Important information about Syndicate Reports and Accounts

Access to this document is restricted to persons who have given the certification set forth below. If this document has been forwarded to you and you have not been asked to give the certification, please be aware that you are only permitted to access it if you are able to give the certification.

The syndicate reports and accounts set forth in this section of the Lloyd's website, which have been filed with Lloyd's in accordance with the Syndicate Accounting Byelaw (No. 8 of 2005), are being provided for informational purposes only. The syndicate reports and accounts have not been prepared by Lloyd's, and Lloyd's has no responsibility for their accuracy or content. Access to the syndicate reports and accounts is not being provided for the purposes of soliciting membership in Lloyd's or membership on any syndicate of Lloyd's, and no offer to join Lloyd's or any syndicate is being made hereby. Members of Lloyd's are reminded that past performance of a syndicate in any syndicate year is not predictive of the related syndicate's performance in any subsequent syndicate year.

You acknowledge and agree to the foregoing as a condition of your accessing the syndicate reports and accounts. You also agree that you will not provide any person with a copy of any syndicate report and accounts without also providing them with a copy of this acknowledgment and agreement, by which they will also be bound.

Report & Financial Statements

Syndicate 4020

Contents

Directors and administration

Managing agent

Ark Syndicate Management Limited

Directors

I Beaton	(Chief Executive)
N Bonnar	
N Brothers	
D Foreman	(Non-executive Chairman)
P McIntosh	
N Smith	
J Wardrop	(Non-executive)
C Watson	(Non-executive)
J Welman	(Non-executive)

Company secretary

J Masson

Managing agent's registered office

30 Fenchurch Avenue
London
EC3M 5AD

Managing agent's company registration number

05887810

Syndicate information

Active underwriter

N Bonnar

Bankers

Lloyds TSB Bank plc
Citibank NA
Royal Bank of Canada

Investment managers

Conning Asset Management Limited
55 King William Street
London
EC4R 9AD

Registered auditors

KPMG LLP
15 Canada Square
London
E14 5GL

The directors of the managing agent present their report and accounts for the 2016 year of account ("YOA") of Syndicate 4020 ("the Syndicate") as closed at 31 December 2018 and their annual report and accounts for the year to 31 December 2018.

Principal activity and review of the business

The principal activity of the Syndicate is the underwriting of direct and reinsurance business in the Lloyd's market. The managing agent of the Syndicate is Ark Syndicate Management Limited ("ASML"), a company incorporated in the UK. ASML also manages the affairs of Syndicate 3902 which commenced underwriting as a stand-alone syndicate in 2017. Gross written premium income for the year is set out below, along with a brief description of each class of business:

	2018 YOA Estimate £'000	2017 YOA Estimate £'000	2016 YOA Closed £'000	2018 Cal year £'000	2017 Cal year £'000
Marine & Energy	30,286	34,093	75,682	35,429	28,195
Property	69,457	67,507	69,874	74,602	60,683
Casualty	56,151	72,698	102,132	58,190	87,871
Specialty	96,091	95,461	104,851	101,279	101,084
	251,985	269,759	352,539	269,500	277,833

Category	Description
Marine & Energy	Cargo & Specie: Syndicate 4020 - Cargo is made up of general cargo transit and storage as well as higher value and more complex risks such as satellites, heavy lift, tows and project cargo. Specie includes fine art, metals, securities and vault risk written on an excess basis. Incidental Syndicate 3902 - Focus on small/medium sized accounts, excludes cash in transit, war on land and jewellers block.
Marine & Energy	Marine & Energy Liabilities: Marine includes the reinsurance of the International Group of P&I Clubs. Energy is only offered in conjunction with Upstream Energy packages.
Marine & Energy	Marine Hull & Liabilities: Syndicate 4020 - Insurance of low profile, smaller fleet business and specialised tonnage, with some vessel construction, marine property and marine war. Incidental Syndicate 3902 - Emphasis on smaller brown water tonnage and older vessels on limited conditions.
Marine & Energy	Energy Upstream: Syndicate 4020 - Insurance of exploration and production property (on/offshore), control of well, removal of wreck, business interruption, construction and renewable energy from a broad geographic spread. Incidental Syndicate 3902 - Upstream oil and gas focussed with a broad geographical spread.
Property	Property Reinsurance: Predominantly non-proportional, balanced between US and Rest of World ("ROW") exposures.
Property	Property Direct & Facultative: Syndicate 4020 - Mostly low fire hazard occupancies, avoiding higher risk exposed classes such as mining, mineral processing and other heavy industries. Incidental Syndicate 3902 - Predominately written on an excess of loss basis, and consists of a diverse mix of municipalities, real estate, heavy industry, energy, utility, transport and leisure.
Property	Property Programmes: US and Canadian binding authorities, avoiding highly competitive middle market/larger commercial property accounts.
Casualty	Casualty Reinsurance: Predominantly US Medical Malpractice, Professional Liability and some General Liability.
Casualty	Specialty Programmes: Professional liability includes architects and engineers, insurance professionals and real estate agents E&O, Allied Health, Cyber Liability and Miscellaneous E&O. Contingency and Crisis management were discontinued in 2016.
Casualty	Package Programmes: Mostly Ark-led US binding authorities. Balanced between Property and Commercial General Liability. Target risks are small commercial low-medium hazard occupancy. The casualty element was discontinued in 2017.
Specialty	Accident & Health: Includes exposure across war, key man, disability, credit card personal accident insurance and reinsurance catastrophe.
Specialty	Specialty Reinsurance: Consists of Aviation and Specialty reinsurance, including crop and satellite. Very little Marine is written.
Specialty	War, Terrorism & Political Risk: Syndicate 4020 - Aviation War consists of airline hull war and excess AV52, and was discontinued in 2017. Terror is primarily pure Terrorism physical damage and business interruption, with a small amount of broad-form political violence, including war on land. Political risk focus is contract frustration and confiscation / expropriation. War on land is also written. Peak exposures are in emerging countries. Incidental Syndicate 3902 – Aviation consists of airline, general aviation (including rotor wing), hull war and excess of loss / space.
Specialty	Contingency: Syndicate 3902 -Predominantly short tail with event cancellation the largest part.
Specialty	Fine Art & Specie: Includes jewellers block, cash in transit, general specie and fine art written both primary and excess.

Seven year summary – closed years	2016 YOA	2015 YOA	2014 YOA	2013 YOA	2012 YOA	2011 YOA	2010 YOA
Syndicate allocated capacity (£m)	400.0	340.0	340.0	381.0	389.4	389.0	345.0
Number of Underwriting Members	2	3	3	1	426	434	2
Aggregate net premiums (£'000)	218,742	200,436	219,227	221,235	223,590	197,550	212,046
	%	%	%	%	%	%	%
Gross premium written (% of illustrative share)	66.5	85.1	91.9	73.9	72.2	62.4	78.4
Net premium written (% of illustrative share)	54.4	59.6	63.5	58.0	57.8	50.8	61.5
Profit (% of gross premium)	0.9	8.0	6.3	13.3	23.3	18.5	3.9
Profit (% of capacity)	0.6	6.8	5.8	9.8	16.9	11.5	3.1
Results for illustrative share of £10,000	£	£	£	£	£	£	£
Gross premiums written	6,650	8,511	9,192	7,389	7,223	6,235	7,836
Net premiums	5,435	5,959	6,351	5,801	5,783	5,079	6,146
RITC from an earlier year of account	7,496	8,739	9,333	7,491	6,759	6,361	4,235
Net claims	(4,635)	(4,864)	(4,935)	(4,288)	(3,137)	(3,153)	(3,292)
Reinsurance to close	(7,279)	(8,127)	(8,871)	(7,254)	(7,110)	(6,590)	(6,668)
Underwriting profit	1,017	1,707	1,878	1,750	2,295	1,697	421
Other syndicate operating expenses	(763	(995)	(813)	(569)	(550)	(504)	(465)
Movement on foreign currency translation	(178)	10	(271)	(61)	(26)	(6)	81
Net investment income	130	271	75	249	511	343	483
Illustrative personal expenses:							
Managing agent's fee	(77)	(77)	(77)	(75)	(75)	(75)	(75)
Profit commission ("PC")	(6)	(155)	(130)	(245)	(419)	(241)	(65)
Other personal expenses	(66)	(80)	(81)	(68)	(51)	(60)	(70)
Profit after illustrative personal expenses / PC	57	681	581	981	1,685	1,154	310

Underwriting performance - YOA

The 2016 YOA has been closed with a profit of £2.3m after all standard personal expenses, equivalent to a profit on stamp capacity of 0.6%. Long tail US casualty reserves have been strengthened in recognition of incurred and potential future claim development, although the impact of this has been partially offset by good claims experience in the majority of the remaining book. Previous major loss estimates have proven to be adequate.

The 2017 YOA is forecast at the 24 month stage to produce an adequate return on stamp capacity. The YOA has been impacted by a series of catastrophe events - Hurricanes Harvey, Irma and Maria, the earthquakes in Mexico and wildfires in California. Despite these losses, a profit is currently forecast for this YOA.

A forecast is not currently required for the 2018 YOA. The YOA has also been impacted by a series of catastrophe events – Hawaii lava flow, Typhoon Jebi, Hurricanes Florence and Michael, and Californian wildfires Camp and Woolsey.

	2018 YOA	2017 YOA
Capacity	£300.0m	£300.0m
Forecast results (% of capacity)	Na	1.7%-6.7%

Underwriting performance – 2018 calendar year

The underwriting loss for the 2018 calendar year is £12.8m. The performance in the year has been impacted by a series of catastrophe events – Hawaii Lava Flood, Typhoon Jebi, Hurricanes Florence and Michael, and Californian Wildfires Camp and Woolsey. Performance has been further impacted by strengthening to long tail US casualty reserves, although the impact of this has been partially offset by good claims experience in the majority of the remaining non property books. The calendar year result together with key performance indicators is shown below:

	2018	2017
(Loss) / profit for the financial year (£'000)	(12,791)	34,527
Claims ratio (%)	63.2%	48.6%
Expense ratio (%)	43.4%	42.9%
Combined ratio (%)	106.6%	91.5%

The claims ratio is the ratio of claims incurred net of reinsurance to earned premiums net of reinsurance. The expense ratio is the ratio of operating expenses and acquisition costs (excluding foreign exchange movements) to earned premiums net of reinsurance. The claims ratio reflects the underwriting issues noted above, and the expense ratio is broadly in line with expectations. The combined ratio including all foreign exchange movements is 106.4% (2017: 91.9%).

