MEMORANDUM

TO: File
FROM: Aaron Foxman
RE: Meeting with the representatives of Property Casualty Insurers Association of America
DATE: November 17, 2010

On November 17, 2010, Brian Bussey, Amy Starr, Michael Reedich, Peter Curley, Richard Grant, and Aaron Foxman of the Securities and Exchange Commission met with Robert Gordon (Senior Vice President, Property Casualty Insurance Association of America ("PCI")), Leon Buck (Assistant Vice President, PCI), Tom Litjen (Vice President, PCI), and Estuardo V. Rodriguez (Principal, The Raben Group) (collectively, the "PCI representatives").

The PCI representatives discussed various matters pertaining to Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, including the definition of "security-based swap" as it pertains to insurance products and the end-user exception to clearing requirements.

PROPERTY CASUALTY INSURERS ASSOCIATION OF AMERICA – DODD-FRANK ISSUES

November 17, 2010; 1:30 a.m. – 2:30 p.m.
SEC Headquarters (100 F Street, N.E., Washington, DC)

AGENDA

PCIAA Topics for Discussion

1. To ensure that the definition of a swap in Section 721(a)(21) of the Dodd-Frank Act (DFA) is not interpreted inappropriately to include property casualty insurance contracts.

2. There are significant structural and regulatory differences between swaps and insurance contracts. Insurers are regulated under the state based insurance regulatory system. Under this regulatory structure the U.S. maintains a robust insurance market with relatively few insurance company insolvencies. There is no logical reason for property casualty insurance contracts to be regulated as swaps and no evidence of any Congressional intent that state regulatory authority over insurance products be supplanted by federal regulation of swaps.

3. PCI proposes that the CFTC clarify the definition of swaps to exclude agreements, contracts, and transactions of insurers that are a part of the business of insurance regulated by a state insurance regulator as of the enactment date of the DFA.

4. For new financial products that are regulated by state insurance regulators as part of the business of insurance that were not regulated as insurance or swaps before the DFA, a rebuttable presumption of an exclusion that could be overcome by a formal CFTC

5. PCI further agrees with Senate Banking Committee Chairman Dodd and Senate Agriculture Chairwoman Lincoln who, in their June 30, 2010 letter to Representatives Frank and Peterson regarding Congressional intent of the Dodd-Frank Act, indicated that regulators must carefully follow Congressional intent in implementing this bill and that the specific standards developed must not be punitive to the end-users of swaps, who use them to manage and mitigate their risks. Insurance investments and risk management are already extensively regulated by state insurance regulators for solvency under very conservative oversight.

6. PCI believes that insurance end–users should be explicitly excluded from the definitions of Major Swap Participant and Swap Dealer.

PCI Property Casualty Insurers Association of America
Shaping the Future of American Insurance

September 17, 2010

David A. Stawick, Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
11521 21st Street, NW
Washington, DC 20581
E-mail: dfadefinitions@cftc.gov

Elizabeth M. Murphy, Secretary
Securities and Exchange Commission
100 F. Street, NE
Washington, DC20549-1090
E-mail: rule-comments@sec.gov

Re: Key Definitions in Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act.
SEC File Number S7-16-10

Dear Secretaries:

The Property Casualty Insurers Association of America (PCI) appreciates the opportunity to submit our comments regarding the key definitions included in Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

We urge the CFTC to take care to ensure that the definition of a swap in Section 721(a)(21) of the Dodd-Frank Act (DFA) is not interpreted inappropriately to include property casualty insurance contracts. There are significant structural and regulatory differences between swaps and insurance contracts. Insurers are regulated under the state based insurance regulatory system. Under this regulatory structure the U.S. maintains a robust insurance market with relatively few insurance company insolvencies. There is no logical reason for property casualty insurance contracts to be regulated as swaps and no evidence of any Congressional intent that state regulatory authority over insurance products be supplanted by federal regulation of swaps. We therefore propose that the CFTC clarify the definition of swaps to exclude agreements, contracts, and transactions of insurers that are a part of the business of insurance regulated by a state insurance regulator as of the enactment date of the DFA. For new financial products that are regulated by state insurance regulators as part of the business of insurance that were not regulated as insurance or swaps before the DFA, a rebuttable presumption of an exclusion that could be overcome by a formal CFTC finding would provide further clarity regarding regulatory jurisdiction.

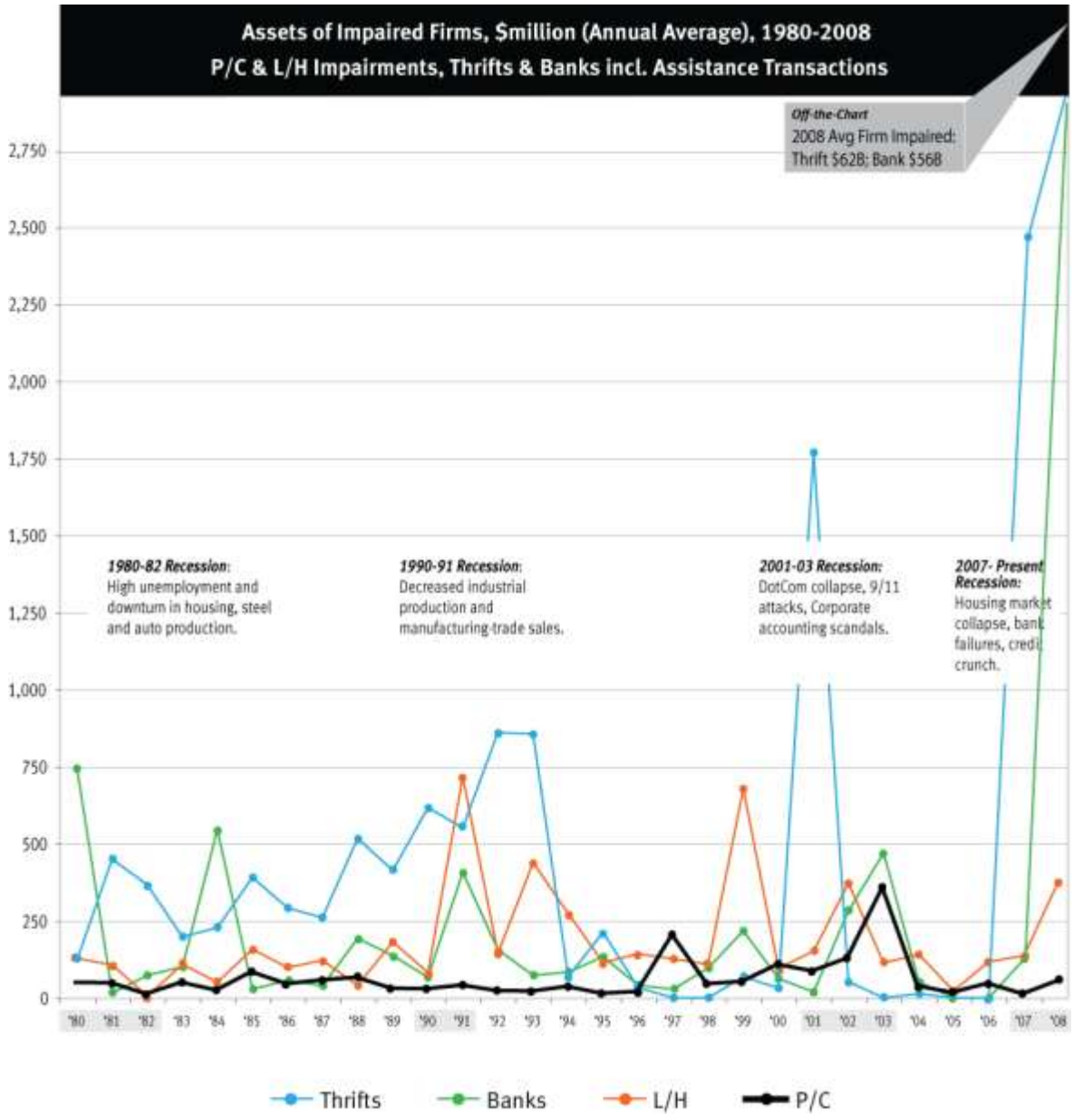
PCI further agrees with Senate Banking Committee Chairman Dodd and Senate Agriculture Chairwoman Lincoln who, in their June 30, 2010 letter to Representatives Frank and Peterson regarding Congressional intent of the Dodd-Frank Act, indicated that regulators must carefully follow Congressional intent in implementing this bill and that the specific standards developed must not be punitive to the end-users of swaps, who use them to manage and mitigate their risks. Insurance investments and risk management are already extensively regulated by state insurance regulators for solvency under very conservative oversight. Accordingly, we believe that insurance end–users should be explicitly excluded from the definitions of Major Swap Participant and Swap Dealer.

PCI is composed of more than 1,000 member property/casualty insurance companies, representing the broadest cross-section of insurers of any national trade association. PCI members write over $174 billion in annual premium, 37.1 percent of the nation's property/casualty insurance.

If you have any questions or if PCI may be of any future assistance, please contact me at 847-553-3664 or james.olsen@pciaa.net

Sincerely,

James M. Olsen
Senior Director Accounting and Investment Policy


Assets of Impaired Firms, $million (Annual Average), 1980-2008
P/C & L/H Impairments, Thrifts & Banks incl. Assistance Transactions
Off-the-Chart
2008 Avg Firm Impaired:
Thrift $62B; Bank $56B
2,750
2,500
2,250
2,000
1,750
1,500
1,250
1,000
750
500
250
0
1980-82 Recession:
High unemployment and downturn in housing, steel and auto production.
1990-91 Recession:
Decreased industrial production and manufacturing-trade sales.
2001-03 Recession:
DotCom collapse, 9/11 attacks, Corporate accounting scandals.
2007- Present Recession:
Housing market collapse, bank failures, credit crunch.
'80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08
Thrifts
Banks
L/H
P/C

NAIC 282-1

NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS (N.A.I.C.)
MODEL LAWS, REGULATIONS AND GUIDELINES
N.A.I.C. MODEL LAWS, REGULATIONS AND GUIDELINES
VOLUME III
COMPANY ORGANIZATION, MANAGEMENT, SECURITIES
DERIVATIVE INSTRUMENTS MODEL REGULATION
NAIC 282-1

Current through April 2010 Update.

Table of Contents

Section 1. Authority

This regulation is adopted and promulgated by the Commissioner of Insurance pursuant to [insert citation to state law equivalent to Section 8 of the Investments of Insurers Model Act].

Section 2. Purpose

The purpose of this regulation is to set standards for the prudent use of derivative instruments in accordance with [insert citation to state law equivalent to Section 9 and 18 of the Investments of Insurers Model Act].

Section 3. Definitions

For the purposes of this regulation, the following definitions shall apply:
A. "Business entity" includes a sole proprietorship, corporation, limited liability company, association, partnership, joint stock company, joint venture, mutual fund, trust, joint tenancy or other similar form of business organization, whether for-profit or not-for-profit.
B. "Counterparty exposure amount" means:
(1) The net amount of credit risk attributable to a derivative instrument entered into with a business entity other than through a qualified exchange, qualified foreign exchange, or

cleared through a qualified clearinghouse ("over-the-counter derivative instrument"). The amount of credit risk equals:
(a) The market value of the over-the-counter derivative instrument if the liquidation of the derivative instrument would result in a final cash payment to the insurance company; or
(b) Zero if the liquidation of the derivative instrument would not result in a final cash payment to the insurance company.
(2) If over-the-counter derivative instruments are entered into pursuant to a written master agreement which provides for netting of payments owed by the respective parties, and the domiciliary jurisdiction of the counterparty is either within the United States or if not within the United States, within a foreign jurisdiction listed in the *Purposes and Procedures of the Securities Valuation Office* as eligible for netting, the net amount of credit risk shall be the greater of zero or the net sum of:
(a) The market value of the over-the-counter derivative instruments entered into pursuant to the agreement, the liquidation of which would result in a final cash payment to the insurance company; and
(b) The market value of the over-the-counter derivative instruments entered into pursuant to the agreement, the liquidation of which would result in a final cash payment by the insurance company to the business entity.
(3) For open transactions, market value shall be determined at the end of the most recent quarter of the insurance company's fiscal year and shall be reduced by the market value of acceptable collateral held by the insurance company or placed in escrow by one or both parties.
C. (1) "Derivative instrument" means an agreement, option, instrument or a series or combination thereof:
(a) To make or take delivery of, or assume or relinquish, a specified amount of one or more underlying interests, or to make a cash settlement in lieu thereof; or
(b) That has a price, performance, value or cash flow based primarily upon the actual or expected price, level, performance, value or cash flow of one or more underlying interests.
(2) Derivative instruments include options, warrants, caps, floors, collars, swaps, forwards, futures and any other agreements, options or instruments substantially similar thereto or any series or combination thereof. Derivative instruments shall additionally include any agreements, options or instruments permitted under regulations adopted pursuant to [insert citation to state law equivalent to Section 8 of the Investments of Insurers Model Act]. Derivative instruments shall not include an investment authorized by [insert state law equivalent to Sections 11 through 17, 19 and 24 through 30 of the Investments of Insurers Model Act].
D. "Qualified clearinghouse" means a clearinghouse for, and subject to the rules of a qualified exchange or a qualified foreign exchange, which clearinghouse provides clearing services, including acting as a counterparty to each of the parties to a transaction such that the parties no longer have credit risk as to each other.
E. "Qualified exchange" means:
(1) A securities exchange registered as a national securities exchange, or a securities market regulated under the Securities Exchange Act of 1934 (15 U.S.C. §§ 78 *et seq.*), as amended;

(2) A board of trade or commodities exchange designated as a contract market by the Commodity Futures Trading Commission or any successor thereof;
(3) Private Offerings, Resales and Trading through Automated Linkages (PORTAL);
(4) A designated offshore securities market as defined in Securities Exchange Commission Regulation S, 17 C.F.R. Part 230, as amended; or
(5) A qualified foreign exchange.
F. "Qualified foreign exchange" means a foreign exchange, board of trade or contract market located outside the United States, its territories or possessions:
(1) That has received regulatory comparability relief pursuant to Commodity Futures Trading Commission Rule 30.10 (as set forth in Appendix C to Part 30 of the CFTC's Regulations, 17 C.F.R. Part 30);
(2) That is, or its members are, subject to the jurisdiction of a foreign futures authority that has received regulatory comparability relief pursuant to Commodity Futures Trading Commission Rule 30.10 (as set forth in Appendix C to Part 30 of the CFTC's Regulations, 17 C.F.R. Part 30) as to futures transactions in the jurisdiction where the exchange, board of trade or contract market is located; or
(3) Upon which foreign stock index futures contracts are listed that are the subject of no-action relief issued by the CFTC's Office of General Counsel, but an exchange, board of trade or contract market that qualifies as a "qualified foreign exchange" only under this paragraph shall only be a "qualified foreign exchange" as to foreign stock index futures contracts that are the subject of such no-action relief under this paragraph.

Section 4. Guidelines and Internal Control Procedures

A. Before engaging in a derivative transaction, an insurance company shall establish written guidelines, approved by the Commissioner, that shall be used for effecting and maintaining derivative transactions. The guidelines shall:
(1) Specify insurance company objectives for engaging in derivative transactions and derivative strategies and all applicable risk constraints, including credit risk limits;
(2) Establish counterparty exposure limits and credit quality standards
(3) Identify permissible derivative transactions and the relationship of those transactions to insurance company operations; for example, a precise identification of the risks being hedged by a derivative transaction; and
(4) Require compliance with internal control procedures.
B. An insurance company shall have a written methodology for determining whether a derivative instrument used for hedging has been effective.
C. An insurance company shall have written policies and procedures describing the credit risk management process and a credit risk management system for over-the-counter derivative transactions that measures credit risk exposure using the counterparty exposure amount.
D. An insurance company's board of directors shall, in accordance with [insert citation to state law equivalent of Section 4 of the Investments of Insurers Model Act]:
(1) Approve the written guidelines, methodology and policies and procedures required by Subsection A, B and C respectively, of this section and the systems required by Subsections B and C of this section; and
(2) Determine whether the insurance company has adequate professional personnel,

technical expertise and systems to implement investment practices involving derivatives.
(3) Review whether derivatives transactions have been made in accordance with the approved guidelines and consistent with stated objectives.
(4) Take action to correct any deficiencies in internal controls relative to derivative transactions.

Section 5. Commissioner Approval

Written documentation explaining the insurance company's internal guidelines and controls governing derivative transactions shall be submitted for approval to the Commissioner. The Commissioner shall have the authority to disapprove the guidelines and controls proposed by the company if the insurance company cannot demonstrate the proposed internal guidelines and controls would be adequate to manage the risks associated with the derivative transactions the insurance company intends to engage in.

Section 6. Documentation Requirements

An insurance company shall maintain documentation and records relating to each derivative transaction, such as:
A. The purpose or purposes of the transaction;
B. The assets or liabilities to which the transaction relates;
C. The specific derivative instrument used in the transaction;
D. For over-the-counter derivative instrument transactions, the name of the counterparty and the market value; and
E. For exchange traded derivative instruments, the name of the exchange and the name of the firm that handled the trade and the market value.

Section 7. Trading Requirements

Each derivative instrument shall be:
A. Traded on a qualified exchange;
B. Entered into with, or guaranteed by, a business entity;
C. Issued or written with the issuer of the underlying interest on which the derivative instrument is based; or
D. Entered into with a qualified foreign exchange.

Section 8. Effective Date

This regulation shall become effective [insert date].

Property Casualty Insurers
Association of America
Shaping the Future of American Insurance

Robert W. Woody
Senior Counsel, Policy

November 5, 2010

Filed Electronically

Financial Stability Oversight Council
c/o United States Department of the Treasury
1500 Pennsylvania Avenue, N.W.
Washington, DC 20220

Re: FSOC Docket No. 2010-0001; Advance Notice of Proposed Rulemaking Regarding Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies

The Property Casualty Insurers Association of America (PCI) appreciates the opportunity to provide comments in response to the Financial Stability Oversight Council's ("the Council") Advanced Notice of Proposed Rulemaking ("ANPR") Regarding Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies. PCI is composed of more than 1000 member property casualty insurance companies, representing the broadest cross-section of insurers of any national trade association. PCI members write over $174 billion in annual premium, 37.1 percent of the nation's property casualty insurance.

PCI was the first financial trade association to propose a comprehensive and detailed analysis for defining and regulating systemic risk. Throughout the Congressional consideration of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("the Dodd-Frank Act"), PCI provided significant research, data, and analysis comparing the systemic risk of different financial sectors, proposed legislative language to detect and measure systemic risk, and worked closely with NERA Economic Consulting, which has done extremely valuable research and analysis on systemic risk indicia and measurement. We attach to our comments two studies conducted by NERA, most importantly one entitled *Systemic Risk Assessment Methodology* (the "NERA Report" – attached at Appendix 1), which we believe will be invaluable to the Council as it considers how to measure and assess systemic risk and to which we frequently refer in our responses to the questions posed in the ANPR. The NERA Report sets forth a number of risk components that the Council should consider and weigh in assessing systemic risk. *We note, in particular, NERA's conclusion that "initial analysis indicates that traditional property and casualty ("P&C") insurance firms would receive relatively low risk ratings within each of the components."* (See NERA Report, paragraph 4.)

Section 113(a)(2) of the Dodd-Frank Act sets forth a list of eleven considerations that the Council is to consider in determining whether a US nonbank financial institution will be

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supervised by the Federal Reserve Board and be subject to heightened prudential standards. Historically, analysis of the risk of required government intervention has been referred to as the "Too Big to Fail" (TBTF) test, which focused primarily on an institution's size relative to the national and international marketplace. However, in establishing the eleven considerations in Section 113(a)(2), the Congress recognized that arbitrary size-based thresholds alone are not a reliable indicator of systemic risk and rejected the TBTF approach. Instead, the Council is instructed to carefully analyze and weigh all eleven statutory considerations in order to ensure the accurate designation of companies whose material financial distress or failure could endanger the nation's financial stability and to avoid erroneous designation of firms that do not pose such a risk -- an error that can carry significant economic costs.

PCI and NERA have proposed that the Council use a rating system similar to the "CAMELS"[1] system familiar to federal banking regulators for estimating a firm's systemic risk. While the Council will ultimately need some flexibility to make qualitative judgments about systemic risk, NERA has boiled down the factors required in the Dodd-Frank Act into nine categories that correlate to the statutory considerations and which can be weighted similarly to the CAMELS risk-analysis that banking regulators perform regularly. This framework allows regulators, the Council, and Office of Financial Research (OFR) analysts to weigh different aspects of systemic risk in order to arrive at a composite systemic risk rating for each firm considered. The more precise these measurements can be, the more certainty is created in the marketplace and the less additional moral hazard is created by selective government intervention. PCI and NERA also propose a multi-stage systemic risk determination process, including a prescreening test that will eliminate the vast majority of companies whose activities do not pose systemic risk to the larger economy as well as a framework for identifying firms for which a special systemic risk designation and accompanying regulation is warranted.

It is critical that the Council not be overly inclusive in any designations. It is too early to judge whether the market value that may accrue to implicit government backing via a systemic risk designation will be overwhelmed by the costs of additional federal systemic risk regulation. It is certain, however, that incorrect designations will lead to impaired market efficiency and resource allocation and increased moral hazard. The greater the uncertainty and reach of this new regulatory overlay, the greater the number of companies that will seek to move offshore, to outsource, or to cease growing in a manner that harms U.S. job growth and innovation. The Council has appropriate flexibility to impose a new designation quickly when a company suddenly increases its systemic risk. Nevertheless, the Council must exercise extreme caution in the use of that flexibility, always remembering that an inappropriate systemic risk designation carries with it enormous burdens and costs associated with the additional compliance requirements and with working toward the removal of the designation over time.

A detailed risk rating framework with appropriate screens will also avoid the significant hazard of inappropriately equating size alone as a proxy for systemic risk. Some financial activities and markets are simply not systemically risky, regardless of holding

[1] The CAMELS system is used by the Federal Reserve, the FDIC, the OCC, and numerous state banking regulators to rate banking institutions' overall condition and performance. The six factors examined are: Capital adequacy; Asset quality; Management administration; Earnings; Liquidity; and Sensitivity to market risk. Ratings are based on financial statements and on-site examinations and are not publicly disclosed.

company size. While a firm aggregating one-sided bets on mortgage securities certainly presents more systemic risk as it grows beyond a certain size, traditional property casualty insurers with independent risks can actually become less risky with increased size as the variance of the liability risks approaches zero.

In comparison to other financial firms, lower returns on equity and comparably low executive compensation, as well as the most comprehensive prudential regulation. In return, though, the industry is highly stable with an extremely low historical impairment rate. Rare traditional property casualty failures tend to be either isolated and attributable to mismanagement or the result of inappropriate state government market manipulation with the risk-vulnerability relatively isolated to the offending state.

Our responses to the 15 specific questions posed in the ANPRM will suggest methods of measuring systemic risk. However, they will also illustrate in some detail the reasons summarized below as to why those measurements will lead to the conclusion that the risk of material financial distress or failure of property casualty insurers generally does not pose any significant, systemic impact on the larger economy.

- Property casualty insurers are **not interconnected** with other financial firms (see Question 7)
- Property casualty insurers have **low leverage** (see Question 8)
- There is **no "run on the bank"** potential in the property casualty industry (see Question 5)
- Property casualty insurers are highly competitive with **low market concentration** (see Question 6)
- Property casualty insurers have **low failure rates** that are **not correlated with economic cycles** (see Question 12)
- Property casualty insurers consumers are largely protected by an insurer-financed **state insurance guaranty fund system** (see Question 12)
- Property casualty insurers are subject to **effective state-level solvency regulation** (see Question 10)
- Property casualty insurers' **investments are highly regulated and transparent** (see Question 5)

In addition, it is critically important for the Council to recognize that, while many insurers exist in holding company structures with parent and/or affiliated companies that are engaged in non-insurance activities, stresses on the non-insurance affiliates are unlikely to cause the failure of the property casualty company and in no way cause the insurer to present systemic risk. Each property casualty insurer is a separate statutory entity whose financial condition is subject to separate regulatory oversight, with safeguards to prevent the parent company from raiding the assets of the property casualty subsidiaries. State insurance regulators will ensure that a failing parent company will not force its property casualty subsidiaries to impair their financial condition in order to provide financial support to resolve the parent's financial missteps or those of other non-insurance affiliates. There is often a misperception that the operations of various affiliated entities within a holding company are necessarily inextricably intertwined. When those entities include property casualty insurers, state insurance regulators require that the assets supporting the insurers' underwriting obligations be walled off from the parent and affiliated entities. Even if the parent company fails, the ability of the property casualty insurer to continue operations will not be imperiled, even if the insurer

is sold or otherwise transitions to another ownership structure (which would only occur under strict state insurance regulatory supervision).

The following are PCI's responses to the 15 specific questions, including systemic risk-related charts by PCI and references to the NERA Report.

1. *What metrics should the Council use to measure the factors it is required to consider when making determinations under Section 113 of DFA?*

   a. *How should quantitative and qualitative considerations be incorporated into the determination process?*

   b. *Are there some factors that should be weighted more heavily by the Council than other factors in the designation process?*

2. *What types of nonbank financial companies should the Council review for designation under DFA? Should the analytical framework, considerations, and measures used by the Council vary across industries? Across time? If so, how?*

4. *Are there simple metrics that the Council should use to determine whether nonbank financial companies should even be considered for designation?*

PCI refers the Council to the NERA Report for a proposed detailed framework for measuring systemic risk factors under Section 113 of the Dodd-Frank Act. That proposal creates a CAMELS-like rating system, scoring a firm from 1-5 based on each of the nine core factors listed below, from which a composite system risk rating would be derived.

Importantly, this scoring test would only be applied to firms that failed to survive an initial screening to eliminate the least likely candidates for systemic risk. That initial screen should focus first on the quantity and quality of the firm's liabilities, and as a second winnowing process, the combination of market concentration and interconnectedness.

Weighted Factors. NERA has broken down systemic risk into nine core factors (and has indicated how they correlate to the statutory considerations applicable under Sections 113 and 210 of the Dodd-Frank Act). (See NERA Report, paragraphs 9 and 10 and 14-39.)

1. Interconnectedness
2. Concentration – Market
3. Implied Product Support
4. Cyclicality
5. Transparency
6. Liquidity
7. Capitalization
8. Joint Factor: Liquidity and Interconnectedness
9. Mitigant/Amplifier: Sector and Firm Specific

There is no one factor that creates systemic risk in isolation – the factors should not individually produce a binary pass-fail result in isolation. Instead, they must be analyzed together and weighted such that systemic risk is indicated only when an aggregate of the firm's ratings for all components exceeds a certain level.

Multi-Step Process -- Systemic Risk Rating System. The following describes the multi-step process that the Council should undertake in identifying firms for systemic risk designation.

Step 1 – Initial Screen to Eliminate Non-Risky Entities

Quantitative Test

Although size alone is not indicative of systemic risk, it is intuitive that firms with small total exposure levels will not pose systemic risk. Thus, an initial risk screening should focus on a quantitative assessment of a firm's exposures, including balance sheet liabilities, notional amounts of derivative contracts and other contractual or contingent liabilities. This threshold may be set as a single nominal amount for all institutions, or could vary according to the type of institution (*e.g.*, property casualty insurer vs. bank). The size threshold may change over time and could be kept confidential to the extent necessary to prevent gaming.

Supplemental Interconnectedness/Market Concentration Test

Institutions that exceed the quantitative exposure threshold above should then be further assessed under the first two of the nine risk components, interconnectedness and market concentration. Those two are chosen because they most directly relate to the question of whether the failure of a financial firm can cause significant losses in other institutions or otherwise disrupt markets in a systemically risky manner. Institutions can be assigned a rating of 1 through 5 for each factor, as set forth in the NERA Report (see paragraphs 17 and 22). If either of these two ratings is 4 or higher, or if the sum of the two scores is 6 or higher, the institution should be subject to a full systemic risk assessment as described in Step 2 below.

Step 2 – Rating Financial Institutions for Systemic Risk to Determine Appropriate Regulatory Response

The NERA Report discusses in detail all nine risk components and suggests methodologies by which a risk rating may be assigned to a firm for each component and a composite rating can then be developed for each financial firm. As the NERA Report indicates, the factors should be weighted, recognizing that systemic risk is a function of the aggregate of risk across all components, and that no one component in isolation is necessarily predictive of systemic risk. Ratings in each category would be added together and when the total exceeds a certain level, the firm would be designated for supervision.

