

ProAssurance Corporation

And Insurance Subsidiaries Full Rating Report

Ratings

Long-Term Issuer Default Rating A-
Senior Debt BBB+

Subsidiaries

Insurer Financial Strength A

Note: See additional subsidiaries in
Appendix

Rating Outlook

Holding Company Negative
Subsidiaries Stable

Financial Data

ProAssurance Corporation

(\$ Mil.)	12/31/17	3/31/18
Net Income	107	12
Shareholders' Equity	1,595	1,569
Calendar-Year Combined Ratio (%)	95.4	99.9
Accident-Year Combined Ratio (%)	113.6	112.1
ROAE (%)	6.3	3.0

Source: SNL Financial.

Related Research

Fitch 2018 Outlook: U.S.
Property/Casualty Insurance
(Underwriting Loss to Narrow
Following 2017 Cat Losses)
(December 2017)

ProAssurance Corporation - Ratings
Navigator (June 2017)

Analysts

Gerald B. Glombicki, CPA
+1 312 606-2354
gerry.glombicki@fitchratings.com

James B. Auden, CFA
+1 312 368-3146
jim.auden@fitchratings.com

Key Rating Drivers

Very Strong Capital Position: ProAssurance Corporation and its operating subsidiaries (collectively referred to as PRA) have a very strong capital position measured on both a risk-adjusted and nonrisk-adjusted basis. This very strong capital position helps protect the balance sheet as medical professional liability insurance (MPLI) reserves tend to have longer durations.

Pressure on Debt Ratings: PRA's Insurer Financial Strength (IFS) rating fits well within guidelines currently in all key factors and was affirmed with a Stable Outlook. PRA's Issuer Default Rating (IDR) and debt ratings are currently narrowed by one notch from the IFS rating due to low financial leverage and strong earnings-based interest coverage, but recently these metrics are below ratings expectations thereby leading to the Negative Outlook on the debt rating and IDR.

Moderate Business Profile: PRA's acquisitions expanded its product offerings such that approximately 37% of YE 2017 premiums came from lines other than MPLI. While Fitch views the diversity of products as favorable, the agency also notes that PRA has limited scale in these markets.

MPLI Industry Trends Negative: The MPLI market is in the midst of a soft rate environment and shrinking industry premiums. Net written premiums (NWP) peaked in 2006 at just over \$10 billion and were down almost 23% in 2017 to just over \$8 billion. Conversely, industry NWP for all lines grew by approximately 24% since 2006. Further, the MPLI market is comprised of many monoline mutual insurance companies with limited geographic diversity and high levels of capital.

Favorable Reserve Development: PRA reported \$134 million in favorable reserve development in 2017, or approximately 8% of the prior year's shareholders' equity balance. This development is related in part to management's prudence and a relatively benign claims environment. While Fitch believes PRA's reserves will continue to display prudence, this absolute level of favorable reserve development is likely to decline going forward.

Rating Sensitivities

Material Adverse Reserve Development: Given the longer term duration of MPLI reserves, Fitch closely monitors reserve development and trends. If Fitch observes sustained periods of adverse reserve development, particularly in recent accident years, ratings could be lowered.

Capital Deterioration: Any material deterioration in PRA's capital position could negatively affect ratings. In particular, an increase in operating leverage at or above 1.0x, or a deterioration in the Prism score below 'Strong', would be a credit negative.

Increased Financial Leverage: If financial leverage were to be sustained above 28%, or if earnings-based interest coverage were less than 6x on a sustained basis, ratings could be downgraded.

Change in Business Profile: An increase in overall size of premiums to exceed \$1 billion where half or more comes from product lines outside of healthcare professional liability insurance, while maintaining financial performance and financial leverage, could lead to an upgrade.

Sovereign- and Country-Related Constraints

Fitch rates the sovereign obligations of the United States of America at 'AAA' with a Stable Outlook, and the Country Ceiling is similarly rated at 'AAA'.

The local currency sovereign rating expresses the maximum limit for local currency ratings of most, but not all, issuers in a given country. At current levels, the ratings of U.S. insurance organizations and other corporate issuers are not likely to be constrained by sovereign or macroeconomic risks.

Market Position and Size/Scale

- Predominant MPLI focus.
- Moderate business profile.
- Large market share within MPLI market.

Predominant MPLI Focus

PRA derives approximately two-thirds of written premiums from MPLI, which is one of the property/casualty (P/C) industry's most unpredictable lines of business given the long-tail duration of liabilities.

