MOODY'S
INVESTORS SERVICE

CREDIT OPINION
14 July 2020

Update

Rate this Research

RATINGS

Direct Line Insurance Group plc

Domicile	BROMLEY, United Kingdom
Long Term Rating	Baa1
Type	Subordinate - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Dominic Simpson +44.20.7772.1647
VP-Sr Credit Officer
dominic.simpson@moodys.com

Nicolo Squercina +44.20.7772.1541
Associate Analyst
nicolo.squercina@moodys.com

Brandan Holmes +44.20.7772.1605
VP-Sr Credit Officer
brandan.holmes@moodys.com

Simon James Robin Ainsworth +44 207 772 5347
Associate Managing Director
simon.ainsworth@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Direct Line Insurance Group plc

Update to credit analysis

Summary

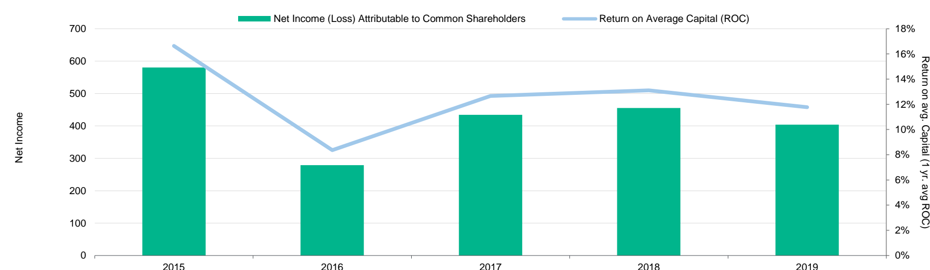
Direct Line Insurance Group plc's (DLG) main operating entity U K Insurance Limited (UKI) is rated A1 for insurance financial strength with a stable outlook. The rating, which was upgraded on 10 May 2019, reflects (i) DLG's track record of reporting consistently strong return on capital (ROC) and underwriting results, which we believe will be sustained, (ii) very strong position in the UK personal lines general insurance market, (iii) relatively conservative investment portfolio and low financial leverage, and (iv) good capitalisation.

These strengths more than offset the Group's dependence on the very competitive and highly regulated UK personal motor market. Furthermore, there is some execution risk around the Group's far-reaching technology transformation, the major part of which DLG expects to complete by the end of 2021, and the change in drivers of future profitability.

For DLG and other insurers, the coronavirus-related economic downturn is constraining premiums, raising claim costs in certain business lines, and adding volatility to investment performance and capital levels. Mitigating these effects are the company's good asset quality and capitalisation, and the industrywide drop in claim frequencies in DLG's largest business line, personal motor.

In May 2020, DLG reported that its Solvency II ratio at 31 March 2020 was 174% increasing to an estimated 177% on 1 May, towards the top of its 140%-180% risk appetite range. The Group expects to incur c.£70 million of cost in implementing a range of measures to provide peace of mind to its stakeholders, and from a Covid-19 related claims perspective, it is estimating £25 million and £10 million of travel and business interruption losses respectively. However, motor claims notifications reduced by c.70% in April although average severity is expected to increase as average repair durations lengthen and credit hire costs increase. Subject to uncertainties arising from Covid-19, DLG has reiterated its profitability targets.

Exhibit 1
Net Income and Return on Capital



Source: Company reports, Moody's Investors Service

Credit strengths

» Very strong position in the UK personal lines market, with powerful brands

» Low exposure to product risk, with a personal lines orientation

» Consistent track record of strong returns on capital and underwriting results

» Relatively low financial leverage and strong earnings coverage of interest

» Relatively conservative investment portfolio

Credit challenges

» Enhancing contributions, both from a premium and profitability perspective, from non-personal lines motor businesses (e.g. commercial and rescue segments)

» Successfully execute the roll out of the new technology systems and convert efficiency gains into a lower cost base

» Sustaining recent underwriting performance in the very competitive UK personal lines market and as the contributions from prior year reserve releases reduce

» Navigating and adapting to changes in the highly regulated and dynamic UK personal motor market

» Limited geographical and business line diversification in which motor business predominates

Rating outlook

The rating outlook is stable reflecting primarily our expectation that the company will sustain its strong profitability both from a return on capital and underwriting perspective, while maintaining its very strong position in the UK personal lines general insurance market. The stable outlook is also underpinned by our expectation that the Group will maintain its relatively conservative investment portfolio, good capitalisation and relatively low financial leverage.

