

# VALIDUS HOLDINGS, LTD.

# FINANCIAL CONDITION REPORT

**DECEMBER 31, 2017** 

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# 1. BUSINESS AND PERFORMANCE

### a. Name of the insurance group

Validus Holdings Group (the "Company" or the "Group"), including Validus Reinsurance, Ltd.

### b. Name and contact details of the group 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 group 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 of the insurance group

The following table sets forth information as of March 26, 2018 (record date for the Company's 2018 Proxy Statement) regarding the beneficial ownership of our common shares by:

- each person known by us to beneficially own more than 5% of our outstanding common shares;
- each of our directors;
- each of our named executive officers; and
- all of our directors and executive officers as a group.

The information provided in the table below with respect to each principal shareholder has been obtained from that shareholder.

Beneficial owner (a)(b)	Common shares	Unvested restricted shares	Total common shares and common share equivalents	Total beneficial ownership (%)
Funds affiliated with or managed by The Vanguard Group	6,416,430		6,416,430	8.09%
Funds affiliated with or managed by Capital World Investors (U.S.)	4,656,948	—	4,656,948	5.87%
Funds affiliated with or managed by Boston Partners	4,341,599	—	4,341,599	5.47%
Edward J. Noonan	1,129,100	82,624	1,211,724	1.42%
Jeffrey D. Sangster	136,206	52,984	189,190	0.17%
Kean D. Driscoll	27,952	62,281	90,233	0.04%
Robert F. Kuzloski	68,388	54,001	122,389	0.09%
Peter A. Bilsby	29,324	51,463	80,787	0.04%
John J. Hendrickson	60,000	54,135	114,135	0.08%
Michael E.A. Carpenter	225,905	_	225,905	0.28%
Matthew J. Grayson	51,393	_	51,393	0.06%
Jeffrey W. Greenberg	3,027	—	3,027	%
Jean-Marie Nessi	1,873	_	1,873	%
Mandakini Puri	6,756	_	6,756	0.01%
Gail Ross	2,900	_	2,900	%
Dr. Therese M. Vaughan	6,756	_	6,756	0.01%
Mahmoud Abdallah	6,756	—	6,756	0.01%
Christopher E. Watson	1,822	_	1,822	%
Karin Hirtler-Garvey	2,994	—	2,994	%
Directors and Executive Officers as a group (22 persons)	1,896,567	553,337	2,449,904	2.39%
Shares held by other persons owning less than 5%	62,017,484	1,622,483	63,639,967	78.18%
Total	79,329,028	2,175,820	81,504,848	100.00%

(a) All holdings in this beneficial ownership table have been rounded to the nearest whole share.(b) Except as otherwise provided in these footnotes, excludes shares as to which beneficial ownership is disclaimed.

### e. Group structure chart for the Company

Please see Exhibit A for a complete listing of the Company's subsidiaries as at December 31, 2017.

Validus Reinsurance, Ltd. is a wholly owned subsidiary of Validus Holdings, Ltd.

### f. Insurance business written by business segment and by geographical region for the year ended December 31, 2017

The Company conducts its operations worldwide through three reportable segments which have been determined under U.S. GAAP segment reporting to be Reinsurance, Insurance, and Asset Management.

The Reinsurance segment operates as a global provider of reinsurance products and primarily concentrates on property and other reinsurance risks commonly referred to as short-tail in nature due to the relatively brief period between the occurrence and payment of a claim. The segment operates primarily through Validus Reinsurance, Ltd. and Validus Reinsurance (Switzerland) Ltd., as well as Lloyd's Syndicate 1183 (the "Talbot Syndicate"), which is managed by Talbot Holdings, Ltd. through its wholly-owned subsidiaries. The Talbot Syndicate has a short-tail treaty reinsurance portfolio that provides the Company with access to the Lloyd's marketplace.

The Insurance segment operates globally and focuses on property and specialty insurance business, as well as facultative reinsurance, which provides coverage on a single-risk basis. The segment operates primarily through two insurance companies, the Talbot Syndicate and Western World Insurance Group, Inc. ("Western World"). Western World provides the Company access to the U.S. commercial insurance market and primarily insures small to medium size commercial institutional risks through three wholly-owned insurance subsidiaries: Western World Insurance Company, Tudor Insurance Company and Stratford Insurance Company. On May 1, 2017, Western World acquired all of the outstanding capital stock of Crop Risk Services, Inc. ("CRS"), a U.S. based primary crop insurance managing general agent.

The Asset Management segment participates in the market for insurance-linked securities ("ILS"), which are financial instruments, the values of which are determined by insurance losses caused primarily by natural catastrophes such as major earthquakes and hurricanes. The Asset Management segment operates primarily through AlphaCat Managers Ltd., an asset manager primarily for third party investors.

The Company's exposures are generally diversified across geographic zones. The following tables set forth the gross premiums written allocated to the territory of coverage exposure for the years indicated:

	Gross Premiums Written											
		Year Ended December 31, 2017										
(Dollars in thousands)	Reinsurance Segment			Insurance Segment		Asset Management Segment		Eliminations		Total	%	
United States	\$	418,814	\$	701,669	\$	119,779	\$	(10,221)	\$	1,230,041	41.7%	
Warthanida analadina Unitad States (a)		17 1(7		149 509		9 4 (7				204 522	( 00/	
Worldwide excluding United States <sup>(a)</sup> Australia and New Zealand		47,467 4,072		148,598 12,849		8,467 2,003		_		204,532 18,924	6.9% 0.6%	
Europe		39,334		32,047		630				72,011	2.4%	
Latin America and Caribbean		49,297		82,107		46		—		131,450	4.5%	
Japan		43,002		5,004		3,855		—		51,861	1.8%	
Canada		6,284		4,633		731		_		11,648	0.4%	
Rest of the world <sup>(b)</sup>		21,927		90,907		_		_		112,834	3.8%	
Sub-total, non United States		211,383	_	376,145		15,732		_		603,260	20.4%	
Worldwide including United States (a)		188,383		99,377		170,126		_		457,886	15.5%	
Other locations non-specific (c)		376,627		275,942		7,182		_		659,751	22.4%	
Total	\$	1,195,207	\$	1,453,133	\$	312,819	\$	(10,221)	\$	2,950,938	100.0%	

	Gross Premiums Written										
		Year Ended December 31, 2016									
(Dollars in thousands)		einsurance Insurance Segment Segment			Asset Management Segment		Eliminations		Total		%
United States	\$	464,212	\$	408,609	\$	64,766	\$	_	\$	937,587	35.4%
Worldwide excluding United States (a)		53,369		146,191		22,206		—		221,766	8.4%
Australia and New Zealand		7,402		10,698		4,949		—		23,049	0.9%
Europe		32,875		29,661		3,245		—		65,781	2.5%
Latin America and Caribbean		52,080		88,315		—		—		140,395	5.3%
Japan		42,045		4,601		3,221				49,867	1.9%
Canada		4,365		5,671		207				10,243	0.4%
Rest of the world <sup>(b)</sup>		21,142		106,110		—				127,252	4.8%
Sub-total, non United States		213,278		391,247		33,828		_		638,353	24.1%
Worldwide including United States (a)		159,313		95,826		170,253		(746)		424,646	16.0%
Other locations non-specific (c)		348,109		298,455		1,555				648,119	24.5%
Total	\$	1,184,912	\$	1,194,137	\$	270,402	\$	(746)	\$	2,648,705	100.0%

(a) Represents risks in two or more geographic zones.

(b) Represents risks in one geographic zone.

(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 by the insurance group during the year ended December 31, 2017

#### Performance of investments

Managed investments represent assets governed by the Company's investment policy statement ("IPS") whereas, non-managed investments represent assets held in support of consolidated AlphaCat variable interest entities which are not governed by the Company's IPS. Consequently, the Company only assesses the performance of its managed investment portfolio.

As at December 31, 2017, the fair values of the investment portfolios of Validus Reinsurance, Ltd. and the Company totaled \$5.3 billion (December 31, 2016: \$5.0 billion) and \$10.8 billion (December 31, 2016: \$9.3 billion), respectively, and were split by asset class as follows:

Validus Reinsurance, Ltd.	Dece	December 31,						
(Dollars in thousands)	2017	2(	016					
Investments								
U.S. government and government agency	\$ 558,885	\$	562,856					
Non-U.S. government and government agency	153,635		118,744					
U.S. states, municipalities and political subdivisions	196,726	)	266,484					
Agency residential mortgage-backed securities	792,065	j	523,455					
Non-agency residential mortgage-backed securities	31,938	;	14,085					
U.S. corporate	1,326,402		1,293,078					
Non-U.S. corporate	278,739	)	258,858					
Bank loans	442,951		570,399					
Asset-backed securities	609,118	;	490,638					
Commercial mortgage-backed securities	310,891		329,568					
Total fixed maturities	4,701,350	)	4,428,165					
Short-term investments	165,720	)	117,558					
Other investments								
Fund of hedge funds			955					
Hedge funds	15,774		17,381					
Private equity investments	78,407	,	89,810					
Fixed income investment funds	174,081		197,455					
Mutual funds	_		5,368					
Equities <sup>(b)</sup>	76,896	;	90,154					
Total other investments	345,158		401,123					
Investments in investment affiliates <sup>(a)</sup>	100,137		100,431					
Total investments	\$ 5,312,365	5 \$	5,047,277					

(a) Validus Reinsurance, Ltd.'s investments in investment affiliates have been treated as equity method investments with the corresponding gains and losses recorded in income as "Income (loss) from investment affiliates."

(b) Equities represent shares of Validus Holdings, Ltd. held by Validus Reinsurance, Ltd.

