IAIS

INTERNATIONAL ASSOCIATION OF
INSURANCE SUPERVISORS

2015 Global Insurance Market Report (GIMAR)

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About the IAIS

The International Association of Insurance Supervisors (IAIS) is a voluntary membership organization of insurance supervisors and regulators from more than 200 jurisdictions. The mission of the IAIS is to promote effective and globally consistent supervision of the insurance industry in order to develop and maintain fair, safe and stable insurance markets for the benefit and protection of policyholders and to contribute to global financial stability.

Established in 1994, the IAIS is the international standard setting body responsible for developing principles, standards and other supporting material for the supervision of the insurance sector and assisting in their implementation. The IAIS also provides a forum for Members to share their experiences and understanding of insurance supervision and insurance markets.

The IAIS coordinates its work with other international financial policymakers and associations of supervisors or regulators, and assists in shaping financial systems globally. In particular, the IAIS is a member of the Financial Stability Board (FSB), member of the Standards Advisory Council of the International Accounting Standards Board (IASB), and partner in the Access to Insurance Initiative (A2ii). In recognition of its collective expertise, the IAIS also is routinely called upon by the G20 leaders and other international standard setting bodies for input on insurance issues as well as on issues related to the regulation and supervision of the global financial sector.

International Association of Insurance Supervisors c/o Bank for International Settlements
CH-4002 Basel
Switzerland
Tel: +41 61 225 300
Fax: +41 61 280 151
www.iaisweb.org

Executive Summary

This 2015 edition of the Global Insurance Market Report (GIMAR) discusses the global (re)insurance sector from a supervisory perspective, focusing on the recent performance of the sector as well as key risks faced by it. During the current year, the global (re)insurance sector has proven to remain functioning and stable in the midst of an often challenging economic and financial environment. Evidence supporting this claim includes the high capital levels held by (re)insurers, the overall stable profitability shown by the sector and an on-going inflow of additional capital.

Partly reflecting increasing competition, the insurance premiums charged by non-life insurers and reinsurers in the commercial lines, property and catastrophe markets have come under pressure. Competition is especially strong in the reinsurance market, in part due to an increasing supply of capital from institutional investors, such as pension funds or hedge funds, to support alternative reinsurance capacity.

Investment yields for (re)insurers have declined slightly, but held up reasonably well despite low interest rates. Insurers' investment income is, however, going to be impacted by a continuation of the low interest rate environment, as the proceeds from maturing assets are reinvested in lower-yielding securities. Investment yields will thus remain under pressure. The lagged impact of low interest rates will keep portfolio yields on a weakening trend for the next couple of years. There is also a risk that stock market performance will be less favourable once interest rates recover, meaning that an important pillar of investment returns may fade.

The insurance industry has experienced a surge of mergers and acquisitions (M&As). According to estimates by market participants, more than 10 percent of the global reinsurance industry is currently involved in major mergers activity. One section of the GIMAR thus aims to address the issue of the raising trend in M&A activity in insurance from the perspective of the relevant insurance supervisory authorities in particular, and IAIS Members in general.

The arguments highlighted above are developed and discussed in the three chapters that make up the 2015 GIMAR. Chapter 1 analyses the overall macroeconomic and financial environment while Chapter 2 focuses specifically on global insurance market developments. Chapter 3, which forms the main part of the report, contains a variety of special topics that focus on regulatory, financial and economic developments and risks. One such section looks at the liquidity of corporate bond markets and its relevance for life insurers. Another discusses insurers' reaching for yield and its implications for supervisors. More special topics cover capacity developments in reinsurance, changes in the insurance-linked securities market, the impact of Solvency II on non-European Economic Area jurisdictions, the use of derivatives by US insurers and the outsourcing of investment managers.

Content

Background

This is the third issue of the Global Insurance Market Report (GIMAR).

The GIMAR assesses developments relevant for the (re)insurance industry and identifies and documents main risks and vulnerabilities for the industry. It does so to promote awareness of these developments and risks among IAIS Members and stakeholders. By providing a financial system-wide assessment of developments and risks, the GIMAR also plays an important role in the IAIS' new macroprudential policy and surveillance framework. Such a global system-wide dimension is an important complement to microprudential insurance supervision, which is more focused on the soundness of individual financial institutions.

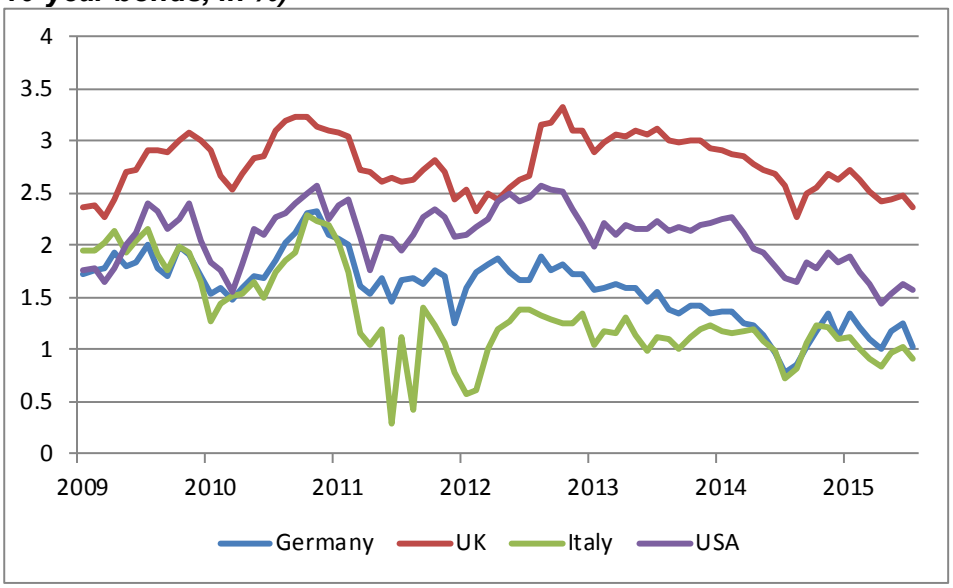
This report is data-driven, written by the Macroprudential Policy and Surveillance Working Group (MPSWG). It is neither an official policy paper nor an application paper, and it is not intended to reflect the views of the Members of the IAIS. The GIMAR report benefitted from contributions from several jurisdictions and industry experts.

Macroeconomic and financial environment

Seven years after the global financial crisis, the insurance industry operates in an economic environment that remains heavily affected by its aftermath, marked by low economic growth, high and still rising debt levels, persistently low and in some economies even negative interest rates, falling commodity prices and depressed inflation rates. To date, insurers have been able to weather such developments well. Since the crisis, premium growth has mostly remained below pre-crisis levels, in particular in advanced economies, but insurers' balance sheets generally remain solid.

Global economic growth has slowed down in the first half of 2015, mainly due to the weakening of emerging markets.[1] Emerging markets and developing economies are currently challenged by falling revenues from sales of oil and other commodities. Moreover, some emerging markets have accumulated substantial amounts of debt, part of which is denominated in US-Dollar. Overall debt in emerging markets has risen from 150% of GDP in 2009 to 195% in 2015.[2] China's total debt has risen by nearly 50 percentage points in the past four years, and now exceeds that of the United States. Globally, debt has risen as well: from 2007 through the second quarter of 2014, the ratio of global debt to GDP has risen by 17 percentage points.[3] Capital inflows into emerging markets have slowed, and the lift-off of US policy rates from the zero lower bound could herald further tightening of external financial conditions. In advanced economies, low long-term interest rates, easy monetary policy conditions and compressed credit spreads support a gradual economic recovery, driven mainly by the US and the UK.

Fig. 1. Market-based inflation expectations Jun 2009-Dec 2015 (Break-even rates of 10-year bonds, in %)

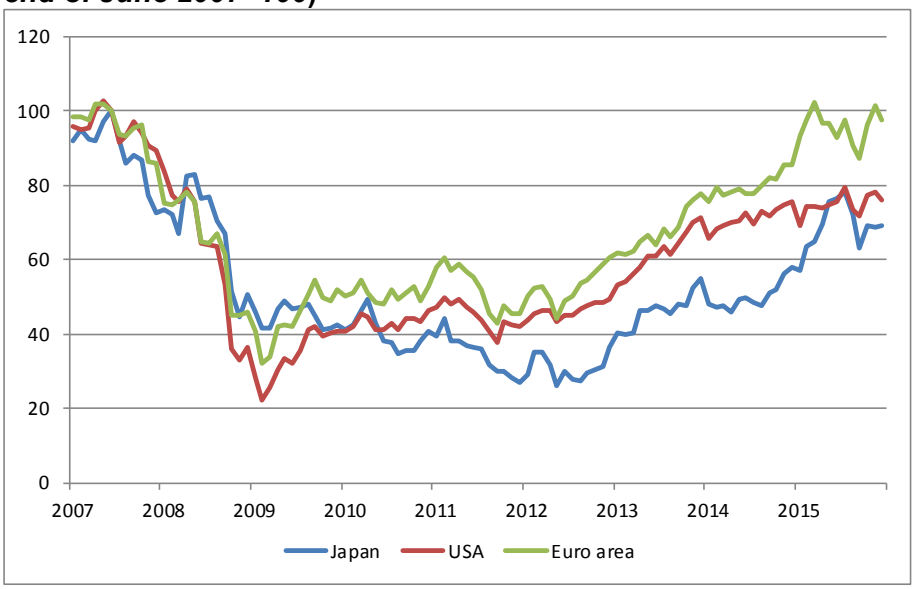


Source: Bloomberg

[1] IMF (2015): World economic outlook – Adjusting to lower commodity prices, Chapter 1, October.
[2] The Economist (2015): The chronicles of debt, November, page 13.
[3] McKinsey Global Institute (2015): Debt and (not much) deleveraging, February, Preface.

Inflation rates have declined globally. Oil prices have declined by more than 50% since mid-2014. Other commodity prices, including food commodities, minerals and metals, have fallen as well, but far less than oil. Persistent economic slack, in some countries and regions complemented with still relatively high unemployment rates, and cost containment measures contribute further to falling inflation rates. In the Euro area, inflation has fallen into negative territory. Financial markets' based long-term inflation expectations, measured by the difference between the 10-year yield of an inflation-linked bond and a regular government bond have also fallen, but remain anchored in positive territory.