Operating expenses

Operating expenses, as set out below, are in line with expectations.

	2018 £'000	2017 £'000
Acquisition costs – brokerage and commissions	76,983	79,163
Acquisition costs – other	4,921	5,767
Administrative expenses	25,378	20,452
Managing agency fee	2,331	2,368
Personal expenses	(82)	5,613
Operating expenses	109,531	113,363

Cash flow

There was a net cash flow decrease of £33.7m (2017: £32.5m) in the year arising from normal operating activities. Profit releases on open years of £9.2m (2017: £6.9m) were made during the year. On 8 February 2019, the ASML board approved a profit release of £7.2m for the 2017 YOA.

Investment return

Syndicate funds are actively managed by third party investment managers. The Syndicate has a diversified portfolio in corporate debt, cash, UK property funds and investment funds with an average duration that is appropriate compared to the expected liability duration.

The investment return for the 2016 YOA was £5.2m and the average return over the three years was 1.4% per annum. Investment returns for the 2018 calendar year, as set out below, are considered to be adequate.

	2018	2017
Average funds available for investment (US$'000)	563,329	636,968
Investment return for the year before allocation to Syndicate 3902 (US$'000)	5,263	19,659
Annualised investment return (%)	0.9%	3.1%

Principal risks and uncertainties

ASML maintains a risk register within its risk management framework. Identified risk events are grouped into major risk categories according to the nature of the potential threat they pose to the business. The risk management framework allows risks to be identified and controls to be put in place as necessary, either to prevent the occurrence of the event or to mitigate its impact. The principal risks of the Syndicate are set out in note 2 of the calendar year accounts.

Financial position

The main components of the balance sheet are technical provisions and investments and cash.

Technical provisions include a provision for outstanding claims of £480.2m (2017: £497.3m) and a provision for unearned premiums of £156.7m (2017: £164.2m). The reinsurers' share of technical provisions is £86.6m (2017: £119.7m) in respect of unearned premiums and £15.8m (2017: £17.2m) for outstanding claims. The provision for outstanding claims is based on evaluations of reported claims and estimates for losses incurred but not reported ("IBNR"). As claims may not be settled for a number of years after they are incurred, the setting of provisions involves a degree of judgement as to the ultimate exposure to losses.

Investments and cash total £394.9m (2017: £441.3m) the majority of which are actively managed by third party investment managers.

Auditors and Annual general meeting

As permitted under the Syndicate Meeting (Amendment No.1) Byelaw it is not proposed to hold a Syndicate Annual General Meeting. The members of the Syndicate intend to reappoint KPMG LLP as auditors.

Disclosure of information to auditors

The directors of ASML who held office at the date of approval of this report confirm that, so far as they are each aware, there is no relevant audit information of which the auditors of the Syndicate are unaware; and each director has taken all the steps that he ought to have taken as a director to make himself aware of any relevant audit information and to establish that the auditors of the Syndicate are aware of that information.

Directors

The directors of ASML served from 1 January 2018 to the date of this report, unless stated otherwise. Shareholdings in the ultimate parent company of ASML, Ark Insurance Holdings Limited ("AIHL") are stated as at 31 December 2018.

Name	H Shares (2015) No.	H Shares (2016) No.	H Shares (2017) No.	H Shares (2018) No.	H Shares (2019) No.
I Beaton (Chief Executive)	386,341	494,516	494,516	494,516	494,516
N Bonnar	386,341	494,516	494,516	494,516	494,516
N Brothers	-	3,456	3,750	4,500	6,000
D Foreman (Non-executive Chairman)	-	-	-	-	-
P McIntosh	-	15,825	15,825	15,825	17,000
N Smith	-	13,847	13,847	13,847	15,000
J Wardrop (Non-executive)	-	-	-	-	-
C Watson (Non-executive)	-	-	-	-	-
J Welman (Non executive)	-	-	-	-	-

I Beaton and N Bonnar also each hold the following shares in AIHL - 92,230 Preference 1 shares (2017: 92,230), 121,788 Preference 2 shares (2017: 121,788), 100 T shares (2017: 100) and 70 Z shares (2017: 70). AIHL has maintained throughout the year Directors' and officers' liability insurance for the benefit of the Ark group, the Directors and its officers.

Future developments

The capacity of the Syndicate for the 2019 YOA is £300.0m (2018 YOA: £300.0m). The capacity of Syndicate 3902 for the 2019 YOA is £100.0m (2018 YOA: £100.0m).

N Bonnar
Active Underwriter
7 March 2019

Distribution Accounts

2016 Year of Account

Statement of managing agent's responsibilities

The directors of the managing agent are responsible for preparing the Syndicate underwriting year accounts in accordance with the Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008 and the Lloyd's Syndicate Accounting Byelaw. They have elected to prepare the accounts in accordance with FRS 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland*.

Under Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008 the directors of the managing agent must not approve the underwriting year accounts unless they are satisfied that they give a true and fair view of the result of the underwriting year at closure. In preparing these accounts, the directors of the managing agent are required to:

- Select suitable accounting policies and then apply them consistently and where there are items which affect more than one year of account, ensure a treatment which is equitable between the members of the syndicate affected is used;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable Accounting Standards have been followed, subject to any material departures disclosed and explained in the accounts;
- Assess the syndicate's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- Use the going concern basis of accounting unless they either intend to cease trading, or have no realistic alternative but to do so. As explained in note 1 the directors of the managing agent do not believe that it is appropriate to prepare the underwriting year accounts on a going concern basis.

The directors of the managing agent are responsible for keeping adequate and proper accounting records that are sufficient to show and explain the Syndicate's transactions and disclose with reasonable accuracy at any time the financial position of the Syndicate and enable them to ensure that the underwriting year accounts comply with the Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008. They are responsible for such internal control as they determine is necessary to enable the preparation of accounts that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the company and to prevent and detect fraud and other irregularities.

On behalf of the ASML Board

Neil Smith
Director
7 March 2019

Independent auditors' report to the members of Syndicate 4020 for the 2016 closed Year of Account

Opinion

We have audited the Syndicate underwriting year accounts for the 2016 year of account of Syndicate 4020 for the three year period ended 31 December 2018, which comprise the Profit and loss account, Balance Sheet, Statement of cash flows and related notes, including the accounting policies in note 2. The financial reporting framework that has been applied in their preparation is applicable law and UK Accounting Standards (UK Generally Accepted Accounting Practice), including FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland, as modified by the Insurance Directive (Lloyd's Syndicate and Aggregate Accounts Regulations 2008) and the Lloyd's Syndicate Accounting Byelaw. Note 1 to the financial statements further explains the basis of preparation of the underwriting year accounts.

This report is made solely to the Syndicate's members, as a body, in accordance with the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008 and the Lloyd's Syndicate Accounting Byelaw. Our audit work has been undertaken so that we might state to the Syndicate's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Syndicate and the Syndicate's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of the directors of the Managing Agent and auditor

As explained more fully in the statement of the directors of the Managing Agent's responsibilities set out on page 9, the directors of the Managing Agent are responsible for the preparation of the underwriting year accounts and for being satisfied that they give a true and fair view. Our responsibility is to audit, and express and opinion on, the underwriting year accounts in accordance with the applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

Scope of the audit of the underwriting year of accounts

A description of the scope of an audit of accounts is provided on the Financial Reporting Council's website at www.frc.org.uk/auditscopeukprivate.

Opinion on underwriting year accounts

In our opinion the underwriting year accounts:

- give a true and fair view of the syndicate's profit for the 2016 closed year; and
- have been properly prepared in accordance with the requirements of the Lloyd's Syndicate Accounting Byelaw.

Matters on which we are required to report by exception

Under the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008 we are required to report to you if, in our opinion:

- adequate and proper accounting records have not been kept by the directors of the Managing Agent on behalf of the syndicate; or
- the underwriting year accounts are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

Ben Priestley (Senior Statutory Auditor)
for and on behalf of KPMG LLP, Statutory Auditor
Chartered Accountants
15 Canada Square
London, E14 5GL
8 March 2019

Distribution Accounts

Profit and loss account

2016 closed YOA for the three years ended 31 December 2018

	Notes	2016 £'000
Syndicate allocated capacity		400,000
Technical account		
Earned premiums, net of reinsurance		
Gross premiums written	3	265,994
Outwards reinsurance premium		(48,607)
Reinsurance to close premium received, net of reinsurance	5	299,846
Allocated investment return transferred from the non-technical account		5,197
Claims incurred, net of reinsurance		
Claims paid - gross amount	3	(206,386)
Reinsurer's share		21,000
Reinsurance to close premium payable, net of reinsurance	6	(291,168)
Operating expenses	4	(43,599)
Balance on the technical account for general business		2,277
Non-technical account		
Investment income		5,197
Allocated investment return transferred to technical account		(5,197)
Profit for the 2016 closed YOA		2,277

The notes on pages 14 to 17 and 40 form part of these accounts.

Balance sheet

2016 closed YOA as at 31 December 2018

	Notes	2016 £'000
Assets		
Financial assets	8	281,726
Debtors arising out of reinsurance operations		3,972
Other debtors		146
Cash at bank and in hand		4,865
Other prepayments and accrued income		-
Total assets		290,709
Liabilities		
Amounts due to members	7	(6,889)
Reinsurance to close premium payable to close the account	6	291,168
Creditors arising out of insurance operations		1,386
Creditors arising out of reinsurance operations		496
Other creditors		203
Accruals and deferred income		4,345
Total liabilities		290,709

The notes on pages 14 to 17 and 40 form part of these accounts. The accounts were approved by the Board of Ark Syndicate Management Limited on 7 March 2019 and signed on its behalf by

N Smith
Finance Director
7 March 2019

Statement of cash flows

2016 closed YOA for the three years ended 31 December 2018

	Notes	2016 £'000
Reconciliation of operating profit to net cash inflow from operating activities		
Operating profit on ordinary activities		2,277
Open year profit release		(9,166)
(Decrease) in cash and investments		6,889
Net cash inflow from operating activities		-

The notes on pages 14 to 17 and 40 form part of these accounts.