Step 3 – Tiering Systemic Risk Designations

Systemic risk designations should be tiered in a way that will allow the Council, the Federal Reserve Board, and prudential regulators to tailor prudential oversight to the circumstances of each institution.

Tier #1: If a company's systemic risk level exceeds the initial screen and its composite systemic risk rating exceeds the levels noted a certain level, and if the Council determines that existing regulatory scrutiny of the company is not adequate to manage its systemic risk, that company should be subject to additional monitoring, a basic level of reporting to the Council on its enterprise risk management, and potential risk auditing by

the Council. Periodic risk auditing should identify deficiencies and require affected companies to develop, within a given timeframe, a corrective action plan and to achieve compliance.

Tier #2: Companies that reach high levels of systemic risk should be subject to scalable capital charges depending on the level of systemic risk presented.

Tier #3: Companies that reach very high levels of systemic risk (or that fail to achieve timely compliance to correct systemic risk deficiencies) should be subject to corrective action plans that implement more robust enterprise risk management and capital standards at the holding company level.

Tier #4: Companies that fail to implement corrective action plans for enterprise risk management and capital standards should be subject to appropriate cease and desist orders by their prudential regulators, with sufficient consideration given to "surgical" approaches so as to minimize the possibility of precipitating other failures within the line of business or the greater enterprise.

Tier #5: Insolvent companies that are not otherwise subject to a resolution procedure and whose failure would create an unacceptable systemic risk to the economy should be recommended for FDIC resolution. Companies should be able to petition to lower their tiering upon taking action to reduce systemic risk, such as by reducing leveraging or raising more capital. Companies should also have an appeals process to review systemic risk determinations.

3. *Since foreign nonbank companies can be designated, what role should international considerations play in designating companies? Are there unique considerations for foreign nonbank companies that should be taken into account?*

Differences in the way foreign and domestic firms operate will be accounted for in the standard assessment process meaning that they can largely be considered on the same basis as domestic firms and can be subject to a similar analytical framework for assessing systemic risk. When assessing an international company, consideration should be given not just to whether the company presents systemic risk generally, but whether the risk presented threatens the U.S. economy such that U.S. government/taxpayer intervention may be required. Consideration should also be given to the quality of the financial regulation to which the foreign firm is subject in its domiciliary country.

5. *How should the Council measure and assess the scope, size, and scale of nonbank financial companies?*

    a. *Should a risk-adjusted measure of a company's assets be used? If so, what methodology or methodologies should be used?*

Risk adjusted measures of exposures -- not just assets -- should be considered in the assessment process. While we do not suggest any specific quantitative technique for risk adjusting exposures, any such process should consider the various risks and correlations of firm exposures and specifically reflect the extent to which exposures are financial market oriented versus physical event oriented. Physical events, such as those covered under property casualty insurance policies, tend to be more normally distributed based on analyses of detailed historical data. (See NERA Report, Paragraph 12.)

The Council should also consider the potential that a firm's failure or impairment would create a "run on the bank." Consumer and investor fears can trigger a sudden run on a *bank* or *securities firm*, leading to loss of highly leveraged capital, a freezing of credit and capital markets, causing cascading interconnectedness failures stemming from the interconnectedness of those firms.

There are no "runs" on property casualty insurers. Most consumers must have auto insurance to drive, homeowners insurance to protect their investments in their homes, and workers compensation and liability insurance to run a business. There is no extra leveraged cash value or discretionary or investment component to withdraw, no potential for insurer failures to freeze markets, and no interconnectedness that creates a likelihood of cascading failures from one institution to others.

Finally, the Council should consider the riskiness and transparency of the firm's investments, and the degree to which its investments are regulated. Property casualty insurers are required to hold surplus funds to protect their ability to pay claims to consumers, which means that their investments must be extremely conservative and liquid. State regulators monitor and regulate insurer investments. Each individual insurer investment is reported on its statutory financial statement and, insurer investment reporting is more transparent than that of any other type of firm.

    b. *Section 113 of DFA requires the Council to consider the extent and nature of the off-balance-sheet exposures of a company. Given this requirement, what should be considered an off-balance sheet exposure and how should they be assessed? How should off-balance sheet exposures be measured (e.g., notional values; mark-to-market values, future potential exposures)? What measures of comparison are appropriate?*

Property casualty insurers are not permitted by their regulators to have off-balance sheet exposures. Thus, this is yet another consideration that will militate against designating property casualty insurers as systemically risky. For those non-insurance firms that do, the Council should look beyond balance sheet totals and consider the total exposure of each firm. Exposure should be defined broadly and include all contractual obligations whether on or off-balance sheet for accounting purposes. This includes obligations that only become "live" upon the occurrence of some trigger event; such exposures can be

treated as sold options. Notional amounts and potential future exposures are both broad measures that should be considered in a determination process. The Council should solicit and carefully consider information and advice from primary regulators in evaluating exposures in specific industries such as the property casualty industry. The Council should also keep in mind that the more highly regulated the asset, the less systemic risk it is likely to pose.

c. *How should the Council take managed assets into consideration in making designations? How should the term "managed assets" be defined? Should the type of asset management activity (e.g., hedge fund, private equity fund, mutual fund) being conducted influence the assessment under this criterion? How should terms, conditions, triggers, and other contractual arrangements that require the nonbank financial firm either to fund or to satisfy an obligation in connection with managed assets be considered?*

Property casualty insurers do not manage assets on behalf of clients. We therefore refrain from comment.

d. *During the financial crisis, some firms provided financial support to investment vehicles sponsored or managed by their firm despite having no legal obligation to do so. How should the Council take account of such implicit support?*

In the insurance industry, public confidence that an insurer's assets are sufficient to meet its underwriting obligations is rooted primarily in the strength of state insurance solvency regulation. Implied support of the type contemplated in this question does not typically arise in the insurance industry. (In exercising its resolution authority, the FDIC should refrain from requiring state-regulated insurers to support non-insurance affiliates in violation of state insurance solvency requirements, particularly relating to minimum levels of capital and surplus.)

In other parts of the financial sector where implied support can be an issue, it should be considered along with other relevant factors in systemic risk assessments. (See NERA Report, Paragraphs 23-25)

6. *How should the Council measure and assess the nature, concentration, and mix of activities of a nonbank financial firm?*

    a. *Section 113 of DFA requires the Council to consider the importance of the company as a source of credit for households, businesses, and State and local governments, and as a source of liquidity for the United States financial system. Given this requirement, are there measures of market concentration that can be used to inform the application of this criterion? How should these markets be defined? What other measures might be used to assess a nonbank financial firm's importance under this criterion?*

Market concentration and the importance of various markets should be a fundamental consideration in systemic risk determination. Market concentration assessments should be based on indices for various product types, taking into consideration the actual economic exposure to which the product gives rise. Market concentrations should be considered along relatively granular lines (*e.g.* commercial and industrial lending not simply total lending), and should consider national, regional, and local concentrations. A standard concentration index, such as the Herfindahl-Hirschman Index, should be used to assess market power.

Importantly, it is not just a market concentration in a particular product line or geography that is critical, but the importance of that market to the overall economy and the presence of substitute products or providers. A market concentration can significantly increase systemic risk when the market is important and there is a lack of substitute products or providers. Conversely, even a high market concentration by a firm offering a product in a particular area may not raise systemic risk when there are numerous competitors or potential competitors that would step in to take over demand if the initial provider were to exit. Low barriers to entry and less concentration in financial product providers, as in the property casualty insurance industry, can render a particular market concentration unimportant. (See NERA Report, Paragraph 22).

Home, auto, and business insurance markets are extremely competitive, with well over 2,000 companies and very low market concentration among the top firms. The chart below lists the concentration indices for insurers (using the Herfindahl-Hirschman Index), which are all far below even the level considered to be moderately concentrated by the Department of Justice. If a major bank or securities firm fails, consumers may have few alternatives for a local ATM machine or secondary securities auctions. In the rare instance that a property casualty insurer becomes impaired, there are many competitors waiting and able to pick up that business. Moreover, unlike any other industry sector, there are well-run residual markets (*i.e.*, "insurers of last resort") in almost every state to ensure that every property casualty insurance consumer has access to the market.

PROPERTY CASUALTY Market Concentration Analysis

Herfindahl-Hirschman Index (HHI) based on 2007 U.S. Total (all states and DC)

Line	HHI Indiv. Cos.	HHI Groups	Number of Indiv. Cos.	Number of Groups
Homeowners	326	778	904	431
Personal Auto	348	665	998	371
Commercial Auto	68	298	934	391
Commercial Multi-Peril	99	346	802	359
Workers Compensation	109	495	717	310
Other Liability	137	633	1439	690
Medical Malpractice	208	303	326	233
Product Liability	217	468	504	161

Notes:
1. The HHI takes into account the relative size and distribution of the firms in a market and approaches zero when a market consists of a large number of firms of relatively equal size. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases.

2. Markets in which the HHI is between 1000 and 1800 points are considered to be moderately concentrated, and those in which the HHI is in excess of 1800 points are considered to be concentrated.

Source: NAIC Annual Statement Database via National Underwriter Insurance Data Services/Highline Data

b. *Section 113 of DFA requires the Council to consider the importance of the company as a source of credit for low-income, minority, and underserved communities. Given this requirement, are there measures of market concentration that can be used to inform the application of this criterion? How should these markets be defined? What other measures might be used to assess a nonbank financial firm's importance under this criterion?*

Because property casualty insurers are not a source of credit, PCI offers no comment beyond the discussion of market concentration above.

7. *How should the Council measure and assess the interconnectedness of a nonbank financial firm?*

   a. *What measures of exposure should be considered (e.g., counterparty credit exposures, operational linkages, potential future exposures under derivative contracts, concentration in revenues, direct and contingent liquidity or credit lines, cross-holding of debt and equity)? What role should models of interconnectedness (e.g., correlation of returns or equity values across firms, stress tests) play in the Council's determinations?*

There are no simple quantitative measures that are applicable across all (nonbank) financial institutions to assess the differences between institutions in risks and correlations of exposures and activities. Any interconnectedness assessment however must consider the total exposures of a financial firm and various concentrations that may exist from such exposures. Total exposure goes beyond whatever accounting methodologies are used to determine balance sheet totals and considers so-called risk shifting activities (*e.g.* written credit default swaps, securitization of mortgages with credit or liquidity risk guarantees, other guarantees or sold puts). The capture of such activities should also address potential moral hazard issues found in originate-to-distribute models of lending and the disaggregation of risky products. Some of the factors that should be considered are discussed in our response to Question 7c below.

   b. *Should the Council give special consideration to the relationships (including exposures and dependencies) between a nonbank financial company and other important financial firms or markets? If so, what metrics and thresholds should be used to identify what financial firms or markets should be considered significant for these purposes? What metrics and thresholds should be used in assessing the importance of a nonbank financial company's relationships with these other firms and markets?*

A rating of a company's systemic importance should take into account the degree of interconnectedness that an institution has with other firms. Key factors to consider will be:

(1) the significance of commitments with counterparties,
   (a) size and number of commitments
   (b) size and nature of any margin or collateral
   (c) clearing time
(2) the correlation of counterparty dependencies generally (*e.g.* are all counterparty commitments likely to come due at the same time?)
(3) the correlation of counterparty dependence with the firm being assessed (*e.g.* do commitments to counterparties increase when assessed firm is in weakened condition?)
(4) the importance of the institution to the management or operation of exchange, clearing or other central system
(5) the size and scope of securities lending operations

The more links an institution has with other firms and the more the nature of those links give rise to counterparty dependencies, the more potential for systemic risk. The more

important the firm is in the network relative to the financial system as whole, the greater the risk. Even a financial institution that is highly interconnected with other firms may not pose significant systemic risk if its connections to other firms are not of a sufficient size and nature to make it systemically important. For example, a conglomerate engaged in an extremely small amount of many financial activities in every major country would be unlikely to create a significant systemic risk, even if its global aggregate size exceeded some arbitrary threshold. Consider also an insurer that primarily sells coverage for celebrity body parts. Even if highly leveraged, prone to failure, and without state insurance guaranty fund coverage, such an insurer would not be significantly interconnected with the rest of the financial sector and its failure would therefore be unlikely to affect the larger credit or liquidity market.

Banks and securities firms make money in part by taking a risk and then "off-loading" it elsewhere in transactions with others. Thus, failures within those sectors can have negative impacts on counterparties and can therefore create a "domino effect" throughout the banking and securities sectors. Such firms can often be highly interconnected in systemically important ways. In contrast, property casualty insurers "own" the risks they insure – they cannot "off-load" them. Although they can buy reinsurance to protect their liabilities, reinsurance does not extinguish their liabilities. The risks remain on the primary insurer's books, and there is therefore little counterparty exposure to an insurer failure.

For more complete discussion related to interconnectedness, see "De-Mystifying Interconnectedness: Assessing 'To Interconnected to Fail' and the Fallout From Getting it Wrong." PCI White Paper, Research by NERA Economic Consulting, April 23, 2010 (attached at Appendix 2).

8. *How should the Council measure and assess the leverage of a nonbank financial firm? How should measures of leverage address liabilities, off-balance sheet exposures, and non-financial business lines? Should standards for leverage differ by types of financial activities or by industry? Should acceptable leverage standards recognize differences in regulation? Are there existing standards (e.g., the Basel III leverage ratio) for measuring leverage that could be used in assessing the leverage of nonbank financial companies?*

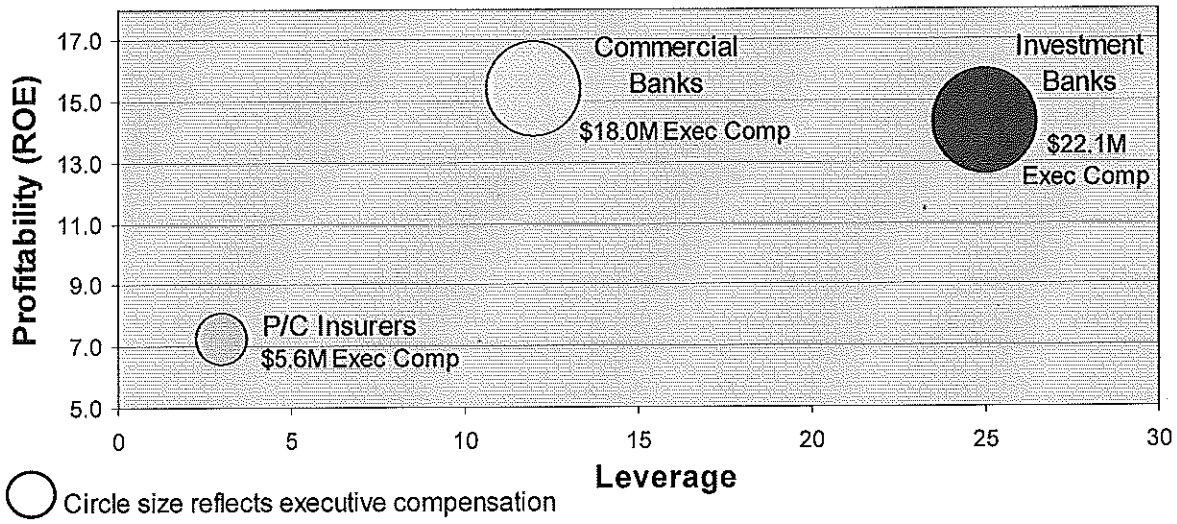
We refer the Council to Paragraphs 35-37 of the NERA Report for its detailed discussion of capitalization ratings, including consideration of leverage.

High levels of leverage increase the likelihood of a firm's failure, which can in turn increase potential systemic risk if the firm has a high market concentration and/or is highly interconnected with other financial firms. It is important to recognize, however, that a leverage ratio that is appropriate in one firm may not be appropriate in another. In considering leverage, the Council must consider the risk and correlation of the assets, liabilities, and other exposures and activities undertaken by a particular firm. Increased portfolio concentrations within a firm will typically require greater capital support than will a more diverse set of exposures. For example, an acceptable leverage level for a fund that undertakes concentrated exposures in one area of the financial market would be much lower than that of an insurance company that has diverse exposure to largely uncorrelated physical events and maintains a high quality asset pool in support of its underwriting exposures.

The financial firms that failed in the recent crisis were highly leveraged. Property casualty insurers, which thrived through the crisis, were <u>not</u> highly leveraged – their inherent liquidity needs and strict state solvency regulatory oversight did not permit it. In a MSCI Barra Research study of financial leverage in 35 industry sectors during the years 1994-2008, the insurance industry was ranked 28th while the banking industry was ranked 7th. The 2009 Economic Report of the President indicated that "[b]efore the financial crisis, the major investment banks were leveraged roughly 25 to 1." PCI has calculated that the insurance industry was leveraged at roughly 3 to 1 prior to the financial crisis. Property casualty insurance is fundamentally about *mitigating* risk as a service for consumers, not leveraging it for a fee to obtain an investment return for consumers as in other industries. The graph below underscores how different property casualty is from other major financial sector with respect to several factors, including leverage.

Financial Industry Sector Distinctions

Profitability, Leverage and Executive Compensation



Source Information:

1. Profitability is based on industry 1998-2007 average annual rate of return; Insurance Information Institute, and Securities Industry and Financial Markets Association.
2. Leverage reflects 2007 Property/Casualty, commercial bank and investment bank results; 2009 *Economic Report of the President* (banks) and PCI calculations of the ratio of net admitted assets to policyholder surplus using A.M. Best data (insurers). Chart depicts investment banks levered 25 to 1; commercial banks 12 to 1; and P/C insurers 3 to 1.
3. Executive compensation is based on 2004-2008 annual average CEO compensation from the top three firms in 2008 where data are publicly available; Morningstar.com and for State Farm, P/C Annual Statements and Pantagraph.com newspaper article. Please note the commercial bank figure is based on the 2nd, 3rd and 5th largest firms as executive compensation figures are not publicly available for all of the top three; similarly, the investment banks figure is based on the 2nd- 4th largest firms. In the chart above, the size of each industry's circle represents executive compensation: P/C insurers $5.6 million; commercial banks $18.0 million; investment banks $22.1 million.

9. *How should the Council measure and assess the amount and types of liabilities, including the degree of reliance on short-term funding of a nonbank financial firm?*

    a. *What factors should the Council consider in developing thresholds for identifying excessive reliance on short term funding?*
    b. *How should funding concentrations be measured?*
    c. *Do some nonbank financial companies have funding sources that are contractually short-term but stable in practice (similar to "stable deposits" at banks)?*
    d. *Should the assessment link the maturity structure of the liabilities to the maturity structure and quality of the assets of nonbank financial companies?*

Liabilities and potential changes in liabilities should be considered in the context of assessing the overall exposure, interconnectedness and market concentration of a financial firm. Standard techniques used in asset/liability management provide one avenue for firm assessment. Additionally, converting derivative exposures and all other dynamic contractual exposures into options may provide a comparable and useful way to assess all potential liabilities under various stressed environments. (See NERA Interconnectedness paper at Appendix 2.)

The Council's assessment process should consider the relationship between the maturity structures of a financial firm's assets and liabilities. The assessment process we propose requires a rating for liquidity that would consider a firm's ability to meet its short-term obligations and roll its short-term funding. In assigning a liquidity rating, the Council should focus on the potential for a firm to meet liquidity demands under future stressed environments.

The Joint Factor-Liquidity and Interconnectedness factor of NERA's proposed assessment process also provides a means for regulators to take the liquidity of firms into account, and highlights the increased systemic risk from highly connected firms with lower levels of liquidity. (See NERA Report, paragraphs 32-34 for a description of the Liquidity component and Paragraph 38 for a description of the Joint Factor-Liquidity and Interconnectedness.)

We note that property casualty insurers do not rely upon short-term funding. Their liquidity needs are generally met by cash flow from premiums. Moreover, because property casualty insurers are not subject to "runs on the bank," premiums received are a reliable source of cash flow. Even if extraordinary losses occur and insurers are required to liquidate assets to pay claims, property casualty insurers are required by their state regulators to invest primarily in high-quality, highly liquid assets.

Firms generally do not pose systemic risk if they are appropriately hedged to minimize failure or if a government back-up system exists. For example, a very large auto insurer poses very little systemic risk to the larger economy. Few commercial third parties rely on a specific auto insurer's policies to the degree that they would suffer immediate economic losses or decline, other than the insurer's direct investors. Policyholders would be largely protected by existing state guaranty funds, third party accident claimants

would be similarly protected through such funds (as well as under their uninsured motorist coverage), and new business could be switched relatively easily to other providers or a state residual market provider. The insurer's contracts with its agents and other suppliers would migrate quickly to new underwriters, and the beneficiaries of its investments would similarly migrate over a relatively short period of time. The insurer's failure would be relatively independent from a larger economic cycle or downturn (accident rates actually tend to fall during economic downturns as people drive less). Its investment portfolio is required to be relatively conservative and unleveraged, and its auto losses would be relatively uncorrelated with any economic cycles or systemic risk waves. Unlike banks and securities firms, a property casualty insurer failure would not cause a run on the industry since the products are essentially mandatory and overall demand is relatively inelastic. While the failure of a large auto insurer would be undesirable, and perhaps even cause a short period of transitory disruption in a local auto insurance marketplace, the negative economic consequences to the larger economy would be relatively limited – primarily transition costs and any net losses of the specific company.

The Council should also consider the nature and timing of a firm's liabilities. For example, a bond insurer's liabilities, though they can be substantial, will be stretched out over a period time – as much as 30 years or more – reflecting bond maturity dates. Superfund and asbestos liabilities are another example. The insurance industry's liabilities with respect to both were substantial, but they played out over an extended period of time, which generally allowed insurers adequate time to manage those liabilities effectively.

Finally, the Council should not make the mistaken assumption that natural catastrophe risks cause property casualty insurers to become systemically risky. In fact, surprisingly few insurer insolvencies have been caused directly by natural catastrophes. According to A.M. Best Company, since 1969, catastrophe losses were the primary causes of financial impairment in only 7.6 percent of all property casualty insolvencies.[2]

Industry observers believe that the number of insolvent property casualty companies peaked in 1990 and have been decreasing since that time. Should a failure occur, it is self-contained, the impaired company's claimants are protected by the guaranty fund mechanism financed by many healthy competitors, and its book of business can be picked up by a whole host of stable property casualty firms to ensure the continuation of coverage.

Legislative initiatives responding to the growing threat of natural catastrophes have included the creation of certain state-run funds such as the Florida Hurricane Catastrophe Fund and California Earthquake Authority. These programs tend to be under-priced and under-funded, in which case they do present a higher risk requiring additional capital after catastrophic events. Although pro-rated assessments are sometimes placed on private insurers to help bail out troubled state funds, there have been no cases in which insurers were adversely affected to the point of becoming financially impaired and causing distress to the economy.

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[2] A.M. Best Company, *1969-2008 Impairment Review,* Special Report, April 6, 2009. From 1969 to 2008, most failures were due to deficient loss reserves/inadequate pricing, rapid growth, and alleged fraud affecting smaller companies. "Impairment of an affiliate" is another factor, introduced in 1990, that has contributed more to insolvency than catastrophe losses.

It is also common for insurers to transfer some of their financial risk to other insurers (*i.e.*, reinsurers, often based in Bermuda or Europe) in the property line of business. By ceding all or part of the risk to a reinsurer, the primary company is protected against frequent or extraordinary losses, especially from large natural disasters. The obligations of the primary insurer are decreased, and consequently its financial strength or capacity (*i.e.*, surplus or financial cushion) is increased. With reinsurance, the insurer is able to offer more coverage to a policyholder than its capacity would otherwise allow and still remain sufficiently solid to write new business, especially those in disaster-prone locations.

Indeed, natural catastrophes arguably threaten other financial institutions more than insurers. A major catastrophic event such as a large earthquake or hurricane can result in reduced home values that lead to significant mortgage defaults, but banks are the ones at risk – not property casualty insurers. Property casualty insurance and other financial services sectors are not systemically connected. Unlike banks, property casualty insurers are at much less risk since they hold only a small proportion of total invested assets in the economy. Because they have more equity to finance their assets, they are not as susceptible as banks to short-term liquidity crises when credit markets are disrupted. Insurers can function soundly using operating cash flow and scheduled investment redemptions to meet their financial obligations and pay out claims, even when large natural disasters occur. Furthermore, runs on property casualty companies are not possible since people need automobile, homeowners and liability insurance to drive, obtain a mortgage, protect their assets, and operate a business.

With a consolidated policyholder surplus of $490.8 billion (as of September 2009), it would take an extraordinary amount of natural catastrophes to have any long-lasting adverse impact on the property casualty industry's net worth. The risk from being exposed to natural catastrophes does not pose a significant systemic threat to the property casualty industry, and the property casualty industry does not pose a significant systemic threat to credit markets and economic activities.

10. *How should the Council take into account the fact that a nonbank financial firm (or one or more of its subsidiaries or affiliates) is already subject to financial regulation in the Council's decision to designate a firm? Are there particular aspects of prudential regulation that should be considered as particularly important (e.g., capital regulation, liquidity requirements, consolidated supervision)? Should the Council take into account whether the existing regulation of the company comports with relevant national or international standards?*

The existence of an effective solvency regulator is highly relevant to the Council's consideration of the potential designation of a financial firm as systemically risky. The Council should refrain from placing a firm under Board supervision when the firm's existing solvency regulation makes it unlikely that the firm will fail, or that its failure would result in any significant, systemic impact on the larger economy. The goal of Section 113 of the Dodd-Frank Act is to establish the Council as a systemic risk monitor to send up red flags when an imperiled firm appears to present a potential systemic risk to the larger economy. It was not meant to establish the Federal Reserve Board as a substitute solvency regulator for firms that already have effective regulators. Board supervision that duplicates or interferes with the existing regulatory structure could hinder responsible solvency regulation of the firm and expose the firm to unnecessary compliance costs, potentially increasing the likelihood of failure. In the absence of significant indicia of systemic risk, the Council should exercise extreme caution to avoid placing firms under Board supervision when doing so would be counterproductive to the goals of Section 113.

The Council should consider the quality of the regulation in the particular industry sector and the appropriateness of the regulatory structure to that industry. The particular aspects of prudential regulation that should be considered will vary from industry to industry. In evaluating the effectiveness of an existing regulator, the Council should be careful to avoid taking an inappropriate, bank-centric perspective of the regulation of nonbank financial firms.

It is also appropriate for the Council to consider whether existing regulation comports with relevant national or international standards. We caution, however, that while deviation from such standards might warrant further scrutiny, lack of compliance with such standards is not necessarily indicative of a regulatory deficiency.

The insurance industry, of course, is subject to effective prudential regulation at the state level. The rate of failures in the insurance industry is quite low. In 2008, the property casualty industry suffered the fourth most expensive hurricane loss in its history, followed by the greatest investment market crash in half a century. Yet there were no major resulting property casualty insolvencies. State insurance regulators ensure that property casualty insurers' underwriting obligations are backed by strong levels of capital and surplus, which are stringently walled off from affiliated entities within a holding company structure. The quality of state insurance regulation has been recognized internationally. In May, 2010, the International Monetary Fund (IMF) released an assessment of regulation in the U.S. insurance sector as part of its Financial Stability

Assessment Program (FSAP) review of the entire U.S. financial sector.[3] The IMF concluded that "strong regulation contributed to the overall resilience of the insurance sector during the financial crisis" and described aspects of state regulation such as data collection and analysis of insurers as "world-leading." The report noted that state insurance regulators have achieved a "high level of observance" with Insurance Core Principles established by the International Association of Insurance Supervisors (IAIS).

[3] *Financial Sector Assessment Program, United States of America, IAIS Insurance Core Principles, Detailed Assessment of Observance*, International Monetary Fund, Monetary and Capital Markets Department, May, 2010.
https://www.imf.org/external/pubs/ft/scr/2010/cr10126.pdf

11. *Should the degree of public disclosures and transparency be a factor in the assessment? Should asset valuation methodologies (e.g., level 2 and level 3 assets) and risk management practices be factored into the assessment?*

Yes. Transparency should be explicitly considered in the determination process. The lack of transparency in a financial firm can create uncertainty and increase the likelihood of runs on institutions during periods of financial crisis, which can cause incremental asset sales, increased volatility, and de-levering within already stressed markets. Within the systemic rating framework, a lack of transparency should be treated as if the opaque area encompassed a high level of risk. (See NERA Report, paragraph 29 for more details on the Transparency component of our proposed methodology.)