Fig. 2. Equity market performance in selected regions; Jan 2007-Dec 2015 (Index, end of June 2007=100)



Source: Bloomberg

Financial markets have been driven by increasing divergences between the monetary policies of the major economies.[4] Since the end of 2014, at least, the US Federal Reserve Open Market Committee (FOMC) remained on track for a gradual tightening of monetary policy. On 16 December 2015, the Federal Reserve decided to raise interest rates. By contrast, the European Central Bank (ECB) has continued its unconventional monetary policies. On 3 December 2015, the ECB decided to extend its asset purchase programme, which it had initially introduced in January. The monthly purchases of EUR 60 billion are now intended to run until the end of March 2017, or beyond, if deemed necessary by the ECB to achieve its inflation target of below, but close to, 2% over the medium term. The US-dollar has correspondingly appreciated, as financial markets anticipated higher US policy rates. On a trade-weighted basis, the US-dollar has appreciated by 11% over the course of the last 12 months.[5] Apart from the impact on foreign exchange rates, increasing monetary policy divergence has caused higher volatility in financial markets. In Europe, expectations that monetary policies will continue or become even more accommodative have in the meantime pushed stock markets to new historical highs, whereas long-term interest rates continued their

[4] European Commission (2015): European economic forecast: Winter 2015, November.
[5] As of November 2015.

downward movement, bringing the sovereign bond spreads for several EU Member States down with them. In the US bond yields have in recent months gradually trended higher in anticipation of tighter monetary policy as the economy continued to improve. [6]The main US stock market indices are down by about 1% in 2015. On a global level, the MSCI World stock market index has declined by 2.7%, mainly due to weaker emerging markets. Corporate credit spreads have moderately widened in the US and in Europe, but remain on historically low levels.

[6] NAIC (2015): Capital markets update: Fall 2015, Capital Markets Special Report, November.

Global insurance market developments

Introduction

The global insurance industry is affected by global economic factors such as weak economic growth, low inflation rates, volatile financial markets and near-zero interest rates. Against this background, premium growth was robust recently; underwriting profitability in non-life insurance is stable, being supported by benign claims trends that enable insurers to release loss reserves. For life insurers, low premium growth and low interest rates in particular form a challenging business environment. At the same time, the entire insurance sector experienced declining investment yields.

Premium growth

The insurance industry has grown at a robust pace in 2015, after an impressive recovery in the year before. Premium growth has slowed down slightly in 2015, in both the advanced economies and in the emerging markets. Global life insurance premiums have risen by 3.3% in real (i.e. inflation-adjusted) terms (2014: 4.7%).[7] Non-life insurance premiums are up 2.5% on an inflation-adjusted basis, after a 2.8% increase in 2014. Non-life insurance premium growth in emerging markets slowed down notably, reflecting weaker economic growth. In 2014, total direct premium growth was higher than GDP for the first time in five years, being driven mainly by health insurance and life insurance.[8]

Insurance premium growth will probably continue to be driven mainly by emerging markets and developing economies.[9] Although they are likely to face diminishing growth in the coming years, affecting demand for life and non-life insurance products, overall economic growth is still expected to remain well above growth rates in the advanced economies of the US, Japan or Europe.[10] Moreover, rising real estate and financial asset values will likely enable insurance companies to generate higher premiums resulting in increased protection levels. Nevertheless, if the US and/or the UK reduce liquidity and start raising policy rates, real estate and financial asset price volatility may increase, as it did this year in August, when the falling Chinese property and stock markets spilled over and temporarily affected other financial markets. Besides, emerging markets have accumulated substantial amounts of debt recently, as mentioned before. Higher levels of debt pose questions about financial stability and whether some emerging markets face the risk of a crisis.

Profitability

Historic low interest rates, volatile financial markets and low GDP growth are adversely affecting the insurance industry's profit margins. Moreover, regulatory and accounting changes continue to challenge insurance companies. These may involve the need to adjust risk management processes and increased control functions organizationally. In Europe, insurers and supervisors alike are consumed by the preparation and implementation of Solvency II, which takes effect at the beginning of 2016.

[7] Swiss Re (2015): Global insurance review 2015 and outlook 2016/17, November.
[8] McKinsey (2015): Global insurance insights: A detailed analysis of trends that shape the industry, Fifth edition.
[9] Munich Re (2015): Insurance market outlook, May.
[10] EY (2015): 2015 Global insurance outlook.

In non-life insurance, underwriting profitability remains relatively stable. The US property & casualty insurance industry's combined ratio improved by 1.2 percentage points to 97.8% in 2015, according to Swiss Re estimates. In Europe, non-life insurers' underwriting results remained stable; the combined ratio averaged around 95% in the first half of 2015, being supported by the very limited frequency and severity of natural catastrophes in the current year.[11] Japan and Australia had strong underwriting results in 2015.[12] Large euro area insurers continued to report solid overall profitability, with median returns hovering at around 9% in the third quarter of 2015.[13]

Premium rates in US commercial lines declined in 2015.[14] Prices in other markets are also under pressure. In Europe, Asia and Latin America, prices in commercial insurance are softening.[15] An important factor is the currently strong capital position in the non-life (re)insurance industry, which leads both to a decline in reinsurance demand since more risks can be retained and, combined with increased competition, to pressure on primary insurers' profit margins. A related factor has been the benign development of claims on casualty business, resulting in major reserve releases.[16]

Reserve releases have contributed to higher profitability and allowed companies to give in on prices in competitive markets. There is a risk that at some point reserving may prove insufficient. Redundant reserves from the hard-market years are gradually being eroded, while the reserves adequacy of recent 'softer market' years is unclear, given that underwriting is based on lower expected claims.

These developments suggest that supervisors should closely monitor the adequacy of non-life insurers' reserving activities. In the past, the two most important factors to cause financial impairments for both life and non-life insurers have been deficient loss provisioning and inadequate pricing.[17] Inadequate prices, either as result of poor actuarial work or in the wake of aggressive pricing in order to compete for market share, materialize often in deficient reserving.[18]

Natural catastrophe losses have remained below historic average levels in both 2013 and 2014. This tendency continued in 2015. Global insured losses for 2015 are estimated to amount to USD 23 billion compared to USD 28 billion in the year before. This is also below the annual average loss of the previous ten years of natural catastrophe insured losses (USD 55 billion).[19] The Atlantic hurricane season has remained well below average in 2015. Hurricane Patricia became the strongest tropical cyclone ever recorded in the Western Hemisphere when its maximum sustained wind speeds reached 200 miles per hour and its

[11] EIOPA (2015): Financial stability report, December, page 25.
[12] Swiss Re (2015): Global insurance review and outlook 2016/17, November, page 12.
[13] ECB (2015): Financial stability review, November, page 83.
[14] The Council of Insurance Agents & Brokers (2015): Commercial P/C pricing: Downward rate trend continued across most lines, News release, October.
[15] Marsh (2015) Global insurance market quarterly briefing, Q2.
[16] Kurt Karl (2014): The global economic and re/insurance market outlook, Presentation at the Geneva Association Insurance and Finance Seminar on "Today's Issues and Opportunities", London, 4 November.
[17] A.M. Best (2010): Best's impairment rate and rating transition study – 1977-2009, May, page 3.
[18] IAIS (2011): Insurance and financial stability, November, page 12.
[19] Swiss Re (2015): Preliminary sigma estimates for 2015: global catastrophes causes economic losses of USD 85 billion, Press release.

central pressure plummeted to 879 millibars. Given low insurance penetration in the hardest-hit areas, insured losses are, however, expected to be negligible.[20]

Investment yields

Insurers' investment yields remain under pressure. The investment environment is challenging for fixed income securities with low yields and exposure to mark-to-market losses when interest rates rise. Corporate bond credit spreads remain at historically low levels, but have widened in 2015, causing some book losses. Fixed income securities are traditionally the main asset class in insurance. In the US, for example, in 2014 67% of insurers' total investments have been invested in bonds.[21] Equity investments benefitted from rising prices in recent years, but can add volatility to insurers' investment yields. In Europe, insurers' average investment yields deteriorated from above 4% to 3.8% in the second quarter of 2015.[22]

Searching for higher investment yields, Japanese life insurance companies have recently (i.e. since fiscal 2014) increased their holdings of risky assets including foreign bonds and stocks, while restraining their investments in so-called "super-long term" domestic bonds (i.e. bonds with a maturity of more than ten years.), in response to a further decline in long-term interest rates. [23] Japanese life insurance companies have also been increasing the number of acquisitions of and investment in foreign insurance companies, to seize growth opportunities in international markets.

Impact of low interest rates

Continued attention by insurance companies and supervisors is being placed on the medium- to longer-term impacts of the low interest rate environment, in terms of possible changes in risk appetite to generate returns and reinvestment risk for maturing bond portfolios. Interest rate risk is significant given the likelihood of rising future rates from current near-zero levels. A sudden rise in interest rates would have an adverse impact on fixed income securities and could create broader financial market volatility. It could also induce policyholders to dramatically increase the surrender of life insurance policies and other products, potentially causing liquidity problems for life insurers.

Persistent low interest rates are most problematic where insurance products provide guaranteed returns. Low rates again can put pressure on life insurers' business models if the duration of assets and liabilities are not closely matched, especially where their liabilities include long-term guarantees. Firms in a number of European countries have issued a substantial share of investment products offering guaranteed returns at rates that are well in excess of current long-term interest rates, and backed these guarantees with assets of significantly shorter duration.[24] Under Solvency II, insurers will be required to value their insurance liabilities on a market-consistent basis. This will be achieved partly through the introduction of a risk margin, the anticipated size of which has increased as risk-free interest rates have fallen.

[20] Aon Benfield (2015): Global catastrophe recap, October, page 3.
[21] NAIC (2015): Year-end 2014 insurance industry investment portfolio asset allocations, Capital Markets Special Report, June.
[22] EIOPA (2015): Financial stability report, December, page 26.
[23] Bank of Japan (2015): Financial system report, October, page 47.
[24] Bank of England (2015): Financial stability report, July, page 42.

Challenges to the European insurance sector were underscored by mixed performance in the 2014 stress test undertaken by EIOPA.[25] It concluded that while the European insurance sector is in general sufficiently capitalized in Solvency II terms, in the medium- to long-term a continuation of the current low (or lower) yield conditions would expose 24% of the participating companies to the risk of not meeting promises to policyholders.[26]

Table 1. Select properties of the major EU life insurance markets[(a)(b)]

Country	Duration gap	Average guaranteed rate in force (per cent)	Share of products with guarantees (per cent)	Investment spread (per cent)
Germany	>10 years	3.1	75	-0.4
Sweden	>10 years	3.3	70	-0.5
Austria	>10 years	3.0	58	0.9
Netherlands	5½ years	3.6	40	0.2
France	4¾ years	0.5	n.a.	-0.6
Denmark	4¾ years	2.6	74	0.1
Spain	<1 years	3.8	n.a.	1.1
Italy	<1 years	2.5	n.a.	0.6
Ireland	<0 years	1.5	n.a.	1.3
United Kingdom	<0 years	0.5	19	-0.1

Sources: European Insurance and Occupational Pensions Authority, Moody's Investors Service, Standard & Poor's Ratings Services (May 2014) and Bank of England calculations.

n.a. = not available.

