# **VALIDUS RE**

# VALIDUS REINSURANCE, LTD.

# FINANCIAL CONDITION REPORT

 $(Expressed\ in\ thousands\ of\ U.S.\ Dollars,\ except\ share\ and\ per\ share\ amounts)$ 

**DECEMBER 31, 2018** 

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# 1. SUMMARY

Validus Reinsurance, Ltd. (the "Company" or "Validus Re") was incorporated under the laws of Bermuda on October 19, 2005. The Company is 100% owned by Validus Holdings, Ltd. (the "parent company" or "Validus Holdings") which was also incorporated under the laws of Bermuda on October 19, 2005. Validus Re is registered as a Class 4 insurer under The Insurance Act 1978 of Bermuda, amendments thereto and related Regulations ("The Act"). The Company primarily offers treaty reinsurance coverage on a global basis in the Property and Specialty lines markets.

This Financial Condition Report ("FCR") is based on the Insurance (Public Disclosure) Rules 2015 which came into effect on January 1, 2016. These rules specify the requirement for commercial insurers to prepare an FCR and requires that it be made publicly available on the insurer's website. This report provides a discussion on the Company's business and performance (section 2), governance structure (section 3), risk profile (section 4), solvency valuation (section 5), capital management (section 6) and subsequent events (section 7).

This report is primarily based on the Company's Economic Balance Sheets ("EBS") as at December 31, 2018. In addition, certain sections include information based on the Company's consolidated financial statements as at December 31, 2018, which have been prepared in accordance with the accounting principles generally accepted in the United States (U.S. GAAP) and include the accounts of the Company and its subsidiaries.

#### 2. BUSINESS AND PERFORMANCE

#### a. Name of the insurer

Validus Reinsurance, Ltd.

# b. Name and contact details of the insurance supervisor

Bermuda Monetary Authority ("BMA") **BMA** House 43 Victoria Street Hamilton, Bermuda Telephone: (441) 295-5278

Fax: (441) 292-7471

# c. Name and contact details of the approved auditor

PricewaterhouseCoopers Ltd. Washington House 16 Church Street Hamilton, HM 11, Bermuda Telephone: (441) 295-2000

Fax: (441) 295-1242

### d. A description of the ownership details including proportion of ownership interest

As noted in Section 1 above, Validus Re is 100% owned by Validus Holdings and was incorporated on October 19, 2005.

On September 4, 2009, pursuant to an Amalgamation Agreement, Validus Holdings acquired all of IPC Holdings Ltd. ("IPC") outstanding common shares in exchange for 0.9727 common shares of Validus Holdings and \$7.50 cash per IPC's common share. IPC's operations were focused on short-tail lines of reinsurance. The primary lines in which IPC conducted business were property catastrophe reinsurance and, to a limited extent, property-per-risk excess, aviation (including satellite) and other short-tail reinsurance on a worldwide basis. The acquisition of IPC was undertaken to gain a strategic advantage in the reinsurance market and increase the parent company's capital base. The investment in IPC was transferred to the Company by Validus Holdings in September 2009 as \$1,325,398 of additional paid-in capital.

On November 30, 2012, pursuant to a merger agreement, Validus Holdings acquired all of the outstanding common shares of Flagstone Reinsurance Holdings, S.A. ("Flagstone") in exchange for 0.1935 common shares of Validus Holdings and \$2.00 cash per Flagstone common share (the "Flagstone Acquisition"). The investment in Flagstone was transferred to the Company by Validus Holdings on November 30, 2012 as \$720,123 of additional paid-in capital, strengthening the Company's leading property catastrophe reinsurance and short-tail specialty insurance platform.

On April 25, 2013, the Company acquired Validus Re Americas, Ltd. (formerly Longhorn Re, Ltd.), a single contract, Bermuda-domiciled crop reinsurer, for cash equal to its tangible net assets.

On October 9, 2013, the Company completed the sale of its wholly—owned Cyprus-domiciled subsidiary, Flagstone Alliance Insurance and Reinsurance plc. for net cash proceeds of \$21,400.

On October 2, 2014, the Company acquired all of the outstanding shares of Western World Insurance Group, Inc. ("Western World"), a U.S.-based specialty excess and surplus lines insurance company, for an aggregate purchase price of \$692,305 in cash. The Western World acquisition was undertaken to enhance the Company's access to the specialty U.S. commercial insurance market. Additional factors that added to the value of Western World included its State Licenses, Brand Name, Distribution Network and Technology.

On May 1, 2017, the Company, through its wholly—owned subsidiary Western World, acquired all of the outstanding capital stock of Crop Risk Services, Inc. ("CRS"), a primary crop insurance managing general agent ("MGA"), for an aggregate purchase price of \$185,576 in cash. The CRS acquisition was undertaken to expand the Company's presence in U.S. primary specialty lines.

On June 15, 2018, the Bermuda Monetary Authority ("BMA") approved the merger of IPCRe with the Company, with the Company being the surviving entity, in accordance with the provisions of Section 1087 of the Companies Act, 1981.

On July 18, 2018, Validus Holdings completed its previously announced definitive agreement and plan of merger (the "Merger Agreement") with American International Group, Inc. ("AIG") in accordance with Section 105 of the Bermuda Companies Act 1981. Pursuant to the Merger Agreement, Validus Holdings merged with an existing AIG subsidiary, with Validus Holdings continuing as the surviving corporation and as a wholly-owned subsidiary of AIG.

On September 1, 2018, in order to align Validus Re's U.S. entities (i.e. Validus Specialty, Inc. and all of its subsidiaries including Western World and CRS ("Validus Specialty Group" or "Validus Specialty")) under AIG's U.S. consolidated tax group, the Company sold its interest in Validus Specialty Group to AIG Property Casualty Inc. in exchange for a note receivable from AIG International Holdings GmbH.

### e. Group structure chart for the Company

Please see Exhibit A for a complete listing of the Company's subsidiaries as at December 31, 2018. The Company is a wholly owned subsidiary of Validus Holdings, Ltd. The Company's ultimate parent company is AIG.

# f. Insurance business written by business segment and by geographical region during the reporting period

The Company has only one business segment. The following table sets forth the gross premiums written allocated to the territory of coverage exposure for the year ended December 31, 2018:

	Year Ended December 31, 2018		
	 Total	%	
United States	\$ 428,074	19.6%	
Worldwide excluding United States (a)	233,453	10.7%	
Australia and New Zealand	18,332	0.8%	
Europe	65,394	3.0%	
Latin America and Caribbean	92,816	4.2%	
Japan	64,689	3.0%	
Canada	12,314	0.6%	
Rest of the world (b)	 113,199	5.2%	
Sub-total, non United States	600,197	27.5%	
Worldwide including United States	490,692	22.5%	
Other locations non-specific (c)	 662,773	30.4%	
Total	\$ 2,181,736	100.0%	

<sup>(</sup>a) Represents risks in two or more geographic zones.

<sup>(</sup>b) Represents risks in one geographic zone.

<sup>(</sup>c) The other locations non-specific category refers to business for which an analysis of exposure by geographic zone is not applicable since these exposures can span multiple geographic areas and, in some instances, are not fixed locations.

# g. Performance of investments, by asset class and details of material income and expenses incurred during the reporting period

# Performance of investments

As at December 31, 2018, the fair values of the investment portfolio of the Company totaled \$2,877,602 and were split by asset class as follows:

	December 31, 2018		
	Amortized Cost or Cost	Fair Value	
U.S. government and government agency	\$ 359,016	\$ 358,018	
Non-U.S. government and government agency	83,599	83,183	
U.S. states, municipalities and political subdivisions	59,743	59,220	
Agency residential mortgage-backed securities	425,339	416,801	
Non-agency residential mortgage-backed securities	25,902	25,415	
U.S. corporate	754,395	741,515	
Non-U.S. corporate	165,877	163,664	
Bank loans	5,109	5,083	
Asset-backed securities	385,997	382,056	
Commercial mortgage-backed securities	199,614	195,968	
Total fixed maturities	2,464,591	2,430,923	
Short-term investments	94,624	94,624	
Other investments			
Hedge funds	6,672	15,123	
Private equity investments	111,270	187,588	
Fixed income investment funds	149,344	149,344	
Total other investments	267,286	352,055	
<b>Total investments</b> \$ 2,826,501 \$		\$ 2,877,602	

A significant portion of (re)insurance contracts written by the Company provide short-tail reinsurance coverage for losses resulting mainly from natural and man-made catastrophes, which could result in payment of a substantial amount of losses at short notice. Accordingly, the Company's investment portfolio is primarily structured to provide liquidity, which means the investment portfolio contains a significant amount of relatively short-term fixed maturity investments. The Company's Investment Policy Statement ("IPS") specifically requires certain minimum thresholds of cash, short-term investments, and highly-rated fixed maturity securities relative to its consolidated net reserves and estimates of probable maximum loss exposures at the 1 in 100 year threshold to provide necessary liquidity in a wide range of reasonable scenarios. As such, the Company structures its managed cash and investment portfolio to support policyholder reserves and contingent risk exposures with a liquid portfolio of high quality fixed-income investments with a comparable duration profile.

The Company's IPS requires investments to have an average duration in the range of 0.75 years to 3.25 years. At December 31, 2018, the average duration of the Company's investment portfolio was 2.57 years. This duration is reviewed regularly based on changes in the duration of the Company's liabilities and general market conditions.

