BMA
BERMUDA MONETARY AUTHORITY

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Bermuda Insurance-Linked Securities (ILS) Market Report

SUMMARY

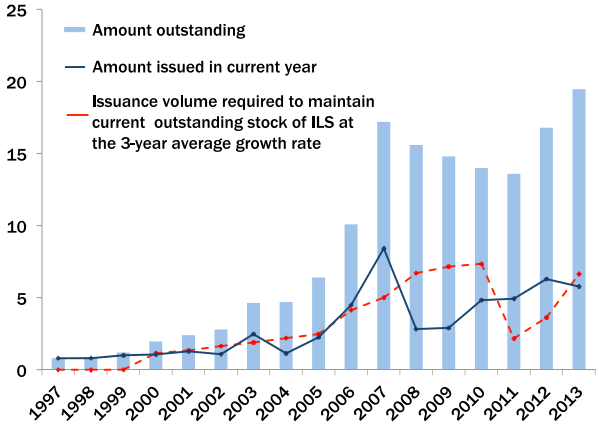
Bermuda has become a leading jurisdiction for the creation, listing and servicing of insurance-linked securities (ILS), accounting for more than 62% of global issuance during the quarter. Total global issuance more than doubled quarter-on-quarter (q/q) to $1.7 billion (up from $0.8 billion in Q3 2012), significantly exceeding the $136 million worth of deals maturing during the quarter. In Bermuda, a growing number of insurers use Special Purpose Insurers (SPIs), which underwrote $1.1 billion (up from $0.5 billion in Q3 2012) of various property and catastrophe risks via seven ILS transactions (out of a total of 10 deals globally). The Bermuda Monetary Authority (BMA) licensed nine SPIs during the quarter. The positive net issuance during the quarter - both globally and in Bermuda - suggests a continuous expansion of the ILS market over the medium term.

The outstanding amount of ILS issued in Bermuda thus far represents more than 40% of the world-wide stock of ILS. Given the rising demand for cost-efficient (re)insurance capacity, the global amount of outstanding ILS reached a record $19.5 billion at the end of the quarter (Figure 1), with $8.0 billion of this total having been sponsored by Bermuda-based SPIs. Since 2010, the BMA has licensed 87 SPIs, covering predominantly North American and European perils.

Bermuda is also host to foreign ILS listings, which augment the depth of the secondary market. At the end of Q3 2013 the Bermuda Stock Exchange (BSX) reported a total of 63 ILS notes and programmes. There are 34 ILS deals (with 43 tranches) listed, with an aggregate nominal value of approximately $7.9 billion,* of which $560 million (or 7%) is issued by non-Bermuda entities. The BSX listed seven ILS transactions for Bermuda-based SPIs during the quarter.

The current issuance trend confirms Bermuda's leading role in meeting the growing demand for diversified investment risk against the background of dynamic financial innovation in a rapidly expanding ILS market.

Figure 1. ILS Capacity Issued and Outstanding by Year (In US$ billion)



Source: Swiss Re, Artemis, and BMA staff calculations.

* Notes programmes are excluded from the number of ILS deals reported in this publication, as they have no nominal value. Also, for the purposes of this Report, the aggregate nominal value of listed ILS does not include ordinary shares issued by (re)insurance funds.

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PRIMARY MARKET: GLOBAL MARKET OVERVIEW

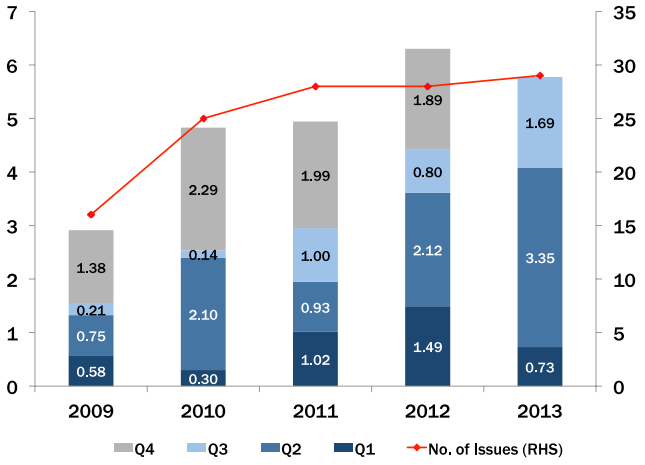
The market for Alternative Risk Transfer (ART) instruments has grown considerably as insurers seek opportunities via new business models. Increasingly, industry participants are expanding their business activities in order to capitalise on fee income and satisfy demand for cost-efficient (re)insurance capacity. Some of the approaches adopted by firms include expanding their asset management services for sophisticated investors, adopting alternative collateral management solutions, and/or establishing sidecars as well as creating special-purpose insurers (SPIs) or segregated accounts companies.

The majority of specialised insurance companies support the issuance of ILS, which have become the hallmark of an expanding ART market. Sponsors of ILS have been attracted by the flexibility of creating specialised pools of insured risks and the ability to fund underwriting exposures from a wide spectrum of sophisticated investors at price levels that are competitive with traditional reinsurance. With the development of innovative ILS structures, it has now also become possible to issue more flexible instruments addressing more efficiently the protection needs of sponsoring cedants. Some reinsurers have created capital markets divisions for ILS issuance to increase capacity. However, the market is still dominated by repeat issuers, which has inhibited greater supply-side diversity.

Capital market investors have supported the development of ILS in the search for higher yields and greater portfolio diversification, which has broadened the base of capital suppliers to the reinsurance market. Investors in ILS have a wider choice of high-quality investments at their disposal, whose market valuation engenders greater overall efficiency and liquidity of capital markets. However, it remains to be seen if the current demand will be sustainable when yields from traditional assets eventually normalise. Given current economic conditions, indications are that the cost-efficient structure of ILS, which incorporate the benefits of low risk premia and facilitate a reduced cost of capital, has served to bolster recent issuance activity.

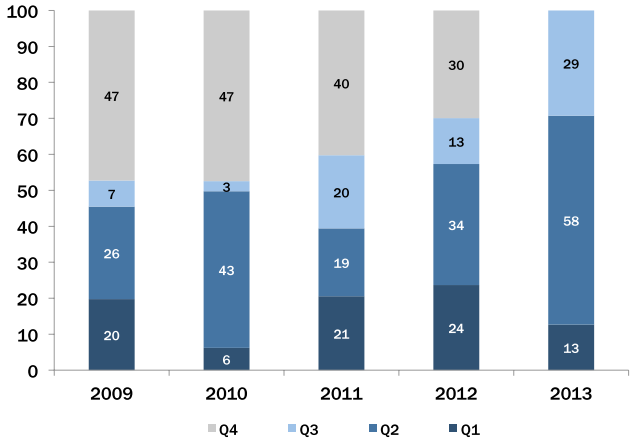
The global ILS market has grown significantly, after issuance more than doubled q/q during the quarter (Figure 2).[1] The net amount of outstanding ILS reached $19.5 million at end-Q3 2013 after ten securities totalling $1.7 million were issued during the quarter (two bonds, with a notional amount of $140 million, matured during the period). In contrast, only four new deals for a total of $804 million were placed during the same period last year. The issuance volumes during the quarter declined relative to the previous quarter (down from $3.4 million to $1.7 million), which is consistent with past experience (Figures 2 and 3). The first and third quarters of each year have historically been the least active periods in terms of number of ILS deals completed and total coverage provided. During the second quarter, ILS sponsors traditionally access new capital just prior to the North Atlantic hurricane season. The last quarter is usually very active as reinsurers approach the 1st January renewal period and seek to increase their capacity via capital markets.

Figure 2. Quarterly ILS Issuance by Deal Volume (In US$ billion) and Number of Deals – Global Market, 2009 – 2013



Source: Artemis and BMA staff calculations.

Figure 3. Seasonal Breakdown of Global ILS Issuance (Deal Volume), 2009 – 2013 (In percent)



Source: Artemis and BMA staff calculations.

[1] Note that the quarter-on-quarter (q/q) change compares the change in a value between the current quarter and the corresponding quarter of the previous year, e.g., Q1 2013 and Q1 2012.