(a) Investment spread is the difference between the internal rate of return on assets and the internal rate of return on liabilities.

(b) Duration gap is the difference between the average duration of liabilities and assets.

Source: Bank of England, Financial Stability Report, July, page 42

Reinsurance

The reinsurance industry is subject to challenging market conditions that are characterized by excess capital, moderate premium growth, falling premium rates, low investment yields and a weak global economy. In the past, reinsurers have been resilient to adverse developments. The global reinsurance market has proven able to withstand the impact of large catastrophes and economic events; recent examples include the terrorist attack on the World Trade Center on September 11, as well as the hurricanes Katrina, Rita and Wilma in 2005. Also, throughout the financial crisis of 2008-09, reinsurers continued to operate as usual, meeting their obligations and providing capacity.[27] Premium growth in reinsurance has been modest in recent years. In 2015, global non-life reinsurance premiums increased by 1% year-on-year,

[25] ECB (2015): Financial stability review, May, page 79.
[26] EIOPA (2014): EIOPA announces results of the EU-wide insurance stress test 2014, Press release, 30. November.
[27] Swiss Re (2013): The essential guide to reinsurance, page 13.

compared to a decline of 1.9% in 2014. [28] Global life reinsurance premiums expanded by 1.6% in 2015, after 1.5% in 2014.

A prolonged period of relatively benign catastrophe payouts and the capital inflows into the alternative capital market have led to overcapacity in the reinsurance market and were the prime underlying cause of decreasing reinsurance rates in the past few years. Total alternative capital was up 7% in the first half of 2015 and reached a market share of 12.1% of total reinsurer capital.[29] Since 2005, there have been low North American losses, which is important for the alternative capital market. Much of the risk taken on by alternative capital is North America hurricane risk, so this capacity has had a lucky run of low losses.[30] The recent renewal rounds have seen a slight stabilization in reinsurance pricing. However, the fierce competition is expected to continue in future as well.

In response to the currently effective forces, reinsurers accelerate their capital management strategies, as acceptable capital deployment opportunities in the market diminish. Reflecting this, in the first half of 2015, the publicly listed reinsurance companies have returned virtually all earnings to shareholders via share buybacks and ordinary and special dividends.[31] Capacity is also being affected as merger and acquisition activity intensifies and transactions are completed. More than 10% of the industry's shareholders' equity is currently involved in major merger activity [32]

Reinsurers remain profitable: Combined ratios in the first half-year of 2015 remained broadly unchanged at 91.6% (H1 2014: 92.1%). [33] Investment yields are weak, at 2.3% in H1 2015, unchanged compared to the year before. On average, reinsurers in the first half-year of 2015 reported an annualized return on equity of 10.7%, down from 12.2% in the same period last year. These figures do not, however, properly reflect the underlying profitability, because insured catastrophe losses have been lower than anticipated and the claims ratio has been reduced by positive reserve releases from redundant reserves for prior years' claims. It is estimated that more "normal" catastrophe losses and excluding prior year reserve releases the reinsurers' return on equity would fall to approximately 5%.[34]

[28] Swiss Re (2015): Global insurance review 2015 and outlook 2016/17, November.
[29] Aon Benfield (2015): Reinsurance market outlook, September, page 2.
[30] Kurt Karl (2015): The global economic and re/insurance market outlook – economic outlook, in Geneva Association Newsletter Insurance and Finance, No. 15, February.
[31] Willis Re (2015): Reinsurance capital growth eases as M&A and active capital management accelerate, September, Press Release.
[32] Willis Re (2015): Reinsurance Market Report– Results for half-year 2015, September, page 3.
[33] Willis Re (2015): Reinsurance market report – Results for half-year 2015, September, page 7.
[34] Willis Re (2015): Reinsurance Market Report– Results for half-year 2015, September, page 2 and 4.

Special topics

1. Mergers and Acquisitions in the Insurance Sector

I. Introduction

Over the past 24 months, the insurance industry has experienced a surge of mergers and acquisitions (M&As). Among other things, M&As have the potential to create efficiencies in the provision of insurance, enabling insurers to improve, for example, the kind, price, amount or geographical reach of the coverage supplied. This, in turn, has the potential to benefit consumers. M&As also have the potential to improve the financial condition of insurers, providing them, for example, with a stronger capital base or a sounder risk diversification horizon. On the other hand, M&As introduce a wide and complex variety of new risk issues, from market dominance issues to corporate culture frictions, from overlooked risk-taking considerations to increased cross-border intricacies.

This section of GIMAR aims to address the issue of the rising trend in M&A activity in insurance from the perspective of the relevant insurance supervisory authorities in particular, and IAIS Members in general. Specifically, it aims to identify and assess some of the key risks emerging from M&A activity and, importantly, it relates these to the IAIS Insurance Core Principles (ICPs), pointing to the breadth of supervisory responses that could be given to these risks. After briefly reviewing recent literature on trends in M&A in insurance and on potential motivations behind these trends, the paper discuses risks brought about by M&As and suggests supervisory responses to these risks. Last but not least, examples regulatory and supervisory approaches at jurisdictional level are provided (i.e. regulation of M&As in China and supervision of M&As in Bermuda).

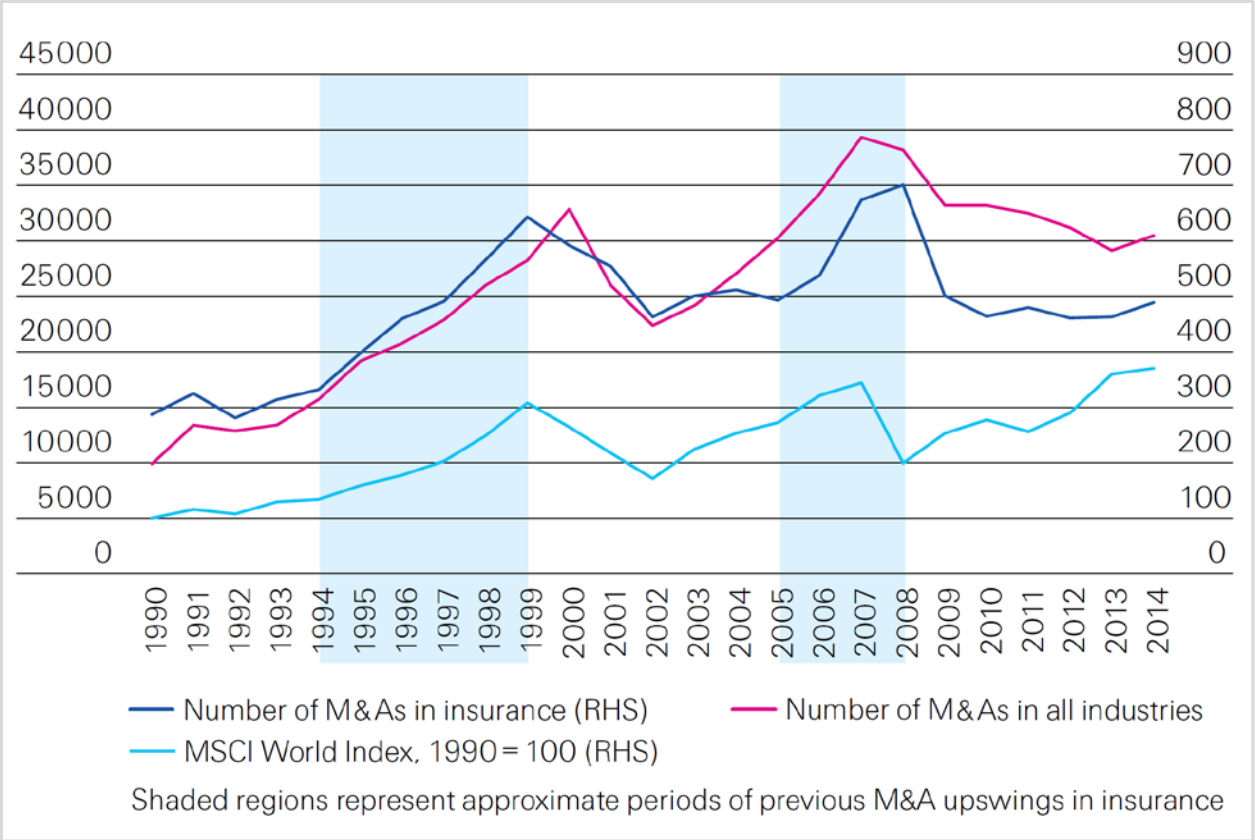
II. M&A activity in insurance – key trends and underlying motivations

There has been an increase in M&A activity among insurers and insurance intermediaries over the past 24 months.[35] A study by Sigma states that similar trends were identified in the 1995–98 and 2005–08 periods, making this perhaps a ”third wave” in the past 30 years. Fig.3 below provides empirical evidence of this.

M&A activity has reached the life and non-life sectors as well as the reinsurance and the reinsurance intermediaries sectors, albeit to different degrees and showing different dynamics. Moreover, the phenomenon seems to have reached global proportions, involving insurers and intermediaries in developed and emerging economies, with the flow of acquisitions going in both directions.

[35] Conning Insurance Research (2015) *Global Insurance Underwriting Sectors Mergers & Acquisitions - The Market Heats Up in 2014*. Conning and Company; A.M. Best (2015) *M&A Mega Deals Return in US P/C, Global reinsurance Industries during First Half 2015*. A.M. Best; A.M. Best (2015) Merger and Acquisition Activity in US Life/Annuity Industry Remained Elevated in First Half 2015. A.M. Best; Deloitte (2015) *2015 M&A Outlook – Continuing Acceleration*. Deloitte Development LLC; Aon (2015) *Reinsurance market Outlook – Supply Increase Pauses and Demand Set to Accelerate* (September 2015). Aon Plc.; Sigma (2015) *M&A in Insurance: Starting of a new Wave?* Swiss Re; Standard and Poor’s (2015) *Reinsurance Shark Tank—Only The Strong Will Survive*. S&P; Guy Carpenter (2015) *The (Re)insurance Landscape – Mid-year (Re)insurance Report*. Marsh and McLennan. KPMG (2015) *Perspective: Trends driving the insurance M&A landscape in 2015*. KPMG.