During the year ended December 31, 2018, net investment income was derived from the following sources:

	Year Ended December 31, 2018	
Fixed maturities and short-term investments	\$ 1	137,041
Other investments		13,116
Cash and cash equivalents		4,938
Dividends from equities		622
Securities lending income		10
Total gross investment income	1	155,727
Investment expenses		(6,050)
Total net investment income	\$ 1	149,677

# Details of Material Income and Expenses for the Year Ended December 31, 2018

The below tables provide summaries of the Company's material income and expenses line items for the year ended December 31, 2018:

	Year Ended December 31, 2018
Revenues	
Gross premiums written	\$ 2,181,736
Net premiums earned	1,678,523
Net investment income	149,677
Expenses Losses and loss expenses	
Current period	1,437,845
Prior years	(159,869)
Total losses and loss expenses	1,277,976
Policy acquisition costs	536,907
General and administrative expenses	129,806

Highlights for the Company for the year ended December 31, 2018 were as follows:

<u>Gross premiums written</u> for the year ended December 31, 2018 amounted to \$2,181,736. The Company underwrites a significant amount of its reinsurance business through three brokers: Marsh & McLennan Companies, Inc. (32.9%), Aon Benfield Group Ltd. (19.0%) and Willis Towers Watson Plc (16.8%).

Net premiums earned for the year ended December 31, 2018 amounted to \$1,678,523.

Reinsurance contracts can be written on a risks attaching or losses occurring basis. Under risks attaching reinsurance contracts, all claims from cedants' underlying policies incepting during the reinsurance contract period are covered, even if they occur after the expiration date of the reinsurance contract. In contrast, losses occurring reinsurance contracts cover all claims occurring during the period of the contract, regardless of the inception dates of the underlying policies. Any claims occurring after the expiration of the losses occurring contract are not covered.

Insurance and reinsurance premiums written are recorded at the inception of the policy. Reinsurance premiums are estimated based on information received from brokers, ceding companies and reinsureds, and any subsequent differences arising on such estimates are recorded in the periods in which they are determined.

Premiums written are earned on a pro-rated basis over the term of the related policy or contract. For direct insurance, and for facultative and losses occurring reinsurance contracts, the earnings period is generally the same as the term of the related contract or policy. For reinsurance contracts written on a risks attaching basis, the earnings period is based on the terms of the underlying contracts and policies and is generally assumed to be 24 months. The portion of the premiums written applicable to the unexpired terms of the underlying contracts and policies in force is recorded as unearned premiums.

<u>Losses and loss expenses</u> for the year ended December 31, 2018 was \$1,277,976, a loss ratio of 76.1%. Incurred losses and loss expenses is comprised of gross losses and loss expenses of \$2,071,641 and reinsurance recoveries of \$793,665. The net favorable development on prior accident years for the year ended December 31, 2018 was primarily driven by favorable development on attritional losses.

#### Event/Non-Event losses

Details of the Company's losses and loss expenses for the year ended December 31, 2018 were as follows:

	Year Ended December 31, 2018
<u>Event</u>	,
Current period	\$ 539,380
Prior years	(131,620)
Sub-total	407,760
Non-Event	
Current period	898,465
Prior years	(28,249)
Sub-total	870,216
Total losses and loss expenses	\$ 1,277,976

Attritional losses for the year ended December 31, 2018 were \$898,465, or 53.5 percentage points of the current year loss ratio.

<u>Policy acquisition costs</u> are costs that vary with, and are directly related to, the successful production of new and renewal business, and consist principally of commissions and brokerage expenses. These costs are deferred and amortized over the period in which the related premiums are earned. Acquisition costs are shown net of commissions earned on reinsurance ceded. However, if the sum of a contract's expected losses and loss expenses and deferred acquisition costs exceeds related unearned premiums, a premium deficiency is determined to exist. In this event, deferred acquisition costs are immediately expensed to the extent necessary to eliminate the premium deficiency. If the premium deficiency exceeds deferred acquisition costs then a liability is accrued for the excess deficiency. There were no significant premium deficiency adjustments recognized during the year ended December 31, 2018. Policy acquisition costs also include profit commissions, which are recognized on a basis consistent with our estimate of losses and loss expenses. Policy acquisition cost ratio for the year ended December 31, 2018 was 32.0%.

<u>General and administrative expenses</u> for the year ended December 31, 2018 was \$129,806. General and administrative expenses include staff costs, office and infrastructure related expenses, business expenses and management fees.

#### h. Any other material information

None

# 3. GOVERNANCE STRUCTURE

#### a. Board and senior management

#### **Board of Directors**

The directors of the Company oversee the management of the Company's business and affairs and are responsible for the corporate governance framework. The directors are elected annually at the Company's annual general meeting and as at December 31, 2018, consisted of the following persons, each of whom is either a senior executive of the Company or of AIG:

- Kean Driscoll;
- Jeffrey Clements;
- Patrick Boisvert; and
- Catherine Duffy.

# **Executive Officers**

The Company's executive officers are responsible for the development and execution of the Company's internal controls, budgets, strategic plans and objectives. As at December 31, 2018, the executive officers consisted of the following person:

- Kean Driscoll;
- Jeffrey Clements;
- Patrick Boisvert;
- Patrick Reardon;
- Kevin Downs;
- Brant Kizer;
- Stephen Bardill;
- Paul Manders;
- Christopher Silvester;
- Marc Haushofer;
- Angeline Ang; and
- Lorraine Dean.

# i. Description of remuneration policy and practices and performance-based criteria governing the board, and its senior executives and employees

# Compensation

### **Board of Directors**

The Directors of the Company do not receive any compensation for their services as Director of the Company.

# **Executive Officers**

The Company's compensation program is designed to motivate executives to maximize the creation of shareholder value, therefore aligning, as much as possible, the Company's named executive officers' rewards with shareholder's interests. The compensation program is composed of three principal components:

- Salary and benefits;
- Annual incentive compensation (annual incentive award); and
- Long-term incentive compensation typically in the form of time vested and/or performance based restricted shares.

The Company's compensation plans are intended to offer opportunities that are competitive with its peer group and consistent with the Company's relative performance over time. In addition, the Company wants its rewards to accommodate the risk and cyclicality of its business. At the time the Company negotiated its employment agreements with the executive officers, it undertook to implement a performance based compensation strategy. To that end, the compensation package includes a fixed component consisting of salary and benefits and two variable components consisting of annual incentive compensation and long-term incentive compensation. To better implement this strategy, a greater emphasis is placed on the variable elements that relate to performance and less of an emphasis is placed on the fixed elements of compensation that do not.

#### **Employees**

The Company's compensation package includes a fixed component consisting of salary and benefits and two variable components consisting of annual incentive compensation and long-term incentive compensation, which vary in accordance with the performance of both the Company and individual. Each department head makes recommendations to the Chief Executive Officer with respect to the compensation of employees other than themselves. The Chief Executive Officer reviews, and if appropriate, approves the compensation recommendations made for each employee and determines the compensation for the Company's department heads.

# ii. Description of the supplementary pension or early retirement schemes for members, the board and senior executives

The Company does not maintain a defined benefit pension or retirement plan for its named executive officers. The Company provides pension benefits to eligible employees through various plans which are managed externally and sponsored by the Company. Contributions are expensed as incurred.

# iii. Material transactions with shareholder controllers, persons who exercise significant influence, the board or senior executives

During the year ended December 31, 2018, the Company received capital contributions from Validus Holdings of \$14,202. In addition, the Company declared dividends to Validus Holdings of \$908,362 during the year ended December 31, 2018.

The following transactions are classified as related party transactions as principals and/or directors of each counterparty are members of the Company's or AIG's board of directors.

### Reinsurance Agreements

Pursuant to reinsurance agreements with the Talbot Syndicate, an affiliate, the Company assumed net premiums earned of \$762,749, incurred losses and loss expenses of \$521,984 and policy acquisition costs of \$322,166 during the year ended December 31, 2018 (2017: \$771,730, \$522,242 and \$331,163, respectively). At December 31, 2018, the Company had premiums receivable of \$44,082, deferred acquisition costs of \$91,641 and funds withheld of \$1,517,265 under these agreements (December 31, 2017: \$43,780, \$90,781 and \$1,368,530, respectively). The Company also had outstanding reserves for losses and loss expenses of \$1,191,689, unearned premiums of \$468,179 and reinsurance balances payable of \$19,444 under these agreements at December 31, 2018 (December 31, 2017: \$1,150,306, \$464,617 and \$17,745, respectively).

Pursuant to reinsurance agreements with AlphaCat, an affiliate, the Company ceded net premiums earned of \$248,540, recovered losses and loss expenses of \$505,254 and earned commissions of \$20,026 during the year ended December 31, 2018 (2017: \$98,706, \$109,993 and \$11,527, respectively). At December 31, 2018, the Company had unearned commissions of \$6,013, paid losses recoverable of \$14,895, prepaid reinsurance of \$50,776, ceded funds withheld of \$181,500 and loss reserves recoverable of \$595,701 (December 31, 2017: \$2,644, \$24,605, \$20,803, \$nil and \$124,099, respectively) under these agreements. The Company also had reinsurance balances payable of \$161,097 at December 31, 2018 (December 31, 2017: \$40,775) under these agreements.

