprise risk management at all insurers, through which each insurer identifies and quantifies its material and relevant risks, using techniques that are appropriate to the nature, scale and complexity of the insurer's risks, in a manner that is adequate to support risk and capital decisions; and

2. To provide a group-level perspective on risk and capital, as a supplement to the existing legal entity view.

An insurer that is subject to an ORSA requirement will be expected to conduct an ORSA to assess the adequacy of its risk management and current and future solvency position, internally document its processes and results, and provide a high-level summary report annually to its domiciliary regulator, if requested. The ORSA prepared and filed by an insurer would have three major sections: 1) a description of its risk management policy; 2) quantitative measurements of its risk exposure in normal and stressed environments; and 3) a prospective solvency assessment. The ORSA proposal goes on to outline detailed requirements for each section.

It is difficult to argue with the proposition that effective regulation requires both the use of quantitative as well as qualitative methods. Although the risk-focused surveillance process already requires regulators to assess the corporate governance and risk management functions of insurers, U.S. regulators could give more attention to this area in recognition of its importance. It is reasonable to expect that most insurance companies should have adequate corporate governance and risk management systems in place, but some may not. Hence, regulators need to have some process in place to determine the adequacy of insurers' corporate governance and risk management systems. The debate centers on whether there are already adequate regulatory measures in place to ensure that insurers are properly managing their financial risk and that regulators have all the tools they need to conduct effective qualitative analysis of insurers' risks and their management of those risks.

The need for additional corporate governance standards warrants further study. It would seem prudent to perform a detailed analysis of the proposed corporate standards and determine the extent to which these standards could be enforced through existing regulations. Such an analysis might indicate that existing regulations are not as extensive or specific as the proposed corporate governance standards. This could lead to a reassessment as to the reasonableness and necessity of the proposed standards and a discussion over the extent to which existing regulations and regulatory tools should be enhanced to achieve a reasonable set of goals and outcomes with respect to corporate governance. Such a discussion could be further informed by a detailed study of past insurer failures and the extent to which inadequate corporate governance contributed to these failures.

It appears that the most recent ORSA proposal reflects an attempt to address many of the concerns expressed by industry representatives with regards to the initial proposal. The manual (in its current form) would seem to offer insurers much more flexibility in terms of how the prepare their ORSA report. It also provides an exemption for small insurers and groups. A domiciliary commissioner could still require an insurer or group that met the exemption criteria to file an ORSA at his or her discretion based on special circumstances.

In the author's opinion, an ORSA requirement has considerable merit and it is very likely that some form of such a requirement will be adopted. Cummins and Phillips (2009) also concluded that the U.S. regulatory system needs to systematically incorporate qualitative factors, provide incentives for improved risk management, and introduce an ORSA process. While it is true that regulators are now expected to conduct an assessment of an insurer's risks and risk management in financial examinations, these examinations generally occur only every 3-5 years. An ORSA requirement would provide a basis for further risk assessments of insurers by department financial analysts between their on-site examinations that could include the evaluation of new risks or issues that might emerge after an insurer's examination. Although a final version of an ORSA has not yet been adopted by the NAIC, based on its current direction it would appear to provide regulators with a valuable new tool in conducting risks assessments of insurers. What will be achieved with this new tool will depend greatly on how regulators use it. Indeed, the

effectiveness of the full scope of the qualitative elements of regulatory supervision hinges on the motivation and capacity of regulators to use all of the tools available to them. Depending on how an ORSA requirement if finalized and enforced, it is likely that many insurers will be required to file an ORSA with their domiciliary regulator.

Interestingly, it appears that the ORSA requirement that will be adopted by the NAIC will be less prescriptive than the ORSA requirement that is being developed by the EU. Whether this will be an issue with the EU or the FIO is unclear. It is clear that the U.S. insurers were strongly opposed to the more prescriptive ORSA requirement that was initially proposed by the NAIC. U.S. regulators may argue that the ORSA requirement that will be adopted will have sufficient specificity to achieve its intended objectives. Ultimately, the adequacy of any ORSA requirement either in the U.S. or the EU will need to be judged by how it is used and its effectiveness in encouraging insurers to exercise good risk management and prompting timely and appropriate regulatory interventions against insurers fail to do a good job in managing their financial risk.

V. Group Supervision

Group supervision is another area that has been marked for review under the NAIC's SMI. This review has received further impetus due to the problems experienced by some financial holding companies during the recent financial crisis, such as the American International Group (AIG). Although the insurance companies within the AIG group were not responsible for its financial problems (which were largely created by its investments subsidiaries), there is the concern that the non-insurance activities within financial groups could potentially have adverse effects on the insurance companies within these groups (Cummins and Weiss, 2010). Hence, regulators in the U.S. and other countries are taking a close look at group supervision to help ensure that there is a coordinated financial regulatory structure for groups which contain insurance companies and the financial condition of these companies are not compromised by the activities of their groups.

Historically, U.S. regulators have tended to focus their supervision on the individual insurance companies (i.e., legal entities) within a holding company structure rather than the holding company or group as a consolidated entity. This is likely due to

the fact that each insurance company must become licensed to do business in a particular state. U.S. regulators have not practiced group supervision in terms of a consolidated solvency assessment of a group or holding company structure. However, they do pay some attention to the relationships and transactions between insurance companies and other entities within a holding company structure and the financial condition of the entire holding company system.

Generally, the primary responsibility for the solvency regulation of an insurance company is delegated to its domiciliary state. If multiple insurance companies within a group are domiciled in one state then that state would be the primary solvency regulator for those companies. If multiple insurance companies within a group are based in different states, a "lead state" approach is taken with respect to their solvency regulation. The lead state acquires and maintains information on the entire holding company, is typically the state that analyzes the financial condition of the entire group, and works with the domestic regulators of each of the insurance legal entities in developing a coordinated strategy to deal with issues affecting the entire group. The NAIC also uses a "lead state" approach for financial examinations where a "coordinating state" works with other states in conducting a coordinated exam if this makes sense based on the structure of the group. The oversight of multiple insurance companies within the same group also occurs through the peer review process conducted by the NAIC for "nationally significant" companies.

The Insurance Holding Company Systems Model Laws and Regulations (IHC) serves as another vehicle by which the states assert some degree of regulation over the transactions between insurance companies under their jurisdiction and the company's affiliates and parent company. The IHC applies to any holding company structure which consists of two or more firms if at least one of the firms is an insurance company. Every insurer must file a registration statement with the insurance department of its home state. This statement must describe all of the relationships that exist and transactions that occur between the insurance company and its affiliated entities. A substantial amount of information must be provided about the controlling entity, including financial statements. The statement must be filed annually and updated during the year if there are any material changes.

The IHC also requires prior regulatory approval of any material transactions between an insurance company and its affiliates. Regulators review these transactions to ensure that they are fair and reasonable and will not undermine the solvency of the insurance company. For example, any dividends declared by the insurance company that exceed the greater of 10 percent of the company's surplus or the company's net gains from operations for the prior year are deemed to be "extraordinary" and are subject to prior regulatory approval. The purpose of this requirement is to ensure that the insurance company's assets are not being depleted by the group in a way that would harm its policyholders. It must be demonstrated that the insurance company will retain adequate surplus after the dividend payment is made in order to continue to support its obligations and operations.