Fitch recognizes the diversification of risks is favorable, but this is offset by the lack of scale in these lines of business. Fitch believes profitable growth in these other lines of business could be the catalyst for a ratings upgrade.

Moderate Business Profile

Fitch believes PRA's business profile relative to the P/C insurance industry is moderate (see figure below). This implies that companies with this profile typically have an IFS rating that falls between 'A' and 'BBB'.

Large Market Share Within MPLI Market

Within the MPLI market, PRA is one of the more dominant writers with a national platform. This allows the company to compete for large multistate facilities and practices giving the company an advantage over MPLI specialists.

Ratings Range Based on Business Profile

IFS Rating Category	AAA	AA	A	BBB	<BBB
Very Strong Business Profile	←	█	→		
Strong Business Profile		←	█	→	
Moderate Business Profile			←	█	→
Weak Business Profile				←	█

Related Criteria

Insurance Rating Criteria (November 2017)

Peer Navigator Comparison

	Business Profile	Influence	Trend
ProAssurance Corp. and Affiliates	A-	High	Stable
Doctors Company Group	A-	High	Stable
Selective Insurance Group	A-	High	Stable
W.R. Berkley Corporation	A+	Moderate	Stable

Source: Fitch Ratings.

Peer Analysis

Very Strong Capital Position and Specialty Market Expertise

PRA's capital metrics compare very favorably with peer rating averages and even those of a category higher, which is similar to other MPLI insurers. While profitability declines in MPLI, the pace will be uneven for both PRA and The Doctors Company, an Interinsurance Exchange (TDC). Compared with specialty peer writers that are one category higher than PRA, size jumps out as a differentiating factor with PRA being smaller than both Selective Insurance Group and W. R. Berkley Corporation by multiples.

The table on the left shows a comparison of business profile scores for the peers as shown on the company's most recently published Ratings Navigators. Overall, the scores are relatively consistent. This highlights that PRA's and TDC's market position and product expertise help them in this rating category compared with larger, more diversified and slightly higher rated peers.

Peer Comparison

(As of Dec. 31, 2016)	IFS Rating	Net Premium Written (\$ Mil.)	CY Combined Ratio (%)	AY Combined Ratio (%)	Operating Ratio (%)	Operating Leverage (x)	Net Leverage (x)	NAIC RBC (%)	Reserve Development/Prior Year PHS ^a (%)
ProAssurance Corp. and Affiliates	A	607	87	108	73	0.5	2.4	373	(9)
Doctors Company Group	A	633	102	118	86	0.3	1.5	512	(5)
Selective Insurance Group	A+	2,371	93	94	86	1.4	4.6	241	(2)
W.R. Berkley Corporation	A+	5,595	94	95	81	1.0	3.4	199	(1)

^aNegative indicates favorable. IFS – Insurer Financial Strength. CY – Calendar-year. AY – Accident-year. PHS – Policyholder surplus. Note: Statutory accounting principles.

Source: SNL Financial.

Capitalization and Leverage

(Years Ended Dec. 31)	2013	2014	2015	2016	2017	Fitch's Expectation
Total Capital (\$ Mil.)	2,642	2,406	2,306	2,247	1,885	Fitch anticipates PRA's operating leverage will remain below 1.0x over the long term. In addition, Fitch anticipates that the long-term average for financial leverage will not exceed 28%, but notes near term will likely range in mid to high teens.
Financial Leverage Ratio (%)	10	11	12	12	16	
Net Premium Written/Common Equity (x)	0.2	0.3	0.4	0.4	0.5	
Net Leverage (x)	1.2	1.5	1.6	1.8	2.1	
Total Assets/Common Equity (x)	2.2	2.5	2.5	2.8	3.1	

Note: GAAP accounting principles.
Source: SNL Financial.

Capital Is Very Strong

- Operating capital levels are very strong.
- Moderate use of financial leverage.
- 'Extremely Strong' Prism score.

Operating Capital Levels Are Very Strong

Fitch notes that PRA has very low levels of operating company leverage as measured by both operating and net leverage. The company also had a very strong RBC ratio at 336% of the company action level on a consolidated basis at YE 2017. Further, Fitch notes that these ratios persisted for several years showing management's discipline to maintaining balance sheet strength.

Fitch does not anticipate a material change to these metrics in the near term, but notes that current levels are likely unsustainable due to competitive forces and pressures of being a publicly traded company.