Notes to the accounts

1. Basis of preparation

The financial statements have been prepared in accordance with the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008 and Financial Reporting Standard 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland* ("FRS 102") as issued in August 2015, and Financial Reporting Standard 103 *Insurance Contracts* ("FRS 103") as issued in March 2015.

Whilst the directors of the managing agent have a reasonable expectation that the syndicate has adequate resources to continue in operational existence for the foreseeable future, these financial statements represent the participation of members in the 2016 year of account, which closed on 31 December 2018. The accumulated profits of the 2016 year of account will be distributed shortly after publication of these accounts. Therefore the 2016 year of account is not continuing to trade and, accordingly the directors have not adopted the going concern basis in the preparation of these accounts. This has no effect on the amounts reported in the accounts as the 2016 year of account will be closed by payment of a reinsurance to close premium, as outlined in note 2 below, which is consistent with the normal course of business for a Lloyd's syndicate and with the approach we have applied to earlier underwriting years.

2. Accounting policies

The underwriting accounts for each YOA are normally kept open for three years before the result on that year is determined. At the end of the three year period, outstanding liabilities can normally be determined with sufficient accuracy to permit the YOA to be closed by payment of a reinsurance to close premium to the successor year of account.

Premiums written

Gross premiums are allocated to each YOA on the basis of the inception date of the policy. Premiums are shown gross of acquisition costs such as brokerage payable and taxes and duties levied on them. Estimates are made for pipeline premiums, representing amounts due but not yet notified. Premiums written are treated as fully earned at 36 months.

Claims Paid

Gross claims paid include claims settlement expenses and are attributed to the same YOA as the original premium for the underlying policy.

Reinsurance to close premium payable

In preparing these accounts, the directors of ASML have made judgements, estimates and assumptions that affect the application of the Syndicate's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to estimates are recognised prospectively.

The reinsurance to close premium is determined on the basis of estimated outstanding liabilities and related claims settlement costs, including claims incurred but not reported ("IBNR") relating to the closed YOA. The measurement of the provision for claims outstanding involves judgments and assumptions about the future that have the most significant effect on the amounts recognised in the financial statements.

Outstanding claims consist of amounts set aside for notified claims and a provision for IBNR claims. The amount included in respect of IBNR is arrived at by considering the actuarially calculated provision, using techniques which generally involve statistical techniques of estimation applied by ASML's actuaries and reviewed by external consulting actuaries, as well as the opinion of the class underwriters and executive management. The actuarial techniques generally involve projecting from past experience the development of claims over time to form a view of the likely ultimate claims to be experienced for more recent underwriting, having regard to variations in the business accepted and the underlying terms and conditions. Large claims are generally assessed individually, being calculated on a case by case basis or projected separately to allow for the possible distortive effects of the developments of these claims on the balance of the data. The provision for claims also includes amounts in respect of internal and external claims handling costs.

Accordingly the two most critical assumptions as regards claims provisions are that the past is a reasonable predictor of the likely level of claims development and that the rating and other models used for current business are fair reflections of the likely level of ultimate claims to be incurred. Ultimate liability will vary as a result of subsequent information and events and this may result in significant adjustments to the amounts provided. Adjustments to the amounts of claims provisions established in prior years are reflected in the financial statements for the year in which the adjustments are made. The methods used, and the estimates made, are reviewed regularly.

2. Accounting policies (continued)

Foreign currencies

Transactions in US dollars, Euros, Canadian dollars and Australian dollars are translated at the closing rate of exchange for the closing year. Underwriting transactions denominated in other foreign currencies are included at the rate of exchange ruling at the date the transaction is processed. Assets and liabilities denominated in US dollars, Euros, Canadian dollars and Australian dollars, where the assets and liabilities in the currency ledgers are broadly matched, are translated at the closing rate of exchange for the year. Assets and liabilities denominated in other foreign currencies are translated into sterling at the rates of exchange at the balance sheet date.

The following rates of exchange have been used in the preparation of these accounts; US dollars 1.27, Canadian dollars 1.74, Euros 1.11 and Australian dollars 1.81.

Investment return

Investment return represents all investment income, realised investment gains and losses and movements in unrealised gains and losses, net of investment expenses, charges and interest. The returns on assets arising in a calendar year are apportioned to each open YOA during the calendar year in proportion to the average funds available for investment for the Syndicate. Investment return is initially recorded in the non-technical account. A transfer is made from the non-technical account to the general business technical account to reflect the investment return on funds supporting underwriting business. Investment return has been wholly allocated to the technical account as all investments relate to the technical account.

Taxation

Under Schedule 19 of the Finance Act 1993 managing agents are not required to deduct basic rate income tax from trading income. In addition, all UK basic rate income tax deducted from syndicate investment income is recoverable by managing agents and consequently the distribution made to members or their members' agents is gross of tax. Capital appreciation falls within trading income and is also distributed gross of tax. No provision has been made for any United States Federal Income Tax payable on underwriting results or investment earnings. Any payments on account made by the Syndicate during the year have been included in the balance sheet under the heading 'other debtors'. No provision has been made for any other overseas tax payable by the members on underwriting results.

Financial assets

Financial assets are recognised in the balance sheet at such time as the Syndicate becomes a party to the contractual provisions of the financial asset. Purchases and sales of financial assets are recognised on the trade date, which is the date the Syndicate commits to purchase or sell the asset. A financial asset is derecognised when the contractual rights to receive cash flows from the financial assets expire, or where the financial assets have been transferred, together with substantially all the risks and rewards of ownership. Financial liabilities are derecognised if the obligations specified in the contract expire, are discharged or cancelled.

On acquisition of a financial asset, the Syndicate is required to classify the asset into one of the following categories: financial assets at fair value through the statement of profit or loss, loans and receivables, assets held to maturity and assets available for sale. The Syndicate has classified its investments as financial assets at fair value through profit or loss because they are managed and their performance is evaluated on a fair value basis. Information about these financial assets is provided internally on a fair value basis to management, and the investment strategy is to invest and evaluate their performance with reference to their fair values.

Fair value is the price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date. When available, the fair value of an instrument is measured using quoted prices in an active market for that instrument. A market is regarded as active if quoted prices are readily and regularly available and represent actual and regularly occurring market transactions on an arm's length basis. If a market for a financial instrument is not active, the fair value is established using a valuation technique. Valuation techniques include using recent orderly transactions between market participants (if available), reference to the current fair value of other instruments that are substantially the same, discounted cash flow analyses and option pricing models. The chosen valuation technique makes maximum use of market inputs, relies as little as possible on specific estimates, incorporates all factors that market participants would consider in setting a price, and is consistent with accepted economic methodologies for pricing financial instruments. Inputs to valuation techniques reasonably represent market expectations and measures of the risk-return factors inherent in the financial instrument. Where possible, valuation techniques are calibrated and tested for validity using prices from observable current market transactions in the same instrument or based on other available observable market data.

2. Accounting policies (continued)

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e. the fair value of the consideration given or received, unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument (i.e. without modification or repackaging) or based on a valuation technique whose variables include only data from observable markets. When transaction price provides the best evidence of fair value at initial recognition, the financial instrument is initially measured at the transaction price and any difference between this price and the value initially obtained from a valuation model is subsequently recognised in profit or loss depending on the individual facts and circumstances of the transaction but not later than when the valuation is supported wholly by observable market data or the transaction is closed out.

Upon initial recognition, attributable transaction costs relating to financial instruments at fair value through profit or loss are recognised in the statement of profit or loss when incurred. Financial assets at fair value through profit or loss are continually measured at fair value, and changes therein are recognised in the statement of profit or loss. Net changes in the fair value of financial assets at fair value through profit or loss exclude interest and dividend income, as these items are accounted for separately as set out below.

Profit commission

Profit commission is charged by ASML in accordance with the managing agent's agreement.

3. Segmental Analysis

	Gross premiums written £'000	Gross claims incurred £'000	Operating expenses £'000	Reinsurance balance £'000	Total £'000
Marine & Energy	60,877	(44,150)	(9,985)	(8,898)	(2,156)
Property	56,041	(33,191)	(9,191)	(7,519)	6,140
Casualty	72,253	(90,766)	(11,850)	(515)	(30,878)
Specialty	76,657	(38,279)	(12,573)	(9,153)	16,652
RITC adjustment	166	-	-	(1,522)	(1,356)
	265,994	(206,386)	(43,599)	(27,607)	(11,598)
RITC premium	305,228	(312,760)	-	16,210	8,678
Total	571,222	(519,146)	(43,599)	(11,397)	(2,920)

All premiums were concluded in the UK.

4. Operating expenses

	2016 £'000
Personal expenses	5,929
Profit on currency sales	7,126
Other expenses	30,544
	43,599

Personal expenses comprise Lloyd's subscriptions, central fund contributions, and a managing agent's fee and profit commission paid to ASML. All other expenses, including audit fees, are charged to and borne by the Syndicate.

All executive directors and staff are employed and remunerated by ASML. Salaries and related costs are included within the management fee charged by ASML and accordingly no direct salary cost is borne by the Syndicate. Details of salary cost and directors remuneration are disclosed in the financial statements of ASML.

Notes to the accounts

5. Reinsurance to close premium received

	2016 £'000
Gross outstanding claims	173,423
Reinsurance recoveries anticipated	(14,154)
Provision for gross claims incurred but not reported	114,312
Reinsurance recoveries anticipated	8,939
Unallocated loss adjustment expenses	5,053
Foreign exchange movement	12,273
	299,846

6. Reinsurance to close premium payable

	2016 £'000
Gross outstanding claims	185,535
Reinsurance recoveries anticipated	(25,527)
Provision for gross and net claims incurred but not reported	121,948
Reinsurance recoveries anticipated	3,936
Unallocated loss adjustment expenses	5,276
	291,168

The reinsurance to close is effected to the 2017 YOA of the Syndicate.

