

**Starr Insurance & Reinsurance  
Limited and Subsidiaries**

Consolidated Financial Statements

December 31, 2018 and 2017

# **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Table of Contents  
December 31, 2018 and 2017

	<u>Page</u>
<b>Independent Auditors' Report</b>	1
<b>Financial Statements</b>	
Consolidated Balance Sheets	3
Consolidated Statements of Operations and Comprehensive Loss	4
Consolidated Statements of Changes in Shareholder's Equity	5
Consolidated Statements of Cash Flows	6
Notes to Consolidated Financial Statements	7

## **Independent Auditors' Report**

To the Board of Directors of  
Starr Insurance & Reinsurance Limited and Subsidiaries

### **Report on the Financial Statements**

We have audited the accompanying consolidated financial statements of Starr Insurance & Reinsurance Limited and Subsidiaries, which comprise the consolidated balance sheets as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss, changes in shareholder's equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditors' Responsibility**

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Starr Insurance & Reinsurance Limited and Subsidiaries as of December 31, 2018 and 2017, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Report on Supplemental Financial Information

Accounting principles generally accepted in the United States of America require that certain information for years preceding 2018 related to the Company's liability for loss and loss adjustment expenses, included within Note 4 on pages 18 through 23, supplement the consolidated financial statements. Such information is required by the Financial Accounting Standards Board who considers it to be an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's response to our inquiries, the basic consolidated financial statements, and other knowledge we obtained during our audits of the basic consolidated financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Baker Tilly Virchow Krause, LLP*

New York, New York  
April 25, 2019

## Starr Insurance & Reinsurance Limited and Subsidiaries

### Consolidated Balance Sheets

(Expressed In Thousands of U.S. Dollars, Except for Number of Shares and Par Value Data)

December 31, 2018 and 2017

	<u>2018</u>	<u>2017</u>
<b>Assets</b>		
Cash and cash equivalents	\$ 245,931	\$ 401,038
Available-for-sale investments, at fair value:		
Fixed maturity securities	2,172,838	2,029,435
Equity securities	58,305	65,779
Other investments	706,488	770,730
Real estate investment	111,634	136,990
Equity method investments	76,975	75,214
Accrued investment income	21,313	22,759
Insurance and reinsurance balances receivable	524,615	493,163
Funds withheld	12,209	11,850
Reinsurance balances recoverable	743,913	655,205
Prepaid reinsurance premiums	372,284	320,682
Deferred acquisition costs	90,342	93,743
Net deferred tax asset	379	233
Other assets	8,118	22,133
	<u>5,145,344</u>	<u>5,098,954</u>
Total assets	<u>\$ 5,145,344</u>	<u>\$ 5,098,954</u>
<b>Liabilities and Shareholder's Equity</b>		
<b>Liabilities</b>		
Loss and loss adjustment expense reserves	\$ 1,788,816	\$ 1,703,113
Insurance and reinsurance balances payable	378,097	374,628
Unearned premiums	717,485	675,962
Accounts payable and accrued liabilities	23,710	22,946
Unearned commissions	13,141	11,254
Due to related parties, net	9,429	6,108
Income taxes payable	11,615	7,994
	<u>2,942,293</u>	<u>2,802,005</u>
Total liabilities	<u>2,942,293</u>	<u>2,802,005</u>
<b>Shareholder's Equity</b>		
Share capital, par value \$1.00, authorized and issued 1,000,000 shares in 2018 and 2017	1,000	1,000
Contributed capital	1,852,720	1,852,720
Retained earnings	346,115	322,446
Accumulated other comprehensive income	3,216	120,783
	<u>2,203,051</u>	<u>2,296,949</u>
Total shareholder's equity	<u>2,203,051</u>	<u>2,296,949</u>
Total liabilities and shareholder's equity	<u>\$ 5,145,344</u>	<u>\$ 5,098,954</u>

See notes to consolidated financial statements

## Starr Insurance & Reinsurance Limited and Subsidiaries

Consolidated Statements of Operations and Comprehensive Loss

(Expressed In Thousands of U.S. Dollars)

Years Ended December 31, 2018 and 2017

	<u>2018</u>	<u>2017</u>
<b>Underwriting Income</b>		
Net premiums written	\$ 530,561	\$ 503,527
Change in unearned premiums	(32,303)	(99,931)
Change in prepaid reinsurance premiums	42,824	66,467
	<u>541,082</u>	<u>470,063</u>
Net premiums earned	541,082	470,063
<b>Underwriting Expenses</b>		
Losses and loss adjustment expenses	471,646	505,701
Commissions and brokerage	129,518	133,932
Change in deferred acquisition costs	4,159	(10,079)
Commission income	(29,119)	(20,791)
	<u>576,204</u>	<u>608,763</u>
Total underwriting expenses	576,204	608,763
Net underwriting loss	(35,122)	(138,700)
<b>Net Investment Income</b>	97,665	211,309
<b>General and Administrative Expenses</b>	29,728	43,088
	<u>32,815</u>	<u>29,521</u>
Income before tax expense	32,815	29,521
<b>Tax Expense</b>	9,146	5,917
	<u>23,669</u>	<u>23,604</u>
Net income	23,669	23,604
<b>Other Comprehensive Loss</b>		
Other comprehensive income from equity method investees	2,983	1,239
Unrealized holding (losses) gains on available-for-sale securities arising during the year	(79,230)	77,463
Reclassification adjustment for realized gains on available-for-sale securities included in net investment income	(41,320)	(115,112)
	<u>(117,567)</u>	<u>(36,410)</u>
Total other comprehensive loss	(117,567)	(36,410)
Total comprehensive loss	<u>\$ (93,898)</u>	<u>\$ (12,806)</u>

See notes to consolidated financial statements

**Starr Insurance & Reinsurance Limited and Subsidiaries**

## Consolidated Statements of Changes in Shareholder's Equity

(In Thousands of U.S. Dollars, Except Share Numbers)

Years Ended December 31, 2018 and 2017

	<u>Share Capital</u>	<u>Contributed Capital</u>	<u>Retained Earnings</u>	<u>Accumulated Other Comprehensive Income</u>	<u>Total Shareholder's Equity</u>
<b>Balance at January 1, 2017</b>	\$ 1,000	\$ 1,852,719	\$ 298,842	\$ 157,193	\$ 2,309,754
Net income	-	-	23,604	-	23,604
Contribution from shareholder	-	1	-	-	1
Other comprehensive loss, net	-	-	-	(36,410)	(36,410)
<b>Balance at December 31, 2017</b>	1,000	1,852,720	322,446	120,783	2,296,949
Net income	-	-	23,669	-	23,669
Other comprehensive loss, net	-	-	-	(117,567)	(117,567)
<b>Balance at December 31, 2018</b>	<u>\$ 1,000</u>	<u>\$ 1,852,720</u>	<u>\$ 346,115</u>	<u>\$ 3,216</u>	<u>\$ 2,203,051</u>

See notes to consolidated financial statements

## Starr Insurance & Reinsurance Limited and Subsidiaries

Consolidated Statements of Cash Flows  
 (Expressed In Thousands of U.S. Dollars)  
 Years Ended December 31, 2018 and 2017

