

**CREDIT OPINION**

23 July 2021

Update

 Rate this Research

**Contacts**

**Manoj Jethani** +1.212.553.1048  
 VP-Senior Analyst  
 manoj.jethani@moodys.com

**Ellen Fagin** +1.212.553.1650  
 Associate Analyst  
 ellen.fagin@moodys.com

**Scott Robinson, CFA** +1.212.553.3746  
 Associate Managing Director  
 scott.robinson@moodys.com

**Marc R. Pinto, CFA** +1.212.553.4352  
 MD-Financial Institutions  
 marc.pinto@moodys.com

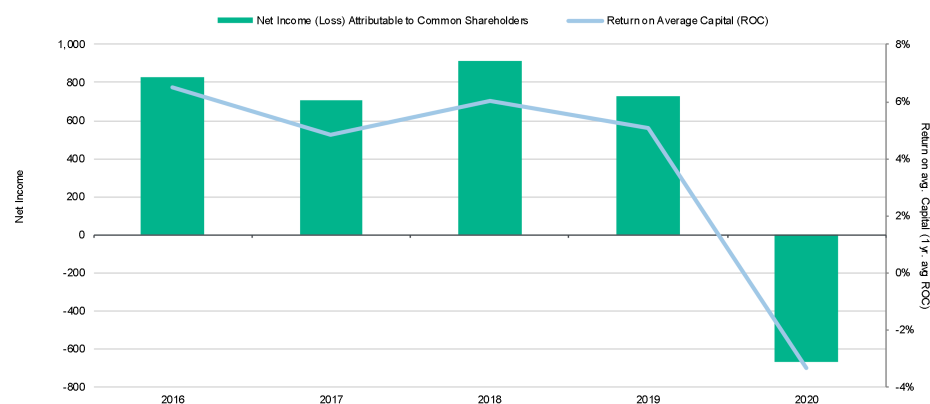
## Pacific Mutual Holding Company

Upgrade reflects solid capital and market position; low interest rates still a headwind

Our credit view of Pacific Mutual Holding Company (unrated), Pacific LifeCorp (Pacific LifeCorp, A3 senior debt, stable) and its US affiliated subsidiaries, Pacific Life Insurance Company and Pacific Life & Annuity Company (collectively Pacific Life, Aa3 IFS, stable), reflects the group's strong market position, excellent capitalization, good risk management and a diverse distribution of products and earnings both in the US and internationally. In the US, Pacific Life's market share reflects top-tier position in sale of life insurance, annuities and structured settlement products. Internationally, in the UK, Ireland and Australia, the company has had growing market share and now holds a presence in 9 countries in Asia, including China. Overall, for Pacific Life, these strengths are partially offset by risks arising from its legacy variable annuity (VA) business' sensitivity to capital market movements, specifically with respect to earnings from movement in interest rates, which is not fully hedged on an economic basis. While we view Pacific Life's investment portfolio as diverse and generally high-quality, the company could face elevated losses in a stress scenario from an above industry concentration in lower quality investment-grade fixed income securities (i.e. Baa-rated bonds currently represent over 50% of total bonds) and commercial mortgage loans (15% of investments), particularly to those with a greater exposure to lodging and retail.

**Exhibit 1**

**Low-interest rates, higher mortality resulted in a 2020 net loss; Expect profitability to become positive in 2021**



2017 net income has been adjusted to exclude the one-time earnings benefit from tax-reform.

Sources: Moody's Investors Service and company filings

## Credit strengths

- » Established market positions in the high-end life insurance markets;
- » Broad and balanced independent distribution;
- » Strong capitalization with a NAIC company action level (CAL) Risk-Based Capital (RBC) ratio 628% as of year-end 2020).

## Credit challenges

- » Managing volatility in capital and earnings from capital market movements;
- » Strong competition in core affluent business and professional life insurance markets;
- » Some long duration products that can be adversely impacted by the current low interest rate environment (e.g. structured settlements).