Pursuant to reinsurance agreements with affiliated subsidiaries of AIG, the Company assumed net premiums earned of \$55,014, incurred losses and loss expenses of \$267,935 and policy acquisition costs of \$2,114 during the year ended December 31, 2018. At December 31, 2018, the Company had premiums receivable of \$4,375, deferred acquisition costs of \$420 and funds withheld of \$220,620 under these agreements. The Company also had outstanding reserves for losses and loss expenses of \$299,575, unearned premiums of \$1,591 and reinsurance balances payable of \$2,254 under these agreements at December 31, 2018.

Pursuant to reinsurance agreements with Western World, an affiliate, the Company assumed net premiums earned of \$4,195, incurred losses and loss expenses of \$2,181 and policy acquisition costs of \$1,535 during the year ended December 31, 2018 (2017: \$157,367, \$120,273 and \$57,711, respectively). At December 31, 2018, the Company had premiums receivable of \$251, deferred acquisition costs of \$nil and unearned premiums of \$2 (December 31, 2017: \$14,236, \$33,547 and \$91,909, respectively). The Company also had outstanding reserves for losses and loss expenses of \$124,832 and reinsurance balances payable of \$9,650 under these agreements at December 31, 2018 (December 31, 2017: \$165,233 and \$15,738, respectively).

# Investments & Loans

On September 26, 2014, Validus Specialty, Inc., an affiliate, obtained a loan from Flagstone Reinsurance (Luxembourg), SARL, a subsidiary of the Company, with a principal amount of \$400,000 bearing annual interest rate of 5.8% and maturing on September 23, 2024. The outstanding balance as at December 31, 2018, including accrued interest, was \$405,848.

On September 1, 2018 and as part of the sale of the Validus Specialty Group, the Company acquired a loan receivable from AIG with a principal amount of \$327,729 bearing annual interest rate of 3.6% and maturing on August 31, 2022. The outstanding balance, including accrued interest, as at December 31, 2018 was \$331,672.

# Service Level Agreements

In accordance with service level agreements, the Company participates in centralized services wherein expenses are incurred by service and other affiliated entities and allocated to, or recharged from, the Validus Holdings group of companies. Services provided across the group include managerial services, underwriting services, actuarial services, claims services, accounting services, information technology services and others. The following table summarizes the revenue and expenses incurred by the Company for services provided to or received from the Validus Holdings group of companies:

	Year E December	
Other insurance related income and other income	\$	31,568
General and administrative expenses		81,738

#### <u>Other</u>

Certain shareholders of AIG and their affiliates, as well as employees of entities associated with directors and officers may have purchased insurance and/or reinsurance from the Company in the ordinary course of business. The Company does not believe these transactions to be material.

# b. Fitness and propriety requirements

### i. Description of the fit and proper process in assessing the board and senior executives

The Company recognizes the importance of having competent executive officers and directors, including their capacity and suitability to fulfil the responsibilities for their positions. As such, the Company ensures that:

- Directors have an appropriate mix and/or level of experience and expertise;
- There is an adequate number of directors to ensure comprehensive discussion and debate of matters while optimizing
  operational efficiency and cost effectiveness.
- Executive Officers have the necessary experience and qualifications to meet any regulatory "fit and proper" standards as applicable;
- There is a sufficient and appropriate number of executive officers to carry out business as determined by the Shareholder.
- Executive Officers are employees of the Company.

# ii. Description of professional qualifications, skills and expertise of the board and senior executives to carry out their functions

The Company's Directors and officers are as follows:

### **Current Directors**

#### Patrick Boisvert

Patrick Boisvert is the Chief Financial Officer of Validus Reinsurance, Ltd. Patrick joined the Company in 2012 and has 23 years of experience, including 19 years in the financial services industry. Prior to this role, Patrick was the Chief Financial Officer of Flagstone Reinsurance Holdings SA. He was previously Chief Financial Officer of West End Capital Management and Vice-President Fund Administration at Bisys Hedge Funds Services. He started his career with Ernst & Young and he is a member of the CPA Institute of Québec.

# Jeffrey Clements

Jeff Clements is the Validus Re Chief Underwriting Officer. Jeff has also been with Validus Group from our founding in 2005, and has been the architect of our excellent specialty reinsurance portfolio. Jeff has also been instrumental in the development of our pricing models and his work with Talbot on our Aviation Reinsurance account has been a perfect example of the ability to achieve great outcomes through group wide cooperation.

# Kean Driscoll

Kean Driscoll is the Chief Executive Officer of Validus Reinsurance, Ltd., the reinsurance segment for the Validus Group. He was a founding member of the Company, and previously served as Chief Underwriting Officer. Kean has 20 years of experience as a reinsurance underwriter, and was previously with Quanta Re, and Zurich Re N.A. (Converium). Kean holds a B.A. in Literature from Colgate University and an M.B.A. from Columbia University, where he graduated with Honors.

#### Catherine Duffy

Catherine Duffy serves as AIG's Country Manager in Bermuda. She leads local operations, including a cross-functional team, and drives the achievement of AIG's strategic objectives in Bermuda. Cathy is the "face of AIG" within Bermuda for customers, brokers, reinsurers, and others. She also coordinates with North American product leaders to provide direction to local underwriting teams. Cathy is a veteran of the Bermuda International Insurance Industry with experience across many aspects of the industry. She was the first Bermudian woman to gain her CPCU and the author of the first comprehensive book tracing the historical development of the International Insurance Industry, Held Captive - A History of International Insurance in Bermuda. Cathy earned a Bachelor Business Administration in Insurance from Howard University. She has completed executive management programs through MIT as well as Wharton. Recently Cathy was chosen to be a Fellow in the Women's International Forum.

# **Current Officers**

# Kean Driscoll - Chief Executive Officer

Kean Driscoll is the Chief Executive Officer of Validus Reinsurance, Ltd., the reinsurance segment for the Validus Group. He was a founding member of the Company, and previously served as Chief Underwriting Officer. Kean has 20 years of experience as a reinsurance underwriter, and was previously with Quanta Re, and Zurich Re N.A. (Converium). Kean holds a B.A. in Literature from Colgate University and an M.B.A. from Columbia University, where he graduated with Honors.

# Jeffrey Clements - Executive Vice President & Chief Underwriting Officer

Jeff Clements is the Validus Re Chief Underwriting Officer. Jeff has also been with Validus Group from our founding in 2005, and has been the architect of our excellent specialty reinsurance portfolio. Jeff has also been instrumental in the development of our pricing models and his work with Talbot on our Aviation Reinsurance account has been a perfect example of the ability to achieve great outcomes through group wide cooperation.

# Patrick Boisvert - Executive Vice President & Chief Financial Officer

Patrick Boisvert is the Chief Financial Officer of Validus Reinsurance, Ltd. Patrick joined the Company in 2012 and has 23 years of experience, including 19 years in the financial services industry. Prior to this role, Patrick was the Chief Financial Officer of Flagstone Reinsurance Holdings SA. He was previously Chief Financial Officer of West End Capital Management and Vice-President Fund Administration at Bisys Hedge Funds Services. He started his career with Ernst & Young and he is a member of the CPA Institute of Ouébec.

# Patrick Reardon - Executive Vice President & Chief Counsel, Reinsurance

Pat Reardon, Executive Vice President & Chief Counsel, Reinsurance, is responsible for overseeing our legal and claims operations for reinsurance.

# Kevin Downs - Executive Vice President & Chief Actuary

Kevin Downs has served as Senior Vice President and Reserving Actuary for Validus Reinsurance Ltd. since joining the firm in May, 2009. Kevin has over twenty years of experience in the insurance and reinsurance industry, serving previously as a Senior Consulting Actuary for Towers Perrin, where he was responsible for managing the firm's relationship with various Bermuda reinsurance companies. Prior to joining Towers, Kevin worked for ACE Ltd. in both Philadelphia and London, where he was involved in reserving and settling liabilities for the firm's long-tail legacy exposures. Kevin began his career as a Pricing Actuary at General Accident Insurance in Philadelphia. Kevin holds a B.S. degree in Mathematics from the University of Notre Dame and is a Fellow of the Casualty Actuarial Society.

# Brant Kizer - Chief Risk Officer

Brant Kizer has served as Vice President, Group Risk for Validus Holdings, Ltd. since joining the firm in February 2012. Brant has over 20 years of experience in the insurance and reinsurance industry, serving previously as Assistant Director, Risk Analytics with the Bermuda Monetary Authority, where he led the Internal Capital Model review initiative, from January 2009 to February 2012. Prior to joining the BMA, Brant served as Director of Capital Markets Development Corporation from June 2007 to January 2009, Vice President then President and Director of Select Reinsurance Ltd. from June 2000 to June 2007 and Assistant Vice President of XL Capital Ltd. from May 1997 to June 2000. Before moving to Bermuda, Brant began his career at USAA in San Antonio, Texas. Brant holds a B.B.A. in Finance and Actuarial Science from the University of Texas at Austin, where he graduated with High Honors.

# Stephen Bardill - Executive Vice President

Steve Bardill, another founding Validus Group employee, is responsible for our International business by working with Kean and Jeff to provide global oversight and strategy, including our Latin American account, which previously was independent of our International portfolio.