Factors that could lead to an upgrade

Positive rating pressure could arise from a combination of:

» Enhanced capital adequacy with gross underwriting leverage of below 2x and Solvency II coverage above 200%;

» Average ROC (Moody's definition) through the cycle above 15% and a reported combined ratio consistently around 90%;

» Adjusted financial leverage consistently below 10%;

» Continued profitable development of non-motor business.

Factors that could lead to a downgrade

Conversely, negative rating pressure could arise from:

» A material reduction in premiums resulting in a material loss of market share; and/or

» Average return on capital through the cycle below 8%; and/or

» Adjusted financial leverage in excess of 25% with earnings coverage below 8x; and/or

» Meaningful deterioration in capital adequacy as reflected in the Group's Solvency II ratio falling sustainably well below 160%.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2
Direct Line Insurance Group plc

Direct Line Insurance Group plc [1][2]	2019	2018	2017	2016	2015
As Reported (Pound Sterling Millions)					
Total Assets	9,434	9,535	9,948	10,122	9,957
Total Shareholders' Equity	2,990	2,905	3,062	2,522	2,630
Net Income (Loss) Attributable to Common Shareholders	403	455	434	279	580
Gross Premiums Written	3,203	3,212	3,392	3,274	3,153
Net Premiums Written	2,987	2,988	3,184	3,068	2,961
Moody's Adjusted Ratios					
High Risk Assets % Shareholders' Equity	23.0%	24.8%	23.1%	29.1%	25.1%
Reinsurance Recoverable % Shareholders' Equity	42.5%	42.4%	38.8%	51.6%	36.6%
Goodwill & Intangibles % Shareholders' Equity	29.6%	25.6%	21.6%	26.8%	26.4%
Gross Underwriting Leverage	2.4x	2.6x	2.6x	3.1x	2.9x
Return on Average Capital (ROC)	11.8%	13.1%	12.7%	8.4%	16.6%
Sharpe Ratio of ROC (5 yr.)	422.0%	393.0%	327.2%	219.5%	197.6%
Adv. (Fav.) Loss Dev. % Beg. Reserves	-10.2%	-12.9%	-12.9%	-8.1%	-11.5%
Adjusted Financial Leverage	14.4%	15.0%	14.6%	19.3%	18.4%
Total Leverage	23.7%	24.6%	23.8%	23.4%	22.3%
Earnings Coverage	12.6x	14.3x	13.3x	9.2x	16.7x
Cash Flow Coverage	NA	NA	NA	NA	NA

[1]Information based on IFRS financial statements as of the fiscal year ended 12/31/2019. [2]Certain items may have been relabeled and/or reclassified for global consistency.
Sources: Moody's Investors Service and company filings

Profile

DLG is the UK's largest personal lines property and casualty (P&C) insurer, with leading positions in personal motor and home by in-force policies (IFP). The Group underwrites around £3.2 billion of gross written premiums (GWP) through its highly recognised brands — Direct Line, Churchill, Privilege and Green Flag — and partners, including Royal Bank of Scotland (RBS) (Baa2 positive) and NatWest.

The Group has four core classes of business — personal motor (representing 52% of premiums in 2019), home (18%), rescue and other personal lines (14%), and commercial (16%) which solely comprises SME business. Following the disposal of its international operations in 2015, the group focuses exclusively on the UK P&C market.

The Group was listed on the London Stock Exchange in 2012 after being divested from RBS in July 2012.

Detailed credit considerations

The A1 IFSR is in line with the adjusted scorecard-indicated outcome as shown in the Moody's scorecard (Exhibit 5).