The IHC also controls any proposed acquisition of an insurance company which is also subject to the review and approval of the company's home state. Regulators have the authority to review and evaluate the business plan, financing, and other matters involved in the transaction. This authority is triggered by any transaction in which 10 percent or more of the stock of the insurance company or its parent is being sold. Regulators want to ensure that any acquisition of an insurance company or material change to its ownership structure will not harm the interests of its policyholders.

Group supervision is also a major area of focus under Solvency II. The European Commission's proposals provide for a new model of group supervision which balances the traditional regulatory view of an insurance group as a collection of separate legal entities with an economic perspective which views the group as an integrated whole across which risks are pooled and diversified. The objective of these proposals is to protect the policyholders of European insurers from the risks associated with the wider group in which they reside, either due to the level of group connectivity or due to insufficient coverage of the group's insurance risks with readily transferable capital. Solvency II also recognizes the international scope of many European Economic Area (EEA) insurance groups and is constructing the system for group supervision accordingly. In effect, this means that Solvency II requires group supervision to be undertaken at both a European and a worldwide level.

While it appears that U.S. regulators believe that the current regulatory framework for group supervision has worked relatively well, they are reconsidering some aspects of this framework in light of the recent financial crisis and the continued evolution of the industry and regulatory practices at the international level. This led to formation of the Group Solvency Issues Working Group (GSIWG) which is charged with studying the current system for U.S. group supervision and recommending needed enhancements. Many enhancements have already been made and others that might ultimately be made can be inferred from NAIC documents pertaining to group supervision.[17]

As a general concept, the working group recommends the consideration of incorporating certain "prudential benefits" into the current group supervision regulatory framework that would employ a "windows and walls" approach. In particular, the working group recommends that regulatory "windows" into group operations be added while building upon rather than rejecting the existing regulatory "walls" designed to protect the insurance companies within a group. Beyond this general recommendation, the working group has made several specific recommendations that it believes will help to achieve the overall goal of improved group supervision.

First, the group recommends that effective communication arrangements should be established between all of the regulators associated with a group and its different entities. At a minimum, the regulator of any insurance company should be able to obtain information from the "primary regulator" whether that regulator is a state, federal agency, or an international authority. Memoranda of Understandings (MOUs) already exist between state insurance regulators and federal regulators. The working group believes that state participation should be coordinated on a similar national basis for sharing confidential information with international regulators. The working group has further proposed that if an insurance company is deemed to be in financial difficulty that the level of communication should be elevated from an "ask and answered" basis to

[17] See memorandum from Group Solvency Issues Working Group to Director Christina Urias, Chair of the Solvency Modernization Initiatives (EX) Task Force, "Report to Solvency Modernization Initiatives (EX) Task Force on Suggested "Windows and Walls" Approach for Regulation of United States Based Insurers Operating Within Corporate Groups, February 26, 2010 at http://www.naic.org/documents/index_smi_group_solvency_windows_and_walls.pdf

"proactive confidential communication." This means that steps would be taken to ensure that state regulators provide confidential notifications to federal and international regulators regarding troubled insurers and that this should occur on a proactive basis when the insurer is operating in a group with entities subject to federal or international oversight. Ideally, there would be a reciprocal mechanism that would encourage other functional and institutional regulators to share information on a similar basis for entities under their jurisdiction.

A second important recommendation of the working deals with supervisory colleges which also are an important element of Solvency II. It believes that supervisory colleges should be formally incorporated into the regular review processes of internationally active groups through enhancements to the IHC and regulatory best practices. These colleges provide a basis for sharing critical information and the channels of communication needed to deal with any group that is experiencing financial distress. In December 2010, the NAIC adopted revisions to the model holding company act that introduce supervisory colleges within the act and identify funding that can be used by U.S. regulators to participate in these colleges.

A third area addressed by the group concerns regulators' access to and collection of information. There is recognition that access to meaningful information about unregulated entities which include non-operating holding companies can present a challenge for all regulators. The working group believes the U.S. group solvency structure should be enhanced to provide broader access to information upstream regarding all holding company groups with regulated insurance entities and all affiliates. It may not be necessary to license holding companies if regulations can be used to establish a centralized, regular and confidential reporting mechanism by a holding company to provide information on all entities under its control.

The fourth element of group supervision discussed by the working group concerns enforcement measures. It believes that adequate regulatory tools should exist to protect an insurer and its policyholders if violations of reporting requirements occur. This could involve increasing penalties and strengthening other consequences if required information is not provided. Further, it believes that standards for transactions with

affiliates be clarified and strengthened as well as standards used to determine whether an entity is or is not in control of an insurance company.

The working group's most extensive set of recommendations deal with group capital assessment.[18] It recommends that the U.S. group supervision include a review and assessment of capital on a group basis in addition to retaining separate capital requirements for insurance companies operating within the group. The working group believes that this will not only help assess the risk of financial contagion with a group but will also place regulators in a better position to assess and participate in discussions of systemic risk involving the insurance sector.

The working group identified two potential objectives of group capital requirements. One objective would be to establish group capital as a common international requirement for regulatory triggers. However, it believes such an objective would be neither realistic nor practical given that international jurisdictions have differing objectives and approaches and there is significant variation in their required treatment of capital for regulatory action purposes. A second objective would be to allow earlier detection of group implications in order to avoid potential financial and reputational contagion to other entities within the group or to the group as a whole. The working group believes this is a more realistic and achievable objective for a group capital requirement using both a quantitative and qualitative approach. Further, this objective is currently within the jurisdiction of state regulators. Hence, the working group recommends that a group capital requirement be pursued to the extent that is confined to this second objective.

The GSIWG posed three different options for group capital assessment for comment and discussion. The first option was labeled as "Legal Entity RBC Adjustments." To comply with IAIS standards, the legal entity RBC would need to account for the risks of being part of a group, such as reputational, contagion, or enterprise risks that could have an adverse effect on an insurance company within the group. This approach would differ from group-level capital because the capital requirements would not require any capital calculations for any non-insurance companies

[18] See Group Solvency Issues (EX) Working Group Group, Capital Assessment Proposal (undated) at http://www.naic.org/documents/committees_ex_isftf_group_solvency_exposures_orsa.pdf

in the group. To perform such an analysis, U.S. regulators would need to obtain financial data from the group. The second option would be to add provisions to the Own Solvency and Risk Assessment (ORSA) to provide the information necessary to perform an analysis of the group's financial condition and risks. The third option would be to require a group capital calculation. After considering the three options, the GSIWG agreed to use the ORSA approach as the means to provide confidential information to U.S. regulators to enable them to regularly perform an analysis of the group's financial condition and risks through the review of the holding company system's target capital position. Under its proposed group capital assessment for ORSA, U.S. based insurance companies that are part of a holding company system would be required to provide a group capital assessment within their confidential ORSA.

The FIO's study lists three topics that are pertinent to group supervision: 1) systemic risk regulation; 2) the regulation of insurance companies and affiliates on a consolidated basis; 3) international coordination of insurance regulation. The NAIC SMI does not explicitly address systemic risk regulation but its discussion of group supervision recognizes that improvements in this area will also place regulators in a better position to assess and participate in discussions of systemic risk involving the insurance sector. The GSIWG's recommendations would also seem to significantly enhance U.S. regulators' coordination with international regulators to the extent that it concerns insurance groups. However, with respect to the regulation of insurance groups on a consolidated basis, the working group's recommendations may fall short of what the FIO believes is necessary. Specifically, the GSIWG has rejected the idea of requiring a group capital calculation. It does contemplate that an insurer's ORSA filing would provide information that would enable regulators to evaluate a group's financial condition and target capital position. Whether the FIO will consider this to be sufficient remains to be seen.