#### Marc Haushofer – Executive Vice President

Marc Haushofer, an experienced Asian sector specialist, joined Validus Re as Chief Representative and head of the Asia-Pacific representative office in 2009. He is the former CEO of Munich Re's Singapore Branch Office for South-East Asia and former Deputy Chairman of the Singapore Reinsurers' Association. He has approximately 25 years of insurance and reinsurance industry experience, with nearly half of this time dedicated to the Asian marketplace.

#### Paul Manders - Executive Vice President

Paul Manders is responsible for our Specialty business, in addition to his role as head of our Marine and Energy account. Paul is another founding partner in the company and has established Validus Re as one of the leading Marine underwriters in the industry.

### Christopher Silvester - Executive Vice President

Chris Silvester has been promoted to Executive Vice President of Validus Re with responsibility for our North American portfolio. Chris joined us in 2006 and has worked closely with Kean Driscoll and Jeff Clements in building Validus Re's U.S. portfolio. Chris is a very disciplined and talented underwriter and our clients have come to count on him as a lead market and problem solver.

### Angeline Ang - Senior Vice President

Angeline Ang is the Financial Controller & Senior Vice President for the Validus Re Singapore Branch. She joined the company in 2009 and is responsible for all financial accounting & regulatory requirements of the Branch office.

# Lorraine Dean - Secretary

Lorraine Dean has served as Company Secretary for Validus Holdings, Ltd. since March 2008. Previously, Lorraine held similar positions with Global Crossing and Appleby Spurling Kempe.

# c. Risk management and solvency self-assessment

# Description of the risk management processes and procedures to effectively identify, measure, manage and report on risk exposures

Risk Management Framework: The Company promotes sound risk management practices at all levels of the organization, and has implemented an ERM framework (the "Framework") that is aligned with the Company's culture and responds to the needs of the business. The Framework establishes, identifies, assesses, quantifies and manages risks and opportunities. The Framework is designed to:

- Establish the principles by which the Company can evaluate the risk/reward trade-offs associated with key strategic and tactical decisions.
- Establish a risk governance structure that, in respect of all activities related to ERM, operates with clearly defined roles and responsibilities.
- Identify and assess all risks and causes of risks arising out of the Company's strategic initiatives, internal processes and external environment.
- Establish a set of responses to manage the Company's risks within its stated risk appetite and risk tolerances.
- Establish procedures through which near-miss and actual incidents, that either have the potential to impact or have impacted the Company, are reported and reviewed in order to inform the risk identification and assessment process.

*Risk Governance:* Our risk governance philosophy reflects the overall governance of the Company while adhering to the overall strategy of the Company.

The Company's Board of Directors provides broad oversight of risk management for Validus Re and is responsible for, among other things, approving the Framework, working with management to ensure ongoing, effective implementation of the Framework and reviewing the Company's specific risk limits as defined in the Framework, including limits related to major categories of risk. The implementation of risk policies and oversight of risk management is the responsibility of the Validus Re Risk Management Committee ("VRMC"). The VRMC reports to the Company's Board of Directors and is governed by a charter that is reviewed and approved annually. The VRMC also has a subcommittee, the Model Validation Subcommittee, which is governed by charters that are reviewed annually. Various risk policies are in place to facilitate consistent risk assessment across the Company and to ensure that strategic business decisions are supported by effective modeling and analysis.

*Risk Appetite:* The Company's risk appetite is expressed through a series of qualitative and quantitative statements, principles, limits, and tolerances that, in the aggregate, convey the Company's risk and reward preferences and set the risk parameters within which the Company. The risk appetite is proposed by management and approved by the Board of Directors.

The significant quantitative measures include meeting minimum returns on capital and risk-adjusted capital over a full insurance industry cycle, managing the probability of break-even net income or better, meeting or exceeding budgeted net income over a calendar year, and managing the probability of losing specified percentages of shareholders' equity in a calendar year. They also include probability thresholds in respect of maintaining a buffer above regulatory and other capital levels.

The Company also sets levels of concentration risks within its risk appetite, including those related to probable maximum losses, zonal aggregates and the contribution of various risk categories to the overall assessment of the Company's risk capital.

*Risk Classification:* Risks are broadly divided into those that the Company assumes explicitly and from which it derives income and those that are a by-product of the operating and business environment, from which the Company does not earn income.

The risks assumed are categorized as catastrophe, reserve and premium risks (also together referred to as insurance risk), market (or investment) risk and credit risk. The Company's goal is to get adequately compensated for these risks, while creating optimal insurance and investment portfolios subject to the constraints of the Company's risk appetite. The remaining risks are categorized as operational and strategic risks, which typically include emerging risks, for which the Company's goal is to identify, assess and mitigate to the extent considered appropriate.

*Risk Ownership:* The Company's risk management philosophy is to entrust risk identification and control activities with the employees who have the responsibility for and expertise in the areas giving rise to each risk. This approach not only creates workflow efficiencies, it also promotes awareness of and accountability for risk at all levels of the Company. As such, primary risk ownership is assigned to the managers of functional areas. The risk identification and control activities are embedded in the job descriptions of risk owners and control operators and monitored by the VRMC.

Risk Assessment, Control and Mitigation: The Company performs a regular risk assessment process that considers the likelihood and impact of causes of risk, both before and after the existence of relevant controls. The approaches used to identify and update causes of risk include scenario building, incident and near-miss reporting and market intelligence. We have established controls to appropriately manage the likelihood and impact of risks, focused on those with the most significance and after considering the tolerance level established for each risk. We may also design new controls in response to the incident reporting process.

The Company also has in place policies, including underwriting, investment, and credit policies, to manage the assumption of risk. These policies provide for the Company's risk limits, tolerance levels and other guidelines, as well as the processes for ensuring compliance with the desired risk profile of the Company. The Company has at its disposal a variety of risk mitigation tools, including the purchase of reinsurance and retrocessional coverage, which it uses to ensure that its risk profile stays within prescribed limits and tolerance levels.

Exposure Management: In order to manage the assumption of insurance risk, the Company has established risk limits through both qualitative and quantitative considerations, including market share, history of and expertise in a class of business or jurisdiction, transparency and symmetry of available information, reliability of pricing models and availability and cost of reinsurance. These limits are reviewed at least annually and aligned to the overall risk appetite established by the Company's Board of Directors. In addition, an exposure management policy is in place to ensure appropriate and consistent risk assessment and aggregation of exposures that accumulate.

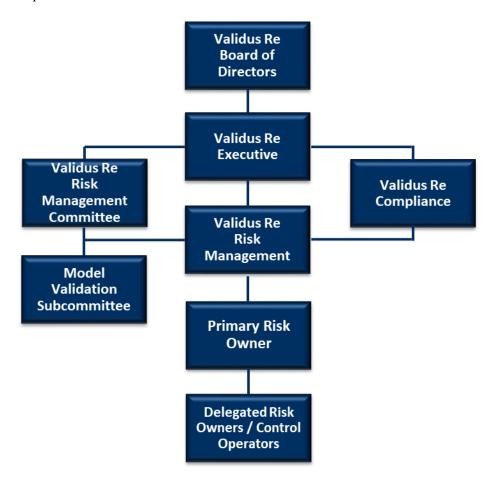
Three tools are used to measure and manage exposures:

- Absolute maximum limits these are defined based on the underlying peril or coverage and include measures such as zonal aggregates, which convey the maximum contractual loss exposure.
- Probable maximum loss these are defined where probabilistic event sets exist for underlying perils and are established for most natural catastrophe, aviation and upstream energy coverage, and convey an extreme but likely loss exposure.
- Realistic disaster scenarios ("RDSs") these are either prescribed by third parties or developed internally and convey a
  more intuitive view of potential loss outcomes.

The Company will often use multiple tools to validate its exposure measurement and ensures that at least one of these tools is available for each class of business.

# ii. Description of how the risk management and solvency self-assessment systems are implemented and integrated into the Insurer's operations; including strategic planning and organizational and decision making process

The chart below outlines the structure of Risk Governance throughout Validus Re. The Risk Governance structure is designed to establish clear lines of responsibility and oversight duties for the Company and operating companies. The Risk Framework sets out the responsibilities and duties for each committee.



The Company's Board of Directors approve the Risk Management framework, the Risk Appetite Statement and the regulatory filings (including the Solvency Self-Assessment) and disclosures.

The VRMC are responsible for the oversight of the key risk management and solvency self-assessment systems, with some items delegated to its subcommittee.

*Risk Appetite Statement:* The Company's risk appetite is expressed through a series of qualitative and quantitative statements, principles, limits, and tolerances that, in the aggregate, convey the Company's risk and reward preferences and set the risk parameters within which the Company operates. Among other metrics, the statement includes probability thresholds in respect of maintaining a buffer above regulatory and other capital requirement levels.

The Company also sets levels of concentration risks within its risk appetite, including those related to probable maximum losses, zonal aggregates and the contribution of various risk categories to the overall assessment of the Company's risk capital.

The Company's Board of Directors reviews and approves the Risk Appetite Statement annually. The Validus Re Capital Model is used to model the business plan and monitor compliance of this with the quantitative Risk Appetite statements; the Company's Board of Directors reviews this each quarter. Additionally, any key decisions on strategy are appraised through reviewing its effect on these risk metrics.

Additional risk measures, such as exposure limits and scenario tests, are reviewed by the VRMC each quarter.

Risk Policies: Various Risk policies exist that outline guidelines for risk assessment for strategic initiatives like:

- Evaluation of New Lines of Business
- Outwards Reinsurance

Other Risk Policies outline Company requirements:

- Exposure Management Policy
- Model Validation Framework
- Validus Re Capital Model Governance

The policies are approved by the VRMC annually.