Moderate Use of Financial Leverage

Fitch notes that leverage increased slightly, which was due to the company returning capital via dividends and share repurchases rather than losses from operations. Fitch has a financial leverage ratio sensitivity of 15% or lower to maintain the compressed holding company notching and fixed-charge coverage of 12x or higher. The current Negative Outlook reflects that holding company metrics are falling short of these sensitivities, and the holding company ratings could be expanded.

Fitch adjusts financial leverage by removing the company's borrowings under its revolving credit agreement because Fitch views this debt as more operational than financial and calculates financial leverage both ways, but this is displayed above net of the revolving credit borrowings. To the extent this debt was not used to earn a spread for financial purposes, Fitch would reclassify this debt as financial instead of operational.

'Extremely Strong' Prism Score

PRA scored 'Extremely Strong' on Fitch's capital model Prism based on YE 2016 results. The Prism score is a ratio of available capital (AC) divided by target capital (TC) at various levels, with the Prism score itself being equal to the highest category where AC exceeds TC.

From a TC perspective, PRA's high reserve and underwriting volatility were big drivers for TC, though these were somewhat muted by low leverage, particularly on the underwriting side. Favorably, PRA does not have any natural catastrophe-related exposures or latent claims, such as asbestos, contributing to TC.

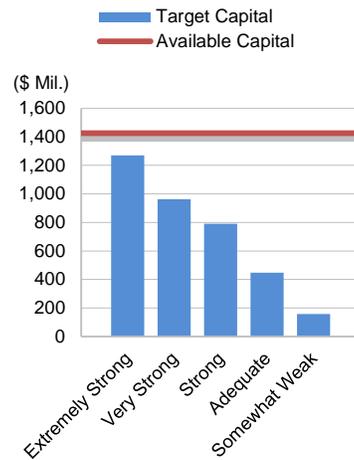
Fitch's AC measure is a range of four different measures that give various haircuts for unrealized gains and losses and affiliated investment values. If companies do not have

significant positions in unrealized gains and losses and affiliated investments, the band of AC is relatively narrow.

Fitch's AC measure used to calculate the Prism score gives 100% credit for unrealized gains and losses and gives a modest haircut for investments in affiliates. However, Fitch believes there can be value in looking at the range of AC, as certain macroeconomic or industry trends may be better captured in an AC measure other than the base measure.

YE 2017 Prism data will be available in the near term, but at this time, Fitch does not anticipate any material changes to results. Fitch also notes that Prism is a reflection of risk based on U.S. statutory combined statements.

2016 Prism Score — ProAssurance Corporation



(\$ Bil.)	2014	2015	2016
Prism Score	Extremely Strong	Extremely Strong	Extremely Strong
AC/TC at Prism Score (%)	119	121	112
AC/TC at Higher Prism Score (%)	N.A.	N.A.	N.A.
Statutory Surplus	1.7	1.5	1.4
Affiliated Investments	0.0	0.0	0.0
Unrealized Bond Gains/(Losses)	0.1	0.1	0.0
Other Adjustments	(0.0)	(0.0)	(0.0)
Available Capital (AC Base)	1.8	1.5	1.4
Target Capital Contributors (%)			
Underwriting	23	27	26
Reserves	30	21	23
Investments	19	22	22
Catastrophe	6	7	7
Other	21	23	23

AC – Available capital. TC – Target capital. N.A. – Not available. Note: Red line is available capital base; shaded area represents the high and low of AC due primarily to value of affiliated life subsidiary and unrealized bond gains/(losses). Source: Fitch Ratings, SNL Financial.

Debt Service Capabilities and Financial Flexibility

(\$ Mil., Years Ended Dec. 31)	2013	2014	2015	2016	2017	Fitch's Expectation
Holding Company Cash and Investments	406	333	323	578	396	Fitch expects PRA's fixed-charge coverage will approximate current levels over the near term. Fitch also anticipates that management will prudently use holding company cash to meet all holding company obligations.
Cash Flow from Operations	39	96	112	169	149	
Interest Expense	3	14	15	15	17	
Fixed-Charge Coverage (x)	12	19	14	12	8	
Maximum Dividend Coverage (x)	112	17	12	13	8	

Note: GAAP accounting principles.
Source: SNL Financial.

Holding Company Liquidity

The holding company has access to a \$250 million revolving credit facility agreement that expires in June 2020.