VI. Statutory Accounting and Financial Reporting

Currently, U.S. regulators use Statutory Accounting Principles (SAP) as the primary basis for financial reporting by insurance companies. Insurers are required to maintain records and file annual and quarterly financial statements with regulators in

accordance with statutory accounting principles that differ somewhat from Generally Accepted Accounting Principles (GAAP). Statutory accounting seeks to determine an insurer's ability to satisfy its obligations at all times, whereas GAAP measures the earnings of a company on a going-concern basis from period to period. Under SAP, most assets are valued conservatively and certain non-liquid assets, e.g., furniture and fixtures, are not admitted in the calculation of an insurer's surplus. Statutory rules also govern such areas as how insurers should establish reserves and claims and the conditions under which they can claim credit for reinsurance ceded.

Historically, the statutory accounting rules for insurance companies were generally similar among the states but there have been some differences. Prior to 2001, statutory accounting principles were not articulated in a way that consistently clarified their interpretation and application on a comprehensive basis. In 1994, the NAIC initiated a project to "codify" SAP so insurers, regulators, and independent auditors would have comprehensive statutory accounting guidance. The objective of the project was to achieve greater standardization in accounting guidelines across the states as well as provide definitions where they have been previously lacking.[19] This led to the NAIC's adoption of a Statement of Concepts to provide guidance on the codification project. It used GAAP as a general framework and addressed objectives exclusive to SAP. The aim is to take advantage of the extensive guidance available in GAAP when it is consistent with insurance regulatory objectives and provide comprehensive guidance for statutory principles which differ from GAAP.

Under the direction of The Codification of Statutory Accounting Principles Working Group, NAIC staff and independent consultants worked on a series of more than 100 issue papers that addressed the numerous technical accounting issues and which were subsequently adopted by the NAIC. The requirements contained in the issue papers by the working group and the NAIC effectively established a set of codified statutory accounting principles. Since the Codification first became effective in 2001, statutory accounting principles have continued to be updated and revised. Many of the changes made during that

[19]The NAIC publishes several references that provide some information on statutory reporting requirements: the Annual Statement Blanks; the Annual Statement Instructions; the Accounting Practices and Procedures Manual; and the Examiners Handbook. There are separate volumes of the annual statement and accounting practices materials for the different types of insurers.

time period are the result of the process that has been established that requires the NAIC to consider if changes should be made to SAP based on the results of the ongoing review of changes to U.S. GAAP. In performing such a review, the NAIC must determine if such changes should be adopted, adopted with modification, or rejected with respect to their inclusion in SAP.

Although U.S. regulators believe the current system for regulatory accounting has worked relatively well and continues to consider changes to SAP based on new GAAP rules, they have decided that there is a need to formulate a policy regarding the future of regulatory accounting. One important development that has prompted the NAIC to move in this direction is the fact that the IAIS and major jurisdictions (including the EU) are advocating International Financial Reporting Standards (IFRS) for regulatory purposes. The Financial Accounting Standards Board (FASB) also is looking at IFRS in considering potential changes to U.S. GAAP that would bring the two accounting systems into greater convergence. Hence, IFRS and how it is being used or advocated in various jurisdictions has received considerable attention in the NAIC discussions regarding the future of statutory accounting.

A detailed discussion of the developments in IFRS is beyond the scope of this paper but they are briefly summarized here. The IFRS are principles-based standards and interpretations codified in the framework for international accounting adopted by the International Accounting Standards Board (IASB). IFRS has been designed for general purpose financial statements using a principles-based approach allowing for the exercise of considerable judgment and discretion. U.S. GAAP is more prescriptive in its approach with more specific standards, comprehensive implementation guidance, and industry-specific interpretations. For U.S. and many non-U.S. companies, IFRS reflects a significant departure from U.S. GAAP. The new IFRS standards are generally more focused on objectives and principles and rely less on detailed rules and interpretations than U.S. GAAP. They are designed to answer one key question: Does a company's financial statement represent the economic reality underlying the transactions and events accounted for in the financial statement?[20] Consequently, the general view of IFRS has been that it utilizes principles that favor a fair-value-like or mark-to-market and mark-to-

[20] See Deloitte (2008)?

model methodologies as well as seeking to raise transparency to a new level through increased disclosure.

The development of IFRS for insurance companies has been divided into two phases. In Phase I, the IASB adopted an interim standard for insurance contracts to help EU insurers convert to IFRS by 2005. It also established a specific definition of insurance and reinsurance contracts, introduced several changes to the accounting for insurance contracts and required increased disclosure relating to future cash flows and risk exposures.

The Phase I standard for insurance contracts raised a number of issues and concerns which are being addressed in Phase II. In May 2007, the IASB issued a discussion paper, "Preliminary Views of Insurance Contracts," to initiate a formal public consultation process on changes that would be made to IFRS 4 and related IFRS provisions. In 2008, FASB and the IASB began working together on developing a common standard for insurance contracts. However, it should be noted that FASB and the IASB have differences of opinion on certain aspects of the accounting for insurance contracts. In June 2010, the IASB published an exposure draft titled "Insurance Contracts" for further public comment. In September 2010, FASB published its own discussion paper on insurance contracts that differs in some respects from the IASB proposal. Initially, the IASB expected to finalize its standard for insurance contracts in 2011 but the most recent IASB work plan indicates that its proposals will be re-exposed or a new review draft will be issued some time in 2012.

Because of the development of IFRS and changes to U.S. GAAP that may result from this development, U.S. regulators are playing close attention to IFRS in their reconsideration of statutory accounting and financial reporting. In 2010, U.S. regulators discussed potential policy decisions about the future of statutory accounting and the financial reporting system and identified three objectives:

- Document the purpose of statutory accounting in the insurance solvency regulation framework;

- Develop a policy position and recommendation regarding International Financial Reporting Standards (IFRS) and its inclusion in, or exclusion from the insurance solvency regulation framework; and

- Develop a policy position recommendation to address the regulatory impacts of non-regulatory uses of statutory financial statements.

Also in 2010, NAIC staff drafted a "Primary Considerations Document" to identify an array of policy options U.S. regulators might consider.[21] It was released for public comment and the ensuing discussions revealed two main concerns. One, the industry did not believe the NAIC should make a decision until the SEC made a decision on IFRS and also until completion of the IASB Insurance Contracts Project. Two, some regulators expressed concerns about relinquishing control to the IASB or FASB with respect to regulatory accounting. Consequently, the NAIC has decided to watch ongoing developments and defer further discussions and decisions until the IAIS insurance core principles for valuation are finalized and the IASB, FASB, and the SEC reach their decisions. That said, it is possible to draw some inferences from the discussion document to gain some perspective on what the NAIC might do when these other activities are completed.

In April 2010, the Statutory Accounting and Financial Reporting Subgroup (SAFRSG) of the SMI (EX) Task Force highlighted three primary questions to address:

1. What should be the purpose of the regulatory accounting model?

2. Given that the IAIS and major jurisdictions are advocating the use of IFRS (possibly with modifications) for regulatory purposes, should the NAIC continue to maintain an entire codification of statutory accounting?

3. Should regulatory financial statements be utilized for public purposes or should a separate public financial filing be required?