Fig. 3. M&As in insurance and all industries



Source: Sigma[36]

Several structural and cyclical factors underpin the recent upward trend in insurance M&A activity. Moreover, there are sector-specific factors driving this development. These factors, which have been discussed at length in the literature,[37] are summarised below.

In the life insurance segment for example, key motivations to engage in M&A activity include: the pursuit of cross-border markets, the effect of run-off portfolios, regulatory developments,[38] and the influence of private equity funds and other investment funds. In the non-life insurance segment, drives appear to be: increasing scale, gaining strength to improve bargaining power (on price and on conditions), accessing cheaper funding, achieving vertical integration, accessing capital markets or the sheer fear of being left behind. With specific reference to reinsurance, M&A activity can be explained in relation to developments in the alternative capital segment, and a perceived need to achieve greater scale. Importantly, key structural factors like the persisting environment of low interest rates and low economic growth have oriented insurers thinking away from ”organic” growth objectives and towards ”inorganic” ones like M&As.

[36] Sigma (2015) *M&A in Insurance: Starting of a new Wave?* Swiss Re.
[37] See note 1 for details.
[38] Stoyanova, R. and Gründl, H. (2014) Solvency II: A Driver for Mergers and Acquisitions? *Geneva Papers on Risk & Insurance*, Vol.39(3), pp.417-439.

III. Supervisory considerations

The paragraphs below draw on the ICPs and elaborate how these relate to specific regulatory considerations with respect to mergers and acquisitions. Key areas addressed are authorisation of mergers and/or acquisitions (ICP 6), governance of the merger and/or acquisition (ICP 7), risk management matters emerging from mergers and/or acquisitions (ICP8), and special supervisory considerations related to mergers and acquisitions of reinsurers (ICP 13).

Authorising mergers and/or acquisitions – ICP 6 (Changes in control and portfolio transfers) makes explicit reference to mergers and acquisitions of insurers. It calls for supervisory frameworks to equip supervisors with powers to grant or deny changes in the control of the insurer, including mergers of insurers or acquisitions of insurers. In assessing the soundness of a merger and/or an acquisition, ICP 6 singles out some key areas of supervisory attention including the suitability[39] and financial strength of those seeking control (Standard 6.5), and the impact on policyholders (Standard 6.7). To a large extent, ICP 6 equates the supervisory process underpinning the assessment of an M&A to that of a new license. For this purpose, the minimum requirements stipulated in ICP 5 (Licensing) are of critical importance to supervisors faced with the responsibility of assessing and deciding on M&As. ICP 6 also calls for supervisors to have the powers to establish any requirement for financial and non-financial resources on the insurers undergoing M&A (Standard 6.8). Finally, in the case of M&A involving insurers domiciled in different jurisdictions, ICP 3 (Information Exchange and Confidentiality Requirements) is of key importance.

Governance and risk management in M&As – ICP 7 (Corporate governance) and ICP 8 (Risk management and internal controls) provide minimum requirements that also apply to the governance and management of mergers and acquisitions. In respect to corporate governance matters related to M&As, supervisors should be able to gain comfort that the Board of the insurer carrying out the acquisition or the prospective Board of the merging insurers set the goals of the merger and or acquisition as well as the strategy to achieve to goals. Importantly, given the uniqueness of processes of merger and/or acquisitions, supervisors should be able to gain comfort that the setting - and implementation - of these goals and strategies are kept under close and frequent review. The planning and execution of mergers and acquisitions should be clearly and consistently communicated to management, which will be responsible for carrying it out. Supervisors should gain comfort that the M&A is being planned and executed with adequate involvement of management in the process.

An area of potential supervisory concern in relation to mergers and acquisitions is that of *organisational culture*. Cultural issues in financial firms have been under dedicated scrutiny since the beginning of the financial crisis in 2007. The Financial Stability Board (FSB) for example, has discussed risk culture and issued guidance on the matter.[40] Importantly, the FSB has singled out mergers and acquisitions as examples of instances where risk culture may

[39] The issue of fitness and propriety of persons is addressed in detail in ICP 5 'Suitability of persons'.
[40] Financial Stability Board (2014) Guidance on Supervisory Interaction with Financial Institutions on Risk Culture - A Framework for Assessing Risk Culture (7 April 2014). Basel, Switzerland: FSB. For an elaboration of culture and financial supervision at a national level, please refer to DNB (2015) *Behaviour and Culture in the Dutch Financial Sector*. Amsterdam, The Netherlands: De Nederlandsche Bank.

undergo changes that could adversely affect financial institutions. This is backed by research looking at the - often detrimental - part played by organisational culture in the post-merger or post-acquisition performance of firms.[41] Mergers and/or acquisitions of firms with different organisational cultures may pose additional risk. This may be exacerbated if the involved firms are located in different countries or bring to the table different mind-sets, as it has been the case of many of the recent M&A transactions. Examples of these are the acquisitions of US life insurers by Japanese firms, the merger of insurance intermediaries Willis with advisory firm Towers Watson,[42] or the acquisition of US insurance financial services provider Conning by Taiwanese life insurer Cathay Life Insurance Co, Ltd.[43]

Supervisors should assess the extent to which insurers intending to enter into a merger or an acquisition have identified and assessed the potential risks emerging from the organisational cultures of the involved firms. Most importantly, supervisors should gain comfort that the firms have put in place adequate risk management and risk governance arrangements aimed at mitigating organisational culture risks. In this respect, for example, board and senior management involvement in the matter are critical, in particular in relation to the extent to which the ”tone at the top” has been consistently set, clearly communicated, and appropriately monitored.

On-site inspections and, specifically, direct meetings with the Board and Senior Management can help supervisors on this issue. IAIS Standard 9.8 articulates minimum requirements in this respect.

M&As in reinsurance – In the opening sections, an overview was provided of the extent to which the recent wave of M&A in insurance has involved reinsurers. In this respect, there are reinsurance-specific matters that supervisors should consider. Most importantly, these matters affect the many insurers - and reinsurers - that conduct business with the reinsurers involved in the M&A activity. Further, an additional layer of complexity emerges when the insurers - and reinsurers - in question are domiciled in jurisdictions different from the ones of the reinsurers involved in the M&A. ICP 13 (Reinsurance and other forms of risk transfer) requires that supervisors in turn require ceding (re)insurers to have reinsurance strategies in place, as well as adequate governance, management and control of these strategies. In this respect, supervisors should require (re)insurers to identify, assess and adequately manage any material changes in their reinsurance strategy emerging from M&A activity in the reinsurance sector. Particular attention should be paid to eventual changes in concentration levels and limits emerging from M&As. Importantly, those supervisors responsible for the supervision of assuming reinsurers or retrocessionaires should also require them to carry out similar reviews

[41] Buono, A., Bowditch J. and Lewis, J. (1985) When Cultures Collide: The Anatomy of a Merger. *Human Relations*, 38(1), pp.477-500; Moran, P. and Panasian, C. (2005) *The human side of mergers and acquisitions: a look at the evidence* - Working Paper Series, Año 3, no. 1, Universidad de Talca (Chile). Facultad de Ciencias Empresariales; Lee, S., Kim, J. and Park, B. (2015) Culture clashes in cross-border mergers and acquisitions: A case study of Sweden's Volvo and South Korea's Samsung. *International Business Review*, 24(4), pp.580-593.

[42] Willis/Tower Watson (2015) *Creating a Leading Global Advisory, Broking and Solutions Firm*. Presentation to Investors, 20 June 2015; Hoffman, I. and Samuel, J. (2015) Willis-Towers Watson: A Merger of Equals—Not Exactly. *Wall Street Journal*, 1 July 2015.

[43] Conning and Company (18 Sep 2015) *Cathay Financial Holdings Completes Conning Acquisition* (accessed on 15 Oct 2015 https://www.conning.com/aboutconning/news-detail.aspx?id=12855).

in respect of the limits, aggregations, and concentrations resulting from the M&A. These review should be part of the assessment carried out in advance of the M&A.

Regulation of M&As in insurance in China

In 2014, the China Insurance Regulatory Commission (CIRC) issued *Measures of the Administration of Acquisition and Merger of Insurance Companies* (the *Measures*) that came into force on 1 June 2014. The *Measures* regulate acquisitions of insurance companies and mergers between insurance companies; they apply to acquisitions and mergers of both Chinese insurance companies and foreign-invested insurance companies in China but exclude acquisitions of non-insurance companies by insurance companies, or overseas acquisitions of foreign insurance companies by Chinese insurance companies.

CIRC's objectives in regulating M&As are, according to Article 20 of the *Measures*: (1) overseeing the solvency position, financial position and management capabilities of the "target" insurance company - in the case of an acquisition - or the "surviving" insurance company - in the case of a merger; (2) superintending the impact of the merger or acquisition on the insurance industry; and (3) supervising the impact on consumers of insurance, the state and the public interest.

The *Measures* require that any proposed merger or acquisition should be approved by CIRC. Applications for approval should include, among other things: an acquisition/merger plan, including a feasibility study, transaction structure, implementing steps, source of the funds, method of payment and subsequent arrangements; the transaction price; and detailed ownership information. Importantly, mergers or acquisitions can only take place between insurance companies in the same insurance business, i.e. insurers cannot concurrently conduct life insurance and non-life insurance businesses.

In respect to reporting requirements post-completion of the acquisition or the merger, Article 22 of the *Measures* requires the target or surviving insurance company to submit to CIRC quarterly reports on the implementation of the acquisition or merger. These reports should address matters such as investments, purchases and sales of assets that have a material impact, affiliated transactions, business transfers, insurance consumer disclosures, public announcements, changes in senior management personnel and resettlement of employees during the preceding quarter.