7. Reconciliation of members' balances

	2016 £'000
Profit for the year of account	2,277
Open year distribution to members	(9,166)
At 31 December	(6,889)

8. Financial assets

	2016 £'000
Shares and other variable yield securities	152,406
Debt and other fixed income securities	77,157
Participation in investment pools	23,264
Other investments	28,899
	281,726

All returns from financial assets were carried through the profit and loss account.

Calendar Year Financial Statements

2018

Statement of managing agent's responsibilities

The directors of the managing agent are responsible for preparing the Syndicate annual accounts in accordance with applicable law and regulations.

The Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008 requires the directors of the managing agent to prepare their Syndicates annual accounts for each financial year. Under that law they have elected to prepare the annual accounts in accordance with UK Accounting Standards and applicable law (UK Generally Accepted Accounting Practice), including FRS 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland*.

Under Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008 the directors of the managing agent must not approve the annual accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Syndicate and of the profit or loss of the Syndicate for that period. In preparing these financial statements, the directors of the managing agent are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the annual accounts;
- Assess the syndicate's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- Use the going concern basis of accounting unless they either intend to cease trading, or have no realistic alternative but to do so.

The directors of the managing agent are responsible for keeping adequate accounting records that are sufficient to show and explain the Syndicate's transactions and disclose with reasonable accuracy at any time the financial position of the Syndicate and enable them to ensure that the financial statements comply with the Insurance Accounts Directive (Lloyds's Syndicate and Aggregate Accounts) Regulations 2008. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the company and to prevent and detect fraud and other irregularities.

The directors of the managing agent are responsible for the maintenance and integrity of the Syndicate and financial information included on the Syndicate's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

On behalf of the ASML Board

Neil Smith
Finance Director
7 March 2019

Independent auditors' report to the members of Syndicate 4020

Opinion

We have audited the financial statements of Syndicate 4020 for the year ended 31 December 2018 which comprise the Statement of Profit or Loss: Technical account – General business, Statement of Profit or Loss: non-technical account, Statement of other comprehensive income, Balance Sheet – Assets, Balance Sheet – Liabilities, Statement of Changes in Members' Balances, Statement of Cash Flows, and related notes, including the accounting policies in note 1.

In our opinion the financial statements:

- give a true and fair view of the state of the syndicate's affairs as at 31 December 2018 and of its loss for the year then ended;
- have been properly prepared in accordance with UK accounting standards, including FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland; and
- have been prepared in accordance with the requirements of the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We have fulfilled our ethical responsibilities under, and are independent of the syndicate in accordance with, UK ethical requirements including the Financial Reporting Council ("FRC") Ethical Standard. We believe that the audit evidence we have obtained is a sufficient and appropriate basis for our opinion.

Going concern

The directors of the Managing Agent have prepared the Annual Return on the going concern basis as they do not intend to liquidate the syndicate or to cease its operations, and as they have concluded that the syndicate's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over its ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

We are required to report to you if we have concluded that the use of the going concern basis of accounting is inappropriate or there is an undisclosed material uncertainty that may cast significant doubt over the use of that basis for a period of at least a year from the date of approval of the financial statements. In our evaluation of the directors' conclusions, we considered the inherent risks to the syndicate's business model, including the impact of Brexit, and analysed how those risks might affect the syndicate's financial resources or ability to continue operations over the going concern period. We have nothing to report in these respects.

However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the syndicate will continue in operation.

Report of the directors of the Managing Agent

The directors are responsible for the Report of the directors of the Managing Agent. Our opinion on the financial statements does not cover that report and we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the Report of the directors of the Managing Agent and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in that report.

In our opinion the information given in the Report of the Directors of the Managing Agent is consistent with the financial statements.

Matters on which we are required to report by exception

Under the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008, we are required to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

We have nothing to report in these respects.

Independent auditors' report to the members of Syndicate 4020

Responsibilities of the directors of the Managing Agent

As explained more fully in their statement set out on page 19, the directors of the Managing Agent are responsible for: the preparation of the financial statements and for being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the syndicate's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to cease trading, or have no realistic alternative but to do so.

Auditor's responsibilities

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

The purpose of our audit work and to whom we owe our responsibilities

This report is made solely to the syndicate's members, as a body, in accordance with the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008. Our audit work has been undertaken so that we might state to the syndicate's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the syndicate's members, as a body, for our audit work, for this report, or for the opinions we have formed.

Ben Priestley (Senior Statutory Auditor)
for and on behalf of KPMG LLP, Statutory Auditor
Chartered Accountants
15 Canada Square
London, E14 5GL
8 March 2019

Income statement

For the year ended 31 December 2018

	Notes	2018 £'000	2017 £'000
Technical account			
Earned premiums, net of reinsurance			
Gross premiums written	3	269,500	277,833
Outward reinsurance premiums		(34,158)	(39,291)
Change in the provision for unearned premiums			
Gross amount		17,847	34,286
Reinsurers' share		(754)	(8,529)
Earned premiums, net of reinsurance		252,435	264,299
Allocated investment return transferred from the non-technical account	4	3,820	11,991
Claims incurred, net of reinsurance			
Claims paid			
Gross amount		(223,694)	(221,453)
Reinsurers' share		56,822	39,940
		(166,872)	(181,513)
Change in the provision for claims			
Gross amount		32,309	(17,610)
Reinsurers' share		(24,952)	70,723
		7,357	53,113
Claims incurred, net of reinsurance		(159,515)	(128,400)
Operating expenses	5	(109,531)	(113,363)
Balance on the technical account for general business		(12,791)	34,527
Non-technical account			
Investment income		3,820	11,991
Allocated investment return transferred to technical account		(3,820)	(11,991)
(Loss) / profit for the financial year		(12,791)	34,527

Statement of other comprehensive income

	Notes	2018 £'000	2017 £'000
(Loss) / profit for the financial year		(12,791)	34,527
Foreign exchange translation differences		497	(1,191)
	13	(12,294)	33,336

All operations are continuing. The notes on pages 25 to 40 form part of these accounts.

Balance sheet

As at 31 December 2018

	Notes	2018 £'000	2017 £'000
Assets			
Financial assets	7	388,515	434,661
Reinsurance assets	8	102,331	136,868
Insurance receivables	10	100,185	98,260
Other debtors		4,969	16,165
Cash at bank and in hand	11	6,422	6,635
Deferred acquisition costs	9	44,754	47,464
Other prepayments and accrued income		2,358	1,290
Total assets		649,534	741,343
Capital, reserves and liabilities			
Capital and reserves			
Members' balances attributable to underwriting participations	13	(15,162)	22,613
Liabilities			
Insurance liabilities	12	636,853	661,499
Other payables	14	27,745	50,959
Accruals and deferred income		98	6,272
Total liabilities		664,696	718,730
Total capital, reserves and liabilities		649,534	741,343

The notes on pages 25 to 40 form part of these accounts. The accounts were approved by the Board of Ark Syndicate Management Limited on 7 March 2019 and signed on its behalf by

N Smith
Finance Director
7 March 2019

Statement of cash flows

For the year ended 31 December 2018

	Notes	2018 £'000	2017 £'000
Operating result		(12,791)	34,527
Change in gross technical provisions		(24,645)	(65,094)
Change in reinsurers' share of gross technical provisions		34,537	(39,325)
Change in debtors		10,912	42,845
Change in creditors		(29,390)	(25,725)
Change in other assets / liabilities		-	-
Investment return		(3,820)	(11,991)
Foreign exchange		(15,987)	28,396
Net cash flows from operating activities		(41,184)	(36,367)
Purchase of equity and debt instruments		(179,860)	(36,893)
Sale of equity and debt instruments		243,668	78,314
Investment income received		4,059	9,796
Investment management fees		(1,414)	(5,377)
Net cash flows from investing activities		66,453	45,840
Distribution profit		(16,316)	(8,535)
Open year release	13	(9,166)	(6,860)
Net cash flows from financing activities		(25,482)	(15,395)
Net (decrease) in cash and cash equivalents		(213)	(5,922)
Cash and cash equivalents at 1 January		6,635	12,557
Cash and cash equivalents at 31 December	11	6,422	6,635

The notes on pages 25 to 40 form part of these accounts.

Notes to the financial statements

1. Statement of accounting policies

The financial statements have been prepared in accordance with the Insurance Accounts Directive (Lloyd's Syndicate and Aggregate Accounts) Regulations 2008 and Financial Reporting Standard 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland* ("FRS 102") as issued in August 2015, and Financial Reporting Standard 103 *Insurance Contracts* ("FRS 103") as issued in March 2015.

Basis of preparation

The financial statements are prepared using the historical cost convention except that financial investments and derivative financial instruments are stated at their fair value. All amounts presented are stated in Sterling, unless stated otherwise. The financial statements have been prepared on a going concern basis. The directors of ASML have a reasonable expectation that the Syndicate has adequate resources to continue in operational existence for the foreseeable future.

Use of judgements and estimates

In preparing these accounts, the directors of ASML have made judgements, estimates and assumptions that affect the application of the Syndicate's accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to estimates are recognised prospectively. The measurement of the provision for claims outstanding involves judgments and assumptions about the future that have the most significant effect on the amounts recognised in the financial statements.

Insurance contracts

Insurance contracts (including inwards reinsurance contracts) are defined as those containing significant insurance risk. Insurance risk is considered significant if, and only if, an insured event could cause Ark to pay significant additional benefits in any scenario, excluding scenarios that lack commercial substance. Such contracts remain insurance contracts until all rights and obligations are extinguished or expire.

Premiums written and earned

Premiums written comprise premiums on contracts incepted during the financial year as well as adjustments made in the year to premiums written in prior accounting years. Premiums are shown gross of acquisition costs such as brokerage payable and taxes and duties levied on them. Estimates are made for pipeline premiums, representing amounts due but not yet notified. Written premiums are recognised as earned according to the risk profile of the policy. Unearned premiums represent the proportion of premiums written in the year that relate to unexpired terms of policies in force at the balance sheet date. The provision is calculated on a policy by policy basis.

Reinsurance premiums ceded

Outwards reinsurance premiums are accounted for in the same accounting year as the premiums for the direct or inwards business being reinsured.

Claims provisions and related recoveries

The provision for claims comprises amounts set aside for claims notified and claims incurred but not yet reported ("IBNR").