In response to the first question, the Primary Considerations Document asserted the opinion that "the purpose of any accounting model should be to communicate relevant financial and nonfinancial information to users of financial statements that allows such users to make decisions on that information." The document delineates a number of primary points for considering the future of U.S. insurance regulatory accounting and other important considerations for statutory accounting. There are too many points to discuss here, but the background discussion in the document expresses views on the current U.S. system for regulatory accounting that provide some perspective

[21] See NAIC (2010).

on what the NAIC may ultimately conclude with respect to the future of statutory accounting. Given that regulators believe that the current system for U.S. insurance regulatory accounting has performed relatively well, it is difficult to conceive that they would ultimately support fundamental changes to this system. There is a greater likelihood that they will study changes in U.S. GAAP and IFRS and then determine those changes they believe are appropriate to adopt consistent with the underlying principles that govern statutory accounting.

With respect to the second question, given that U.S. regulators already consider changes to U.S. GAAP for inclusion in statutory accounting, if GAAP and IFRS converge in the future, any new GAAP/IFRS requirements would be evaluated under this same approach. Various options are listed in the document which could include freezing SAP without any changes, U.S. GAAP with statutory adjustments (essentially the current system), IFRS with statutory adjustments, IFRS for public companies and IFRS/GAAP with statutory adjustments for non-public companies, and IFRS without adjustments. In reviewing these options and the associated discussion, it is reasonable to surmise that U.S. regulators would prefer the second option, i.e., U.S. GAAP with statutory adjustments. This would mean that current SAP would be retained and then regulators would decide which changes to SAP that they would believe to be appropriate based on changes in U.S. GAAP and IFRS. Regulators would be taxed in terms of needing to consider what could be significant changes to U.S. GAAP and IFRS but they would likely prefer to take on this task rather than giving up their control over the system used for U.S. regulatory accounting. Subsequent discussions by the subgroup indicate that SAP and U.S. GAAP will likely converge in some areas but U.S. regulators will retain their prerogative to determine what changes they will adopt for statutory accounting.

In regards to the third question, three scenarios were identified: 1) "current process"; 2) "middle of the continuum"; and 3) "most changes." The current process would mean using the NAIC financial statement for both regulatory purposes and public reporting. The second scenario would entail using the NAIC financial statement for public reporting and other statutory exhibits and schedules would be confined to insurer's RBC filings which are confidential. The third scenario would constitute using a different report for public purposes and a separate confidential financial statement that would be

accessible only to regulators. Based on the discussions of these scenarios, the most likely outcome is that U.S. regulators will continue to use the current process. There is no evidence that there is a pressing public need for financial information on insurance companies that is not already well served by the current system. Hence, it seems very unlikely that U.S. regulators would recommend a different approach unless someone comes forward with a convincing argument that the current system is inadequate in addressing the public need for financial information on insurance companies.

Whether the states reluctance to adopt IFRS in their entirety will become an issue with regulators in other countries is uncertain. In a perfect world, insurance companies would be subject to the same accounting standards regardless of where they are domiciled or do business. However, the world is not perfect and U.S. regulators have good reason to be cautious about adopting international accounting standards without applying their discretion as to what makes most sense in the U.S. context. Ultimately, the degree of convergence of SAP and U.S. GAAP will likely receive more attention than the convergence of SAP with IFRS.

VII. Reinsurance

The principal issue in the U.S. regarding the regulation of reinsurance has been the different treatment of domestic versus foreign reinsurers in granting credit for reinsurance recoverables. This has been an issue that predates the SMI but was incorporated into the SMI in recognition of its importance and the fact that work was already underway to revise the historical approach to granting credit for reinsurance. Under this approach, primary insurers are allowed "full credit" for reinsurance placed with reinsurers domiciled and regulated in the U.S. and some "approved" foreign insurers that deposit funds in U.S. financial institutions according to regulatory collateral requirements. Historically, the U.S statutes and regulations have required foreign reinsurers to post collateral equal to their gross liabilities to ceding U.S. insurers in addition to maintaining a trusteed surplus of not less than $20 million.

The disparate treatment of domestic and foreign reinsurers has been strongly criticized by foreign reinsurers and some U.S. regulators as inefficient and unfair. Critics of the historical U.S. approach argue that it makes no differentiation between financially

sound reinsurers that are subject to rigorous regulation in their host countries from financially weak reinsurers based in countries with less rigorous regulation. In effect, all U.S. reinsurers are treated in the same manner with no distinctions made with respect to their financial condition. There is also the concern that the U.S. approach was inconsistent with the global market for reinsurance. These issues prompted U.S. regulators to consider a different approach for determining the basis for granting credit for reinsurance transactions.

The historical approach for granting credit for reinsurance in the U.S. can be contrasted with the approach that is being developed in the EU. A significant development in the EU was the adoption of its Reinsurance Directive (RID) in 2005. The RID was subsequently adopted in the EU Solvency II Directive in 2009. The objective of the RID was to support reinsurance markets by establishing a single European market for reinsurance. Under the RID, each reinsurance company is subject to the supervision of its host country but allowed to operate freely throughout the EU without discrimination. This included the elimination of collateral requirements for EU reinsurers.

Both the RID and the Solvency II Directive deal with the matter of how reinsurers domiciled outside the European Economic Area (EEA) – labeled "third-country reinsurance companies" – will be treated. The Directive gives the European Commission the authority to decide whether a third country's solvency system, as applied to the reinsurance activities of the reinsurers based in the third country, is considered equivalent to that provided under Solvency II. When a third country's solvency regime is deemed equivalent, then EEA members must accord reinsurance transactions between EEA insurers and reinsurers in the third country the same treatment as transactions with EEA reinsurers. This means that EEA member states cannot require reinsurers based in third countries that are deemed to be equivalent to post deposits to cover their obligations to ceding insurers under their jurisdiction. However, if a third country is not deemed equivalent, then reinsurers domiciled in that country could be required to post collateral commensurate with their obligations to ceding insurers in EEA countries. The determination of whether a third-country reinsure would be required to post collateral will be left to the discretion of each EAA member state. EEA members could dictate

other regulatory requirements for non-equivalent third country reinsurers, such as rating standards, greater scrutiny, or notification/registration requirements.

In 2008, the NAIC adopted a proposal to establish a Reinsurance Regulatory Modernization Framework Proposal ("Reinsurance Framework") that was intended to address the concerns that had been raised about the approach to foreign reinsurance transactions that was in place at that time. Under this proposal, U.S. insurers would qualify as "national reinsurers" regulated by their home state. Non-U.S. reinsurers could qualify as "port of entry" (POE) reinsurers by using an eligible state as a port of entry. A POE reinsurer would be subject to oversight by its port of entry supervisor. Both national reinsurers and POE reinsurers would be subject to collateral requirements that would be scaled according to their financial strength ratings from approved rating organizations. U.S. and non-U.S. reinsurers that did not become qualified as national or POE reinsurers would remain subject to current state laws and regulations governing credit for reinsurance.

This new framework would have been a significant improvement relative to the current system, but problems arose in implementing it. Under the Framework, the NAIC had intended to create a Reinsurance Review Supervision Division (RRSD) that would be tasked with administering the new framework, including deciding which states would qualify as the supervisors for national and POE reinsurers. However, this approach was abandoned in favor of having the federal government assume this responsibility but proposed legislation to this effect was rejected the Congress. Congress choose a different path by enacting the Nonadmitted and Reinsurance Reform Act (NRRA) which prohibits a state from denying credit for reinsurance if the domiciliary state of the ceding insurer recognizes such credit and is either an NAIC-accredited state or has financial solvency requirements substantially similar to NAIC accreditation requirements.