Table I: Summary ILS Issuance in Selected Jurisdictions (Total Issued Deal Volume)

ILS Issuance by Country of Risk (In US$ billion)					
Country	**2009**	**2010**	**2011**	**2012**	**2013**
Bermuda	–	1.2	1.6	2.5	3.5
Cayman Islands	2.5	2.7	2.0	3.5	1.8
Ireland	0.4	0.7	0.9	0.2	0.5
United States	–	0.2	0.4	0.1	–
Other	–	0.04	–	–	–

Table II: Summary ILS Issuance in Selected Jurisdictions (Number of Deals)

Number of Issuances by Country of Risk (SPV)					
Country	**2009**	**2010**	**2011**	**2012**	**2013**
Bermuda	0	3	8	11	19
Cayman Islands	13	16	12	15	8
Ireland	3	4	6	1	2
United States	–	1	2	1	–
Other	–	1	–	–	–

Table III: Triggers in ILS Issuance in Selected Jurisdictions (Total Issued Deal Volume, Q1 2009 – Q3 2013)

Trigger (In US$ billion)	Bermuda	Cayman Islands	Ireland	United States
Indemnity	4.0	5.9	–	–
Industry Loss Index	3.2	2.6	2.2	0.5
Longevity Index	–	0.1	–	–
Medical benefit ratio index	–	0.6	–	–
Modeled Loss	0.6	0.6	–	–
Mortality Index	–	0.7	0.2	–
Multiple	–	0.6	0.2	0.2
Parametric	0.6	0.6	–	–
Parametric Index	–	0.7	0.2	0
Unknown	0.3	0.1	–	–

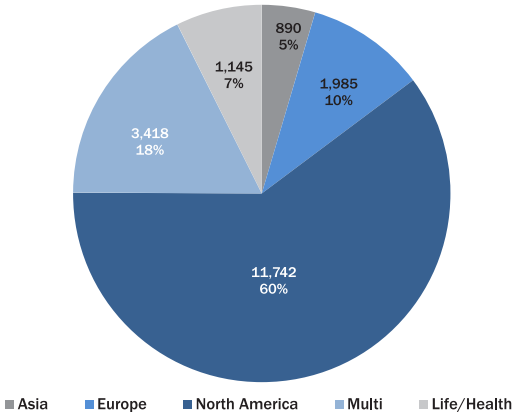
Table IV: Triggers in ILS Issuance in Selected Jurisdictions (Outstanding Deal Volume, end-Q3 2013)[2]

Trigger (In US$ billion)	Bermuda	Cayman Islands	Ireland	United States
Indemnity	3.6	4.0	–	–
Industry Loss Index	2.8	1.6	2.0	0.5
Longevity Index	–	0.1	–	–
Medical benefit ratio index	–	0.6	–	–
Modeled Loss	0.6	0.1	–	–
Mortality Index	–	0.7	0.2	–
Multiple	–	0.5	0.1	0.2
Parametric	0.6	0.3	–	–
Parametric Index	–	0.5	0.1	0
Unknown	0.3	0.1	–	–

Despite the surge of issuances over the last three years, the ILS market remains small relative to traditional (re)insurance business. The ILS market represented only about 15% of total underwriting capacity of (re)insurers globally last year.[3] Since 2009, over 125 ILS have been issued. Aside from Bermuda, jurisdictions with significant insurance securitisation activity in this area include the Cayman Islands and Ireland.

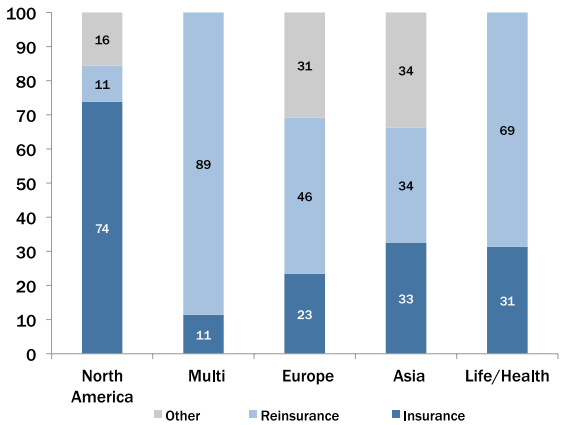
Most ILS cover North American perils, which accounted for 60% of the total outstanding volume (Figures 4 and 5).[4] Primary underwriters sponsored 74% of total coverage for those bonds ($8.7 billion). In contrast, reinsurers sponsored 89% of the volume for multi-regional bonds ($3.0 billion), which comprises portfolios that include catastrophic events in two or more regions, and 46% of that for Europe ($0.9 billion). The multi-region category represented 18% of the outstanding ILS bonds. The remaining categories accounted for approximately 22% of the market by volume. This may be explained by the fact that the majority of primary insurers in the ILS market are U.S.-based firms, while European sponsors of ILS tend to be reinsurers. Coverage for Asian catastrophes is evenly split between insurers and reinsurers, with the bond volume for the region representing only 5% ($890 million) of the overall ILS bond market.[5]

Figure 4. Total Outstanding Volume of ILS by Region/Peril, 2009 – 2013 (In US$ million)



Source: Artemis and BMA staff calculations.

Figure 5. Coverage per Region/Peril by ILS Sponsor Type, 2009 – 2013 (In percent)



Source: Artemis and BMA staff calculations.

[2] Rounded to one decimal place; therefore, Bermuda sums to $7.9 rather than $8.0 as reported in the summary on the first page of the report.
[3] Note that global reinsurer capital totalled a record $505 billion at end-2012, an increase of 11% ($50 billion) relative to end-2011, according to the latest AON Benfield Aggregate (2013) report. This calculation is a broad measure of capital available for insurers to trade risk and includes both traditional and non-traditional forms of reinsurance capital. Capital reported by the ABA group of 31 leading reinsurers increased by 12% ($33 billion) to $313 billion, driven primarily by $29.5 billion of net income and $15.9 billion of unrealised capital gains. Net premiums written increased to $121 billion during 2012 (up by 4% relative to 2011).
[4] The proportion of coverage for this region relative to the total market is actually higher given that most multi-regional bonds include U.S. events.
[5] The 'Other' category relates to insurance pools/associations.

PRIMARY MARKET: DOMESTIC ISSUANCE

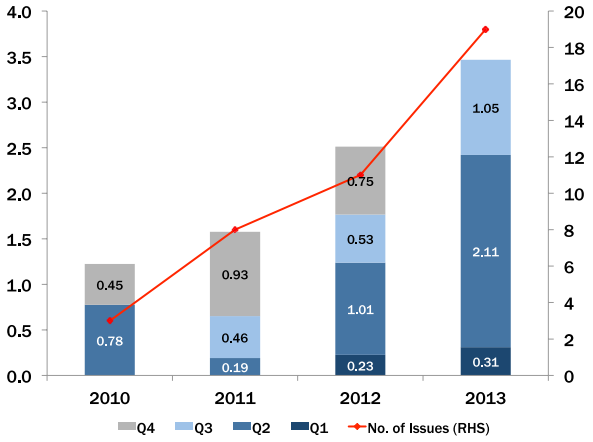
As a premier jurisdiction for the creation, listing and servicing of ILS, Bermuda has seen a surge of issuance, which primarily funds property and casualty (P&C) underwriting risks of firms that are licensed as SPIs under the BMA's regulatory framework (Box 1). Rising SPI registrations confirm the leading role played by Bermuda against the background of dynamic financial innovation and a sophisticated regulatory and listings environment. Given the current low-interest rate environment and growing demand for diversified investment risk, the ILS market is expected to expand significantly.

ILS issuances by companies domiciled in Bermuda have kept pace with gains made in the overall market. Net issuance more than doubled from 2010 through 2012 (Figure 6), and the issuance in 2013 to date confirms the historical experience of rising issuance volume. ILS activity nearly doubled q/q, consistent with the overall market, after a year of strong growth. During the third quarter, Bermuda-based SPIs underwrote $1.1 billion of various P&C risks via seven ILS transactions covering mostly North American and European perils. At the same time, the BMA licensed 9 new SPIs.

Through the first three quarters of the year, the total issuance of ILS by Bermuda-based SPIs stood at $3.5 billion. Slightly over 13% of the issuance ($455 million) stems from three of the SPIs that were licensed in 2012;[6] conversely, 16 of the 29 SPIs that were licensed in 2013 accounted for the total ILS-based underwriting of $3.0 billion of various P&C risks, of which fourteen were listed on the BSX.

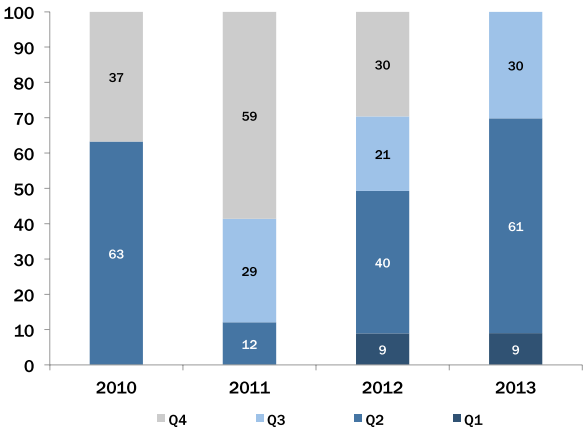
The BSX accounted for over 40% of the global market capitalisation of ILS at the end of Q3 2013. A total of 34 ILS (comprising 43 tranches) are listed on the BSX with an aggregate nominal value of approximately $7.9 billion, of which $560 million (or 7%) are issued by non-Bermuda entities. In May 2012, the BSX listed Florida Citizens as sponsors of a $750 million CAT bond, the largest on record.