Insurance financial strength rating

The key factors currently influencing the rating and outlook are:

Market position, brand and distribution: Very strong position in the UK personal lines market, own brand growth to continue

As the largest personal motor line writer in the UK as well as one of the leading home writers, we consider DLG's market position to be very strong and its brands, in particular Direct Line and Churchill, to be very powerful. We expect DLG's personal lines market position to remain very strong benefiting from planned growth via the price comparison website (PCW) channel and its rescue (via Green Flag) business. DLG's small and medium-sized enterprise commercial business is growing supported by the Group's investments into risk selection and pricing capabilities, but its overall commercial market share remains relatively modest at this stage.

In the medium-to-long term, Moody's also believes that DLG's multi-channel distribution strategy, powerful brands and financial resources will enable the Group to adapt to changes in the market place, particularly as increasing car safety features, and eventually autonomous vehicles, start to transform the traditional risk pool.

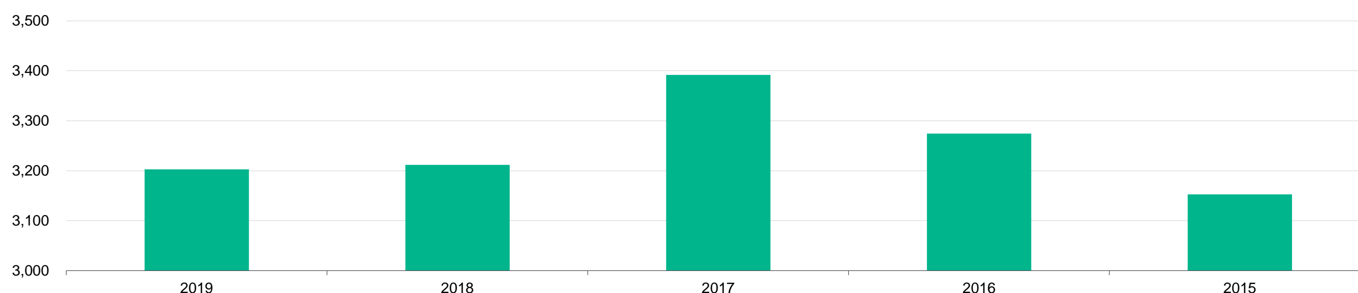
Nevertheless, the Coronavirus-induced economic slowdown is likely to have a negative impact on DLG's and other UK insurers' premiums in at least 2020 with current uncertainty around the pace of economic recovery and consequential impact on customer behaviour.

In 2015, DLG started to modestly grow its premium base after several years of decline (see Exhibit 3), which reflected management's action to improve performance and difficult pricing conditions. GWP fell by c.5% during 2018 but GWP stabilised at YE19 with the impact of lower average premiums in Motor and Home and lower partnership volumes almost fully offset by strong growth in Green Flag and Commercial direct own brands.

Exhibit 3

Gross Written Premiums evolution

£ million



Source: Company reports, Moody's Investors Service

Overall, we view DLG's personal lines distribution as strong, with products sold directly by phone, over the internet, through online aggregators, as well as via partnerships particularly in the home segment. To improve efficiency and effectiveness, DLG has been re-establishing its partnership capabilities, including exiting a number of partnerships and has renegotiated existing deals. For example, in 2018 the Group signed a minimum 5 year partnership deal with Volkswagen Insurance Services (Great Britain), and again extended its travel agreement with Nationwide until 2023. In 2016, it signed a three-year extension with RBS for home and private insurance. The commercial division also benefits from some direct distribution (via Direct Line for Business, “DL4B”), although the majority of premiums are still accessed via brokers. DLG also continues to improve its distribution capabilities by investing in new websites, digital propositions (e.g. Darwin) and by targeting less traditional partnerships. Darwin targets customers who mainly buy through PCWs and uses a smart pricing system to provide a price based on the individual.

The Group's underwriting expense ratio remains relatively high and above its personal-lines-orientated peers, despite the Group's inherent scale advantages. However, DLG's reported expense ratio reduced by 4.9% points to 29.9% in 2018 although it increased

slightly to 30.3% at YE19 driven by an increase in the commission ratio. Going forward, we expect the Group's expense ratio to reduce, via the implementation of ongoing efficiency programme initiatives and top-line growth, although because of Covid-19 DLG has warned that it may not achieve the target of reducing operating expenses by £50 million from 2018-2021. Longer-term, DLG is aiming to improve its operating expense ratio to 20% by YE23 (YE18: 23.4%).