Claims incurred comprise claims and claims handling expenses paid in the year and the movement in provision for outstanding claims and future claims handling expenses. Recoverable amounts arising out of subrogation and salvage together with reinsurance recoveries are deducted from the cost of gross claims.

Outstanding claims consist of amounts set aside for notified claims and a provision for IBNR claims. The amount included in respect of IBNR is arrived at by considering the actuarially calculated provision, using techniques that generally involve statistical techniques of estimation applied by ASML's actuaries and reviewed by external consulting actuaries, as well as the opinion of the class underwriters and executive management. The actuarial techniques generally involve projecting from past experience of the development of claims over time to form a view of the likely ultimate claims to be experienced for more recent underwriting having regard to variations in the business accepted and the underlying terms and conditions. Large claims are generally assessed individually, being calculated on a case by case basis or projected separately to allow for the possible distortive effects of the developments of these claims on the balance of the data. The provision for claims also includes amounts in respect of internal and external claims handling costs.

The reinsurers' share of provisions for claims is based on calculated amounts of outstanding claims and projections for IBNR, net of estimated irrecoverable amounts, having regard to the reinsurance programme in place for the class of business, the claims experience for the year and the current security rating of the reinsurance companies involved. The Syndicate uses a number of statistical techniques to assist in making these estimates.

1. Statement of accounting policies (continued)

Accordingly the two most critical assumptions as regards claims provisions are that the past is a reasonable predictor of the likely level of claims development and that the rating and other models used for current business are fair reflections of the likely level of ultimate claims to be incurred. Ultimate liability will vary as a result of subsequent information and events and this may result in significant adjustments to the amounts provided. Adjustments to the amount of claims provisions established in prior years are reflected in the financial statements for the year in which the adjustments are made. The methods used, and the estimates made, are reviewed regularly.

Acquisition costs

Acquisition costs, comprising brokerage and taxes and duties levied on them are deferred to the extent that they are attributable to premiums unearned at the balance sheet date.

Foreign currency translation

a) Functional and presentation currency

Items included in the financial statements are measured using the US dollar, the currency of the primary economic environment in which the Syndicate operates ("functional currency"). The financial statements are presented in Sterling, being the presentation currency of the Syndicate. Differences arising from the translation from the functional to presentation currency are presented in the statement of other comprehensive income.

b) Transactions and balances

Foreign currency transactions are translated into the functional currency using average exchange rates applicable to the period in which the transactions take place and where the company considers these to be a reasonable approximation of the transaction rate. Foreign exchange gains and losses resulting from the settlement of such transactions and from translation at the period end of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of profit or loss. Non-monetary items recorded at historical cost in foreign currencies are translated using the exchange rate on the date of the initial transaction. For the purposes of foreign currency translation, unearned premiums and deferred acquisition costs are treated as if they are monetary items.

Financial assets

Financial assets are recognised in the balance sheet at such time as the Syndicate becomes a party to the contractual provisions of the financial asset. Purchases and sales of financial assets are recognised on the trade date, which is the date the Syndicate commits to purchase or sell the asset. A financial asset is derecognised when the contractual rights to receive cash flows from the financial assets expire, or where the financial assets have been transferred, together with substantially all the risks and rewards of ownership. Financial liabilities are derecognised if the obligations specified in the contract expire, are discharged or cancelled.

On acquisition of a financial asset, the Syndicate is required to classify the asset into one of the following categories: financial assets at fair value through the statement of profit or loss, loans and receivables, assets held to maturity and assets available for sale. The Syndicate has classified its investments as financial assets at fair value through profit or loss because they are managed and their performance is evaluated on a fair value basis. Information about these financial assets is provided internally on a fair value basis to management, and the investment strategy is to invest and evaluate their performance with reference to their fair values.

Fair value is the price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date. When available, the fair value of an instrument is measured using quoted prices in an active market for that instrument. A market is regarded as active if quoted prices are readily and regularly available and represent actual and regularly occurring market transactions on an arm's length basis. If a market for a financial instrument is not active, the fair value is established using a valuation technique. Valuation techniques include using recent orderly transactions between market participants (if available), reference to the current fair value of other instruments that are substantially the same, discounted cash flow analyses and option pricing models. The chosen valuation technique makes maximum use of market inputs, relies as little as possible on specific estimates, incorporates all factors that market participants would consider in setting a price, and is consistent with accepted economic methodologies for pricing financial instruments. Inputs to valuation techniques reasonably represent market expectations and measures of the risk-return factors inherent in the financial instrument. Where possible, valuation techniques are calibrated and tested for validity using prices from observable current market transactions in the same instrument or based on other available observable market data.

1. Statement of accounting policies (continued)

The best evidence of the fair value of a financial instrument at initial recognition is the transaction price, i.e. the fair value of the consideration given or received, unless the fair value of that instrument is evidenced by comparison with other observable current market transactions in the same instrument (i.e. without modification or repackaging) or based on a valuation technique whose variables include only data from observable markets. When transaction price provides the best evidence of fair value at initial recognition, the financial instrument is initially measured at the transaction price and any difference between this price and the value initially obtained from a valuation model is subsequently recognised in profit or loss depending on the individual facts and circumstances of the transaction but not later than when the valuation is supported wholly by observable market data or the transaction is closed out.

Upon initial recognition, attributable transaction costs relating to financial instruments at fair value through profit or loss are recognised in the statement of profit or loss when incurred. Financial assets at fair value through profit or loss are continually measured at fair value, and changes therein are recognised in the statement of profit or loss. Net changes in the fair value of financial assets at fair value through profit or loss exclude interest and dividend income, as these items are accounted for separately as set out below.

Insurance receivables and payables

Insurance receivables and payables are recognised when due. These include amounts due to and from agents, brokers and insurance contract holders. Insurance receivables are classified as ‘loans and receivables’ as they are non-derivative financial assets with fixed or determinable payments that are not quoted on an active market. Insurance receivables are measured at amortised cost less any impairment losses. Insurance payables are stated at amortised cost.

Other receivables

Other receivables are carried at amortised cost less any impairment losses.

Investment income

Investment income consists of dividends, interest, realised and unrealised gains and losses and foreign exchange gains and losses on financial assets at fair value through the statement of profit or loss. Dividends on equity securities are recorded as revenue on the ex-dividend date. Interest is recognised separately on an amortised cost basis using the effective interest rate method for financial assets at fair value through the statement of profit or loss. The realised gains or losses on disposal of an investment are the difference between the proceeds and the original cost of the investment. Unrealised investment gains and losses represent the difference between the carrying value at the reporting date, and the carrying value at the previous period end or purchase value during the period.

Other payables

Other payables are stated at amortised cost determined on the effective interest rate method.

Cash and cash equivalents

Cash and cash equivalents consist of cash at bank and in hand, deposits held at call with banks and other short-term highly liquid investments with maturities of three months or less from the date of acquisition. Cash and cash equivalents are classified as loans and receivables and carried at amortised cost less any impairment losses.

2. Management of risk

Approach to risk management

Ark’s core business relies on the assumption of internal and external risk within the appetites and tolerances established by the Board. Primarily Ark’s business is the assumption of Insurance Risk and Market Risk, with the additional categories of Credit Risk, Liquidity Risk, Operational Risk and Group Risk. Managing these risks in a manner that is consistent with the strategy, appetites and tolerances established by the Board requires that Ark has in place a systematic, objective, and robust set of governance arrangements and processes for identifying and quantifying the risks to which it is exposed. This enables Ark to determine appropriate strategies and approaches for prevention and mitigation.

The effectiveness with which Ark manages risk is a key determinant of the level of capital resources required to run the business and its ability to achieve its strategic objectives including, in relation to capital efficiency and the production of acceptable levels of return.

2. Management of risk (continued)

Insurance risk

This is the risk arising from the uncertainties in timing, frequency and severity of insured losses, relative to the expectations made at the time of business planning or underwriting. Ark's business is based on the seeking and assumption of insurance risk. The Syndicate writes a balanced and diversified book of business through a team of experienced underwriters with the objective of charging appropriate premiums to cover claims and operational costs whilst optimising the expected return on equity. Target returns are assessed each year, taking into account the insurance market outlook and realistic expectations of return on equity. Insurance risk comprises the following elements:

a) Exposure management risk

This is the risk of exposure to an event, or a series of events, which causes a potential financial loss that exceeds expectations. The nature of Ark's business and underwriting portfolio includes the assumption of a high degree of catastrophe, non-catastrophe and accumulative exposure to different events. This is managed through the purchase of reinsurance and diversification of business lines and geographical areas to balance exposures, with the aim of reducing the risk that one event, or a series of events, will cause unacceptable loss to the business. Ark's catastrophe and non-natural catastrophe modelling processes incorporate Ark-specific disaster scenarios, aggregate caps and cross-class modelling which reflect the diversity of the portfolio.

b) Underwriting quality risk

This is the risk of inappropriate underwriting or the inadequate pricing of risks which can lead to unprofitable business or inefficient line utilisation and risk selection. The management of underwriting quality can be difficult in a competitive market where underwriters are often under pressure to meet premium and pricing targets. Ark operates an underwriting controls framework which includes individual underwriting authorities, continual quality monitoring and peer review of risks. The framework aims to ensure a high quality of underwriting through monitoring of pricing and rate change, contract certainty and agreement of appropriate terms and conditions.

c) Delegated underwriting quality risk

This is the risk of exposure to inappropriate risks through the delegation of underwriting authorities to third parties or the delegation of authority to inappropriate third parties. The nature of delegated underwriting naturally increases the risk of underwriting, through the ability of third parties being able to bind the Syndicate to risks without detailed review of the risk involved. This risk is mitigated through the application of strict guidelines, managed by a dedicated team within the Compliance department. This team reviews coverholder and third party authority ("TPA") approvals pre-bind and monitors a programme of audits to ensure compliance with regulations and guidelines.

d) Claims management risk

This is the risk that claims made are not managed in an appropriate manner, leading to material adverse results through an increase in claims, payments or exposure to legal issues. The management of claims is conducted in accordance with claims procedures, which are, in turn, in line with the Lloyd's Minimum Standards. This includes the management of claims workflows and response times, reviews of major claims to ensure accurate estimates, regular reserving reviews and management of complaints. These processes are enhanced through communication with underwriting teams to understand the policy or portfolio and with the Compliance department to manage coverholders and TPAs.

e) Reserving risk

This is the risk that the estimated claims reserves differ materially from the ultimate cost of the claim or event. Reserving risk is a significant category in the Internal Model and has the potential to significantly impact profitability. The potential impact is controlled through the use of a mix of actuarial models and methods, industry data and underwriter experience to produce reliable estimates that are based on up to date information, and consistently applied over time and across classes of business. These estimates are subject to an external review each year.

f) Reinsurance purchasing

This is the risk of purchasing insufficient or inappropriate reinsurance, or the exhaustion of reinsurance, leading to excessive or unexpected losses. The process of reinsurance purchasing forms a major part of Ark's business planning process and includes the use of the Internal Model as a tool for decision making. Reinsurance is purchased for a mixture of risk and event losses across the majority of classes, in a mixture of excess of loss and proportional cover, dependent on the scale and characteristics of the class or treaty concerned. Ark also employs controls and monitoring around the use of insurers, credit ratings and concentration risk.