Figure 6. Quarterly ILS Issuance by Volume and Number of Deals (In US$ billion) – Bermuda only



Source: Artemis and BMA staff calculations.

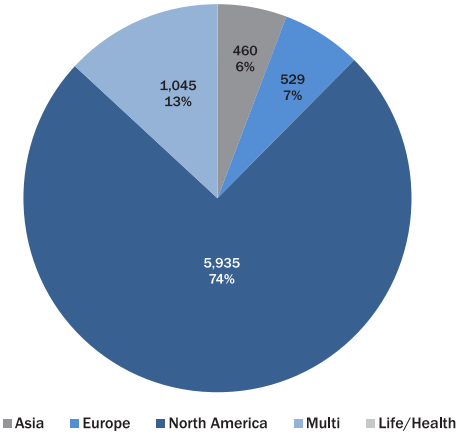
Figure 7. Seasonal Breakdown of Bermuda-issued Deals (Deal Volume), 2010 – 2013 (In percent)



Source: Artemis and BMA staff calculations.

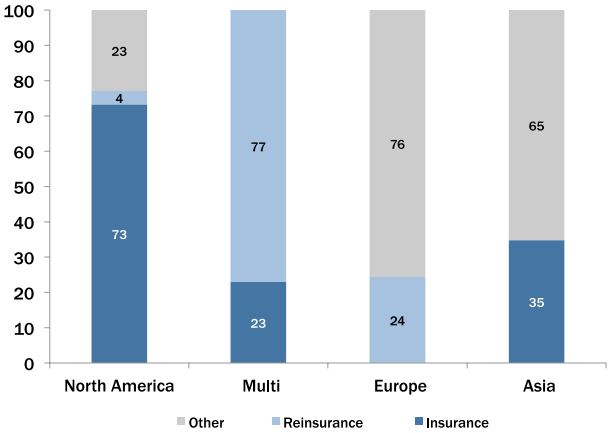
[6] In 2011, the BMA licensed 23 new SPIs (which represents a significant increase from 8 in 2010 and 1 in 2009). There were 27 SPIs licensed in 2012.

Figure 8. Total Outstanding Volume of Bermuda-issued Deals by Region/Peril (In US$ million)



Source: Artemis and BMA staff calculations.

Figure 9. Coverage per Region/Peril by ILS Sponsor Type for Bermuda-issued Deals, 2010 – 2013 (In percent)



Source: Artemis and BMA staff calculations.

The Bermuda market shows a specialisation in CAT bonds, with the majority of transactions using more conservative trigger types compared to other jurisdictions. North American perils by direct underwriters claim the lion's share of outstanding ILS (Figure 8). While there is some activity in life securitisation, most issuance is motivated by P&C underwriting given the large footprint of the business line in Bermuda, which also explains the preponderance of non-parametric, indemnity-based ILS triggers. Primary insurers sponsored 73% of total coverage for those bonds ($4.3 billion). In contrast, reinsurers ceded 77% and 24% of multi-region and European risks, respectively. Life/health securitisation is conspicuously absent thus far (Figure 9). Tables I-IV provide a summary of ILS issuance by volume and number of deals in key jurisdictions as well as the distribution of trigger types.

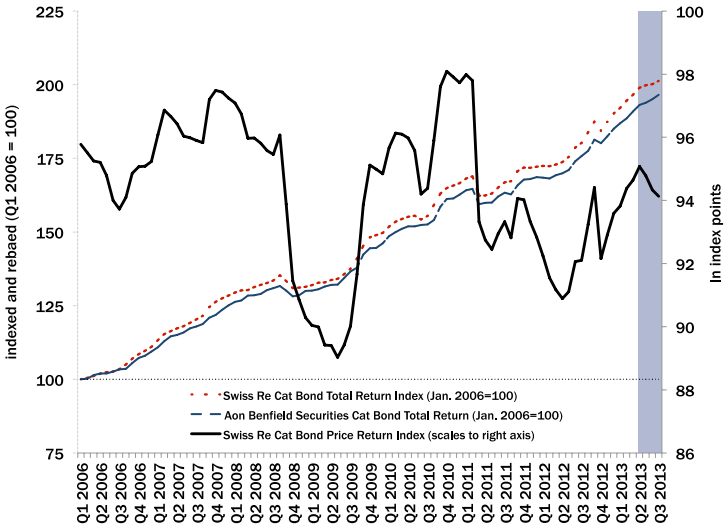
Bermuda is also an important jurisdiction for the demand side of the ILS market. According to Swiss Re (2012), as of end-2011, Bermuda represented 13% of the global investor base for ILS (44% in Europe, 36% in the United States, 5% in Canada, 1% in Japan and 1% in Australia), and the global insurance-linked securities investor base-type is 71% dedicated, 20% money manager, 6% reinsurer, 2% hedge fund, and 1% insurer.

SECONDARY MARKET: PRICE INDICES

Given the large footprint of P&C insurance risk in the ILS market, this section reviews the overall market performance of outstanding CAT bonds based on the three most commonly used benchmark indices.

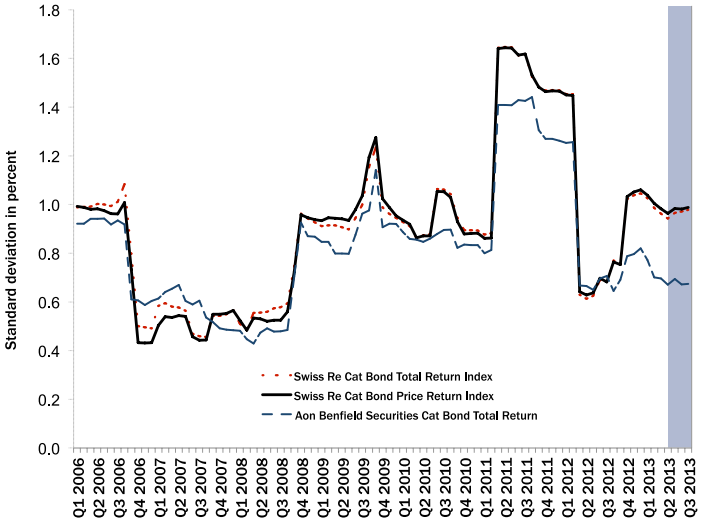
The overall performance of the CAT bond market was very positive during the quarter. The recent rise of nominal returns reflects seasonal pricing effects of hurricane exposed bonds as general spread tightening in the middle of the Atlantic hurricane season has lifted the secondary market price indices of CAT bonds (Figure 10). The strong performance also testifies to the rising demand for CAT bonds as an alternative investment product as spreads have continued to tighten. This trend is remarkable given the prospect of a near-term phasing out of the accommodative monetary policy in the United States, which would imply higher returns from traditional investments and an associated reduction in demand for ILS. However, during the last 12 months demand for CAT bonds has outstripped supply as a result of a considerable influx of capital into the market for short-dated ART investments, and led to resilient pricing for most of the season. This has helped CAT bond prices climb further, almost returning to highs seen in early 2011, which also implies a positive total return of the outstanding CAT bond market during the period.

Figure 10. ILS Total Return and Price Return Benchmark Indices, 2006 – 2013 (In index points)



Source: Bloomberg LP and BMA staff calculations.

Figure 11. ILS Total Return and Price Return Benchmark Indices: Annualised Return Volatility, 2006 – 2013 (In percent)



Source: Bloomberg LP and BMA staff calculations.

The risk-return trade-off of CAT bonds has become more favourable. Table V below provides a summary of selected indicators of market performance over the last seven quarters (Q1 2012 to Q3 2013) comparing the recent development of the Swiss Re Cat Bond Total Return Index and the Aon Benfield Securities Cat Bond Total Return Index as the global market benchmarks.[7] Since the end of June, the two indices recorded a positive quarterly return of 1.32% (up from 0.61% during the previous quarter) and 1.04% (up from 0.73%), respectively. The annualised return volatility of each index declined marginally to 0.95% and 0.65% during the quarter but increased compared to the same quarter a year ago. Figure 10 shows the quarterly closing levels of the two total return indices by Swiss Re and Aon Benfield, which illustrate the valuation gain of a broad CAT portfolio since Q1 2006 (as base year), and the corresponding price return index as suitable relative benchmarks to other investments. Figure 11 shows the annualised return volatility over a 12-month rolling window. While capital gains have been positive since 2006, prices at end Q3 2013 were still below the peak levels achieved in early 2011 despite a steady appreciation over the last 12-15 months. Figure 11 highlights that during the same time, the annualised return volatility (as a measure of risk) dropped significantly (but remained high relative to the same quarter a year ago as indicated by the positive value of normalised squared returns).