## Outlook

On July 21, 2021, we upgraded the IFS ratings to Aa3 and the senior debt ratings to A3. The outlook was changed back to stable from positive. The upgrade reflects Pacific Life's strong market position, excellent statutory capitalization, ongoing risk management actions and a commitment to its mutual philosophy (i.e., focus on policyholder value). Going forward, items to watch include the pressure of current low interest rates on earnings and the impact of the economic environment on the mortality businesses (i.e. life insurance, reinsurance and retrocession)

## Factors that could lead to an upgrade

- » Reduced capital and earnings sensitivity to capital market movements;
- » GAAP return on capital consistently greater than 8%;
- » Financial leverage below 15% (excluding AOCI); and
- » Earnings coverage consistently above 8x.

## Factors that could lead to a downgrade

- » NAIC company action level RBC ratio falls below 400% (adjusting for captives) and/or lack of organic statutory capital generation;
- » GAAP return on capital less than 6%;
- » Financial leverage greater than 20% (excluding AOCI); or
- » Earnings coverage below 6x.

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.moody's.com](http://www.moody's.com) for the most updated credit rating action information and rating history.

## Key indicators

Exhibit 2

Pacific Mutual Holding Company [1][2]	2020	2019	2018	2017	2016
<b>As Reported (US Dollar Millions)</b>					
Total Assets	190,672	171,473	157,699	157,877	143,298
Total Shareholders' Equity	17,452	16,055	13,072	13,704	11,140
Net Income (Loss) Attributable to Common Shareholders	(671)	725	913	1,365	824
Total Revenue	10,062	10,747	9,652	9,510	9,169
<b>Moody's Adjusted Ratios</b>					
High Risk Assets % Shareholders' Equity	62.1%	53.6%	51.2%	47.6%	46.1%
Goodwill & Intangibles % Shareholders' Equity	31.9%	34.1%	44.2%	38.8%	43.4%
Shareholders' Equity % Total Assets	8.6%	8.8%	7.5%	8.0%	7.5%
Return on Average Capital (ROC)	-3.3%	5.1%	6.0%	4.8%	6.5%
Sharpe Ratio of ROC (5 yr.)	94.0%	787.3%	640.7%	596.7%	580.7%
Adjusted Financial Leverage	14.4%	12.1%	14.7%	13.1%	16.4%
Total Leverage	15.8%	13.7%	16.5%	14.9%	17.5%
Earnings Coverage	-6.3x	8.2x	8.9x	7.8x	8.3x
Cash Flow Coverage	19.7x	22.3x	23.8x	19.6x	8.7x

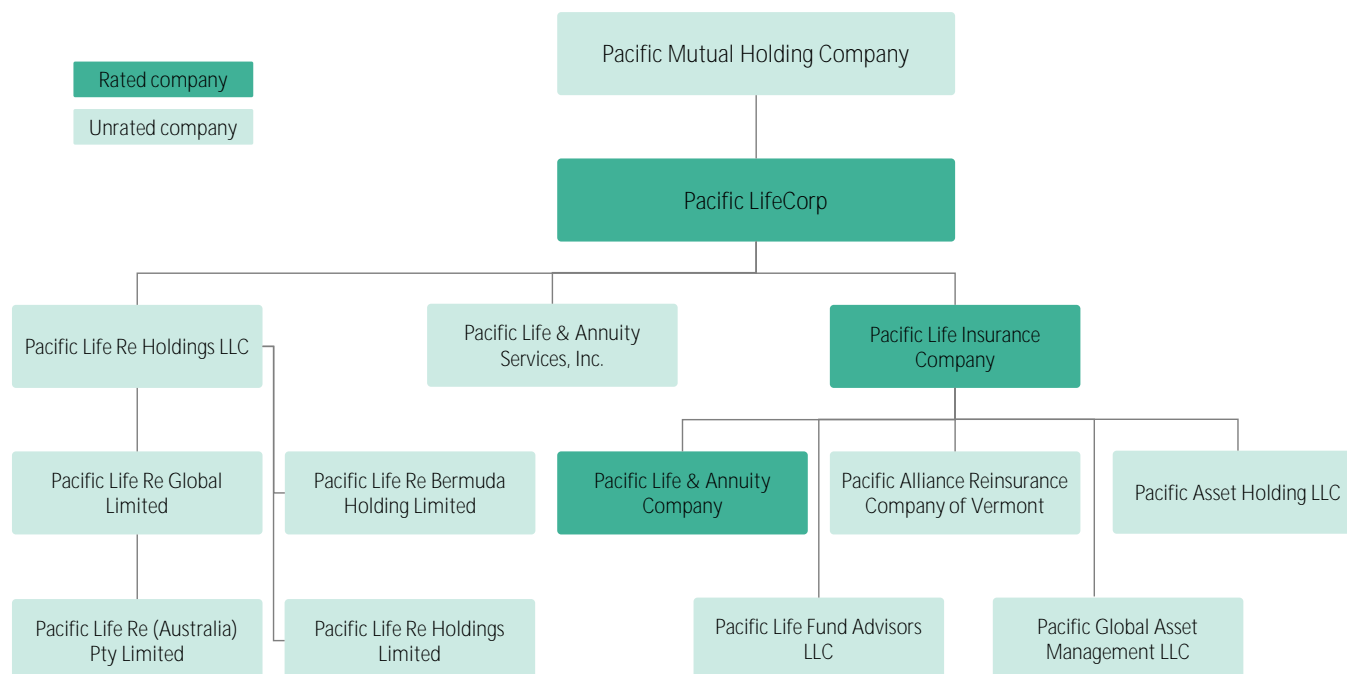
[1] Information based on US GAAP financial statements as of the fiscal year ended 31 December. [2] Certain items may have been relabeled and/or reclassified for global consistency. Sources: Moody's Investors Service and company filings