Property casualty insurers are subject to an extremely high level of transparency. All property casualty insurers are required to submit annual and quarterly public financial reports to their state of domicile and the National Association of Insurance Commissioners (NAIC) that provide far more information than public companies are required to file with the Securities and Exchange Commission (SEC). As noted earlier, insurers must report on each individual investment, and a special schedule provides for exhaustive review of insurer loss reserves, the most significant liability for property casualty insurers.

Risk management practices are also an appropriate area of inquiry for the Council. Insurers are subject to rigorous state regulatory examinations, which include a significant and detailed review of insurers risk management practices. Although the Council will be able to consult with insurance regulators as needed on their views of the quality of the risk management practices of an insurer, the fact that this is an integral part of the examination process should provide the Council with a degree of confidence that the risk management practices of an insurer have already been vetted and are appropriate to the insurer's business.

12. *During the financial crisis, the U.S. Government instituted a variety of programs that served to strengthen the resiliency of the financial system. Nonbank financial companies participated in several of these programs. How should the Council consider the Government's extension of financial assistance to nonbank financial companies in designating companies?*

It is certainly appropriate for the Council to consider financial assistance received from governmental sources as one of many potential indicia of systemic risk. That said, PCI emphasizes that it is the activities and characteristics of the given firms that should be the focus of the Council.

In addition to providing financial assistance, federal and state governments are often involved in other ways in the affairs of financial firms, and these governmental influences should also enter into the Council's assessment of systemic risk. For example, state regulators have the leeway (which they used during the Great Depression) to stretch out the timing of claims payments to facilitate balance sheet adjustments. Consider also that, unlike some other financial services sectors, most home, auto, and business insurance consumers are fully protected by guaranty funds in every state. If a derivatives firm fails, its investors lose everything. *If a property casualty insurer fails, most policyholders are protected from financial losses.* In the last 40 years, the property casualty insurance guaranty system has paid out roughly $21 billion in policyholder claims on behalf of insolvent insurers. The existing system of state guaranty funds has served the industry and its consumers well. In part because of the state guaranty fund system, even the failure of one of the largest property casualty holding companies would be unlikely to create systemic risk or require additional government intervention.

13. *Please provide examples of best practices used by your organization or in your industry in evaluating and considering various types of risks that could be systemic in nature.*

    a. *How do you approach analyzing and quantifying interdependencies with other organizations?*

    b. *When and if important counterparties or linkages are identified, how do you evaluate and quantify the risks that a firm is exposed to?*

    c. *What other types of information would be effective in helping to identify*

    d. *and avoid excessive risk concentrations that could ultimately lead to systemic risk instability?*

PCI has no comment.

14. *Should the Council define "material financial distress" or "financial stability"? If so, what factors should the Council consider in developing those definitions?*

We do not propose any specific definitions of "material financial distress" or "financial stability." We note, however, that the appropriate definition of the "material financial distress" will vary across different types of firms and that the Council should give considerable weight to the relevant solvency regulator's determination of financial distress, such as those determinations made under the Risk Based Capital regime used in the insurance industry. We do not believe that the term "financial stability" has any particular widely understood definition. However, for purposes of Section 113, we believe that the term will most likely be understood as a question of whether U.S. financial instability resulting from systemic risks would be likely to lead to U.S. government intervention. In that regard, we emphasize the importance that the Council refrain from designating a firm as systemically risky merely because the firm is in financial distress if there is no reason to believe that the firm's failure would create a systemic risk to the larger U.S. economy such that U.S. government intervention would be required.

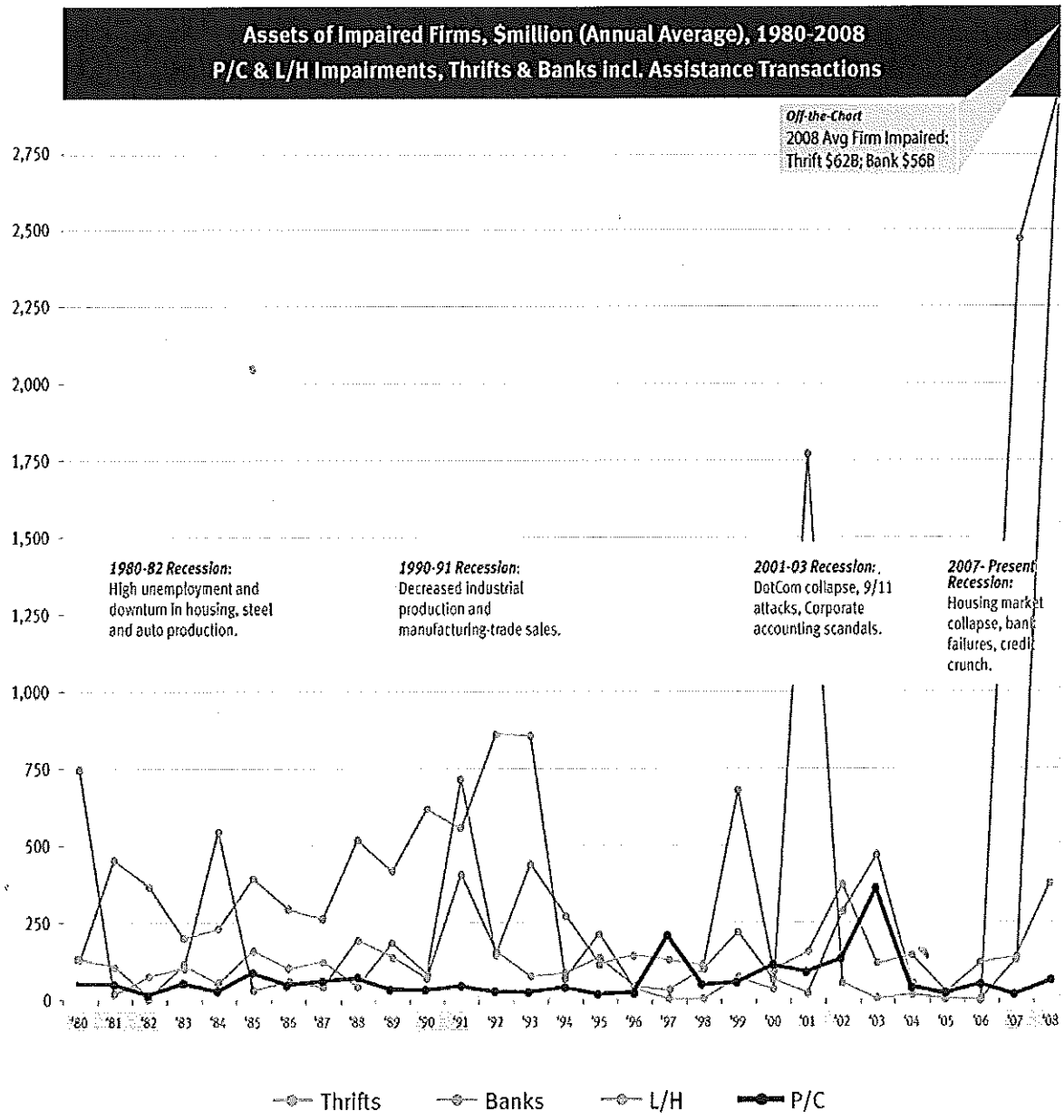
15. *What other risk-related considerations should the Council take into account when establishing a framework for designating nonbank financial companies?*

One further component of the a systemic risk rating system to be considered is the cyclicality of a firm's financial results, as reflected by the likelihood that a firm's financial performance will deteriorate commensurate with downturns in the markets and general economy. A firm or groups of firms that are naturally more correlated with financial market downturns are more likely to contribute to a systemic risk episode than those who operate without cycles or on cycles that are less correlated with markets.

Unlike other financial sectors, auto, home, and business insurers have a consistently low and counter-cyclical failure rate. One reason is that property casualty losses stem from events such as natural disasters that are independent of market cycles. Another reason is that property casualty insurers are required to hold surplus funds to ensure their ability to pay claims, which means that their investments must be extremely conservative and liquid.

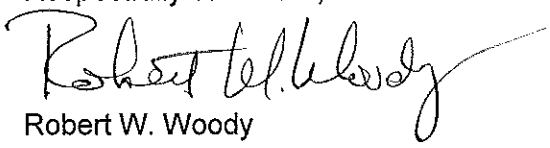
For example, surety insurance in many cases will over-perform during economic downturns because labor and materials can become more affordable, allowing failing obligations to be fulfilled without the need to claim on the surety coverage. Surety insurance companies have negligible or reverse correlation with industry systemic risk cycles are thus are highly unlikely to be part of a systemic wave (as are other financial firms with similar risk characteristics).

The following chart shows the low impairment rate of property casualty insurers as compared to other financial firms and the lack of correlation between insurer impairments and economic downturns.


Assets of Impaired Firms, $million (Annual Average), 1980-2008
P/C & L/H Impairments, Thrifts & Banks incl. Assistance Transactions
Off-the-Chart
2008 Avg Firm Impaired:
Thrift $62B; Bank $56B
2,750
2,500
2,250
2,000
1,750
1,500
1,250
1,000
750
500
250
0
1980-82 Recession:
High unemployment and downturn in housing, steel and auto production.
1990-91 Recession:
Decreased industrial production and manufacturing-trade sales.
2001-03 Recession:
DotCom collapse, 9/11 attacks, Corporate accounting scandals.
2007- Present Recession:
Housing market collapse, bank failures, credit crunch.
'80 '81 '82 '83 '84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08
Thrifts
Banks
L/H
P/C

We hope these comments are helpful to the Council. If we may be of further assistance in answering questions or providing additional information, please do not hesitate to contact me at (202) 639-0496.

Respectfully submitted,

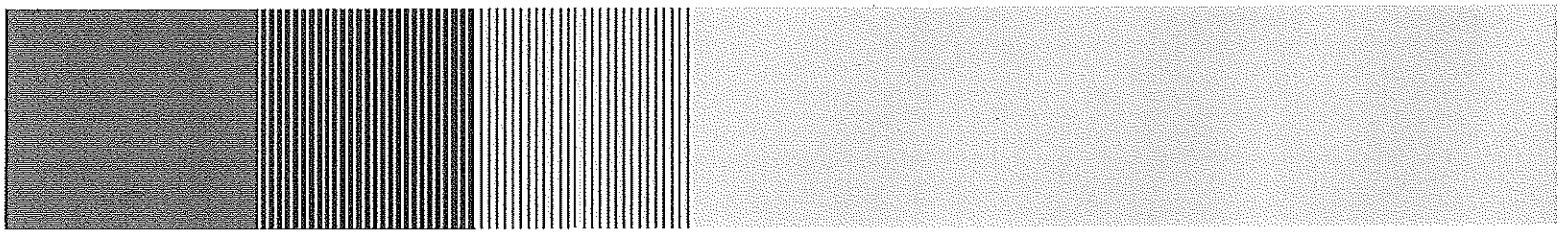


Robert W. Woody

Appendix 1

November 5, 2010

Systemic Risk Assessment Methodology



NERA
Economic Consulting

Overview for PCIAA

1 During 2009-2010, Congress worked to formulate a broad-reaching financial regulatory overhaul in response to the financial crisis. Ultimately, lawmakers agreed in a conference committee on a bill known as the "Dodd-Frank Wall Street Reform and Consumer Protection Act" ("Dodd-Frank"), which was subsequently signed into law by President Obama on July 21, 2010. A major part of Dodd-Frank deals with systemic risk evaluations of financial institutions. These evaluations, among other things, are required to determine: 1) the need for systemic risk oversight of specific nonbank financial companies, and 2) the amount (if any) of systemic risk-based assessments charged to individual financial institutions. Though Dodd-Frank requires regulators to consider a number of delineated factors as part of a systemic risk evaluation, it provides latitude for regulators to consider other factors and does not detail the specific construct of the assessment process. On October 6, 2010, regulators published an Advance Notice of Proposed Rulemaking ("ANPR") related to pending regulations which will determine the process for determining firms that pose systemic risk. Regulators specifically sought public comment on a series of 15 questions.

2 Federal regulators are ultimately expected to devise a new risk rating framework(s) to use in assessing systemic risk of individual financial institutions. The results of such rating process will largely determine if a firm becomes subject to systemic oversight by the Federal Reserve and the amount of systemic risk charge a firm is assessed. Determinations regarding the need for Federal Reserve systemic oversight of nonbank financial companies will be performed on an ongoing basis[1] to capture changes in individual institution activities, as well as shifts in underlying markets.

3 To reflect the many facets and complexities of a financial firm's systemic risk contribution, and to consider specified legislative requirements, a "CAMELS-like" rating system[2] estimating a firm's systemic risk is likely to be developed by regulators. Each letter in the CAMELS system represents a key component of safety and soundness for an individual bank legal entity; the CAMELS components are derived from various qualitative and quantitative considerations and ultimately weighted and aggregated to arrive at a composite rating. A similar construct using components which are aggregated up to a composite systemic risk rating would be familiar to regulators, allow capture of the specific Dodd-Frank considerations, and give regulators latitude to add and weight individual considerations as deemed appropriate.

4 The key component ratings regulators should use to arrive at an aggregate systemic risk rating for financial firms are described below. Within these components all the specific considerations[3]

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[1] These will be performed at least annually, per Dodd-Frank.

[2] The CAMELS system is used by the Federal Reserve, the FDIC, the OCC, and numerous state banking regulators to rate banking institutions' overall condition and performance. The six factors examined are Capital adequacy, Asset quality, Management administration, Earnings, Liquidity, and Sensitivity to market risk. Ratings are based on financial statements and on-site examinations.

[3] Dodd-Frank's required considerations are specified in Sec. 113(a)(2) Considerations, and Sec. 210(o)(4)(C) Risk-based Assessment Considerations."

denoted by Dodd-Frank are captured. Initial analysis indicates that traditional property and casualty ("P&C") insurance firms would receive relatively low risk ratings within each of the components.

Introduction:

5 This paper outlines a risk assessment process that may be used to determine the level of systemic risk posed by various individual financial institutions. Application of the system to a broad set of financial firms will allow rank ordering of firms in terms of systemic risk.

6 The process, which has been constructed over a number of months, should be considered as regulations that require the Financial Stability Oversight Council ("FSOC") to identify financial institutions posing significant systemic risk are devised by Regulators. The relative rankings provided by the process will allow the FSOC to properly prioritize its oversight efforts across the broad spectrum of financial market participants

7 Though not designed in response to the Advance Notice of Proposed Rulemaking[4] ("ANPR") published on October 6, 2010 in the Federal Register, the assessment process is responsive to many of the key questions posed. Though developed at the request of PCIAA, it should be stressed that the methodology has been empirically designed and is purposely broad enough to be
8 applied to all types of financial institutions whether they be characterized as hedge funds, banks, private equity firms, or insurance companies.

To reflect the many facets and complexities of a financial firm's systemic risk contribution, and to consider relevant legislative requirements, the process is designed in a multi-component "CAMELS-like" format[5]. Each letter in the CAMELS system represents a key component of safety and soundness for an individual bank legal entity; each component is derived from various qualitative and quantitative considerations and ultimately weighted and aggregated to arrive at a composite rating. A similar construct that rates important systemic risk components which are then aggregated up to a composite systemic risk rating will allow capture of the specific considerations denoted in the "Dodd-Frank Wall Street Reform and Consumer Protection Act" ("Dodd-Frank"), and give regulators latitude to add and weight individual considerations as deemed appropriate. The multi-component CAMELS-like format is familiar to most regulators and financial market participants, which will aid in implementation.

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[4] "Advance Notice of Proposed Rulemaking Regarding Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies." *Federal Register:* Vol. 75 No. 193. October 6, 2010.

[5] The CAMELS system is used by the Federal Reserve, the FDIC, the OCC, and numerous state banking regulators to rate banking institutions' overall condition and performance. The six factors examined are Capital adequacy, Asset quality, Management administration, Earnings, Liquidity, and Sensitivity to market risk. Ratings are based on financial statements and on-site examinations.

Assigning Systemic Risk Ratings

9 The below sections outline key components for the evaluation of financial firm systemic risk. Each of the sections contains one or more metrics that link a particular institution to systemic risk. The first 7 of these are primary factors that determine a firm's likelihood to contribute to a systemic risk episode. Components 1-4 largely seek to reflect the impact that the failure or impairment of a firm may have on the financial system. The 5th component has both repercussions on a systemic level as well as the individual level. Components 6 and 7 are the key factors that determine the likelihood that a financial firm will be able to remain un-impaired during stressed conditions. The final two categories reflect joint and mitigating factors that can either increase or decrease a firm's likelihood of contributing to systemic risk.

10 Each of the 9 scores will be rated in a way similar to bank CAMELS ratings. That is, each score will be from 1-5, with 1 the best possible and 5 the worst. From the component scores, a composite systemic risk rating for each institution will be derived.

The components are:

1. Interconnectedness
2. Concentration – Market
3. Implied Product Support
4. Cyclicality of Financial Results
5. Transparency
6. Liquidity
7. Capitalization
8. Joint Factor: Liquidity and Interconnectedness
9. Mitigant/Amplifier: Sector and Firm Specific

Multi-Stage Systemic-Risk Determination Process

11 The nine components comprising the full rating system should not be applied to every financial institution. For efficiency, a full assessment should only be performed on institutions that qualify under the two pre-tests described below.

12 I. Exposure Test: Total Quantity of Liabilities

Though size may not be well correlated with systemic risk potential for firms with relatively large total exposure levels, it is intuitive that a firm with a small total exposure level will not pose a systemic risk. A quantitative exposure hurdle that considers all balance sheet liabilities, notional amounts of derivative contracts, and other contractual or contingent liabilities should be utilized to reduce the universe of institutions that are subject to a more detailed assessment.

The exposure test threshold may be set at a single nominal amount (e.g. $10 billion) for all institutions, or may vary according to type of institution (i.e. property and casualty insurer vs. bank). The size test threshold(s) may change over time and the exact level may or may not be made public (to prevent gaming).

13 II. Core Systemic Component Test

Institutions above the exposure threshold would be assessed under a sub-set of the nine components detailed. The two key components for consideration are: 1. Interconnectedness; and 2. Market Concentration. Each institution above the exposure threshold will be assigned a score of 1-5 for these two key factors. If either of the two component scores were rated 4 or higher or the sum of the two scores is 6, the institution would be subject to a full systemic risk assessment.

The Interconnectedness and Market Concentration components are more fully described in the next section. However, the choice for these two components as a pre-test is described briefly. Quite simply, regardless of the other component ratings, if the failure or rapid deterioration of a particular institution does not have potential to cause significant losses amongst other institutions (interconnectedness) and does not remove a significant financial service/product provider from a significant market (market concentration), then the individual firm should not be considered systemically important. That is, the firm's demise would not have any significant impact to the financial system.

Firms that exceed both pre-test thresholds would be subject to the comprehensive assessment, considering all nine factors detailed in the next section.

Key Components for Evaluation of Financial Firm Systemic Risk

I. Interconnectedness: Potential for Spill-over

14 Interconnectedness is the potential for a financial firm, as a result of its failure or impairment, to transmit financial difficulties to other financial and non-financial firms. Interconnectedness results from the reliance that other entities place on a financial institution to fully meet the terms/obligations of various contractual commitments including but not limited to derivatives, guarantees, committed lending facilities, and insurance. See PCIAA/NERA whitepaper[6].

15 An interconnectedness assessment looks to the total exposures of a financial firm and various concentrations that may exist from such exposures. Total exposure goes beyond whatever accounting methodologies are used to determine balance sheet totals and considers so-called risk shifting activities (e.g. written credit default swaps, securitization of mortgages with credit or liquidity risk guarantees, other guarantees or sold puts). The capture of risk-shifting activities addresses potential moral hazard issues inherent in the originate-to-distribute model of lending and the disaggregation of risky products. A number of authors and commentators have emphasized the importance of capturing institutions contribution to risk shifting. See Kane (2009, 2010a,b) for leading examples.[7]

16 A firm with a high level of interconnectedness inherently poses a greater level of financial system risk. Ultimately, various nominal and risk-weighted exposure metrics may be considered for different types of financial institutions in assessing interconnectedness, but a strict rules based formula is not recommended.

The following sections of the Dodd-Frank Financial Reform Act relate to or require consideration of interconnectedness:

- Section 113 Considerations: (B), (C), (G), (I), (J), (D)
- Section 210 Considerations[8]: (i), (ii), (vi), (ix)

Rating - Interconnectedness

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[6] For more complete discussion related to interconnectedness, see "De-Mystifying Interconnectedness: Assessing 'To Interconnected to Fail' and the Fallout From Getting it Wrong." PCI White Paper, Research by NERA Economic Consulting, April 23, 2010.

[7] Kane, Edward J., 2009. "Incentive Roots of the Securitization Crisis and Its Early Mismanagement," Yale Journal on Regulation, 26 (summer), 405-416. Kane, Edward (2010a). "Redefining and Containing Systemic Risk," Atlantic Economic Journal (forthcoming). Kane, Edward. (2010b) "Missing Elements in the US Financial Reform: A Kubler-Ross Interpretation of the Inadequacy of the Dodd-Frank Act" Keynote Address, 2010 Infiniti Conference

[8] Section 210 Considerations points come from Section 210(o)(4)(C), unless otherwise noted.

The rating will take into account the degree of interconnectedness that an institution has with other firms. Key factors to consider will be

(1) the significance of commitments with counterparties,

(a) size and number of commitments

(b) size and nature of any margin or collateral

(c) clearing time

(2) the correlation of counterparty dependence with the firm being assessed (e.g. do commitments to counterparties increase when assessed firm is in weakened condition?)

(3) the correlation of counterparty dependencies (e.g. are all counterparty commitments likely to come due at the same time?)

(4) importance of institution to the management or operation of exchange, clearing or other central system

(5) size and scope of securities lending operations

18 Regulators are encouraged to consider each of these factors in determining a rating for the institution. A number of methods from the academic literature may be useful in determining the importance of the financial institutions in the financial network. We encourage regulators to consider at least two components of network structure when evaluating the contribution of an entity. First, we encourage a simple metric of network centrality, such as connectedness – a measure of how many 'links' an institution has to other institutions. More links could imply more risk should the institution fail. Second, we encourage regulators to consider how 'important' a financial institution is in the network. An institution that transacts daily with every other institution in the world, but only for $1 is not 'important' even though it is highly inter-connected. A measure such as Bonacich centrality is designed to capture this importance. Ballaster et al (2006), Calvo-Armengol, et al (2009) and Cohen-Cole et al (2010) provide more detail regarding the theory and application behind the use of this measure.[9]

A final rating of 1-5 will reflect the following summary descriptions:

1. *Completely independent*
2. *Somewhat independent*

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[9] Bonacich, P. (1987), "Power and Centrality: A Family of Measures", American Journal of Sociology, 92, 1170-1182.; Ballaster, C., A. Calvo-Armengol, A. and Y. Zenou, 2006, "Who's Who in Networks. Wanted: The Key Player", Econometrica, 74, 1403-1417.; Calvo-Armengol, A., E. Patacchini, and Y. Zenou, 2009, "Peer Effects and Social Networks in Education," Review of Economic Studies, 76, 1239-1267. Cohen-Cole, E., Kirilenko, A, and Pattachini, E. (2010) "Are Networks Priced? Network Topology and Order Trading Strategies in a High Liquidity Market" University of Maryland, mimeo. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1597738

3. *Moderately interconnected*
4. *Highly interconnected*
5. *Very highly interconnected*

II. Market Concentration: Firm Market Share; Ease of Product/Service Substitution; Granularity of Market(s); Standardization/Customization of Products

19 Individual financial product/service offerings consumed by retail and institutional customers may be offered by a large number of firms within a competitive market or by a smaller more concentrated group of firms. Less competition within a particular product/service class can result in substantial difficulty in product replacement/substitution should one of the offering firms exit the market as a result of impairment, failure, or otherwise.

20 As financial product markets largely controlled by a few firms grow in terms of importance to overall markets and the economy at large, the firms offering such products pose increasing levels of systemic risk. For example, if a few firms serve as counterparties to the vast majority of credit default swaps ("CDS"), and the CDS market is of high importance to the overall market/economy, such firms likely pose significant systemic risk, regardless of total balance sheet size or other diversified activities. A firm that represents a particular market concentration may itself not have a portfolio concentration (which is considered within capital and liquidity ratings)

21 Market concentration risk considers product/service offerings and direct holdings of financial products, as well as off-balance sheet exposures and assets under management that are effectively controlled by an institution (or may become direct holdings).

The following sections of the Dodd-Frank Financial Reform Act relate to or require consideration of market concentration.

- Section 113 Considerations: (D), (E), (F), (G), (I)
- Section 210 Considerations: (i), (iii), (ix), (x), (xi)

Rating - Market Concentration

22 The assigned rating will be based on market concentration indices for product lines. Ratings will consider national,, regional, and local concentrations.

We encourage the use of standard concentration statistics, such as the Herfindahl-Hirschman Index (HHI). The HHI is a measure of the size of firms (or products) in relation to the industry. It is defined as the sum of squares of the market shares of the 50 largest firms within the industry. Where there are fewer than 50 firms, it uses all firms. The index itself is a number between 1/N and 1, where N is the number of firms in the industry. An HHI above .18 is typically considered a highly concentrated industry. In order to ascribe a value to each firm, we suggest taking the contribution of each firm to

the HHI. This is a number between zero and 1 and is a measure of market power of the firm within that segment.

Regulators should consider the concentration of products such as commercial and industrial ("C&I") lending (rather than all lending). As a result, each product category will receive one national and a number of local scores.

A final rating of 1-5 will reflect the following summary descriptions:

1. *One of many actors in local markets or small actor in national market. No significant concentration in any product category.*
2. *One of few actors in local markets or small to medium actor in national market. No significant concentration in any product category.*
3. *One of limited actors in local markets or medium actor in national market. Some concentration in limited product categories.*
4. *Key actor in multiple local markets or medium-large actor in national market. Concentration in many product categories.*
5. *Key actor in national market and in numerous local markets.*

III. Implied Product Support

23 Even in the absence of contractual exposures or obligations (that would be considered in the interconnectedness rating) a financial firm may imply support for certain positions or products. This may be the result of the firm having involvement in initial underwriting or distribution or by having staked out a position as a key liquidity provider in a certain product class. A firm may have even set previous precedents of supporting products in the past.

24 Such support may be abandoned by a firm in times of stress in an effort to shore up its own condition. However, abandoning products where implied support had existed can cause or exacerbate broader market problems and thereby increase systemic risk.

Rating – Implied Product Support

The rating should consider the dependence by the market on the implied support or
25 product(s) provided by the firm being considered. If the dependence is high in a particular product class or classes that are important to markets, then the implied support rating should be high. Implied support may be high but if wide support is provided by a number of firms then the support is less important. A lack of implied support or potential importance of support would result in a low score.

1. *No implied support on products or support is not relied upon*
2. *Minimal implied support relative to resources*
3. *Some implied support relative to resources*
4. *Significant implied support relative to resources*
5. *Strong implied support for a number of key market products with high reliance by market for continued support. Level of support is high relative to resources*

IV. Cyclicality of Financial Results: Exposure to, or Correlation with, Market Cycles

26 Cyclicality is reflected by the likelihood that a firm's financial performance will deteriorate commensurate with the timing of declines or increased volatility within general financial markets. Financial firms that are highly exposed to financial market cycles tend to pose higher systemic risk than others. For instance, if a firm needs to increase capital or liquidity levels just as market conditions deteriorate, not only can firm-specific problems ensue, but the troubled firm's forced sale of assets into a declining market can exacerbate overall market deterioration.

27 More cyclically exposed firms may be properly capitalized and sufficiently liquid to weather even significant cycles, and so it should not be assumed that more cyclical firm are always more likely to become impaired (other considerations are important). However, the behaviors of more cyclical firms can be more important to the system during downturns. Finally, it should be noted that some firms may be exposed to cycles, but to the extent those cycles are not highly correlated with market and economic downturns they are unlikely to contribute to systemic risk episode.

- Section 113 Considerations: (B), (G), (I), (J)
- Section 210 Considerations: (i), (ii), (xi)

Rating - Cyclicality

28 The rating should be informed by the correlation of firm earnings with a set of key market indicators. We encourage regulators to consider using three sets of cyclicality measures: general economic conditions, consumer cyclical information and financial market conditions.