As a consequence, several states have expressed an interest in going forward with their own collateral-reduction reforms. Indeed, several states including Florida, New York, New Jersey, and Indiana have already reduced collateral requirements for foreign reinsurers in an effort to reduce the cost of reinsurance for insurers based in their jurisdictions. To support these kinds of initiatives, the NAIC amended the Credit for Reinsurance Model Law and Regulation in 2010 to incorporate key elements of the

Reinsurance Framework. Guidance will also be provided to the Financial Regulation Standards and Accreditation (F) Committee concerning how these elements will be incorporated into the financial regulation standard and accreditation process. These actions were instigated to enable states to reduce their collateral requirements in a way that would not put them at odds with accreditation standards. At the same time, the NAIC has continued to further refine the Credit for Reinsurance Model Law and Regulation to establish a basis upon which all states could implement the key elements of the reinsurance framework.

It is helpful here to summarize the key provisions of the revised Credit for Reinsurance Model Law and Regulation in order to understand how collateral requirements will change as more states adopt these revisions into their own laws and regulations. Under the new provisions, domestic and foreign reinsurers can elect either to be subject to the same collateral requirements imposed in the prior model law or qualify as an "eligible insurer" that would be subject to reduced collateral requirements if they comply with number of criteria, of which several are identified here. First, the reinsurer must be domiciled and licensed to transact insurance or reinsurance in a "qualified jurisdiction" as determined by the commissioner. Second, the reinsurer must maintain minimum capital and surplus or its equivalent in an amount to be determined by the commissioner pursuant to regulation. Third, the reinsurer must maintain financial strength ratings from two or more rating agencies deemed acceptable by the commissioner pursuant to regulation.[22]

The collateral requirements for certified reinsurers that meet these and other criteria would be scaled according the ratings assigned to them by the commissioner. The commissioner must assign a rating to each certified reinsurer giving due consideration to the financial strength ratings that have been assigned to each reinsurer by rating agencies that are deemed acceptable to the commissioner. The highest rating a certified reinsurer can be assigned must correspond to the financial strength ratings it receives from approved rating organizations that are outlined in a table provided in the revised model regulation. The commissioner is compelled to use the lowest financial strength rating

[22] According to the revised model regulation, acceptable rating agencies include Standard and Poor's, Moody's, Fitch, A.M. Best, and "any other nationally recognized statistical rating organization.

received from an approved rating agency in determining the highest possible rating of a certified reinsurer. Table 2 shows the ratings that would be assigned to a certified reinsurer based on its financial strength ratings from the four principal rating agencies and the corresponding collateral requirement expressed as a percentage of the security that the reinsurer would be otherwise required to post to fully collateralize its obligations to ceding insurers.

Table 2
NAIC Rating Scale for Reinsurance Collateral Requirements

NAIC Rating	Security Required	Corresponding Financial Strength Ratings			
		Best	S&P	Moody's	Fitch
Secure - 1	0%	A++	AAA	Aaa	AAA
Secure - 2	10%	A+	AA+,AA,AA-	Aa1,Aa2,Aa3	AA+,AA,AA-
Secure - 3	20%	A	A+,A	A1,A2	A+,A
Secure - 4	50%	A-	A-	A3	A-
Secure - 5	75%	B++,B+	BBB+,BBB,BBB-	Baa1,Baa2,Baa3	BBB+,BBB,BBB-
Vulnerable - 6	100%	<B+	<BBB-	<Baa3	<BBB-

The revisions to the model law and regulation for credit for reinsurance are intended to allow a state to reduce its collateral requirements for foreign reinsurers consistent with key elements of the original proposed Reinsurance Framework. Although this should help individual states to achieve the principal goal of the Framework, arguably, it is not the more comprehensive system envisioned in the original proposal. Also, given that states will have the discretion as to whether to adopt the new regulation or not, this will likely decrease the degree of uniformity in the states' regulation of reinsurance. How many states will adopt the new regulation and how quickly they will do so are uncertain. Nevertheless, one could contend that it is the best that can be accomplished under a state-based system. Its ultimate effect on the market for reinsurance will depend on how many states adopt the revised regulations and how they are implemented. It is reasonable to expect that as more states reduce collateral requirements for foreign reinsurers, the cost of reinsurance for U.S. insurers should fall. This would also likely increase competition between U.S. reinsurers and foreign reinsurers.

It will be interesting to see how the EU and other countries will react to these changes in how the states treat foreign reinsurance transactions. It is likely that there will be considerable disappointment with the fact that reinsurance reforms will be determined

state by state and not uniformly adopted by all states. The Congress could have assisted the states in implementing a more uniform system by enacting the proposed legislation submitted by the NAIC but it chose not to do so. The EU may claim that it is developing a more uniform and "trade-friendly" approach by eliminating collateral requirements for reinsurers that are domiciled in countries that are deemed to have "equivalent" regulatory systems. At the same time, for reinsures domiciled in countries that are not deemed to have equivalent regulatory systems, EU member states will be allowed to use their own discretion as to what additional regulatory requirements will be imposed on these reinsurers.

VIII. Risk-Focused Surveillance

The NAIC's Risk-Focused Surveillance Framework is an essential element of its overall efforts to improve the system for U.S. solvency regulation even though it is not specifically identified as one of the major components of its SMI. The Framework, adopted in 2004, links four key regulatory functions and coordinates them in a more cohesive manner so that they are applied consistently by regulators (Vaughn, 2009). These four functions are: 1) risk-focused examinations; 2) off-site risk focused analysis; 3) examination of internal and external changes in an insurance company; and 4) an annual supervisory plan for each insurer developed by its domiciliary regulator. The NAIC has developed an Insurer Profile Summary (IPS) which is completed by the domiciliary regulator for each insurer and contains the summaries of its risk-focused examinations, financial analysis, the examination of its internal and external changes, its supervisory plan and other information relating to its financial condition. The IPS also provides a summary of an insurer's financial condition, risk profile, regulatory actions and plans, and other important information relevant to assessing its financial condition and risk (Vaughn, 2009).

Of the four principal functions outlined in this framework, risk-focused examinations have received the greatest attention and are the primary focus of this paper. In 2006, the NAIC adopted changes to the Financial Condition Examiners Handbook to do a better job of incorporating prospective risk assessment in identifying insurers that have or will likely encounter financial difficulty and concentrate on the capacity of an

insurer's managers to identify, evaluate and manage its risks. Earlier editions of the Handbook provided guidelines for a specific risk analysis (SRA) but they did not reflect the broader scope and enhanced procedures contained in the 2006 version of the Handbook. Between 2007 and 2009, financial examiners could elect to use either the SRA approach or the revised risk-focused examination approach. Starting in 2010, all states were required to use the revised approach for financial accreditation purposes. Some states did employ the new procedures prior to 2010 and now all states are required to use the revised approach to remain in compliance with the NAIC's financial accreditation standards.