Supervision of M&As in insurance in Bermuda

Bermuda's (re)insurance industry has experienced substantial M&A activity during 2015, with the top five M&A transactions having an aggregate statutory capital and surplus of USD35 billion. The Bermuda Monetary Authority (BMA) developed a dedicated risk-based supervisory approach to M&As, the key elements of which are described below:

- Before an M&A is publicly announced, BMA expects the affected companies to proactively engage with it in communicating the deal. BMA uses the timing and way in which companies engage with it as an indication of the firms' approach to the matter.
- Upon announcement, and in instances where BMA is the group supervisor, it engages regulators in the jurisdictions affected by the M&A, notifying the proposed transaction.
- BMA engages with executive management of the impacted companies. Separate meetings are held with the acquirer, the target and in some cases, the joint committee charged with executing the transaction. BMA reviews the relevant information presented to the companies' Boards. Key strategic, governance and risk-managements insights are drawn from the analysis of the information provided by firms, for example:
  - Motivations for the transaction including the valuation and cost of capital considerations.
  - Transaction details and planned timelines (execution approach, milestones and measurement targets).
  - Soundness of the business plan and strategy for the combined entity, which are subjected to statutory "material change" approval procedures. In assessing this BMA pays specific attention to the tools (i.e. internal capital model, etc.) used in evaluating the proposed transaction, and other considerations such as cultural conflicts, risk appetite, capital adequacy and communication flow.
  - Post-closing impact assessment which includes integration plan, risk aggregation and/or business overlap assessments, etc.
- Where the acquirer is not already involved in an operating capacity in the insurance industry, BMA seeks to understand the risk-reward perspectives of the acquirer, how comfortable the acquirer is with the volatility involved and how the proposed transaction fits in their overall investment strategy.
- For hostile takeovers, BMA follows the activities closely being mindful of the timeline surrounding shareholders' approval. This dictates the timing and level of the BMA's engagement with the party(ies). Fitness and propriety checks are also conducted with respect to shareholder controller, controller, officers and director changes.
- Post shareholder approval of the deal, regular engagement with executive management is required to obtain progress updates especially on integration /execution risks.
- Post-closing of the transaction, the supervisory approach is a continuing process aimed at understanding the oversight, governance and control environment for key integration risks. The companies' own Integration Framework/Strategy acts as a high-level master plan that guides BMA's engagement with the Board and executive management. BMA also reassesses its risk ratings and its outlook for the new (re)insurer. Considerations include: (i) progress against timeline/milestones in the integration plan; (ii) emerging risks/issues that had not previously been identified and how addressed; and (iii) lessons learnt and how this feeds back into the M&A process for future transactions.

2. Corporate bond liquidity and life insurance companies

Life insurance companies use fixed income assets to hedge their long-maturity insurance liabilities. Within the fixed income sector, corporate bonds are particularly attractive because they offer yield in excess of government debt. On a global basis, insurance companies are among the largest participants in the corporate bond market. Life insurance companies are estimated to hold between 20% and 40% of the corporate bonds in the United States (20%), Europe (21%), and Japan (40%).[44]

Insurance companies tend to purchase corporate bonds on the primary market (when they are first issued) and to trade them less than some other market participants. However, high quality corporate bonds are also a potential source of liquidity for insurance companies. For example, an insurer may want to sell bonds to make payments for catastrophic hurricane claims or to a cover an unexpected spike in annuity redemptions. Typically, insurers use bond dealers for secondary market bond trades. Since the corporate bond market is generally illiquid, bond dealers traditionally held a substantial inventory of bonds to facilitate trading.

Recent developments have brought into question the role that bond dealers have traditionally performed in providing liquidity in the corporate bond market. Since these dealers are primarily banks, the bonds they hold are subject to Basel III rules on capital and liquidity. Basel III increased the amount of capital banks must hold against corporate bonds[45] and imposed liquidity rules that may further increase the cost to banks from holding bond inventories.[46] Additionally, in the US (home of many bond dealers), the so-called "Volcker Rule," a part of the Dodd-Frank Act, limits dealer banks trading corporate bonds for their own gain (proprietary trading).[47] These reasons may have contributed to the sharp drop in the corporate bond inventories at dealer banks (see Fig. 1). The inventory of corporate bonds held by dealers in the US decreased from a pre-crisis peak of USD 235 billion in 2007 to USD 56 billion in 2013.[48] There was also a decline in the number of primary dealers from 41 in 1990 to 22 in 2013.[49]

Trading in corporate bonds has also changed in recent years, possibly due to the change in dealer behaviour. Following the financial crisis, average trade size for corporate bond decreased (see Fig. 2). It has yet to return to its pre-crisis level.

These developments in the corporate bond market suggest that supervisors should re-examine the liquidity of insurer's asset portfolios and how those assets match with the insurer's liabilities. Cash flow management is also very important. If an insurer is reasonably matched from those perspectives, there will be little likelihood it will need to sell assets. If these aspects are not well managed, it is possible the insurer would have to sell corporate bonds in a hurry, and it may be able to do so only with a large price concession.

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[44] The European data are from "European Insurance in Figures", December 2014, Insurance Europe (2013 numbers); the American data comes from the Flow of Funds put out by the Federal Reserve (2014 numbers); and the Japanese data are from the Life Insurance Association of Japan fact books and the Japan Securities Dealers Association (2013 numbers).

[45] "Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule; Final Rule."

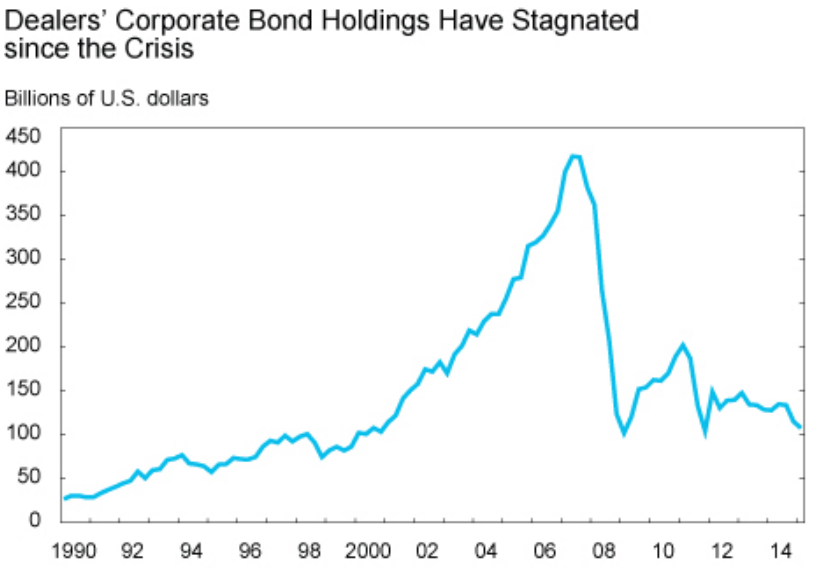
[46] "Liquidity Coverage Ratio: Liquidity Risk Measurement Standards; Final Rule." Corporate debt may qualify as "Level 2B Liquid Assets" subject to a 50% haircut. In addition, Level 2B Liquid Assets cannot exceed 15% of the total high-quality liquid assets.

[47] "Section 619 of the Dodd-Frank Act: Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Private Equity Funds."

[48] "Primary dealer statistics", Federal Reserve Bank of New York

[49] "Primary dealer list", Federal Reserve Bank of New York

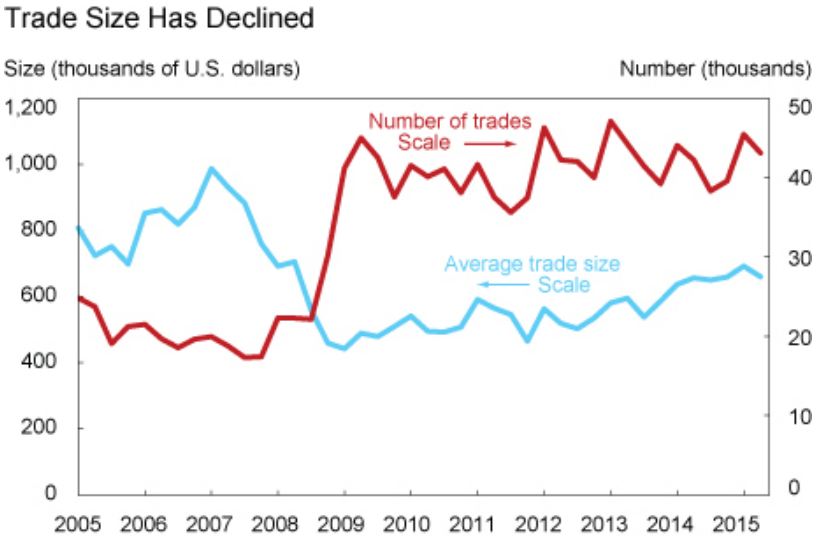
Fig. 4.[50] Dealers' Corporate Bond Holdings



Source: Federal Reserve Board, "Financial Accounts of the United States."

Note: The chart shows the quantity of corporate and foreign bonds (held in the United States) owned by securities brokers and dealers.

Fig. 5. Trade size



Source: Authors' calculations, based on Trade Reporting and Compliance Engine (TRACE) data from the Financial Industry Regulatory Authority.

Note: The chart shows average trade size and average daily number of trades by quarter for all corporate bonds (excluding convertible bonds).

[50] Figures 4 and 5 come from "Has US Corporate Bond Market Liquidity Deteriorated?" by Tobias Adrian, Michael Fleming, Or Shachar, and Erik Vogt (Liberty Street Economics, NY Fed, October 5, 2015).

3. Reaching for yield by insurance companies

The current low interest rate environment has persisted since the end of the financial crisis. The Federal Reserve Board (the Fed) has kept short-term interest rates low—near zero—and a relatively flat yield curve since the end of 2008 to stimulate economic growth. As such, the US insurance industry has been challenged with investing in assets that not only generate yield, but also meet investment guidelines, including an asset-liability matching strategy.

Low yields on corporate bonds have driven insurers and other investors into less traditional investments often referred to as "alternative assets," which tend to be less liquid but offer higher returns. The terms "alternative assets" and "alternative investments" have no fixed definition and, as such, different analysts will include different investment types within those categories. However, the general idea is that they are "alternatives" to the traditional stocks and bonds held by institutional investors and high-net-worth individuals; they often have a complex structure and a more limited investor base, which likely means less liquidity. The most commonly referenced alternative assets for insurers include investments in private equity and hedge funds. Other asset types sometimes included are investments in CRE, either directly or through mortgages, and structured securities, especially CLOs. US insurers have been investing in some of these assets for decades, so they and state insurance regulators do not necessarily consider them alternative assets.

The US insurance industry's total exposure to below investment grade bonds (i.e., bonds rated below BBB) for the 10 years ended 2014 has ranged from a high of 6.3% of cash and invested assets to a low of 4.7%.[51] From at least 2004-09, the industry's exposure to below investment grade bonds gradually increased, with a more significant increase occurring in 2009 as a result of credit rating downgrades during the financial crisis. Since then, however, the book/adjusted carrying value (BACV) and percentage of total below investment grade bonds ticked downward until 2014. On the other hand, within the investment grade universe, the industry's exposure to BBB-rated bonds has increased from 23% of total bonds in 2009 to 26% of total bonds in 2014. Bonds rated higher than BBB have decreased from a high of 76% of total bonds for this 10-year period in 2006 and 2007, to a low of 68% of total bonds as of year-end 2012, 2013 and 2014.