Validus Holdings, Ltd.		Decem	ber 3	1,
(Dollars in thousands)		2017		2016
Managed investments				
U.S. government and government agency	\$	727,397	\$	804,126
Non-U.S. government and government agency		312,239		240,791
U.S. states, municipalities and political subdivisions		201,303		271,830
Agency residential mortgage-backed securities		978,049		679,595
Non-agency residential mortgage-backed securities		40,373		15,477
U.S. corporate		1,533,395		1,534,508
Non-U.S. corporate		422,249		410,227
Bank loans		442,951		570,399
Asset-backed securities		658,303		526,814
Commercial mortgage-backed securities		312,395		330,932
Total fixed maturities		5,628,654		5,384,699
Short-term investments		230,011		228,386
Other investments				
Fund of hedge funds				955
Hedge funds		15,774		17,381
Private equity investments		78,407		89,809
Fixed income investment funds		204,426		242,093
Overseas deposits		56,611		50,106
Mutual funds				5,368
Total other investments		355,218		405,712
Investments in investment affiliates <sup>(a)</sup>		100,137		100,431
Cash and cash equivalents		691,687		415,419
Restricted cash		62,848		15,000
Total managed investments	\$	7,068,555	\$	6,549,647
Non-managed investments				
Catastrophe bonds	\$	229,694	\$	158,331
Short-term investments		3,151,746		2,567,784
Cash and cash equivalents		63,303		4,557
Restricted cash		331,815		55,956
Total non-managed investments		3,776,558		2,786,628
Total investments	\$	10,845,113	\$	9,336,275
	<u>+</u>	- , ,	-	- , , , -

(a) The Company's investments in investment affiliates have been treated as equity method investments with the corresponding gains and losses recorded in income as "Income (loss) from investment affiliates."

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 IPS specifically requires certain minimum thresholds of cash, short-term investments, and highly-rated fixed maturity securities relative to our 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 managed investments to have an average duration in the range of 0.75 years to 3.25 years. At December 31, 2017, the average duration of the Company's managed investment portfolio was 2.17 years (December 31, 2016: 2.17 years). This duration is reviewed regularly based on changes in the duration of the Company's liabilities and general market conditions.

The Company's IPS also requires certain minimum credit quality standards for its managed fixed maturity portfolio, including a minimum weighted average portfolio rating of A+ for securities assigned ratings. Further limits on asset classes and security types are also mandated. In addition, the Company stress-tests the downside risks within its asset portfolio using internal and external inputs and stochastic modeling processes to help define and limit asset risks to acceptable levels that are consistent with our overall Enterprise Risk Management ("ERM") framework. As at December 31, 2017, the Company's rated managed fixed maturity portfolio had an average credit quality rating of AA- (December 31, 2016: AA-).

The value of the Company's managed fixed maturity portfolio will fluctuate with, among other factors, changes in the interest rate environment and in overall economic conditions. Additionally, the structure of the Company's overall managed investment portfolio exposes the Company to other risks, including insolvency or reduced credit quality of corporate debt securities, prepayment, default and structural risks on asset-backed securities, mortgage-backed securities and bank loans and liquidity risks on certain other investments, including hedge funds, investment funds and private equity investments.

During the years ended December 31, 2017 and 2016, net investment income was derived from the following sources:

Validus Reinsurance, Ltd.	Years Ended December 31,							
(Dollars in thousands)			2016					
Investments								
Fixed maturities and short-term investments	\$	112,898	\$	103,674				
Other investments		27,630		26,595				
Cash and cash equivalents and restricted cash		2,433		2,548				
Dividends from equities		2,491		2,294				
Securities lending income		25		55				
Total gross investment income		145,477		135,166				
Investment expenses		(7,769)		(7,334)				
Total net investment income	\$	137,708	\$	127,832				

Validus Holdings, Ltd.	Years Ended December 31,							
(Dollars in thousands)	 2017		2016					
Managed investments								
Fixed maturities and short-term investments	\$ 127,600	\$	119,085					
Other investments	29,930		27,860					
Cash and cash equivalents and restricted cash	4,069		2,939					
Securities lending income	25		55					
Total gross investment income	161,624		149,939					
Investment expenses	(8,669)		(8,221)					
Total managed net investment income	\$ 152,955	\$	141,718					
Non managed investments								
Fixed maturities and short-term investments	\$ 14,833	\$	6,931					
Cash and cash equivalents and restricted cash	10,085		1,736					
Total non-managed net investment income	24,918		8,667					
Total net investment income	\$ 177,873	\$	150,385					

The Company's managed net investment income for the years ended December 31, 2017 and 2016 was \$153.0 million and \$141.7 million, respectively. The increase of \$11.2 million during the year ended December 31, 2017 as compared to 2016 was primarily driven by strong performance from the Company's fixed income funds.

The Company's managed yield-bearing portfolio had an effective yield of 2.32% and 2.24% for the years ended December 31, 2017 and 2016, respectively. Investment yield is calculated by dividing total managed net investment income by the average balance of the yield bearing assets managed by the Company's portfolio managers. Average assets for the period ended is the average of the beginning, ending and intervening quarter end asset balances.

# Details of Material Income and Expenses for the Years Ended December 31, 2017 and 2016

The below tables provide summaries of Validus Reinsurance, Ltd.'s and the Company's material income and expenses line items for the years ended December 31, 2017 and 2016:

Validus Reinsurance, Ltd.	Years Ended December 31,								
(Dollars in thousands)	 2017	2016							
Revenues									
Gross premiums written	\$ 2,568,293 \$	5 2,325,197							
Net investment income	137,708	127,832							
Expenses									
Losses and loss expenses:									
Current period excluding items below	1,390,210	1,148,377							
Current period-notable loss events	400,792	41,812							
Current period—non-notable loss events	46,233	43,512							
Change in prior accident years	(209,995)	(213,456							
Total losses and loss expenses	 1,627,240	1,020,245							
Policy acquisition costs	596,638	579,850							
General and administrative expenses	203,299	161,330							
Validus Holdings, Ltd.	Years Ended De	cember 31,							
(Dollars in thousands)	 2017	2016							
Revenues									
Gross premiums written	\$ 2,950,938 \$	2,648,705							
Net investment income	177,873	150,385							
Expenses									
Losses and loss expenses:									
Current period excluding items below	1,425,166	1,120,841							
Comment manifed an estable lange counter	1.046.040	00 211							

Current period excluding items below	1,425,166	1,120,841
Current period—notable loss events	1,046,949	90,211
Current period—non-notable loss events	50,596	70,237
Change in prior accident years	(222,533)	(216,192)
Total losses and loss expenses	2,300,178	1,065,097
Policy acquisition costs	471,553	449,482
General and administrative expenses	352,137	336,294

Highlights for the Company for the year ended December 31, 2017 and 2016 were as follows:

<u>Gross premiums written</u> for the year ended December 31, 2017 were \$2,950.9 million compared to \$2,648.7 million for the year ended December 31, 2016, an increase of \$302.2 million, or 11.4%. The increase in gross premiums written was primarily driven by an increase in the Insurance and Asset Management segments.

Losses and loss expenses for the years ended December 31, 2017 and 2016 were \$2,300.2 million and \$1,065.1 million, respectively and included the following:

### Notable and Non-notable Loss Events

The Company defines a notable loss event as an event whereby consolidated net losses and loss expenses aggregate to a threshold greater than or equal to \$30.0 million. The Company defines a non-notable loss event as an event whereby consolidated net losses and loss expenses aggregate to a threshold greater than or equal to \$15.0 million but less than \$30.0 million.

### Notable Loss Events

Losses and loss expenses incurred during the year ended December 31, 2017 from notable loss events were \$1,046.9 million, or 40.6 percentage points of the loss ratio. Net of losses attributable to AlphaCat investors and noncontrolling interests of \$603.4 million and the net impact of reinstatement premiums and acceleration of unearned premiums of \$31.3 million, the net loss attributable to the Company from 2017 notable loss events was \$412.2 million and was incurred by event as follows:

	Year Ended December 31, 2017										
	Notable Loss Events										
(Dollars in thousands)	 lurricane Harvey	ł	Hurricane Irma	H	Iurricane Maria	Ċ	Northern California Wildfires		Southern California Wildfires		Total
Net losses and loss expenses	\$ 313,204	\$	458,145	\$	149,351	\$	87,754	\$	38,495	\$	1,046,949
Net losses and loss expenses attributable to AlphaCat third party investors and noncontrolling interests	(163,103)		(265,362)		(93,531)		(67,592)		(13,837)		(603,425)
Validus' share of net losses and loss expenses	150,101		192,783		55,820		20,162		24,658		443,524
Net impact on premiums earned <sup>(a)</sup>	4,653		(26,433)		(1,482)		(8,024)		_		(31,286)
Net loss attributable to Validus	\$ 154,754	\$	166,350	\$	54,338	\$	12,138	\$	24,658	\$	412,238

(a) Net impact on premiums earned includes reinstatement premiums assumed and ceded and the net impact of accelerating unearned premiums assumed and ceded.