## Profile

Pacific Life Insurance Company and Pacific Life and Annuity Company are the primary operating subsidiaries of Pacific LifeCorp. Pacific Life Re Ltd. is a subsidiary of Pacific LifeCorp. These insurance subsidiaries provide life insurance, individual annuities, pension risk transfer, structured settlements, mutual funds, life reinsurance and retrocession products. They serve individuals, businesses, and pension plans with a variety of investment products and services. In December 2019, Pacific Life completed the sale of Aviation Capital Group (ACG), a business engaged in leasing and acquiring commercial jet aircraft, to Tokyo Century Corporation (unrated).

Exhibit 3

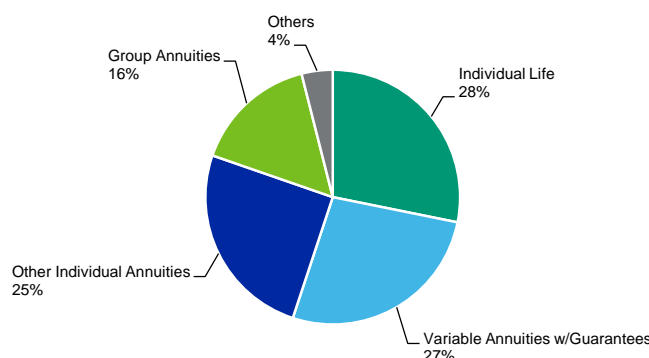
### Corporate Structure as of December 31, 2020



Source: Schedule Y statutory statements, Moody's Investors Service research

Exhibit 4

### Total revenues by segment shows a diversified business profile Full year 2020



Source: Company statutory statements

## Detailed credit considerations

Moody's rates Pacific Life Aa3 for insurance financial strength, which is in line with the adjusted scorecard-indicated outcome.

### Insurance financial strength

The key factors currently influencing the rating and outlook are:

#### Market position and brand: Focus on the high-end life insurance market, but recent actions to grow internationally

Moody's views Pacific Life's market position and brand as being very strong. The A-adjusted score for the company's market position, which is in line with the unadjusted scorecard result, is supported by a strong, focused position in the high-end life insurance market serving the very affluent and businesses. The company holds a leading market share in most of the markets it competes in, including individual life insurance, structured settlements and annuities. Within its US individual life business, Pacific Life is the top provider of universal life insurance, which includes indexed universal life and variable universal life. It is also a leading provider of life insurance policies with limited long-term care benefits. The adjusted rating for this factor reflects Pacific Life's market position internationally, including the UK and Ireland, where it sells life protection and longevity type products and in Australia and Asia, where they market protection and critical illness products. The lingering effects of the pandemic are a headwind for life insurers, including Pacific Life, but we expect mass vaccinations in the US, plus recent US government stimulus to help ease the impact on demand for life insurance and annuity products in 2021.