Product risk and diversification: Relatively low product risk, offset by limited business diversification and dependence on the UK
DLG writes UK non-life business only, split 84% personal lines and 16% commercial lines. DLG has four main business segments, including motor (52% of GWP and 55% of operating profit in 2018), home (18% and 28%), rescue and other (14% and 7%), and commercial (16% and 10%). In our view, product line diversity is therefore relatively limited in light of the preponderance of personal motor.

More positively, DLG's product risk is considered low as a result of this preponderance of personal lines. Although the business is exposed to large bodily injury claims volatility, windstorm and flood catastrophe risk, DLG purchases significant reinsurance cover.

Asset quality: Relatively conservative investment portfolio, notwithstanding relatively high exposure to credit versus peers
We view DLG's asset quality as good. The Group has a relatively conservative investment portfolio, with c.86% held in fixed income securities and cash. In recent years, the Group has undertaken some re-risking actions, reflected in the rise in DLG's HRA as a percentage of shareholders' equity ratio to around 23% as of YE19 from 8% as of year-end 2013. DLG continues to have no exposure to equities, with HRA primarily comprising property investments and high yield bonds. Since 2014, DLG also has had an exposure to UK infrastructure, which supports the asset strategy backing periodical payment order liabilities.

As at YE19, DLG's invested assets comprised 73% fixed income securities, 13% cash and cash equivalents, 5% property investments, 5% infrastructure debt, and 4% commercial real estate loans with an average duration of total debt securities of 2.5 years. DLG has also repositioned its credit portfolio. Corporate bonds represented c.69% of invested assets as at YE19, which is significantly higher than a number of its UK/European P&C peers reflecting in part the consequences of not investing in equities. However, the credit quality of the fixed income portfolio is very good, with around 61% of fixed income assets rated A or higher with a well-diversified portfolio by sector. However, DLG has increased its exposure to high-yield credit, which as at YE19, amounted to around 7% of invested assets, slightly above the Group's 6% target. Over the next 12-18 months, we expect only modest tweaks to the Group's investments as the Group continues to shift its portfolio towards its targets.

DLG's overall asset quality also benefits from a relatively low level of reported goodwill and intangible assets (including Deferred Acquisition Costs) as % of equity although this metric increased again to c.30% as of YE19 (YE18: c.26%) as the Group continued to invest in the business. Reinsurance recoverables have historically been low, although increased again to c.43% at YE19 (YE18: c.42%), slightly out of line with the typical 30%-40% historically.

Capital adequacy: Good capitalisation notwithstanding recent Covid-related stress
DLG's capital adequacy is good. The Group's Solvency II ratio reduced to 165% as of YE19 (YE18: 170%) although this ratio increases to 191% if the final dividend and £150 million share buyback amounts, which are currently on hold, are excluded. Subsequently, the Group has reported an estimated and reduced (in relation to the 191%) Solvency II ratio at 31 March 2020 of 174%, increasing to an estimated 177% on 1 May, (although these estimates include £29 million of share buybacks completed before the suspension) which nevertheless is towards the top of DLG's 140% to 180% risk appetite range. And the Group's recent £260 million subordinated Tier 2 issuance will significantly increase the Solvency II ratio (by c.20% points on a pro-forma YE19 basis excluding final dividend and share buyback) although will dilute the quality of capital.

In recognition of the regulatory guidance and heightened uncertainty in the macroeconomic environment, DLG has not recommended the YE19 dividend but intends to next review this alongside the half year results. Over time, we expect the Group's Solvency II ratio to converge towards the middle of the Group's target range of 140%-180%. The Group has a general strategy of returning excess capital to shareholders via special dividends or, going forward, share buybacks, which will negatively impact shareholders' equity, but we expect DLG's Solvency II ratio to remain robust.