	<u>2018</u>	<u>2017</u>
<b>Cash Flows from Operating Activities</b>		
Net income	\$ 23,669	\$ 23,604
Net realized gain on investments	(41,320)	(115,112)
Losses on other-than-temporary impairments of investments	22,990	-
(Income) Loss from equity method investments	(2,983)	1,520
Depreciation of fixed assets	454	380
Deferred taxes	146	(149)
Net amortization of bond premium	5,417	10,634
Foreign exchange gain in income	(100)	(1,114)
Change in:		
Accrued investment income	1,446	2,084
Insurance and reinsurance balances receivable	(31,452)	(151,106)
Funds withheld	(359)	(1,615)
Reinsurance balances recoverable	(88,708)	(189,535)
Prepaid reinsurance premiums	(51,602)	(65,281)
Deferred acquisition costs	3,401	(15,220)
Due to related parties, net	3,321	(246)
Other assets	14,015	(15,739)
Loss and loss adjustment expense reserves	85,703	295,690
Insurance and reinsurance balances payable	3,469	132,053
Unearned premiums	41,523	104,378
Accounts payable and accrued liabilities	764	8,228
Unearned commissions	1,887	2,630
Income taxes payable	3,621	(182)
	<u>(4,698)</u>	<u>25,902</u>
<b>Cash Flows from Investing Activities</b>		
Fixed maturity securities available-for-sale:		
Purchases	(999,249)	(201,837)
Sales, maturities and calls	786,437	247,940
Other investments available-for-sale:		
Purchases and contributions	(52,194)	(54,654)
Sales and distributions	108,877	123,705
Distributions from investment in real estate	6,356	2,275
	<u>(149,773)</u>	<u>117,429</u>
<b>Cash Flows from Financing Activities</b>		
Change in foreign currency translation adjustment on accumulated other comprehensive income	(636)	-
	<u>(636)</u>	<u>-</u>
Net cash used in financing activities	(636)	-
Net (decrease) increase in cash and cash equivalents	(155,107)	143,331
<b>Cash and Cash Equivalents, Beginning of Period</b>	<u>401,038</u>	<u>257,707</u>
<b>Cash and Cash Equivalents, End of Period</b>	<u>\$ 245,931</u>	<u>\$ 401,038</u>
<b>Supplementary Disclosure of Non-Cash Transactions</b>		
Contribution of investment from Parent	<u>\$ -</u>	<u>\$ 1</u>

See notes to consolidated financial statements



# **Starr Insurance & Reinsurance Limited and Subsidiaries**

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

## **1. The Company and Its Activities**

Starr Insurance & Reinsurance Limited was incorporated under the laws of Bermuda on April 12, 2007. Starr Insurance & Reinsurance Limited and its subsidiaries (the "Company") is a wholly-owned subsidiary of Starr Global Holdings, AG ("Starr Global") a Switzerland registered company which in turn is 100 percent owned by Starr International Company, Inc. ("SICO"), a Swiss company incorporated in 1943. The registered office of the Company is 19 Par-la-Ville Road, Hamilton, Bermuda.

The Company reinsures affiliated and unaffiliated insurance companies, under quota share, excess of loss and aggregate stop loss reinsurance agreements. The Company assumes business from affiliates, including Starr Indemnity & Liability Company ("SILC"), Starr Surplus Lines Insurance Company, and Starr Syndicate Limited. The business reinsured from unaffiliated insurance companies is generally produced by the divisions of SILC (the "Starr Agencies"), a related party. The Company writes, through its subsidiaries Starr International (Europe) Limited, Starr International Insurance (Singapore) Pte., Ltd. and Starr International Insurance (Asia) Limited, and reinsures the following lines of business - aviation, energy, excess casualty, property, accident and health, professional liability, marine, residential construction, contractors' pollution and political financial risk. The Company uses quota share and excess of loss retrocessional and reinsurance agreements to limit its exposure on direct business written and on reinsurance assumed.

One of the Company's wholly-owned subsidiaries is a Cayman-domiciled investment holding company that invests primarily in limited partnerships, real estate investments and private equity funds.

The Company evaluated subsequent events for recognition or disclosure through April 25, 2019, the date the financial statements were available to be issued.

## **2. Significant Accounting Policies**

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). The preparation of consolidated financial statements in conformity with GAAP requires management to make certain estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. While management believes that the amounts included in the financial statements reflect the Company's best estimates and assumptions, actual results could differ from these estimates. Significant estimates made by the Company include fair value of investments, other-than-temporary impairment of investments, deferred acquisition costs, reinsurance balances recoverable and loss and loss adjustment expense reserves.

### **Principles of Consolidation**

The consolidated financial statements include all accounts, after significant intercompany eliminations, between the Company and its subsidiaries.

### **Foreign Currency**

The functional currency of the Company is the United States ("U.S.") Dollar, while the accounts of foreign-based subsidiaries and branches are measured, in most instances, using the local currency of the subsidiary as the functional currency. Revenues and expenses of these businesses are generally translated into U.S. Dollars at the average exchange rate for the period. Assets and liabilities are translated at the exchange rate as of the end of the reporting period. Gains or losses from translating the financial statements of foreign-based operations are included in equity as a component of accumulated other comprehensive income. Gains and losses arising from transactions denominated in a currency other than the functional currency of the Company or the applicable subsidiary of the Company are included in the consolidated statements of operations and comprehensive loss except that unrealized gains or losses associated with available-for-sale securities are included as a component of other comprehensive loss.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### **Other Comprehensive Loss**

Certain changes in assets and liabilities, such as unrealized gains and losses on available-for-sale investments, are reported as a separate component in the equity section of the consolidated balance sheets. Such items, along with net income, are components of other comprehensive loss and reflected in the consolidated statements of operations and comprehensive loss.

The amount reclassified from accumulated other comprehensive income was entirely from realized gains on investments and is included in net investment income in the accompanying consolidated statements of operations and comprehensive loss.

### **Premiums**

Gross premiums written are recognized as revenue on a pro rata basis over the term of the insurance and reinsurance contracts to which they relate. The portion of premiums that will be earned in the future are deferred and reported as unearned premiums. Premiums written for which the ceding company's reports are not available are estimated.

### **Insurance and Reinsurance Balances Receivable and Payable**

Insurance and reinsurance balances receivable and payable are comprised of premium amounts due from ceding insurers and due to reinsurers net of acquisition costs, funds withheld and losses paid. Insurance balances receivable also includes amounts due from policyholders on direct written business. All amounts are due within one year of the balance sheet date.

Insurance balances receivable are periodically evaluated for collectability based on the credit history of policyholders and their current financial condition. Provisions for uncollectible insurance balances receivable are charged against an allowance account when such balances are deemed to be uncollectible. The Company had no valuation allowance recorded as of December 31, 2018 and 2017.

### **Reinsurance Ceded**

Reinsurance premiums ceded are recognized over the policy term in the same manner as the related premiums are earned. The portion of premiums that will be recognized in the future are deferred and reported as prepaid reinsurance premiums in the accompanying consolidated balance sheets.

The Company uses quota share and excess of loss reinsurance arrangements to spread risk and reduce the risk of catastrophic loss from reinsurance assumed and direct written business. The ceding of risks to reinsurers does not relieve the Company of its obligations to its insureds or its ceding companies. The Company remains liable for the risks insured or reinsured to the extent that any reinsurer does not meet the obligations it assumed under the reinsurance arrangement or direct written business. To minimize its exposure to significant losses from reinsurer insolvencies, the Company evaluates the financial condition of its reinsurers. It is the opinion of management that the financial strength of the Company's reinsurers is such that any potential exposure to the Company for non-payment is minimal, and therefore no valuation allowance has been recorded as of December 31, 2018 and 2017.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### **Deferred Acquisition Costs**

Acquisition costs represent commissions and other costs of successfully acquiring new insurance and reinsurance contracts and the renewal of existing contracts. Acquisition costs are deferred and amortized over the term of the contracts to which they relate. Proceeds from retrocessional reinsurance transactions that represent recovery of acquisition costs reduce applicable unamortized acquisition costs in such a manner that net acquisition costs are capitalized and charged to expense in proportion to net premium earned.

The Company conducts a premium deficiency analysis whereby deferred acquisition costs are reviewed to determine if they are recoverable from future income. If such costs are estimated to be unrecoverable they are written off. The Company considers investment income in its determination of premium deficiency. The Company determined that no such deficiency existed as of December 31, 2018 and 2017.