(1) General Economic Conditions

(a) GDP

(b) M3

(2) Consumer Cyclical

(a) Housing/Commercial Real Estate price index

(b) Consumer confidence

(c) Consumer borrowing

(3) Financial Market

(a) S&P, Dow, FTSE index, etc

(b) VIX-type measures

A final rating of 1-5 will reflect the following summary descriptions:

1. *Negative correlation with key measures*
2. *Mild negative correlation with key measures*
3. *No correlation with key measures*
4. *Mild positive correlation with key measures*
5. *Large positive correlation*

V. Transparency: Availability and Market Comprehension of Financial Exposures

29 Transparency provides market participants and regulators with information regarding a financial firm's various risk exposures. A high level of transparency allows the market to estimate the financial position of a firm in the current environment and under various potential future scenarios. Lack of transparency creates uncertainty about a firm's financial position and future prospects which can increase risk to the individual firm and to the system as a whole. This is because during stressed periods, opacity tends to exacerbate fear and related "runs on institutions" by retail and institutional customers/counterparties. Such runs can result in incremental asset sales, increased volatility, and de-levering within already stressed markets.

- Section 113 Considerations: (B), (I)
- Section 210 Considerations: (i), (ii), (xi)

Rating - Transparency

30 The rating will be based on the regulator's discretion, with regulators encouraged to take into account a number of factors including the timeliness and detail of financial institution release of:

(1) level, quality, trend of capital,

(2) derivative positions and off-balance sheet contractual exposures

(3) counterparty positions and various forms of counterparty concentration, and

(4) level, quality and trend of liquidity

31 The timeliness and level of disclosure required by regulators of various institutions can vary significantly. Some institutions that are largely un-regulated may have minimal or no reporting requirements. As such, fully meeting current regulatory reporting requirements could result in either a high or low rating within this framework.

A final rating of 1-5 will reflect the following summary descriptions:

1. *Financial institution releases substantial, timely information on each key category.*
2. *Financial institution releases substantial, timely information in some categories.*
3. *Financial institution releases some information in each category or substantial information in one category.*
4. *Financial institution releases some information in limited categories.*
5. *Financial institution releases little information on any category. Example would be status quo quarterly call reports only.*

VI. Liquidity: Ability to Meet Cash Obligations

32 A firm's liquidity position determines its ability to meet current and potential cash obligations. Higher levels of liquidity reduce the need for a firm to sell (potentially less liquid) assets to meet current obligations. Firms with low liquidity relative to potential needs have a relatively high potential for failure and potential to contribute to systemic risk. This is particularly true for a firm that represents a market concentration or that is highly interconnected.

- Section 113 Considerations: (I), (J)
- Section 210 Considerations: (ii), (v), (vii), (viii), (xi)

Rating - Liquidity

33 The rating will be based on the ability to meet cash obligations. Where available, liquidity ratings from safety and soundness regulators should be considered (e.g. L in CAMELS, for banks). Within this systemic framework regulators must focus on the potential for a firm to meet liquidity demands under potential future stressed environments. Current obligations are typically met with a combination of existing liquidity in the form of cash, liquid securities or various borrowing. However, the ability to meet obligations in a stressed future environment must consider potential liquidation values of assets, changes in margins/haircuts on collateralized borrowings and the potential for committed liquidity providers to fail to meet their obligations. Portfolio exposure concentrations tend to increase liquidity risk.

34 The matrix below illustrates an example of one input to a liquidity rating. The matrix considers the portion of liabilities maturing in less than 30 days and the sources for meeting those liabilities.

	Cash/Treasury Only	*(2)*	*(3)*	*(4)*	*Credit Lines Only*
>10% of liabilities <30 days	*1*	*2*	*3*	*4*	*5*
>20% of liabilities <30 days	*2*	*2*	*4*	*4*	*5*
>30% of liabilities <30 days	*2*	*3*	*4*	*5*	*5*
>40% of liabilities <30 days	*3*	*3*	*5*	*5*	*5*
>50% of liabilities <30 days	*3*	*4*	*5*	*5*	*5*

VII. Capitalization: Degree of Leverage

35 Capital serves as a buffer to absorb financial company losses. The size of a financial institution's capital relative to its various risk exposures and the correlation of those exposures is a key determinant of firm survival. Concentrations (e.g. portfolio concentration) or multiple disparate risk exposures under certain scenarios can rapidly deplete a financial firm's capital and threaten survival. Low levels of capital (i.e., high levels of leverage) increase the likelihood of a firm's failure, thereby increasing systemic risk, particularly for a firm that represents a market concentration or is highly interconnected. For purposes of this framework the continued adequacy of capital under more severe financial and economic downturns should be considered.

It is critical that capitalization ratings consider the risk and correlation of the assets, liabilities and other exposures and activities undertaken by a particular financial firm. A simple leverage ratio is not comparable across financial firms that undertake different activities. For instance a fund that undertakes concentrated exposures in one area of the financial market would need significantly lower leverage to obtain a capitalization rating commensurate with an insurance company that has diverse exposure to largely uncorrelated physical events and maintains a high quality asset pool in support of potential exposures.

- Section 113 Considerations: (A), (I), (K)
- Section 210 Considerations: (i), (iv), (vii)

Rating - Capitalization

36 If available, the capitalization rating will consider relevant regulatory "safety and soundness" capital ratings (e.g. C in CAMELS, if a bank), which generally reflect firm capital in relation to exposures as well as the quality of capital. However in rating both liquidity and capitalization, it is important that potential differences in arriving at safety

and soundness ratings across various types of financial firms be considered. Functional regulators may tend to rate an individual firm within a sector relative only to the other regulated firms in that sector. However, in this more overarching framework it should be realized that a "satisfactory" liquidity or capitalization rating for a firm in one sector is not commensurate with a firm in a different sector. Higher concentrations in exposures and market funding sources within a firm typically require greater capital support than a more diverse set of exposures and funding sources.

37 Recent policy discussion and academic work has emphasized the importance of firms holding not only common equity to buffer against shocks, but also the importance contingent capital. One set of prominent suggestions includes the issuance of conditional capital buffers in initial debt form. This type of debt would automatically convert to equity based on a set of pre-determined criteria such as the level of the firms' stock price. In this fashion, the firm would have access to additional capital precisely when it is exposed to systemic shocks. The final rating, for example, may be based on a table such as the one below, along with other relevant qualitative and quantitative considerations. The C column across the top of the matrix represents the primary regulator's capital rating for the institution (e.g. The "C" in CAMELS for regulated banks)

	C- 1	*C-2*	*C-3*	*C-4*	*C-5*
Common Equity (CE) >8%+ conditional capital (CC) >5%	*1*	*2*	*3*	*4*	*5*
CE >6% and CC>5%	*2*	*3*	*3*	*4*	*5*
CE >4%+ CC>5%	*3*	*4*	*4*	*5*	*5*
CE >4%+ CC>3%	*4*	*5*	*5*	*5*	*5*
Common Equity <5%	*5*	*5*	*5*	*5*	*5*

VIII. Joint Factor - Liquidity + Interconnectedness

38 This rating is intended to capture the fact that interconnected institutions are a greater risk to the financial system if they are themselves illiquid. Higher liquidity risk is more likely to trigger an event which can cascade through the system. It also serves to reward even interconnected institutions with sound liquidity management.

	Interconnectedness (1)	***(2)***	***(3)***	***(4)***	***Interconnectedness (5)***
Liquidity (1)	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
(2)	*(2)*	*(2)*	*(3)*	*(4)*	*(5)*
(3)	*(3)*	*(3)*	*(3)*	*(4)*	*(5)*
(4)	*(4)*	*(4)*	*(4)*	*(4)*	*(5)*
Liquidity (5)	*(5)*	*(5)*	*(5)*	*(5)*	*(5)*

IX. Mitigants/Amplifier

Individual firms or groups of firms may be supported by various mitigants that serve to
39 reduce the gross level of systemic risk contribution, as reflected by the components above. For example, the existence of a group resolution fund can reduce the systemic impact from a group member's failure. Additionally, the existence of a robust and low-impact wind-down plan can reduce the systemic risk posed by a financial firm. Finally, a firm that has superior information systems with respect to its own exposures as well as superior market monitoring capabilities may be able to take steps to avoid exposure to potential stressful environments.

- Section 113 Considerations: (H)
- Section 210 Considerations: Section 210(o)(4)(B)

Rating – Mitigants/Amplifier: Sector and Firm Specific

40 This rating is intended to capture the variety of methods that a financial institution can use to mitigate its systemic risk. Rating examples below are indicated. A 1 rating will reduce the systemic risk score; a 3 would have no impact and a 5 would amplify the composite rating.

1. *Sector Guarantee Funds; Detailed Wind-down plan; Strong information systems*
2.
3. *Satisfactory wind-down plan and information systems*
4.
5. *Lack of detailed wind-down and contingency plans; Marginal information systems*

Future Development

42 When considered together, the component ratings above should reflect the net systemic risk posed by various financial institutions, while encompassing all considerations required by Dodd-Frank.

43 Going forward in the development of the assessment process, each individual component may be further defined and detailed by regulators. Specific qualitative and quantitative measures may be specified that are utilized in arriving at the component rating. For firms that are currently lightly regulated with minimal reporting, regulators may need to set up new information flows in order to arrive at informed ratings. In other more highly regulated sectors, current exposure information reported in public and regulatory filings may be sufficient to derive an informed systemic risk rating.

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APPENDIX 2

PCI White Paper

April 23, 2010

De-Mystifying Interconnectedness

Assessing "Too Interconnected to Fail" and the Fallout From Getting it Wrong

Research by: NERA Economic Consulting

Prepared for: Property Casualty Insurers Association of America

PCI Property Casualty Insurers Association of America
Shaping the Future of American Insurance

NERA Economic Consulting

PCI White Paper

De-Mystifying Interconnectedness

Table of Contents

PCI is comprised of more than 1,000 member companies, representing the broadest cross-section of insurers of any national trade association. PCI members write over $180 billion in annual premium and 37.4 percent of the nation's property casualty insurance. Member companies write 44.0 percent of the U.S. automobile insurance market, 30.7 percent of the homeowners market, 35.1 percent of the commercial property and liability market, and 41.7 percent of the private workers compensation market.

Contributors

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Executive Summary

Congress is currently considering broad legislation to address heightened financial services and systemic risk regulation. In December, the U.S. House of Representatives passed legislation H.R. 4173, the "Wall Street Reform and Consumer Protection Act of 2009," which requires that asset size be primarily used to determine whether a financial firm is deemed systemically risky. The Senate is now also considering using asset size as a determinative factor in similar systemic risk legislation. However, this approach is flawed, as it fails to consider a firm's level of interconnectedness, in relation to the larger financial system.

Interconnectedness – the extent to which a firm impacts and is impacted by other firms – is a more accurate and efficient measure of systemic risk. As addressed in the January 2010 NERA study, "Why 'Too Big to Fail' is Too Short-Sighted to Succeed," using size alone to determine whether a firm poses systemic risk paints an incomplete and distorted picture.

Financial system interconnectedness is a key factor for understanding systemic risk and the potential for future market failures. It is important for Congress to consider a financial firm's interconnectedness in any new systemic risk regulation efforts. Firms that maintain a higher degree of interconnectedness pose greater systemic risk and warrant a higher prioritization in any systemic risk mitigation efforts undertaken. Firms that are less connected and pose less risk to the financial system should be treated commensurately.

Failure to appropriately differentiate between firms with varying levels of interconnectedness may not only lead to an inefficient and possibly ineffective systemic risk mitigation process, but can also bring about other undesirable economic results. These economic impacts include:

I. Inefficient Regulation and Competing Mandates

II. Increased Legal and Market Uncertainty

III. Inefficient Capital Structure and Increased Cost of Capital

IV. Reduced Transparency and Increased Risk

V. "Free Riders" and Loss of Economic Efficiency

VI. Adverse Incentives and New, Additional Moral Hazard

VII. Undermined Market Discipline

VIII. U.S. Job Losses and Decline in U.S. Competitiveness

Interconnectedness should be considered in any assessment of an individual firm's inclusion in proposed systemic risk and resolution legislation. Financial regulation should also consider the other major sources of firm-based systemic risk, including: cyclicality, leverage, liquidity risk and transparency. The significant economic costs of a flawed policy based on "Too-Big-To-Fail" are likely to outweigh any potential benefits.

Introduction

The paper begins by briefly describing financial system interconnectedness ("IC") and its importance to systemic risk. It then describes the negative consequences associated with a failure to consider varying levels of IC across financial firms within financial reform efforts. Inappropriate consideration of financial firm IC would lead to inefficient use of regulatory resources and pose significant unnecessary costs to firms, consumers, and the system as a whole.

In Part II, the paper defines and discusses specific categories of financial firm IC in non-technical terms, providing examples. Certain interconnectedness mitigants are also described which can reduce negative spillovers that may otherwise result from a firm's inherent IC.

In Part III, a description and the results of a survey of financial firm IC are discussed. The survey ranks the IC of five stylized financial institutions (list 5 types). These firms in aggregate represent a large portion of the total U.S. financial system. For each stylized financial firm, the inherent IC, mitigants to IC, and net IC were ranked by a group of external[1] financial markets experts.

The survey results indicate that significant differences in IC exist across various firm types. It follows that the potential for different financial firm types to initiate or contribute to a systemic risk episode will vary widely as a result of IC differences.

We conclude it is important for legislators and regulators to ensure that differences in financial firm IC are reflected within any new systemic risk reduction efforts.

1 Survey respondents are external in that they are not employed by the contributors' employers (i.e., NERA and Oliver Wyman).

Part I: The Importance of Interconnectedness to Systemic Risk

Interconnectedness, sometimes referred to as "spillover" or "contagion," reflects the impact that entities have on one another. Across financial firms, a high level of IC is sometimes viewed positively, as it may be associated with the ability to "lay-off" risks to counterparties. However, during episodes of stress, IC can take on the negative connotation of contagion, when problems at one or a few firms are transmitted across networks, infecting counterparties and customers.

As described by Mayr, "On the one hand, an interbank system or a risk transfer market provides an insurance against liquidity shocks. On the other hand, it exposes a wider range of institutions to systemic risk."[2]

IC is, in fact, a primary reason that many view the failure of certain financial firms as creating potentially more overall systemic risk than non-financial firms. Some financial firms maintain a high number of very significant connections that are difficult to fully monitor. The issue is summarized by Bullard, et al.:

> In the normal course of business, large commercial and investment banks lend and trade with each other through interbank lending and deposit markets, transactions in over-the-counter (OTC) derivatives, and wholesale payment and settlement systems....The lightning speed of financial transactions and the complex structures of many banks and securities firms make it especially difficult for a firm to fully monitor the counterparties with which it deals, let alone the counterparties of counterparties. The rapid failure of a seemingly strong bank could potentially expose other firms to large losses. Even firms that do not transact directly with the affected bank can be exposed through their dealings with affected third parties.[3]

A high number and degree of connections between firms creates the potential for systemic risk. Intuitively, a group of firms or an individual firm whose failure does not significantly impact its creditors, counterparties, or customers, and that is not significantly impacted by other firms' problems, is unlikely to initiate or contribute to a systemic risk episode.[4] Conversely, a group of firms or an individual firm whose own financial problems pose large negative impacts to other firms, or that has a significant likelihood of becoming impaired as a result of exposure to troubled firms, is more likely to contribute to a systemic risk episode. As described in the Report to G20 Finance Ministers and Governors:

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2 Bernhard Mayr, "Financial Contagion and Intra-group Spillover Effects," Dissertation no. 3303 of the University of St. Gallen, Graduate School of Business Administration, January 22, 2007, p. 31.

3 James Bullard, Christopher J. Neely, and David C. Wheelock, "Systemic Risk and the Financial Crisis: A Primer," Federal Reserve Bank of St. Louis Review 91, no. 5, Part 1 (September/October 2009), pp. 408-409.

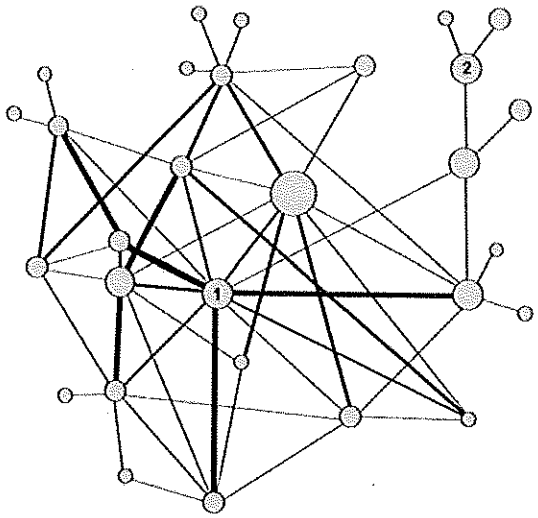
4 The surprise demise of a firm that serves to wipe out equity holders would negatively impact any investors with concentrated equity holdings. However, diversification can mitigate this.

> Interconnectedness captures situations when financial distress in one institution materially raises the likelihood of financial distress in other institutions because of the network of contractual relations in which the institution operates. This chain effect operates on both sides of the balance sheet, i.e., there are inter-connections on the funding side as well as on the provision of funds. The larger the number of links (the larger the number of creditors and clients), the higher potential to cause spillovers onto either clients and/or creditors. In addition, the larger the size of the individual exposures (the "thickness" of the links), the greater the potential that these effects will be magnified.[5]

Whether through direct contractual obligations or indirect relations, all financial firms maintain some degree of IC. However, within a continuum of IC, different financial firms have a greater or lesser number and degree of linkages as a result of their natural and preferred business activities. Additionally, certain firm types have mitigants or firewalls in place that effectively reduce the likelihood of financial problem transmission. To assess a firm's net IC, this concept must first be defined and explained.

The figure below illustrates a hypothetical financial institution network, and focuses on two specific firms. Firm #1 maintains a high number and degree of interconnections, and therefore naturally poses a greater risk to the system, should it encounter financial problems. Firm #2, which is less connected, both poses less risk to the system and is less exposed to risks emanating from other firms. It is notable that the absolute size of the firms does not reflect their degree of IC.[6]

Financial Institution Interconnectedness
High vs. Low Interconnected Firms



Circles represent financial firms. Circle size represents firm asset size.
Lines represent connections between firms. Line thickness represents degree of connection.

5 *Report to G20 Finance Ministers and Governors: Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations*, International Monetary Fund, Bank for International Settlements, Financial Stability Board, October 2009, p. 10.

6 For more complete discussion related to failure of size as a determinant of specific risk, see "Why 'Too Big to Fail' is Too Short-Sighted to Succeed," PCI White Paper, Research by NERA Economic Consulting, January 18, 2010.

A useful comparison to the systemic risk of the financial system is the "hub-and-spoke" model that airlines use to efficiently transport passengers. In the airline system, the "hub" cities, whether very large in terms of resident population such as New York, NY, or smaller such as Charlotte, NC, are of critical importance to the efficacy of the entire transport network. An airport closure in a hub city can result in massive travel disruptions regardless of travelers' ultimate destinations. Conversely, an airport closure in a less significant "spoke" city will result in problems for a much smaller portion of air-travelers. Additionally, the system's capacity to facilitate work-arounds to spoke cities, such as flights to airports nearby followed by ground transportation, is much higher.

Though financial institution networks may not be purposely designed in a hub-and-spoke model, financial networks can naturally end up in a similar design with similar weaknesses. An analogous example could be a particular over-the-counter ("OTC") securities or derivatives markets in which the majority of transactions ultimately involve a relatively small number of dealer firms.

To summarize the introduction to IC, it is intuitive that different financial firms maintain different quantities and significance of connections. Given that the financial system or network is the framework through which systemic risk is transferred, firms exhibiting more significant connection nodes have a relatively greater potential to contribute to a systemic risk episode. Developing the necessary financial and regulatory infrastructure to assess the level and significance of IC is critical to averting the type of financial crisis experienced recently. In addition, a program that misses the mark, or relies too heavily on identifying and regulating the wrong factors may actually give rise to increased costs to business, changes in economic behavior, and an erosion of market discipline that leads to increased systemic risk. The following section details the economic research and evidence from recent crises in which systemic risk became palpable, and conducts an analysis of current proposals for contending with systemic episodes.

Economic Consequences of Interconnectedness and Efforts to Regulate Systemic Risk

As the need to address systemic risk has reached a level of urgency for regulators and legislators in the wake of the financial crisis, many have come to recognize that the critical target for future policies is not one that is directed at those firms that are "too-big-to-fail," but more precisely "too-interconnected-to-fail." While there seems to be widespread agreement on the importance of addressing IC, proposals for reform have continued to focus on the former, with increased regulation and government resolution authority still considered as a remedy for the latter. As a result, these proposals have the potential to have an unintended negative impact on firms whose IC is low or unlikely to lead to a systemic risk episode, while failing to target or discourage those firms whose activities give rise to IC-generated systemic risk.

Analysis of IC or "channels of contagion" by economists Allen and Gale (2000) indicates that the structure of linkages between banks can result in the transmission of shocks (such as an unexpected demand for liquidity) across financial entities which can spread across regions.[7] The extent to which the markets or industries in which the firms operate are interconnected and complete (risks are traded or efficiently priced contractually) determines

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7 Allen and D. Gale, "Financial Contagion," *Journal of Political Economy 108*, no. 2 (2000), p. 2.

whether a shock is transmitted and gives rise to systemic risk episodes.[8] As we demonstrate in the sections that follow, depending on structural relationships, IC can act as a shock absorber or, conversely, as a transmitter of contagion and negative spill-over effects. Consistent with the insight of economic studies, our results confirm that different industries display different levels of IC and therefore pose different levels of systemic risk.

The characteristics of firms within an industry and their relationships to each other, their clients (depositors, creditors, policyholders, etc.) and the correlation of risks in assets become critical factors in determining the role of IC in relation to systemic risk. Since IC can be fundamental to the transmission of systemic risk, changes to regulatory programs and new authorities designed to address systemic risk must take IC exposures into account. Also, policies must recognize how existing contractual, legal and various regulatory structures act to reduce IC and the correlated exposures that give rise to systemic risk.

Economic studies find that IC alone does not give rise to systemic risk, but combined with higher levels of debt among interconnected firms and lower levels of capital, the likelihood of contagion leading to a systemic event is greater. This is confirmed by Nier, et al., who find in their study that the knock-on effects of a failure in a banking system depends on the level of concentration, the extent of interbank linkages, and the level of capital available to act as a buffer to absorb shocks. In general, the authors find that high levels of concentration, larger-sized interbank linkages, and lower capital levels increase the scope for transmission of systemic risk.[9]

The factors identified by Nier, et al., are also consistent with evidence regarding the causes, scope, and spread of the Asian financial crisis of 1997. In addition to organizational interconnectivity common to Asian financial conglomerates, there were high levels of IC in the financial relationships among those entities in the services sector accompanied by high levels of debt.[10] Reliance on offshore finance, and its simultaneous pullback at the signs of early problems, led to significant losses and the onslaught of the crisis that ensued.

The lethal combination of high interbank connectivity, large interbank liabilities, high debt levels, and low levels of capital certainly were at play in the recent financial crisis. But it is important to remember that not all financial industries exhibit these characteristics to the degree seen in the Asian crisis or in recent experience. The property and casualty ("P&C") insurance industry has low levels of IC, does not carry the high levels of debt found in the banking industry, has greater asset to capital ratios, and is not generally reliant upon outside capital for funding. As a result, the network effects predicted by economic experience that result in the transmission of systemic risk are unlikely to be observed in the P&C industry.

Various proposals contemplate a regulatory authority that would assume responsibility for regulating systemic risk, whether that involves the creation of a council of existing regulators, creation of a separate agency or combination of agencies (such as a consolidated banking authority), or a specialized group housed within an agency (such as the Federal Reserve) designated to explicitly focus on identifying systemic risk and addressing it through policy and direct intervention. In most proposals under consideration, the systemic risk regulator would have expansive resolution authority which it could use to intervene in, and potentially restructure or dismantle, a firm in order to forestall a systemic risk episode.

8 *Ibid.*, p. 6.

9 E. Nier, J. Yang, T. Yorulmazer, and A. Alentorn, "Network models and financial stability," Bank of England Working Paper No. 346 (April 2008), p. 3.

10 Martin Perry, *Small Firms and Network Economies* (London: Routledge, 1999), p. 124.

To address those instances of systemic risk episodes, proposals have called for a systemic dissolution fund to "bail-out" the entity (or implicitly, its counterparties and other stakeholders) to ensure that losses that the firm suffers and obligations that are in jeopardy of being defaulted upon do not have a domino effect on others. The goal of the fund would be to corral the risk at the source, so that any spill-over effects upon firms to which it is connected are minimal. However, creating an effective regulatory solution involves ensuring that the approach can deliver a real reduction in systemic risk, and the regulatory solutions themselves do not duplicate other efforts and give rise to greater risk-taking behavior.

Inefficient Regulation and Competing Mandates

To determine the economic effects of proposals under consideration, we focus our analysis on the regulatory proposals that are seen as necessary to address systemic risk, but which at present fail to fully account for the impact and contribution of interconnectedness. A mechanism strictly based on the size of the firm, for example, would run the risk of capturing firms that exceed the size threshold but that are not interconnected, and as a result, do not pose systemic risk. Such a regulatory structure would be less effective at reducing systemic risk, and would increase costs for affected firms without a commensurate benefit, creating an inefficient regulatory program.

Government efforts to contain the spread of systemic crisis have had the effect of rewarding systemically interconnected firms, leaving non-interconnected firms without the same level of support. As the government shifts to remove the support and/or pushes to internalize the cost of the systemic risk externality imposed upon the financial system, it is important that the costs are not now shifted to firms whose IC did not contribute to the recent crisis and do not contribute to systemic risk generally.

The concern with proposals to create an additional regulatory authority is that they by and large contemplate a federal-level, bank-centric approach in the provision of regulatory authority. All proposals put forth thus far implicitly assume that federal authorities are necessary to counter systemic risk, and fail to recognize that state, regional, and industry-level regulatory authorities (such as self-regulatory organizations or national guaranty associations) can and have been effective at providing implicit and powerful safeguards against IC exposures that can act as a conduit for systemic risk.

In various industries, including the P&C insurance industry, state regulatory authorities are an important and effective facet of a regulatory model that helps ameliorate systemic risk on an ongoing basis before it becomes a concern to federal authorities. For example, regional trends may lead to the failure of various firms within a particular state or region, and local and state authorities are often in a better position to identify the source of the emerging problems and craft loans, subsidies, or apply targeted tax policy to address the problem before it becomes a "systemic" crisis. While data on state and local responses to economic decline and loss are more difficult to compile and studies in the literature are focused on economic development in a comparative sense, the impact is substantial in the U.S. economy where local economic concerns are as important to economic welfare as more national issues, in large part because of the interconnected nature of regional economies. Local and state responses confound the domino effect of IC-transmitted systemic risk by addressing the problem at the source and internalizing the externality of systemic risk at the local level.

Another concern is how firms are restructured, sold, or dissolved as a failure ensues. In the case of a federally-insured depository institution, there is a statutory framework for the resolution and receivership processes. When a

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banking organization becomes insolvent it is closed by its federal or state chartering authority and placed into receivership. The Federal Deposit Insurance Corporation ("FDIC") reimburses the insured depositors either by transferring their insured funds to another banking organization or by paying them directly. The FDIC is then responsible for managing the receivership process.

By law the FDIC seeks to maximize the returns to the bank's creditors. They sell the bank's assets and use the proceeds to pay the creditors of the failed bank. Secured creditors are protected against losses to the extent they have sufficient collateral. Proceeds from the sale of the other assets are then used to cover the other creditors of the failed bank to the extent possible. Losses are borne first by shareholders, then by subordinated debt holders, general creditors, and depositors, in that order. The FDIC stands in line in the place of the insured depositors. This ensures that the failed institution's non-deposit creditors bear losses before the deposit insurance fund. The exception is if there is a finding of systemic risk in which case certain categories of creditors can be reimbursed amounts above what they would otherwise be entitled to in order to mitigate the systemic risk.

The process by which firms in the insurance industry are dissolved are subject to relevant insolvency and liquidation laws and the regulatory framework particular to the governing state jurisdictions. Insurance companies have established guaranty associations to protect consumers and policyholders in the event of a firm insolvency. Unlike the guarantee provided to depository institutions by the FDIC, there are multiple guaranty funds dispersed geographically and jurisdictionally to ensure that policyholders and consumers do not suffer financial loss as a result of a failure of an insurance provider. This system allows the impact of the failure to be mutualized in a more diversified way, and helps minimize spillovers to the broader economy. But the priorities and objectives of a systemic risk regulatory authority are different from, and in fact could be contradictory to, those of the state authorities (whose primary concerns are the economic impact on the relevant business and market within its jurisdiction) and guaranty funds (whose mandate is to protect policyholders as a first priority).