Losses and loss expenses incurred during the year ended December 31, 2016 from notable loss events were \$90.2 million, or 4.0 percentage points of the loss ratio. Net of losses attributable to AlphaCat investors and noncontrolling interests of \$21.7 million and reinstatement premiums of \$4.3 million, the net loss attributable to the Company from 2016 notable loss events was \$64.2 million and was incurred by event as follows:

	Year Ended December 31, 2016										
		Notable Loss Events									
(Dollars in thousands)	Canadian Wildfires			Hurricane Matthew	2016 New Zealand Earthquake			Total			
Net losses and loss expenses	\$	19,650	\$	39,140	\$	31,421	\$	90,211			
Net losses and loss expenses attributable to AlphaCat third party investors and noncontrolling interests		(3,696)		(8,943)		(9,068)		(21,707)			
Validus' share of net losses and loss expenses		15,954		30,197		22,353		68,504			
Reinstatement premiums, net		(1,496)		(2,781)		(65)		(4,342)			
Net loss attributable to Validus	\$	14,458	\$	27,416	\$	22,288	\$	64,162			

# Non-notable Loss Events

Losses and loss expenses incurred during the year ended December 31, 2017 from non-notable loss events were \$50.6 million, or 2.0 percentage points of the loss ratio. Net of losses attributable to AlphaCat investors and noncontrolling interests of \$4.1 million and including the impact of net reinstatement premiums ceded of \$0.3 million, the net loss attributable to the Company from 2017 non-notable loss events was \$46.8 million and was incurred by event as follows:

	Year Ended December 31, 2017									
	Non-notable Loss Events									
(Dollars in thousands)	Energy Mexico City Total Loss Event Earthquake					Total				
Net losses and loss expenses	\$	27,330	\$	23,266	\$	50,596				
Net losses and loss expenses attributable to AlphaCat third party investors and noncontrolling interests		_		(4,104)		(4,104)				
Validus' share of net losses and loss expenses		27,330		19,162		46,492				
Reinstatement premiums, net		513		(213)		300				
Net loss attributable to Validus	\$	27,843	\$	18,949	\$	46,792				

Losses and loss expenses incurred during the year ended December 31, 2016 from non-notable loss events were \$70.2 million, or 3.1 percentage points of the loss ratio. Net of losses attributable to AlphaCat investors and noncontrolling interests of \$5.6 million and reinstatement premiums of \$12.6 million, the net loss attributable to the Company from 2016 non-notable loss events was \$52.0 million and was incurred by event as follows:

	Year Ended December 31, 2016									
				No	n-n	otable Loss Eve	nts			
(Dollars in thousands)	Texas Kumamoto Jubilee Oil SpaceX Hailstorms Earthquake								Total	
Net losses and loss expenses	\$	19,305	\$	15,480	\$	15,213	\$	20,239		70,237
Net losses and loss expenses attributable to AlphaCat third party investors and noncontrolling interests		(5,638)		_		_		_		(5,638)
Validus' share of net losses and loss expenses		13,667		15,480		15,213		20,239		64,599
Reinstatement premiums, net		(2,108)		_		(8,942)		(1,510)		(12,560)
Net loss attributable to Validus	\$	11,559	\$	15,480	\$	6,271	\$	18,729	\$	52,039

### Change in prior accident years

Loss reserve development on prior years was as follows:

	Years Ended December 31,			
(Dollars in thousands)	2017 20			
(Favorable) development on events	\$ (30,765)	\$	(14,394)	
(Favorable) development on attritional losses	(191,768)		(201,798)	
Change in prior accident years	\$ (222,533)	\$	(216,192)	

The favorable development on events in 2017 primarily related to favorable development on the 2015 Pemex oil refinery explosion. The favorable development on events in 2016 primarily related to favorable development on the 2015 Chilean Earthquake non-notable loss event and the 2015 Tianjin port explosion notable loss event and was partially offset by adverse development established following the receipt of a loss advice on an individual marine policy that incepted during the second half of 2015.

# Attritional losses

Attritional losses for the year ended December 31, 2017 of \$1,425.2 million, or 55.1 percentage points of the loss ratio compared to \$1,120.8 million, or 49.9 percentage points of the loss ratio for the year ended December 31, 2016.

Policy acquisition cost ratio for the years ended December 31, 2017 and 2016 was 18.3% and 20.0%, respectively.

<u>General and administrative expenses</u> for the years ended December 31, 2017 and 2016 were \$352.1 million and \$336.3 million, respectively. The increase in general and administrative expenses was primarily attributable to \$30.6 million of CRS expenses, of which \$4.7 million related to the amortization of intangible assets acquired, and to the continued build out of the Company's U.S. underwriting platform.

# h. Any other material information

None

### 2. GOVERNANCE STRUCTURE

#### a. Parent Board and Senior Management

# i. Description of the structure of the parent board and its senior executive, the roles, responsibilities and segregation of these responsibilities

Edward J. Noonan is the Chairman of the Board of Directors (sometimes referred to herein as the "Board") and the Company's Chief Executive Officer. The Company believes that this unitary leadership structure provides, among other things, more effective leadership for a growth company. As such, the Company believes that under this structure the Chief Executive Officer is able to respond more quickly to market conditions. The importance of the ability to act swiftly and decisively is apparent in situations such as business development and the addition of business teams and talented professionals where decisions have to be made within a very short period of time. As the Company continues to grow, unitary leadership helps to lower the costs of information transfer from the Chief Executive Officer to the Chairman and enhances swift decision making in a dynamic environment. In addition to his broad experience as both an executive and Director/Chairman in the global insurance and reinsurance industries, the Chief Executive Officer also has specialized knowledge regarding the strategic challenges and opportunities facing the Company that is valuable to the Chairman's job. The Company believes, therefore, that it is appropriate for the Chief Executive Officer, the person most familiar with these challenges and strategies, to lead discussions with the Board. In addition, the Company's experienced outside and independent Board also acts as a counter-balance to any potential over influence that this unitary leadership structure might present.

In order to further counter-balance this leadership structure, in connection with each regularly scheduled meeting of the Board, the non-management Directors meet in executive session without any member of management in attendance. The Board considers annually the selection of a non-management Director to serve as presiding Director at executive sessions of non-management Directors. Mr. Greenberg is the non-management Director whom the Board has selected to preside over these sessions. In addition, the independent Directors meet as a group at least annually.

The Company's Bye-laws provide that the Board shall consist of not less than nine nor more than twelve members as determined by resolution of the Board, divided into three classes, designated "Class I," "Class II" and "Class III," with each class consisting as nearly as possible of one-third of the total number of Directors constituting the entire Board of Directors.

The term of office for each Director in Class II expires at the 2018 Annual General Meeting if and when held; the term of office for each Director in Class III expires at the 2019 Annual General Meeting; and the term of office for each Director in Class I expires at the 2020 Annual General Meeting of the Company. At each Annual General Meeting, the successors of the class of Directors whose term expires at that meeting shall be elected to hold office for a term expiring at the Annual General Meeting to be held in the third year of their election. In 2017, there were seven meetings of the Board. All incumbent Directors attended at least 75% of such meetings and of the meetings held by all committees of the Board of which they were a member. All then incumbent directors attended the 2017 Annual General Meeting.

The Board has established an Audit Committee, a Compensation Committee, an Executive Committee, a Finance Committee, a Corporate Governance and Nominating Committee and a Risk Committee. Under the applicable requirements of the NYSE, each of the Audit, Compensation and Corporate Governance and Nominating Committees consists exclusively of members who qualify as independent directors.

Copies of the charters for the Audit Committee, the Compensation Committee, the Corporate Governance and Nominating Committee, the Finance Committee and the Risk Committee, as well as the Company's Corporate Governance Guidelines, Code of Business Conduct and Ethics for Directors, Officers and Employees, which applies to all of the Company's directors, officers and employees, and Code of Ethics for Senior Officers, which applies to the Company's principal executive officer, principal accounting officer and other persons holding a comparable position, are available free of charge on the Company's website located at www.validusholdings.com or by writing to Investor Relations, Validus Holdings, Ltd., 29 Richmond Road, Pembroke, HM 08, Bermuda. The Company will post on its website any amendment to or waiver under the Code of Business Conduct and Ethics for Directors, Officers and Employees or the Code of Ethics for Senior Officers granted to any of its Directors or executive officers that relates to any element of the code of ethics definition set forth in Item 406 of Regulation S-K of the Securities Act of 1933, as amended.

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

# **Board of Directors**

### **Cash Compensation**

The Company's non-employee, non-founder related Directors each receive an annual retainer for serving as a Director and a set fee for each Board meeting that such Director attends. In addition, Directors receive a fee for each committee meeting that they attend. Certain Directors who chair The Company's Finance, Audit, Risk, Compensation, Executive and Corporate Governance and Nominating Committees receive additional annual retainer fees. Pursuant to the Company's Director Stock Compensation Plan, Directors are able to elect to receive their annual retainers in the form of the Company's common shares or to defer their annual retainers into share units (other than in the case where such a deferral would be subject to U.S. income tax). In addition, the Company reimburses each Director for all reasonable expenses in connection with the attendance of meetings of the Board of Directors and any committees thereof.

### **Equity Based Compensation**

The Company has a Director Stock Compensation Plan, which is designed to attract, retain and motivate members and potential members of the Board of Directors. Under this plan, each Director may make an election in writing on or prior to each December 31 to receive his or her annual retainer fees payable in the following plan year in the form of shares instead of cash. The number of shares distributed in case of election under the plan is equal to the amount of the annual retainer fee otherwise payable on such payment date divided by 100% of the fair market value of a share on such payment date.

# **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 shareholders' 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 named 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.

The Company's Chief Executive Officer makes recommendations to the Compensation Committee with respect to the compensation of all named executive officers other than himself. The Compensation Committee reviews and, if appropriate, approves the compensation recommendation made for each named executive officer and determines the compensation for the Chief Executive Officer. In 2017, the annual incentive compensation for each named executive officer was primarily based on the consolidated results of the Company.

The Compensation Committee designs the Company's compensation plans to be competitive with its peers in order to attract and retain talented individuals. The Compensation Committee regularly performs a review of the Company's compensation practices relative to its peer group. In addition, the Compensation Committee has in the past (prior to fiscal year 2017) engaged compensation consultants to provide market data and to assist it in determining appropriate types and levels of compensation. The companies included in the 2017 peer group were: Alleghany Corporation, Arch Capital Group, Ltd., Argo Group International Holdings, Ltd., Aspen Insurance Holdings Limited, Axis Capital Holdings Limited, Everest Re Group, Ltd., RenaissanceRe Holdings Ltd., and XL Group, Ltd.

# **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. In addition, the Compensation Committee of the Board of Directors reviews and approves all employee incentive compensation.

# iii. Description of the supplementary pension or early retirement schemes for members of the insurance group, the parent board and its 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.

Certain senior executives and retired selected key employees of the Company's U.S.-based insurance operations participate in nonqualified, unfunded, defined benefit plans. Benefits for these plans are based on final average earnings, social security benefits earned at retirement date and years of service.