# iii. Description of the relationship between the solvency self-assessment, solvency needs, and capital and risk management systems

The solvency self-assessment, utilizing the Validus Re Capital Model, is the primary tool for monitoring ongoing compliance with the quantitative measures set out in our Risk Appetite Statement. These measures include requirements for the level of capital buffers to maintain above requirements set by regulators, rating agencies and our own internal view of our economic capital requirement - Risk Capital measured at a 1 in 250 TVAR level from the Validus Re Capital Model. In each case, we require that sufficient capital resources are maintained to ensure the probability of exhausting any of our capital buffers is below a desired threshold (set out in the Risk Appetite Statement).

Additionally, the solvency self-assessment provides a variety of information and risk measures that are used in informing business strategy, such as decisions on risk transfer through reinsurance/retrocession and optimizing our underwriting portfolio from a risk vs return viewpoint.

The risk management systems feed up into the calibration of the solvency self-assessment in various ways. For example, internal loss data is used in calibration of the insurance risk distributions and assessments of operational risks and controls are used in calibrating the operational risk distributions.

# iv. Description of the solvency self-assessment approval process including the level of oversight and independent verification by the board and senior executives

Solvency self-assessment is prepared by the Head of Economic Capital Modeling. This is reviewed by the Chief Risk Officer ("CRO"), followed by a review by the VRMC. The VRMC consists of the Company's CEO, CRO, CUO, Chief Actuary and CFO, among other members. A special meeting is organized for the Company's Board of Directors to allow sufficient time for a review of the solvency self-assessment and to answer any questions they may have.

The solvency self-assessment is provided to the Board for approval with emphasis upon the Company's internal capital modeling, significant changes during the quarter, current and emerging risk exposures, and how the exposures are mitigated in the risk management framework. Via the solvency self-assessment, the Board also reviews how exposures are in compliance with the Company's risk appetite statement, risk tolerance levels and limits. The process respects the 'Three Lines of Defense' in that it is managed by the Second Line (rather than First), and is subject to periodic review by the Third Line (Internal Audit), and occasionally validated by third party consultants.

#### d. Internal controls

# i Description of the internal control system

On an annual basis, the Company performs risk assessments that consider and score the likelihood and impact of causes of risk, both before and after the existence of relevant controls. The Risk team works with the business to ensure that the scoring is consistent across various areas and that the appropriate key controls are in place. The key controls that have been established are designed to appropriately manage the likelihood and impact of risks. New controls may be designed as a result of the incident reporting process or where there are changes in the risk profile or underlying processes. To further strengthen the Company's control framework, the performance of all key controls takes places with the results being fed back to the business.

A Management level committee reviews the risk framework and respective components ensuring that material elements have been identified and are being mitigated and monitored on a regular basis. The resulting output is integrated with the Capital Model for the purpose of quantifying Operational Risk.

Various Risk Policies are in place that apply to various functions of the Group. Compliance with these policies is monitored on a regular basis and reported to a Management level committee.

The Company also has in place various supporting policies, including underwriting, investment, and credit policies, to manage the assumption of risk. These policies provide for the Company's risk limits, tolerance levels and other guidelines, as well as the processes for ensuring compliance with the desired risk profile of the Company. The Company has at its disposal a variety of risk mitigation tools, including the purchase of reinsurance and retrocessional coverage, which it uses to ensure that its risk profile stays within prescribed limits and tolerance levels.

# ii. Description of how the compliance function is executed

The Validus Re CEO, with the concurrence of the Validus Re Board of Directors, shall appoint a senior level executive as Compliance Officer ("CO") of the Company, who shall be responsible for formulation and implementation of an effective Compliance Program. In order to assure the independence of the CO, and the integrity of the Program, the CO reports directly to the Board of Directors on a periodic basis on matters relating to the Company's material compliance with applicable legal/jurisdictional requirements and the Company's Code of Conduct. Further, any material changes to the CO's authority or status shall be made with the concurrence of the Audit Committee.

The purpose of the Validus Re Compliance Program is to:

- Integrate compliance risk management in day to day business activities and strategic planning;
- Help protect the Company from financial or reputational harm that arises from non-compliant or unethical conduct;
- Help prevent, detect and remediate compliance failures or risks; and
- Ensure the organization meets its regulatory obligations in each jurisdiction.

# e. Internal audit - description of how the internal audit function is implemented and how it maintains its independence and objectivity when conducting its functions

Internal Audit is established by the AIG's Internal Audit Committee ("AC") pursuant to applicable laws and regulations, customs of corporate governance and best practices. The Chief Internal Auditor is hired, evaluated, retained and terminated by the AC. The AC seeks input from the Company's executive management in making its selection. The Chief Internal Auditor is delegated the authority to operate AIG's group internal audit function on behalf of the AC, with scope over all subsidiary operations.

The Chief Internal Auditor is authorized to allocate resources, determine scopes of work, and apply the techniques necessary to accomplish the audit objectives required by the AC. The Chief Internal Auditor and designated internal audit staff, as appropriate, are granted authority for full, free and unrestricted access to all of the organizations' functions, records, files and information systems, personnel, contractors, physical properties, rental locations, and any other item relevant to the function, process or department under review. All of the employees of the organization are required to assist the staff of group internal audit in fulfilling their audit functions and fiduciary duties.

To provide for the independence of the group internal audit function, the Chief Internal Auditor reports functionally to the AC and administratively to the Company's executive management. The Chief Internal Auditor shall freely discuss audit policies, audit observations and agreed actions, audit follow-up, guidance issues and other matters as necessary.

The scope of AIG's group internal audit function work encompasses the examination and evaluation of the organization's policies, procedures and data, and key activities include the review of:

- Policies and procedures approved by the Board;
- Governance and oversight structures and processes;
- Risk management procedures and reports;
- Financial and operating information;
- Compliance to procedures and relevant regulations;
- Organizational culture and ethics;
- Business operations and their effectiveness and efficiency in managing risk; and
- · Projects and business change initiatives.

AIG's group internal audit function activity shall be conducted at all times in accordance with the mandatory *International Standards for the Professional Practice of Internal Auditing* adopted by the Institute of Internal Auditors ("IIA"). All members of AIG's group internal audit team shall meet or exceed the ethical standards delineated by the IIA in its *Code of Ethics*.

# f. Actuarial function – a description of how the actuarial function is implemented

The Company has an established Actuarial function that is responsible for coordinating, planning, consolidating, and reporting on a broad range of actuarial items for the Group. This function reports directly to the Chief Financial Officer and has access to and frequent communication with the Board of Directors. The Chief Actuary is a Fellow of the Casualty Actuarial Society (FCAS) and a Member of the American Academy of Actuaries (MAAA). The key responsibilities of the Actuarial Function are to assist in the Company's stewardship mission by:

- Evaluating reserving policies and practices at the operating companies;
- Review of overall reserve adequacy for the Company;
- Evaluating pricing models utilized at the operating companies; and
- Review of budgeted or planned loss ratios for the operating companies.

# g. Outsourcing

### i. Description of the outsourcing policy and information on any key or important functions that have been outsourced

The Company has an expense and procurement policy in place that outlines the various levels of approval authority for transactions involving contractual obligations, outsourcing arrangements and disbursement of funds for activities. Certain investment management duties have been delegated to third party investment managers. Apart from this, the Company has not outsourced any other key operational areas including underwriting, finance, risk management, internal audit and compliance to third parties.

# ii. Description of material intra-group outsourcing

The Company has service level agreements in place to address material intra-group outsourcing arrangements. The intra-group outsourcing arrangements include the following services:

- Actuarial
- Analytical (catastrophe research)
- Computer programming
- Credit advisory
- Finance
- Human resources
- Internal audit
- Investment management services
- Information technology
- Legal services
- Management advisory
- Operations
- Risk management

The provision of these services are charged to the service recipient at cost plus a markup, which varies based on the service provided.

These service arrangements are reviewed and updated on a regular basis, and ultimately approved by the Chief Financial Officers of the relevant entities within the Validus Holdings group.

# h. Any other material information

None.

# 4. RISK PROFILE

# a. Material risks that the insurer is exposed to, including how these risks are measured and any material changes that have occurred during the reporting period

The risk of high levels of claims following a severe catastrophe event is assessed to be the dominant risk for the Company. Other material risks include the risk that we have underestimated our reserves for incurred losses, the risk of heightened claims due to emerging claims or coverage issues, the risk posed by competition leading to a loss of market share or a deterioration in business quality, and the risk of losses on our investment portfolio.

These risks are measured through our holistic Economic Capital Model.

The Company's main risk categories are insurance, market, credit, operational, and strategic risk.

Insurance Risk - the risk of loss arising from inadequate pricing or of adverse change in the value of insurance liabilities due to inadequate provisioning assumptions. For Validus Re, the most significant risk is from a sever catastrophe event. Other material risks include the risk that we have underestimated our reserves for incurred losses, the risk of heightened claims due to emerging claims or coverage issues, the risk posed by competition leading to a loss of market share or a deterioration in business quality;

Market Risk - the risk of loss or of adverse change in the financial situation resulting, directly or indirectly, from fluctuations in the level and in the volatility of market prices of financial instruments. The predominant effect of this is on potential for losses in our investment portfolio;

Credit Risk - the risk of loss or of adverse change in the financial situation, resulting from the deterioration of the credit quality or default of an issuer of a financial instrument, a borrower, or a counterparty in a reinsurance or derivative contract. Our most significant credit risks are from reinsurance/retrocession counterparties;

Operational Risk - the risk of loss arising from inadequate or failed internal processes, personnel or systems, or from external events; and

Strategic Risk - the risk of loss arising from the adverse effect of management decisions on both business strategies and their execution, as well as from unexpected changes in environmental trends that damage the operating economics of the business.