As noted, if the new systemic risk regulatory authority deems a firm's eminent losses or insolvency will lead to losses at counterparties and creditors, which in turn, could have a systemic effects, it could act to forestall the ensuing default by taking the entity into receivership, much like the process used by the FDIC. Banking authorities could reach through a holding company for the purposes of protecting counterparties or creditors, potentially raiding insurance or other business subsidiaries whose equity holders, creditors, or other stakeholders would be considered to be less systemically risky. While it is certainly not likely that the intent of Congress is to create an authority that would put insurance policyholders at risk, the net result could be just that.

Increased Legal and Market Uncertainty

Various proposals under consideration involve the expansion of the current model for the resolution authority for depository institutions and grant new authority to federal agencies that gives them the ability to take over non-bank entities, including companies whose primary business may include insurance or other financial services. To be efficient and effective, the resolution program should be directed at the source of IC-generated risk, and those firms that contribute to systemic risk.

The potential for a duplicative systemic risk authority that could circumvent established resolution processes would not only unnecessarily increase costs to taxpayers, but could lead to competing and confusing standards for acting upon a crisis situation. Since insurance firms are not interconnected to the same degree as banking institutions, an insolvency may not have systemic consequences. As noted above, there is no "run-on-the-bank" psychology that would ensue in a crisis. In addition, there are resolution priorities dictated by statute. A bank-centric or federal level regulatory authority with a different orientation may create legal uncertainty for what types of obligations take precedence or would receive payment priority in the event of a default.

Even in the case of a large financial holding company that has subsidiaries that are interconnected and cyclical, an intervention by the systemic risk regulator that would supersede established priorities for guarantee and resolution may be dangerous and counterproductive. These established priorities ultimately reduce systemic risk, and reliance upon them creates legal and market certainty that helps mitigate the spread of a crisis.

It is important that efforts to create a regulatory authority charged with identifying sources of systemic risk do not work to supplant the structures that have been in place in guaranty funds that have heretofore been governed by state regulators to protect local businesses and institutions that support those industries within a particular region. In a time of increased concern about the growth of the federal deficit as a result of the massive bailouts from the recent financial crisis, a recognition that state authorities designed to focus on industries within their purview provide substantial and effective regulatory supervision of industries is critical. Creating duplicative regulatory authorities whose purpose may in fact conflict with the state mandates, e.g., systemic risk reduction versus respect for contracts whose costs and benefits are born and realized locally, is economically inefficient and could even be counterproductive. In the insurance example, payment of claims and protection of policyholders is tantamount to state insurance regulators. Erecting a federal authority whose powers can take precedence over state strictures creates legal uncertainty and can create IC exposure where it did not exist before.

The possibility that federal authorities may circumvent local efforts to combat sources of risk gives rise to additional moral hazard in that those state authorities may choose to let fail those entities that they would have otherwise resolved as a result of the federal level systemic guarantee. While it is tempting to presume that states would continue the same level of intervention and support for firms in their jurisdictions, cost concerns in economic downturns lead state and localities to vie for federal assistance whenever available.

Current regulatory proposals under consideration would clearly weaken existing contractual and legal protections that prevail under conditions of bankruptcy. While bankruptcy in general is not thought of as a desirable outcome, in many industries the precedents for resolving a bankrupt entity are well developed in the law and in practice, and this enables bankrupt firms, investors, and creditors a level of certainty regarding the dissolution of a failed firm. For example, subordination established in the issuance of debt and equity specifies payment priorities that determine

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ex ante returns to an investment as well as the ex post distribution of proceeds or liquidation value in the event of default. The establishment of separate resolution authority may enable these authorities to supersede or act to circumvent those provisions.

Inefficient Capital Structure and Increased Cost of Capital

The creation of authorities whose primary purpose is the identification and resolution of systemic risk has the potential to increase uncertainty in the capital markets which could increase the cost of capital. Also, as noted above, assuming those firms with high levels of IC are more likely to foment systemic risk concerns, they would be more likely candidates for government to step in and circumvent the bankruptcy process than those that are not subject to IC. The potential for reordering of payment priorities established in financial contracts and in bankruptcy law governing particular industries could be undermined by well-meaning efforts to control systemic risk. Thus, the establishment of resolution authority has the potential to undermine a firm's choice of the capital structure (which determines payment priority in bankruptcy) as well as frustrate efforts to compensate investors for the risks and expected rewards emanating from that structure.

It is important that any systemic risk authority recognizes the degree of interconnectedness in those firms for which this authority is granted and focuses on those activities that give rise to interconnectedness. Thus, those proposals that focus on greater supervision of payment, clearing, and settlement systems properly recognize the contribution of interconnectedness of financial activities to systemic risk by minimizing the transmission of systemic exposure arising from counterparty credit risk. Similarly, encouraging central counterparty solutions that increase transparency and recognition of credit risks through the maintenance of necessary collateral addresses IC concerns within those sectors (for example, in the derivatives and securities markets). However, imposing collateral or other requirements on entities that fall under state level authority that limit the use of derivatives and are not interconnected creates unnecessary burdens on those entities.

Another concern is that the market and the public, rightly or wrongly, may perceive those firms that are covered by the systemic dissolution fund to have a lower risk of loss or failure due to the government back-up. This creates an economic advantage for those firms if markets believe they are a lower risk. A perceived lower risk of default translates into a lower cost of capital (since a firm's contracting ability and borrowing rates are affected by the likelihood of default) and potentially greater investment opportunities. Conversely, those firms that do not fall under the umbrella may experience greater cost of capital, reduced investment opportunities, and a competitive disadvantage relative to those covered.

Reduced Transparency and Increased Risk

As noted, in proposals passed by the House and under consideration in the Senate, legislators have put forth a fund that would be generated by assessments on systemically risky firms that would be used to bail out a firm whose failure would pose significant systemic consequences. In general, proposals have focused on tapping firms of a particular size based on consolidated assets, and assessing those firms some amount commensurate with their size or other factors that have yet to be stipulated (e.g., interconnectedness, the likelihood of failure, cyclicality, etc.).

Failure to identify interconnectedness can lead to opacity and increased likelihood of risk transfer. If proposals focus on the use of size thresholds for identification of systemically risky firms and do not account for IC and the speed and intensity of the transmission of risk through IC channels, government will not fully identify systemically risky firms for which regulatory oversight is needed. Those high risk firms that go unidentified would increase the likelihood of systemic risk sources building, and catching regulatory authorities unaware. Opportunities for the firm and authorities to mitigate risk through prompt action and reduce the systemic threat will be missed. Further, the potential for risk to spread is increased if the source is also opaque to counterparties and creditors. Funds not raised from risky firms that inevitably draw upon it creates a cross-subsidy from those firms who contribute while also increasing the likelihood that taxpayers would have to pay to support the firm.

"Free-Riders" and Loss of Economic Efficiency

Another potential cost associated with using a myopic approach that does not take into account levels of IC is that those firms that pose systemic risk may nonetheless look to the government for assistance should they get in financial trouble. The potential that some firms will be tapped to contribute to the fund, while other risky firms will not be required to contribute gives rise to a "free-rider" problem. Free-riders do not pay into the systemic dissolution fund but nonetheless may be able to draw upon the fund and otherwise benefit from the financial support and stability that result from the government guarantees.

The potential for free-riding also provides those firms with an advantage over competitor firms who, by virtue of their size or other factors, must contribute to the fund. The emergence of competitive advantages for free-riding firms also impedes economic efficiency and results in a cross-subsidy as firms that must contribute implicitly support the risk-taking of competitors who do not pay their share.

Adverse Incentives and New, Additional Moral Hazard

While the potential for free-riding is perhaps indicative of any governmental financial assistance program, the availability of a systemic dissolution fund for such assistance increases incentives to take incremental risk in expectation of the back-stop assistance available also from the fund. The creation of additional government backstop measures creates various and significant moral hazards. Moral hazard, a term that is derived from the economics of insurance markets, refers to the case in which a party who has insurance coverage would take on greater risk than he normally would knowing that he will not have to bear the cost should losses occur.

As the government has extended more guarantees to cover risk of loss of individual and financial activity (e.g., unemployment benefits, the FDIC, Fannie Mae, and Freddie Mac), economic studies have found that those covered are more likely to engage in risky activities. Moral hazard is created because of the expectation that the government, not they, will be responsible for the losses. While moral hazard is evident in various contexts, it is of increased concern when its effects land on taxpayers who must ultimately bear the cost of financial losses.

In the case of the systemic dissolution fund, the potential for increased moral hazard occurs because financial entities may take additional risks in expectation that if they incur losses, the government will step in to make good on their obligations to avoid systemic consequences. In the recent financial crisis, many noted sources, including

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Congressional committees and global regulators, ascribed the incidence of excessive risk taking by banks and other financial entities to the misaligned incentives that result from moral hazards associated with implicit and explicit government guarantees.

Another related negative consequence of creating a resolution fund that pools both highly, interconnected systemically-risky firms in with those who may be large, but not interconnected is that it expands the government safety net to financial entities that do not necessarily need it, which could change decision-making and economic behavior both by the firms, their counterparties, and thus stakeholders. Companies subject to competitive pressure and market discipline to manage their risks could instead rely upon the government, and would achieve quasi-public status, much like Fannie Mae and Freddie Mac did, both of which were availed to massive bailouts by the U.S. taxpayer. Many government and economic officials have noted that it was the implicit guarantee that enabled the excessive risk taking by these entities. In the same vein, expanding these implicit guarantees may well increase the risk of systemic crisis.

Undermined Market Discipline

The importance of IC in transmitting systemic risk is not given sufficient treatment in current proposals that use size of assets as a threshold for identification of systemically risky firms. By targeting size, and not systemic risk, the proposals do not incentivize firms to reduce systemic risk and undermines those market forces and behaviors that reduce risk. This is because firms, counterparties, investors, and other potential stakeholders may infer from their identification and inclusion in the regime as being subject to a higher level of government protection than other firms. This reduces stakeholders' incentives to perform the necessary due diligence with respect to the firm's risks and act accordingly. For example, potential stakeholders such as counterparties and investors have market incentives to monitor a firm for risk levels and to reduce credit, increase the risk premium on the debt, or sell their debt and equity as risks increase. Inclusion in the government program mutes these forces of market discipline that would discourage risky behavior.

In addition, private sector solutions, such as guaranty funds, insurance, and clearing, which result in risk reduction, may seem less necessary or feasible if the perception of a government guarantee prevails. If the collective market discipline these efforts represent are hampered, systemic risks will be effectively increased as firms have less incentive to mitigate risky behaviors and their participants have less incentive to monitor and exert pressure upon them to do so.

In a free market system, the failure and exit of inefficient firms is a natural dynamic of the competitive market. Not allowing entities to fail, or cross-subsidizing those that do through greater forbearance, would have significant long-term economic consequences. Forbearance includes extensions of low rate loans, establishment of liquidity facilities (low cost access to government funds), government purchase of equity (as was the case with Citibank and General Motors, for example), and outright government guarantees of assets (including for example, commercial paper and money market funds). As noted by Acharya, et. al., "forbearance during systemic crisis creates incentives for banks to herd and become interconnected." (p.2) In their model and study of systemic risk, they find that forbearance creates what the authors refer to as collective moral hazard, which increases systemic risk. Setting aside the debate of how necessary such massive intervention was in the recent crisis, institutionalizing and expanding the structures that led to the crisis through the expansion of resolution authority has the likely result of increasing moral hazards that increase interconnectedness and contribute to systemic risk.

U.S. Job Losses and Decline in U.S. Competitiveness

If levels of IC are not incorporated into the mechanism for determining whether a firm is systemically risky, and size of assets is legislated as the means for determining the assessment, investment in productive capacity and employment are likely to be affected. In the financial services sector characterized by a higher rate of substitutability of technology capital for labor and an abundance of low-cost foreign-based labor, a broad-based assessment that fails to account for economic factors including IC on U.S. firms will lead to an increase in unemployment in the U.S. and a loss of competitiveness. This is particularly true of industries such as insurance which has historically been a more labor intensive industry and slower to outsource basic services due to the localized nature of the P&C services. This is distinct from the banking and mortgage markets, where outsourcing certain activities, such as loan or mortgage servicing, is common and has given rise to agency costs along the chain that proved insurmountable. Unfortunately, however, as an assessment is levied on low IC industries and the focus of regulation is shifted toward the federal level, resulting increases in costs for U.S. firms may hasten outsourcing to foreign-based labor and cuts in U.S. jobs as U.S. companies strive to maintain competitiveness.

If the regulatory focus and assessment on firms is based on size and not IC, those U.S. firms that have access to the global capital markets and the flexibility could choose to restructure the firm to shift assets (to avoid the size threshold) and its labor demand offshore. So not only would the assessment itself lead to a predicted decrease in employment as firms seek to raise funds to cover the cost, but also firms may shift additional jobs overseas to maintain competitiveness and escape the greater regulatory costs. The net result would be a loss of U.S. jobs with no reduction in IC, which when combined with other economic trends, is the primary conduit for systemic risk. This could result in a shrinking of the U.S. tax base and a simultaneous and unprecedented increase in government guarantees.

It is envisioned that the costs of the new financial regulatory program, including the dissolution fund, will be borne by the industries which are its presumed beneficiaries. However, there is no way to identify these beneficiaries ex ante. Instead, the affected industries will have no choice but to cut operating costs (which may lead to a loss of jobs) or to pass along the costs of the new strictures and the contribution to the dissolution fund to consumers. Since many of the affected financial services provided by these industries are consumed by individuals and small business as well as large, the economic impact will be broad-based and significant.

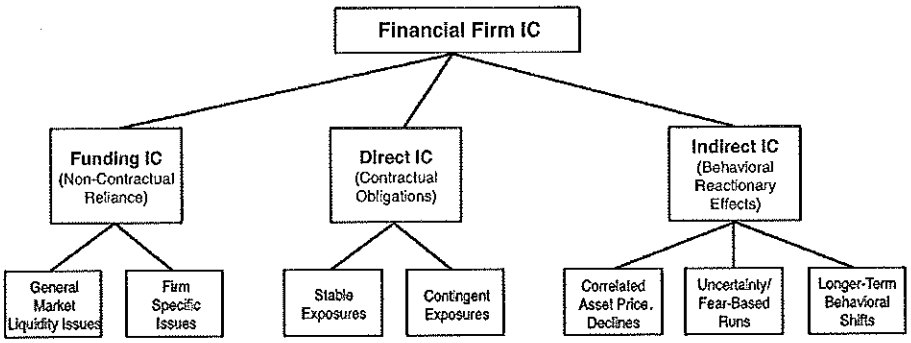
Part II: Key Types of Inherent Interconnectedness ("Inherent IC")

Assessing the level of a firm's IC and its potential to contribute to systemic risk can be challenging given the variations and complexities in financial markets and products. In an effort to describe IC in the context of financial institutions and facilitate an assessment process, we parse IC into various categories. The three broadest categories of a firm's inherent IC are:

1. **Direct Interconnectedness ("Direct IC");**
2. **Funding Interconnectedness ("Funding IC"); and**
3. **Indirect Interconnectedness ("Indirect IC").**

Within each of these major IC categories, risk posed to, or coming from, the system can be discussed in more granular sub-types. We discuss these sub-types but acknowledge that additional perspectives and descriptions are not precluded. A diagram below summarizes the composition of interconnectedness from an individual firm perspective, as described in this section.

Components of Financial Firm Interconnectedness (IC)



1. Direct Interconnectedness

Direct IC is the most straightforward form of connection between financial firms. It encompasses contractual exposures or obligations between legal entities. Such exposures may be broadly thought of as "promises to pay."[11] Intuitively, risks to individual firms, and to the system as a whole, can arise when an unexpectedly large portion of promises to pay go unmet.

A larger number of contractual obligations can increase the direct IC of a financial firm. Similarly, a higher significance (or potential significance) of obligations increases direct IC.

continued

11 The other side of a promise to pay is the right to receive.

First-Order and Second-Order Contagion

Clearly, direct IC exposures have the capacity to transmit problems from an individual firm to its immediate counterparties. Such exposure may be described as "first-order contagion." However, the chain-like network of direct IC exposures can result in "second-order"[12] contagion as well. Second-order contagions can result in impairments to firms that have no direct connection with the "source" firm and maintain no financial exposure to specific market events at hand. Such occurrences, sometimes referred to as "cascading" or "domino" effects, create the potential to infect a large portion of the connected financial system.

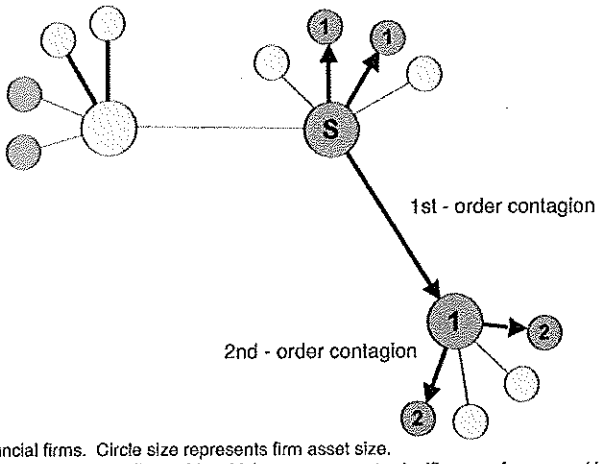
First- and second-order direct IC is discussed by Mayr:

> [D]irect contagion is always concerned with an obligation that cannot be met by the primary entity and, this has immediate consequences for the affected entity in the form of a pecuniary loss. In particularly adverse instances those events may even trigger chain reactions (i.e., domino effects), provoking the failure of other entities. This chain reaction is then associated with contagion. The infection of these companies, however, does not have any direct relation to the initial shock, e.g. a liability that cannot be met. The exposure simply comes from the linkage between the entities.[13]

An illustration of the contagion described is provided below.

In the figure, when one major firm (the source) becomes significantly impaired, firms maintaining significant direct connections (i.e., contractual exposures) with the source experience problems. Counterparties with more substantial connections to the source are more impacted. First-order impaired firms, in turn, spread weakness to their own dependent counterparties. In such a situation, initial positive features associated with potential risk distribution ultimately infect the broader network in a viral-like fashion.

First-Order and Second-Order Contagion



Circles represent financial firms. Circle size represents firm asset size.
Lines represent connections between firms. Line thickness represents significance of exposure/dependence.
Arrows indicate direction of contagion.

S = Source: Initally impaired firm.

- Healthy
- Marginal
- Highly impaired or failed

12 We broadly consider any contagion beyond first-order to be "second-order".

13 Bernhard Mayr, "Financial Contagion and Intra-group Spillover Effects," Dissertation no. 3303 of the University of St. Gallen, Graduate School of Business Administration, January 22, 2007, p. 29.

Types of Direct IC

The contractual direct IC exposures discussed above can be broken into two primary types. Broadly speaking, an individual firm can enter into a financial contract with a counterparty or customer resulting in either 1) a stable exposure or 2) a contingent exposure. Each type of direct IC is discussed below.

A. Stable Exposures

We define "stable exposures" to include traditional credit extensions, such as loans and repurchase agreements ("repos").[14] Loans and repos require repayment of a stated principal amount over a pre-determined period under contractual terms. Such borrowing arrangements tend to be bounded in terms of size, and so the lending firm's maximum financial loss from the contract can be easily determined at any point in time.[15] Many stable exposures, such as loans, amortize or can be prepaid during the term of the contract, so the current outstanding is not constant over time. However, the principal due and the primary terms of repayment are not highly dependent on market variables or events.[16]

B. Contingent Exposures

Contingent exposures represent a more dynamic form of direct IC. These contractual exposures may come due or result in a "current obligation" to a financial firm only under specifically delineated circumstances. Contingent exposures encompass a wide variety of financial instruments including letters of credit, swaps and other derivative contracts, guarantees, liquidity facilities, and insurance contracts. A firm's current obligation under a contingent exposure at any time may be dependent on the path of a referenced economic variable(s).[17] For example, an interest rate referenced by an interest rate swap determines the current obligations of the swap counterparties. Another form of contingent exposure may become current as a result of a customer demand or call. For example, a borrower's demand under the terms of a committed line of credit creates a current obligation to the lender. Finally, in another form of contingent exposure, a contract may create a current obligation only as a result of a particular non-market event. For example, a home fire can create a current obligation for a fire insurance company (e.g., a policy payout).

Under a given contingent exposure, there may never arise a circumstance in which an obligated financial firm takes a financial loss or is required to pay out funds to a counterparty. However, under other circumstances, the same contractual exposure may result in very significant current obligations on a firm.

Some contingent exposures such as traditional insurance contracts (e.g., auto, hazard, life) are relatively non-complex and well-understood. Underwriters have the benefit of a long robust history of experience as they determine the risk and price of coverage. Such insurance contracts typically include a stated maximum liability. Because traditional insurance contracts reference non-financial events, in large pools the expected payouts on policies are quite predictable.

continued

14 A repurchase agreement is a form of collateralized loan.

15 Some loans or credit arrangements have revolving features, but line increases are typically un-committed and so maximum exposure at any point in time is equivalent to the outstanding exposure. Undrawn but committed lines are considered contingent exposures, discussed next.

16 We consider a floating rate loan to represent a stable exposure, even though the interest requirements can change over time based on the level of a market interest rate. There is no bright-line delineation between a stable exposure and contingent exposure.

17 Many financial derivative payouts are said to be "path-dependent."

However, other forms of contingent exposures can be complex and less well-developed, making risks difficult to assess. For example, the current obligations resulting from certain derivative contracts referencing financial market variables can be highly unpredictable given a short history of experience, lack of market depth, and reliance on unobservable or estimated model inputs for valuation. Some derivative contingent exposures can even pose unlimited exposure to a financial firm.[18]

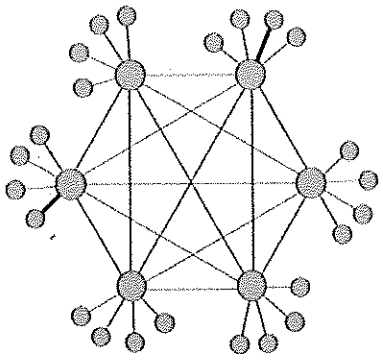
Contingent Exposures: General Market Volatility/Stress

In a financial network in which firms maintain numerous outstanding contingent exposures that reference financial market variables, the network's aggregate level of current exposure can be expected to grow when markets become volatile or stressed. This can effectively make financial firms more dependent on the continued health of their direct and indirect counterparties, who, ironically, may be competitors. In such an environment, assuming all firms in the network are not overly exposed to any unexpected severe market movements, the health of individual firms would be unlikely to change significantly. Under this assumption, both contingent and stable exposures will be met as expected by the network of connected institutions. That is, no significant new financial firm problems would pose a threat of spillover to connected firms.

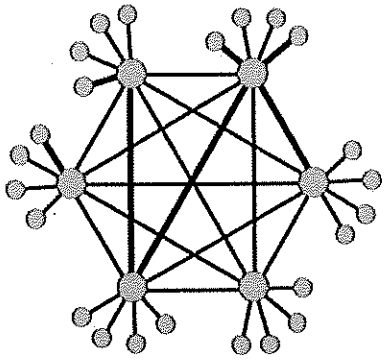
The figures below illustrate the direct IC of a hypothetical network of financial institutions under two different market scenarios. The six inner circles represent major over-the-counter ("OTC") dealers for a particular class of securities. The outer circles represent other firms that could be investment funds, brokers, or other investors.

Even with the same set of contractual exposures, if a significant volume of exposures are contingent, under certain market circumstances the firms become more exposed to, and dependent on, one another. In this example all firms remain healthy (green) and are all able to meet their heightened current obligations (represented by the thickened lines).

Low Volatility/Low Current Exposure



High Volatility/High Current Exposure
No Dealer Risk Concentration



Circles represent financial firms. Circle size represents firm asset size.
Lines represent connections between firms. Line thickness represents degree of connection.

- Healthy
- Marginal
- Highly impaired or failed

18 For example, writing a naked call option or shorting a stock exposes the writer to the potentially unlimited increases in the reference position's price.

The illustration above clearly represents the ideal case from the system standpoint, in which portfolios of risks held by individual firms are not overly exposed to a market shift. The lack of any individual firm impairment may be the result of purposeful risk management by individual firms or simply good luck. However, the favorable result above is not always the case.

Contingent Exposure: Concentrated "Tail Risk" Exposures

Tail risk can be generally described as undertaking a risk exposure that has a low likelihood of occurrence.[19] Many types of financial firms seek to prudently undertake various forms of tail risk by entering into contingent exposures for which they are compensated. However, financial firms can implicitly or purposefully undertake tail risk concentrations, particularly via contingent exposures tied to financial markets.[20] Though the particular contingency referenced may have a low perceived likelihood of occurrence, a firm with a concentrated position will experience a high severity loss when the contingency does occur.

Some forms of concentrated tail risks may be generally known and even become accepted within markets. For instance, the total level of financial firm exposure to a significant decline in U.S. housing prices may not have been fully transparent in 2006, but it was clearly a concentrated risk exposure at a number of financial firms that were considered to be in strong financial health. Despite the potential severity, for most investors, analysts, and rating agencies, a 30% nationwide decline in U.S. home prices was not considered within the set of possible outcomes in 2006. Much of the risk to housing declines was undertaken through various contingent exposure forms including credit default swaps, credit enhancements, liquidity facilities, and unfunded synthetic securitizations.

Other concentrations of contingent exposures can be more difficult to identify either due to opacity or because fundamentally unrelated exposures can become correlated during market stress. This phenomenon is discussed later under indirect IC. Unexpected high severity losses experienced by a highly connected firm can rapidly spread distress among dependent counterparties, as significant obligations go unmet.

continued

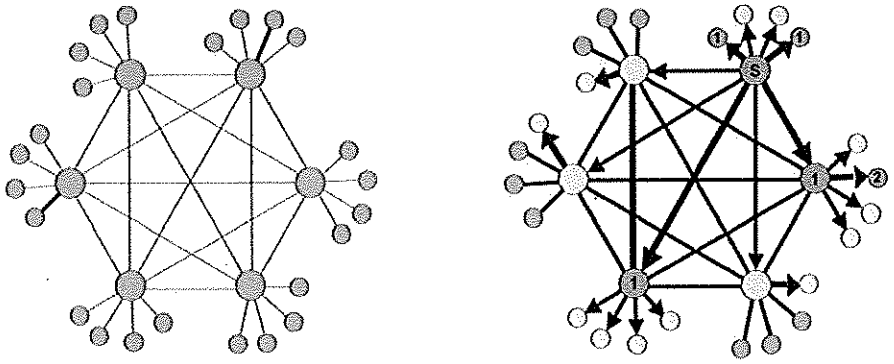
19 In trading products terminology, tail risk can be described as writing a deep out-of-the money put option.

20 Stable exposures, such as loans and bonds, may also represent concentrations of tail risk, but such exposures tend to be more transparent and stable, with well-defined maximum financial exposure.

In the illustration below, when the previously depicted network of firms is exposed to unexpected market moves and volatility, one or more connected firms which maintained significant concentrations to the relevant tail risk(s) becomes impaired. As a result of IC contagion, the problem firm threatens the entire system.

Low Volatility/Low Current Exposure

High Volatility/High Current Exposure With Dealer Risk Concentration



Circles represent financial firms. Circle size represents firm asset size.
Lines represent connections between firms. Line thickness represents degree of connection.

- Healthy
- Marginal
- Highly impaired or failed

2. Funding Interconnectedness

With direct IC we discussed the onset and transmission of potential firm financial problems arising from contractual failures by firms. However, with funding IC, there is no contractual failure. Rather funding IC exists when a financial firm is dependent on other institutions to renew or replace contractual funding as it matures. The retention of these funding connection(s) clearly depends on both the ability and willingness of a lending institution to continue lending.

As many financial institutions employ a significant degree of financial leverage, maintaining sufficient sources of wholesale debt market funding can represent a critical activity.[21] Managers that perceive their firms to be in satisfactory financial condition may come to rely heavily on uncommitted[22] institutional/wholesale funding. The use of relatively inexpensive short term-borrowings to fund longer-term less-liquid but higher yielding assets is a constant temptation for banks and certain other financial institutions seeking to increase earnings.[23]

Clearly, over-reliance on market counterparties for uncommitted but necessary funding can expose a firm to risk of failure. There are two general circumstances in which significant reliance on uncommitted funding becomes problematic. First, declines in general market liquidity, which may result from economic or market conditions, can

21 This role is typically undertaken by a financial firm's corporate treasurer.

22 If untapped funding lines are "committed," they would be categorized as direct IC, given the contractual requirement to fund.