Table V. Selected ILS Market Performance Indicators, Q1 2012 – Q3 2013

Selected ILS Market Performance Indicators
In percent unless indicated otherwise

	2012				2013		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Price Return 1/							
Swiss Re Cat Bond Price Return Index	0.15	1.10	1.61	0.50	1.10	0.61	1.32
Aon Benfield Securities Cat Bond Total Return	-0.60	0.33	0.85	-0.28	0.37	-0.11	0.60
Bermuda Stock Exchange Insurance Index	0.12	0.92	1.39	0.69	1.03	0.73	1.04
Return Volatility							
Annualised Standard Deviation 2/							
Swiss Re Cat Bond Price Return Index	1.18	0.64	0.74	1.04	0.99	0.96	0.95
Aon Benfield Securities Cat Bond Total Return	1.18	0.65	0.73	1.05	1.01	0.98	0.97
Bermuda Stock Exchange Insurance Index	1.06	0.67	0.68	0.80	0.72	0.68	0.65
Normalised Squared Returns (In standard deviations) 3/							
Swiss Re Cat Bond Price Return Index	-0.44	0.53	1.11	0.59	-0.51	-1.13	0.38
Aon Benfield Securities Cat Bond Total Return	-0.36	-0.03	0.87	0.82	-0.52	-0.49	-0.12
Bermuda Stock Exchange Insurance Index	-0.42	0.34	0.94	0.24	-0.23	-0.70	0.27

Notes:
1/ quarterly average of month-on-month change of last prices.
2/ quaterly average of the 12-month standard deviation of the logarithmic returns of last prices.
3/ quarterly average of the 12-month moving average of squared month-on-month changes of last prices, normalised over a rolling window of 12 months; a positive (negative) value indicates above (below) average performance conditional on return volatility.

Source: Bloomberg LP and BMA staff calculations.

[7] The Swiss Re indices were launched in June 2007 and comprise a series of performance indices constructed to track the price return and total rate of return of performance of all outstanding dollar-denominated CAT bonds. The main index is divided into 18 different sub-indices, of which the most important ones are "Single-Peril U.S. Wind Cat Bonds", "Single-Peril California Earthquake Cat Bonds" and "BB Cat Bonds" (Standard & Poor's-rated). The index is based on Swiss Re pricing indications only and base-weighted back to January 2002. Three years after Swiss Re, Aon Benfield Securities, the securities and investment banking operation of Aon Benfield, launched its own ILS indices in 2010. These indices are base-weighted back to December 2000 and track the performance of CAT bonds in four different baskets: "All Bond", "BB-rated Bond", "U.S. Hurricane Bond", and "U.S. Earthquake Bond".

BERMUDA: STRUCTURAL FACTORS AND SUPERVISORY REGIME

A sophisticated legal system, a strong regulatory framework, a developed infrastructure as well as the local presence of highly-skilled human capital underpin Bermuda's reputation as a quality jurisdiction, and domicile of choice for insurance, reinsurance and financial services' companies. Bermuda is known for its innovative (re)insurance industry, which has shown remarkable resilience during the financial crisis and has recorded a strong performance over the recent past amid rising levels of capacity.

Bermuda has emerged as a leader in the global ILS market only four years after implementing a specific regulatory framework to facilitate the formation of such instruments through a new license class for insurers. In 2009, the Bermuda Monetary Authority introduced the concept of a special purpose insurer (SPI), following passage of the Insurance Amendment Act 2008. The emergence of the ILS market has been facilitated in part by a large investor base and the existing (re)insurance expertise in Bermuda, which hosts one of the world's largest reinsurance markets with some 1,400 firms and total assets of more than $500 billion at end-2012. The Bermuda market is also host to the creation of sidecars, industry loss warranties (ILWs), and collateralised reinsurance vehicles.

BOX 1: REGULATORY FRAMEWORK FOR ILS IN BERMUDA

The following information provides a brief overview of the legislation governing the process of forming special purpose insurers as issuers of ILS in Bermuda.[8] For this purpose, SPIs are structured as "bankruptcy remote" entities, which are required to be fully-funded and independent companies that accept pre-specified insurance risk from, and which are managed by, a sponsoring (re) insurance company.[9] The regulatory focus during the licensing process of SPIs is on the assessment of the quality of the sponsoring entity and the complete collateralisation of the policy limits of insurance risk ceded to the SPI (as well as the extent to which the collateralisation is impacted by the business plan of the SPI). Moreover, investments in SPIs are restricted to sophisticated participants.

The characteristics of collateralisation and investor eligibility are defined in the BMA Guidance Note No. 20 – Special Purpose Insurers:[10]

Collateralisation - To be fully-funded, an SPI will be expected to: i. confirm full disclosure to the cedant or insured of the fact that the maximum reinsurance recovery from the SPI is limited to the lower of the stated contract limit or the available assets of the SPI; ii. ensure that, under the terms of any debt issue or other financing mechanism used to fund its (re)insurance liabilities, the rights of providers of that debt or other financing are fully subordinated to the claims of creditors under its contracts of (re)insurance; iii. enter into contracts or otherwise assume obligations which are solely necessary for it to give effect to the (re)insurance special purpose for which it has been established; and iv. ensure that, to the extent that more than one (re)insurance contract is in place within the SPI, each of the (re)insurance contracts is structured so that the SPI meets the fully funded requirements individually for each contract.

Sophisticated Investors - Sufficiently sophisticated participants [for the purposes of SPI licensing] satisfy one or more of the criteria below: i. high income private investors; ii. high net worth private investors; iii. sophisticated private investors; iv. investment funds approved by the Authority under the Investment Funds Act (IFA); v. bodies corporate, each of which has total assets of not less than $5 million, where such assets are held solely by the body corporate or held partly by the body corporate and partly by one or more members of a group of which it is a member; vi. unincorporated associations, partnerships or trusts, each of which has total assets of not less than five million dollars, where such assets are held solely by such association, partnership or trust or held partly by it and partly by one or more members of a group of which it is a member; vii. corporate bodies, all of whose shareholders fall within categories i.-iii.; viii. partnerships, all of whose members fall within categories i.-iii.; ix. trusts, all of whose beneficiaries fall within categories i.-iii.; x. any company quoted on a recognised stock exchange; and xi. any party deemed to have sufficient knowledge and experience in financial and business matters to make them capable of evaluating the merits and risks of the prospective investment.

Incorporation and Registration Process - The process of establishing an SPI is substantially similar to that for "conventional" commercial and captive insurers.[11] Key elements of the "Licensing Application" include: i. a business plan, which provides the fundamental elements of the proposed transaction and, importantly, evidences the fully-funded and sophisticated nature of the business; ii. drafts of relevant transaction documents (such as reinsurance agreements and collateral trust agreements); iii. a completed "SPI Checklist" (a standard BMA form); and iv. relevant service provider acceptance letters.

[8] The material presented is not intended to be a substitute for professional legal advice.
[9] Prior to the SPI legislation, ILS were not listed in Bermuda.
[10] Full details of the relevant legislative provisions and supervisory guidance for SPIs may be found at http://www.bermudalaws.bm/Laws/Consolidated%20Laws/Insurance%20Act%201978.pdf and http://www.bma.bm/document-centre/policy-and-guidance/INSURANCE%20II/Guidance%20Note%20No.%2020%20-%20Special%20Purpose%20Insurers.pdf.
[11] The BMA maintains a streamlined, expedited application process for SPIs wishing to seek an exchange listing for ILS, asset-backed promissory notes, and other financial instruments.