### **Losses and Loss Adjustment Expenses**

Losses and loss adjustment expenses ("LAE") include amounts paid and recovered, net of reinsurance, in the period and changes in the outstanding loss reserves, incurred but not reported ("IBNR") reserves, reinsurance balances recoverable and accretion of loss reserve discount. LAE are charged to income as they are incurred and consist mainly of external costs relating to the negotiation and settlement of claims.

### **Loss and LAE Reserves and Reinsurance Balances Recoverable**

The Company's loss and LAE reserves are comprised of outstanding loss and LAE reserves and IBNR loss and LAE reserves. The outstanding loss reserves comprise estimated losses based on reports provided by the ceding companies and direct loss notifications received from insureds. The IBNR reserves are based upon management's best estimate of the ultimate cost of settlement of losses that may be incurred by the Company, in accordance with the recommendations of an actuary.

Outstanding loss and LAE reserves and IBNR loss and LAE reserves reflect management's best estimate of future amounts needed to pay claims and related settlement costs with respect to insured events which have occurred, including events that have not been reported to the Company. In many cases, significant periods of time, ranging up to several years or more, may elapse between the occurrence of an insured loss, the reporting of the loss to the Company and the Company's payment of that loss. As part of the process in determining the Company's outstanding loss and LAE reserves and IBNR loss and LAE reserves, actuarial models are used that analyze industry data and consider the impact of current developments and trends, such as trends in claims severity and frequency and claims settlement trends. Also considered are legal developments, regulatory trends, legislative developments, and changes in social attitudes and economic conditions. Management believes that its outstanding loss reserves and IBNR loss and LAE reserves are fairly stated as of December 31, 2018 and 2017. However, estimating the ultimate claims liability is necessarily a complex and judgmental process inasmuch as the amounts are based on management's informed estimates, assumptions and judgments using data currently available. As additional experience and data becomes available regarding claims payment and reporting patterns, legal and legislative developments, judicial theories of liability, the impact of regulatory trends, changes in social attitudes and economic conditions, the estimates are revised accordingly. If the Company's ultimate losses prove to differ substantially from the amounts recorded at December 31, 2018 and 2017, the related adjustments could have a material adverse effect on the Company's financial condition, results of operations and liquidity.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

Reinsurance balances recoverable are estimated in a manner consistent with the reserving methodology adopted in the estimation of the outstanding loss reserves and the IBNR reserves and the related reinsurance arrangements.

Future adjustments to the amounts recorded resulting from the continual review process, as well as differences between estimates and ultimate settlements, will be recorded in the consolidated statements of operations and comprehensive loss when such adjustments become known and are estimable.

### **Cash and Cash Equivalents**

Cash and cash equivalents include short-term, highly liquid investments with maturities of three months or less at the date of acquisition.

### **Fixed Maturity Securities**

Fixed maturity securities have been classified as available-for-sale and are reported at fair value, adjusted for any other-than-temporary decline in fair value, with unrealized holding gains and losses reported as a net amount in accumulated other comprehensive income. Realized gains and losses are determined using the specific identification basis.

The Company reviews fixed maturity securities in its investment portfolio on a periodic basis to specifically identify individual securities that have incurred an other-than-temporary decline in fair value below cost or amortized cost. This review encompasses, among other things, recent issuer activities, such as defaults, quarterly earnings announcements, and other pertinent financial news for the issuer, recent developments and economic outlooks for particular industries, rating agency actions, and the length of time and extent to which fair value has been less than cost or amortized cost. When management's review identifies an other-than-temporary impairment, it compares its projected discounted cash flows to the amortized cost in order to determine the credit related portion of the impairment, which is recognized in the statements of operations and comprehensive loss. The non-credit portion of the other-than-temporary impairment relative to all other factors is recorded as a component of other comprehensive income. In addition, management also considers whether it has the intent to sell a particular security or whether it is more-likely-than-not the Company has the ability to hold the security to recovery.

### **Equity Securities and Other Investments**

All equity securities and other investments, which include hedge, private equity and real estate funds, are classified as available-for-sale and are carried at fair value with net unrealized holding gains or losses reported as a component of accumulated other comprehensive income. SIH funds are investments held in funds established and managed by Starr Investments Holdings, LLC ("SIH"), a wholly-owned subsidiary of C.V. Starr & Co., Inc. ("C.V. Starr"), a related party of the Company. Realized gains and losses on equity investments are determined on a first-in-first out basis. Realized gains and losses on other investments are determined on a specific identification basis.

The various partnerships are investment companies which record their underlying investments at fair value policies established by management of the underlying fund, typically the fund's Net Asset Value ("NAV"). Fair value policies at the underlying fund generally require the fund to utilize pricing/valuation information, including independent appraisals, from third party sources, however, in some instances current valuation information, for illiquid securities or securities in markets that are not active, may not be available from any third party source or fund management may conclude that the valuations that are available from third party sources are not reliable. In these instances fund management may perform model-based analytical valuations that may be used to value these investments.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

The Company uses NAV per share (or its equivalent), as a practical expedient to estimate the fair value of certain alternative investments including hedge, real estate and private equity funds, if NAV is calculated consistent with GAAP and sale of the investment at an amount different than NAV is not probable. The Company considers the nature, risk and probability for the sale of the investment (at amounts different from NAV). The Company's considerations include (but are not limited to):

- Unfunded commitments (for additional investment)
- Redemption eligibility and frequency
- Required redemption notice

Based upon these considerations, the Company concluded that NAV for the alternative investments is calculated consistent with GAAP.

The Company uses cost as a basis for the fair value of its investments in various direct investments during the early stages of the investment. This basis is then updated as the investments mature and other financial information becomes available.

The Company reviews all equity securities, hedge, private equity and real estate funds in its investment portfolio on a periodic basis to specifically identify individual securities that have incurred an other-than-temporary decline in fair value below cost. This review encompasses, among other things, recent issuer activities, such as defaults, quarterly earnings announcements, and other pertinent financial news for the issuer, recent developments and economic outlooks for particular industries, rating agency actions, and the length of time and extent to which fair value has been less than cost. When management's review identifies an other-than-temporary impairment in the valuation of a security, a realized loss is recognized in the consolidated statements of operations and comprehensive income. In 2018 and 2017, an impairment charge of \$3,990 and \$0, respectively, was recognized on one of its real estate funds.

### **Real Estate Investment**

The Company's investment in real estate is considered to be a joint venture. The Company owns 70 percent of Avalange Commercial Corp. an entity incorporated in the British Virgin Islands. Joint ventures are entities whereby the Company and other parties undertake an economic activity which is subject to joint control. The Company has elected to record its investment in real estate as a joint venture and carry it at cost, adjusted for other-than-temporary impairments, in a manner consistent with SICO and its subsidiaries' accounting policy for those investments in real estate in which SICO and its subsidiaries have a controlling interest. The carrying amount of the Company's investment in the real estate joint venture is \$111,634 and \$136,990 as of December 31, 2018 and 2017, respectively, and is included in real estate investment in the consolidated balance sheets.

Investments in real estate are evaluated for impairment when events or changes in circumstances indicate that the carrying value of such assets may not be recoverable or the assets meet the criteria of held for sale. Upon the occurrence of a triggering event, the asset is reviewed to assess whether the estimated undiscounted cash flows expected from the use of the asset plus residual value from the ultimate disposal, or appraised value, exceeds the carrying value of the asset. If the carrying value exceeds the estimated recoverable amounts, the asset is reduced to the estimated discounted present value of the expected future cash flows from using the asset, or appraised value.

In 2018 and 2017, an impairment charge of \$19,000 and \$0, respectively, was recognized on the joint venture investment. In determining the amount of the impairment charge, in addition to the factors considered in the preceding paragraph, the Company considered the exchange rate between the functional currency of the joint venture investment and the U.S. dollar which experienced significant volatility in 2018 and 2017. As a result, the Company's determination of the impairment charge included, in part, certain assumptions regarding historical averages of the exchange rate over various time periods.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### **Equity Method Investments**

The Company utilizes the equity method of accounting with respect to investments where it possesses the ability to exercise significant influence, but not control, over the operating and financial policies of the investee. The ability to exercise significant influence is presumed when an investor possesses more than 20 percent but less than 50 percent of the voting interests of the investee. This presumption may be overcome based on specific facts and circumstances that demonstrate the ability to exercise significant influence is restricted.