#### Distribution: Primarily independent distribution network, but strong reputation with core partners

Pacific Life relies primarily upon a wide variety of third parties such as independent agents, financial advisors, banks and registered representatives for its insurance product distribution. As a result, the company maintains less direct control over its distribution and could see relatively lower persistency and more volatile sales for its third-party sold products than those companies with more control over their distribution systems. However, it benefits from a strong market breadth in most major channels other than career agents, resulting in an A score for diversity of distribution. The company has had long-standing relationships with many key independent distributors, and a reputation for excellent customer service that benefits the company in the market, increasing its sustainability in the independent channels. However, in 2020, sales across a portion of Pacific Life's businesses, like many of its peers, were pressured by the coronavirus-driven environment, social distancing and persistent low interest rates, although 2021 has rebounded strongly and expect sales to pick momentum similar to pre-covid time. As a result, we have left this factor unchanged, which is the same as the unadjusted scorecard result of A.

#### Product focus and diversification: New sales distribution reduces overall product risk

Pacific Life has a very diverse set of product offerings in life and annuity markets, including fixed and variable products, as well as institutionally oriented products. The product diversification also benefits from Pacific Life Re, its international, reinsurance and life retrocession operations. In the US, Pacific Life is particularly strong in serving the high net-worth life insurance market and benefits from very strong persistency on its products. The middle-market segment helps improve the overall product risk profile (primarily term life insurance products) and creates opportunities to expand its customer base and cross-sell other insurance products in the future.

Although AG49a will impact sales of certain type of IUL products (i.e, products with multiplier), we think that Pacific Life holds a diverse suite of life insurance product offerings to compensate for this impact. We also believe Pacific Life benefits from a good balance between fixed and variable products, a partial result of its emphasis on risk management and diversification. Since virtually all of the life insurance business is of the nonparticipating variety, which limits its ability to share adverse experience with its policyholders and restricts upward movement for this rating factor, Moody's views Pacific Life's product focus and diversification score to be in-line with the unadjusted score and hence left this factor score unchanged at A.

### **Asset Quality: Good quality investment portfolio**

Pacific Life's general account investment portfolio is diversified and consists primarily of fixed-income securities and commercial mortgages. As of the end of 2020, Pacific Life's ratio of high-risk assets as a percentage of shareholders' equity was 62%, consistent with a A sub-factor score, which primarily emanates from its holdings in below-investment grade bonds, alternative investments and real estate. In its baseline forecast, Moody's projects the global speculative grade default to peak at 6.6% in 2021, above the historical average of about 4.2%.

In addition, the company's commercial mortgage loan (CML) (15% of invested assets) portfolio, with a greater exposure to lodging (11%) and an exposure to retail CMLs, which is more focused on high-end market retail space, had come under pressure in 2020 which resulted in the company granting forbearance requests and working with borrowers to restructure their mortgage loans, leading us to remain concerned about the performance of this asset class in 2021, especially as we think about the demand for lodging and office space in the near term.

Goodwill and other intangibles are equal to approximately 32% of shareholders' equity, consistent with a A score. We believe deferred acquisition costs (DAC), which represents most intangibles, to be of higher quality than goodwill, largely because of the greater likelihood that DAC will eventually be converted into tangible equity, as profits net of DAC amortization flow through income, given the strong policyholder persistency. Overall, we view the asset quality to be the same as the unadjusted score and hence have left the factor unchanged.

### **Capital Adequacy: Exceptional RBC ratio, but can be volatile during low-rate environment**

Pacific Life has strong capital adequacy, as measured by shareholders' equity as a percentage of total assets of 8.6% as of year-end 2020, which is in line with Moody's expectation for an Aa-rated company. However, for US firms we consider the RBC ratio to be a more reliable measure of a US insurer's capital adequacy. Pacific Life's RBC ratio is very strong at 628% as of year-end 2020 and moderately benefited from a capital contribution from the holding company's senior note debt issuance. Total capital was largely unchanged as of Q1 2021 and it is our expectation that the company will continue to maintain an exceptional RBC ratio going forward, which provides a cushion against tail risk events. We do note that although Pacific Life has taken prudent risk management steps to protect capital in times of stress, its RBC ratio may exhibit volatility in response to capital market movements, especially from interest rates at this level for a prolonged period.