23 The asset-liability management risk discipline seeks to manage the risk associated with variations between maturities (and re-pricings) of assets and liabilities.

lead wholesale lenders to reduce the amount of funding available to a dependent firm. In this case the lending firms may themselves suffer from reduced sources of funds, or otherwise seek to bolster liquidity to meet potential obligations. Second, lending firms may become unwilling to roll-over funding to a specific borrowing institution, because the borrower is perceived to have become an unacceptable credit risk. Another motive to cut funding to an individual firm is because a lender(s) may have incentives to push the borrowing firm into distress. To the extent that reductions in borrowed funds exceed a firm's liquid assets, the result is likely an illiquidity-based failure. A failure of an individual firm as a result of an inability to maintain sufficient funding can serve as the catalyst for broad system problems, as the illiquid firm fails to honor contractual exposures (i.e., direct IC), thereby infecting counterparties.

Kroszner discusses liquidity reliance in the recent crisis noting, "It did not matter whether there were a few large institutions or many smaller institutions – funding from key sources suddenly dried up and firms relying upon this funding, large or small, were forced into fire-sales by liquidity squeezes. The key is the interconnection and the correlation, not the size in and of itself."[24]

Structural Wrong-Way Risk

The recent financial crisis provides a reminder that significant market-based deterioration in a financial firm's asset values (or increase in current obligations) can coincide with deterioration in general market liquidity and the ability of a firm to maintain uncommitted funding. In terms of the descriptions above, direct IC obligations can increase just as funding IC becomes problematic. We characterize this dangerous aspect of some financial firms as "structural wrong-way risk." Certain firms are more naturally exposed to structural wrong way risk than others, but the level is also impacted by firm profit strategies and risk management.

U.S. Investment Bank Example

Structural wrong-way risk was prevalent within a number of investment banks prior to the financial crisis that ensued in 2007. These investment banks were not only highly dependent on the short-term debt markets for a large portion of their ongoing funding, but also entered into massive contingent exposures, providing various forms of financial market instrument guarantees (e.g., guarantees on the value of mortgage-backed securities). As financial market participants pulled back from risk-taking in 2007 and 2008 and de-levered, the overall level of liquidity available in markets fell quickly. This made it difficult for some investment banks to roll over short-term and other near-maturity funding. Simultaneously, contingent exposures referencing financial assets (e.g., long positions in mortgage-related assets), created additional large current obligations. For firms such as Bear Stearns, just as market liquidity became challenging, the firm sustained large market-based losses. These simultaneous problems led to the firm's rapid deterioration.

continued

24 Randall Kroszner, "Interconnectedness, Fragility and the Financial Crisis," Prepared for Financial Crisis Forum, Financial Crisis Inquiry Commission, Washington, DC, February 26-27, 2010, p. 7.

Because a number of investment banking firms that had undertaken significant structural wrong-way risk maintained a high level, intensity, and complexity of connections, direct and indirect government support was deemed necessary in some cases. A key reported government concern was that a "daisy chain" of failures could be set off should highly interconnected firms fail suddenly.

Property and Casualty (P&C) Insurance Company example

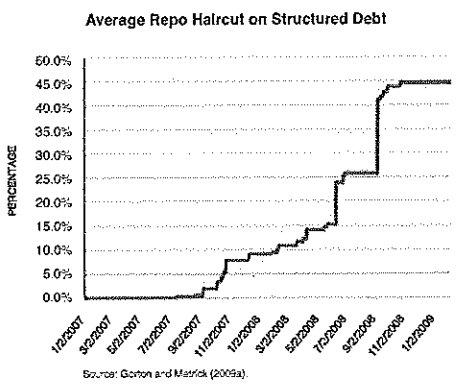
Firms such as property and casualty ("P&C") insurance companies are not exposed to the same form of structural wrong-way risk as discussed above. This is primarily because the vast majority of P&C firm contingent exposures do not reference financial market variables or instruments. For instance, contingent exposures of a P&C company may become current obligations as a result of auto accidents or building fires. Such human errors or natural events are not inherently correlated with financial market weakness and tend to occur in a fairly stable and predictable fashion. Further, with respect to funding, P&C firms are not highly dependent on the roll-over of short-term debt, as funding tends to be more matched with pools of insurance obligations.

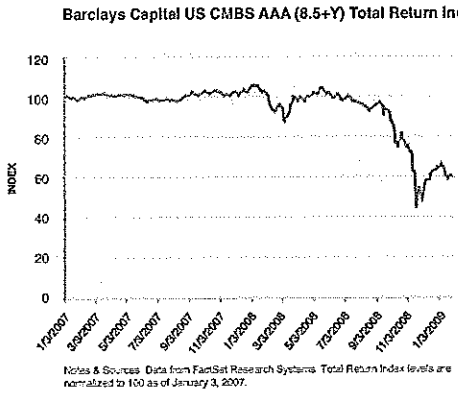
Given the above, an increase in a P&C company's current obligations would not be expected to occur in a coordinated fashion with a decline in the liquidity of a P&C firm. As a result, counterparties dependent on traditional P&C firms for payments under either stable or contingent exposures are less exposed to financial market shocks.

Alternative Perspectives on Wrong-Way Risks

Structural wrong-way risk, as discussed above, can be described from different perspectives and using different terms. For example, one might simply conclude that certain financial firms are more exposed to financial market cycles, without explicitly considering the correlation of market-based contingent exposures and market-based liquidity reliance. Traders may describe the combined structural elements as a negative market gamma position. However described, the key point is that financial networks that include highly connected firms that are exposed to this combination of risks can be prone to significant contagion.

The graphs below illustrate the concurrent issues with market funding and market asset prices during the recent crisis. As the cost and difficulty of obtaining short-term secured borrowing increased (as shown by the required average repo haircut), market values of highly rated securities fell (as shown by an AAA index of commercial mortgage securities).





3. Indirect Interconnectedness

Once a significant market shift or crisis reaches some critical level, significant indirect IC issues may arise. Indirect IC does not result from first-order or second-order contractual or funding exposures, but rather is based on customer and financial firm behavioral changes. These behaviors may be driven by imperfect information, limited time to digest information, or a general desire to de-risk or preserve liquidity in uncertain times. Indirect IC tends to exacerbate the effects of direct and funding IC problems, but can also pose negative impacts to financial firms where these exposures are not significant.

Indirect IC is categorized into three sub-types, though there are no strict bright-lines dividing the categories. These include:

A. Declines in Fundamentally Unrelated Assets

B. Uncertainty/Fear-Based Runs on Institutions

C. Consumer Behavioral Shifts

A. Declines in Fundamentally Unrelated Assets

When markets re-assess the value/risk of a certain asset class, resulting in significant market value declines, firms holding significant exposure to that class are likely to find themselves in a weakened condition. This situation often leads weakened firms to sell fundamentally unrelated asset classes which can: 1) provide immediate liquidity, and 2) provide realized gains (i.e., profit) that bolster firm capital levels. However, if several troubled firms choose to sell

continued

the same un-troubled asset class simultaneously, an unexpectedly high level of market supply can result. This drives down market prices, as the new extra supply cannot be easily absorbed by markets.

As a result of the above phenomena, financial firms unaffected by initial market problems can suddenly face significant market losses and deterioration of capital. High financial leverage exacerbates the impact of such asset price declines. Though these follow-on market price declines may be primarily liquidity-based, the declines may be of such severity and/or longevity that a firm's financial health is threatened. This well-known effect reduces intended benefits of firm asset diversification strategies when market stress is significant.[25] Given the lack of transparency with respect to market participants' holdings and the uncertainty of firm liquidation decisions, it can be virtually impossible to determine which initially unrelated asset classes may be negatively impacted.

Mayr describes the above phenomena, noting, "This contagious effect reduces the benefits of diversification because it generates positive correlation between the investments, even though these may be independent, in terms of their fundamentals."[26]

In the recent financial crisis, when "AAA"-rated securities backed by non-prime mortgages of certain vintages were determined to encompass higher credit risk than originally anticipated by many investors, market prices fell. Several major financial institutions (e.g., banks, investment banks, hedge funds) holding concentrations of these securities incurred major losses unexpectedly. To shore up liquidity and capital, some of these companies began to liquidate other fundamentally unrelated assets, such as municipal bonds or corporate leveraged loans. The large quantity and relatively rapid sales of these initially unrelated debt instruments pushed market prices down, resulting in losses even for financial firms that had not been significantly impacted by the declining mortgage securities.

B. Uncertainty/Fear-Based Runs on Institutions

A lack of information or lack of understanding with regard to a healthy institution's actual exposure to troubled assets and troubled counterparties can cause customers and investors to exit funding relationships and other dealings in an "abundance of caution." Such cautionary or fear-based actions undertaken to avoid potential losses on deposits are often characterized as "run on the bank" behavior. The perception of a limited time to retrieve all funds often leads to the velocity of this effect.

A financially sound deposit-gathering or investment firm that is perceived as being risky relative to its level of capital and liquidity, or is perceived as being more connected to problem institutions, is more prone to runs, even if perceptions are incorrect. Often a financial institution's loss of liquidity resulting from funding runs forces it to engage in rapid asset sales in the face of undesirable markets. This sale activity can lead to broad downward pressure on market prices as described earlier.

Kroszner describes the potential for funding runs based on firm opacity, complexity, and secondary contagions, "With lengthy and complex intermediation chains, it can be difficult to assess the health of an individual institution

25 It is sometimes said that under stress all asset correlations go to 1, indicating that in severe market stress scenarios, virtually all financial asset prices decline as a result of distressed sales and declining liquidity.

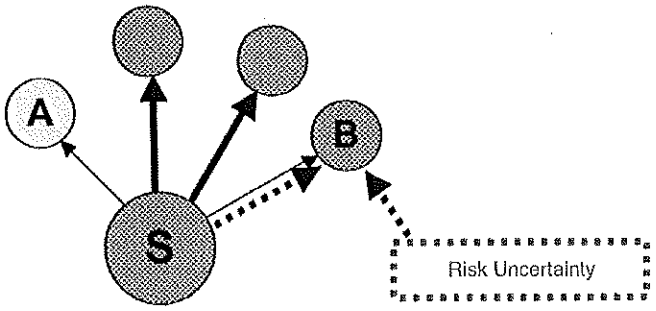
26 Mayr (2007), p. 33.

because its health will depend significantly upon the health of its counterparties, which in terms depend upon the health of their counterparties, as well as upon the health and behavior of their funders. The difficulty in determining the actual health of a particular financial firm caused by this opacity – in parallel to the inability of depositors to determine the solvency of individual banks – makes the entire system vulnerable to funding runs."[27]

Kroszner goes on to describe the situation in the recent financial crisis by noting, "Funding dried up for all intermediaries due to lack of information on intermediaries' exposures to the troubled assets and potentially troubled institutions along with an increase in risk aversion."[28]

The figure below illustrates that even when the direct IC and exposure to a problem firm are minimal, indirect IC resulting from risk exposure uncertainty can impair a firm. Both firms A and B maintain modest direct exposure to a problem firm S (source). However, firm B is negatively impacted by indirect IC, because its customers and the markets in general lack transparency and/or understanding of B's actual exposures. In contrast, because the market understands that firm A has minimal exposure to the source firm, its indirect exposure is much less significant.

Indirect IC



Circles represent financial firms. Circle size represents firm asset size.
Lines represent connections between firms. Line thickness represents significance of exposure/dependence.
Arrows indicate direction of contagion.

S = Source: Initally impaired firm.

Firm A: Transparent, well-understood exposures
Firm B: Opaque, complex exposures

Direct Interconnectedness

Indirect Interconnectedness

Healthy

Marginal

Highly impaired or failed

continued

27 Kroszner (2010), pp. 6-7.

28 Kroszner (2010), p. 10.

C. Consumer Behavioral Shifts

Another component of indirect IC results from broader and longer-term behavior shifts of customers and investors. When crisis conditions lead to fundamental changes in market participant behavior, these new behaviors can impact otherwise unscathed financial firms. This is true even when customers and investors retain confidence that a given firm is not impacted by market problems.

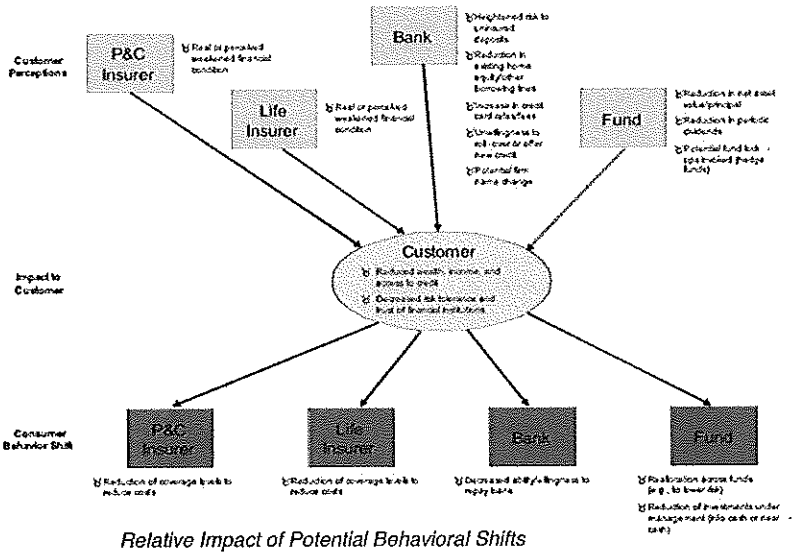
An example is an increased allocation to risk-free assets or reduced indebtedness by consumers who seek to de-risk once a crisis ensues. Such shifts can begin quickly, but can persist for long periods as memories of crisis-based losses linger. Such behavior can reduce the level of assets and/or number of transactions undertaken within mutual funds that are comprised of risky assets. Similarly it can reduce demand for bank borrowing or other more complex capital raising transactions.

Mayr notes, "indirect contagion results in changes in others' behaviour, which in turn may cause consequential loss or exposure."[29] Mayr goes on to further describe indirect IC from behavioral shifts, "...when contagion is indirect the affected entity suffers no immediate loss, as a result of liabilities or difficulties of the emanating entity, but due to the prospected change in behaviour of other agents. The consequences cannot be directly referred to the original event, even if it was the (main) trigger of these adverse reactions, that is, without the event one would not have seen any reactions."[30]

In a sense, broad behavioral shifts, brought about by a financial crisis can traverse into generally unrelated sub-industries and result in deterioration in financial results. It is intuitive that a significant crisis encompassing macro-economic declines can lead to such behavioral shifts.

The illustration below lists potential impacts to a retail customer arising from a financial market crisis. As the customer experiences declines in wealth and risk tolerance, behavioral changes ensue in relation to a broad set of firms. Even firms without significant direct or funding IC can be negatively impacted by significant financial crises.

Behavioral Shifts by Financial Product Consumers



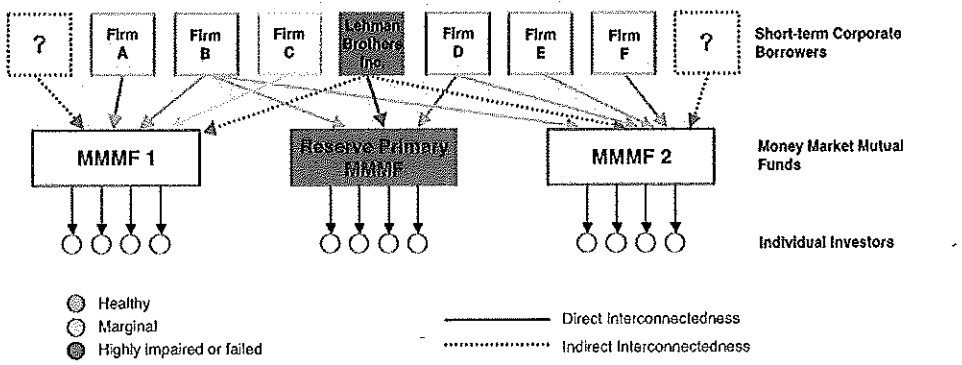
Relative Impact of Potential Behavioral Shifts

29 Mayr (2007), p. 29.

30 Mayr (2007), p. 29.

Though each of the firm-types depicted above can be negatively impacted by indirect IC from consumer behavioral shifts, the level of impact varies significantly. For example, the financial impact to a bank is very high if consumers become less willing or able to repay loans. Recently, as a result of the reduction in home values, some borrowers who are able to make mortgage payments choose not to, given their homes values have fallen below their mortgage debt. This creates sizeable direct losses to banking firms. On the other end of the spectrum are traditional insurance companies. Should customers cease to make payments on their policies, the policies are cancelled and the company's related liabilities are removed. Though the loss of policies or reductions in coverage levels can result in reduced earnings for traditional insurers, the impact is modest in relation to the issues faced by bank companies.

The figure below illustrates direct and indirect IC impact of the Lehman Brothers bankruptcy on money market mutual funds (MMMFs). When Lehman Brothers became unable to meet its debt obligations (direct IC), the Reserve Primary MMMF lost principal value (i.e., the fund broke the buck.[31]) However, other MMMFs that were not directly exposed to Lehman began to experience significant fund-holder withdrawals, as fears of potential exposure to Lehman or other problem debt issuers proliferated. This indirect IC threatened to force many sound MMMFs to liquidate positions into already declining markets, potentially aggravating downward pressure in market prices of financial instruments (e.g., short-term corporate debt). The Federal Government, recognizing the start of a run, intervened with unprecedented guarantees of MMMFs.



Concentrated Legal Entity Exposures vs. Concentrated Risk Exposure

Up to this point, the discussion of IC has focused primarily on the negative impact that a single counterparty or otherwise obligated firm can have on another institution. However, it is also important to consider IC exposures from a consolidated counterparty perspective. For instance, if multiple counterparties of a firm, each with modest connections, simultaneously fail to meet their obligations, or decided to tighten or eliminate funding, this can spark a firm's failure.

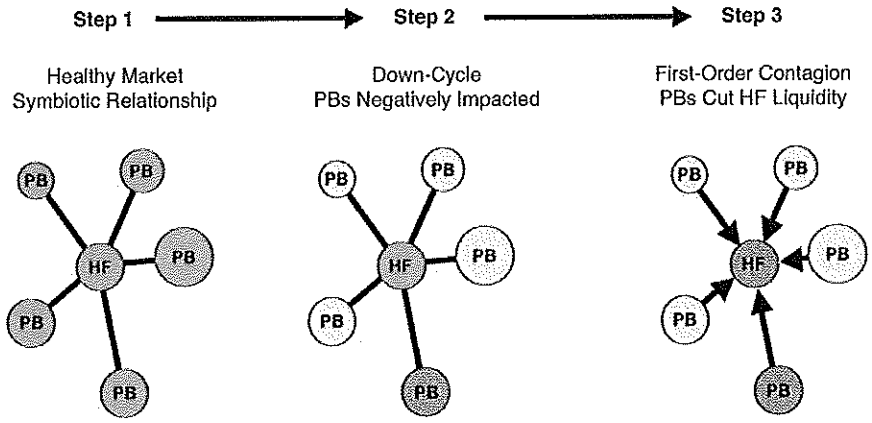
Such a portfolio-based view of IC must consider how much correlation exists with respect to the health of the set of counterparties. If numerous counterparties with modest obligations to a firm are all highly exposed to the same financial market cycle, the firm itself can have a significant indirect exposure to that cycle. Indirect exposure to financial cycles via counterparties is a considered a form of IC risk.

continued

31 When a money market mutual fund's net asset value (NAV) drops below $1 per share it is said to "break the buck." Money market funds have an implied promise to preserve capital at all costs and preserve the $1 floor on share prices.

As an example, a hedge fund may be dependent on continued funding and leverage from a group of five bank or investment bank prime brokers (counterparties). However, if each of the prime brokers is highly exposed to a particular financial market decline, leading them to reduce funding and leverage provided to the hedge fund, the fund may be forced to liquidate positions into an undesirable market or to shut down. The diversification of obtaining funding and leverage from multiple sources can prove ineffective if all sources are at risk to the same events.

The illustration below depicts a hypothetical hedge fund (HF) with five prime brokers (PB).[32] *In a stable market, all firms are in healthy condition. However, when a down-cycle ensues, in an effort to reduce risk and conserve liquidity, the prime brokers cut lending and increase hedge fund margin requirements. These actions can force the fund to sell assets into an undesirable market, locking in losses. The pressure can ultimately lead to the fund's total liquidation.*



Mitigants to Inherent IC

A range of techniques can be undertaken by individual firms to reduce their IC exposure. Some mitigation techniques, simply involve the application of sound counterparty risk management and the provision of a high degree of transparency to markets, investors, and customers.

1. Reduction of Current and Potential Counterparty Exposures

Even firms that by their nature are highly connected to institutional counterparties can reduce IC risk through the application of strong counterparty risk management. For instance, requiring counterparties believed to be highly creditworthy to fully collateralize with cash or cash equivalents any current exposures from derivatives positions (i.e., contingent exposures) reduces the potential for IC losses should the counterparty become unexpectedly impaired. Such frequent "settling-up" on a mark-to-market basis essentially reduces the "thickness" of connections between counterparties. From a system standpoint, the collateralization of current exposures can reduce the occurrence of rapid firm failures that may occur on the heels of credit downgrades or other signs of difficulty, which can prompt multiple counterparties to suddenly demand collateral.

32 Prime brokers, typically major banks or investment banks, are parties used by hedge funds to transact various trades. Prime brokers often also offer the hedge funds forms of financing (e.g., funding) and other services.

Requiring the posting of initial margins on derivative transaction by less creditworthy counterparties is also prudent. This at least partly ensures that a counterparty has the capacity to fund potential losses on contingent exposures.

From a broad portfolio counterparty risk management context, financial firm managers can take additional steps to limit aggregate counterparty exposures. For instance, contingent exposures to firms within the same sector or to firms highly exposed to structural wrong-way risk can be limited to mitigate IC risk.

2. Transparent and Clearly Understood Exposures

As described earlier, risk opacity and/or exposure to highly complex or difficult to understand risks can expose firms to indirect IC. Conversely, a financial firm that takes steps to maintain a high level of transparency and undertake exposures in forms that are understood by market participants is less likely to experience indirect IC issues.

The Bank of England cites "information frictions" as prominent in the run-up to the recent crisis including, "Network externalities which arise when agents in a financial system do not have the information necessary to determine the risks to which they are exposed."[33] Heightened transparency reduces information frictions.

In the same spirit, with respect to counterparty dependencies, firms that seek to mitigate direct and indirect IC should reduce exposures to opaque counterparties that can pose real or perceived threats to firm health.

3. Resolution Processes and Industry Guaranty Funds

Certain financial firm types are covered by pre-designated resolution processes and industry guaranty funds that aid in troubled firm resolution. These processes seek to limit negative impacts to customers and counterparties that may result from a lengthy or disorderly firm bankruptcy. Generally, such processes provide for orderly disposition of contractual obligations, when a regulator deems a firm to have reached a certain threshold of weakness, prior to insolvency. The existence of the resolution processes and guaranty funds can reduce the prevalence of funding runs by customers and counterparties who may otherwise seek to sever contractual relationships/exposures at early signs of firm weakness.

A well-known financial resolution process is undertaken by the FDIC with respect to federally insured bank legal entities. At certain pre-determined levels of financial weakness, the FDIC takes banks into receivership. The primary goal of FDIC receivership is to liquidate bank assets in an orderly fashion and to repay insured depositors, incurring the least cost to the insurance fund. During the wind-down, the FDIC continues to operate the firm to minimize any system disruptions.

Similar to the FDIC, when state insurance regulators deem that an insurance company has insufficient strength to continue operations, the company is shut down through an orderly resolution process. Any customer insurance obligations that are due but cannot be paid are funded up to pre-defined thresholds by state insurance guaranty funds. Like the FDIC fund, the state insurance guaranty funds are derived from assessments to industry firms.

continued

33 Bank of England, "The Role of Macroprudential Policy," November 2009, p. 12.

The orderly nature and increased certainty of outcome provided by resolution processes reduces the potential for a problem firm to spread financial problems through direct or indirect IC.

4. *Ease of Entry and Substitutability of Firms*

Within a financial sub-sector, the ease of entry and ability of customers to switch firms can be an important mitigant to system IC. In a highly concentrated sector that has few players who are able to defend their market-shares, the impact of a single firm failure on the system is relatively large. For instance, the U.S. OTC derivatives market is largely concentrated amongst a small group of banking firms. According to the OCC's "Quarterly Report on Bank Trading and Derivatives Activities" for the fourth quarter of 2009, "the five banks with the most derivatives activity hold 97% of all derivatives, while the largest 25 banks account for nearly 100% of all contracts."[34] Though firms other than banks engage in derivatives dealing, banking companies currently dominate dealing in OTC derivative instruments. The failure of one of the top five banking firms can be highly consequential as these entities serve as counterparty on a vast number and notional of proprietary trades, which can be difficult to replace.

Conversely, in a financial sub-sector that has relatively low barriers to entry and a robust number of competing firms, systemic risk is relatively small. The ability of customers/counterparties to easily switch their dealings to other firms, or to easily replace their contracts upon firm failure reduces systemic risk. Auto insurers represent an example of a highly competitive financial product sub-market.

Though there are clearly some natural barriers to entry for certain financial activities, including specialized labor and technology requirements, this mitigation factor largely depends on the rules set out legislatively and by regulators. Regulators seeking to reduce systemic risk should institute requirements that allow a robust competitive market.

34 Comptroller of the Currency, "OCC's Quarterly Report on Bank Trading and Derivatives Activities, Fourth Quarter 2009," p. 7.

Part III: Institutional IC Assessment

Description of Analysis

In this section we discuss and provide results from a survey of external industry experts on financial firm interconnectedness. The survey responses provide benchmarks of relative IC levels for five stylized U.S. financial firms. The complete firm descriptions are included in the Appendix of this whitepaper. The firm types include 1) Complex Banking Corporation [B]; 2) Hedge Fund [HF]; 3) Mutual Fund [MF]; 4) Life Insurance Company [LI]; and 5) Property and Casualty Insurance Company [PC].

It is implicit that within actual sub-groups of the financial industry there are variations in IC that stem from a firm's breadth of activities and management choices. The stylized examples utilized here seek to capture the essence of a typical or average firm.

Survey Respondents:

The respondents, though anonymous, consist of a variety of individuals with significant financial industry experience and knowledge. None of the respondents are current employees of NERA, Oliver Wyman, or PCI or its affiliates. Additionally, none of the individuals surveyed was provided any coaching on desired responses or told that the survey was part of a paper commissioned by PCI.

Each of the individuals can be classified as at least one of the following:

- Current or former financial regulator;
- Current or former financial industry employee (e.g., financial consultant, financial firm accountant);
- Individual with advanced academic background in finance or economics (e.g., college professor, PhD economist).

The respondents have average experience in the industry of 18 years.

Survey Instructions:

Each survey participant was provided Part II of this paper describing IC, along with the appendix containing the descriptions of five stylized financial firm types.