In applying the equity method, the Company records its investment at cost in the consolidated balance sheets as equity method investments. Any increase or decrease in the carrying amount subsequent to acquisition is the result of the Company's share of the net income or losses and comprehensive income of the investee as well as distributions received from or contributions to the investee net of insurance transactions between the Company and the investee. The Company's share of earnings or loss and comprehensive income are recorded in the Company's consolidated statements of operations and comprehensive loss.

The Company reviews its equity method investments for possible impairment taking into account events and circumstances that may have occurred since the prior review, and any impairment is recorded in the Company's consolidated statements of operations and comprehensive loss. No impairment was recorded for the years ended December 31, 2018 and 2017.

### **Funds Withheld**

Funds withheld comprise amounts held by a ceding insurer pursuant to the terms of a quota share reinsurance agreement.

### **Concentration of Risks**

The Company holds investments with a fair value of \$448,577 and \$528,115 as of December 31, 2018 and 2017, respectively, in funds established and managed by SIH.

### **Variable Interest Entities**

A variable interest entity ("VIE") is a legal entity that does not have sufficient equity at risk to finance its activities without additional subordinated financial support or is structured such that equity investors lack the ability to make significant decisions relating to the entity's operations through voting rights or do not substantively participate in the gains and losses of the entity.

The primary beneficiary of a VIE is required to consolidate the entity. The primary beneficiary is the entity that has both (1) the power to direct the activities of the VIE that most significantly affect the entity's economic performance and (2) the obligation to absorb losses or the right to receive benefits that could be potentially significant to the VIE.

The Company's exposure to VIE's primarily relates to ownership of limited partner interests in investment partnerships. Many investment partnerships are VIE's under Accounting Standards Update ("ASU") No. 2015-02, *Amendments to the Consolidation Analysis*, because the limited partners as a group lack kick-out or participating rights. The Company is not involved in the design or establishment of the investment partnerships, nor does it hold the general partner interest in the investment partnerships or otherwise actively participate in the management of the partnerships, and therefore does not direct investment activities of the VIE's. Therefore, the Company lacks power over the relevant activities of the vehicles and consequently does not qualify as the primary beneficiary. The Company is exposed to losses when the values of the investments held by the investment partnerships decrease. The Company's maximum exposure to loss equals the Company's share of the investment partnerships.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

As of December 31, 2018 and 2017, the Company's total VIE assets and maximum exposure to loss from investment partnerships is \$706,488 and \$770,730, respectively.

The Company is also a passive investor in commercial mortgage-backed securities ("CMBS"), collateralized loan obligations ("CLO") and other asset-backed securities ("ABS"). By design, CMBS, CLO, and ABS securitization entities are not adequately capitalized and therefore considered VIE's. The Company's investments in these securities are passive in nature and do not obligate the Company to provide any financial or other support to the issuer entities. Based on passive involvement in these types of securities, management has determined that the Company is not the primary beneficiary of these entities. These investments have been accounted for as available-for-sale securities which are disclosed in Note 3 and are not included in the total VIE assets or maximum exposure to loss figures presented above.

### **Recently Issued Accounting Pronouncements**

#### **Accounting Standards Updates Adopted by the Company**

In February 2015, the FASB issued ASU No. 2015-02, *Amendments to the Consolidation Analysis*. ASU No. 2015-02 provides new guidance regarding whether a reporting entity should consolidate certain types of legal entities. Among other things, the ASU modifies the evaluation of whether limited partnerships and similar entities are variable interest entities or voting interest entities, eliminates the presumption that a general partnership should consolidate a limited partnership, and affects the consolidation analysis of reporting entities that are involved with variable interest entities including those that have fee arrangements and related party relationships. The Company adopted ASU No. 2015-02 on January 1, 2017. The adoption of the standard did not have a material effect on our consolidated financial condition, results of operations or cash flows.

During January 2016, the FASB issued ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. ASU No. 2016-01: a) requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income; (b) simplifies the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment to identify impairment; (c) eliminates the requirement to disclose the fair value of financial instruments measured at amortized cost for entities that are not public business (d) requires an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments; (e) requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset (that is, securities or loans and receivables) on the balance sheet or the accompanying notes to the financial statements; and (f) clarifies that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets. ASU No. 2016-01 is effective for annual periods beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. The Company adopted ASU No. 2016-01 on January 1, 2019 and reclassified the outstanding unrealized gains and losses on the relevant investments to retained earnings.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### Pending Accounting Standards Updates

During May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. ASU No. 2014-09 establishes principles for recognizing revenue upon the transfer of promised goods or services to customers, in an amount that reflects the expected consideration received in exchange for those goods or services. The updated guidance requires an entity to recognize revenue as performance obligations are met, in order to reflect the transfer of promised goods or services to customers in an amount that reflects the consideration the entity is entitled to receive for those goods or services. Contracts classified as insurance contracts under Topic 944 are excluded from the scope of Topic 606, however the Company's other revenue sources will be subject to the new pronouncement. During 2016 and 2017, the FASB also issued ASU No. 2015-14, which deferred the effective date of ASU No. 2014-09; ASU No. 2016-08, *Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which clarifies the implementation guidance on principal versus agent considerations in Topic 606; ASU No. 2016-10, *Identifying Performance Obligations and Licensing*, which clarifies the identification of performance obligations and the licensing implementation guidance; ASU No. 2016-12, *Narrow-Scope Improvements and Practical Expedients* and ASU No. 2016-20, *Technical Corrections and Improvements to Topic 606*, which both affect narrow aspects of Topic 606. Topic 606 (as amended) is effective for fiscal years beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019 and may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of initial application. The Company is currently assessing the effect that Topic 606 (as amended) will have on its results of operations, financial position and cash flows.

During June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments*. ASU No. 2016-13 requires financial assets measured at amortized cost to be presented at the net amount expected to be collected, through an allowance for credit losses that is deducted from the amortized cost basis. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. During November 2018, the FASB also issued ASU No. 2018-10, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses*, which clarifies the effective date for nonpublic entities and clarifies that receivables arising from operating leases are not within the scope of Subtopic 326-20. ASU No. 2016-13 is effective for annual periods beginning after December 15, 2020, and interim periods within fiscal years beginning after December 15, 2021. Early adoption is permitted for annual and interim periods beginning after December 15, 2018. The Company is currently assessing the effect that ASU No. 2016-13 will have on its results of operations, financial position or cash flows.

During October 2018, the FASB issued ASU No. 2018-17, *Targeted Improvements to Related Party Guidance for Variable Interest Entities*. ASU No. 2018-17 allows a private company to elect to not apply VIE guidance to legal entities under common control (including common control leasing arrangements) if both the parent and the legal entity being evaluated for consolidation are not public business entities. This alternative provides an accounting policy election that a private company must apply to all current and future legal entities under common control that meet the criteria for applying this alternative. The amendments of this update expand the private company alternative provided in ASU No. 2014-07, *Consolidation (Topic 810): Applying Variable Interest Entities Guidance to Common Control Leasing Arrangements*, to not apply the VIE guidance to qualifying common control leasing arrangements, and therefore, the amendments in ASU No. 2014-07 are superseded by the amendments in this update. Additionally, indirect interests held through related parties in common control arrangements should be considered on a proportional basis for determining whether fees paid to decision makers and service providers are variable interests. ASU No. 2018-17 is effective for fiscal years beginning after December 15, 2020. Early adoption is permitted. The Company is currently assessing the effect that ASU No. 2018-17 will have on its results of operation, financial position and cash flows.



## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

During August 2018, the FASB issued ASU No. 2018-13, Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement. ASU No. 2018-13 modifies the disclosure requirements for fair value measurements in Topic 820, Fair Value Measurement. The amendments are based on the concepts in the FASB Concepts Statement, Conceptual Framework for Financial Reporting—Chapter 8: Notes to Financial Statements, which the Board finalized on August 28, 2018. ASU No. 2018-13 is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2019. Early adoption is permitted. The Company is currently assessing the effect that ASU No. 2018-13 will have on its results of operation, financial position and cash flows.

### 3. Investments

#### a. Fixed Maturity Securities

The cost or amortized cost and fair value of the Company's investment portfolio at December 31 were as follows:

	2018			
	Amortized Cost/Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Fixed maturity securities:				
U.S. Treasury securities and obligations of U.S. government agencies	\$ 63,414	\$ 94	\$ 3	\$ 63,505
States, political subdivisions and foreign government securities	118,393	855	7,552	111,696
Corporate debt securities	1,763,276	9,713	23,214	1,749,775
Asset-backed securities	171,236	465	3,134	168,567
Other	80,016	193	914	79,295
Total fixed maturity securities	<u>\$ 2,196,335</u>	<u>\$ 11,320</u>	<u>\$ 34,817</u>	<u>\$ 2,172,838</u>
	2017			
Fixed maturity securities:				
U.S. Treasury securities and obligations of U.S. government agencies	\$ 26,107	\$ -	\$ 20	\$ 26,087
States, political subdivisions and foreign government securities	119,303	2,567	3,842	118,028
Corporate debt securities	1,593,195	41,287	2,842	1,631,640
Asset-backed securities	162,912	949	135	163,726
Other	88,548	1,570	164	89,954
Total fixed maturity securities	<u>\$ 1,990,065</u>	<u>\$ 46,373</u>	<u>\$ 7,003</u>	<u>\$ 2,029,435</u>

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

Certain cash and cash equivalents and fixed maturity securities available-for-sale with an aggregate fair value of \$1,272,253 and \$1,365,596 as of December 31, 2018 and 2017, respectively, have been placed in trust accounts to secure the Company's obligations to ceding companies. Interest earned on the securities placed in the trust accounts amounted to \$49,348 and \$57,167 as of December 31, 2018 and 2017, respectively, and is included in net investment income in the consolidated statements of operations and comprehensive loss. The Company may not reduce, close, terminate or draw from the trust accounts without the express permission of the respective ceding companies.

For securities that were in an unrealized loss position, the length of time that such securities have been in an unrealized loss position, as measured by their year-end fair values, were as follows:

	December 31, 2018					
	Less than 12 Months		12 Months or More		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Fixed maturity securities:						
U.S. Treasury securities and obligations of U.S. government agencies	\$ 57,471	\$ 3	\$ -	\$ -	\$ 57,471	\$ 3
States, political subdivisions and foreign government securities	11,479	2,054	53,199	5,498	64,678	7,552
Corporate debt securities	610,447	13,953	231,904	9,261	842,351	23,214
Asset-backed securities	124,808	3,072	5,050	62	129,858	3,134
Other	49,646	627	6,414	287	56,060	914
Total fixed maturity securities	<u>\$ 853,851</u>	<u>\$ 19,709</u>	<u>\$ 296,567</u>	<u>\$ 15,108</u>	<u>\$ 1,150,418</u>	<u>\$ 34,817</u>
	December 31, 2017					
Fixed maturity securities:						
U.S. Treasury securities and obligations of U.S. government agencies	\$ 4,320	\$ 20	\$ -	\$ -	\$ 4,320	\$ 20
States, political subdivisions and foreign government securities	32,066	3,067	28,829	775	60,895	3,842
Corporate debt securities	229,198	2,074	38,688	768	267,886	2,842
Asset-backed securities	58,451	127	244	8	58,695	135
Other	17,594	141	815	23	18,409	164
Total fixed maturity securities	<u>\$ 341,629</u>	<u>\$ 5,429</u>	<u>\$ 68,576</u>	<u>\$ 1,574</u>	<u>\$ 410,205</u>	<u>\$ 7,003</u>

The Company's investments are managed in accordance with its investment guidelines established by its Executive Committee and approved by its Board of Directors. The Company's investments potentially expose it to credit risk. The Company's portfolio comprises a diversified holding of debt and equity securities and therefore does not contain significant holdings with any one single issuer. All debt securities are in accordance with the investment guidelines. Management has received Board approval to hold below investment grade securities and will continue to monitor these investments for potential impairment. Market risk exists in that the recorded fair value will fluctuate with changes in fair value. Management has considered the nature of investments in an unrealized loss position, the cause of their impairment, the severity and duration of their impairment and other relevant information available and believes that impairments are temporary in nature. In the opinion of management, the risk of exposure due to market risk is low due to the diversified portfolio.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

For securities, other than fixed maturity securities, that are in an unrealized loss position management considers such factors as the size of the loss compared to fair value, the commitment period and remaining commitment of the fund, other information from investment managers to determine if the impairment is other-than-temporary, and the Company's ability and intent to hold these securities to recovery.

The amortized cost and fair value of fixed maturity securities by contractual maturity as of December 31, 2018 are shown below. Expected maturities will differ from contractual maturities because the issuers may have the right to call or prepay certain obligations.

	<b>Amortized Cost/ Cost</b>	<b>Fair Value</b>
Within one year	\$ 324,414	\$ 322,988
One to five years	745,763	741,342
Six to ten years	818,853	805,179
After ten years	136,069	134,755
Commercial mortgage and asset backed securities	171,236	168,574
	<u>\$ 2,196,335</u>	<u>\$ 2,172,838</u>

### b. Equity Securities

	<b>2018</b>	<b>2017</b>
Cost	\$ 64,356	\$ 55,446
Gross unrealized (loss) gain	(6,051)	10,333
Fair value	<u>\$ 58,305</u>	<u>\$ 65,779</u>

### c. Other Investments

	<b>2018</b>		<b>2017</b>	
	<b>Cost</b>	<b>Fair Value</b>	<b>Cost</b>	<b>Fair Value</b>
Hedge funds	\$ 61,514	\$ 73,634	\$ 70,188	\$ 84,792
Private equity funds	15,780	69,820	10,054	62,167
SIH funds	477,997	448,577	525,428	528,115
Real estate funds	19,783	18,434	28,489	29,576
Private debt funds	94,745	96,023	64,620	66,080
Total	<u>\$ 669,819</u>	<u>\$ 706,488</u>	<u>\$ 698,779</u>	<u>\$ 770,730</u>

In 2012, the Company transferred a number of investments into various funds established by SIH in order that the SIH investment professionals could participate in an SIH administered Carry/Co-Investment Program, which the Company views as aligning the interests of the SIH investment professionals with those of the Company. The investment funds are accounted for as limited partnerships by the Company and are carried at fair value.

The hedge, private equity, real estate and private debt funds, and other investments of the Company are managed under an investment management agreement with SIH, a wholly-owned subsidiary of C.V. Starr & Co, which is a registered investment advisor.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### d. Net Realized Gains

Net realized gains on available-for-sale securities included in net investment income are summarized below for the years ended December 31:

	<u>2018</u>	<u>2017</u>
Fixed maturity securities:		
Gross gains from sales and other disposals	\$ 3,021	\$ 4,072
Gross losses from sales and other disposals	(4,183)	(348)
Other investments:		
Gross gains from sales and other disposals	42,553	111,546
Gross losses from sales	(71)	(158)
Net realized gains	<u>\$ 41,320</u>	<u>\$ 115,112</u>

### e. Other Than Temporary Impairment

The Company performs quarterly reviews of its investments in order to determine whether declines in fair value below the cost or amortized cost basis were considered other-than-temporary. The Company recorded other-than-temporary impairments on its investments during 2018 and 2017 of \$22,990 and \$0 respectively. The Company's assessment was based on the issuer's current and expected future financial position, as well as relevant information provided by investment advisors and analysts.