With regard to capital sensitivities, the Group has disclosed that its greatest exposures are a change in reserving basis for motor Periodic Payment Orders (PPOs) to use a real discount rate of -1% and a 100bp increase in credit spreads, which would reduce the Solvency II ratio by 8 and 9 ppts respectively as at YE19. A large catastrophe loss, equivalent to the 1990 storm, would also have a

meaningful 9 ppt impact. Given the Group's relatively conservative investment portfolio and lack of equities exposure, DLG's Solvency II ratio is relatively insensitive to market movements aside from those related to credit spread.

Given the reduction in shareholders' equity since 2011, total equity as a percentage of net written premiums has declined. However, gross underwriting leverage has gradually declined standing at 2.4x at YE19 (YE18: 2.6x) driven by lower reserves.

Profitability: Profitability targets met once again for year-end 2019, but the highly competitive and dynamic UK personal market and Covid-19 are a challenge

In 2019, the Group achieved a return on tangible equity (RoTE) of 20.8%, a combined ratio (COR) of 92.2% (below the Group's ongoing 93%-95% target range), and a 2.4% investment yield This good set of results benefited from a strong underwriting profit notwithstanding reductions in prior year reserve releases and investment return which is under more pressure with the further fall in interest rates. With regard to our scorecard metrics, DLG's five-year average ROC improved to 12.5% (YE18: 12.2%), and the Sharpe ratio of ROC improved to 422% (YE18: 393%).

For DLG and other insurers, the coronavirus-related economic downturn is constraining premiums, raising claim costs in certain business lines, and adding volatility to investment performance. The Group expects to incur c.£70 million of cost in implementing a range of measures to provide peace of mind to its stakeholders, and from a Covid-19 related claims perspective, it is estimating £25 million and £10 million of travel and business interruption losses respectively. However, motor claims notifications reduced by c.70% in April although average severity is expected to increase as average repair durations lengthen and credit hire costs increase. Subject to uncertainties arising from Covid-19, DLG has reiterated its profitability targets although it acknowledges these will inevitably depend on the duration and uncertainties of Covid-19, and the pace of economic recovery and consequential impact on customer behaviour.

The coronavirus aside, we expect DLG's performance to continue to benefit from its disciplined approach to underwriting and claims management, its pricing capabilities supported by its strong brand differentiation, ongoing cost reduction initiatives and revenue growth thereby enabling it to continue to meet its 15% return on tangible equity and underwriting targets. This is notwithstanding the UK motor market remains extremely competitive, which makes it difficult for price increases to match claims inflation and the uncertainty around the outcome of the FCA's review of general insurance pricing practices. More specifically to DLG, the Group aims to grow the current year contribution to operating profits to more than 50% by YE21 to offset the expected decline in motor prior year reserve releases and faces some execution risk in the roll out of its new technology systems, on a large scale, in order to gain efficiency, capability, and flexibility improvements.

Reserve adequacy: Reserve releases expected to reduce but remain a feature, notwithstanding the inherent challenge of motor bodily injury claims

DLG has reported significant prior-year reserve releases since 2011, as reflected in the five-year weighted-average favourable loss development as a percentage of opening reserves, of 11.2% (2019-2015). These reserve releases were driven mainly by the Group's motor division in relation to favourable developments in bodily injury claims.

Given the Group's prudent reserving approach of current accident years, we expect reserve releases to remain a material contributor to future operating profit. However, we expect releases to trend downward driven predominantly by increasing levels of reinsurance purchased by the Group, together with motor claims inflation for which the Group has a 3%-5% long-term range. Motor claims inflation is driven by the rising cost of damages from repair costs because vehicles are fitted with more advanced technology, used car prices and credit hire costs. During 2017, there was also a rise in home claims inflation related to the escape of water, although DLG has taken a number of significant actions across pricing, underwriting and claims management to mitigate escape of water inflation henceforth.

Furthermore, some volatility will likely remain a feature particularly within the UK motor portfolio. We will continue to monitor changes in PPO propensities and large bodily injury claims.

In 2018 and 2019, reserve releases were £404 million and £295 million respectively, and prior year releases in Motor continue to reduce. 2018 benefited from a £51 million amount as a result of DLG assuming a higher Ogden discount rate of 0%. In contrast, at YE19, there was a reserve increase of £17 million as a result of the movement of the Ogden discount rate to -0.25%.