2. Management of risk (continued)

g) Underwriting management

This is the risk that returns from the policies written are different from expectations or are not in line with the business plan. Examples include a failure to reduce or exit from unprofitable business or a failure of underwriters to follow the business plan which sets out the parameters, classes, limitations and profitability expectation of underwriting teams for the forthcoming year. Communication of the business plan to the underwriting teams is therefore imperative. The performance of each class and the syndicate portfolio as a whole is reviewed against the business plan on a regular basis by the Board and various committees using information available from the management information portal. Various controls are in place to ensure constant vigilance including underwriting authorities, monitoring of risk codes, geographical aggregates and data quality.

Sensitivity to net claim liability movements	2018 Impact on profit £'000	2017 Impact on profit £'000	2018 Impact on net assets £'000	2017 Impact on net assets £'000
5% increase in total net claim liabilities	(26,726)	(26,232)	(26,726)	(26,232)
5% decrease in total net claim liabilities	26,726	26,232	26,726	26,232

Credit risk

Credit risk arises when counterparties fail to meet their obligations in full as they fall due. The key areas where credit risk can arise include reinsurers, brokers, coverholders and investment counterparties.

The probability of reinsurer default is modelled by the Actuarial team as part of the Internal Model. Ark seeks to reduce this risk by avoiding over-reliance on specific reinsurers through the application of concentration limits and thresholds. This is monitored by the Security Advisory Committee ("SAC"). Prior to the transaction of business, broker and coverholder default is mitigated through the application of due diligence on new and existing counterparties, and a rolling audit schedule post-bind. Overdue premium is also monitored by class, broker and age of debt. The investment portfolio is managed in line with asset allocation guidelines which are monitored by type, counterparty, quality and duration. Ark outsources the management of a significant proportion of its investment portfolio to managers who monitor and report on performance and adherence to guidelines on a regular basis.

2018 – credit risk analysis	A or above £'000	BBB £'000	Lower than BBB £'000	Unrated £'000	Total £'000
Financial assets at fair value	133,467	4,793	155	250,100	388,515
Reinsurance assets	107,862	20	-	14,557	122,439
Cash and cash equivalents	6,422	-	-	-	6,422
	247,751	4,813	155	364,657	517,376

2017 – credit risk analysis	A or above £'000	BBB £'000	Lower than BBB £'000	Unrated £'000	Total £'000
Financial assets at fair value	66,674	3,265	260	364,462	434,661
Reinsurance assets	143,221	-	-	4,703	147,924
Cash and cash equivalents	6,635	-	-	-	6,635
	216,530	3,265	260	369,165	589,220

Insurance receivables and other receivables balances have not been impaired, based on all evidence available, and no impairment provision has been recognised in respect of these assets. Inwards premium receivables are credit controlled by third-party managers. Ark monitors third party coverholders' performance and their financial processes through the coverholder management team. A provision for doubtful debts is included within reinsurance receivables of £1.3m (2017: £1.4m).

2. Management of risk (continued)

Market risk

This is the risk that the value of assets and liabilities changes as a result of market movements e.g. foreign exchange rates, interest rates and market prices.

a) Foreign exchange risk

The functional currency of the Syndicate is the US dollar and the presentation currency in which the Syndicate reports its results is Sterling. Therefore the Syndicate is exposed to fluctuations in exchange rates for non-dollar denominated transactions.

The Syndicate operates in five main currencies: US dollars, Sterling, Canadian dollars, Australian dollars and Euros. The underwriting capital is matched by currency to the principal underlying currencies of its written premiums. This helps to mitigate the risk that the capital required to underwrite business is materially affected by any future movements in exchange rates.

2018 – currency analysis	Sterling £'000	Euros £'000	Canadian dollars £'000	Australian dollars £'000	US dollars £'000	Total £'000
Assets	19,095	57,029	27,627	3,880	541,903	649,534
Liabilities	66,448	39,801	22,842	8,604	527,001	664,696
Net assets / (liabilities)	(47,353)	17,228	4,785	(4,724)	14,902	(15,162)

2017 – currency analysis	Sterling £'000	Euros £'000	Canadian dollars £'000	Australian dollars £'000	US dollars £'000	Total £'000
Assets	(14,081)	52,656	32,096	15,026	655,646	741,343
Liabilities	89,313	30,690	25,286	11,802	561,639	718,730
Net assets / (liabilities)	(103,394)	21,966	6,810	3,224	94,007	22,613

The table below gives an indication of the impact on profit after tax and net assets of a percentage change in the relative strength of the US dollar against the value of the main currencies, simultaneously.

Sensitivity to foreign exchange risk	2018 Impact on profit £'000	2017 Impact on profit £'000	2018 Impact on net assets £'000	2017 Impact on net assets £'000
USD weakens by 5% against other currencies	2,187	335	2,187	335
USD strengthens by 5% against other currencies	(2,417)	(370)	(2,417)	(370)

b) Interest rate risk

Some of the financial instruments, including certain financial assets at fair value, cash and cash equivalents and borrowings, are exposed to movements in market interest rates. Interest rate risk is managed by primarily investing in short-duration financial assets and cash and cash equivalents. The duration of assets are monitored on a regular basis. The duration of assets exposed to movements in market interest rates is 0.91 (2017: 0.81). Changes in interest rates, with all other variables constant, would result in changes in the capital value of debt securities and borrowings as well as subsequent interest receipts and payments.

Sensitivity to interest rate risk	2018 Impact on profit £'000	2017 Impact on profit £'000	2018 Impact on net assets £'000	2017 Impact on net assets £'000
50 basis point increase in interest rates	(876)	(361)	(876)	(361)
50 basis point decrease in interest rates	876	361	876	361

2. Management of risk (continued)

c) Price risk

Financial assets recognised at fair value are exposed to movements in market prices.

Sensitivity to price risk	2018 Impact on profit £'000	2017 Impact on profit £'000	2018 Impact on net assets £'000	2017 Impact on net assets £'000
5% increase in FTSE 100 and S&P 500	-	2,292	-	2,292
5% decrease in FTSE 100 and S&P 500	-	(2,292)	-	(2,292)

Liquidity risk

Liquidity risk arises where cash may not be available to pay obligations when they fall due without incurring unreasonable penalties or expense costs. The risk is minimised by holding sufficient liquid assets to enable large and unexpected payments, predominately claims, to be made in all but the most extreme scenarios. Ark's Catastrophe Event Response Plan provides information to quantify liquidity implications of losses, reinsurance recoveries, cashflows and trust funds in the event of a catastrophe or large loss. The process is stress tested using historic scenarios to determine the behaviour of the portfolio following an event or series of events.

2018 – maturity analysis	<1yr £'000	1-2yrs £'000	2-3yrs £'000	3-5yrs £'000	>5yrs £'000	Total £'000
Financial assets at fair value	334,705	32,277	13,700	5,437	2,396	388,515
Cash and cash equivalents	6,422	-	-	-	-	6,422
	341,127	32,277	13,700	5,437	2,396	394,937

2017 – maturity analysis	<1yr £'000	1-2yrs £'000	2-3yrs £'000	3-5yrs £'000	>5yrs £'000	Total £'000
Financial assets at fair value	404,112	16,586	10,136	1,531	2,296	434,661
Cash and cash equivalents	6,635	-	-	-	-	6,635
	410,747	16,586	10,136	1,531	2,296	441,296

In the above analysis, assets with no duration are included as "less than one year".

Net claim liability cashflow timing	<1yr £'000	1-3yrs £'000	3-5yrs £'000	>5yrs £'000	Total £'000	Weighted average term (years)
2018	131,326	135,607	62,138	64,544	393,615	2.69
2017	125,655	139,091	65,104	47,746	377,596	2.93

Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes or systems. Risks are identified within the risk register and are modelled via operational scenarios. Ark aims to minimise its exposure to operational risk by monitoring controls and management information in the form of key indicators that indicate changes to the risk profile.

Ark outsources a number of key functions, such as investment management, inwards premium credit control and human resources. This introduces the risk that the Syndicate may be exposed to liability or may fail to achieve its objectives due to inappropriately arranged, or a failure of, outsource arrangements. This risk is mitigated through pre-contract due diligence and performance review throughout the contract life cycle.

2. Management of risk (continued)

Ark recognises that the success of a business depends on the ability to retain the services of existing key staff and to attract and retain additional people in the future, both in underwriting and support functions. This risk is managed through the provision of sufficient education and development, support for qualifications and competitive remuneration packages.

Ark is also impacted by the risk of information technology system failure or disruption. This is mitigated through a control framework which includes network security, data, hardware and applications and is complimented by detailed planning around back-ups, contingency and disaster recovery, all of which are monitored and tested on a regular basis.

Ark has limited exposure to Brexit. Less than 5% of premiums written are based in the European Union ("EU") and in 2019, Ark commenced transacting with Lloyd's Brussels, the insurance company set up by Lloyd's to ensure syndicates can continue to access EU business. Ark continues to manage exposure to fluctuations in market value and foreign exchange and holds a limited amount of Sterling and Euro denominated assets.