Related to the exposure to lower quality corporate bonds, with increased demand in the market generally for below investment grade bonds, issuers have been successful issuing bonds with increasingly weaker protective covenants. This potentially increases the risk profile of these bonds at the same time that investment yields are lower; such that investors in general are not sufficiently compensated for the risk.

The US insurance industry's exposure to private equity funds and hedge funds has been the subject of increased scrutiny. This is due to their illiquidity and opaqueness. From 2005-14, investments in private equity funds grew from USD 19.4 billion to USD 69.5 billion. Investments in hedge funds during that same period grew from USD 6.1 billion to USD 16.3 billion. On a combined basis, these investments now represent approximately 1.5% of total industry general account assets.

While the US insurance industry's default experience was nominal in comparison with the overall market's default experience, industry exposure to commercial mortgage and real estate decreased in terms of BACV from 2008-10, as the industry significantly reduced its investing activity while existing mortgages matured. Since 2010, the exposure has been increasing. On

[51] NAIC (2015): Are US insurers reaching for yield in the low interest rate environment?, Capital Markets Special Report, July.

a percentage basis, these two asset types followed a similar trend, showing a relatively significant drop from 2009-10; but, since then, exposure has been increasing approximately 5% each year except for 2013-14 when the exposure increased more than 6%.

Also for the European countries, persistently low interest rates pose a significant risk to the (life)insurance[52] sector by depressing companies' profitability and eroding their ability to meet obligations to policyholders; this is because a large portion of their liabilities are of fixed nominal amount and long duration, typically greater than those of the assets that cover them.[53] At European level the picture varies greatly as not all insurers are equally affected by the low interest rate environment at the same ground due to differing market structures, different products sold and hence different situations as regard duration mismatches. In this context, two types of possible European insurance industry's behaviour (the one does not exclude the other) may be observed:

- A **search for higher returns** in an attempt to compensate for low yield. Low interest rates may foster change in the asset allocation towards more risky or longer-maturity assets (asset side); and or may encourage insurers to pursue non-core insurance activities (i.e. providing direct credit to the economy in the form of mortgage loans) increasing their non-policyholder liabilities (liability side).

- A **search for different "less-capital-absorbing" business model** by a change in product portfolios which leads to the decrease of guarantees offered and most of all to the shifting of risks to policy holders.

Undeniably, the sustainability of profitability of the business and solvency position of life insurers in the current context of low interest rates remains challenging and the phenomena of the "search for yield" has become the main topic at both micro and even more at macro level.

While the "search for yield" per se should not be seen as something undesirable, currently and under a financial stability perspective, it is considered in its negative acceptation. Indeed, in the absence of a shared definition, the "search for yield" is, nowadays associated with the search for higher returns where the typical behaviours to optimize yields by re-allocation of investment portfolios is linked to the undertaking's risk appetite exceeding its risk bearing capacities[54] and risk management capabilities.[55]

Based on a 2014 EIOPA survey, there is no remarkable overall trend towards higher-yielding instruments or asset classes visible yet. At the European level, investment portfolios of insurers remained substantially unchanged as historically they have been concentrated on fixed income

[52] Life insurance companies are more exposed as they have to satisfy the guaranteed returns they offered in the contracts.

[53] Part of the 2014 European Insurance and Occupational Pensions Authority (EIOPA) insurance stress test assessed the impact on capital requirements and cash flows of two scenarios involving two different interest rate term structures: the first envisaged low rates for all maturities, and the second analyzed the effects of a negative-sloping yield curve. The results of the exercise show that in several countries the insurance industry is characterized by substantial balance between obligations and investments, in terms of both yields and duration; this is reflected in relatively low capital adequacy requirements to cover the risk of low interest rates; in others, by contrast, risk exposure and the corresponding capital requirements are high on average.

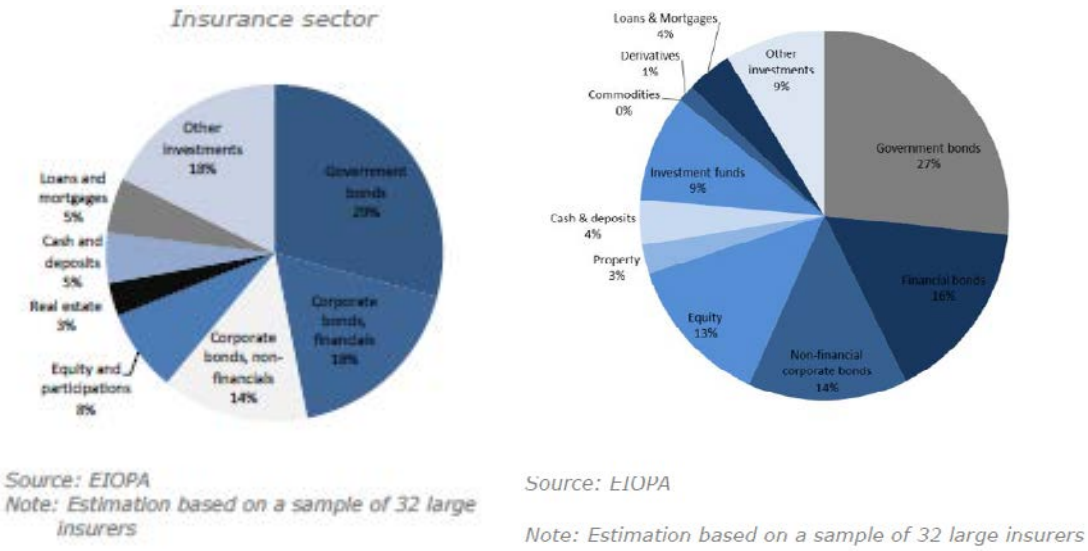
[54] In a low yield environment, insurers may be more prone to take additional risks so to reach the expected investment returns ("gamble for resurrection").

[55] Investing in higher yielding instruments often translate in a widened exposure toward sophisticated and very complex financial instruments (i.e.: infrastructure, hedge funds, private equity, derivatives, direct credit to the economy). When the risk management has not the right level of expertise to master this complex transactions the risk of uncontrolled search for yield arise.

instrument seven though, a slight increase in equity exposure has been detected in the last few years as well.

Fig. 6. Average composition of insurance investment portfolio

2013 2014



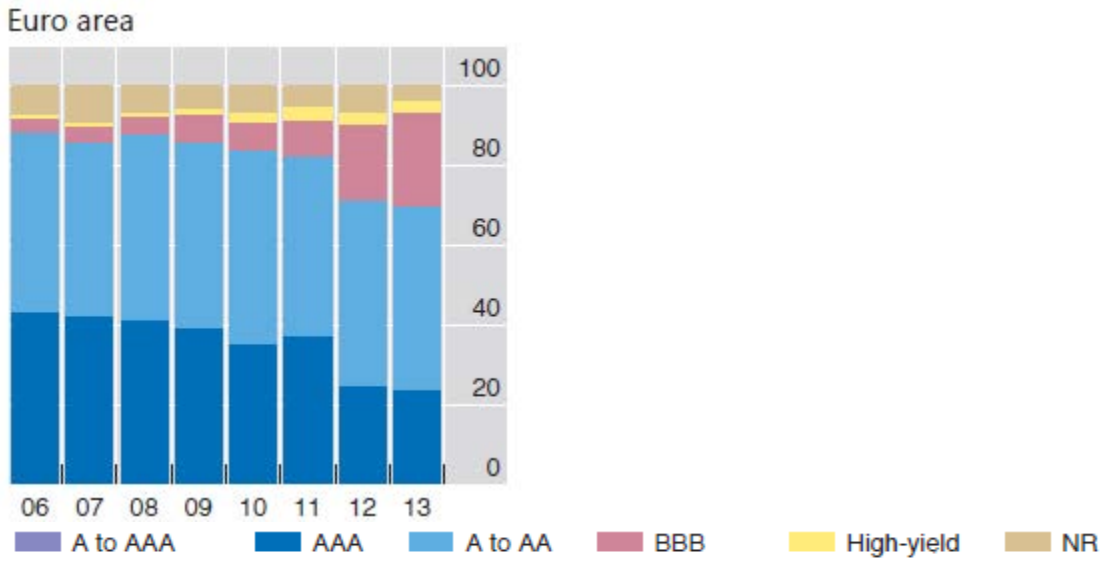
Source: EIOPA
Note: Estimation based on a sample of 32 large insurers

Source: EIOPA

Note: Estimation based on a sample of 32 large insurers

However, it seems that some first evidences of increased risk appetite by insurance companies in an attempt to offset low interest rate are starting to emerge as well. Based on data from the 2015 BIS annual report, the risk profile of European insurance companies' assets has deteriorated albeit from a conservative starting point. Indeed, in recent years there has been a shift in the asset re-allocation from the AAA to BBB rating category. Even though the change could be partly due to a shift (downgrade) in the credit quality of securities already in portfolios referenced by the BIS it could be also consistent with some sort of active search for yield.

Fig. 7. Insurance investment in EU area



Source BIS annual report 2015

The ECB also notes that some European insurers appear to be taking on more investment risks, with evidence of portfolio shifts towards infrastructure financing, equities and lower-quality bonds. [56] Insurers in some European countries are increasing their lending activities, which may also be motivated by a search for yield. Lending activities by euro area insurers are not extensive on aggregate, but significant in some countries. Loans account for more than 5% of insurers' financial assets in the Netherlands, Belgium and Germany. In 2014, the highest growth rates of lending by insurance companies were seen in the Netherlands and in Belgium. Given that lending is not a core insurance business, it is essential for supervisors to make sure that insurers which take it up have adequate risk management in place.

4. Changes in the Insurance-Linked Securities Market

The Macroprudential Policy and Surveillance Working Group held discussions earlier in 2015 on reinsurance. One specific issue was with regards to the impact of Insurance-Linked Securities (ILS) on the traditional reinsurance market. It has been noted that the ILS market has grown, with recent size estimates at approximately USD 25 billion. One concern is the relative permanence of that capital.