The objective of a risk-focused examination is to extend and enhance the identification of risks inherent in an insurer's operations and to use this evaluation in developing a plan for its ongoing monitoring. This intention is to achieve continuous regulatory surveillance of an insurer and broaden the examination process beyond the risks present at the time of an examination to recognize risks that commence when the examination is conducted as well as consider risks that are anticipated to arise or extend past beyond the completion of the examination. Risk-focused examinations have several objectives, including:

- Identifying insurers that are in financial trouble or have a strong potential to get in financial trouble;
- Determining compliance with state statutes and regulations;
- Providing a clear methodology for assessing "residual risk" and how this assessment should be incorporated into examination procedures; and
- Encouraging the assessment of issues relevant to an insurer's risk management that go beyond financial reporting errors.

There should be several benefits to risk-focused examinations if they are conducted properly. One benefit should be a better allocation of regulatory resources to high-risk insurers and high-risk areas within an insurance company's operations. A second benefit should be examining high-risk or troubled insurers more frequently and subjecting them to more intensive ongoing monitoring. A third benefit should be putting more emphasis on the adequacy of an insurer's internal control structure and putting less

emphasis on verifying the accuracy of its financial reports.[23] This leads to a fourth potential benefit which is making better use of independent and internal auditors' reports rather than replicating audit tests they have already performed. In sum, a risk-focused approach should result in more efficient and effective examinations that contribute to an enhanced ongoing supervisory process that does a better job in identifying high-risk companies in more proactive manner.

There are seven phases in a risk-focused examination, which are:

1. Understanding the company and identifying the key functional activities to be reviewed;
2. Identifying and assessing the risks inherent in the company's activities;
3. Identifying and evaluating the company's risk mitigation strategies and controls;
4. Determining the residual risk for identified sub-activities and the overall residual risk by key activity;
5. Establishing and conducting the examination procedures that will be performed;
6. Updating the prioritization of the company and its supervisory plan; and
7. Drafting the examination report and management letter based on the findings of the examination.

Providing a detailed discussion of what is entailed in each phase is beyond the scope of this paper, so only the most important outcomes of the risk-focused examination process are highlighted here. One principal outcome is the determination of the "residual risks" associated with nine key activities of an insurer's operations: credit, market, pricing/underwriting, reserving, liquidity, operational, legal, strategic and reputational risks. Residual risk for a given sub-activity is determined by assessing the inherent risk associated with that activity, "subtracting" the effect of internal controls from the magnitude of each inherent risk and then applying professional judgment to adjust the results of this calculation to develop an overall residual risk assessment for each key activity. The overall residual risk for each key activity can be rated as high, moderate, or

[23] It should be notes that insurers are required to undergo annual CPA audits which perform the function of validating their account balances. As long as regulators can rely on these audits, then going through the same validation process in financial examinations is redundant although regulators may wish to reserve their prerogative verifying the accuracy of key items such as an insurer's claims reserves.

low. In turn, the residual risk determined for each activity can be used as a basis for determining where to focus examiner/analysts resources most efficiently.

Relevant material findings from a company's risk assessment and any other examination results are used to prioritize the company with regards to further monitoring and analysis and developing a supervisory plan for the company. Historically, an insurer's prioritization was based on periodic reviews by regulatory financial analysts conducted annually, quarterly or on a more frequent basis if deemed necessary. The new process still considers those reviews in prioritizing companies, but now it also uses the information that is derived from the risks assessed during the financial examination. The results of risk-based examinations provide further information with respect to additional factors that can be used in determining a company's priority level including its risk mitigation strategies, corporate governance, residual risks, and prospective risks.

In turn, a company's prioritization and any associated analysis can be used to establish a supervisory plan that will be used in future monitoring of the company. The supervisory plan is a confidential state-specific document that is included in the examination work papers for a company. Various elements of the plan may be discussed with a company's management as needed. A supervisory plan should include an overview of the current plan, a program for further monitoring and analysis, planned meetings with company management, and examination information relevant to the company's ongoing supervision. The development and effective implementation of a good supervisory plan for each company is very important given that on-site financial exams typically occur every five years, but can be scheduled more frequently (as well as targeted exams) if the circumstances warrant it.

In the final phase of the examination process, a public examination report is drafted and ultimately finalized after the examined company has had an opportunity to respond to its findings. It should provide an evaluation of the financial condition of the company and offer findings of fact with respect to any material issues or concerns uncovered in the examination. The examiners may also draft a management letter to convey results and observations made during the examination that are not deemed appropriate for the public examination report. A management letter would be retained as a confidential document as part of the examination work papers. It should be presented to

the company's board of directors or management and may serve as a basis for further discussion with company regarding any issues or concerns that regulators may have regarding its financial condition or risk management.

In theory, risk-focused examinations should be a major improvement in how regulators conduct financial exams and where they direct their focus. If performed properly, they should enable regulators to develop a much better understanding of a company's risks (both current and prospective) and how well they are managed. In turn, if regulators determine that a company has taken on an excessive amount of risk or if there are significant deficiencies in its risk management activities, they can be more proactive in taking remedial actions that could prevent the company from getting into severe financial distress or at least lower the cost of its impairment or bankruptcy if the problems cannot be remedied. Also, knowing that they will be subject to risk-focused exams should help to encourage companies to have good risk management programs and adequate internal controls to the extent that any are not otherwise motivated to do so.

While risk-focused examinations have the potential for being a much more efficient and informative vehicle for determining an insurer's risk and how well it is managing it, this potential can only be realized if these examinations are conducted appropriately. Hence, an important question is how well risk-focused examinations are being conducted in practice. This is a difficult question to answer due to the fact that most states have just begun completing their examinations using these processes beginning in 2010. Additionally, there is a lack of any comprehensive information on or assessments of actual examination practices that have been made public. However, some indications can be drawn from public documents issued by the NAIC. In March 2010, the NAIC commenced the Examination File Review Project which is conducted by NAIC staff. Although the results of this project have not been made public, two documents have been produced from which one might draw some inferences about what the NAIC staff found in conducting their reviews and suggestions that they have made to NAIC committees with respect to how the NAIC could help the states improve their examination processes.

The first document is a memo from the Chair of the Financial Condition (E) Committee in response to suggestions made by NAIC staff. The second document is a

memo from the Chief Financial Regulator's Forum on Risk-Focused Examination Reserving Issues. In general, both documents indicate that there is considerable room for improvement in terms of how many states are implementing the new exam procedures.[24] This should not be a surprise as many states did not begin conducting risk-focused exams until 2010. Undoubtedly, many examiners have to climb a steep "learning curve" in implementing the revised procedures. As they conduct more exams and become more familiar with the revised procedures, their performance should improve. Both documents recommend programs that could be instigated by the NAIC that would help the states advance more quickly in conducting risk-focused exams in the manner they were intended to be conducted.

The author also interviewed several companies that had recently undergone risk-focused exams. Some of the companies interviewed appeared to have a relatively positive experience in terms of how their exams were conducted. These companies expressed the view that the examiners were professional in how the approached the exams, were properly prepared, followed the new procedures as they were intended to be followed, and focused their attention on the most important areas relevant to each company. However, other companies interviewed had a less positive experience. Based on their experience, the examiners did not seem to be properly prepared to conduct the examination, failed to gain a thorough understanding of the companies' operations and risk profile, and spent too much time focusing on areas that were not material in terms of the companies' risk exposures. Because it was possible to conduct only a small number of interviews, it is difficult to identify the factors that might explain the differences in how well the states conducted risk-focused examinations. That said, based on the interviews, it could be surmised that orientation, training and experience are critical in ensuring that examiners have the capacity and the direction to conduct risk-focused exams in the way they are intended.