GLOBAL ILS ISSUANCES

Table VI. Transaction Overview of Global ILS Issuance, Q3 2012—Q3 2013

	Sponsor	Short Name	Issue Date	Maturity Date	Amount Issued ($ million)	Region/Peril Covered	Trigger Type	Country of Issuance (SPI)	BSX Listings
Q3 2012	Munich Re	**QUEEN STREET VI LTD**	17-Jul-12	9-Apr-15	100	Multi	Industry Loss Index	**Bermuda**	✔
	Swiss Re	VITA CAPITAL V	30-Jul-12	15-Jan-17	275	Life/Health	Mortality Index	Cayman Islands	
	California Earthquake Auth.	**EMBARCADERO RE**	31-Jul-12	7-Aug-15	300	North America	Indemnity	**Bermuda**	✔
	Hannover Re	**EURUS III LTD**	13-Sep-12	7-Apr-16	129	Europe	Industry Loss Index	**Bermuda**	✔
Q4 2012	Swiss Re	MULTICAT MEX 12-1	12-Oct-12	4-Dec-15	315	North America	Parametric	Cayman Islands	
	Swiss Re	MYTHEN RE LTD 12-2	5-Nov-12	5-Jan-17	200	Multi	Multiple	Cayman Islands	
	Munich Re	**QUEEN STREET VII LTD**	31-Oct-12	8-Apr-16	75	Multi	Industry Loss Index	**Bermuda**	✔
	SCOR	ATLAS RE VII LTD	1-Nov-12	7-Jan-16	228	Multi	Industry Loss Index	Ireland	
	USAA	RESIDENTIAL RE 2012	30-Nov-12	6-Dec-16	400	North America	Indemnity	Cayman Islands	
	Zurich American Ins.	**LAKESIDE RE III**	28-Dec-12	8-Jan-16	270	North America	Indemnity	**Bermuda**	✔
	National Union Fire Ins.	**COMPASS RE LTD**	31-Dec-12	8-Jan-15	400	North America	Industry Loss Index	**Bermuda**	✔
Q1 2013	Cincinnati Insurance	**SKYLINE RE TD**	23-Jan-13	23-Jan-14	61	North America	Indemnity	**Bermuda**	
	Aetna Life Ins. Co.	VITALITY RE IV LTD	23-Jan-13	9-Jan-16	150	Life/Health	Medical benefit ratio	Cayman Islands	
	Nationwide Mutual	CAELUS RE 2013	7-Mar-13	7-Mar-16	270	North America	Indemnity	Cayman Islands	
	Citizens Property Insurance	**EVERGLADES RE LTD**	28-Mar-13	28-Mar-16	250	North America	Indemnity	**Bermuda**	✔
Q2 2013	North Carolina JUA/IUA	**TAR HEEL RE LTD**	9-Apr-13	9-May-16	500	North America	Indemnity	**Bermuda**	✔
	State Farm	**MERNA RE IV**	1-Apr-13	8-Apr-16	300	North America	Indemnity	**Bermuda**	✔
	Nationwide Mutual	CAELUS RE 2013 S2	4-Apr-13	7-Apr-17	320	North America	Indemnity	Cayman Islands	
	Turkish Cat. Insurance Pool	**BOSPHORUS 1 RE LTD**	25-Apr-13	3-May-16	400	Europe	Parametric	**Bermuda**	✔
	Allstate	**SANDERS RE LTD 2013**	3-May-13	5-May-17	350	North America	Industry Loss Index	**Bermuda**	
	Louisiana Citizens	PELICAN RE LTD 2013	8-May-13	15-May-17	140	North America	Indemnity	Cayman Islands	
	Florida Municipal Ins. Trust	**SUNSHINE RE LTD**	10-May-13	9-May-16	20	North America	Indemnity	**Bermuda**	
	American Coastal Ins. Co.	**ARMOR RE LTD 2013**	14-May-13	14-May-14	183	North America	Indemnity	**Bermuda**	✔
	Travelers	LONG POINT RE III 2013	16-May-13	18-May-16	300	North America	Indemnity	Cayman Islands	
	Allianz Argos 14 GmbH	**BLUE DANUBE II LTD**	22-May-13	23-May-16	175	North America	Modelled Loss	**Bermuda**	✔
	USAA	RESIDENTIAL REINS 2013	31-May-13	6-Jun-17	300	North America	Indemnity	Cayman Islands	
	Unknown cedant	**OAK LEAF RE LTD**	19-Jun-13	4-Jun-14	30	North America	Indemnity	**Bermuda**	
	Munich Re	**QUEEN STREET VIII RE**	26-Jun-13	8-Jun-16	75	Multi	Industry Loss Index	**Bermuda**	✔
	Assurant	IBIS RE II LTD	26-Jun-13	28-Jun-16	185	North America	Industry Loss Index	Cayman Islands	
	Amlin AG	**TRAMLINE RE II LTD**	27-Jun-13	7-Jul-17	75	North America	Industry Loss Index	**Bermuda**	✔
Q3 2013	Groupama	GREEN FIELDS II CAP*	1-Jul-13	9-Jan-17	364	Europe	Industry Loss Index	Ireland	
	AIG	**TRADEWYND RE LTD**	9-Jul-13	9-Jul-18	125	North America	Indemnity	**Bermuda**	✔
	Swiss Re	MYTHEN RE LTD 13-1	2-Jul-13	9-Jul-15	100	North America	Industry Loss Index	Cayman Islands	
	Renaissance Re & DaVinci Re	**MONA LISA RE LTD**	8-Jul-13	7-Jul-17	150	North America	Industry Loss Index	**Bermuda**	✔
	NJ Manufacturers Ins. Group	**SULLIVAN RE LTD**	23-Jul-13	6-Jul-16	60	North America	Indemnity	**Bermuda**	
	FMTAC	**METROCAT RE LTD**	30-Jul-13	5-Aug-16	200	North America	Parametric	**Bermuda**	✔
	AXIS Capital Holdings Ltd.	**NORTHSHORE RE LTD**	5-Aug-13	5-Jul-16	200	North America	Industry Loss Index	**Bermuda**	✔
	Texas Windstorm Ins. Assoc.	**KANE SAC**	6-Aug-13	5-Jun-14	10	North America	Indemnity	**Bermuda**	✔
	SCOR Global Life SE	ATLAS IX CAPITAL LTD	11-Sep-13	17-Jan-19	180	Life/Health	Mortality Index	Ireland	
	Zenkyoren	**NAKAMA RE LTD**	6-Sep-13	29-Sep-16	300	Asia	Indemnity	**Bermuda**	✔

Source: Artemis, Bermuda Stock Exchange, AON Benfield and BMA staff calculations.

BERMUDA: OVERVIEW OF ILS LISTINGS AT THE BERMUDA STOCK EXCHANGE (BSX)