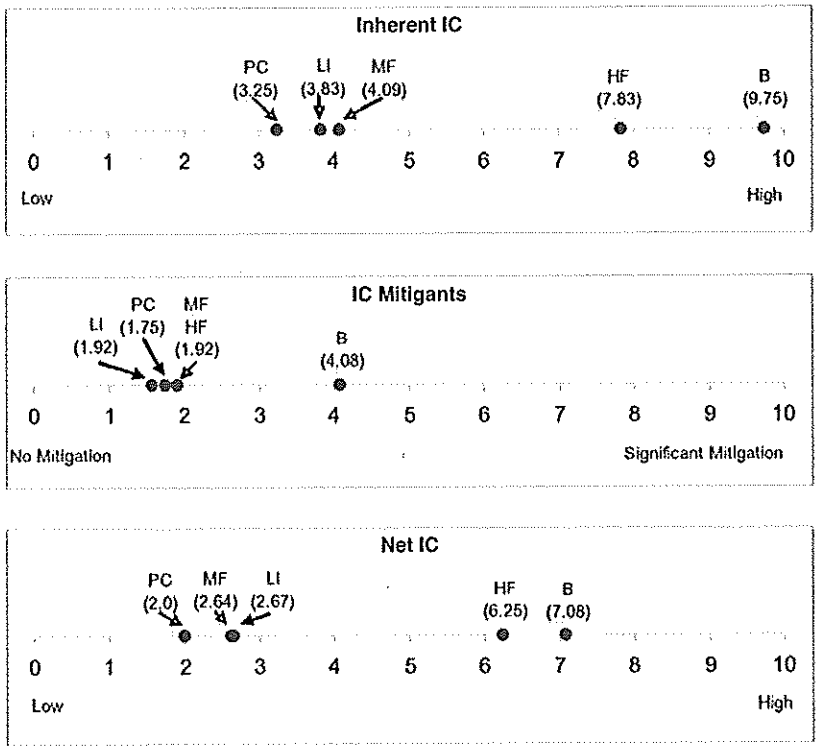
Participants were asked to read the stylized firm descriptions as well as the narrative discussion of IC. They were then asked to provide relative rankings for each firm type on three ranking continuums. The continuums, each a number line from 1-10, were titled: 1) "Inherent Interconnectedness," 2) "Interconnectedness Mitigants," and 3) "Net Interconnectedness."

continued

The authors believe that survey results represent a well-informed and meaningful benchmark of IC risk for the various firm types. A high level of precision in the ratings was not the intent.

Survey Results:

In total, 35 surveys were distributed and 12 completed survey responses were received within the allotted time. The average results from the surveys are provided below.



B = Complex Banking Corporation HF = Hedge Fund MF = Mutual Fund LI = Life Insurer PC = Property & Casualty Insurer

Discussion of Results

The following conclusions can be drawn from the results:

1. Significant dispersion among financial firm types

Respondents indicated that the stylized firm types differ significantly within each of the continuums, particularly with respect to inherent and net interconnectedness. Given the close relationship of IC with systemic risk, results indicate that the different financial firm types vary significantly with respect to their potential to contribute to a systemic risk episode.

2. Rank order of results

Banking firms were rated consistently highest in terms of IC. Though respondents indicated complex banking firms also had a notable degree of IC mitigation, on average the net IC for the banks also ranked highest. Insurance firms, both life and P&C, were judged to have relatively low inherent IC and low net IC. In particular, the P&C insurance firm was judged to have the lowest IC of all five firm types. The banking firm was judged to be over 3 times as interconnected as the P&C firm on a numerical scale.

Overall Survey Conclusions

The survey, though not large in scope, provides a clear indication that differing financial firm types should not be viewed similarly with respect to their level of IC. While banking companies and hedge funds are viewed as highly interconnected, other firms, particularly P&C firms pose less systemic risk as a result of their low IC.

Conclusion

The level of IC is an overarching factor in the systemic risk posed by a financial firm. In this paper, we have endeavored to break out firm IC into individual components that may be meaningfully assessed on an institution by institution basis. Our analysis indicates that IC varies significantly by financial institution type. Results from a survey of external experts confirm this dispersion, indicating that certain financial firms, especially P&C insurance firms, tend to have a low level of IC, while other firms such as complex banking companies exhibit high levels of IC. Any efforts to monitor and reduce systemic risk should naturally focus on those firms posing the greatest risk.

Our study and review of the evidence indicates that a failure to appropriately differentiate between firms with varying levels of IC may not only lead to an inefficient and possibly ineffective systemic risk mitigation process, but can also bring about other undesirable economic results. Specifically, potential side effects include:

- Reduced transparency regarding the true underlying sources of risk and greater likelihood of taxpayer-funded bailouts;
- Reduced stakeholder incentive to perform necessary due diligence with respect to a firm's risks, which as a result reduces market discipline that would discourage risky behavior;
- Potential for greater systemic risk as a result of misaligned incentives that arise from moral hazards associated with implicit and explicit government guarantees;
- An increase in unemployment and a loss of U.S. competitiveness; and
- New cost burdens to businesses whose IC does not pose significant systemic risk, which may be passed through to consumers.

Given these compelling and problematic results, it is important that legislators and regulators ensure that differences in financial firm IC are reflected within any new systemic risk reduction efforts. Because of the effect of IC, compounded by the moral hazard arising from government policy, it is vital that proposals for increased resolution authority and coverage by a systemic dissolution fund allow proper targeting and prioritization of efforts. Those companies that are not interconnected, whose risks are not correlated, and who do not exhibit pro-cyclicality, should not be included in the resolution structure. Those companies whose financial activities lead them to create and to propagate systemic risk should be included. By incorporating a measure or adjustment for interconnectedness and other relevant factors, the regulatory proposals would reduce negative economic consequences, government costs, and uncertainty. By establishing clear mechanisms for measuring systemic risk that minimize incentives to increase systemic risk, greater certainty regarding the consequences and costs of certain risk activities will ultimately increase market confidence.

Appendix: Description and Background Discussion of Financial Firm Types

Below we provide brief descriptions of five stylized financial firm types.[35] These descriptions are provided as background material to survey respondents (described in section II).

A. Complex Banking Company

Banking companies play a key financial intermediary role within the U.S. economy, through their traditional activities of accepting deposits and offering credit. This activity is often characterized as "maturity transformation," by which shorter-term deposits and other borrowings (i.e., bank liabilities) are transformed into longer-term loans (i.e., bank assets).

Banks typically maintain a relatively high degree of financial leverage. The market is generally accepting of bank's high leverage given a perception of limited risk-taking ability associated with stringent supervision and regulation. Additionally, most banks derive a significant portion of their funding from FDIC insured deposits. The government deposit insurance program creates a relatively high level of stability for this funding source.

Significant changes in the banking industry have occurred over the last two decades. First, a high level of consolidation in the industry has concentrated a majority of industry assets and deposits into a relatively small number of firms. The recent financial turmoil, with its government assisted mergers has only increased industry concentration and has led the remaining major stand-alone investment banks to become banking companies.

With the repeal of Glass Steagall in 1999 and reduction of other regulatory restraints, a number of banking companies became more complex, moving heavily into the investment banking and trading arenas. These new businesses led several of the top banking firms to increase their levels of counterparty exposure through derivatives transactions and other contingent exposures. For example a number of complex banking companies maintain significant contingent exposures through offerings of principal protected products, holdings of highly-rated unfunded synthetic CDOs, and issuance of other forms of sold put options. Such exposures tend to be difficult to assess for external financial analysts and investors and tend to have low regulatory capital requirements relative to the losses they can generate under stressed conditions.

Additionally, over the past decade, top banking firms, in an effort to increase return on equity ("ROE"), increased so-called "originate-to-distribute" activities. Rather than maintain loans on balance sheet and earn a spread above the cost of funding, banking firms began to package and distribute loans and other instruments. Originate to distribute allowed banks to realize profits more quickly (which tend to be paid out in dividends and incentive compensation) and also to remain under balance sheet-based leverage constraints. However, many banking companies continue to support their "distributed" products through liquidity facilities or implicit guarantees.

continued

35 The financial firm sub-groups presented are stylized examples representing "pure-play" providers. It is recognized that a financial conglomerate could own each type of company listed; this is considered in a separate section discussing intra-connectedness.

In addition, banks often retain exposure to various forms of buyer recourse, where buyers of securities are able to "put-back" underlying non-performing loans found not to meet various underwriting requirements.

Finally, over the last decade many major complex banks have begun to rely less on retail deposits for funding and more on the wholesale markets. Traditional bond offerings of various maturities provide some of this funding. However, short-term inter-bank borrowings, commercial paper, and repurchase agreements have become a significant source of funding for many banking firms. This increased reliance on short-term uninsured market funding combined with increased mark-to-market on banking assets has significantly increased the structural wrong-way risk within some major firms.

B. Hedge Fund

The term "hedge fund" has come to encompass a heterogeneous class of alternative investment vehicles. A precise definition of hedge funds remains unresolved, as noted by Judge Randolph in a 2006 ruling related to hedge fund regulation, "[t]he term is commonly used as a catch-all for 'any pooled investment vehicle that is privately organized, administered by professional investment managers, and not widely available to the public.'"[36]

Hedge fund investors are generally more limited in their redemptions than mutual fund investors; a typical requirement is that an investor requesting redemption has to wait 90 days. Hedge funds may follow many different investment strategies but many engage in investment strategies that involve high amounts of leverage, from financial institution prime brokers, to increase returns. Leverage can be the direct result of borrowing, such as when hedge funds invest in equities using margin agreements or when hedge funds invest in fixed income assets with funds borrowed in a repurchase agreement. OTC derivatives are heavily utilized by some hedge funds.

Because hedge funds have more sophisticated/risky investment strategies and are largely unregulated or lightly regulated, they are generally available only to qualified investors. Prime brokers may get to see a part of a given hedge fund's portfolio but most investors do not have access to individual position information.

Hedge funds' leverage contributes significantly to their interconnectedness, particularly during market stress or unexpected correlations across markets. A hedge fund generates profits (or loss) from its chosen financial positions. The only collateral that a hedge fund has to support leverage derived from financial institutions is those same positions. In essence the primary source and secondary source of repayment is the same. As a result, it is intuitive that during a market stress, in which a hedge fund begins to generate losses, that prime brokers who lend to the fund would tighten lending terms.

During the boom, hedge funds increased leverage as the price of borrowing declined and repurchase agreement and other margin requirements fell. In the most recent crisis, hedge fund borrowing via repo agreements resulted in major financial disruptions as fixed income repo collateral fell in value, repo haircuts increased, and the resulting spiral of reduced lending, higher cost lending, and asset sales has been characterized as a "run on the shadow banking system" (Gorton, 2009).

Lo (2009) noted that even though there are many hedge fund investment strategies, the returns of hedge funds were becoming more correlated over time, suggesting that systemic risk from hedge fund investments might be increasing.[37]

36 *Phillip Goldstein, et al v. Securities and Exchange Commission*, p. 2.

37 Andrew W. Lo, "The Feasibility of Systemic Risk Measurement," Written Testimony Prepared for the U.S. House of Representatives, Financial Services Committee, October 19, 2009.

C. Mutual Fund

Mutual funds represent the largest amount of assets under management. Mutual fund shares are uninsured. Although there may be fees for investors to move funds in and out of mutual funds, investors can typically liquidate positions daily at the net asset value. There are many different types of mutual funds. Fund prospectuses dictate fund objectives, allowable strategies, and potential assets. Some funds seek to track the returns of a specified index, while other funds are actively managed and seek to outperform benchmarks. Mutual funds are able to hold a variety of equity and debt securities.

Mutual funds offer their investments to the public and are subject to substantial regulation that prohibits leverage and requires periodic, detailed position reporting. Given the high level of liquidity provided to fund-holders, mutual funds function as savings vehicles for many. Not surprisingly then, one of the most significant systemic risks faced by mutual funds is liquidity risk caused by a run on the assets. This was the case when exposure to Lehman Brothers Holdings Inc. debt led to redemptions on concerns about asset values which led the Reserve Primary Fund to cut its share price to less than $1 per share. The fact that this money market mutual fund "broke the buck" led to wider concerns and additional redemptions in money market mutual funds ended in intervention by the Federal Reserve to supply liquidity and guarantee values in the market.

Separately, and prior to the Lehman event, a number of money market mutual funds had invested directly or indirectly in private label mortgage, asset-backed, and CDO securities. Some of these exposures were undertaken by investments in short-term paper issued by structured investment vehicles ("SIVs") which held the underlying asset-backed paper. When the market for underlying asset-backed positions quickly dried up in summer 2007, many of these mutual funds took unexpected losses and some were bailed out by their sponsoring banking companies.

The mutual fund industry's exposure to "run on the bank" liquidity problems is an example of the industry's direct IC to the municipalities and individuals, and a run can result in a substantial decline in value and a spreading of a financial problem. However, outside of the bank runs, the mutual fund industry is unlikely to have significant spillover effects to other financial institutions. Regulation and reporting requirements result in relatively transparent obligations and prevent mutual funds from holding leverage that would tend to amplify shocks to other entities.

D. Life Insurance Company

In general, insurers have some significant differences from other financial institutions. They are regulated at the state level, provide financial reports annually that include details of assets and liabilities, and they have few unreported obligations (i.e., they do not have significant off-balance sheet credit promises and other obligations). In terms of investments, insurer regulation has been relatively more stringent than regulation of other financial institutions, limiting their ability to take on off-balance sheet risk or investments in derivatives. Insurance companies are somewhat different from financial institutions that are focused on investing clients' funds. In contrast, insurers receive policyholders' funds and invest them; and then, if a covered event occurs, the insurer makes a payment to the policyholder.

Insurance is often divided into life and property and casualty ("P&C") lines. Life insurance products generally provide protection from mortality-related risks. Life insurance products that provide more of a savings component, such as whole life, universal life, guaranteed investment contracts ("GICs"), and some annuities, are more connected to

continued

markets than products that primarily reflect mortality risk such as term insurance. Life insurers offering such savings products can find themselves with promised values to clients that exceed the value of supporting assets, particularly after a severe market downturn. After such a market decline customers may find it necessary or attractive to cash out, leaving the insurer with realized losses.

The life insurance industry has historically had greater exposure to mortgages and junk bonds than the nonlife insurance industry. In the early 1990s, there were a number of high profile bankruptcies by large life insurers that had large investments in junk bonds, commercial real estate, or both. A number of these bankruptcies were preceded by large withdrawals of policyholder funds. There has been debate about whether these were examples of policyholder runs but it is unclear whether most of the insurers who had promised high returns on a number of investment products would have been solvent to pay out their obligations.

Since the early 1990s, there have been several regulatory changes for life insurers which reduce the chance of a similar event. In general, both life and nonlife insurers have held diversified, high quality portfolios of assets. The insurance industry, like many other investors in the recent low interest rate environment, has moved toward a higher proportion of corporate and private label or non-agency mortgage-backed securities at the expense of government bonds and government-sponsored entity obligations. The applicable risk-based capital requirements supported this type of substitution because the assets carried the same risk weights as government and agency-guaranteed obligations but gave a higher yield. However, overall exposure has remained relatively low.

The risk to consumers of a failed life insurer is limited through state insurance guaranty funds. These funds make policy pay-outs should a firm become illiquid or insolvent.

E. Property and Casualty Insurance Company

Property and Casualty ("P&C") insurers are part of the overall insurance industry as introduced above, but offer specific non-life insurance protection to consumers including fire, homeowners, medical malpractice, workers' compensation, automobile liability and physical damage, aircraft, burglary, and theft. P&C insurers do not offer variable annuity products where an insurer may have to make up for losses from un-hedged major market moves. The major assets of the companies that make up the P&C sector are fixed-income securities, though equities and other types of securities are also held. Historically, P&C insurers have been among the larger holders of municipal securities. Regulations limit the use of derivatives. The companies' primary liabilities represent amounts payable to policyholders.

Capital and funding is largely provided via insurance premiums. It is unlikely that suppliers of capital, the policy-holders, will pull funds from the insurers at a time when they have to fund liabilities. To the extent that capital is pulled, insurance liabilities decline as well given an insurer is no longer liable to cover future expected losses of a lapsed policy.

P&C insurers are limited in their ability to take advantage of (or take on the risk of) asset-liability mismatches, unlike the mismatch risks taken on by many financial institutions prior to the most recent crisis. Duration matching is viewed as a source of value in the industry. For P&C insurers, liabilities are of varying duration (e.g., physical damage auto is short, liability is longer, product liability and workers compensation can be very long) and corresponding earning assets tend to match specific liability pools.

Property and casualty typically follow what is referred to as the "insurance cycle," which is not highly correlated with the business cycle. The P&C cycle is impacted by asset returns: when they are high the industry becomes more competitive (that is, insurance prices fall and insurers compete aggressively for policyholders), but when asset values fall, industry capacity falls and the market hardens (or at least softens less) due to the reduced capacity. The P&C insurance cycle is not correlated with the business cycle since unexpectedly high occurrences of non-financial events is not inherently more likely when financial markets fall.

With respect to the recent financial market crisis the higher quality, relatively liquid assets held by nonlife insurers have limited downside financial impact to both stand-alone P&C insurers and P&C insurers that are part of larger financial conglomerates.

The risk to consumers of a failed P&C insurer is limited through state insurance guaranty funds. These funds make policy pay-outs should a firm become illiquid or insolvent.

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Washington, D.C. 20548

February 23, 2006

The Honorable Michael G. Oxley
Chairman
Committee on Financial Services
House of Representatives

Subject: *Definitions of Insurance and Related Information*

Dear Mr. Chairman:

This letter transmits to you our briefing slides concerning a variety of issues related to identifying a universal definition of insurance and the challenges associated with doing so. We briefed your committee staff on the preliminary results of our work on June 24, 2005, and on our final results on November 29, 2005. Specifically, we provided information on (1) the elements that are commonly part of definitions of insurance, (2) a few products not universally defined as insurance or regulated across the states by their insurance departments, (3) possible regulatory implications of developing separate definitions for insurance products covering insurance risks in more than one category, (4) current developments in statutory and financial accounting communities in re-evaluating their guidelines for measuring risk transfer in reinsurance contracts, and (5) certain circumstances when finite risk contracts are used.

We focused on insurance and reinsurance in the private sector and excluded federal insurance programs. We identified elements crucial to defining or developing a definition of insurance, but we did not attempt to compile an exhaustive list of all private sector products that might be considered insurance. We reviewed relevant documents from the National Association of Insurance Commissioners (NAIC), academic sources, accounting boards, insurance companies, professional and industry associations, state insurance regulators, federal securities regulators, court cases, and general media. We also met with knowledgeable staff at NAIC and other professional and industry associations. We conducted our work from December 2004 through December 2005 in accordance with generally accepted government auditing standards.

Definitions of Insurance

We looked at a variety of sources to identify a definition of insurance and found that, while most definitions differed because they were developed for specific purposes or had changed over time, the definitions shared key elements of risk transfer and risk spreading. Definitions of insurance are developed for various purposes such as different fields of study, categories of insurance, and state or federal statutes.[1]

While risk transfer and risk spreading are key elements, these definitions often include other elements, or parameters, commonly found in the definitions. These include

- indemnification, which is the payment for losses actually incurred;
- the ability to make reasonable estimates of future losses;
- the ability to express losses in definite monetary amounts; and
- the possibility of adverse, random events occurring outside the control of the insured.

Further, while products may transfer various types of risks, a product must transfer insurance risk to qualify as an insurance product. Insurance risk is coverage for exposures that have the potential for financial loss. It is defined by NAIC as equivalent to underwriting risk. That is, for property-casualty insurers, it is the risk of mispricing new business or the risk of underestimating needed reserves for business already written. The accounting industry defines insurance risk as those risks related to uncertainties resulting from both the amount and timing of losses paid and other expenses.

Even when some losses lack certain elements of insurance, insurers have sometimes found ways that allow coverage for such losses. For example, nonpecuniary or noneconomic losses (e.g., the loss of well-being or happiness) lack certain elements of insurance—there is no commonly

[1]For example, the Gramm-Leach-Bliley Act, section 302(c) defines insurance by, among other things, making reference to state insurance laws (see slide 8).

accepted method of expressing a definite monetary amount for nonpecuniary losses and no measurable means to indemnify the insured. For example, the loss of happiness upon the death of a loved one would be difficult if not impossible to quantify in monetary terms; instead of attempting to quantify such a loss, life insurers agree to pay a predetermined amount of monetary benefits upon the death of the insured, and they charge a premium based on both the amount of insurance and the expected mortality risk of the insured.

In reviewing the various definitions of insurance, we also found that court interpretations and state regulatory practices change definitions over time. For example, courts have emphasized different elements of an insurance contract such as its principal object and purpose as in *Jordan v. Group Health* or have focused on the legal elements necessary for an enforceable contract as in *Griffin Systems v. Washburn*.[2] (See slides 5-8 and 13-15 for further discussion of various definitions of insurance.)

How States Define and Regulate Insurance

Generally, states define and regulate the same products as insurance. While states rely on a variety of sources to provide a legal and regulatory definition of insurance, these sources sometimes lead to differences in how certain products are categorized—whether as insurance or not. In an effort to reduce confusion, NAIC has attempted to catalog products regulated by each of the state insurance regulators in standardized lists known as Uniform Product Coding Matrices (UPCM)—one for property casualty products and another for life/accident/health products. Insurers are to use the UPCM as a guide for filings of insurance rates and policy forms. Most of the products in the UPCM are recognized and regulated across all states as insurance. However, some differences still exist. For example, prepaid legal service plans are defined and regulated as insurance in Texas but not in South Carolina.

[2]The *Jordan* case focused on insurance contracts that also contained noninsurance features and looked at both the insurance and noninsurance features to determine the "principal object and purpose" of the contract *Jordan v. Group Health Ass'n.*, 107 F.2d 239, 247-48 (D.C. Cir. 1939). The *Griffin* case articulated four elements of an insurance contract: (1) a contract between an insurer and insured that exists for a specific period of time, (2) an insurable interest possessed by the insured, (3) consideration in the form of a premium paid by the insured to the insurer, and (4) the assumption of risk by the insurer who agrees to indemnify the insured for potential loss resulting from specified perils *Griffin Systems v. Washburn*, 505 N.E.2d 1121, 1123-24 (Ill. App. Dist. 1987).

Many states have a statutory definition that is stated generally and may explicitly include and/or exclude specific insurance products.[3] A few states do not have a general definition. For example, Illinois' statute lists classes of products subject to or excluded from regulation. When a product is not listed in the statute, Illinois regulators apply a functional definition consisting of the elements articulated in *Griffin Systems v. Washburn*.

We identified some products either not included in the UPCM or subject to differences in statutory or regulatory approaches among various state insurance regulators. These include

- products created and offered by noninsurers as substitutes for other products underwritten by insurers (e.g., debt cancellation contracts created by lenders as substitutes for credit insurance; see slide 18);

- products that are viewed sometimes as insurance and other times as prepayment or discount payment plans for services (e.g., legal and medical services plans; see slides 21-22);

- various annuity products sold by insurers because whether a particular annuity product is insurance hinged on the level of insurance risk and/or investment risk assumed by the insurer (e.g., variable annuities in which the insurer assumes no investment risk and period certain annuities in which the insurer assumes no mortality risk; see slides 27-28); and

- insurance products regulated by state departments other than state insurance departments because of their historical association with particular industries or economic activities (e.g., title insurance that, according to a state insurance department official, is historically associated with the real estate market; see slide 31).

Products we identified with differences in regulatory approaches among some state insurance regulators are listed and discussed on slides 18-31.

[3]An example of a statutory definition that is stated generally is: "Insurance is a contract whereby one undertakes to indemnify another or pay a specified amount upon determinable contingencies."

Regulation of Products That Cover Insurance Risks in More Than One Category

Products that cover insurance risks in more than one category (life, accident, health, property casualty) could face uncertain regulation if separate insurance definitions were developed and used for each category. Currently, insurance products are classified by regulators as life, accident,[4] health, or property casualty insurance, even though some products cover insurance risks in more than one of these categories.

Based on the product descriptions in NAIC's UPCM, we list and describe eight insurance products we found that cover risks in more than one of the categories (slides 33-34). Our list was not intended to be exhaustive but to illustrate that some products could actually fit in two or more categories even though each product is historically associated with one particular category of insurance. The historical associations have not affected insurance regulation because insurance definitions generally apply across categories. However, if separate statutory definitions of insurance were developed for each category, it is unclear how products characterized by features from multiple categories would be classified for regulatory purposes. As a result, products that cover insurance risks in more than one category might be regulated differently or might be regulated under multiple regimes. For example, it is unclear whether accident insurance that also provides death and health care benefits would be regulated solely as accident insurance or also as both life and health insurance, and whether regulation would differ across the three types of insurance. (See slides 32-34 for additional information on this issue.)

Reinsurance

Reinsurance is insurance for insurers. In contrast to insurance, reinsurance is not sold as a standard product. Each contract is separately negotiated. Two basic types of reinsurance contracts exist—treaty and facultative. The key difference between treaty and facultative reinsurance contracts is how insurers select risks for transfer. In a treaty reinsurance contract, the reinsurer and insurer agree on which select class(es) of underlying policies of the insurer's to underwrite. In a facultative reinsurance contract, the reinsurer and insurer agree on individual underlying policies. In addition to

[4]Accident insurance is a form of health insurance against loss by accidental bodily injury. ("Fundamentals of Risk and Insurance," by Emmett J. Vaughan and Therese Vaughan).

the method of selecting underlying policies, reinsurance contracts usually contain features such as floors and caps that limit the amount of risks underwritten.

The transfer of risk is the key element to defining reinsurance. While reinsurance contracts can also transfer noninsurance risks, it is the transfer of insurance risk that is the focus when evaluating the validity of a reinsurance contract. Further, if sufficient insurance risk is transferred, the entire contract can be defined as reinsurance and qualify for reinsurance accounting—a type of accounting treatment sought when beneficial to the insured's financial statements.[5] Currently, the statutory and financial accounting communities are re-evaluating methods used in determining whether a reinsurer's contract covering property casualty insurance risks actually transfers insurance risk. Both statutory and financial accounting standards establish the necessary conditions of risk transfer for reinsurance contracts including that the reinsurer assume significant insurance risk and face a reasonable possibility of significant loss.[6] Statutory and financial accounting guidelines also clarify that while reinsurance contracts may transfer other types of risks, such as investment risk, only insurance risk is subject to the conditions for determining risk transfer. Also, the guidelines require that determinations of risk transfer should consider all features in a contract such as cancellation provisions or payment schedules that delay the reinsurer's timely reimbursement of claims; features like these may limit the transfer of insurance risk. In addition, financial accounting guidelines explain that determining the extent of risk transferred in one reinsurance contract should be done in the context of all other related contracts or agreements because they may potentially limit the transfer of insurance risk. However, once the determination is made that the contract transfers sufficient insurance risk,

[5]For clarity, contracts that do not transfer sufficient insurance risk can be referred to as "reinsurer's contracts."

[6]The NAIC issues Statements of Statutory Accounting Principles (SSAP) that provide guidance for required filings of insurance company financial statements to state insurance regulators and the NAIC. Another accounting organization, the Financial Accounting Standards Board, also establishes financial accounting and reporting standards—Statement of Financial Accounting Standards—some of which are specifically for insurance and reinsurance companies and transactions. NAIC's Statement of Statutory Accounting Principles No. 62 and FASB's Statement of Financial Accounting Standards No. 113, paragraphs 9a and 9b, establish the necessary conditions of risk transfer for contracts: (1) "reinsurer assumes significant insurance risk under the reinsured portions of the contract" (commonly called the "9a test") and (2) "It is reasonably possible that the reinsurer may realize significant loss" (commonly called the "9b test").

reinsurance accounting can be applied to the entire contract, including any noninsurance risks being transferred. (See slides 35-42 for further information on reinsurance.)

Finite Risk Contracts

No widely accepted definition exists for finite risk contracts. Finite risk contracts can be used by both insurers (finite risk reinsurance) and noninsurers (finite risk insurance). In general, such contracts transfer less insurance risk than traditional reinsurance or insurance. Instead, finite risk contracts tend to emphasize financing and accounting benefits. Specifically, the contracts allow the insured to transfer to a reinsurer or insurer both insurance risk and uncertainties about the timing of certain cash flows and recognition of certain income and expenses. Thus, an insured could use these contracts to both reduce insurance risk and control or smooth the timing of cash flows and the recognition of certain expenses and income. This could favorably affect earnings, capital, and certain ratios that regulators, rating agencies, and investment analysts might use to measure and monitor a company's financial health.

Finite risk contracts must transfer sufficient insurance risk to legitimately qualify for these financing and accounting benefits. Although finite risk contracts can be legitimately structured to meet these requirements, some companies that originally presented their finite risk contracts as transferring sufficient insurance risk, and thus qualifying for the financing and accounting benefits, were discovered to have used mechanisms such as undisclosed side agreements that resulted in little or no insurance risk actually being transferred. Disguising such contracts to look like "real reinsurance" or insurance can mislead regulators, policyholders, and investors about the actual financial condition of the company. (See slides 43-47 for further discussion of finite risk contracts.)

In summary, we found that there is no single, universal definition of insurance. However, we identified certain key elements of risk transfer or risk spreading that were common among the varying definitions. Moreover, while statutory definitions of insurance sometimes differed between states leading to differences in the regulation of certain products, states generally define and regulate the same products as insurance. Insurance products also are categorized by type of insurance risk such as life, accident, health, and property casualty. However, some products, while designated as belonging to one of the major categories, have characteristics that fall into more than one category. Therefore, if separate statutory definitions of

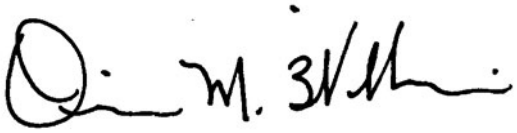
insurance were developed for products in each category of insurance risk, products that transfer insurance risks in more than one category could face uncertain regulation.