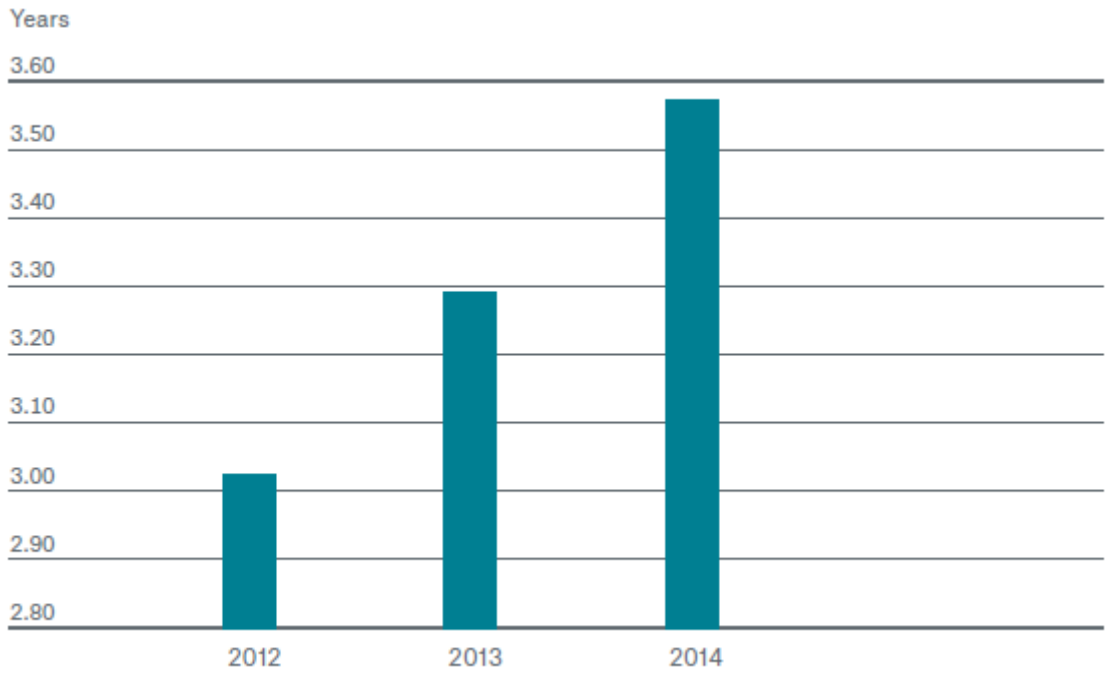
Specific to the question of stability of capital available through the ILS market, S&P commented that the term of the typical ILS is no longer as short term in tenor. Generally, cat bond issuance, which makes up the majority of ILS, has historically tended to center around the three-year maturity range.

The average maturity based on the number of issuances decreased in 2004-2006 as certain issuers found effective pricing for smaller deals with maturities of one and two years. The companies wanted the flexibility to maintain their options for buying their protection. However, issuance based on the notional amount was higher. After 2006, maturities tended to increase slightly. In 2014 and 2015, the average maturities increased though the sample size is smaller since more issuances have been completed without ratings (see chart below). However, issuers continue to come to market with tenors of three years or more as investors have become comfortable with the asset class.

The increasing maturity length is an example for a trend in the catastrophe bond and insurance linked securities market in the last couple of years towards sponsor or cedent-friendly structures. Others include the increasing use of variable reset structures, which typically provide the cedent with an option to adjust some of the key risk variables of the coverage provided by the security, [57]and the trend towards using indemnity loss triggers instead of parametric triggers. In 2014, 72% of bonds issued were indemnity based, evolving into the "new normal" in the cat bond market.[58] The increasing maturity length provides issuers – primary insurers as well as reinsurers that use cat bonds to retrocede risk – with protection against rising premium rates. Investors are binding their capital, which provides some reassurance that alternative capital is here to stay for a longer period of time even in case of a major insured catastrophe event.

[56] ECB (2015): Financial stability report, November, Page 88.
[57] Artemis (2014): The growing popularity of the catastrophe bond variable reset, September, www.artemis.bm
[58] Munich Re (2014): Insurance-linked securities (ILS) – Market review 2014 and outlook 2015, Page 3.

Fig. 8. Average risk period of cat bonds



Source: Munich Re

5. Dedicated global reinsurance capacity

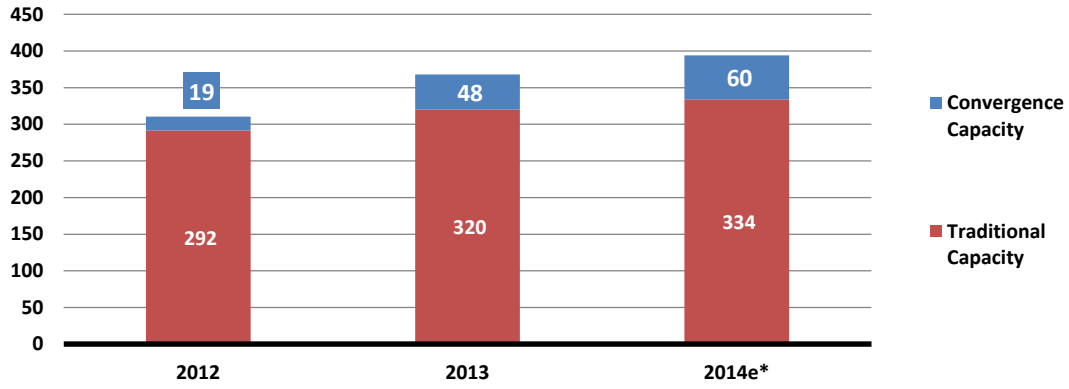
In connection with the previously mentioned discussions on the impact of ILS on traditional reinsurance, concerns have also been noted with the view that there is excess capital available for reinsurance and alternative forms of risk transfer. A.M. Best was asked to address the Working Group on this issue. A primary argument of A.M. Best was that just aggregating the capital positions of reinsurers was overly simplistic and would overstate the amount of capital available for reinsurance.

A.M. Best has compiled an estimate of dedicated global reinsurance capacity (Figure 9), working in conjunction with Guy Carpenter. This estimate is not a simple aggregation of the shareholders' equity of all companies that write reinsurance since not all of a company's capacity is necessarily allocated to its reinsurance business. Most global reinsures are engaged in business other than reinsurance, such as specialty insurance or other outside interests. A.M. Best and Guy Carpenter have estimated the amount of capital dedicated to writing reinsurance by using A.M. Best's proprietary capital model, Best's Capital Adequacy Ratio (BCAR), and reviewing by line-of-business allocations for the majority of the top 50 reinsurance organizations, while giving consideration to reinsurance capacity offered by smaller participants in the market. A. M. Best also considered the amount of financed capital (debt) employed in a company's capital structure. Using the BCAR output for each company on this basis provides a clearer indication of how much capital is actually deployed to reinsurance operations.

At year-end 2014, there was approximately USD 334 billion of traditional capital and USD 60 billion of convergence capital, including industry loss warranties, collateralized reinsurance and cat bonds. On this basis, A.M. Best estimated marginal growth in traditional sector capital as strong earnings were offset by sustained share buybacks and dividends, as reinsurers sought to maintain but not expand their capital positions. As previously noted, convergence capital continued to enter the reinsurance industry, albeit at a slowing pace. Cat bond issuance (shown in Exhibit 10) continued to grow strongly through year-end 2014. Likewise, capital continued to flow into collateralized reinsurance vehicles and sidecars.

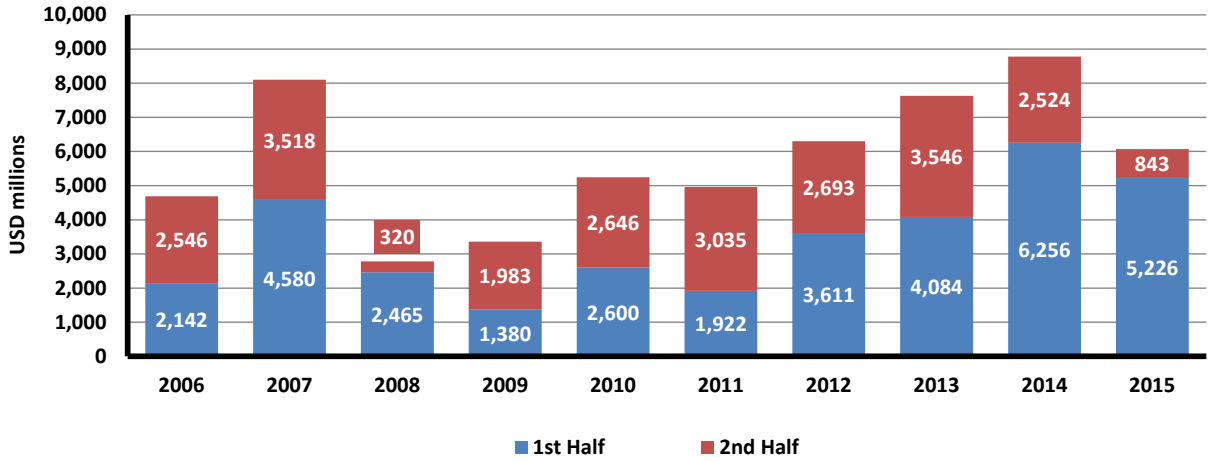
Conditions in the global reinsurance market will remain competitive and challenging, as primary companies are expected to continue retaining more business and/or seek better terms and conditions for sharing their profitable business. Margin compression will likely continue, however, there is evidence that the pace of decline in reinsurance rates, particularly in US property catastrophe have begun to slow. Third-party capital continues to seek a larger piece of the pie, but here to the pace of capital market capacity entering the market has seemed to slow and some collateralized markets have returned excess capacity to investors unable to find suitable opportunities to deploy their capacity.

Fig. 9. Total dedicated reinsurance capacity (USD billions)



Note: * Estimate by Guy Carpenter and A.M. Best
Source: A.M. Best, Guy Carpenter

Fig. 10. Cat bond issues by six-month periods



Source: A.M. Best Research, Artemis and Swiss Re

6. Derivatives use by US insurance companies

Derivatives use has continued to grow among US insurers through 2014.[59] While notional value is often not the best measure of exposure for derivatives, based on notional value, US licensed insurers' use of derivatives now exceeds USD 2 trillion. This is compared with just over USD 1 trillion at the end of 2010. This growth should be considered in the context of: (1) estimates of the overall size of the derivatives market which exceeds USD 65 trillion; and (2) the major use of derivatives by US insurers, which continues to be roughly 95% for hedging purposes.

Derivatives use among US insurers is fairly concentrated, numbering 208 companies. The majority of who are life companies. Of the total notional value of derivatives, 61% are in the form of interest rate swaps. The next largest derivatives type is equity options. Use of credit default swaps continues to be relatively modest within the insurance legal entities, totalling USD 35 billion in notional value, of which 47% is bought protection. Counterparty exposure is another area of focus. The ten largest derivatives counterparties used by US insurers account for 65% of their total notional exposure. The actual fair value exposure is offset by collateral posted. As of year-end 2014, US insurers had posted approximately USD 12 billion in collateral, while also being the beneficiaries of approximately USD 36 billion in collateral posted by counterparties.