All of these risks are measured using the Validus Re Capital model. This includes external vendor models for catastrophe and market risks, and internally developed components for other risks and aggregation across risks. The Validus Re Capital is a fully stochastic Monte Carlo simulation model that generates 100,000 scenarios for all risk categories along with associated interdependencies between them. The Validus Re Capital Model has been in use for six years. Enhancements are continually made, however no material changes to the way that risks are measured have occurred since last year.

# b. How risks are mitigated including the methods used and the process to monitor the effectiveness of these methods

Our most significant risk transfer mechanism is the use of reinsurance/retrocession. Detailed analysis is undertaken each year to support the reinsurance/retrocession purchase decisions. This uses the Validus Re Capital Model to measure the effect and extent of risk transfer and the value creation from the options on offer. This is carried out at a Group and operating company level including consideration of internal reinsurance. The operating companies regularly provide the GRMC with outwards reinsurance profitability studies are conducted, giving information on actual ceded claims as well as ceded claims disputes. To demonstrate how proposed coverage would respond, an "as if" analysis is carried out with respect to specific historical losses applicable to the cover being sought (e.g. Katrina, Deepwater, etc.) and the impact of relevant RDS's are examined.

Risk appetite metrics and risk limits are monitored by each operating company against tolerances on a quarterly basis. Escalation procedures are in place for breaches, involving communication to the VRMC and, if necessary, communication to the Board.

### c. Material risks concentration

Material concentrations of risk from natural catastrophes include, but are not restricted to, exposure to windstorms in the United States, Europe and Japan, and exposure to earthquakes in the United States and Japan. The probable maximum loss ("PML") metrics for these peril-regions are disclosed to the Company's Board of Directors.

Material concentrations of risk from non-natural catastrophe include, but are not restricted to, terrorist attacks, accidents within the marine, aerospace and energy sectors, and geopolitical and economic unrest. Illustrative RDS's for non-natural catastrophes are disclosed to the Company's Board of Directors.

Risk concentrations from other risk categories are far less material, as required by our risk appetite statement.

# d. How assets are invested in accordance with the prudent person principle as stated in paragraph 5.1.2 of the Code

The overriding goal of our investment management is capital preservation, such that the assets of the Company are invested to provide for the timely payment of all contractual obligations of policyholders and creditors, ensuring our ability to underwrite future business and to satisfy all regulatory and rating agency requirements. We aim to achieve these objectives through a clearly defined process that is driven by the enterprise-wide risk and capital position of the Company to ensure assets are invested in accordance with our defined financial objectives and risk tolerances. Our approach considers the joint impact of underwriting and investment risks to the Company, in the context of clear prioritization of underwriting needs and opportunities. As such, we structure our investment portfolio to support policyholder reserves and contingent risk exposures with a liquid portfolio of high quality fixed-income investments with a comparable duration profile.

Our Chief Financial Officer oversee our investment strategy and have established the Company's IPS which is approved by our Finance Committee and Board of Directors. The purpose of the IPS is to:

- Communicate and align the Company's investment philosophy and goals;
- Provide transparency regarding investment policies, procedures and controls;
- Set expectations and priorities of our third party investment managers;
- Establish a framework for integrating investment management into our overall ERM process;
- Mandate our investment parameters, including permissible asset classes and portfolio constraints, and governance structure for portfolio oversight and management;
- Establish formalized criteria to measure, monitor, and evaluate investment performance and risk exposures on a regular basis; and
- Ensure assets are invested in accordance with the overall financial goals and risk tolerances of the Company.

The IPS is updated annually or as otherwise appropriate to reflect changes to the Company, the economy, the investment environment, the regulatory environment or other factors.

# e. Stress testing and sensitivity analysis to assess material risks, including the methods and assumptions used, and the outcomes

The Company maintains a capital model that is updated on a quarterly basis. The model incorporates every material risk to which the Company is exposed, including underwriting, reserving, market and credit. This allows the Company to test the adequacy of its capital and liquidity against thousands of potential stress scenarios.

In addition to the probabilistic testing intrinsic to the capital model, the Company also estimates the financial impact of several deterministic scenarios such as specific natural catastrophe events as well as stress events in the areas of Marine, Political Risk, Aviation, Space, Terrorism, Liability and Cyber, including scenarios specified by the BMA. Estimated net loss for a number of non-natural catastrophe stress events is disclosed twice per year in the company's financial supplement. Based on the latest results, the Company believes it has sufficient capital and liquidity to comply with its contractual and regulatory obligations upon experiencing any of the tested stress scenarios.

### f. Any other material information

None.

# 5. SOLVENCY VALUATION

### a. The valuation bases, assumptions and methods used to derive the value of each asset class

The following methods and assumptions were used in estimating the fair value of each class of financial instrument recorded in the Consolidated Balance Sheets.

The carrying values of cash and cash equivalents (including restricted cash), investment income due and accrued, funds withheld, balances receivable on the sale of investments and reinsurance balances receivable approximated their fair values at December 31, 2018, due to their respective short maturities.

# Accounts and premiums receivable

The accounts and premiums receivable balance represents premiums owed from (re)insurers, less related acquisition costs. Outstanding premiums are valued at fair value, being the amount recoverable, and due to the short-term nature of the receivable no adjustments to valuation, estimates or judgments are required.

The recognition and valuation basis is consistent with the accounting valuation under U.S. GAAP. However, the balance has been adjusted within the Company's Economic Balance Sheet to exclude the amount not yet due on the valuation date.

#### Derivative instruments

The Company enters into various derivative instruments in the form of foreign currency forward exchange contracts. These derivative instruments are used to manage exposures to currency risk. All of the Company's outstanding derivative financial instruments are recognized in the Consolidated Balance Sheets at their fair values. The effect on earnings from recognizing the fair values of these derivative financial instruments depends on their intended use, their hedge designation, and their effectiveness in offsetting changes in the fair values of the exposures they are hedging.

To qualify for hedge accounting treatment, a derivative must be highly effective in mitigating the changes in the fair value or cash flows of the hedged item. The Company formally documents all relationships between designated hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The documentation process includes linking derivatives to specific assets or liabilities on the balance sheet, and assessing, both at the hedge's inception and on an ongoing basis, whether the derivatives that are used in hedging transactions are highly effective in offsetting the designated changes of the hedged items. The Company currently applies the long haul method when assessing a hedge's effectiveness.

The Company discontinues hedge accounting prospectively when it is determined that the derivative is no longer highly effective in offsetting the designated changes of the hedged item, the derivative is de-designated as a hedging instrument, or the derivative expires or is sold, terminated or exercised. When hedge accounting is discontinued because the Company becomes aware that it is not probable that the forecasted transaction will occur, the derivative continues to be carried on the balance sheet at its fair value, and gains and losses that were included as part of accumulated other comprehensive income are reclassified and recognized immediately in earnings.

# Deferred tax assets

Deferred tax assets and liabilities are recorded in accordance with ASC Topic 740 "Income Taxes". Consistent with ASC 740, the Company records deferred income taxes which reflect operating losses and tax credits carried forward and the tax effect of the temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and their respective tax bases.

The Company and its Bermuda domiciled subsidiaries are not subject to any income, withholding or capital gains taxes under current Bermuda law. The Company has operating subsidiaries in various other jurisdictions around the world, including but not limited to the U.S., Luxembourg, Switzerland and Canada that are subject to relevant taxes in those jurisdictions.

The Company recognizes the tax benefits of uncertain tax positions only where the position is more likely than not to be sustained upon examination by tax authorities based upon the technical merits of the position. Based on the more-likely-than-not recognition threshold, we must presume that the tax position will be subject to examination by a taxing authority with full knowledge of all relevant information. If the recognition threshold is met, then the tax position is measured at the largest amount of benefit that is more than 50% likely of being realized upon ultimate settlement. The Company classifies all interest and penalties related to uncertain tax positions in income tax expenses.

### Fixed maturity investments

In general, valuation of the Company's fixed maturity investment portfolio is provided by pricing services, such as index providers and pricing vendors, as well as broker quotations. The pricing vendors provide valuations for a high volume of liquid securities that are actively traded. For securities that do not trade on an exchange, the pricing services generally utilize market data and other observable inputs in matrix pricing models to determine month end prices. Prices are generally verified using third party data. Index providers generally utilize centralized trade reporting networks, available market makers and statistical techniques.

In general, broker-dealers value securities through their trading desks based on observable inputs. The methodologies include mapping securities based on trade data, bids or offers, observed spreads, and performance on newly issued securities. Broker-dealers also determine valuations by observing secondary trading of similar securities. Prices obtained from broker quotations are considered non-binding, however, they are based on observable inputs and by observing secondary trading of similar securities obtained from active, non-distressed markets. The techniques generally used to determine the fair value of the Company's fixed maturity investments are detailed below by asset class.