Table VII. Transaction Overview of BSX-listed ILS Issuance, 2010 – 2013

	Sponsor	Short Name	Issue Date	Maturity Date	Amount Issued ($ million)	Region/Peril Covered	Trigger Type	Country of Issuance (SPI)
2010	Chartis	LODESTONE RE LTD	20-Dec-10	8-Jan-14	450	North America	Industry Loss Index	Bermuda
	Flagstone Re	MONTANA RE	22-Dec-10	8-Jan-14	210	Multi	Multiple	Cayman Islands
2011	Munich Re	QUEEN STREET II	22-Mar-11	9-Apr-14	100	Multi	Industry Loss Index	Ireland
	Munich Re	QUEEN STREET III	28-Jul-11	28-Jul-14	150	Europe	Industry Loss Index	Ireland
	California Earthquake Auth.	EMBARCADERO RE	1-Aug-11	4-Aug-14	150	North America	Indemnity	Bermuda
	Munich Re	QUEEN STREET IV	27-Oct-11	9-Apr-15	100	Multi	Industry Loss Index	Ireland
	National Union Fire Ins.	COMPASS RE LTD	1-Dec-11	8-Jan-15	575	North America	Industry Loss Index	Bermuda
2012	California State Comp. Ins.	GOLDEN STATE RE	8-Dec-11	8-Jan-15	200	North America	Modelled Loss	Bermuda
	Amlin	TRAMLINE RE LTD	22-Dec-11	8-Jan-15	150	Multi	Industry Loss Index	Bermuda
	California Earthquake Auth.	EMBARCADERO RE	6-Feb-12	13-Feb-15	150	North America	Indemnity	Bermuda
	Munich Re	QUEEN STREET V RE LTD	27-Feb-12	9-Apr-15	75	Multi	Industry Loss Index	Bermuda
	Allianz	BLUE DANUBE LTD	3-Apr-12	10-Apr-15	240	Multi	Modelled Loss	Bermuda
	Citizens Property Insurance	EVERGLADES RE LTD	30-Apr-12	30-Apr-14	750	North America	Indemnity	Bermuda
	Munich Re	QUEEN STREET VI LTD	17-Jul-12	9-Apr-15	100	Multi	Industry Loss Index	Bermuda
	California Earthquake Auth.	EMBARCADERO RE	31-Jul-12	7-Aug-15	300	North America	Indemnity	Bermuda
	Hannover Re	EURUS III LTD	13-Sep-12	7-Apr-16	129	Europe	Industry Loss Index	Bermuda
	Munich Re	QUEEN STREET VII LTD	31-Oct-12	8-Apr-16	75	Multi	Industry Loss Index	Bermuda
	Zurich American Ins.	LAKESIDE RE III	28-Dec-12	8-Jan-16	270	North America	Indemnity	Bermuda
	National Union Fire Ins.	COMPASS RE LTD	31-Dec-12	8-Jan-15	400	North America	Industry Loss Index	Bermuda
2013	Citizens Property Insurance	EVERGLADES RE LTD	28-Mar-13	28-Mar-16	250	North America	Indemnity	Bermuda
	State Farm	MERNA RE IV	1-Apr-13	8-Apr-16	300	North America	Indemnity	Bermuda
	North Carolina JUA/IUA	TAR HEEL RE LTD	9-Apr-13	9-May-16	500	North America	Indemnity	Bermuda
	Turkish Cat. Insurance Pool	BOSPHORUS 1 RE LTD	25-Apr-13	3-May-16	400	Europe	Parametric	Bermuda
	Allstate	SANDERS RE LTD 2013	3-May-13	5-May-17	350	North America	Industry Loss Index	Bermuda
	American Coastal Ins. Co.	ARMOR RE LTD 2013	14-May-13	14-May-14	183	North America	Indemnity	Bermuda
	Allianz Argos 14 GmbH	BLUE DANUBE II LTD	22-May-13	23-May-16	175	North America	Modelled Loss	Bermuda
	Munich Re	QUEEN STREET VIII RE LTD	26-Jun-13	8-Jun-16	75	Multi	Industry Loss Index	Bermuda
	Amlin AG	TRAMLINE RE II LTD	27-Jun-13	7-Jul-17	75	North America	Industry Loss Index	Bermuda
	Renaissance Re & DaVinci Re	MONA LISA RE LTD	8-Jul-13	7-Jul-17	150	North America	Industry Loss Index	Bermuda
	AIG	TRADEWYND RE LTD	9-Jul-13	9-Jul-18	125	North America	Indemnity	Bermuda
	FMTAC	METROCAT RE LTD	30-Jul-13	5-Aug-16	200	North America	Parametric	Bermuda
	AXIS Capital Holdings Ltd.	NORTHSHORE RE LTD	5-Aug-13	5-Jul-16	200	North America	Industry Loss Index	Bermuda
	Texas Windstorm Ins. Assoc.	KANE SAC	6-Aug-13	5-Jun-14	10	North America	Indemnity	Bermuda
	Zenkyoren	NAKAMA RE LTD	6-Sep-13	29-Sep-16	300	Asia	Indemnity	Bermuda

Source: Artemis, Bermuda Stock Exchange, AON Benfield and BMA staff calculations.

BERMUDA: REGISTRATION OF SPECIAL PURPOSE INSURERS (SPIs) AND NUMBER OF ISSUED ILS

The number of SPI registrations during the quarter increased considerably year over year, which supports a strong issuance pipeline for Bermuda-based ILS. The BMA licensed nine SPIs during Q3 2013, up from two registrations during the same time period last year. Based on the historical relationship between SPI registration and ILS issuance, the rising number of SPI registrations suggests a positive trajectory of ILS volumes for the remainder of the year. So far, Bermuda-based SPIs have issued 19 deals this year.

Table VIII. SPI Registrations and ILS issuance in Bermuda, 2010 - 2013

		SPI Registrations	Bermuda-based ILS
2010	Q1	2	0
	Q2	3	2
	Q3	—	—
	Q4	3	1
	Annual Total	8	3
2011	Q1	2	—
	Q2	8	1
	Q3	4	4
	Q4	9	3
	Annual Total	23	8
2012	Q1	4	2
	Q2	9	3
	Q3	2	3
	Q4	12	3
	Annual Total	27	11
2013	Q1	8	2
	Q2	12	10
	Q3	9	7
	Q4	—	—
	Annual Total	29	19
	Total	87	41

Source: BMA.

BACKGROUND: THE EVOLUTION OF INSURANCE-LINKED SECURITIES UNTIL 2012

The emergence of ILS has been one of the most significant developments in the (re)insurance sector during the recent past. These securities are products of the convergence between the insurance and capital markets and may be used in addition to, or as an alternative to, the purchase of reinsurance. More specifically, ILS structures represent ART instruments that enable insurance risk to be sold in capital markets, raising funds that can be used by issuers to pay claims arising from catastrophes and other loss events. The most prominent type of ILS are CAT bonds, which are fully collateralised debt instruments that pay off on the occurrence of defined catastrophic events. Although the ILS market is small relative to the overall (re)insurance market, it is significant when compared to the P&C sector of the traditional (re)insurance market.

Insurance securitisation increased from near zero in 1997 to about $15 billion in 2007 before falling sharply due to the financial crisis and a lack of investor appetite for life insurance transactions "wrapped" with monoline insurer guarantees.[12] Until 2007, ILS issuance was largely motivated by long-term business (i.e., life insurance) as a result of Regulation XXX and capital management objectives.[13] Since Regulation XXX securitisation depended on monoline wraps to achieve the "AAA" ratings required by investors, the financial challenges of monoline insurers has inhibited any significant growth of this segment of the ILS market since 2007. Natural catastrophe risk securitisation through CAT bonds also formed a key segment of the market and represented almost half of the ILS market when it peaked in 2007 at approximately $7 billion.[14] However, as with the life-related securitisation transactions, issuance dropped in early 2008 due to a surplus of traditional (re)insurance capacity, and dried up completely after the collapse of Lehman Brothers whose credit derivative contracts backed low-quality collateral underlying some of the transactions.[15] When these bonds were sharply downgraded, investors stepped back on fears that other CAT bonds were similarly exposed to credit risk.

Shortly after the height of the financial crisis, in February 2009, ILS issuance began to recover as issuers introduced more conservative collateralisation procedures and reinsurance markets tightened. Since then issuance volumes have steadily grown. If the trend continues it may not be long until the 2007 record issuance is surpassed. Outstanding natural ILS and sidecars peaked at just under $16 billion at end-2007 (Goldman Sachs, 2011). In comparison, global insured CAT losses were about $40 billion in 2010, and ranged from $10 billion to $30 billion between 1990 and 2009 (indexed to 2010 U.S. dollars), except for 2006, which spiked to over $100 billion (Swiss Re, 2011).

In 2012, the global ILS market continued to expand and amounted to more than $16 billion outstanding (up from $13.8 billion in 2011), with almost $6 billion in new issuances during the year. After relatively limited growth between 2010 and 2011, primary market activity picked up significantly in 2012 in spite of several natural disasters, including Superstorm Sandy in the United States.

[12] However, such transactions were more about regulatory arbitrage than actual risk transfer. Note that the present data do not include "life settlement" transactions (where whole life insurance policies are sold by the beneficiary or insured for an amount greater than its surrender value, but lower than the policy's face or insured value).
[13] The National Association of Insurance Commissioners' (NAIC) Model Regulation XXX requires insurers to establish heightened statutory reserves for term life insurance policies with long-term premium guarantees.
[14] CAT bonds were first created in the mid-to-late 1990s in response to a severe property catastrophe insurance crisis in the United State caused by Hurricane Andrew (1992, Florida and Louisiana) and the Northridge Earthquake (1994, California).
[15] For a typical CAT bond, issuance proceeds are invested in collateral to ensure that all interest, principal, and CAT-contingent payments can be made in a timely manner. The issuers of the four bonds in question opted to hold lower-quality collateral coupled with a total return swap with Lehman Brothers to protect against any collateral deterioration.