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

At December 31, 2017 and 2016, Validus Reinsurance, Ltd. held fixed maturity investments of \$60.2 million relating to the repurchase of principal amounts of the Company's 2007 Junior Subordinated Deferrable Debentures due 2037, which generated net investment income of \$2.5 million during the year ended December 31, 2017 (2016: \$2.2 million).

Validus Reinsurance, Ltd. also held other investments representing shares of the Company with a fair value of \$76.9 million at December 31, 2017 (December 31, 2016: \$90.2 million), which generated net investment income of \$2.5 million during the year ended December 31, 2017 (2016: \$2.3 million). The net change in unrealized losses on this investment were \$(13.3) million during the year ended December 31, 2017 (2016: gains of \$14.3 million).

Furthermore, distributions from Validus Reinsurance, Ltd. to the Company were \$115.0 million during the year ended December 31, 2017 (2016: \$290.0 million).

The Company announced four quarterly cash dividends of \$0.38 per common share during the year ended December 31, 2017 (2016: \$0.35). These dividends were paid on March 31, 2017, June 30, 2017, September 29, 2017 and December 29, 2017 to holders of record on March 15, 2017, June 15, 2017, September 15, 2017 and December 15, 2017, respectively.

On February 9, 2017, the Company announced a cash dividend of \$0.3671875 per depositary share on its outstanding Series A Preferred Shares. The preferred share dividend was paid on March 15, 2017 to shareholders of record on March 1, 2017.

On May 10, 2017, the Company announced a cash dividend of \$0.3671875 per depositary share on its outstanding Series A Preferred Shares. The preferred share dividend was paid on June 15, 2017 to shareholders of record on June 1, 2017.

On August 9, 2017, the Company announced cash dividends of \$0.3671875 (2016: \$0.3753472) and \$0.3423611 per depositary share on its outstanding Series A and Series B Preferred Shares, respectively. The preferred share dividends were paid on September 15, 2017 to shareholders of record on September 1, 2017.

On November 1, 2017, the Company announced cash dividends of \$0.3671875 (2016: \$0.3671875) and \$0.3625000 per depositary share on its outstanding Series A and Series B Preferred Shares, respectively. The preferred share dividends were paid on December 15, 2017 to shareholders on record on December 1, 2017.

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

# **Group** Ark Insurance

Christopher E. Watson, a director of the Company and senior principal of Aquiline Capital Partners LLC ("Aquiline Capital"), serves as a director of Group Ark Insurance Holdings Ltd. ("Group Ark"). Prior to August, 2016, Aquiline Capital was also a shareholder of Group Ark.

Pursuant to reinsurance agreements with a subsidiary of Group Ark, the Company recognized gross premiums written during the year ended December 31, 2016 of \$3,157 (2015: \$2,718) with \$292 included in premiums receivable at December 31, 2016. The Company also recognized reinsurance premiums ceded during the year ended December 31, 2016 of \$40 (2015: \$24). The Company recorded \$798 of loss reserves recoverable at December 31, 2016 and earned premium adjustments of \$3,115 during the year ended December 31, 2016 (2015: \$2,833).

### Wellington

Aquiline Capital are shareholders of Wellington Insurance Company ("Wellington") and Christopher E. Watson serves as a director of Wellington.

Pursuant to reinsurance agreements with a subsidiary of Wellington, the Company recognized gross premiums written during the year ended December 31, 2017 of \$4,196 (2016: \$2,860 and 2015: \$nil) with \$211 included in premiums receivable at December 31, 2017 (December 31, 2016: \$666). The Company also recognized earned premium adjustments during the year ended December 31, 2017 of \$4,377 (2016: \$2,603 and 2015: \$nil).

#### Aquiline II, Aquiline III, Aquiline Tech and Aquiline Armour

Jeffrey W. Greenberg and Christopher E. Watson, directors of the Company, serve as managing principal and senior principal, respectively, of Aquiline Capital. Additional information related to the Company's investments in Aquiline II, III, Tech and Armour is disclosed in Note 7(c), *"Investments in Investment Affiliates."* 

The Company had, as of December 31, 2017 and December 31, 2016, investments in Aquiline II, III, Tech and Armour with a total value of \$100,137 and \$100,431 and outstanding unfunded commitments of \$125,996 and \$64,071, respectively. For the year ended December 31, 2017, the Company incurred \$2,863 (2016: \$2,874 and 2015: \$3,333) in partnership fees associated with these investments.

#### b. Fitness and Propriety Requirements

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

#### **Board Members**

The Corporate Governance and Nominating Committee ("CGNC") assists the Board in (i) identifying individuals qualified to become board members or members of the committees of the Board, and recommending individuals that the Board of Directors selects as director nominees to be considered for election at the next annual general meeting of shareholders or to fill vacancies; (ii) developing and recommending to the Board appropriate corporate governance guidelines; and (iii) overseeing the evaluation of the Board, management and the Board committees and taking a leadership role in shaping the Company's corporate governance policies. Each member of the CGNC is "independent" within the meaning of the rules of the NYSE. The duties and responsibilities of the CGNC are set forth in the committee's charter.

*Identifying and Evaluating Nominees.* The CGNC is responsible for reviewing with the Board, on an annual basis, the skills and characteristics appropriate for new Board members as well as an assessment of the skills and characteristics of the Board as a whole. While there is no formal policy with respect to diversity of board members, when seeking a new member or evaluating the current membership, the CGNC works with the Board to determine the appropriate characteristics, skills and experiences for the Board as a whole and its individual members. Characteristics expected of all directors include independence, integrity, high personal and professional ethics, sound business judgment, and the ability and willingness to commit sufficient time to the Board. In evaluating the suitability of individual Board members, the CGNC takes into account many factors, including a candidate's experiences in and understanding of, the (re)insurance industry, corporate finance and investments as well as his or her business, educational and professional background. When the Board determines to seek a new member, whether to fill a vacancy or otherwise, the CGNC may employ third-party search firms and will consider recommendations from Board members, management and others, including shareholders. The committee has recently undertaken a review of the current composition of the Board with the objective of increasing the percentage of independent directors.

*Nominees Recommended by Shareholders.* The CGNC will consider, for Director nominees, persons recommended by Shareholders, who may submit recommendations to the CGNC in care of the General Counsel at Validus Holdings, Ltd., 29 Richmond Road, Pembroke, HM 08, Bermuda. To be considered by the CGNC, such recommendations must be accompanied by a description of the qualifications of the proposed candidate and a written statement from the proposed candidate to the effect that he or she is willing to be nominated and desires to serve if elected. Nominees for Director who are recommended by Shareholders to the CGNC will be evaluated in the same manner as any other nominee for Director.

#### Senior Executives

The Group CEO is authorised by the Board to ensure the Group has appropriate skills, knowledge and experience in its Executive Officers to fulfil the strategic plans and day to day operation of the Group. To this end the Group CEO, working with the Group Director of Human Resources ("HR") (and any other senior key stakeholder) will define the role and seek suitable candidates either directly or through an engaged third party partner. Once a suitable shortlist of candidates has been presented, an assessment and selection process will take place that will involve candidates being interviewed by the Group CEO, Group Director of HR and other key stakeholders. An independent third party may also be involved in the assessment process. Once a suitable candidate

has been selected the Group HR function will make the offer of employment (following the agreement of the Group CEO and Chair of the Compensation Committee). Once the offer has been accepted the Group HR function will carry out appropriate preemployment background checks (that might include criminal record, financial, employment and education history) and engage with the local governance executive to ensure all appropriate regulatory approvals are obtained. Finally, a programme of induction will be implemented once the candidate has joined the business to ensure they are fully integrated/on boarded within the first three months of their employment.

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

### Validus Holdings, Ltd.

Below are details of the Board and Senior Executives for the Company, along with their qualifications, skills and expertise:

#### Board

*Edward J. Noonan*, age 59, has been Chairman of our Board and the Chief Executive Officer of the Validus Group since its formation. Mr. Noonan has over 30 years of experience in the (re)insurance industry, serving most recently as the acting Chief Executive Officer of United America Indemnity Ltd. from February 2005 through October 2005 and as a member of the Board of Directors from December 2003 to May 2007. Mr. Noonan served as President and Chief Executive Officer of American Re-Insurance Company from 1997 to 2002, having joined American Re in 1983. Mr. Noonan also served as Chairman of Inter-Ocean Reinsurance Holdings of Hamilton, Bermuda from 1997 to 2002. Prior to joining American Re, Mr. Noonan worked at Swiss Reinsurance from 1979 to 1983. Mr. Noonan received a B.S. in Finance from St. John's University in 1979. Mr. Noonan is also a director of Central Mutual Insurance Company and All American Insurance Company, both of which are property and casualty companies based in Ohio.

*John J. Hendrickson*, age 57, has been a director of the Company since its formation. In February 2013, Mr. Hendrickson joined Validus Group as Director of Strategy, Risk Management and Corporate Development. Prior to joining the Company, Mr. Hendrickson was the Founder and Managing Partner of SFRi LLC, an independent investment and advisory firm specializing in the insurance industry. From 1995 to 2004, Mr. Hendrickson held various positions with Swiss Re, including as Member of the Executive Board, Head of Capital Partners (Swiss Re's Merchant Banking Division) and Managing Partner of Securitas Capital. From 1985 to 1995, Mr. Hendrickson was with Smith Barney, the U.S. investment banking firm. Mr. Hendrickson has also served as a director of (re)insurance companies, including serving as audit committee chair.

*Mahmoud Abdallah*, age 69, has served as a Director since May 2012. Mr. Abdallah currently serves as Managing Partner of MMA Global Investments LLC, an investment and advisory firm, a position he had held since July 2012. Mr. Abdallah also served as the Chairman and Chief Executive Officer of MISR Insurance Holding Company (MIHC), Cairo Egypt, from 2006 to 2012. Mr. Abdallah has over 30 years of experience in the insurance industry. His experience includes International Reinsurance, Direct Insurance Broking, Mergers and Acquisitions Consulting, Private-Public Globalization Initiatives, and Privatization of Government owned Insurance Operations. He has also twice served as Chairman of the International Insurance Council and currently is a member of the National Council for Arts and Sciences at George Washington University. Mr. Abdallah is also a Board member of Egypt Air, HSBC Egypt and the Metropolitan Opera in New York. The specific experience, qualifications, attributes and skills that led to the conclusion that Mr. Abdallah should serve as a director, as of the date hereof, are as follows: Mr. Abdallah has extensive experience in the global insurance and reinsurance industry and international finance as well as serving as a director of other financial services companies.