Regulatory risk

Regulatory risk is the risk of censure following a breach of regulatory or legal requirements, or a failure to respond to deadlines or information requests from regulators in a satisfactory and timely manner.

Ark is regulated, overseen or required to report to the PRA, FCA, Lloyd's and other overseas regulators. Each body requires adherence to specific requirements and guidelines. In order to mitigate this, Ark seeks to conform to the regulations as they apply to each functional area. Much of this is operated through training and awareness to promote correct behaviour at source, as opposed to corrective action at a later stage. The overall risk is managed by the Compliance department which seeks to ensure that deadlines are met and changes in regulation are communicated in a timely manner.

Ark has put in place processes and controls to identify and mange the conduct risk associated with the business it underwrites. Ark will continue to lead high product risk business where risks are consistent with the probability targets taking into account the additional requirements for oversight and monitoring conduct risk.

Capital management risk

Capital is primarily required to support underwriting at Lloyd's. Lloyd's applies capital requirements at member level and centrally to ensure that Lloyd's complies with Solvency II, and beyond that to meet its own financial strength, licence and ratings objectives.

In order to meet Lloyd's requirements, each syndicate is required to calculate its Solvency Capital Requirement ("SCR") for the prospective underwriting year. This amount must be sufficient to cover a 1 in 200 year loss, reflecting uncertainty in the ultimate run-off of underwriting liabilities (SCR 'to ultimate'). The syndicate must also calculate its SCR at the same confidence level but reflecting uncertainty over a one year time horizon (one year SCR) for Lloyd's to use in meeting Solvency II requirements. The SCRs of each syndicate are subject to review by Lloyd's and approval by the Lloyd's Capital and Planning Group.

Each member of a syndicate is liable for its own share of underwriting liabilities on the syndicate(s) on which it is participating. Each member's SCR is determined by the sum of the member's share of the syndicate SCR 'to ultimate'. Where a member participates on more than one syndicate, a credit for diversification is provided to reflect the spread of risk, but consistent with determining an SCR which reflects the capital requirement to cover a 1 in 200 year loss 'to ultimate' for that member. Over and above this, an uplift is applied by Lloyd's to the member's capital requirement, known as the Economic Capital Assessment ("ECA").

3. Segmental analysis

Ark management considers that it has one segment, risks underwritten at Lloyd's in the United Kingdom.

Notes to the financial statements

4. Investment income

	2018 £'000	2017 £'000
Income on financial investments at fair value	5,473	5,047
Interest on cash and cash equivalents	1,064	1,762
Gains on the realisation of investments	1,534	3,731
Unrealised gains on investments	3,989	12,704
Losses on the realisation of investments	(4,011)	(745)
Unrealised losses on investments	(2,815)	(5,131)
Investment management charges	(1,414)	(5,377)
	3,820	11,991

5. Operating expenses

	2018 £'000	2017 £'000
Acquisition costs	81,904	84,930
Administrative expenses	25,378	20,452
Managing agency fee	2,331	2,368
Personal expenses	(82)	5,613
	109,531	113,363

Administrative expenses are incurred on behalf of the Syndicate by ASML. These expenses include:

	2018 £'000	2017 £'000
Audit fees, of which £68k (2017:£67k) relates to the audit of regulatory returns	172	169
Performance related pay	2,240	5,200

6. Directors and employees

All executive directors and staff are employed and remunerated by ASML. Staff costs are included in the management fee charged by ASML and no direct salary cost is borne by the Syndicate. Salary costs and directors remuneration are disclosed in the financial statements of ASML. The Syndicate has not been charged with any performance related remuneration paid to directors of ASML. Performance related remuneration charged to the Syndicate is set out in note 5.

	2018 £'000	2017 £'000
Emoluments of the Active Underwriter	374	415

No contributions were made to money purchases pension schemes in the year in respect of the Active Underwriter (2017: Nil).

7. Financial assets

Financial assets at fair value:	Cost 2018 £'000	Cost 2017 £'000	Value 2018 £'000	Value 2017 £'000
Shares and other variable yield securities	207,346	326,753	210,696	335,243
Debt and other fixed income securities	131,488	54,675	128,514	53,832
Participation in investment pools	30,697	27,823	30,697	27,554
Other investments	18,608	18,032	18,608	18,032
	388,139	427,283	388,515	434,661

The amount expected to mature before and after one year is:

Before one year	334,705
After one year	53,810
	388,515

The fair values of financial assets are based on prices provided by investment managers who obtain market data from numerous independent pricing services. The pricing services used by the investment manager obtain actual transaction prices for securities that have quoted prices in active markets. For those securities which are not actively traded, the pricing services use common market valuation pricing models. Observable inputs used in common market valuation pricing models include, but are not limited to, broker quotes, credit ratings, interest rates and yield curves, prepayment speeds, default rates and other such inputs which are available from market sources.

Level 1 includes fair values measured using quoted prices (unadjusted) in active markets for identical instruments. Level 2 includes fair values measured using directly or indirectly observable inputs or other similar valuation techniques for which all significant inputs are based on market observable data. Level 3 includes fair values measured using valuation techniques for which significant inputs are not based on market observable data.

All financial assets and borrowings are considered by management to be Level 2. Level 2 of the hierarchy contains corporate securities, asset backed securities and mortgage-backed securities. The fair value of these assets is based on the prices obtained from both investment managers and investment custodians.

8. Reinsurance assets

	2018 £'000	2017 £'000
Reinsurers' share of claims reported	39,882	65,279
Reinsurers' share of claims incurred but not reported	46,691	54,395
Reinsurers' share of claims liabilities	86,573	119,674
Unearned premiums	15,758	17,194
	102,331	136,868

9. Deferred acquisition costs

	2018 £'000	2017 £'000
Balance at 1 January	47,464	60,549
Additions	76,550	67,077
Amortisation charge	(81,904)	(84,424)
Foreign exchange movement	2,644	4,262
	44,754	47,464

10. Insurance receivables

	2018 £'000	2017 £'000
Debtors arising out of direct insurance operations	64,319	70,010
Debtors arising out of direct reinsurance operations	35,866	28,250
	100,185	98,260

	2018 £'000	2017 £'000
Due within one year	97,789	95,134
Due after one year	2,396	3,126
	100,185	98,260

11. Cash and cash equivalents

	2018 £'000	2017 £'000
Cash at bank and in hand	6,422	6,635

12. Insurance liabilities

	2018 £'000	2017 £'000
Claims reported and loss adjustment expenses	249,222	255,045
Claims incurred but not reported	230,966	242,225
Gross claims liabilities	480,188	497,270
Unearned premiums	156,665	164,229
	636,853	661,499

12. Insurance liabilities (continued)

Movements in insurance liabilities and reinsurance assets are as follows:

Claims and loss adjustment expenses	2018 Gross £'000	2018 Reinsurance £'000	2018 Net £'000	2017 Gross £'000	2017 Reinsurance £'000	2017 Net £'000
At 1 January	497,270	119,674	377,596	512,293	68,750	443,543
Claims paid	(223,694)	(56,822)	(166,872)	(221,453)	(39,940)	(181,513)
Movement arising from current years	181,832	20,444	161,388	230,345	98,313	132,032
Movement arising from prior years	3,416	-	3,416	8,718	-	8,718
Net exchange differences	21,364	3,277	18,087	(32,633)	(7,449)	(25,184)
At 31 December	480,188	86,573	393,615	497,270	119,674	377,596

Unearned premiums	2018 Gross £'000	2018 Reinsurance £'000	2018 Net £'000	2017 Gross £'000	2017 Reinsurance £'000	2017 Net £'000
At 1 January	164,229	17,194	147,035	214,300	28,794	185,506
Increase in the year	269,500	34,158	235,342	277,833	39,291	238,542
Release in the year	(287,347)	(34,912)	(252,435)	(312,119)	(47,822)	(264,297)
Net exchange differences	10,283	(682)	10,965	(15,785)	(3,069)	(12,716)
At 31 December	156,665	15,758	140,907	164,229	17,194	147,035

Assumptions and processes

a) The reserving process

Ark uses a quarterly process to set its reserves. Several actuarial and statistical methods are used to estimate the ultimate premium and claims costs, with the most appropriate method selected depending on the nature of each class of business. In addition, the underwriting teams review the development of the incurred loss ratio over time, work with the claims team to set reserve estimates for identified claims and utilise their detailed understanding of both risks underwritten and the nature of the claims to establish an alternative estimate of ultimate claims cost, which is compared to the actuarially established figures. The Reserving Committee then determines the reserves held for accounting purposes. An annual independent actuarial review is undertaken to ensure that the reserves established are not lower than an independently established best estimate.

Chain-ladder techniques are applied to premiums, paid claims and incurred claims (i.e. paid claims plus case estimates). The basic technique involves the analysis of historical claims development factors and the selection of estimated development factors based on historical patterns. The selected development factors are then applied to cumulative claims data for each underwriting year that is not yet fully developed to produce an estimated ultimate claims cost for each underwriting year. The Bornhuetter-Ferguson method uses a combination of a benchmark / market-based estimate and an estimate based on claims experience. The former is based on a measure of exposure such as premiums; the latter is based on the paid or incurred claims observed to date. The two estimates are combined using a formula that gives more weight to the experience-based estimate as time passes.

The choice of selected results for each underwriting year of each class of business depends on an assessment of the technique that has been most appropriate to observed historical developments. In certain instances, this has meant that different techniques or combinations of techniques have been selected for individual underwriting years or groups of underwriting years within the same class of business. As such, there are many assumptions used to estimate general insurance liabilities.

Triangulations of the paid / outstanding claim ratios are also reviewed as a way of monitoring any changes in the strength of the outstanding claim estimates between underwriting years so that adjustments can be made to mitigate any subsequent over/(under) reserving.