# U.S. government and government agency

U.S. government and government agency securities consist primarily of debt securities issued by the U.S. Treasury and mortgage pass-through agencies such as the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Government National Mortgage Association. Fixed maturity investments included in U.S. government and government agency securities are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources and integrate other observations from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The fair value of each security is individually computed using analytical models which incorporate option adjusted spreads and other daily interest rate data.

# Non-U.S. government and government agency

Non-U.S. government and government agency securities consist of debt securities issued by non-U.S. governments and their agencies along with supranational organizations (also known as sovereign debt securities). Securities held in these sectors are primarily priced by pricing services who employ proprietary discounted cash flow models to value the securities. Key quantitative inputs for these models are daily observed benchmark curves for treasury, swap and high issuance credits. The pricing services then apply a credit spread for each security which is developed by in-depth and real time market analysis. For securities in which trade volume is low, the pricing services utilize data from more frequently traded securities with similar attributes. These models may also be supplemented by daily market and credit research for international markets.

# U.S. states, municipalities and political subdivisions

The Company's U.S. states, municipalities and political subdivisions portfolio contains debt securities issued by U.S. domiciled state and municipal entities. These securities are generally priced by independent pricing services using the techniques described for U.S. government and government agency securities described above.

# Agency residential mortgage-backed securities

The Company's agency residential mortgage-backed investments are primarily priced by pricing services using a mortgage pool specific model which utilizes daily inputs from the active to be announced market which is very liquid, as well as the U.S. treasury market. The model also utilizes additional information, such as the weighted average maturity, weighted average coupon and other available pool level data which is provided by the sponsoring agency. Valuations are also corroborated with daily active market quotes.

### Non-agency residential mortgage-backed securities

The Company's non-agency mortgage-backed investments include non-agency prime residential mortgage-backed fixed maturity investments. The Company has no fixed maturity investments classified as sub-prime held in its fixed maturity investments portfolio. Securities held in these sectors are primarily priced by pricing services using an option adjusted spread model or other relevant models, which principally utilize inputs including benchmark yields, available trade information or broker quotes, and issuer spreads. The pricing services also review collateral prepayment speeds, loss severity and delinquencies among other collateral performance indicators for the securities valuation, when applicable.

# U.S. corporate

U.S. corporate debt securities consist primarily of investment-grade debt of a wide variety of U.S. corporate issuers and industries. The Company's corporate fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk. In certain instances, securities are individually evaluated using a spread which is added to the U.S. treasury curve or a security specific swap curve as appropriate.

#### Non-U.S. corporate

Non-U.S. corporate debt securities consist primarily of investment-grade debt of a wide variety of non-U.S. corporate issuers and industries. The Company's non-U.S. corporate fixed maturity investments are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk.

# Bank loans

The Company's bank loan investments consist primarily of below-investment-grade debt of a wide variety of corporate issuers and industries. The Company's bank loans are primarily priced by pricing services. When evaluating these securities, the pricing services gather information from market sources regarding the issuer of the security and obtain credit data, as well as other observations, from markets and sector news. Evaluations are updated by obtaining broker dealer quotes and other market information including actual trade volumes, when available. The pricing services also consider the specific terms and conditions of the securities, including any specific features which may influence risk.

Also, included in the bank loan portfolio is a collection of loan participations held through an intermediary. A third party pricing service provides monthly valuation reports for each loan and participation using a combination of quotations from loan pricing services, leveraged loan indices or market price quotes obtained directly from the intermediary.

# Asset-backed securities

Asset backed securities include mostly investment-grade debt securities backed by pools of loans with a variety of underlying collateral, including automobile loan receivables, student loans, credit card receivables, and collateralized loan obligations originated by a variety of financial institutions. Securities held in these sectors are primarily priced by pricing services. The pricing services apply dealer quotes and other available trade information such as bids and offers, prepayment speeds which may be adjusted for the underlying collateral or current price data, the U.S. treasury curve and swap curve as well as cash settlement. The pricing services determine the expected cash flows for each security held in this sector using historical prepayment and default projections for the underlying collateral and current market data. In addition, a spread is applied to the relevant benchmark and used to discount the cash flows noted above to determine the fair value of the securities held in this sector.

### Commercial mortgage-backed securities

Commercial mortgage backed securities are investment-grade debt primarily priced by pricing services. The pricing services apply dealer quotes and other available trade information such as bids and offers, prepayment speeds which may be adjusted for the underlying collateral or current price data, the U.S. treasury curve and swap curve as well as cash settlement. The pricing services determine the expected cash flows for each security held in this sector using historical prepayment and default projections for the underlying collateral and current market data. In addition, a spread is applied to the relevant benchmark and used to discount the cash flows noted above to determine the fair value of the securities held in this sector.

### Short term investments

Short-term investments consist primarily of highly liquid securities, all with maturities of less than one year from the date of purchase. The fair value of the portfolio is generally determined using amortized cost which approximates fair value.

#### Other investments

# Hedge funds

The hedge fund's administrator provides quarterly Net Asset Value ("NAV") with a three-month delay in valuation. The fair value of this investment is measured using the NAV practical expedient.

### Private equity investments

The private equity funds provide quarterly or semi-annual partnership capital statements with a three- or six-month delay which are used as a basis for valuation. These private equity investments vary in investment strategies and are not actively traded in any open markets. The fair value of these investments are measured using the NAV practical expedient.

# Fixed income investment funds

The Company's investment funds consist of a pooled investment fund. The pooled investment is invested in fixed income securities with high credit ratings and is only open to Lloyd's Trust Fund participants. The fair value of units in the investment fund is based on the NAV of the fund and is traded on a daily basis.

The fair value of the Company's remaining investment funds is based on the NAV of the fund as reported by the independent fund administrator. The fund's administrators provide a monthly reported NAV with a one or three month delay in their valuation. The fair value of these investments are measured using the NAV practical expedient. None of these investments are probable of being sold at amounts different than their NAVs.

b. The valuation bases, assumptions and methods used to derive the value of technical provisions and the amount of the best estimate. The amount of the risk margin as well as the level of uncertainty to determine the value of the technical provisions should be included

We have referred to guidance provided by the BMA to calculate technical provisions. In certain cases, we have referred to technical provision guidance from Lloyd's as that is the framework used by Talbot for Solvency II purposes. We have utilized the technical provision template provided by the BMA (on their website) as part of our process.

We rely on the following data for technical provision calculation associated with our operating companies:

Claims provision data provided by the Company's operating companies: These are provided separately by operating company
and are based on their underlying U.S. GAAP reserve process for Q4 2018. The operating companies also provide expected
reserve cashflows and other adjustments for the claims provision. For intercompany balances with Talbot, this data comes
directly from their Solvency II process. Other adjustments made to the claims provision include:

- Removal of prudency margins;
- Adjustments for cost of investment income and bad debt;
- Inclusion of expected cashflows for future reinstatement premiums ("RIP") and other premium receivables related to claims that have already occurred; and
- Discounting of cash flows.
- Premium provision data provided by the operating companies: These are provided separately by operating company and
  are based on expected cashflows related to unearned premium and bound but not incepted contracts. Similar to the claims
  provision, expected cashflows and other adjustments are included. For intercompany balances with Talbot, this data comes
  directly from their Solvency II process.
- The risk margin increases the technical provisions from the best estimate to theoretical level needed to transfer obligations to another risk bearing entity. We use the technical provision template provided by the BMA to calculate the risk margin.
- Discount rates: We use risk-free discount rates provided by the BMA. The BMA provides separate discount rates by currency.
- The operating companies independently map their data to BMA class of business. To allocate business to BMA lines of business, Validus Re used general ledger codes and Talbot uses Lloyd's business codes.

The technical provisions are made up of the following elements:

	December 31, 2018
Best estimate premium provisions	\$ 328,578
Best estimate loss and loss expense provision	2,565,899
Risk margin	179,659
Total general business insurance technical provisions	\$ 3,074,136

# c. Description of recoverables from reinsurance contracts, including special purpose insurers and other risk transfer mechanisms

The Company enters into reinsurance and retrocession agreements in order to mitigate its accumulation of loss, reduce its liability on individual risks, enable it to underwrite policies with higher limits and increase its aggregate capacity. The ceding of the (re)insurance risk does not legally discharge the Company from its primary liability for the full amount of the policies, and the Company is therefore required to pay the loss and bear collection risk relating to the possibility that the reinsurer or retrocessionaire fails to meet its obligations under the reinsurance or retrocession agreement.

The Company primarily uses ceded reinsurance for risk mitigation purposes. The Company primarily purchases reinsurance on either an excess of loss or proportional basis and also purchases industry loss warranties and a relatively small amount of facultative reinsurance.

Paid losses recoverable and loss reserves recoverable balances include amounts owed to us in respect of paid and unpaid ceded losses and loss expenses, respectively. The balances are presented net of a provision for non-recoverability. In establishing our reinsurance recoverable balances, significant judgment is exercised by management in determining the amount of unpaid losses and loss expenses to be ceded as well as our ability to cede losses and loss expenses under our reinsurance contracts.

The Company's ceded unpaid losses and loss expenses consists of two elements, those for reported losses and those for Incurred But Not Report ("IBNR"). Ceded amounts for IBNR are developed as part of our loss reserving process. Consequently, the estimation of ceded unpaid losses and loss expenses is subject to similar risks and uncertainties in the estimation of gross IBNR.