Here again, insurers may see considerable differences among the states in terms of their adoption and implementation of the various elements of the risk-focused surveillance framework. To some extent this is inevitable as the states vary in terms of

[24] This observation is consistent with the results of the interviews conducted by the author, discussed below.

their experience and sophistication in using the new methods. Even with close adherence to the guidelines promulgated by the NAIC, the states can exercise considerable discretion in terms of how conduct risk-focused surveillance. Over time it is reasonable to expect that there will be greater uniformity in this area but absolute uniformity is not likely to be achieved. Indeed, the states would probably argue that their ability exercise their discretion in risk-focused surveillance is a strength and not a weakness of state regulation. It also is not clear that we will see greater uniformity among EU member states in their implementation of the qualitative aspects of regulation under Pillar II of Solvency II.

If risk-focused exams are to fulfill their potential and the risk-focused surveillance framework is to achieve its objectives, then the NAIC will need to substantially step its support for these activities. If left on their own, the states might gradually improve their examination and analysis methods but this could take considerable time with inconsistent results. If, on the other hand, the NAIC targets the proper implementation of the risk-focused surveillance framework as a top priority and devotes the necessary resources to accomplish this, then the states could progress much more rapidly in achieving the full potential of this much more advanced approach to financial monitoring and analysis.

Ultimately, many insurers should benefit from risk-focused exams if they are conducted appropriately. At the very least, the length of time and the cost of financial examinations should be reduced. At the same time, some companies may find it necessary to improve their risk management processes in order to obtain favorable exam reports. Finally, some insurers may be subject to more intensive regulatory monitoring as a result of their risk-focused exams and required to remedy problems or issues revealed by their exams and subsequent monitoring and analysis. Overall, there should be more communication and interactions between regulators and insurers which some insurers may welcome but others may not.

IX. Other Issues

As noted above, the FIO's study encompasses a number of topics some of which are not directly tied to solvency regulation but, nonetheless, may be indirectly related to solvency regulation and/or also concern market regulation. Of these topics, the issues of

uniformity in state regulation and the pros and cons of partial or full federal regulation of insurance are very salient. Many contend that there is a considerable lack of uniformity in state regulation and this has been a subject of considerable criticism by insurers, brokers, and international regulators (Cooke and Skipper, 2009). In the view of the author, these criticisms are most warranted in the areas of company and producer licensing and market regulation. Insurers and producers are forced to go through what can be a costly process to become licensed in every state in which they do business (Regan, 2007; Pottier, 2010) While the NAIC created the National Insurance Producer Registry (NIPR) and the Uniform Certificate of Authority Application (UCAA) to help make it easier for insurers and producers to get licensed in the various states, insurers and producers do not believe these mechanisms have sufficiently reduced the hurdles and costs associated with obtaining state licenses. This is one reason why many large national insurers and multi-state producers favor some form of federal regulation of insurance, such an Optional Federal Charter (OFC) that would allow them to cross state lines without having to obtain a state license in every state in which they do business.

Many insurers also have expressed significant concerns about state rate and product regulation as well as state market conduct regulation. In the U.S., the extent and stringency of rate regulation varies significantly by line and by state. The lines subject to the greatest rate regulation are personal auto, homeowners, workers' compensation and health insurance. The reality is that in most states and markets, at a given point in time, regulators do not attempt to impose severe price constraints. The problem arises when strong cost pressures compel insurers to raise their prices and regulators resist market forces in an ill-fated attempt to ease the impact on consumers.[25] Inevitably, severe market distortions occur. Ultimately, insurance markets can be sucked into a "downward spiral" as the supply of private insurance evaporates and state mechanisms are forced to cover the gap. Rate suppression also can decrease incentives to reduce risk which can lead to rising claim costs which further increases pricing and market pressures. Together, these developments can create major crises in the cost and supply of insurance.

[25] Regulators may seek to suppress overall rate levels and/or compress rate differentials between low and high-risk insureds.

The argument for rate deregulation is fairly straight-forward. One would expect that prices in competitive insurance markets would be "actuarially-fair" and not excessive. Also, competition should drive insurers to be efficient and prices should gravitate to the lowest possible level necessary to cover the costs of an efficient insurer, including its cost of capital or a "fair" profit. If one accepts the notion that competitive prices are desirable and insurers will charge such prices in the absence of government intervention, then there is no need for rate regulation if insurance markets are competitive. The empirical research overwhelmingly confirms both the competitive nature of insurance markets and the lack of benefits from rate regulation (Harrington, 2002). Requiring or authorizing regulators to regulate rates invites political pressure and interference that can lead to the dismal scenario described above. Hence, the further deregulation of insurance pricing in the U.S. seems warranted and would enable regulators to allocate more resources to addressing true market failures. Unfortunately, there is no indication that the NAIC has targeted price deregulation as a major priority.

There is some economic basis for the regulation of insurance products, especially products purchased by individuals and small businesses. Because unsophisticated buyers may find it difficult to fully understand the provisions of an insurance contract, unscrupulous insurers could take advantage of this situation by selling contracts that may contain major gaps in coverage or other provisions that would be unduly detrimental to consumers. Hence, one could argue that there is justification for some level of insurance product regulation for unsophisticated buyers.

The issue then turns to how insurance products should be regulated. Currently, the states subject insurance policies purchased by individuals and small businesses to prior approval. While the prior approval of insurance policies is not a concern per se, the requirements that some states impose on insurance policies can be problematic. Some of these requirements appear very idiosyncratic and do not produce significant benefits for consumers. In addition, the review and approval process in some states can be lengthy and torturous for insurers. The NAIC has created mechanisms that attempt to make the process for submitting and obtaining approval of insurance products more efficient, but significant problems remain in the view of many insurers.

A good case also can be made for some regulation of market conduct in insurance which involves both insurance companies and their intermediaries. As in the case of insurance products, unsophisticated insurance buyers are potentially subject to unfair treatment by insurers.[26] In the U.S., the concern lies less with the scope of market conduct regulation and more with the methods used to regulate market conduct. Currently, the states subject insurers to extensive, duplicative and costly examinations that focus too much on minor errors and too little on major patterns of abuse. Regulators also fail to recognize and encourage insurer self-compliance efforts. Klein and Schacht (2001) discuss the problems with the current system and suggest a more effective and efficient approach to market conduct monitoring that would maximize reliance on self-regulatory mechanisms and target regulatory investigation and enforcement to significant problems.

State regulation of products, rates and the underwriting criteria that can be used are particularly vexing to both national and international insurers. Their concerns lie not only with the process of getting products and rates approved but also the constraints and mandates that many states apply. Consequently, many national insurers and international insurers favor some form of federal regulation of insurance. The concept of an optional federal charter has particular appeal for these companies because they would only have to deal one federal regulator and would be largely exempt from state rate and product regulation based on the legislative proposals for an OFC that had been introduced in Congress. That said, a number of single-state and smaller regional carriers were strongly against an OFC and joined with the states in opposing its enactment. Despite this fierce opposition, OFC legislation was proceeding through the Congress and had the support of the Bush administration until the Fall of 2008 when the financial crisis accelerated and drew Congressional attention away from insurance regulation to the broader framework for financial regulation. Since that time, there does not appear to have been any strong push to move forward with OFC legislation but the concept has not been forgotten and its proponents are likely waiting for the right time to renew their efforts to see some form of federal insurance regulation established.