We still believe that Pacific Life is best positioned in the Aa range on this factor, given its high level of reported capital and RBC ratio, somewhat offset by its sensitivity to capital market movements.

### **Profitability: Diversified earnings, but sensitive to equity market and interest rates**

Moody's views Pacific Life's profitability to be good and benefits from diversification. However, in 2020 the company recorded a return on capital ratio of -3.3% which was driven by a GAAP net loss of \$671 million. The primary drivers for the net loss included the impact of lower interest rates which weakened life insurance and retirement segment profitability, higher claims from the pandemic, one-time third-party reinsurance related charges and investment losses. Somewhat offsetting these negative drivers were higher returns

from alternatives and positive results from the institutional and international businesses. Earnings remain sensitive to equity market movement, particularly in the retirement solutions business (RSD), but are expected to be far less so than in the past, particularly as the company implemented newer hedging strategies in 2020 and also as the older block of guarantees shrinks as new business comes onto the books. Looking ahead, we expect profitability to return to pre-pandemic levels in 2021, especially given the reduction in mortality, recent performance in the capital markets and an expectation of lower asset defaults. As a result, we have adjusted the score on this factor up to A from the unadjusted scorecard result of Baa.

### Liquidity and Asset/Liability Management (ALM): Stable liability profile, but VA adds ALM risk

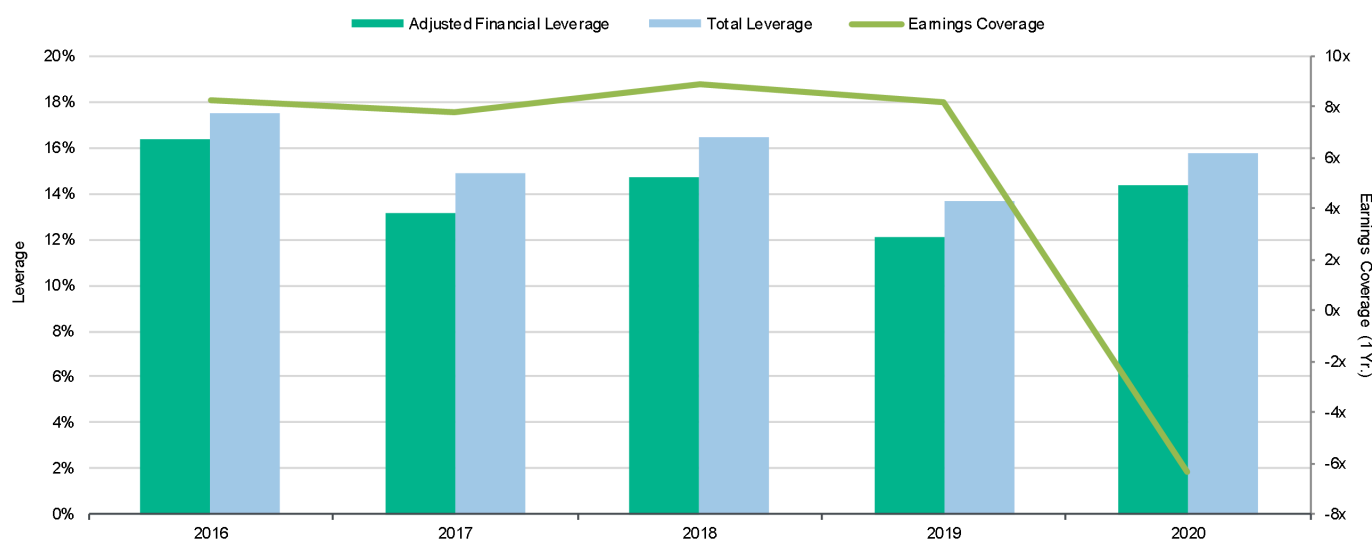
Moody's believes that Pacific Life has excellent liquidity to meet its near-term policyholder obligations based on the unadjusted scorecard metric, and this is supported by a stable liability profile of life insurance business. While the company may face some challenges from the low interest rate environment, especially in long duration lines such as structured settlements, newer structured settlement sales have been focused on shorter duration products which somewhat minimizes these challenges. Moody's believes the company has ample liquidity to manage through a stressful liquidity scenario.