*Michael E.A. Carpenter*, age 68, was appointed as a Director of the Company in August 2011. Mr. Carpenter joined Talbot in June 2001 as its Chief Executive Officer. Following the sale of Talbot to the Company in the summer of 2007, Mr. Carpenter was appointed as non-executive Chairman of Talbot. Mr. Carpenter stepped down as Chairman of Talbot in March 2016, but remains a Non-Executive Director. Prior to joining Talbot in 2001, Mr. Carpenter served as finance director and managing director of Limit plc, the UK listed Lloyd's group now part of QBE, from 1993 to 2000. Mr. Carpenter is a graduate of Cambridge University, a Member of the Chartered Institute for Securities & Investment (CISI) and a Fellow of the Institute of Chartered Accountants (FCA). The specific experience, qualifications, attributes and skills that led to the conclusion that Mr. Carpenter should serve as a director, as of the date hereof, are as follows: Mr. Carpenter has extensive experience in the global financial services industry, a professional background as a chartered accountant and significant expertise in Lloyd's of London.

*Matthew J. Grayson*, age 56, has been a Director of the Company since its formation. Mr. Grayson is the Chairman of the Company's Finance Committee, and a member of the Audit, Risk and Compensation committees. Mr. Grayson is the Executive Chairman of Western Pharmacy Group Holdings, LLC, is Executive Chairman of Gemstate Pharmacy Group, Inc., is a Director of Salient CRGT Holdings, Inc., is a Principal of Telaraña Land & Cattle Company, LLC. and is a Principal of Welder Reserve Fund I, GP, an oil and gas asset management firm. Mr. Grayson is a member of the President's Council of Ducks Unlimited. He earned B.A. degrees in economics and political science (with distinction) from Stanford University. In 1998, following a career

in investment banking and capital markets, Mr. Grayson co-founded Venturion Capital, a private equity firm that specialized in global financial services companies. In 2005, Venturion Capital's professionals joined with Jeffrey W. Greenberg and others to form Aquiline Capital Partners LLC, a New York based private equity firm. Mr. Grayson has 34 years experience in the financial services industry and has extensive experience as a financier and investor in the global (re)insurance industry. Mr. Grayson is also experienced in investment portfolio oversight and capital markets.

*Jeffrey W. Greenberg*, age 66, has been a Director of the Company since its formation. He also serves as the managing principal of Aquiline, which he founded in 2005. Mr. Greenberg served as chairman and chief executive officer of Marsh & McLennan Companies, Inc. from 2000 to 2004. From 1996 to 2004, Mr. Greenberg was the chairman of MMC Capital, the manager of the Trident Funds. He previously served as a director of Ace, Inc. and as Chairman of Conning Holdings, Inc. Mr. Greenberg has also previously served as a senior executive of AIG, where he was employed from 1978 to 1995. Additionally, Mr. Greenberg has very extensive experience as an investor and director of Bermuda based (re)insurance companies.

*Karin Hirtler-Garvey*, age 60, has been a Director of the Company since August 2017. Ms. Hirtler-Garvey has over 9 years of experience as a Board Director in diversified industries and over 25 years of leadership experience in the financial services industry, preceded by 8 years in public accounting as a CPA licensed in New Jersey. Ms. Hirtler-Garvey commenced her Board services in 2005 as a Director at Aeropostale Inc., where she currently serves as Chairman of the Board (previously the Lead Independent Director & Audit Committee Chair). Ms. Hirtler-Garvey is also a Director at Medley Capital Corporation since 2010, where she serves as the Compensation Committee Chair, and at USAA Federal Savings Bank since 2011, where she serves as the Risk Committee. From 2006 through September 2014, Ms. Hirtler-Garvey served as a director at Western World Insurance Group, where she served as Audit Committee Chair, through the date of its acquisition by the Company. From June 2008 through June 2009, Ms. Hirtler-Garvey was a Director at Residential Capital LLC where she served as Audit Committee Chair.

*Jean-Marie Nessi*, age 68, has been a Director of the Company since its formation and has 40 years of experience in the reinsurance industry. He has been a non-executive director of AIG Europe Limited since 2012 and also served as a director of Matmut Enterprises from 2007 to 2013. Mr. Nessi has also served as the head of Aon Global Risk Consulting at Aon France from October 2008 to January 2009. Mr. Nessi served as Chairman and CEO of NessPa Holding from January 2006 to September 2008 and as the head of the property and casualty business unit for PartnerRe Global, a subsidiary of PartnerRe SA, from February 2003 to February 2006. He was appointed Chairman of PartnerRe SA in June of 2003. Prior to PartnerRe, Mr. Nessi led AXA Corporate Solutions, the successor company to AXA Ré and AXA Global Risk.

*Mandakini Puri*, age 58, has been a Director of the Company since its formation. Since December 2016, Ms. Puri has also served on the board of trustees of Vornado Realty Trust (NYSE: VNO). From May of 2011 until retiring in May of 2013, Ms. Puri served as a Managing Director of BlackRock Global Private Equity. She also served as a consultant to Bank of America/Merrill Lynch Global Private Equity ("MLGPE") from April 2009 until April 2011. From 1994 through 2009, Ms. Puri served as a senior vice president with MLGPE, where she was the Chief Investment Officer. Ms. Puri had been part of Merrill Lynch's private equity business since 1994, prior to which she was a Director in the High Yield Finance & Restructuring Group at Merrill. Ms. Puri joined Merrill Lynch in 1986.

*Gail Ross*, age 65, has been a Director of the Company since May 2016. Ms. Ross, who is currently retired since 2015, is a seasoned (re)insurance professional with nearly forty years in the industry. She has had extensive experience as a consultant focusing on mergers and acquisitions, operational best-practices and valuations of property/casualty (re)insurance companies around the world. From 2003 through 2015, Ms. Ross served as a Principal and Consulting Actuary of Milliman, Inc., a global insurance consulting firm. Prior to joining Milliman, Ms. Ross served from 1995 through 2002 as Vice President and Consulting Actuary with Am-Re Consultants, Inc. and from 1985 to 1994 as a Principal and Consulting Actuary with Tillinghast. Ms. Ross began her career in 1976 as an underwriter and actuarial assistant with Travelers Insurance Company. Ms. Ross is a Fellow of the Casualty Actuarial Society (CAS) and a Member of the American Academy of Actuaries (MAAA). She is a past President of the CAS and served as the Chair of the CAS Board of Directors.

*Therese M. (Terri) Vaughan*, age 61, has been a Director of the Company since May 2013. Since September 2014, Ms. Vaughan has served as the Dean of the College of Business and Public Administration at Drake University. Ms. Vaughan served as Chief Executive Officer of the National Association of Insurance Commissioners (NAIC) from 2009 to 2012 where she oversaw operations and navigated the company through a significant period of financial regulatory reform. Previously, Ms. Vaughan served as the Iowa Insurance Commissioner and is a past NAIC President. She has also held academic positions, including the Robb B. Kelley Distinguished Professor of Insurance and Actuarial Science at Drake University, and co-authored two college textbooks on insurance. Ms. Vaughan earned a Ph.D. in risk and insurance at the University of Pennsylvania and a B.B.A. in insurance and economics at the University of Iowa. She is a CPCU, an Associate of the Society of Actuaries, an Associate of the Casualty Actuarial Society, and a member of the American Academy of Actuaries. She also serves on the Board of Verisk Analytics (NASDAQ: VRSK), a provider of risk-assessment services and decision analytics.

*Christopher E. Watson*, age 67, has been a Director of the Company since its formation. He also serves as a senior principal of Aquiline Capital Partners LLC ("Aquiline"), which he joined in 2006. Mr. Watson has more than 36 years of experience in the financial services industry. From 1987 to 2004, Mr. Watson served in a variety of executive roles within the property & casualty insurance businesses of Citigroup and its predecessor entities. From 1990 to 2004, Mr. Watson was president and chief executive officer of Gulf Insurance Group, one of the largest surplus lines insurance companies in the world. Mr. Watson served as a senior executive of AIG from 1974 to 1987. Mr. Watson is also a director of Group Ark Insurance Holdings Ltd., a Bermuda-based underwriter of insurance and reinsurance risks in the Lloyd's market, and Beach UK Holding Co., a reinsurance broker in the UK, US, and Canada. In addition, Mr. Watson serves on the Board of Worley Claim Service, LLC., a claim adjusting firm focused on catastrophe events.

#### Executive Officers (excluding those officers who are members of the Company's Board of Directors)

*Jeffrey D. Sangster*, age 45, has served as Executive Vice President and Chief Financial Officer of the Company since February 2013. Mr. Sangster joined the Company in October 2006 and has served in various finance positions during that time, including Chief Accounting Officer and Chief Financial Officer of Validus Reinsurance, Ltd. Mr. Sangster has 20 years of experience in the reinsurance industry and was previously with Endurance, Centre Group and Ernst & Young. Mr. Sangster is Chartered Accountant and a member of the Chartered Professional Accountants of Bermuda and the Chartered Professional Accountants of Manitoba.

*Peter Bilsby*, age 48, currently serves as Global Head of Insurance and Chief Executive Officer of the Talbot Group. Prior to this, Mr. Bilsby served as Managing Director of Talbot. Mr. Bilsby joined Talbot as Head of Global Aerospace from XL London Market Ltd. in September 2009 and served as Director of Underwriting until his appointment as Managing Director in November 2013. Peter Bilsby has almost 30 years' experience in the insurance market.