[26] One could argue that most insurance companies have strong incentives to treat consumers fairly. However, in the absence of regulation, there could be some companies without these incentives that would attempt to take unfair advantage of consumers.

Understandably, many state regulators likely have a different view of these issues. Historically, the NAIC has defended the states' prerogative to regulate their markets in a manner they believe best serves the interests of consumers. Regulators have also argued that their "proximity" to consumers makes them particularly well-positioned to protect their interests. While some regulators favor rate deregulation, others do not. Indeed, consumer advocates argue that the states should do more, not less, in regulating insurers' market practices. Hence, it is important to understand that there are different opinions on whether current state policies on market regulation are justified or not.

One can only speculate on what the FIO will conclude about the issues. The head of the FIO is a former state insurance commissioner. Its 15-member advisory committee is fairly even balanced with 7 state insurance regulators, 6 industry representatives, one consumer representative, and one academic member. It would not be a surprise if the FIO called for increasing the degree of uniformity in state market regulation, although the state regulator members of the advisory committee may be arguing against such a conclusion. Delivering a favorable recommendation on increasing the federal role in insurance regulation would be even more contentious and the FIO might be hesitant to take such a step at this point in time. A more likely scenario might be that the FIO would recommend "smaller" reforms and allow the states the opportunity to address any perceived deficiencies in the current system before recommending more radical measures.

X. Summary and Conclusions

Insurance regulation in the U.S. has continued to progress over its 150-year history in response to changing circumstance and the evolution of insurance industry. While this progression has not been confined to solvency regulation per se, many of the most significant changes have occurred with respect to the financial oversight of insurance companies. Some changes have occurred incrementally while others have been implemented in episodes of reforms in response to crises or other events that have revealed deficiencies in the solvency regulatory system existing at that time. We are now witnessing one of these episodes of reforms that are embodied in the NAIC Solvency Modernization Initiative. However, in contrast to previous episodes, the NAIC's SMI is

more motivated by a desire to raise U.S. regulation to a level of best practices than a perceived need to address problems revealed by a large increase in the number and cost of insurer failures as has occurred in the past.

The NAIC's SMI is an ambitious program of reform that is centered on five key areas: 1) capital requirements; 2) governance and risk management; 3) group supervision; 4) statutory accounting and financial reporting; and 5) reinsurance. In addition, the NAIC has been developing and implementing its risk-focused surveillance framework which constitutes a more advanced approach to financial monitoring and risk assessment of insurance companies. In considering changes to the current system, U.S. regulators are paying close attention to regulatory developments at the international level, including the EU's Solvency II. U.S. regulators are also conscious of the federal interest in insurance regulation as demonstrated by the establishment of the FIO and would likely prefer to address any issues that might be used to justify greater federal involvement in insurance regulation. Despite these external pressures, U.S. regulators appear to be favoring reforms that they believe make the most sense for the U.S. system rather simply adopting practices employed or being developed in other countries. The fact that U.S. regulators have been engaging in a vigorous dialogue with international regulator and the FIO reflect their desire to reach common understandings with these external parties on the adequacy of U.S. insurance regulation.

In this context, some specific comments are warranted with respect to particular aspects of the modernization of insurance solvency regulation in the U.S. There appears to be a great antipathy towards the use of dynamic financial modeling in determining capital requirements. With limited exceptions, U.S. regulators seem to be wedded to a formula-based approach. This is unfortunate given the advances that have occurred in using model-based approaches to determining insurers' capital needs. While caution is warranted in considering the use of model-based approaches to determining insurer capital standards, it would not be a huge step for the NAIC to develop and test a standard model to evaluate whether it would prove superior to a formula-based approach. However, it also should be noted that it appears that U.S. regulators, at least over time, have been shifting their emphasis from a reliance on capital standards to financial monitoring to identify insurers that are in financial distress or have incurred excessive

financial. Arguably, this is necessary if U.S. RBC requirements are insufficient to trigger regulatory interventions that are warranted based on an insurer's financial condition or risk.

Hence, the proper design and implementation of a robust and effective risk focused surveillance framework become particularly important in the U.S. system. As discussed above, the development of this framework has been an ongoing process. Indeed, certain elements of the SMI would be expected to be incorporated into this framework such an ORSA requirement, group supervision, and revised accounting standards. In terms of its design, the framework that the NAIC has developed appears to encompass most, if not all, of the elements that one could reasonably expect. The concern arises with its implementation by the various states. Based on the inferences that can be drawn from the conduct of risk-focused examinations, the states have considerable work to do to realizing the potential of a true risk-focused surveillance framework. State insurance departments also will be challenged to recruit and retain high-quality personnel with the skill sets necessary to carry out a modern regulatory system.

There is also the question of how the state's efforts to modernize insurance solvency regulation will be judged by the federal government. The Federal Insurance Office was charged with studying the current regulatory system and submitting a report to Congress in January 2012. Given the close association of the FIO with state insurance regulators and the makeup of its advisory committee, it seems unlikely that the FIO will find substantial deficiencies in the current system of solvency regulation considering the reforms that have been or will likely be adopted under the NAIC's SMI. However, the FIO may recommend changes in other areas such as improving uniformity in state licensing requirements and market regulation.

It should be noted that this paper only briefly discusses other areas of the modernization of insurance regulation that fall outside the direct scope of solvency regulation. U.S. insurance regulation has been criticized in several of these areas because of the structure and/or policies that are currently in place. One aspect of U.S. regulation that has been criticized is the fact that it is a state-based system which critics argue is inefficient and increases insurers' cost of doing business across state borders. This criticism has led to proposals for the creation of an Optional Federal Charter (OFC)

which would allow insurers to opt to be federally regulated and exempt from most state regulations. Other areas criticized include individual state licensing requirements and rate and policy form regulation, as well as market conduct regulation. While the NAIC has created mechanisms intended to help streamline the processes for insurer licensing and rate/form submissions, the industry has not been satisfied by these efforts and has called for substantial reforms in all of these areas. This may continue to be an area of controversy unless federal pressure compels the states to make major reforms in insurance market regulation.

What will be the impact of the modernization of solvency regulation on insurance companies? Clearly, insurers will see some effects. Although the contemplated changes to the way in which insurers' capital standards are determined will not be substantial, RBC requirements would be expected to increase due to the changes that will likely be made. The NAIC's SMI will likely have other effects. Insurers will be required to comply with some form of an ORSA requirement and the changes contemplated with respect to group supervision will likely entail additional reporting. Many insurance companies may actually benefit from the proper implementation of risk-focused exams although some may be compelled to improve their risk management practices as a result of these exams. Further, companies that have assumed excessive financial risk may be subject to more proactive regulatory interventions. Finally, some insurers may see their cost of reinsurance go down as a consequence of state reforms of reinsurance collateral requirements.

In sum, one could reasonably argue that the changes that have or will be adopted by U.S. regulators will result in a meaningful improvement in the U.S. system for solvency regulation even if they fall short of what some experts might advocate as they look at what is occurring under Solvency II. Based on the direction of the NAIC's SMI, is this the best that U.S. regulators can do? This is a matter of opinion. It appears that most U.S. regulators believe that it is while others may believe that U.S. regulators could do better. Ultimately, the success of the modernization of solvency regulation in the U.S. will be determined based on its outcomes. Time will tell whether the U.S. has done enough to implement best practices that will be adequate to regulate a modern and global insurance industry.

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