Although our reinsurance recoverable balances are derived from our determination of contractual provisions, the recoverability of such amounts may ultimately differ due to the potential for a reinsurer to become financially impaired or insolvent or for a contractual dispute over contract language or coverage. Consequently, we review our reinsurance recoverable balances on a regular basis to determine if there is a need to establish a provision for non-recoverability. In performing this review, the Company uses judgment in assessing the credit worthiness of our reinsurers and the contractual provisions of our reinsurance agreements. In the event that the credit worthiness of our reinsurers were to deteriorate, actual uncollectible amounts could be significantly greater than our provision for non-recoverability.

The Company uses a variety of methods to estimate uncollectible reinsurance, with the primary method being a default analysis. The primary components of the default analysis are reinsurance recoverable balances by reinsurer and default factors used to determine the portion of a reinsurer's balance deemed to be uncollectible. Default factors require considerable judgment and are determined using the current rating, or rating equivalent, of each reinsurer as well as other key considerations and assumptions.

The use of different assumptions within the model could have an effect on the provision for uncollectible reinsurance reflected in the Company's Consolidated Financial Statements. To the extent the creditworthiness of the Company's reinsurers was to deteriorate due to an adverse event affecting the reinsurance industry, such as a large number of major catastrophes, actual uncollectible amounts could be significantly greater than the Company's provision.

#### d. The valuation bases, assumptions and methods used to derive the value of other liabilities

The carrying values of accounts payable and accrued expenses as well as other liabilities approximated their fair values at December 31, 2018, due to their respective short maturities.

#### e. Any other material information

None.

# 6. CAPITAL MANAGEMENT

### a. Eligible capital

# i. Description of the capital management policy and process to determine capital needs for business planning, how capital is managed and any material changes during the reporting period

The primary capital management objectives of the Company are as follows:

- 1. Ensure sufficient capital to meet and/or exceed all applicable regulatory requirements;
- 2. Ensure sufficient capital to meet and/or exceed all applicable internal capital requirements as determined by the Company's risk management framework;
- 3. Maintain some amount of excess capital over and above items 1 and 2; and
- 4. Return true excess capital above items 1, 2, and 3 to the Company's shareholders.

These requirements include, but are not limited to the following:

#### Regulatory requirements

Minimum capital and/or solvency standards exist for the Company and its subsidiaries in many of the jurisdictions in which it operates. These jurisdictions and capital requirements/models include:

- 1. Bermuda BMA BSCR model; and
- 2. Switzerland Swiss Financial Market Supervisory Authority ("FINMA") Swiss Solvency Test ("SST") model;

#### Internal Capital Requirements

The Company operates under the guidance of an extensive ERM framework that has been established to identify, assess, quantify and manage risks and opportunities. A key element of the ERM framework is the Company's integrated Economic Capital Model ("ECM") framework to facilitate the consistent evaluation of risk and capital.

The Company regularly uses both regulatory and internal capital requirements to assess the overall capital position and that of subsidiary companies. To the extent that excess capital exists over and above these requirements, Company management can and regularly does find the most effective means to return this additional excess capital to the Company's parent. Methods of excess capital return to common shareholders includes but is not limited to: common share open market repurchases, common share tender offers, regular common share dividends and extraordinary common share dividends.

# ii. Description of the eligible capital categorized by tiers in accordance with the Eligible Capital Rules

As at December 31, 2018, Eligible Capital for the Company was categorized as follows:

	December	r 31, 2018
Tier 1 Available Capital	\$	2,423,845
Tier 2 Available Capital		-
Tier 3 Available Capital		200,000
Total Eligible Capital	\$	2,623,845

The majority of Eligible Capital for the Company is Tier 1, the highest quality capital, consisting of capital stock, contributed surplus and statutory surplus. The Company also has a modest amount of Tier 3 capital consisting of letter of credit approved by the BMA as Other Fixed Capital.

# iii. Description pf the eligible capital categorized by Tiers, in accordance with the Eligible Capital Rules used to meet the Enhanced Capital Requirement (ECR) and the Minimum Margin of Solvency defined in accordance with section (1)(1) of the Act

As at December 31, 2018, Eligible Capital for the Company as applied to its Minimum Margin of Solvency ("MSM") and ECR was categorized as follows:

	Year Ended December 31, 2018		
	Applied to MSM	Applied to ECR	
Tier 1 Available Capital	\$ 2,423,845	\$ 2,423,845	
Tier 2 Available Capital	-	-	
Tier 3 Available Capital	-	200,000	
Total Eligible Capital	\$ 2,423,845	\$ 2,623,845	

# iv. Confirmation that the eligible capital is subject to transitional arrangements as required under the Eligible Capital Rules

The letter of credit approved as Eligible Capital are subject to transitional arrangements to 2021.

# v. Identification of any factors affecting encumbrances affecting the availability and transferability of capital to meet the Eligible Capital Rules

As at December 31, 2018, the Company had cash and cash equivalents, restricted cash, short-term investments and fixed maturity investments that were pledged during the normal course of business, of which certain assets were held in trust. Pledged assets are generally for the benefit of the Company's cedants and policyholders, to support fully collateralized reinsurance transactions and to facilitate the accreditation of the Company by certain regulators. These assets are released to the Company upon the payment of the obligations or the expiration of the risk period.

# vi. Identification of ancillary capital instruments that have been approved by the Authority

On December 27, 2018, the Company secured a non-assignable, non-transferrable unsecured standby letter of credit from Standard Chartered Bank for a sum not exceeding the aggregate amount of \$200,000 effective December 31, 2018, expiring on December 31, 2021. This standby letter of credit is recorded as Other Fixed Capital on the Statutory Statement of Capital and Surplus and as a Tier 3 Ancilliary Capital as at December 31, 2018, subject to certain conditions.

# vii.Identification of differences in shareholder's equity as stated in the financial statements versus available statutory capital and surplus

Other than the impact of statutory based technical provision valuation techniques, significant differences between GAAP shareholders' equity and available statutory capital and surplus include an increase in available statutory capital and surplus for letter of credit approved as other fixed capital, and a reduction in available statutory capital for the removal of intercompany loan receivables and prepaid expenses.

# b. Regulatory capital requirements

# i. Identification of the amount of the ECR and Minimum Margin of Solvency at the end of the reporting period

As at December 31, 2018, the regulatory capital requirements for the Company were assessed as follows:

		December 31, 2018	
ECR	\$ 1,	123,286	
Minimum Margin of Solvency.		661.874	

	As at December 31, 2018, the Company was compliant with the MSM and ECR requirement.
iii	$Description \ of the \ amount \ and \ circumstances \ surrounding \ the \ non-compliance, the \ remedial \ measures \ taken \ and \ their \ effectiveness$
	Not applicable.
iv.	Where the non-compliance has not been resolved, a description of the amount of the non-compliance at the end of the reporting period
	Not applicable.
c.	Approved internal capital model used to derive the ECR
i.	A description of the purpose and scope of the business and risk areas where the internal model is used
	Not applicable.
ii.	Where a partial internal model is used, a description of how it is integrated with the BSCR Model.
	Not applicable.
iii.	A description of methods used in the internal model to calculate the ECR
	Not applicable.
iv.	A description of aggregation methodologies and diversification effects
	Not applicable.
v.	$A \ description \ of \ the \ main \ differences \ in \ the \ methods \ and \ assumptions \ used \ for \ the \ risk \ areas \ in \ the \ internal \ model$ versus the BSCR Model
	Not applicable.
vi.	A description of the nature and suitability of the data used in the internal model
	Not applicable.
vii	.Any other material information
	Not applicable.

ii. Identification of any non-compliance with the Minimum Margin of Solvency and the ECR

# 7. SIGNIFICANT EVENT

a.	A	descri	ption	of	the	signi	ficant	event

The Company has no significant reportable events subsequent to December 31, 2018.

b. Approximate date(s) or proposed timing of the significant event

Not applicable.

c. Confirmation of how the significant event has impacted or will impact, any information provided in the most recent financial condition report filed with the Authority

Not applicable.

d. Any other material information

None.

# Validus Reinsurance, Ltd. List of Subsidiaries

List of Subsidiaries		
Subsidiary	Jurisdiction	Ownership Interest Held By Immediate Parent 100% unless otherwise indicated
Validus Reinsurance, Ltd.	Bermuda	
Underwriting Risk Services S.A.	Chile	99.0%
AlphaCat Re 2011 Ltd.	Bermuda	22.3%
AlphaCat 2013, Ltd.	Bermuda	19.7%
AlphaCat 2015, Ltd.	Bermuda	20.0%
BetaCat Ltd.	Bermuda	
Validus Holdings (UK) Plc	United Kingdom	
Validus Reinsurance (Switzerland) Ltd	Switzerland	
Validus Reinsurance (Switzerland) Ltd (Bermuda Branch)	Bermuda	
Flagstone Reinsurance (Luxembourg), SARL	Luxembourg	
Validus Risk Services (Ireland) Limited	Ireland	
Validus Research, Inc.	Canada	
Validus UPS, Ltd.	Bermuda	
Flagstone (Bermuda) Holdings Limited	Bermuda	
IAL Leasing Ltd.	Bermuda	
Mont Fort Re Ltd.	Bermuda	
Flagstone (Mauritius) Limited	Mauritius	
Flagstone Underwriting Support Services (India) Pvt.	India	99.0%