12. Insurance liabilities (continued)

Where significant large losses impact an underwriting year, the development is usually very different from the attritional losses. In these situations, the large loss total is extracted from the remainder of the data and analysed separately by the respective claims managers using exposure analysis of the policies in force in the areas affected. Further assumptions are required to convert gross of reinsurance estimates of ultimate claims cost to a net of reinsurance level and to establish reserves for unallocated claims handling expenses and reinsurance bad debt.

b) Major assumptions

The main assumption underlying these techniques is that the Syndicate's past claims development experience (with appropriate adjustments for known changes) can be used to project future claims development and hence ultimate claims costs. As such these methods extrapolate the development of premiums, paid and incurred losses, average costs per claim and claim numbers for each underwriting year based on the observed development of earlier years. Throughout, judgement is used to assess the extent to which past trends may not apply in the future; for example, to reflect changes in external or market factors such as economic conditions, public attitudes to claiming, levels of claims inflation, premium rate changes, judicial decisions and legislation, as well as internal factors such as portfolio mix, policy conditions and claims handling procedures.

The loss development tables below provide information about historical claims development by the identified operating segments. The tables are by underwriting year which in our view provides the most transparent reserving basis. The top part of the table illustrates how the estimate of the claims ratio for each underwriting year has changed at successive year ends. The bottom half of the table reconciles the gross and net claims to the amount appearing in the balance sheet. While the information in the table provides a historical perspective on the adequacy of the claims liabilities established in previous years, users of these financial statements are cautioned against extrapolating past redundancies or deficiencies on current claims liabilities. The Syndicate believes that the estimate of total claims liabilities selected is adequate. However, due to inherent uncertainties in the reserving process, it cannot be assured that such balances will ultimately prove to be adequate.

	2018	2017	2016	2015	2014	2013	2012	2011	2010 & prior
Gross claims	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
1 year	85,801	136,949	79,180	87,732	90,975	110,810	114,289	100,687	604,240
2 years	-	206,363	168,563	177,295	177,903	213,748	174,919	179,284	731,898
3 years	-	-	195,811	195,916	196,150	223,502	181,003	192,700	758,634
4 years	-	-	-	193,454	198,857	218,543	180,067	188,835	749,971
5 years	-	-	-	-	225,028	220,123	180,503	187,924	744,129
6 years	-	-	-	-	-	228,362	175,428	192,210	737,194
7 years	-	-	-	-	-	-	171,886	191,003	735,743
8 years	-	-	-	-	-	-	-	189,988	731,691
9 years	-	-	-	-	-		-	-	720,915

	2018	2017	2016	2015	2014	2013	2012	2011	2010 & prior
Net claims	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
1 year	72,323	56,684	75,167	82,191	87,976	107,516	106,940	94,047	540,603
2 years	-	110,194	136,322	162,831	169,182	188,290	170,574	161,342	633,179
3 years	-	-	169,098	182,217	183,420	197,720	175,111	164,597	653,331
4 years	-	-	-	179,985	181,791	192,636	170,818	155,683	642,313
5 years	-	-	-	-	198,394	193,409	169,959	153,527	632,687
6 years	-	-	-	-	-	200,697	165,608	153,828	623,562
7 years	-	-	-	-	-	-	162,334	151,855	621,340
8 years	-	-	-	-	-	-	-	150,531	619,047
9 years	-	-	-	-	-	-	-	-	609,121

12. Insurance liabilities (continued)

	Gross All years £'000	Net All years £'000
Total claims	2,217,606	1,852,677
Less paid claims	(1,737,418)	(1,459,062)
Total claims liabilities	480,188	393,615

On a whole account basis, the claims experience in 2018 has been better than expected based on the prior year reserves.

13. Reconciliation of members' balances

2018	2018 YOA £'000	2017 YOA £'000	2016 YOA £'000	Total £'000
At 1 January	-	(2,754)	9,052	6,298
Profit / (loss) for the year	(15,451)	9,846	(7,186)	(12,791)
Other recognised gains / (losses)	(53)	138	412	497
Distribution	-	-	(9,166)	(9,166)
At 31 December	(15,504)	7,230	(6,888)	(15,162)

2017	2017 YOA £'000	2016 YOA £'000	2015 YOA £'000	Total £'000
At 1 January	-	(10,999)	7,137	(3,862)
Profit / (loss) for the year	(2,463)	19,622	17,368	34,527
Other recognised gains / (losses)	(291)	429	(1,329)	(1,191)
Distribution	-	-	(6,860)	(6,860)
At 31 December	(2,754)	9,052	16,316	22,614

The members participate on the Syndicate by reference to years of account and the ultimate result, assets and liabilities are assessed with reference to policies incepting in that YOA in respect of their membership of a particular year.

14. Other payables

	2018 £'000	2017 £'000
Creditors arising out of direct insurance operations	2,831	3,333
Creditors arising out of reinsurance operations	24,914	47,626
	27,745	50,959

	2018 £'000	2017 £'000
Due within one year	27,745	50,959
Due after one year	-	-
	27,745	50,959

15. Movement in opening and closing portfolio investments and cash net of financing

	2018 £'000	2017 £'000
Net cash outflow for the year	(253)	(6,093)
Cash flow – portfolio investments	(59,252)	(41,801)
Movement arising from cash flows	(59,505)	(47,894)
Changes in market values and exchange rates	13,146	(21,466)
Total movement in portfolio investments net of financing	(46,359)	(69,360)
Balance brought forward at 1 January	441,296	510,656
Balance carried forward at 31 December	394,937	441,296

16. Movement in cash and portfolio investments

	At 1 January 2018 £'000	Cash flow £'000	Change in market value £'000	At 31 December 2018 £'000
Cash at bank and in hand	6,635	(253)	40	6,422
Shares and other variable yield securities	335,243	(132,387)	7,840	210,696
Debt and other fixed income securities	53,832	70,140	4,542	128,514
Participation in investment pools	27,554	3,353	(210)	30,697
Other investments	18,032	(358)	934	18,608
Total portfolio investments	434,661	(59,252)	13,106	388,515
Total cash and portfolio investments	441,296	(59,505)	13,146	394,937

Notes to the financial statements

17. Related parties

The registered office of the ultimate parent company, AIHL, is Clarendon House, 2 Church Street, Hamilton, HM11, Bermuda. The immediate parent company of ASML is Group Ark Insurance Holdings Limited ("GAIHL").

Swiss Reinsurance Company Limited, which forms part of the Swiss Reinsurance group, held 11.69% of the ordinary share capital of AIHL until 30 June 2016, when the entire holding was repurchased by AIHL. The Syndicates have purchased reinsurance protection on normal commercial terms and at arms length from Swiss Reinsurance Company (UK) Limited ("Swiss Re"), which is part of the Swiss Reinsurance group. Premiums paid by the Syndicates to Swiss Re in the year amounted to £1.0m (2017: £1.0m).

C Watson resigned as a director of Validus Holdings Limited in 2018. The Syndicates have purchased reinsurance protection on normal commercial terms and at arms length from the Validus Group. Premiums paid by the Syndicates in the year amounted to £2.8m (2017: £4.5m).

C Watson is a director of Aquiline Capital Partners LLC ("Aquiline"). The Syndicates have invested funds totalling £4.8m (2017: £4.0m) in a private equity fund managed by Aquiline.

I Beaton, N Bonnar and D Foreman are partners of Elvis Capital Partners ("ECP"). GAIHL has a contingent profit commission arrangement with ECP based on the profit after tax produced by the Syndicate operations. No profit commission has been accrued by GAIHL under this contract (2017: £1.0m).

ECP owns Mercury Capital Limited ("Mercury"), a catastrophe risk manager. Mercury provides actuarial consultancy services to GAIHL on normal commercial terms which GAIHL then recharges to ASML. The actuarial consultant, C Griffiths, is a director of AIHL. Fees paid by GAIHL to Mercury in the year in respect of these services amounted to £0.1m (2017: £0.1m).

The Syndicates have made investments through Mercury in assets exposed to catastrophe insurance risk through various Industry Loss Warranty arrangements. At the year end, included within the investments of the Syndicates is £22.3m relating to these assets (2017: £19.1m). An investment gain of £2.5m (2017: loss of £4.4m) was generated by these assets in the year. No fee is paid by the Syndicates to Mercury in respect of these arrangements.

The Syndicates underwrite business through Cove Program Managers Limited ("Cove") under a binding authority. ASML holds 14.5% of the ordinary share capital of Cove and I Beaton serves without fee as a non-executive director. Gross premium income, excluding brokerage and commissions, due to the Syndicates under this binding authority amounted to less than £0.1m (2017: £0.1m). Commissions paid by the Syndicates in the year to Cove amounted to less than £0.1m (2017: £0.1m).

Ark Underwriting Inc. ("AUI") is a wholly owned subsidiary of ASML, which facilitates the introduction of US reinsurance business into the Syndicates through a binding authority. AUI earns commission set on normal commercial terms, and the amount paid by the Syndicates to AUI was £0.7m (2017: £0.6m).

Accident & Health Underwriting Limited ("AHU") is a wholly owned subsidiary of GAIHL. N Brothers serves without fee as a director of AHU. The Syndicates underwrite business through AHU under a binding authority. Gross premium income, excluding brokerage and commissions, due to the Syndicates under this binding authority amounted to £6.3m (2017: £5.1m). Brokerage and commissions paid in the year by the Syndicates to AHU amounted to £4.3m (2017: £3.5m).

GAIHL is a member controlling 50% of Accident & Health Claims Services LLP ("AHC"), the other 50% being controlled by AHU. AHC provides claims handling services to the Syndicates. Fees paid in the year by the Syndicates in respect of these services amounted to £0.3m (2017: £0.3m).

I Beaton is a director of Innova Re Investment Services Limited ("IRIS"), an investment advisory company. GAIHL owns 55% of the share capital of the parent company of IRIS. ASML has entered into a contract on normal commercial terms and at arms length with IRIS for the provision of investment advisory services. Fees paid by ASML to IRIS in the year amounted to £1.2m (2017: £1.6m). The Syndicates have also paid investment charges to GAIHL of £1.0m (2017: £4.3m).

J Wardrop is a director of Starstone Underwriting Limited ("Starstone"). The Syndicates have purchased reinsurance protection on normal commercial terms and at arms length from Starstone. Premiums paid by the Syndicates in the year amounted to £0.4m (2017: Nil). Also, the Syndicate provided reinsurance under separate contracts to Starstone on normal commercial terms and at arms length. Gross premium income, excluding brokerage and commissions, due to the Syndicate under these contracts amounted to £0.2m (2017: Nil).