Debt Maturities

(\$ Mil., As of March 31, 2018)	
2018	0
2019	0
2020	123
2021	0
2022	0
2023 or Later	290

Note: GAAP financials.
Source: PRA.

Strong Financial Flexibility and Debt-Servicing Capabilities

- Strong but declining fixed-charge coverage.
- High maximum dividend coverage.
- Solid holding company liquidity.

Strong but Declining Fixed-Charge Coverage

The narrow holding company debt notching PRA receives is a function of both maintaining financial leverage below 15% and fixed-charge coverage above 12.0x. While financial leverage modestly breaches the 15% sensitivity, the lower fixed-charge coverage is a sensitivity that could lead to holding company ratings returning to standard notching.

As the combined ratio increased, coupled with a modest increase in interest expense and flat to slightly positive premium growth, fixed-charge coverage declined.

High Maximum Dividend Coverage

PRA could pay \$137 million up to the holding company in 2018 from the operating companies without seeking regulatory approval for extraordinary dividends. This compares favorably with the modest amount of annual interest expense. The company's strong earnings, coupled with low financial leverage, make traditional interest coverage ratios extremely high.

Solid Holding Company Liquidity

As of Dec. 31, 2017, PRA held \$396 million of cash and investments outside of the insurance company subsidiaries that were available for use without prior regulatory approval of which \$267 million was used to pay shareholder dividends in 2018. The current borrowings under the revolving credit facility are fully secured.

Financial Performance and Earnings

(\$ Mil., Years Ended Dec. 31)	2013	2014	2015	2016	2017	Fitch's Expectation
Net Premiums Earned	528	700	694	733	739	Fitch's long-term expectations for PRA's underwriting results would be a GAAP calendar-year combined ratio that approximates 100%.
Realized Investment Gains/(Losses)	68	15	(42)	35	16	
Net Income	298	197	116	151	107	
Combined Ratio (%)	70.6	82.1	90.5	91.4	95.4	
Accident-Year Combined Ratio (%)	112.8	108.1	113.7	111.0	113.6	
Operating Ratio (%)	46.1	64.2	74.8	77.8	82.4	
ROE (%)	13.3	8.9	5.8	8.0	6.3	

Note: GAAP accounting principles. ROE excludes FAS 115.
Source: SNL Financial.

Very Strong but Declining Profitability

- Calendar-year results differ from accident-year results.
- Diversified revenue base.

Calendar-Year Results Differ from Accident-Year Results

Fitch notes that the strong calendar-year combined ratios for the past several years were helped by large, favorable, prior-period loss reserve development. Although favorable reserve development can be an indicator of reserve strength, it can also mask problems in underwriting results. Therefore, Fitch also examines accident-year results when assessing a company's profitability.

Accident-year underwriting results show a general flat to deteriorating trend. Further, reserve development, while still positive, is showing signs of slowing pressure on core accident-year loss ratios. Fitch expects this trend to continue in the near term with calendar-year combined ratios approximating 100% due to the competitive nature of the MPLI market place.

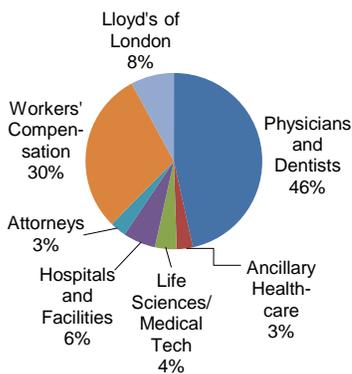
Diversified Revenue Base

Favorably, the company's geographic and specialty mix combined with a lack of dependence on specific markets allows for the flexibility to withdraw or pull back from overly competitive or difficult local markets and specialties.

Overall, MPLI still accounts for the bulk of net premiums earned and the results are deteriorating as the market increases competitiveness and favorable reserve development dwindles from older policy years. The Lloyd's of London Syndicate segment still lacks scale, but is anticipated to have an underwriting profit in the near term.

Gross Premiums by Product

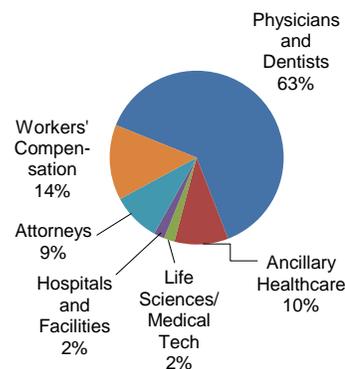
(As of Sept. 30, 2017)



Source: ProAssurance Corporation.