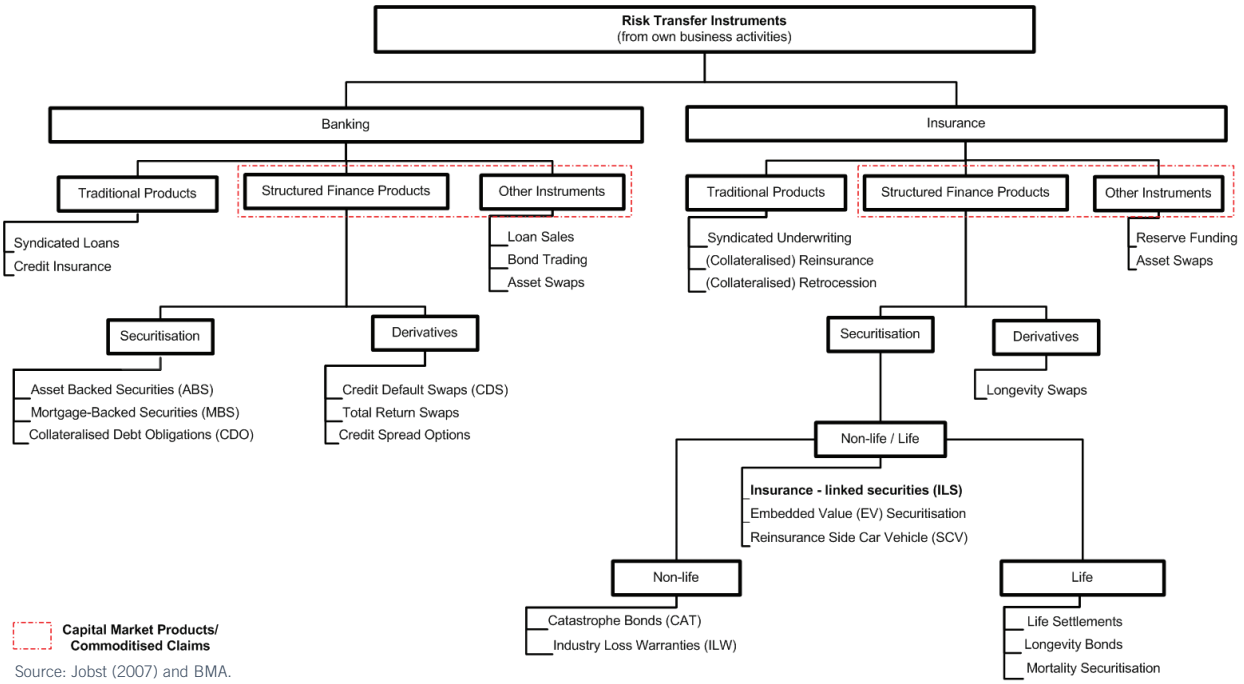
BACKGROUND: BENEFITS AND DRAWBACKS OF ILS

Benefits	
Ability to lock in multi-year protection	Multi-year capacity and pricing shelter the sponsor from cyclical price fluctuations in the reinsurance market (Note: traditional reinsurance contracts usually cover a one-year period while maturities for ILS are typically 3-5 years).
Reduced transaction costs	ILS imply economies of scale while offering the tax and accounting benefits associated with traditional reinsurance. Many ILS are issued as part of a bond series, meaning that the majority of the documentation and structure may be used for a successor bond with relatively modest supplementation.
Complementarity	ILS provide alternative options to traditional reinsurance diversify sources of capacity.
Collateralised coverage	ILS are fully collateralised risk transfer facilities and prevent the cedant from losing reinsurance in the event of insolvency, significantly mitigating concerns about counterparty credit risk.
“Pure play” investment risk	ILS isolate general business, credit rating risks, and insolvency risks of the sponsor.
Diversification	ILS have low correlations to traditional asset classes, high risk adjusted returns, low volatility compared to other asset classes and strong collateral structures.
Drawbacks	
Capital market sensitivity	ILS issuance is highly dependent on capital market demand and liquidity.
Lower capital requirements	ILS issuance involves the creation of a Special Purpose Vehicle (SPV), which issues securities, backed by the ceded premium from insured risk, that are distributed to investors. The capital relief stems from the reduction of premium-matched assets through the creation of reinsurance recoverables, which transfers the market risk from holding collateral assets to investors and removes solvency capital requirements from securitised insurance risk. Even though the optimisation of economic capital is desirable, capital relief from off-balance sheet transactions introduces new risks to the transactions that might not be fully reflected in valuation models and/or supervisory standards.
Fixed up-front costs	ILS typically have fixed up-front costs that can include legal fees, modelling costs, brokerage fees, ratings fees and bank fees. All of these can be cost intensive for small issuers.
Basis risk	ILS with parametric triggers could imply “basis risk”, which can be understood as the difference between the actual losses experienced by the sponsor and the payment received by the sponsor based on the design of underlying model and trigger structure. The basis risk from the model risk, trigger error or both would need to be evaluated by investor(s).
Competition for traditional reinsurance	ILS might drive traditional business away from reinsurers and lower premiums for traditional underwriting.
Regulatory arbitrage	ILS increase possibilities of regulatory arbitrage; repackaging of transferred portfolios of insurance risk may weaken transparency.
More complex supervision required	ILS introduce additional prudential considerations (e.g., security design, investment risks, collateralisation) and therefore lead to more complex supervision (demands for integrated supervision).

BACKGROUND: RISK TRANSFER IN STRUCTURED FINANCE AND INSURANCE SECURITISATION

Insurance-linked securities (ILS) securitise insurance risk as a form of capital-market based structured finance within the broad spectrum of risk transfer techniques (Figure 12). Opportunities for structured finance arise if i. established forms of external finance are unavailable (or depleted) for a particular financing need or ii. traditional sources of funds are too expensive for issuers to mobilise sufficient funds for what would otherwise be an unattractive investment based on the issuer's desired cost of capital. In general, structured finance comprises "all advanced private and public financial arrangements that serve to efficiently refinance and hedge any profitable economic activity beyond the scope of conventional forms of on-balance sheet securities (debt, bonds, equity) at lower capital cost and agency costs from market impediments and liquidity constraints. In particular, most structured investments i. combine traditional asset classes with contingent claims, such as risk transfer derivatives and/or derivative claims on commodities, currencies or receivables from other reference assets or ii. replicate traditional asset classes through synthetication or new financial instruments (Jobst, 2007, pp. 200f)."

Figure 12. Risk Transfer Instruments and Insurance Securitisation



Source: Jobst (2007) and BMA.

Insurance securitisation is distinct from asset securitisation, which is commonly used by credit institutions and corporates. Insurance securitisation by means of ILS represents an alternative, capital market-based source of funding profitable underwriting activities in lieu of raising capital from shareholders and borrowing from creditors (since reserves remain unchanged). The transfer of clearly defined insurance risk allows sponsors of ILS to benefit from more cost-efficient terms of funding without increasing their on-balance sheet liabilities or changing their underwriting capacity. Even though insurance securitisation shares with asset securitisation the premise of cost-efficient funding of diversified risk exposures and the reduction of the economic cost of capital, it is predicated on the creation of reinsurance recoverables in return for a pre-specified payment to investors, whose investment represents the collateralisation of the transferred insurance risk (up to the contractual policy limit).[16] In contrast, asset securitisation describes the process and the result of converting (or "monetising") cash flows from a designated asset portfolio into tradable liability and equity obligations, which represents an effective method of redistributing asset risks to investors and broader capital markets (transformation and fragmentation of asset exposures).[17]

Insurance securitisation, much like structured finance in general, offers issuers enormous flexibility to create securities with distinct risk-return profiles in terms of maturity structure, security design, and the type of underlying insurance risk. However, securitisation involves a complex structured finance technology, which necessitates significant initial investment of managerial and financial resources.[18] Moreover, there is an increasing complexity of insurance securitisation due to a multiplicity of valuation models (and uncertainty surrounding underlying assumptions, especially during times of stress),[19] different loss triggers, and diverse pricing mechanisms. Thus, the ever-growing range of different products and security designs being made available to investors invariably create challenges in terms of transparency and risk management.

[16] Moreover, some of the characteristics of asset securitisation that contributed to the financial crisis between 2008 and 2011, such as insufficient screening of creditors, incentive problems of both sponsors and servicers in monitoring securitised loans, and the erroneous valuation models do not apply to insurance securitisation. For instance, in most cases sponsor retain loss provisions for insurance risk ceded to ILS structures, which provides incentives for the adequate actuarial assessment of underwriting risks.

[17] Embedded value (EV) securitisation is the only form of structured finance used by insurance firms that comes close to the concept of asset securitisation. EV securitisation transactions commoditise future cash flows that are released from a block of in force insurance business, future underwriting margins, investment income on reserves and required capital supporting the business, and anticipated reserve releases. By executing such a transaction, an insurer is able to receive an upfront payment using these future cash flows as collateral.

[18] See also IMF (2006 and 2009).