On ALM, appropriately managing the risks from a book of VAs containing embedded guarantees is a challenging task at best and requires the company to employ a hedging program to mitigate any market disruptions. These factors make interest rate and equity hedging more key, and make the company's ALM more challenging, and support a downward adjustment for the factor score to A from the unadjusted result of Aa.

### Financial Flexibility: Low leverage and strong cash flow coverage

Exhibit 5

#### Financial leverage expected to remain low; Weak earnings coverage will bounce back in 2021



Sources: Moody's Investors Service and company filings

Pacific Life's adjusted financial leverage (14.4% as of year-end 2020) is low and consistent with Aaa-rated insurers. Total leverage, which was modestly higher at 15.8% as of year-end 2020, includes hybrid equity credit on the outstanding surplus notes. Earnings coverage, which has historically been very strong, declined to -6.3x in 2020 as a result of the net loss. However, the company continues to have strong financial flexibility supported by modest financial leverage and strong cash flow coverage relative to modest holding company interest expenses (approximately \$39 million).

Given the company is organized in a mutual holding company structure, we believe that raising external equity is not a realistic alternative for the company. However, we still believe that an Aa rating for this factor is appropriate given the low financial leverage

and strong cash flow coverage ratios as discussed above. As a result, we have left the adjusted score to be at the same level as the unadjusted score.

### Liquidity analysis

Pacific Life Insurance Company has a \$700 million commercial paper program. These unsecured notes rank pari passu with Pacific's other unsubordinated indebtedness. Pacific had no commercial paper outstanding as of December 31, 2020.

In June 2021, Pacific Life amended and extended two existing revolving credit facilities for Pacific LifeCorp and Pacific Life Insurance Company into a single unified \$1 billion five year co-borrowed revolving credit facility (RCF) maturing June 2026. The unified RCF replaced standalone five-year revolving credit facilities of \$600 million and \$400 million for Pacific LifeCorp and Pacific Life Insurance Company, respectively. There were no amounts outstanding as of June 30, 2021 and the facilities contain no material adverse change clauses.

As of December 31, 2020, the company held approximately \$516 million in cash and liquid investments at the holding company. Pacific Life's statutory dividend capacity in 2021 is \$769 million without requiring special regulatory approval. Total cash needs at the holding company in 2020 include \$39 of interest expense.

### ESG considerations

#### Environmental

An increased focus on environmental risks by life insurers is net credit positive for the industry. A responsible investing approach encourages insurers to think long term, diversify their portfolios, manage regulatory trends, and consider more broadly the material risks and opportunities across all asset classes.

#### Social

Life insurers have a moderate overall exposure to social risks. Given this sector's reliance on handling customer data and privacy, customer relations are important. Regulatory, demographic and societal trends related to regulatory rules and practices, taxation of products, people living longer, and an aging population will affect products that are sold for retirement and estate planning, and the ability of insurers to effectively distribute and price these products. Societal trends could also limit the ability of Pacific Life to share adverse experience through higher premium rate actions on policyholders of life insurance.

#### Governance

Corporate governance is highly relevant to life insurers and is important to creditors because governance weaknesses can lead to a deterioration in a company's credit quality, while governance strengths can benefit a company's credit profile. The governance considerations most relevant to our credit analysis are (1) management credibility & track record, (2) ownership structure (e.g. privately held, publicly traded, or mutual), (3) growth and financing strategy, (4) risk management, and (5) Board oversight.

### Support and structural considerations

The notching between Pacific LifeCorp's A3 senior unsecured debt rating and the Aa3 insurance financial strength rating of its operating subsidiaries is three notches, which is typical notching practice for US insurance holding company structures.