*Patrick Boisvert*, age 44, was appointed Executive Vice President and Chief Accounting Officer of the Company in July 2016. Prior to his role, he was Managing Director & Chief Financial Officer of Validus Reinsurance (Switzerland) Ltd. Before joining Validus in 2013, Mr. Boisvert was Chief Financial Officer of Flagstone Reinsurance Holdings SA from 2008 to 2012 and Chief Accounting Officer and Treasurer from 2006 to 2008. Prior to joining Flagstone, he was Vice President Fund Administration for BISYS Hedge Fund Services. Mr. Boisvert began his career in 1995 with Ernst & Young in Montreal, Canada. He holds a Bachelor in Accounting from Université du Quebec à Trois-Rivieres, is a member of the C.F.A. Institute and a member of the Chartered Professional Accountants of Canada.

*Kean D. Driscoll*, age 44, is the Global Head of Reinsurance, President of Validus Holdings, Ltd. and Chief Executive Officer of Validus Reinsurance, Ltd. He was a founding member of the Company, and previously served as Chief Underwriting Officer. Mr. Driscoll has over 20 years of experience as a reinsurance underwriter, and was previously with Quanta Re, and Zurich Re N.A. (Converium). Mr. Driscoll holds a B.A. in Literature from Colgate University and an M.B.A. from Columbia University, where he graduated with Honors.

Andrew E. Kudera, age 58, has served as Chief Actuary of the Company since January 2010. Previously, Mr. Kudera operated an independent actuarial consulting firm which served as corporate actuary and loss reserve specialist for Validus Reinsurance, Ltd. from its inception through to the end of 2008. Prior to establishing his own consulting firm, Mr. Kudera was the Chief Reserving Actuary for Endurance Specialty Holdings Ltd., a large international (re)insurance company. Mr. Kudera has over 35 years of actuarial and financial management experience in the insurance industry in both company and consulting capacities. Mr. Kudera is a Fellow of the Casualty Actuarial Society, a Member of the American Academy of Actuaries, an Associate of the Society of Actuaries, a Fellow of the Canadian Institute of Actuaries and a Fellow of the Institute of Actuaries.

*Robert F. Kuzloski*, age 54, joined the company in January 2009 and served as Executive Vice President and Chief Corporate Legal Officer of the Company until August of 2012 when he was appointed Executive Vice President and General Counsel of the Company. Prior to joining the Company in January of 2009, Mr. Kuzloski served as Senior Vice President and Assistant General Counsel of XL Capital Ltd. Prior to that, Mr. Kuzloski worked as an attorney at the law firm of Cahill Gordon & Reindel LLP where he specialized in general corporate and securities law, mergers and acquisitions and corporate finance.

*Michael R. Moore*, age 48, serves as Executive Vice President and Group Chief Operating Officer of the Company, a position he has held since May 2016, having previously held the position of Chief Accounting Officer since June 2013. Mr. Moore has over 20 years of experience, including 18 years in the (re)insurance industry. Prior to joining Validus, Mr. Moore served as a Senior Vice President, Corporate Operations at Axis Capital, Chief Accounting Officer at Endurance Specialty Holdings Ltd. and as a Senior Manager with Ernst & Young. Mr. Moore received a Bachelor of Commerce, with distinction, from the University of Alberta in 1993 and he is a Chartered Accountant and member of the Chartered Professional Accountants of Bermuda and Chartered Professional Accountants of Canada.

Jonathan P. Ritz, age 50, serves as President of Western World Insurance Group, Inc. and Chief Executive Officer of Validus Specialty, having previously held the position of Chief Operating Officer since October 2010. Mr. Ritz has over 20 years of experience in the (re)insurance and brokerage industries. Most recently, Mr. Ritz served as Chief Operating Officer of IFG

Companies-Burlington Insurance Group. Prior to IFG, Mr. Ritz served as Chief Operating Officer of the specialty lines division of ICAT Holdings LLC. From 2007 to 2008, Mr. Ritz was a Managing Director at Guy Carpenter and from 1997 to 2007 he held various positions with United America Insurance Group including Chief Operating Officer and Senior Vice President of ceded reinsurance.

*Romel Salam*, age 51, serves as Executive Vice President and Chief Risk Officer of the Company, a position he has held since April 2013. He was promoted to his current role after serving for three years as Chief Actuary and Chief Risk Officer of Validus Reinsurance, Ltd, the reinsurance arm of Validus Group. Prior to joining the Company in 2010, Mr. Salam was a Senior Vice President at Transatlantic Reinsurance where he spent 20 years in positions of increasing responsibility. Mr. Salam is a Fellow of the Casualty of Actuarial Society and a Member of the American Academy of Actuaries.

*Lixin Zeng, Ph.D., CFA*, age 49, serves as Global Head of Asset Management and Chief Executive Officer of AlphaCat Managers Ltd. and has played a key role in the Manager since its formation in 2008. Prior to this role, he was Executive Risk Officer of Validus Reinsurance Ltd, responsible for developing and executing the catastrophe risk strategy of the entire Validus Group. Dr. Zeng was one of the original employees at the founding of Validus in 2005. His prior positions include: Chief Catastrophe Risk Officer at the ACE Group from 2004 to 2005, Head of Development at Willis Re Inc from 2001 to 2004, Analyst at EW Blanch Co. from 1998 to 2001 and Research Scientist at Arkwright Mutual Insurance Co from 1996 to 1998. Mr. Zeng has expertise in insurance portfolio optimization and risk management and has published multiple articles in professional journals on related topics. He has a Ph.D. in atmospheric sciences from the University of Washington where he graduated in 1996. He received a B.S. in Meteorology from Beijing University, graduating in 1990 and is a CFA charterholder.

# Validus Reinsurance, Ltd.

The Board members of Validus Reinsurance, Ltd. are as follows:

Name	Age	Board Position
Edward J. Noonan	59	Executive Director
Jeffrey D. Sangster	45	Executive Director
Robert F. Kuzloski	54	Executive Director
Kean D. Driscoll	44	Executive Director
Jonathan P. Ritz	50	Executive Director
John J. Hendrickson	57	Executive Director

A description of the professional qualifications, skills and expertise of the Validus Reinsurance, Ltd. Board members are detailed above.

The Senior Executive officers of Validus Reinsurance, Ltd., including those officers who are members of the Board of Directors, are as follows:

*Kean D. Driscoll*, whose professional qualifications, skills and expertise are provided above, is the Chief Executive Officer of Validus Reinsurance, Ltd.

Robert Marcotte serves as the Executive Vice President and Chief Financial Officer of Validus Reinsurance, Ltd.

*Gavin Bishop* serves as Chief Operating Officer and has been an employee of the Group since 2007 serving in various roles, most recently as Controller since September 2009.

*Jeffrey Clements* serves as the Chief Underwriting Officer of Validus Reinsurance, Ltd. He has also been with the Group since our founding in 2005.

*Kevin Downs* serves as Chief Actuary and has served as Senior Vice President and Reserving Actuary for Validus Reinsurance, Ltd.

*Patrick Reardon* serves as Executive Vice President and the Chief Counsel, Reinsurance, and is responsible for overseeing our legal and claims operations for reinsurance.

#### c. Risk Management and Solvency Self-Assessment

# i. Description of the group's 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.
- Establish minimum requirements that must be met by each of the Company's reportable segments.
- 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, with the segments given broad autonomy over the management of their businesses, while adhering to the overall strategy of the Company. Similarly, the Company's reportable segments have broad operational latitude over their risk management functions while staying within the parameters set by the Company.

The Company's Board of Directors has established a separate Risk Committee ("RC") that is governed by a charter which is updated and reviewed periodically by the Board of Directors. The RC 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 Group Risk Management Committee ("GRMC"). The GRMC reports to the RC and is governed by a charter that is reviewed and approved annually by the RC. The GRMC also has two subcommittees, the Model Risk Subcommittee and the Operational Risk Subcommittee, both of which are governed by charters that are reviewed annually by the RC. 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 and its segments operate. 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 rating agency 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 GRMC.

*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, a group exposure management policy is in place to ensure appropriate and consistent risk assessment and aggregation of exposures that accumulate between the operating companies in the group.

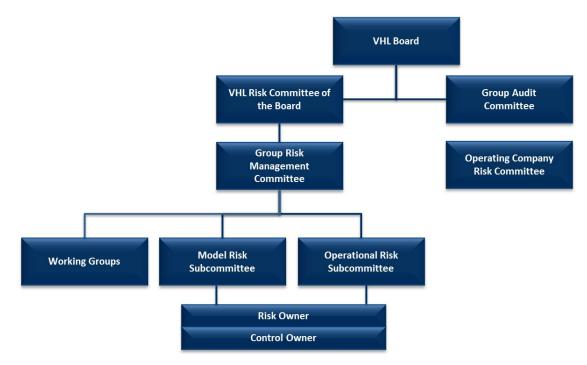
Three tools are used to measure and manage exposures:

- 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 group's risk management and solvency self-assessment systems are implemented and integrated into the group's operations

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



The Risk Committee of the Board approve the Risk Management framework, the Charter of the GRMC, the Group Risk Appetite Statement and the regulatory filings (including the Solvency Self-Assessment) and disclosures.

The GRMC are responsible for the oversight of the key risk management and solvency self assessment systems, with some items delegated to its two subcomittees. A similar system operates at operating company level with each having risk oversight committees equivalent to the GRMC, with similar responsibilities and governance around them.

*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 and its segments operate. Among other metrics, the statement includes probability thresholds in respect of maintaining a buffer above regulatory and rating agency 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 Risk Committee of the Board reviews and approves the Risk Appetite Statement annually. The Validus Capital Model is used to model the business plan and monitor compliance of this with the quantitative Risk Appetite statements; the Risk Committee of the Board reviews this each quarter. Additionally, any key decisions on strategy are appraised through reviewing its effect on these risk metrics. Examples include the recent acquisitions of Western World and CRS where the effect on our risk metrics formed a key part of the due diligence process.