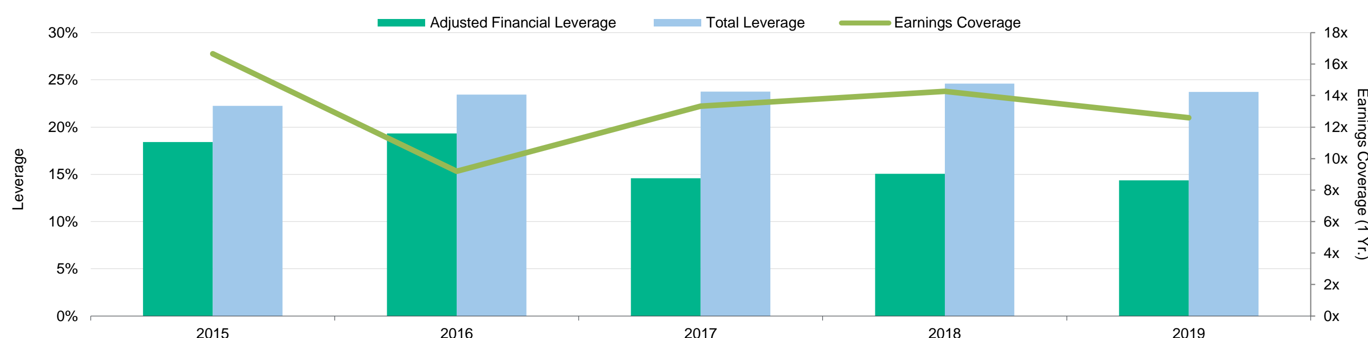
Financial flexibility: Leverage has increased in 2019 but expected to remain relatively low, and strong earnings coverage

We view DLG's overall financial flexibility as very good. Adjusted financial leverage reduced slightly at YE19 and remained low at 14.4% (YE18: 15%), including £259 million of dated subordinated notes and £347 million of restricted tier 1 securities, which qualify for equity credit from us, together with bank debt and an operating lease liability. In June 2020, DLG issued £260 million of dated subordinated Tier 2 notes which in itself on a pro-forma YE19 basis will increase adjusted financial leverage by around 7% points. However, although leverage will likely be pressured by the Group's dividend policy, we expect it to remain relatively low in relation to the A1 IFSR.

Earnings coverage is strong, averaging around 13x over the past five years at YE19.

Exhibit 4

Financial Flexibility



Source: Company reports, Moody's Investors Service

As a result of its historic ownership, DLG has a more limited record in accessing capital markets versus some of the largest European insurers. However, we regard the restricted Tier 1 issuance in December 2017 and the IPO, following the lower Tier 2 debt issuance in April 2012, together with the debt issuance in June 2020 as evidence that DLG can successfully access the capital markets.

Structural considerations

The subordinated notes issued by DLG in June 2020 are rated Baa1(hyb). The rating is derived from the A1 IFSR of UKI and the three notch differential reflects Moody's standard notching practices for an insurance holding company domiciled and operating in jurisdictions where group regulation is in effect, and also reflects the structural and contractual subordination of the notes.

The guaranteed subordinated notes issued by DLG in April 2012 are rated A3(hyb). The rating reflects the fact that the notes are unconditionally and irrevocably guaranteed by UKI on a subordinated basis and reflect standard notching (versus the senior rating) for subordinated debt that lacks a mandatory trigger we consider to be “meaningful”.

Environmental, social and governance considerations

Environmental

Like its P&C insurance peers, DLG is exposed to the economic consequences of climate change, primarily through the unpredictable effect of climate change on the frequency and severity of weather-related catastrophic events, such as floods and storms. However, in the ordinary course of its business, the Group undertakes a number of steps to manage these risk exposures, including the purchase of significant reinsurance cover and the regular reassessment of external catastrophe models to ensure they fully capture climate-related risk.

Social

Like its P&C peers, DLG's social risks arise primarily from underwritten exposures to liability claims against individuals and small businesses.