Policyholders by Product

(As of Sept. 30, 2017)



Source: ProAssurance Corporation.

Segment Underwriting Results

Net Premiums Earned (\$000)	2014	2015	2016	2017
Specialty P/C Segment	492,733	443,313	457,816	453,921
Workers' Compensation Segment	194,540	213,161	220,815	227,408
Lloyd's of London Syndicate Segment	12,458	37,675	54,650	57,202
Consolidated Total	699,731	694,149	733,281	738,531
Combined Ratio (%)				
Specialty P/C Segment	73.3	80.2	81.5	87.6
Workers' Compensation Segment	96.0	95.9	95.5	91.1
Lloyd's of London Syndicate Segment	144.2	116.0	104.2	124.4
Consolidated Total	82.1	90.5	91.4	95.4

Source: Company financials.

Investments and Liquidity

(Years Ended Dec. 31)	2013	2014	2015	2016	2017	Fitch's Expectation
Cash and Invested Assets (\$ Mil.)	4,148	4,207	3,890	4,043	3,821	Fitch expects that PRA will maintain a conservative investment portfolio in the near term, possibly extending into traditional riskier asset classes such as common equity, but at a measured pace.
Cash and Invested Assets/Common Equity (x)	1.8	2.0	2.0	2.2	2.4	
Investment Yield (%)	3.2	3.0	2.7	2.5	2.4	
Risky Assets Ratio (%)	53	59	49	58	71	
Liquid Assets/Technical Reserves (x)	210	197	187	197	185	

Note: GAAP accounting principles. Common equity excludes FAS 115.
Source: SNL Financial.

Conservative Investment Portfolio

- High-quality, fixed-income portfolio.
- Modest exposure to municipal sector.
- Risky asset ratio Increases.

High-Quality, Fixed-Income Portfolio

PRA's fixed-income portfolio, which represents approximately two-thirds of invested assets, had an average credit quality of 'A+' at YE 2017, with 93% of the portfolio invested in investment-grade securities. The duration of the portfolio was 3.4 years with an average tax-equivalent income yield of 3.5%.

Modest Exposure to Municipal Sector

PRA's total municipal sector exposure as of YE 2017 was \$632 million, or approximately 17% of invested assets. As of Dec. 31, 2017, the weighted average credit rating was 'AA' with 74% of the portfolio in special revenue bonds, 17% general obligation and 9% prefunded.

Risky Asset Ratio Increases

The risky asset ratio is the sum of non-investment-grade debt, common equity and other assets relative to equity. These investments tend to be illiquid, particularly in times of market stress. This ratio increased yoy mainly due to a decline in the denominator, total equity, although equity holdings increased modestly. Overall, this ratio is in line with PRA's very strong investment profile.

Reserve Adequacy

(\$ Mil., Years Ended Dec. 31)	2012	2013	2014	2015	2016	Fitch's Expectation
Loss and LAE Reserves	2,055	2,073	1,820	1,756	1,720	Fitch's ratings anticipate that PRA's management will maintain the same prudent reserving process for setting future reserves. Additionally, Fitch recognizes that recent historical levels of favorable development are unsustainable, but Fitch does anticipate loss reserves to be a continued organizational strength.
PAY Reserve Development	(272)	(223)	(182)	(161)	(144)	
PAY Reserve Development/NPE	(49.4)	(42.4)	(26.0)	(23.2)	(19.6)	
PAY Reserve Development/BOY Common Equity	(13.4)	(10.5)	(7.8)	(7.7)	(7.3)	
Net Reserves/Common Equity	0.9	0.8	0.9	0.9	1.0	

LAE – Loss adjustment expense. PAY – Prior accident year. NPE – Net premiums earned. BOY – Beginning of year. Note: GAAP accounting principles. Source: SNL Financial.

Demonstrated Reserve Strength

- Reserves are sufficient and positive to the rating.
- Carried reserves within actuarial range.
- Volatile industry accident-year loss experience over time.
- All segment reserves develop favorably.

Reserves Are Sufficient and Positive to the Rating

Fitch believes that PRA's reserves are sufficient and positive to the rating. Fitch's analysis of PRA's reserves still indicate sufficiency, but overall redundancy diminished. The previous level of reserve development relative to earned premiums was unsustainable and among the highest in Fitch's rated universe.