## 4. Loss and Loss Adjustment Expense Reserves

The reserving process for the unpaid losses and LAE provides for the Company's best estimate at a particular point in time of the ultimate unpaid cost of all losses and LAE incurred, including settlement and administration of claims, and is based on facts and circumstances known and includes claims that have been incurred but not yet reported. The process includes using actuarial methodologies to assist in establishing these estimates, judgments relative to estimates of future ultimate loss expectancy, the length of time before claims will develop to their ultimate level and the possible changes in the law and other external factors that are often beyond the Company's control. The methods used to select the estimated claim reserves include the initial expected loss ratio projection, incurred claim projection, and the Bornhuetter-Ferguson (B-F) method. The process produces indicated reserve estimates and an acceptable range. The indicated reserve estimate is the result of numerous best estimates made by line of business, accident year, and broken out between losses and LAE. The amount of loss and LAE reserves for reported claims is based primarily upon a case-by-case evaluation of coverage, liability, injury severity, and any other information considered pertinent to estimating the exposure presented by the claim. The amounts of loss and LAE reserves for unreported claims are determined using historical information by line of insurance as adjusted to current conditions.

Due to the inherent uncertainty associated with the reserving process, the ultimate liability may differ, perhaps substantially, from the original estimate. Such estimates are regularly reviewed and updated and any resulting adjustments are included in the current year's results. These liabilities are closely monitored and are recomputed periodically using the most recent information on reported claims and a variety of statistical techniques. Specifically, on at least a quarterly basis, the Company reviews, by line of business, existing revenues, new claims, changes to existing case reserves and paid claims with respect to the current and prior years.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

Activity in loss and LAE reserves is summarized as follows (in thousands):

	<u>2018</u>	<u>2017</u>
Gross balance as of January 1	\$ 1,703,113	\$ 1,407,423
Less reinsurance balance recoverable	<u>655,205</u>	<u>465,670</u>
Net balance as of January 1	<u>1,047,908</u>	<u>941,753</u>
Incurred related to:		
Current year	469,276	492,111
Prior years	<u>2,370</u>	<u>13,590</u>
Total incurred losses and LAE	<u>471,646</u>	<u>505,701</u>
Paid related to:		
Current year	112,762	82,447
Prior years	<u>357,262</u>	<u>317,619</u>
Total paid losses and LAE	<u>470,024</u>	<u>400,066</u>
Foreign exchange translation	<u>(4,627)</u>	<u>520</u>
Net balance as of December 31	1,044,903	1,047,908
Plus reinsurance balance recoverable	<u>743,913</u>	<u>655,205</u>
Gross balance as of December 31	<u>\$ 1,788,816</u>	<u>\$ 1,703,113</u>

For the years ended December 31, 2018 and 2017, losses and LAE incurred included adverse development of \$2,370 and \$13,590, respectively. The adverse development experienced in 2018 was less than \$3 million. The adverse development experienced in 2017 was the result of the Excess Casualty line.

The following information about incurred and paid losses development is as of December 31, 2018, net of reinsurance, and the total of IBNR liabilities, plus expected development on reported losses included within the net incurred claims amounts. These tables include unaudited information about incurred and paid losses development for years preceding 2018, which is presented as required supplemental information.

The following factors are relevant to the loss development information included in the tables below:

- 1) Table Organization - The tables are organized by Accident Year. The majority of the casualty lines and property lines are written on an occurrence basis.
- 2) Groupings - The Company believes our two groupings have homogenous risk characteristics with similar development patterns and would generally be subject to similar trends.
- 3) Reinsurance - Our reinsurance programs varies by exposure type and may change year to year. This may affect the comparability of the data presented in our tables.
- 4) IBNR - We include development from past reported losses in IBNR.
- 5) Data excluded from tables - Information with respect to accident years older than 10 years is excluded from the development tables. Unallocated LAE are also excluded.
- 6) Claim Counts - Reported claims for the Company are not shown as a significant amount is assumed business and claim counts are not available.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements

(Expressed in Thousands of U.S. Dollars)

December 31, 2018 and 2017

For each method, losses are projected to the ultimate amount to be paid. The Company analyzes the results and may emphasize or de-emphasize some or all of the outcomes to reflect actuarial judgement regarding the reasonableness in relation to supplementary information and operational and industry changes. These outcomes are then aggregated to produce a single selected point estimate that is the basis for the internal actuary point estimate for the loss reserves. Please note the Company has relied more heavily on the Company's own reported loss development pattern in the current year. These Company patterns continue to gain more credibility as the data matures. The segments are assumed reinsurance and the Company does not have access to claim frequency. For this reason, it is impracticable to disclose this information on these segments as it is not utilized in internal estimates of ultimate reserve amounts or timing of payments.

### Property

#### Incurred Losses and Allocated LAE, Net of Reinsurance (2009-2017 unaudited)

Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	As of December 31, 2018  Total of Incurred-but- Not-Reported Liabilities Plus Expected Development on Reported Claims
2009	\$ 69,284	\$ 95,408	\$ 102,981	\$ 105,035	\$ 105,919	\$ 103,692	\$ 102,973	\$ 103,759	\$ 105,111	\$ 103,370	\$ 111
2010		61,516	95,276	102,004	105,524	106,121	104,097	101,333	102,003	100,385	970
2011			87,152	120,065	122,937	123,560	123,664	125,054	125,743	127,778	2,818
2012				139,263	141,911	146,253	148,513	152,445	150,886	152,418	4,794
2013					185,181	203,444	205,718	204,348	195,222	195,936	9,855
2014						184,253	175,579	183,323	176,800	174,336	12,931
2015							157,158	124,099	128,167	121,923	15,828
2016								144,277	104,364	119,368	25,019
2017									185,643	143,032	41,443
2018										221,552	64,418
Total										<u>\$ 1,460,098</u>	

#### Cumulative Paid Losses and Allocated LAE, Net of Reinsurance (2009-2017 unaudited)

Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
2009	\$ 31,650	\$ 66,892	\$ 84,371	\$ 92,447	\$ 97,099	\$ 99,468	\$ 100,822	\$ 101,015	\$ 102,430	\$ 102,824
2010		26,794	60,876	82,587	93,612	97,458	98,286	97,892	99,215	99,686
2011			36,860	82,952	101,778	112,764	115,663	119,940	122,150	123,087
2012				69,086	95,440	117,910	130,525	138,778	142,152	144,475
2013					77,666	98,019	144,468	166,131	175,365	179,216
2014						41,060	94,940	124,809	143,822	149,947
2015							24,599	56,847	100,524	102,601
2016								30,262	64,454	86,174
2017									34,140	77,691
2018										63,443
										<u>\$ 1,129,144</u>
All outstanding liabilities before 2007, net of reinsurance										\$ 1,694
Liabilities for losses and loss adjustment expenses, net of reinsurance										<u>\$ 332,648</u>

# Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

## Casualty

### Incurring Losses and Allocated LAE, Net of Reinsurance (2009-2017 unaudited)

Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	As of
											December 31, 2018
											Total of Incurred-but- Not-Reported Liabilities Plus Expected Development on Reported Claims
2009	\$ 50,540	\$ 116,363	\$ 136,591	\$ 137,427	\$ 141,437	\$ 154,706	\$ 168,113	\$ 167,280	\$ 163,035	\$ 163,010	\$ 3,251
2010		80,190	139,459	143,895	152,612	158,466	176,507	177,800	172,838	170,058	9,951
2011			76,990	157,672	122,468	126,657	130,551	136,830	149,869	146,771	13,156
2012				121,632	160,122	168,570	176,703	187,691	194,786	194,148	18,647
2013					167,554	175,968	174,414	174,936	181,274	205,247	30,894
2014						227,678	212,718	204,399	208,988	225,152	46,816
2015							180,905	195,814	207,410	218,026	56,140
2016								205,145	218,946	213,594	61,125
2017									297,798	296,404	101,813
2018										237,503	111,285
										Total	<u>\$ 2,069,913</u>