## Rating methodology and scorecard factors

Exhibit 6

### Pacific Mutual Holding Company

Financial Strength Rating Scorecard [1][2]	Aaa	Aa	A	Baa	Ba	B	Caa	ScoreAdj	Score
Business Profile								A	A
<b>Market Position and Brand (15%)</b>								A	A
-Relative Market Share Ratio			X						
<b>Distribution (10%)</b>								A	A
-Distribution Control			X						
-Diversity of Distribution			X						
<b>Product Focus and Diversification (10%)</b>								A	A
-Product Risk			X						
-Life Insurance Product Diversification			X						
Financial Profile								A	Aa
<b>Asset Quality (10%)</b>								A	A
-High Risk Assets % Shareholders' Equity			62.1%						
-Goodwill & Intangibles % Shareholders' Equity			31.9%						
<b>Capital Adequacy (15%)</b>								Aa	Aa
-Shareholders' Equity % Total Assets		8.6%							
<b>Profitability (15%)</b>								Baa	A
-Return on Capital (5 yr. avg.)				3.8%					
-Sharpe Ratio of ROC (5 yr.)					94.0%				
<b>Liquidity and Asset/Liability Management (10%)</b>								Aa	A
-Liquid Assets % Liquid Liabilities		X							
<b>Financial Flexibility (15%)</b>								Aa	Aa
-Adjusted Financial Leverage	14.4%								
-Total Leverage		15.8%							
-Earnings Coverage (5 yr. avg.)			5.4x						
-Cash Flow Coverage (5 yr. avg.)	18.8x								
Operating Environment								Aaa - A	Aaa - A
Preliminary Standalone Outcome								A1	Aa3

[1] Information based on US GAAP financial statements as of fiscal year ended December 31, 2020. [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 7

Category	Moody's Rating
<b>PACIFIC LIFECORP</b>	
Rating Outlook	STA
Senior Unsecured	A3
<b>PACIFIC LIFE INSURANCE COMPANY</b>	
Rating Outlook	STA
Insurance Financial Strength	Aa3
ST Insurance Financial Strength	P-1
Surplus Notes	A2 (hyb)
Commercial Paper	P-1
<b>PACIFIC LIFE &amp; ANNUITY COMPANY</b>	
Rating Outlook	STA
Insurance Financial Strength	Aa3
<b>PACIFIC LIFE GLOBAL FUNDING II</b>	
Rating Outlook	STA
Senior Secured	Aa3

Source: Moody's Investors Service

## Moody's related publications

### Sector Research:

- » [Life Insurance – US: A little inflation is credit positive; a sizable spike would hurt, June 2021](#)
- » [Life Insurance – US: Life insurers' investment portfolios strengthen as pandemic effects wane, June 2021](#)
- » [Life Insurance – US: Q1 2021 earnings rise on strong alternatives performance, despite higher mortality, May 2021](#)
- » [Life & Health Insurance – US: Capital strong but still vulnerable to changing economic outlook, May 2021](#)
- » [Life Insurance – US: PE-driven M&A: good for life insurance sellers, less so for remaining policyholders, April 2021](#)
- » [Life Insurance – US: Companies transform business models via M&A, prepare for post-COVID world, April 2021](#)
- » [Life Insurance – US: The rebirth of institutional spread lending: cautious growth, but an area to watch, March 2021](#)
- » [Life Insurers – US: Higher Q4 profitability partly offset by low rates, which are driving transformative M&A, March 2021](#)
- » [Life Insurance – US: Hidden in stimulus bill: a win for whole life insurers, January 2021](#)
- » [Life Insurance – US: Life insurers can withstand even extreme second wave of coronavirus, December 2020](#)
- » [Life & Health Insurance – US: Profitability weakens driven by low rates, pandemic-driven mortality claims, November 2020](#)
- » [Life Insurance – US: M&A heats up as low rate environment drives change in business strategies, November 2020](#)
- » [Life Insurance – US: Credit deterioration picks up in CMBS holdings but capital is resilient, November 2020](#)
- » [Life Insurance – US: Rating migration could weaken capital should recession be severe, prolonged, November 2020](#)
- » [Life Insurance – US: Voluntary benefits: near-term volatility, but longer-term prospects remain bright, October 2020](#)

### Industry Outlook:

- » [Life Insurance – US: Strengthening US economy supports return to stable outlook, May 2021](#)
- » [Global Macro Outlook 2021-22 \(May 2021 Update\): Recovery solidifies in the US and Europe, while emerging markets face multiple risks, May 2021](#)

### Methodology:

- » [Life Insurers Methodology, November 2019](#)

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.

© 2021 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 CREDIT RATINGS AFFILIATES ARE THEIR 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 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 APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S 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 \$5,000,000. 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.moody.com](http://www.moody.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 61 003 399 657 AFSL 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 JPY550,000,000.

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

REPORT NUMBER

1296758