Concerning reinsurance and its accounting treatment, the amount of insurance risk actually transferred is important because of the benefits of reinsurance accounting to the ceding company. Specifically, if insurance risk is transferred at sufficient levels, the entire contract would qualify for reinsurance accounting, with resulting positive effects on the ceding company's reserves and surplus. Another type of contract—the finite risk contract—can receive reinsurance accounting or other preferred accounting treatment but transfers less risk at a lower premium than traditional insurance. Recently some companies that had these contracts and used reinsurance accounting treatment were found to have transferred insufficient insurance risk to qualify for such treatment.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the date of this report. At that time, we will send copies of this report to the Chairman and Ranking Minority Member of the Senate Committee on Banking, Housing, and Urban Affairs and the Ranking Minority Member of the House Committee on Financial Services. We also will make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have questions regarding this report, please contact me at (202) 512-5837 or williamso@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Lawrence D. Cluff, Angela Pun, Mel Thomas, Christine J. Kuduk, Nancy S. Barry, and Tania L. Calhoun made key contributions to this report.

Sincerely yours,



Orice M. Williams
Director, Financial Markets and Community Investment

Enclosure

Definitions of Insurance

Presentation For
Committee on Financial Services
U.S. House of Representatives

GAO
Accountability * Integrity * Reliability

Contents

Scope and Methodology

- We focused on products sold by insurers or reinsurers in the private sector and excluded federal insurance programs.
- We did not attempt to compile an exhaustive list of all products in the private sector that might be considered insurance.
- We reviewed academic textbooks and journals; documents from National Association of Insurance Commissioners (NAIC), state insurance regulators, Securities and Exchange Commission, and National Association of Securities Dealers; statutory and financial accounting principles and standards; general media; and court cases.
- We interviewed officials from NAIC, industry associations for life, health, and property casualty insurance, as well as banking and other professional associations. We also interviewed academicians and officials with the Illinois insurance department.

Definitions of Insurance

In our research, we found that

- There is no universal agreement on a definition of insurance,
- Most definitions have common elements,
- The Gramm-Leach-Bliley Act provides one definition used by the federal government,
- Nonpecuniary losses are usually not covered by insurance, and
- Identity theft insurance pays only for actual expenses incurred by the victim.

Definitions of Insurance

No Universal Agreement

Insurance industry participants and state regulators develop definitions for different purposes, such as

- Specific subject areas, such as accounting, actuarial science, economics, and finance;
- Specific types of insurance, such as life or property casualty; or
- Statutes and regulations, which can vary across states.

These definitions are dynamic, sometimes caused by

- Evolution of thinking in subject areas;
- Product innovations; and
- Changes in statutes, regulations, and court interpretations.

Definitions of Insurance

Key Elements

Definitions of insurance have two key elements:

- Risk is transferred.
  - An uncertain, possibly large, loss is transformed into a certain, small cost or premium for the insured; and
  - An insured transfers risk to another entity.

- Risk is spread. That is, an insurer spreads risk over a large enough group for the law of large numbers to predict both total losses and the probability of a single loss with some accuracy.

Other Elements

Other elements often considered to be conditions necessary for an “insurable” risk are

- Risks that are reasonably homogeneous and independent; and
- Losses that meet certain conditions, including
  - Chance occurrences,
  - Low probability of loss,
  - Occur at a definite time and place, and can be expressed as a definite monetary amount, and
  - Are not catastrophic, i.e., do not affect a large number of insureds at the same time.

Definitions of Insurance

Gramm-Leach-Bliley Definition

Section 302(c) defines insurance as

- Any product regulated as insurance as of Jan. 1, 1999, in accordance with the relevant state insurance law, in the state in which the product is provided; and
- Any product first offered after Jan. 1, 1999, which
  - A state insurance regulator determines shall be regulated as insurance in the state in which the product is provided because the product insures, guarantees, or indemnifies against liability, loss of life, loss of health, or loss through damage to or destruction of property, including, but not limited to, surety bonds, life insurance, health insurance, title insurance, and property and casualty insurance; and
  - Is not a product or service of a bank as described in the section; and
- Any annuity contract, the income on which is subject to tax treatment under section 72 of the Internal Revenue Code.

Description of Nonpecuniary Losses

Pecuniary or economic losses have a market price or can be calculated in monetary terms. Some examples include

- The cost to repair or replace a damaged vehicle, or
- A family's loss of future expected income from the death or disability of an income-earning parent or spouse.

Nonpecuniary or noneconomic losses do not have a market price. These losses are the reduction of insureds' welfare such as their health, well-being, and happiness.

Nonpecuniary Losses Lack Certain Common Elements, but Some Coverage Provided

Nonpecuniary losses lack certain common insurance elements. For example

- Nonpecuniary losses cannot be calculated as a definite amount;
- The principle of indemnity does not apply; and
- There is no insurable interest for some types of nonpecuniary losses.

Insurers provide coverage for some nonpecuniary losses by paying

- Predetermined monetary amounts, such as life insurance paying the amount chosen by the insured at time of purchase; or
- Amounts calculated in monetary terms under specific circumstances, such as uninsured motorist insurance covering damages for “pain and suffering.”

Identity Theft Insurance Covers Pecuniary Expenses

Although the theft of one's identifying information is a nonpecuniary loss, identity theft insurance only pays for associated expenses that have a market price or can be calculated in monetary terms. These include

- Costs of certified mail and long-distance calls;
- Lost wages from time taken off work; and
- Fees, such as attorney and loan application fees.

How States Define and Regulate Insurance

States rely on a variety of sources to help define and regulate insurance. These include

- State statutory definitions,
- Court interpretations,
- Regulatory descriptions of insurance products, and
- Uniform Product Coding Matrices (UPCM) categories of insurance.

However, some products are not universally recognized or regulated as insurance.

How States Define and Regulate Insurance

State Statutory Definitions

- Many states have a statutory definition that is general and inclusive, similar to the following:

  Insurance is a contract whereby one undertakes to indemnify another or pay a specified amount upon determinable contingencies (Kentucky Revised Statutes § 304.1-030)

- Some states have explicit inclusions and/or exclusions. For example, Kentucky's definition includes annuities and sureties, while Wisconsin's excludes continuing care contracts.

- A few states do not have a statutory definition. For example, Illinois' insurance statutes list classes of products subject to or excluded from regulation. When a product is not listed in the statutes, the regulators apply a functional definition consisting of the elements articulated in a court case.

Definitions of Insurance 13

How States Define and Regulate Insurance

Court Interpretations

Two court cases have helped guide states in defining and regulating insurance:

- *Jordan v. Group Health* found that courts may look at the nature of the contractual relationship to determine whether risk transfer or distribution is its "principal object and purpose."
- *Griffin Systems v. Washburn* found that courts may look to see whether a product contains certain elements within a definition of insurance. These elements include
  - A contract between an insurer and insured that exists for a specific period of time,
  - An insurable interest possessed by the insured,
  - Consideration in the form of a premium paid by the insured to the insurer, and
  - The assumption of risk by the insurer who agrees to indemnify the insured for potential loss resulting from specified perils.

How States Define and Regulate Insurance

Regulatory Descriptions of Insurance Products

NAIC worked with insurance departments in 20 to 25 states to develop the UPCM that lists and describes

- Property/Casualty insurance products, and
- Life/Accident/Health insurance products.

NAIC developed the UPCM to

- Identify all products regulated by state departments of insurance,
- Standardize terminology for insurance products across all states, and
- Aid filings of insurance products (rates and policy forms).

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How States Define and Regulate Insurance

UPCM Categories of Insurance

Category of insurance		Description
Property/Casualty		Coverage against loss or damage to property and liabilities to third parties resulting from such losses or damages or other events
Life, Accident, Health, Annuity, and Credit	Continuing Care Retirement Community (CCRC)	A senior housing arrangement that, in addition to housing, includes some provision for skilled nursing care
	Credit Insurance	Coverage that pays off or takes over scheduled payments on an obligation to a creditor upon occurrence of a specified event such as death, disablement, or unemployment of the insured debtor
	Health Insurance	Coverage that provides benefits for expenses related to and losses resulting from sickness, a medical condition, or an accident
	Health Maintenance Organization (HMO)	A health insurance plan with a range of medical coverages offered on a prepaid and group basis to its enrollees through medical providers under contract
	Life Insurance	Insurance contracts that provide specified benefits amounts to named beneficiaries upon the death of the insured
	Long-Term Care Insurance	Insurance that covers or reimburses for the costs of long-term care, nursing home care, and home care services
	Medicare Supplement	Coverage is known as Medigap insurance because it supplements or fills gaps in coverage of the federal Medicare Program
	Multiline	Insurance not captured elsewhere
	Viatical Settlements	Contract or agreement in which a third party purchases all or a part of a policyholder's life insurance policy

Source: Based on information from NAIC.

How States Define and Regulate Insurance

Products Not Universally Recognized or Regulated as Insurance

Key Issues	Product
Products created by noninsurance entities that substitute for regulated insurance products	Debt cancellation contracts & debt suspension agreements [b] Gap waivers [b] Rental car damage waivers & theft waivers [b]
Products that could be either insurance or payment plans	Legal services plans [b] Medical services plans [b] Extended service contracts [a] Preneed funeral & burial arrangements [a] Continuing care retirement communities [a] Preventive health care coverage [a]
Products underwritten by insurers that contain investment risk	Variable annuities and equity indexed annuities [a] Period certain annuities [b] Viatical settlements & life settlements [a]
Insurance and insurance-like products not always regulated by state departments of insurance	Surety contracts [a] Title insurance [a]

Notes: [a] Located in NAIC's Uniform Product Coding Matrices.

[b] Not located in NAIC's Uniform Product Coding Matrices.

How States Define and Regulate Insurance

Substitutes for Regulated Insurance Products

Debt Cancellation or Suspension Contracts

Description

- Created by lenders as substitutes for credit insurance
- For a fee, lender retains risk in lieu of pursuing collection and potential recovery on loan if borrower defaults
- Lender agrees to cancel or temporarily suspend loan under conditions such as death, disability, or unemployment of borrower
- Unclear whether these are a transfer of insurance risk or forgiveness of financial obligation
- Equivalent to credit insurance from consumer's viewpoint

Information on regulation

- Illinois—does not view as insurance; no indemnity payments from third parties
- Michigan—does not view as insurance but as incidental to loans
- New York—views as insurance but does not regulate when sold by financial institutions

How States Define and Regulate Insurance

Substitutes for Regulated Insurance Products
Gap Waivers

Description

- Created by auto dealers and others as a substitute for gap (originally, guaranteed auto protection) insurance
- For a fee, creditor retains risk by agreeing to waive the excess of the lessee's or debtor's obligation to pay the amount owed on a property over its actual cash value in the event of total loss due to theft or physical damage
- Unclear whether these are a transfer of insurance risk or forgiveness of financial obligation
- Properties include autos, boats, and computers
- Some offer gap waivers as alternative to gap insurance that other entities offer

Information on regulation

- New York—views as insurance under certain conditions; auto dealers or lenders who are not licensed as insurance agents or brokers may offer gap waivers; providers of gap waivers that in turn buy gap insurance from licensed insurers must not charge customers more than they pay
- Mississippi—has not determined whether gap waivers are insurance and does not regulate them

How States Define and Regulate Insurance

Substitutes for Regulated Insurance Products
Rental Car Damage and Theft Waivers

Description

- Created by car rental companies as a substitute for rental insurance
- For a fee, rental company retains risk by agreeing not to hold driver liable in the event of certain damages involving a rental vehicle
- Unclear whether these are a transfer of insurance risk or forgiveness of financial obligation
- Equivalent to rental car insurance from consumer's viewpoint

Information on regulation

- New York—rental company must obtain driver's written consent to buy the waiver before the driver signs the rental agreement
- Texas—does not view as insurance; are waivers of rental company's right to recover on damages to auto

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans

Legal Services Plans

Description

- The term is used to characterize plans that
  - provide legal services
  - pay for the cost of obtaining legal services
  - prepay for future legal services, at discounted prices
  - reimburse for legal services costs
  - prepay for future legal services, if needed
- Unclear whether these are transfers of insurance risk, price discounting plans, prepaid expense plans, or some combination

Information on regulation

- New York—included in the list of authorized insurance is legal services insurance that is defined as providing legal services or reimbursement for the cost of legal services
- South Carolina—prepaid legal service contracts regulated by the state's Department of Consumer Affairs
- Texas—prepaid legal insurance is insurance if one party prepays another for future legal services that may or may not be needed and if the other party assumes the risk that such services may be needed

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans
Medical Services Plans

Description

- Some physicians and medical groups offer prepayment plans to patients
  - to avoid the administrative burden of third-party health insurance
  - that appear to operate as insurer/providers (such as HMOs) on a smaller scale
- Unclear whether these are transfers of insurance risk, price discounting plans, prepaid expense plans, or some combination

Information on regulation

- New York—A plan in which patients prepay for future medical care needs
  - would be insurance and require licensing if the plan provides unlimited services dependent on the happening of a fortuitous event that could cost more than the prepayment
  - would not be insurance and not require licensing if certain services occasioned by the happening of a fortuitous event are offered for an additional fee that covers the cost of the services, although discounted from the usual fee

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans
Extended Service Contracts (ESC)

Description—typically sold for autos, "home" (major home appliances), and consumer products

- Providers assume future costs of repairs or maintenance for a fee
- Not to be confused with written or implied warranties of fitness and merchantability provided by the manufacturer
- Some state courts have determined that ESCs are insurance when the seller of an ESC is not the manufacturer but a repair service provider

Information on regulation—Regulation in some states is based on state court decisions such as those discussed in the *Griffin v. Washburn* case:

- Arizona court—ESC is insurance because third-party insurer sold ESC
- Texas and Virginia courts—ESC is not insurance because merchant of product sold ESC and makes repairs

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans

Preneed Funeral and Burial Arrangements

Description

- Purchase of future funeral services and merchandise at locked in current price
- Can be unfunded or funded in advance of need
- Advance payments are deposited in interest-bearing trust account or used to buy funeral insurance
- Can also be funded with future life insurance or annuity proceeds upon death
- Are typically revocable and movable at any time by consumer and trust account prefunding is returnable
- Unclear whether these are a transfer of insurance risk, price discounting plans, or prepayment of expenses

Information on regulation

- Arkansas—licenses and regulates sales of such services; state finance division examines contracts and bank trust accounts
- California—Department of Consumer Affairs' Cemetery and Funeral Bureau licenses and regulates funeral establishments that sell such services
- Colorado—regulates sellers

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans

Continuing Care Retirement Communities (CCRC)

Description

- Senior housing arrangements that provide for skilled nursing care, if later needed
- Three types of communities
  - Type A—fee is locked in if skilled care is later needed
  - Type B—fee for skilled care is locked in for limited time with later increases that don't reach market rate
  - Type C—access to later skilled care is assured, but at full market rate
- Unclear whether these are transfers of insurance risk, price discounting plans, or prepayments of expenses

Information on regulation

- California—Department of Social Services certifies and regulates CCRCs, but state insurance code regulates uncertified CCRCs
- North Carolina—CCRCs must be licensed by the commissioner of insurance and state insurance code governs their activities
- South Carolina—CCRCs do not include nursing home or residential care facilities licensed by state Department of Health & Environmental Control
- Unclear how many state insurance departments regulate CCRCs

How States Define and Regulate Insurance

Products That Could Be Insurance or Payment Plans
Preventive Health Care Coverage

Description

- Covers health care to keep healthy or to prevent illness
- Health insurance plans appear to typically cover preventive care
- Includes annual physicals, pelvic exams, flu shots, screening mammograms, and dental cleanings
- Many preventive health care activities tend to be recurring and predictable
- Unclear whether these are a transfer of insurance risk, price discounting, or prepayment of expenses

Information on regulation

- Required by some states to be included in health insurance
- Traditionally included in health insurance

How States Define and Regulate Insurance

Products Underwritten by Insurers Containing Investment Risks

Variable Annuities and Equity-Indexed Annuities

Description

- Annuity—a contract that, in return for premium(s) paid, guarantees a series of payments for a specified period or for life.
- Variable annuity—pays a rate of return based on the performance of investments. Interest rate and principal are usually not guaranteed. The customer retains almost all of the investment risks.
- Equity-indexed annuity—pays a minimum rate of return plus an extra rate using a formula based on charges to an equity index such as the S&P 500. The contract usually guarantees a minimum account value. The customer retains some of the investment risk.
- Insurer assumes mortality risks through added features, if offered, such as payments for life and death benefits.

Information on regulation

- Variable annuities
  - Sold by insurance companies, but regulated by SEC
  - In some states, state securities regulators have authority over variable annuities
  - State departments of insurance (DOI) regulate the insurer selling the product
- Equity-indexed annuities are sold by insurance companies and the SEC is evaluating them to determine if they should be regulated as securities

How States Define and Regulate Insurance

Products Underwritten by Insurers Containing Investment Risks
Period Certain Annuities

Description

- Pay a fixed rate of return over a specified term such as 5, 10, 15, or 20 years
- Customer shifts all investment risks to the insurer
- As with any annuity, the insurer could assume mortality risks through added features such as death benefits or retirement benefits, if offered

Information on regulation

- Traditionally regulated by DOI as an insurance product
- Illinois—If an annuity transfers mortality risks to the insurer, it is regulated.

How States Define and Regulate Insurance

Products Underwritten by Insurers Containing Investment Risks

Viatical Settlements and Life Settlements

Description

- Viaticals—policyholders are usually ill with under 2 years of life expectancy
- Life settlements—policyholders are over 65 with normal life expectancy
- Each product may be bundled together and sold to investors
- In both cases
  - Third party pays policyholder cash and becomes a beneficiary of the life insurance death benefit
  - The cash payment is more than the cash surrender value of the policy but less than the expected death benefit
- Unclear whether these products pose insurance risk or investment risk

Information on regulation

- Sometimes regulated by DOI, sometimes by state securities regulator, and sometimes by both
- Some states adopted NAIC's Viatical Settlements Model Act, which requires viatical companies to be licensed by a state DOI
- In California, Connecticut, New York, and Washington, settlement providers are licensed by the DOIs

Definitions of Insurance 29

How States Define and Regulate Insurance

Insurance and Insurance-Like Products That Are Not Always Regulated by State DOIs

Surety Contracts

Description

- A contract where the surety (similar to insurance company) agrees, for a fee, to perform the principal's (similar to the policyholder) obligations to a third party in the event the principal fails to perform
- Surety assumes risk from the third party that the principal will not perform contractual obligations
- Unlike insurer, surety has a right to seek indemnification from the principal after performing contractual obligations

Information on regulation

- New York and Utah—If an issuer sells surety bonds as a vocation, as opposed to incidental to other business activity, then it is subject to insurance regulation
- Kentucky and Delaware—Their statutory definitions explicitly include those who "act as surety"

How States Define and Regulate Insurance

Insurance and Insurance-Like Products That Are Not Always Regulated by State DOIs

Title Insurance

Description

- For a fee, an insurer agrees to indemnify the insured up to a specified amount of loss for defects in the title to real property
- Typically required by mortgage lenders at property settlement

Information on regulation

- Iowa—This is the only state that does not allow the sale of title insurance within its borders; the state's Finance Authority operates a Title Guaranty Program.
- Illinois—Regulated by the Division of Financial Institutions, not the state DOI
- Regulatory treatment does not vary widely among the states

Regulation of Products That Cover Insurance Risks in More Than One Category

Some products, while defined by NAIC as belonging to a particular category of insurance, have characteristics that also fit in other categories.

We have

- Described the products, and
- Identified the categories of risks covered by each product.

Regulation of Products That Cover Insurance Risks in More Than One Category

Product Descriptions

Product	Description
Accident	Coverage for death, dismemberment, disability, or hospital and medical care caused by or necessitated as a result of specified accidents
Credit Disability	Makes monthly loan/credit transaction payments to the creditor upon the disablement of an insured debtor
Credit Life	Coverage sold in connection with loan and credit transactions to provide insurance protection against death
Credit Insurance	Coverage of an obligation to a creditor upon the death or disablement of the insured debtor; includes coverage that protects the value of collateral for a loan
Disability Income	Coverage designed to compensate insured individual for a portion of the income they lose because of a disabling injury or illness
Employee Benefit Liability	Liability protection for employers against employee claims such as for wrongful termination or improper calculation of employee benefits from pension plans, group life, health, or disability income insurance or accidental death and dismemberment insurance
Employers Liability	Coverage for the legal liability of employers arising out of injury to employees
Workers' Compensation	Coverage for an employer's liability for injuries, disability, or death to persons in their employment, without regard to fault, as prescribed by state or federal workers' compensation laws or other statutes

Source: GAO analysis of lines of insurance descriptions.

Regulation of Products That Cover Insurance Risks in More Than One Category

Categories of Risks Covered by One Product

Product	Insurance Category			
	Property/Casualty	L/A/H		
		Life	Accident	Health
Accident		O	P	O
Credit Disability	P		O	O
Credit Life	P	O		
Credit Insurance	P	O	P	
Disability Income	O		P	
Employee Benefit Liability	P	O	O	O
Employers Liability	P		O	
Workers' Compensation	P	O	O	

P = Product's insurance category in NAIC's Uniform Product Coding Matrix.

O = Other categories with products that have similar features.

* Credit insurance is listed under two categories in NAIC's UPCM.

Source: GAO analysis of lines of insurance descriptions.

Reinsurance

Some of the principal elements of reinsurance and its uses include

- The definition of reinsurance,
- Reinsurance contracts,
- Reinsurance and risk transfer,
- The 9a and 9b “tests” for risk transfer,
- The benefits of statutory reinsurance accounting for insurers, and
- Reinsurance contracts permit the transfer of varying levels of risk.

Reinsurance

Definition

The Reinsurance Association of America defines reinsurance as

> A transaction whereby the assuming reinsurer, for a payment, agrees to indemnify the ceding insurer against all, or a part, of the loss which the latter may sustain under the policy or policies which it has issued.

Reinsurance Contracts

- Reinsurance is not sold as a standardized product. Each contract is separately negotiated.
- Regulators look for risk transfer in each contract to determine if reinsurance has occurred.
- Two basic methods of assuming risks in reinsurers' contracts are
  - Treaty reinsurance, which usually covers a part or a percentage of a book of an insurer's business, for example, all of an insurer's medical malpractice policies with hospitals; and
  - Facultative reinsurance, which covers individual policies, usually of a unique nature, for example, an insurer's medical malpractice policy with the Mayo Clinic.

Reinsurance and Risk Transfer

Statement of Statutory Accounting Principles

Reinsurance is the assumption by an insurer of all or part of an insurance risk undertaken originally by another reinsurer.

(Accounting Practices and Procedures Manual, NAIC, underlining added)

Statement of Financial Accounting Standards

Insurance provides indemnification against loss or liability from specified events during a specified period. The insurer (or ceding enterprise) pays (cedes) an amount to the reinsurer, and the reinsurer agrees to reimburse the insurer for a specified portion of claims paid under the reinsured contracts indemnification against loss or liability under a reinsurance contract generally referred to as risk transfer.
(Financial Accounting Standard No. 113, underlining added)

Reinsurance and Risk Transfer

- Risk transfer requires that the reinsurer indemnifies the insurer for unexpected losses.
- Insurance risk does not include investment risk.
- Insurance regulators bear responsibility for determining whether risk transfer has occurred for statutory purposes.
- Risk transfer is determined by applying financial and statutory accounting guidelines:
  - Reinsurer assumes significant insurance risk under the reinsured portions of the contract (“9a test”), and
  - It is reasonably possible that the reinsurer may realize significant loss (“9b test”).

The 9a and 9b Tests for Risk Transfer

9a test

- The amount and timing of reinsurer's claims settlements should vary directly with the severity and timing of the loss event.
- The extent of risk transfer is determined by examining contract features.

9b test

- The 10/10 rule means the reinsurer has a 10 percent or greater chance of incurring a 10 percent or greater loss of the premium under the contract. While regulators do not universally agree with the "10/10 rule," it is commonly used by industry.
- The extent of risk transfer is determined through risk transfer analysis, but it can yield different results.

If a reinsurer's contract passes the 9a and 9b tests to the regulator's satisfaction, reinsurance accounting can be applied to the entire contract.

Benefits of Statutory Reinsurance Accounting for Insurers

Insurers attempt to structure reinsurance contracts to transfer sufficient risk to qualify for reinsurance accounting in order to

- Improve net income on the income statement,
- Improve the surplus on the balance sheet,
- Improve the regulatory ratios used for solvency regulation, and
- Increase the insurers ability to write more policies with existing capital.

Reinsurance Contracts Permit the Transfer of Varying Levels of Risk

Simple quota share reinsurance is a basic form of treaty reinsurance contract that fully transfers risk. In this contract, insurer and reinsurer share all business in a fixed proportion. For example, in a 70 percent quota share, 70 percent of premiums, losses, and loss expenses would be ceded to the reinsurer, while 30 percent would be retained by the insurer.

Elements added to a simple contract may limit risk transfer:

- By adding certain types of features into the contract (for example, a sliding scale ceding commission), or
- Through verbal and written side agreements that limit risk transfer.

Finite Risk Contracts

Finite risk contracts are a mechanism for limiting risk transfer. We discuss

- Their definition,
- Their purposes,
- Current domestic and international scrutiny, and
- Organizations reviewing finite risk issues.

Finite Risk Contracts

Definition

Finite risk contracts

- Have no global definition;
- Are called by many other names, such as financial reinsurance, financial engineering reinsurance, or structured reinsurance;
- Can take place between a reinsurer and an insurer, or an insurer and a noninsurance entity;
- May transfer to a reinsurer less insurance risk than traditional insurance—or no insurance risk—while emphasizing other features; and
- May cost less than traditional insurance or reinsurance.

Finite Risk Contracts

Purposes

Insurers may structure finite risk contracts to appear like traditional reinsurance:

- To qualify for preferential accounting and tax treatment while transferring minimal insurance risk;
- To maintain certain financial ratios, such as premiums to surplus, within acceptable or favorable limits for regulators, rating agencies, and investors; or
- For financing purposes, such as spreading multiyear timing risks, that have priority over transferring insurance risk (for example, long-tail risks).

Similarly, noninsurers might use finite risk contracts for smoothing earnings by deferring recognition of losses on major events that might otherwise be fully charged against current earnings, or for evenly spreading cash outflows associated with such events.

Such contracts, if not legitimately structured, may result in misleading financial statements.

Finite Risk Contracts

Domestic and International Scrutiny

International and U.S. organizations are reviewing issues related to finite risk contracts such as

- Disclosure requirements for finite risk contracts,
- Certification by company officials,
- Different accounting treatments for insurance risks and noninsurance risks when a reinsurance contract contains more than insurance risks (“unbundling”), and
- What constitutes the transfer of insurance risk.

NAIC has approved new requirements for property-casualty insurers that include

- Insurers reporting contract terms and management objectives for certain finite reinsurance contracts, and
- CEO and CFO attesting that no side agreements exist and that risk has transferred.

Finite Risk Contracts

Organizations Reviewing Finite Risk Issues

U. S. organizations currently reviewing finite risk issues include

- NAIC,
- The American Academy of Actuaries,
- The Casualty Actuarial Society,
- The Financial Accounting Standards Board, and
- The Internal Revenue Service.

International organizations currently reviewing finite risk issues include

- The International Accounting Standards Board, and
- The International Association of Insurance Supervisors.

Summary

- Insurance has no single, universal definition, but definitions have key elements of risk transfer and risk spreading.
- Although definitions of insurance differ among some states and certain products are not universally recognized and regulated as insurance across all states, states generally define and regulate the same products as insurance.
- Products that cover insurance risks in more than one category (life, accident, health, property-casualty) could face uncertain regulation if separate insurance definitions are developed for each category.
- While reinsurance contracts can transfer various levels of insurance and noninsurance risks, contracts that transfer sufficient insurance risk are defined entirely as reinsurance and qualify for reinsurance accounting.
- Some finite risk contracts that received reinsurance accounting or other preferred accounting treatment were later found to have transferred insufficient insurance risk to qualify for such treatment.

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