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

Risk Appetite Statements are also established at operating company level consistent with the operating company requirements set out in the Group Risk Appetite Statement. Compliance is monitored similarly using the Validus Capital model with reporting to both the operating company and Group Boards.

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

- Mergers and Acquisitions
- Evaluation of New Lines of Business
- Outwards Reinsurance

Other Risk Policies outline Company requirements:

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

These policies apply to the Group as well as operating companies. The policies are approved by the GRMC annually.

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

The solvency self-assessment, utilizing the Validus Capital Model, is the primary tool for monitoring ongoing compliance with the quantitative measures set out in our Risk Appetite Statement, both at a Group and operating company level. 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 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, both at a Group and operating company level, such as decisions on risk transfer through reinsurance/retrocession and optimizing our investment 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 parent board and senior executives

Solvency self-assessment is prepared by the Group Head of Economic Capital Modeling. This is reviewed by the Group Chief Risk Officer ("CRO"), followed by a review by the GRMC. The GRMC consists of the Group's and operating companies' CEO's,

CRO's and the Director of Strategy and Corporate Development, among other members. A special meeting is organized for the Risk Committee of the Validus Board to allow sufficient time for a review of the solvency self-assessment and to answer any questions they may have.

After review, 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 Defence' 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 all the operating companies and 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 of the insurance group is executed

The Validus Group CEO, with the concurrence of the Validus Board of Directors, shall appoint a senior level executive as Chief Compliance Officer of the Company, who, shall be responsible for formulation and implementation of an effective Compliance Program (which includes Western World, Talbot, Validus Re and AlphaCat). In order to assure the independence of the CCO, and the integrity of the Program, the CCO reports directly to the Validus Audit Committee 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 CCO's authority or status shall be made with the concurrence of the Audit Committee.

The purpose of the Validus Group Compliance Program is to:

- Integrate compliance risk management in day to day business activities and strategic planning;
- Help protect Validus Group 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 of the insurance group is implemented and how it maintains its independence and objectivity when conducting its functions

Group Internal Audit is established by the Company's Audit Committee ("AC") pursuant to applicable laws and regulations, customs of corporate governance and best practices. The Chief Audit Officer 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 Audit Officer is delegated the authority to operate the Company's group internal audit function on behalf of the AC, with scope over all subsidiary operations.

The Chief Audit Officer 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 Audit Officer 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 Audit Officer reports functionally to the AC and administratively to the Company's executive management. The Chief Audit Officer shall freely discuss audit policies, audit observations and agreed actions, audit follow-up, guidance issues and other matters as necessary.

The scope of the Company'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.

The Company'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 the Company's group internal audit team shall meet or exceed the ethical standards delineated by the IIA in its *Code of Ethics*.

#### f. Actuarial Function - description of how the insurance group's actuarial function is implemented

The Validus Group has an established Group 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 Group Chief Financial Officer and has access to and frequent communication with the Board of Directors. The Group Chief Actuary is a Fellow of the Casualty Actuarial Society (FCAS), a Fellow of the Canadian Institute of Actuaries (FCIA), an Associate of the Society of Actuaries (ASA), and a Member of the American Academy of Actuaries (MAAA). The key responsibilities of the Group Actuarial Function are to assist in the Group's stewardship mission by:

- Liaising with the operating company Chief Actuaries to represent the Group's interests and ensure consistent policies and practices across the group;
- Evaluating reserving policies and practices at the operating companies;
- Review of overall reserve adequacy for the group;
- · 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 insurance group's outsourcing policy and information on any key or important functions that have been outsourced

Validus Reinsurance, Ltd. and the Company have 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, which are governed by the Company's IPS, have been delegated to third party investment managers. Apart from this, Validus Reinsurance, Ltd. and the Company have not outsourced any other key operational areas including underwriting, finance, risk management, internal audit and compliance to third parties.

# ii Description of the insurance group's material intra-group outsourcing

Validus Reinsurance, Ltd. and the Company have 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 Operating Officers of the relevant entities within the Group.

# h. Any other material information

None.

# 3. RISK PROFILE

# a. Material risks that the insurance group 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 Group. 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, 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 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 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 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 of the insurance group 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 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, 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 relevant operating company risk committees 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 within the Validus Financial Supplement.

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 within the Validus Financial Supplement.

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

# d. How assets are invested by and on behalf of an insurance group in accordance with the prudent person principle as stated in paragraph 12 (1) (a) of the Insurance (Group Supervision) Rules 2011

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 Investment Officer and 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 IPS provides a framework for the management and oversight of the Company's managed investment portfolio ("managed investments"), which excludes investments held in support of consolidated AlphaCat variable interest entities ("VIEs") ("non-managed investments") that are invested in accordance with the offering documentation of each company managed by AlphaCat Managers. 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 by the insurance group, and the outcomes

The Company maintains a group 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.

# 4. SOLVENCY VALUATION

#### a. 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, 2017, due to their respective short maturities.

#### **Collateral loans**

The Company (including Validus Reinsurance Ltd.) participates in a securities lending program whereby certain securities from its portfolio are loaned to third parties for short periods of time through a lending agent. The Company retains all economic interest in the securities it lends and receives a fee from the borrower for the temporary use of the securities. Collateral in the form of cash, government securities and letters of credit is required at a rate of 102% of the market value of the loaned securities and is held by a third party.

The collateral loans balance is valued at the fair value of the underlying securities. Refer to the fixed maturity investments section below for further details.

#### 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

Derivative instruments consist primarily of foreign currency forward contracts and interest rate swap contracts which are valued on the basis of standard industry valuation models. The inputs to these models are based on observable market inputs. The Company also has weather derivative contracts which are valued on the basis of modeled and other information provided by the Company's counterparties. The Company reviews this information as it is ultimately management's responsibility to ensure that the fair values are appropriate. All of the Company's outstanding derivative financial instruments are recognized at their fair values.

# Deferred tax assets

Deferred tax assets are recorded in accordance with U.S. GAAP. 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.K., U.S., Switzerland, Luxembourg 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.

The valuation of deferred tax assets is consistent with the accounting valuation under U.S. GAAP.

# Fixed maturity investments

Note: the following description of the Company's policies in regards to its investment portfolio also applies to the policies of Validus Reinsurance, Ltd.

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.

#### 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.

#### <u>Bank loans</u>

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. Significant unobservable inputs used to price these securities include credit spreads and default rates.

#### 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.

Where pricing is unavailable from pricing services, the Company obtains non-binding quotes from broker-dealers. This is generally the case when there is a low volume of trading activity and current transactions are not orderly.

#### 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.

#### Catastrophe bonds

Catastrophe bonds are priced based on broker or underwriter bid indications.

#### 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

#### Fund of hedge funds

During the year ended December 31, 2017, the Company's investment in a fund of hedge funds was liquidated. Prior to liquidation, the fund's administrator provided a monthly reported Net Asset Value ("NAV") with a three month delay in its valuation.

The fund manager provided an estimate of the fund NAV at year end based on the estimated performance provided from the underlying funds. To determine the reasonableness of the estimated NAV, the Company compared the fund administrator's NAV to the fund manager's estimated NAV that incorporates relevant valuation sources. Prior to liquidation, the fair values of these investments were measured using the advised NAV's.

# Hedge funds

The hedge fund's administrator provides quarterly NAVs with a three month delay in valuation. The fair value of this investment is based on the advised NAV.

### 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 based on the advised NAV.

### 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.

Included in investment funds is a residual equity tranche of a structured credit fund valued using a dynamic yield that calculates an income accrual based on an underlying valuation model with a typical cash flow waterfall structure. Significant unobservable inputs used to price this fund include default rates and prepayment rates.

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.

### **Overseas** deposits

The Company's share of a portfolio of Lloyd's overseas deposits are managed centrally by Lloyd's and invested according to local regulatory requirements. The composition of the portfolio varies and the deposits are made across the market. The fair value of the deposits is based on the portfolio level reporting that is provided by Lloyd's. The fair value of these investments are based on the advised NAV.

# Mutual funds

During the year ended December 31, 2017, the Company's investment in a mutual fund was liquidated. Prior to liquidation, the mutual fund consisted of an investment fund which invested in various quoted investments. The fair value of units in the mutual fund was based on the NAV of the fund as reported by the fund manager. The mutual fund had daily liquidity which allowed the Company to redeem its holdings at the applicable NAV on short notice.

# Investments in affiliates

Investments in which the Company has significant influence over the operating and financial policies of the investee are accounted for under the equity method of accounting which approximates fair value as at December 31, 2017. Under this method, the Company records its proportionate share of income or loss from such investments in its results for the period.

# 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 (Validus Re, Talbot, Western World, AlphaCat):

• 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 2017. The operating companies also provide expected reserve cashflows and other adjustments for the claims provision. For 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") or other premium receivables related to claims that have already occurred; and
- Discounting of cashflows.
- 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 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 and AlphaCat use general ledger codes, Talbot uses Lloyd's business codes and Western World uses National Association of Insurance Commissioner ("NAIC") classes.

The technical provisions are made up of the following elements:

		December 31, 2017				
(Dollars in thousands)	_	Validus Reinsurance, Ltd. Validus Holdings, L				
Best estimate claims provision	\$	5	2,647,009	\$	3,249,341	
Best estimate premium provision			661,326		445,827	
Risk margin			197,319		212,532	
Total technical provisions	\$	5	3,505,654	\$	3,907,700	

# 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 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 senior notes payable are valued at par less unamortized debt issuance costs in the Consolidated Balance Sheets. The debt issuance costs are amortized to income over the life of the senior notes, which mature on January 26, 2040.

The debentures payable are valued at par in the Consolidated Balance Sheets.

The carrying values of accounts payable and accrued expenses as well as other liabilities approximated their fair values at December 31, 2017, due to their respective short maturities.

### e. Any other material information

None.