### Cumulative Paid Losses and Allocated LAE, Net of Reinsurance (2009-2017 unaudited)

Accident Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
2009	\$ 11,885	\$ 41,302	\$ 73,665	\$ 88,955	\$ 104,246	\$ 119,193	\$ 128,496	\$ 142,569	\$ 148,850	\$ 157,284	
2010		13,174	48,777	68,282	87,391	100,079	122,461	141,660	147,987	155,271	
2011			15,824	24,365	39,274	53,524	75,253	94,548	108,156	116,607	
2012				4,786	42,064	74,949	103,753	127,142	145,003	161,027	
2013					19,401	41,505	59,732	96,093	115,491	155,391	
2014						21,157	57,398	81,891	116,086	144,908	
2015							20,399	77,656	108,838	143,142	
2016								35,920	100,738	135,069	
2017									49,448	143,614	
2018										49,076	
										<u>\$ 1,361,389</u>	
										All outstanding liabilities before 2007, net of reinsurance	\$ 6,944
										Liabilities for losses and loss adjustment expenses, net of reinsurance	<u>\$ 715,467</u>

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
 (Expressed in Thousands of U.S. Dollars)  
 December 31, 2018 and 2017

The reconciliation of the net incurred and paid claims development tables to loss and LAE reserves in the consolidated balance sheets is as follows as of December 31, 2018:

Net outstanding liabilities	
Property	\$ 332,648
Casualty	715,467
Other short-duration insurance lines	<u>5,504</u>
Loss and LAE reserves, net of reinsurance	<u>1,053,619</u>
Reinsurance recoverable on unpaid claims	
All segments	<u>743,913</u>
Total reinsurance recoverable on unpaid claims	<u>743,913</u>
Insurance lines other than short-duration	
Other discount	<u>(8,716)</u>
Total gross loss and LAE reserves	<u>\$ 1,788,816</u>

Four predominant methods were used to project the portion of liabilities which is incurred but not reported as of December 31, 2018 for each line. The first is Expected Loss Ratio Method. All expected loss ratio methods calculate ultimate loss, and the IBNR component of that loss, using the same formula. Ultimate loss equals earned premium multiplied by the expected loss ratio. IBNR is the difference of the ultimate and reported losses. The second is the Bornhuetter-Ferguson (BF) method. The BF approach involves two assumptions: an expected loss ratio and an expected reporting pattern used to determine the percent of liabilities unreported as of the valuation date. The ultimate loss is determined by calculating an IBNR and adding it to the reported loss. IBNR loss equals the earned premium multiplied by the unreported percentile multiplied by the expected loss ratio. The third method is the IBNR to Earned Premium method. The IBNR to Earned Premium method assumes that IBNR reserves are only required to provide for claims in the process of adjustment. This amount of IBNR reserve depends on the earned premium. IBNR is earned premium multiplied by the IBNR to Earned Premium factor. The final method is the Loss Development Factor Method. Loss development factors are applied to reported losses to calculate ultimate loss indications.

The following is supplementary information about average historical claims duration as of December 31, 2018:

### Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance (unaudited)

Years	1	2	3	4	5	6	7	8	9	10
Property	29.3%	27.6%	20.4%	8.5%	4.0%	2.1%	1.0%	0.7%	0.2%	0.0%
Casualty	11.1%	19.9%	13.6%	13.4%	11.0%	12.8%	8.6%	6.0%	2.1%	0.0%



## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

The following is a summary of the liabilities for unpaid claims and claims adjustment expenses that are recorded at present value on the balance sheets as of December 31:

	<u>2018</u>	<u>2017</u>
Carrying amount of the loss and LAE reserves presented at present value	\$ 118,012	\$ 227,025
Aggregate amount of discount	1,880	10,596
Amount of interest accretion recognized in income	8,716	15,080
Range of interest rates used to discount	3.5%	3.5%

Interest accretion is classified in losses and LAE in the consolidated statements of operations and comprehensive loss. In 2018, the aggregate discount decreased by \$8,716 which caused an increase in the losses and LAE of that same amount.

### 5. Reinsurance

The components of net premiums written and earned, and losses and LAE incurred were as follows for the years ended December 31:

	<u>2018</u>	<u>2017</u>
Premiums written:		
Direct	\$ 396,807	\$ 260,378
Assumed	778,600	756,995
Ceded	<u>(644,846)</u>	<u>(513,846)</u>
Net	<u>\$ 530,561</u>	<u>\$ 503,527</u>
Premiums earned:		
Direct	\$ 321,159	\$ 231,589
Assumed	872,928	729,236
Ceded	<u>(653,005)</u>	<u>(490,762)</u>
Net	<u>\$ 541,082</u>	<u>\$ 470,063</u>
Losses and LAE:		
Direct	\$ 196,672	\$ 288,089
Assumed	775,957	589,137
Ceded	<u>(500,983)</u>	<u>(371,525)</u>
Net	<u>\$ 471,646</u>	<u>\$ 505,701</u>

The Company did not have any reinsurance balances recoverable greater than three percent of shareholder's equity as of December 31, 2018 or 2017.

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

---

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

### **6. Related Party Transactions and Balances**

During 2012, the Company entered an investment management agreement with SIH, who manages certain of the Company's investments. SIH charges fees directly to the Company, a limited partner. The expenses paid in 2018 and 2017 were \$6,040 and \$6,919, respectively.

The Company and its subsidiaries engage in various transactions with an affiliated company, Starr International Investments, Ltd., related to its investments. The net amount due from the Company at December 31, 2018 and 2017 was \$78 and \$80, respectively.

The Company has entered into various contracts of reinsurance ceded by affiliated companies. During 2018, a number of these contracts of reinsurance were non renewed upon expiry. The total gross written premium assumed from affiliated companies during the years ended 2018 and 2017 was \$390,705 and \$372,160, respectively. The Company also cedes to various affiliated companies. The gross premium ceded was \$13,756 and \$18,487 for 2018 and 2017, respectively. The Company recorded in insurance and reinsurance balances receivable, net reinsurance receivables from affiliated companies of \$54,571 and \$45,825, respectively, as of December 31, 2018 and 2017. Included in loss and LAE reserves are affiliated balances in the amount of \$813,432 and \$787,821, respectively, as of December 31, 2018 and 2017.

### **7. Income Taxes**

The Company has received an undertaking from the Bermuda government exempting it from all local income, withholding and capital gains taxes until March 31, 2035. At the present time no such taxes are levied in Bermuda.

Certain of the Company's subsidiaries are subject to federal, state or local taxes based upon their countries of incorporation or where they conduct business. Such amounts are immaterial to the consolidated financial statements.

### **8. Dividend Restrictions and Statutory Financial Information**

#### **Dividend Restrictions**

Under Bermuda law, the Company is prohibited from declaring or making payment of a dividend if it fails to meet its minimum solvency margin or minimum liquidity ratio. Prior approval of the Bermuda Monetary Authority is required if the Company's dividend payments would reduce its prior year-end total statutory capital and surplus by 25 percent or more.

#### **Statutory Financial Information**

The Company prepares its statutory financial statements in conformity with accounting principles set forth in The Insurance Act 1978, amendments thereto and related regulations. The statutory capital and surplus of the Company was \$2,264,700 and \$2,299,610 at December 31, 2018 and 2017, respectively. The statutory net income of the Company was \$23,669 and \$23,604 for the years ended December 31, 2018 and 2017, respectively.

# Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

## Capital Restrictions

The Company is subject to the BSCR administered by the BMA. No regulatory action is taken if an insurer's capital and surplus is equal to or in excess of their enhanced capital requirement determined by the BSCR model. In addition, the BMA has established a target capital level for each insurer, which is 120 percent of the enhanced capital requirement. The regulatory targeted capital and the actual statutory capital for the Company was as follows as of December 31:

	<u>2018</u>	<u>2017</u>
Regulatory targeted capital	<u>\$ 634,442</u>	<u>\$ 748,437</u>
Actual capital	<u>\$ 2,264,700</u>	<u>\$ 2,299,610</u>

## 9. Fair Value Measurements

The Company applies the provisions of FASB authoritative accounting guidance which defines fair value as the price that would be received to sell an asset or paid to transfer a liability (i.e. the "exit price") in an orderly transaction between market participants at the measurement date.

In determining fair value, the Company uses various valuation approaches. FASB authoritative accounting guidance establishes a fair value hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are those that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs reflect the Company's assumption about the inputs market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. The fair value hierarchy is categorized into three levels based on the inputs as follows:

Level 1 - Fair value measures are based on unadjusted quoted market prices in active markets for identical securities. The fair value of securities included in this category was based on quoted prices that are readily and regularly available in an active market. Level 1 assets include listed mutual funds, equities and certain debt securities.

Level 2 - Fair value measures are based on observable inputs, such as quoted prices for similar assets at the measurement date; quoted prices in markets that are not active; or other inputs that are observable, either directly or indirectly. Assets which generally are included in this category may include states, municipalities and political subdivisions fixed maturities, corporate bonds, mortgage backed securities and asset backed securities.

Level 3 - Fair value measures are based on inputs that are unobservable and significant to the overall fair value measurement, and may involve management judgment.

Level 3 inputs include capital accounts of the Company's interest for partnership interests in various alternative investments including hedge, real estate and private equity funds, which are included in other investments. The various partnerships are investment companies which record their underlying investments at fair value based on fair value policies established by management of the underlying fund. Fair value policies at the underlying fund generally require the fund to utilize pricing/valuation information, including independent appraisals, from third party sources, however, in some instances current valuation information, for illiquid securities or securities in markets that are not active, may not be available from any third party source or fund management may conclude that the valuations that are available from third party sources are not reliable. In these instances fund management may perform model-based analytical valuations that may be used to value these investments.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the financial instrument.

The following table provides the fair value measurements of applicable Company financial assets by level within the fair value hierarchy as of December 31, 2018 and 2017. These financial assets are measured on a recurring basis:

	2018			
	Level 1	Level 2	Level 3	Total
Fixed maturity securities:				
U.S. Treasury securities and obligations of U.S. government agencies	\$ 63,505	\$ -	\$ -	\$ 63,505
States, political subdivision and foreign government securities	-	111,696	-	111,696
Corporate debt securities	-	1,749,775	-	1,749,775
Asset-backed securities	-	168,567	-	168,567
Other	-	79,295	-	79,295
Total fixed maturity securities	63,505	2,109,333	-	2,172,838
Equity securities	58,305	-	-	58,305
Total assets measured at fair value	\$ 121,810	\$ 2,109,333	\$ -	\$ 2,231,143
	2017			
Fixed maturity securities:				
U.S. Treasury securities and obligations of U.S. government agencies	\$ 26,087	\$ -	\$ -	\$ 26,087
States, political subdivision and foreign government securities	-	118,028	-	118,028
Corporate debt securities	-	1,631,640	-	1,631,640
Asset-backed securities	-	163,726	-	163,726
Other	-	89,954	-	89,954
Total fixed maturity securities	26,087	2,003,348	-	2,029,435
Equity securities	65,779	-	-	65,779
Total assets measured at fair value	\$ 91,866	\$ 2,003,348	\$ -	\$ 2,095,214

## **Starr Insurance & Reinsurance Limited and Subsidiaries**

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

The following table includes information related to the Company's investments in certain other invested assets, including private equity funds, hedge funds and other alternative investments that calculate net asset value per share (or its equivalent). For these investments, which are measured at fair value on a recurring or non-recurring basis at December 31, 2018, the Company uses the net asset value per share as a practical expedient for fair value.

	<b>2018</b>	
	<b>Fair Value Using Net Asset Value</b>	<b>Unfunded Commitments</b>
Investment category includes:		
Hedge funds	\$ 73,634	\$ 632
Private equity funds	69,820	4,080
SIH funds	448,577	59,704
Real estate funds	18,434	6,459
Private debt funds	96,023	58,280
	<u>\$ 706,488</u>	<u>\$ 129,155</u>

Private equity and SIH fund investments included above are not redeemable during the lives of the funds, and have expected remaining lives that extend in some cases to 10 years. Expected lives are based upon legal maturity, which can be extended at the general manager's discretion, typically in one year increments.

In general, the hedge fund investments included above are redeemable, quarterly, with redemption notices ranging from 1 day to 180 days.

### **10. Financial Instruments**

The Company's financial instruments consist of cash and cash equivalents, investments at fair value and accrued investment income.

#### **Fair Values**

The carrying value of cash and cash equivalents, accrued investment income, funds withheld, accounts payable and accrued liabilities and due to related party approximate fair value due to their short term nature. Insurance assets and liabilities are excluded from the fair value disclosures.

#### **Interest Rate Risk**

Fluctuations in interest rates will have a direct impact of the interest earned on the Company's cash and cash equivalents.

### **11. Equity Method Investments**

On May 31, 2011, the Company purchased a 20 percent equity interest in Starr Property & Casualty Insurance (China) Company, Limited ("Starr China") formerly known as Dazhong Insurance Company Limited of China. As a result, the Company acquired Board representation and participation in the policy making process of Starr China.

## Starr Insurance & Reinsurance Limited and Subsidiaries

Notes to Consolidated Financial Statements  
(Expressed in Thousands of U.S. Dollars)  
December 31, 2018 and 2017

On August 13, 2012, the Company purchased a 49 percent equity interest in Dubai Starr Sigorta ("Dubai Starr") formerly known as Dubai Group Sigorta A.S.

The investments are considered equity method investments by the Company and are recorded under the equity method. Details of the investments at the date of acquisition are as follows:

	<u>Starr China</u>	<u>Dubai Starr</u>
Cash including acquisition expenses and capital expenditures	\$ 62,448	\$ -
Net equity at date of acquisition	<u>27,092</u>	<u>(6,955)</u>
Goodwill	<u>\$ 35,356</u>	<u>\$ (6,955)</u>

The following is the aggregated summary financial information of Starr China and Dubai Starr as of and for the years ended December 31, 2018 and 2017:

	<u>Starr China</u>		<u>Dubai Starr</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Balance sheet information:				
Total assets	\$ 584,446	\$ 482,791	\$ 50,946	\$ 59,534
Total liabilities	<u>429,615</u>	<u>333,159</u>	<u>41,432</u>	<u>51,100</u>
Net equity	<u>\$ 154,831</u>	<u>\$ 149,632</u>	<u>\$ 9,514</u>	<u>\$ 8,434</u>
Statements of operations information:				
Total revenue	\$ 75,771	\$ 77,141	\$ 30,486	\$ 25,402
Total expenses	<u>63,851</u>	<u>79,652</u>	<u>29,339</u>	<u>26,411</u>
Net income (loss)	<u>\$ 11,920</u>	<u>\$ (2,511)</u>	<u>\$ 1,147</u>	<u>\$ (1,009)</u>

## 12. Commitments and Contingencies

The Company may be involved in various legal proceedings and claims which arise in the ordinary course of its business. While any litigation contains an element of uncertainty, management and counsel believe that the outcome of such litigation will not have a material adverse effect on the Company's financial position or results of operations.

Pursuant to the terms of a parental guarantee in place with one of the Company's equity method investees, Dubai Starr, in the event that Dubai Starr fails or is unable to satisfy any or all of its financial obligations or discharge any or all of its financial liabilities under or pursuant to any contracts issued by Dubai Starr and placed or sold through an unaffiliated broker, then each parental guarantor unconditionally agrees that it shall provide an amount of funds to Dubai Starr in accordance with such parental guarantor's proportional ownership percentage as is necessary. As of December 31, 2018, the Company has no expected obligations to provide capital under the terms of the guarantee.