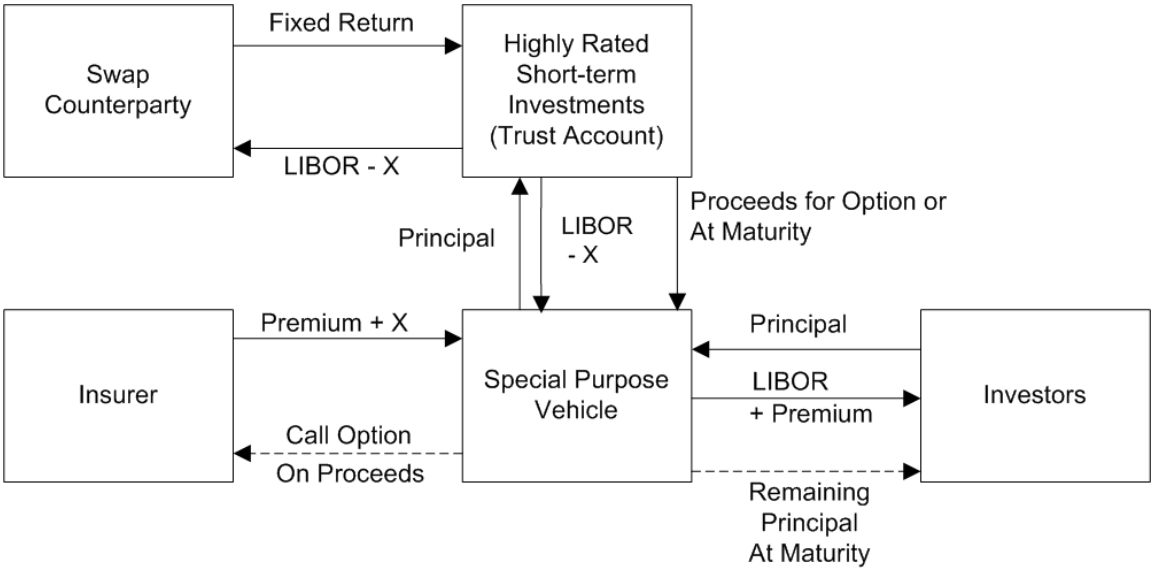
[19] Uncertainty, which is characterised by rare and non-recurring events, can invalidate measures and undermine pricing models.

BACKGROUND: ILS STRUCTURE AND SECURITY DESIGN

A typical ILS transaction begins with the formation of a special purpose vehicle (SPV) or special purpose entity (SPE) subject to the registration and licensing by a regulatory authority (Figure 13). The SPV issues bonds to investors and invests the proceeds in safe, short-term securities such as government bonds or highly-rated corporates, which are held in a trust account. Embedded in the bonds is a call option that is triggered by a defined loss event. On the occurrence of the event, proceeds are released from the SPV to help the insurer pay claims arising from the event. For most ILS, the principal is fully at risk, i.e., if the contingent event is sufficiently large, the investors could lose the entire principal in the SPV. In return for the option, the insurer pays a premium to the investors. The fixed returns on the securities held in the trust are usually swapped for floating returns based on LIBOR (London Interbank Offered Rate) or some other widely accepted money market rate. The reason for the swap is to immunise the insurer and the investors from the variability of interest rates. Consequently, investors receive LIBOR plus the risk premium in return for providing capital to the trust. If no contingent event occurs during the term of the issued bonds, the principal amount is returned to the investors upon the expiration of the bonds.

In the absence of a traded underlying asset, ILS are structured to pay off on several types of triggering variables: i. indemnity triggers, where pay-outs are based on the size of the sponsoring insurer's actual losses; ii. index triggers, where pay-outs are based on an index not directly tied to the sponsoring firm's losses; iii. parametric triggers, based on the physical characteristics of the event; iv. modelled loss triggers, based on the results of a simulation model; or v. hybrid triggers, which blend more than one trigger in a single bond (Cummins, 2012).[20] If a trigger event occurs, it can result in an unwinding of the transaction or a haircut to the investor. To date, indemnity and industry loss index triggers have been most prevalent, accounting for approximately 75% of all deals issued since 2009.

Figure 13. Typical Structure of an Insurance-Linked Security (ILS).



Note: ILS structures have become more sophisticated as the market has grown in complexity with multiple perils as securitised risk and tranche subordination becoming more frequent. The illustration above represents a stylised version of an ILS structure.

[20] A more comprehensive definition of each trigger type can be found on the next page.

GLOSSARY

TRIGGER DEFINITIONS

Indemnity refers to when the triggering event is the actual loss incurred by the sponsor following the occurrence of a specific event, in a specified region and for a specified line of business, as if traditional catastrophe reinsurance had been purchased. If the layer specified in the CAT bond is $100 million excess of $500 million, and the total claims add up to more than $500 million, then the bond is triggered.

Industry Loss Index is a "pooled indemnity" solution where the indemnity loss experience of a number of companies is used to determine the industry loss estimate. The bond is triggered when the industry loss from a certain peril reaches the specified threshold, typically determined by a recognised agency.

Hybrid triggers combine two or more triggers in a single bond.

Modelled Loss structures refer to the construction of an exposure portfolio using modelling software. Once an event occurs, the event parameters are run against the exposure database. The structure is triggered if modelled losses exceed a specified threshold.

Parametric refers to those transactions that depend on the physical characteristics of a catastrophic event in order for the bond to be triggered. That is, the bond is triggered when the characteristics of the catastrophic event meet pre-specified conditions. Typical parameters include magnitude, proximity, wind-speed or whatever else is deemed appropriate for the given peril.

GENERAL TERMS

Alternative Risk Transfer (ART) refers to non-traditional forms of insurance and reinsurance as risk is transferred to other entities/business models or capital market investors as alternative providers of risk protection. Examples of the former include, for instance, self-insurance, captives, pools and risk retention groups, whereas insurance-linked securities (ILS) and industry loss warranties (ILWs) are examples of the latter.

Asset-backed security (ABS) is a security that is collateralised by the cash flows from a pool of underlying assets such as loans, mortgages, leases and receivables.

Basis risk is the difference between the actual losses experienced by the sponsor and the payment received by the sponsor based on the design of underlying model and trigger structure when ILS use parametric triggers.

Catastrophe bond is a risk-linked security that transfers a specified set of risks from the cedant or sponsor to investors in the capital market in order to provide cover for potential losses caused by catastrophic events.

Capital market is a market in which individuals and institutions trade financial securities. Organisations/ institutions in the public and private sectors also often sell securities on the capital markets in order to raise funds.

Cedant refers to a (re)insurance company purchasing reinsurance cover.

Counterparty risk is the risk faced by one party in a contract that the other, the counterparty, will fail to meet its obligations under the contract. In most financial contracts, counterparty risk is also known as "default risk" or "credit risk."

Credit rating is a measure of risk that the payment terms agreed to by an entity or contained in a financial instrument will not be fulfilled. The rating is typically expressed as a letter grade issued by private sector credit rating agencies.

Diversification in insurance is predicated on minimising underwriting risks by spreading expected loss exposures over different lines of business, geographical areas, and types of risk.
Event risk is the insurable risk from an occurrence such as a catastrophe

Insurance-linked security (ILS) is a financial instrument through which insurance risk is transferred to capital markets and whose value is determined by insurance loss events.

Longevity bond is a bond that pays a coupon proportional to the number of survivors in a selected birth cohort, creating an effective hedge against longevity risk.

Longevity risk is the risk that people live longer than expected.

Mean-variance efficient frontier is a set of points showing the minimum return volatilities of portfolios for any given level of expected returns of portfolios.

Moral hazard is a condition in which an individual or institution will tend to act less carefully than it otherwise would because the consequences of a bad outcome will be largely shifted to another party.

Peril refers to a specific risk or cause of loss covered by an insurance policy or insurance-linked security such as a catastrophe bond.

Premium is the specified amount of payment required by an insurer to provide coverage under a given plan for a defined period of time.

Primary Insurer is the insurer that cedes risk to a reinsurer.

Principal is the original amount invested, separate from any interest payments.

Regulatory arbitrage refers to taking advantage of differences in regulatory capital requirements of financial activities across countries or different financial sectors, which might also involve differences between economic risk and that measured by regulatory standards.

Reinsurance defines the practice of insurers transferring portions of risk portfolios to other parties by some form of agreement in order to reduce the likelihood of having to incur a large obligation resulting from an insurance claim.

Securitisation is the creation of securities from a reference portfolio of pre-existing assets or future receivables that are placed under the legal control of investors through a special intermediary created for this purpose (SPI or SPV).

Special Purpose Insurer, Vehicle or Entity (SPI, SPV or SPE) is usually a subsidiary company with a balance sheet structure and legal status that makes its obligations secure even if the parent company goes bankrupt.

Tranches of securities represent a hierarchy of payment and risk typically associated with an asset-backed security. Higher tranches are less risky and have first priority on the payment of claims.

Trigger type refers to how the principal impairment is triggered. The most common trigger types for ILS market structures include indemnity, industry loss index, modelled loss and parametric.

Underwriting capacity is the maximum amount of money an insurer is willing to risk in a single loss event on a single risk or in a single period.

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