Another aspect of US insurance regulators oversight over derivatives use is the impact of changes to the derivatives market, partly as a result of changes in derivatives regulation. A central component of that is the expected migration of over-the-counter derivatives to centralized clearinghouses. The over-the-counter (OTC) derivatives markets still dwarf the exchange-traded markets, and the bulk of the insurance industry's derivatives exposure is in bilateral instruments; the tide is gradually turning, however, driven by regulatory forces in the US and Europe.

Many observers agree that the mandated changes to what is referred to by the US Securities and Exchange Commission (SEC) and the US Commodity Futures Trading Commission (CFTC) as the "swaps market" will increase hedging costs, with some observers predicting that investors will change their hedging practices in response to the rising cost of swaps.[60] There is some anecdotal evidence of these trends, but little quantitative evidence thus far. Still, the full effect of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) and other regulatory changes are still being phased in, with the compliance schedule for significant components of the new regulatory regime will be phased in between December 2015 and December 2019. With respect to collateral requirements, most market participants will be required to post more collateral than in the past, in part because, until recently, there was little, if any, margin requirement for most counterparties, especially large ones. In the past, bilateral OTC derivatives could result in very high levels of leverage. The imposition of stronger regulations regarding margin requirements, however, represents a significant change and will result in a material reduction in leverage. Because initial margin must be maintained for the life of the trade, it has to be either borrowed or made unavailable to invest elsewhere; hence, it has an associated opportunity cost, or cost of funding, that negatively affects the return profile of the associated trading position or hedge. Changes in margin requirements may also contribute to changes in market liquidity.

[59] NAIC (2015): Update on the insurance industry's use of derivatives and exposure trends, Capital Markets Special Report, August.
[60] NAIC (2015): Developments in the derivatives market with respect to hedging costs and practices in the US insurance industry, Capital Markets Special Report, August.

Overall, regulatory changes, particularly with respect to over-the-counter derivatives such as the swap contracts that historically were the preferred hedging instrument for insurers managing interest rate risk is potentially significant. Thus far, there is little quantifiable evidence of materially higher hedge costs for insurers. It is also possible that hedging costs for insurers could increase as global economic and market conditions change, resulting in higher interest rates and increased market volatility. In either case, this could have an impact on the hedging strategies of insurers.

7. External investment managers

Outsourcing to external investment managers by US insurers has been growing at a significant rate for several years. Estimates are that US insurers now use external investments managers for over USD 1 trillion in general account assets, out of a total of USD 5.7 trillion in cash and invested assets; and that is expected to continue to grow in the near term.[61] This also represents over 1,000 US insurers, out of a total of 4,800. Some outsourcing is for all of the insurer's assets while others are for only specific mandates.

The benefits to insurers of outsourcing to external investment managers are: (1) asset managers with well-developed infrastructure and resources allow insurers to effectively implement new strategies and fine-tune tactical asset allocations in a shifting market; (2) small to medium-sized insurers may access investment opportunities that are otherwise not available; and (3) outsourcing generally costs less to implement compared to the cost of developing the expertise and infrastructure in-house. While the benefits to the insurer can be significant, the trend has also raised concern among state insurance supervisors, especially when viewed in conjunction with concerns about US insurers reaching for yield in the prevailing low interest rate environment. For example, supervisors are asking questions such as:

- Are external investment managers adding a significant amount of investment risk to previously conservatively managed portfolios, and does that cause solvency issues? (While many insurers have historically continued to operate with a buy and hold strategy, grounded in the longer duration of their liabilities, many asset managers are focused on the total return style of investment management.)
- Do the managers in question understand the unique nature of insurers and their liabilities? (Added risk can be in form of less liquidity, greater market value volatility, added credit risk or increases in cash flow variability.)
- Are the asset-liability management structures at the insurers up to the task?
- What safeguards exist in the Investment Management Agreements to address suitability of investments, potential conflicts of interest and reasonableness of management fees?
- Are regulatory frameworks robust enough to recognize and properly assess all the nuances of different investment strategies?

The NAIC's Financial Condition Examiners Handbook provides clear guidance on assessing the risks associated with the key activities of an insurer. An investment management agreement provides guidelines under which an external investment manager may invest on behalf of an insurer. Investment guidelines typically stipulate limits on any single security, issuer, industry or asset type concentration. Use of external investment managers does not relieve the insurer's management (and board of directors) of responsibility for compliance with statutory accounting rules and regulations. An additional concern is the potential for self-

[61] NAIC (2015): US insurance industry third-party investment management, Capital Markets Special Report, May.

dealing through affiliates of the external investment manager. This can result in transactions that are not arms-length and not in the best interest of the insurer, as well as layering of additional fees and expenses to the benefit of the external investment manager. The NAIC continues to focus on disclosure as a key component of regulatory oversight. It is also emphasizing the need to carefully review investment management agreements.

Over the last few decades, outsourcing has been an increasing trend within all financial services industries. From a supervisory perspective one of the challenges that is then created is the ability of the supervisor to ”reach into” the outsourced provider and obtain information, carry out examinations and ensure that risks are properly mitigated. When outsourcing first started to occur, many Boards and companies seemed to have the view that they had ‘removed’ risk from their operations at the same time they were achieving cost savings. Of course, neither is necessarily the case and over time, supervisors have been pushing Boards and management to recognise that risks still exist – they may have altered in nature or detail but they clearly remain there. For example, the possibility of a business interruption even may have been reduced (one would hope at least) by outsourcing to a more robust provider with a greater capacity for live back up recovery facilities. However, there is a risk of lack of control over system improvements or customisation or, potentially recovery for any damages that may occur as a result of an event (insurance is not a perfect mitigant). So outsourcing of any business operation of an insurer is something where supervisors need to be making sure that Boards and management properly focus on the costs and benefits from such arrangements and that there is a continuing proper, robust and evolving risk management focus on such arrangements by the insurer.

8. Areas of Solvency II which have an impact on non-EEA jurisdictions

In January 2016, Solvency II will come into effect. EIOPA has hence been asked to provide some perspective on the implications of this new European regulatory regime on third party jurisdictions.

1. **Group supervision of European Economic Area (EEA) groups and cooperation in colleges**

   - Cooperation between the group supervisor and other relevant supervisors takes place within a college of supervisor, which is obligatory for EEA groups under Solvency II. Cooperation in colleges should involve relevant non-EEA supervisory authorities, for the purpose of efficient information exchange. In practice, the colleges for all EEA groups already operate, but some of the aspects of their functioning will change after implementation of Solvency II, e.g. scope of information exchange, coordination arrangements will be signed for all colleges, there will be clear rules of membership and participation in colleges.
   - Non-EEA supervisory authorities may be approached to sign coordination arrangements, describing the rules of cooperation in colleges. EIOPA elaborated a coordination arrangements template, which should be adapted to the specificities of each group and its college.
   - The scope of information to be exchanged depends on equivalence of professional secrecy provisions of the relevant non-EEA jurisdiction. This issue is addressed inter alia by EIOPA Guidelines on operational functioning of colleges.
   - Group supervision of European groups involves risks to which all undertakings are exposed, including those situated outside the EEA. It does not have a direct impact on those undertakings, but as the effect they will need to provide relevant

information to the parent undertaking. The way of including related undertaking in the calculation of group solvency depends on the method applied: default method based on consolidated accounts or an alternative method of deduction and aggregation. In the second case, it also matters if a third-country in which a related undertaking is situated is recognised as equivalent or not under Article 227 of the Solvency II Directive (please see the explanation below).

2. Equivalence

The Solvency II Directive recognizes that the insurance industry is a fully internationalised business. To avoid unnecessary duplication of regulation, the Directive introduced the concept of equivalence. Equivalence decisions are mutually beneficial to EEA (re)insurers and third country (re)insurers. They promote open international insurance markets, whilst simultaneously ensuring that policy holders are adequately protected globally.

2.1. Article 227 – Group solvency

- In case of equivalence, when deduction and aggregation method is used, the SCR and the own funds eligible to satisfy that requirement as laid down by the third country concerned can be taken into account when calculating group solvency. This relieves the related undertaking in the third country concerned from having to recalculate its data in conformity with the Solvency II requirements.
- So far Switzerland has been recognised as equivalent, and Australia, Bermuda, Brazil, Canada, Mexico and the United States as provisionally equivalent (which provides the same benefits as equivalence). A decision on provisional equivalence for Japan is currently under scrutiny by the European Council and European Parliament.
- EIOPA issued an opinion which provides advice on taking into account the rules of equivalent third countries in calculation of group solvency.

2.2. Article 260 – Group supervision

- In case of equivalence, when there is a sub-group at the EU level, EU supervisory authorities should rely on equivalent third country group supervision. This avoids third country international groups being subject to the unnecessary burdens that would arise from dual group supervision.
- Guideline 5 of EIOPA Guidelines on group solvency further specifies in what cases EU supervisors should rely on the group supervision exercised by the third-country supervisory authorities and exempt the third-country group from group supervision at the ultimate level of the European Union.
- So far Switzerland has been recognised as equivalent. A decision on Bermuda (which will also upgrade their status under Article 227 to fully equivalent) is currently under scrutiny by the European Council and European Parliament.

2.3. Article 172 - Reinsurance

- Reinsurance contracts with equivalent third country reinsurers will be treated in the same manner as those concluded with EU reinsurers. It also prohibits Member States to require the pledging of assets to cover unearned premiums and outstanding claims or the location of assets within the Community.

- This is likely to increase the attractiveness for EEA insurers of entering into reinsurance arrangements with undertakings in third countries whose solvency regime has been deemed equivalent.
- So far Switzerland has been recognised as equivalent. Decisions on Bermuda and Japan are currently under scrutiny by the European Council and European Parliament.

3. Operation in the EEA in form of a branch

- Solvency II regulates supervision of branches of non-EEA insurance undertakings, which ensures that the way of treatment of those branches will be harmonised across EU member states. In this way the rules of third-country branches' operations are harmonised across the EU.
- EIOPA published in 2015 guidelines on supervision of branches of third-country insurance undertakings, whose aim is to ensure the same level of protection of policyholders of a branch of a third-country insurance undertaking as if they were dealing with an insurance undertaking situated in the EU whether in its home Member State or through a branch under Directive 2009/138/EC.