# 5. CAPITAL MANAGEMENT

# a. Eligible Capital

# i. Description of the capital management policy and process of the insurance group 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 Bermuda Solvency Capital Requirement ("BSCR") model;
- 2. Switzerland Swiss Financial Market Supervisory Authority ("FINMA") Swiss Solvency Test ("SST") model;
- 3. United Kingdom Lloyd's, Financial Conduct Authority ("FSA") and Prudential Regulation Authority ("PRA") Solvency II capital requirements; and
- 4. United States of America National Association of Insurance Commissioners ("NAIC") Risk Based Capital ("RBC") Framework.

# 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 owners, the common shareholders of Validus Holdings, Ltd. 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 of the Validus Reinsurance, Ltd. and Validus Holdings Group categorized by tiers in accordance with the Eligible Capital Rules

As at December 31, 2017, Eligible Capital for Validus Reinsurance, Ltd. and Validus Holdings Group was categorized as follows:

	Validus	Reinsurance, Ltd.	
(Dollars in thousands)	Dece	mber 31, 2017	
Tier 1 Capital	\$	3,542,226	
Tier 2 Capital		301,285	
Tier 3 Capital			
Total Eligible Capital	\$	3,843,511	

The majority of Eligible Capital for Validus Reinsurance, Ltd. is Tier 1, the highest quality capital, consisting of capital stock, contributed surplus and statutory surplus. Validus Reinsurance, Ltd. also has a modest amount of Tier 2 capital consisting of the excess of encumbered assets over the related policyholder obligations and subordinated debt approved as Tier 2 ancillary capital in the amount of \$249.4 million.

	Validus	Holdings Group
(Dollars in thousands)	Decer	nber 31, 2017
Tier 1 Capital	\$	3,410,334
Tier 2 Capital		960,812
Tier 3 Capital		249,358
Total Eligible Capital	\$	4,620,504

The majority of Eligible Capital for Validus Holdings Group is Tier 1, the highest quality capital, consisting of capital stock, contributed surplus, statutory surplus and minority interest. Validus Holdings Group also has Tier 2 capital consisting of the excess of encumbered assets over the related policyholder obligations as well as senior notes and subordinated debt approved as Tier 2 ancillary capital in the amount of \$535.4 million. The Tier 3 capital consists of the subordinated debt which has been approved as Tier 2 capital for Validus Reinsurance, Ltd. above.

### iii. Eligible capital by tiers

As at December 31, 2017, Eligible Capital for Validus Reinsurance, Ltd. and Validus Holdings Group as applied to its Minimum Margin of Solvency ("MSM") and Enhanced Capital Requirement ("ECR") was categorized as follows:

		Validus Reinsurance, Ltd. December 31, 2017				
(Dollars in thousands)		Applied to MSM Applied				
Tier 1 Capital	\$	3,542,226	\$	3,542,226		
Tier 2 Capital		301,285		301,285		
Tier 3 Capital		—		—		
Total	\$	3,843,511	\$	3,843,511		

		Validus Holdings Group December 31, 2017				
(Dollars in thousands)	A	Applied to MSM Applied to ECR				
Tier 1 Capital	\$	3,410,334	\$	3,410,334		
Tier 2 Capital		852,584		960,812		
Tier 3 Capital		_		249,358		
Total	\$	4,262,918	\$	4,620,504		

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

The senior notes and subordinated debt instruments approved as Eligible Capital are subject to transitional arrangements to 2026.

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

As at December 31, 2017, 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

Ancillary capital for Validus Reinsurance, Ltd. includes \$249.4 million of subordinated debt, with maturities ranging from 2036 to 2037, which was approved as Tier 2 Eligible Capital.

Ancillary capital for Validus Holdings Group includes \$535.4 million of senior notes and subordinated debt, with maturities ranging from 2036 to 2040, which was approved as Tier 2 Eligible Capital. Ancillary capital for Validus Holdings Group also includes Tier 3 Eligible Capital which consists of the subordinated debt approved as Tier 2 Eligible Capital for Validus Reinsurance, Ltd.

As noted above, the subordinated debt is subject to transition arrangements that expire in 2026.

# 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 minority interests, as well as senior notes, subordinated debt and preference shares approved as other fixed capital; and a reduction in available statutory capital for goodwill, other intangible assets, the Company's common shares held by Validus Reinsurance, Ltd., and prepaid expenses.

# b. Regulatory Capital Requirements

# i. Identification of the amount of the Validus Reinsurance, Ltd. and Validus Holdings Group ECR and MSM at the end of the reporting period

As at December 31, 2017, the regulatory capital requirements for Validus Reinsurance, Ltd. and Validus Holdings Group were assessed as follows:

	December 31, 2017					
(Dollars in thousands)	Validus Reinsurance, Ltd.		Validus Reinsura		Validus Holo	lings Group
MSM	\$	675,560	\$	1,677,788		
ECR	\$	1,293,077	\$	1,677,788		

# ii. Identification of any non-compliance by the insurance group with the MSM and the ECR

As at December 31, 2017, the Company was compliant with the MSM and ECR requirement.

iii. Description of the amount and circumstances surrounding the insurance group's 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 of the insurance group at the end of the reporting period

Not applicable.

# c. Approved Internal Capital Model

Not applicable.

# 6. SIGNIFICANT EVENT

# a. A description of the significant event

# i. Merger Agreement

On January 21, 2018, the Company entered into a definitive agreement and plan of merger (the "Merger Agreement") with AIG. The Merger Agreement provides that, subject to the satisfaction or waiver of certain conditions set forth therein, the Company will merge with an existing AIG subsidiary in accordance with the Bermuda Companies Act (the "Merger"), with the Company surviving the Merger as a wholly–owned subsidiary of AIG (the "Surviving Company").

Pursuant to the Merger Agreement, at the effective time of the Merger, holders of the Company's common shares will be entitled to receive consideration of \$68.00 in cash per common share. Each of the Company's issued and outstanding Series A and Series B Preferred Shares will remain issued and outstanding as a "Series A Preferred Share" and "Series B Preferred Share," respectively, of the Surviving Company.

The Merger is expected to close in mid-2018, subject to the approval of the Company's shareholders, regulatory approvals and other customary closing conditions. The Merger Agreement permits the Company to pay out regular quarterly cash dividends not to exceed \$0.38 per common share, with its quarterly dividend for the second fiscal quarter for 2018 to be paid prior to the closing of the Merger even if such closing occurs prior to the regular record or payment date of such dividend.

### b. Date of the significant event

Refer to Section 6a above.

# c. Impact of event on information included within the most recent filed financial condition report

Refer to Section 6a above.

### d. Any other material information

None.

# Exhibit A

# Validus Holdings, Ltd. List of Subsidiaries

Subsidiary	Jurisdiction	Ownership Interest Held By Immediate Parent 100% unless otherwise indicated
Validus Holdings, Ltd.	Bermuda	
Validus Reinsurance, Ltd.	Bermuda	
Underwriting Risk Services S.A.	Chile	99.0%
AlphaCat Re 2011 Ltd.	Bermuda	22.3%
AlphaCat Re 2012 Ltd.	Bermuda	37.9%
AlphaCat 2013, Ltd.	Bermuda	19.7%
AlphaCat 2014, Ltd.	Bermuda	19.6%
AlphaCat 2015, Ltd.	Bermuda	20.0%
BetaCat Ltd.	Bermuda	20.070
Validus Holdings (UK) Plc	United Kingdom	
Validus Reinsurance (Switzerland) Ltd	Switzerland	
L.P. Holding Limited	Cyprus	
Limassol Power Plant Limited	Cyprus	
Flagstone Africa (PTY) Limited	South Africa	
Validus Specialty, Inc.	Delaware	
Validus Specialty Underwriting Services, Inc.	Delaware	
Validus America, Inc.	Delaware	
Validus Services, Inc.	Delaware	
Validus Reaseguros, Inc.	Florida	
Validus Re Americas, (New Jersey) Inc.	New Jersey	
AlphaCat Capital Inc.	Delaware	
Western World Insurance Group, Inc.	Delaware	
Western World Insurance Company	New Hampshire	
Stratford Insurance Company	New Hampshire	
Tudor Insurance Company	New Hampshire	
Westco Insurance Managers, Inc.	New Jersey	
Westco Claims Management Services, Inc.	New Jersey	
Crop Risk Services, Inc.	Illinois	
Flagstone Reinsurance (Luxembourg), SARL	Luxembourg	
Validus Risk Services (Ireland) Limited	Ireland	
Validus Research, Inc.	Ontario	
IPCRe Limited	Bermuda	
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%

Subsidiary	Jurisdiction	Ownership Interest Held By Immediate Parent 100% unless otherwise indicated
Validus Services (Bermuda), Ltd.	Bermuda	
Validus Ventures Ltd.	Bermuda	
AlphaCat Managers Ltd.	Bermuda	
AlphaCat Advantage Fund Ltd.	Bermuda	
AlphaCat Reinsurance Ltd.	Bermuda	
AlphaCat Diversified Fund Ltd.	Bermuda	
AlphaCat Master Fund Ltd.	Bermuda	
AlphaCat Opportunities Ltd.	Bermuda	
BetaCat Fund Ltd.	Bermuda	
BetaCat Feeder Fund I Ltd.	Bermuda	
AlphaCat Prima Fund Ltd.	Bermuda	
AlphaCat Soteria Fund Ltd.	Bermuda	
Talbot Holdings Ltd.	Bermuda	
Talbot Capital Ltd.	Bermuda	
Talbot 2002 Underwriting Capital Ltd.	United Kingdom	
Talbot Underwriting Holdings Ltd.	United Kingdom	
Talbot Underwriting Services, Ltd.	United Kingdom	
Talbot Underwriting Ltd.	United Kingdom	
Talbot Underwriting (LATAM) S.A.	Chile	99.0%
Talbot Risk Services Pte, Ltd.	Singapore	
Talbot Underwriting (MENA) Ltd.	Dubai	
Talbot Risk Services (Labuan) Pte. Ltd.	Labuan	
Talbot Underwriting Risk Services, Ltd.	United Kingdom	
Talbot Underwriting Capital Ltd.	United Kingdom	