We also regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. Furthermore, the rapid and widening spread of the coronavirus outbreak, deteriorating global economic outlook, falling oil prices, and asset price declines are creating a severe and extensive credit shock across many regions and markets including the

insurance sector. While the breadth and severity of the shock in still uncertain, we expect it will have an impact on DLG's claims, premiums, earnings and capital, at least in 2020.

Governance

Like all other corporate credits, the credit quality of DLG is influenced by a wide range of governance-related issues, relating to financial, managerial, ownership or other factors, all of which can be exacerbated by regulatory oversight and intervention.

While a number of DLG's risk exposures are complex, the Group has a comprehensive risk management framework in place that mitigates various governance risks. Furthermore, DLG operates within a strong regulatory environment, being overseen by the UK's PRA, FCA and other regulatory and industry bodies.

Rating methodology and scorecard factors

Exhibit 5

Direct Line Insurance Group plc

Financial Strength Rating Scorecard [1][2]	Aaa	Aa	A	Baa	Ba	B	Caa	Score	Adj Score
Business Profile								A	A
Market Position, Brand and Distribution (25%)								A	Aa
-Relative Market Share Ratio			X						
-Underwriting Expenses % Net Premiums Written			27.7%						
Product Focus and Diversification (10%)								A	Baa
-Product Risk		X							
-P&C Insurance Product Diversification			X						
-Geographic Diversification						X			
Financial Profile								Aa	A
Asset Quality (10%)								Aa	A
-High Risk Assets % Shareholders' Equity	23.0%								
-Reinsurance Recoverable % Shareholders' Equity		42.5%							
-Goodwill & Intangibles % Shareholders' Equity		29.6%							
Capital Adequacy (15%)								Aa	A
-Gross Underwriting Leverage		2.4x							
Profitability (15%)								Aaa	A
-Return on Capital (5 yr. avg.)	12.5%								
-Sharpe Ratio of ROC (5 yr.)	422.0%								
Reserve Adequacy (10%)								Aaa	Aa
-Adv. (Fav.) Loss Dev. % Beg. Reserves (5 yr. wtd. avg.)	-11.2%								
Financial Flexibility (15%)								Aa	A
-Adjusted Financial Leverage	14.4%								
-Total Leverage		23.7%							
-Earnings Coverage (5 yr. avg.)	13.2x								
-Cash Flow Coverage (5 yr. avg.)									
Operating Environment								Aaa - A	Aaa - A
Preliminary Standalone Outcome								Aa2	A1

[1]Information based on IFRS financial statements as of fiscal year ended 12/31/2019. [2]The Scorecard rating is an important component of the company's published rating, reflecting the standalone financial strength before other considerations (discussed above) are incorporated into the analysis.

Source: Moody's Investors Service

Ratings

Exhibit 6

Category	Moody's Rating
DIRECT LINE INSURANCE GROUP PLC	
Rating Outlook	STA
Subordinate	Baa1 (hyb)
U K INSURANCE LIMITED	
Rating Outlook	STA
Insurance Financial Strength	A1

Source: Moody's Investors Service

Moody's related research

Rating actions

- Moody's assigns Baa1(hyb) rating to Direct Line's dated subordinated notes (May 29, 2020)
- Moody's upgrades Direct Line's IFSR to A1; stable outlook (May 10, 2019)

Issuer in-depth:

- FAQ: Direct Line to maintain profitability despite competition, change in profit drivers (July 4, 2019)

Sector comments:

- UK Insurance - UK stress tests show resilience of non-lifesector; limited disclosure for life insurers (June 25, 2020)
- UK P&C Insurance - UK regulator's plan to clarify legal validity of BI claims is credit positive (June 10, 2020)
- UK P&C Insurance - UK motor insurers' profit under pressure as higher claims outweigh price gains (February 4, 2020)

Outlook:

- UK P&C Insurance - 2020 Outlook - Stable Outlook for UK P&C insurance given robust capital and good operating performance (February 26, 2020)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

© 2020 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from $1,000 to approximately $2,700,000. MCO and Moody's investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1236834

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Moody's
INVESTORS SERVICE