Carried Reserves Within Actuarial Range

As of YE 2017, PRA carried net reserves of approximately \$1.7 billion. The company's 10-K filing indicates that at an 80% confidence interval reserve estimates ranges from \$1.4 billion on the low end to \$2.1 billion on the high end. Premiums for all states are reviewed at least annually and loss reserves are reviewed twice yearly.

Volatile Industry Accident-Year Loss Experience over Time

Over the past 30 years, MPLI industry loss ratios were as high as 138% and as low as 54%. This volatility, coupled with the longer duration MPLI reserves, is representative of the inherent underwriting risk of the MPLI product. Thus, it is important when analyzing reserves to look at various management estimates and see how loss experience develops over time.

All Segment Reserves Develop Favorably

Workers' compensation reserves are approximately 14% of gross consolidated reserves compared with 77% for healthcare professionals, 5% medical technology liability and 3% for legal professional liability business. Claims in workers' compensation historically closed at a faster rate than in healthcare professional liability or medical technology and life sciences.

PRA recognized \$134.4 million in total favorable development for YE 2017 with \$119.3 million in specialty P/C, \$14.3 million in workers' compensation, and \$0.8 in its Lloyd's Syndicate segment.

Reinsurance, Risk Management and Catastrophe Risk

Minimal Use of Reinsurance

- Reinsurance program.
- Low use of reinsurance.
- High credit quality of reinsurers.

Reinsurance Program

PRA generally reinsures professional liability risks under annual treaties whereby the company maintains 100% of the first \$1 million per claim and reinsurers the remainder up to \$25 million with a retention of 5%–12.5% based on layer. Large professional liability risks that are above basic reinsurance treaties are reinsured on a facultative basis.

Medical technology and life sciences product coverages are separately reinsured, generally with 100% retention on the first \$1 million of coverage and 10% of coverage exceeding those levels up to \$9 million.

The traditional workers' compensation book provides for 100% retention up to \$500,000 with coverage up to \$119.5 million per loss event with nothing retained.

Low Use of Reinsurance

Given PRA's capital base coupled with low property catastrophe risks, the company sparsely utilizes reinsurance, and NWP were 87% of gross written premiums in 2017. Fitch expects similar reinsurance utilization to continue, but notes that as the company premium mix evolves towards other non-MPLI business, more reinsurance may be used.

High Credit Quality of Reinsurers

PRA uses a variety of reinsurers that have an 'A' rating or higher. As of Dec. 31, 2017, total reinsurance recoverables were \$336 million. Approximately \$64 million was collateralized by LOCs or funds withheld, and there are no amounts due from individual reinsurers exceeding 5% of shareholders' equity.

Appendix A: Other Ratings Considerations

Below is summary of additional ratings considerations of a technical nature that are also part of Fitch's ratings criteria.

Complete Ratings List

Allied Eastern Indemnity Company
 Eastern Alliance Insurance Company
 Eastern Advantage Assurance Company
 PACO Assurance Company, Inc.
 ProAssurance Indemnity Company, Inc.
 ProAssurance Casualty Company
 ProAssurance Specialty Insurance Company
 Podiatry Insurance Company of America
 Medmarc Casualty Insurance Company
 Noetic Specialty Insurance Company

Group IFS Rating Approach

Fitch considers the rated insurance entities listed in the left margin to be Core. As such, all were assigned the group rating. These entities share common management, resources and branding. Only normal regulatory barriers exist to dividend movement between entities and up to the parent. Fitch believes the entity has adequate financial strength to support its operating subsidiaries and management is willing to do so, although no formal support agreements are in place. All operating companies have a 'A' IFS rating based on a combined group assessment.

Notching

For notching purposes, the regulatory environment of the U.S. is assessed by Fitch as being Effective and classified as following a Ring-fencing approach.

Notching Summary

IFS Ratings

A baseline recovery assumption of Good applies to the IFS ratings. Standard notching was used from the IFS "anchor" rating to the implied operating company IDR.

Holding Company IDR

Nonstandard notching was applied between the implied operating company and holding company IDRs. A one-notch, adjustment was made for favorable leverage, coverage and holding company liquidity.

Holding Company Debt

A baseline recovery assumption of Below Average for a holding company issuer was used, which is standard notching.

IFS – Insurance Financial Strength. IDR – Issuer Default Ratings.

Criteria Variations

None.

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

The issuer did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure.

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: [HTTPS://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS](https://fitchratings.com/understandingcreditratings). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE. FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2018 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.